



# ANEXO II

## ESFUERZOS EVENTOS CRÍTICOS



| Barra | Station | Evento     | P       | V2        | V3        | T        | M2         | M3         |
|-------|---------|------------|---------|-----------|-----------|----------|------------|------------|
| Text  | m       | Text       | KN      | KN        | KN        | KN-m     | KN-m       | KN-m       |
| 1     | 0       | Extremo 1A | 0.026   | -11.496   | 0.024     | 2.4212   | 0.0174     | -2.6632    |
| 1     | 0.5     | Extremo 1A | 0.026   | -3.823    | 0.024     | 2.4212   | 0.0052     | 1.1665     |
| 1     | 1       | Extremo 1A | 0.026   | 3.849     | 0.024     | 2.4212   | -0.0069    | 1.1599     |
| 1     | 0       | Extremo 2A | -0.067  | -11.496   | -0.071    | 2.4212   | -0.0462    | -2.6632    |
| 1     | 0.5     | Extremo 2A | -0.067  | -3.823    | -0.071    | 2.4212   | -0.0108    | 1.1665     |
| 1     | 1       | Extremo 2A | -0.067  | 3.849     | -0.071    | 2.4212   | 0.0245     | 1.1599     |
| 2     | 0       | Extremo 1A | 0.068   | -9.679    | 0.05      | 1.4114   | 0.0298     | -0.602     |
| 2     | 0.5     | Extremo 1A | 0.068   | -2.006    | 0.05      | 1.4114   | 0.0048     | 2.3192     |
| 2     | 1       | Extremo 1A | 0.068   | 5.666     | 0.05      | 1.4114   | -0.0203    | 1.4042     |
| 2     | 0       | Extremo 2A | -0.159  | -9.679    | -0.1      | 1.4114   | -0.0585    | -0.602     |
| 2     | 0.5     | Extremo 2A | -0.159  | -2.006    | -0.1      | 1.4114   | -0.0084    | 2.3192     |
| 2     | 1       | Extremo 2A | -0.159  | 5.666     | -0.1      | 1.4114   | 0.0417     | 1.404      |
| 3     | 0       | Extremo 1A | 0.124   | -9.279    | 0.056     | 0.5139   | 0.0304     | 0.874      |
| 3     | 0.5     | Extremo 1A | 0.124   | -1.606    | 0.056     | 0.5139   | 0.0024     | 3.5953     |
| 3     | 1       | Extremo 1A | 0.124   | 6.066     | 0.056     | 0.5139   | -0.0256    | 2.4804     |
| 3     | 0       | Extremo 2A | -0.27   | -9.279    | -0.103    | 0.5139   | -0.057     | 0.8738     |
| 3     | 0.5     | Extremo 2A | -0.27   | -1.606    | -0.103    | 0.5139   | -0.0052    | 3.595      |
| 3     | 1       | Extremo 2A | -0.27   | 6.066     | -0.103    | 0.5139   | 0.0465     | 2.4799     |
| 4     | 0       | Extremo 1A | 0.185   | -8.435    | 0.053     | 0.1947   | 0.0275     | 2.254      |
| 4     | 0.5     | Extremo 1A | 0.185   | -0.763    | 0.053     | 0.1947   | 0.0008192  | 4.5535     |
| 4     | 1       | Extremo 1A | 0.185   | 6.91      | 0.053     | 0.1947   | -0.0259    | 3.0169     |
| 4     | 0       | Extremo 2A | -0.383  | -8.435    | -0.095    | 0.1947   | -0.0507    | 2.2535     |
| 4     | 0.5     | Extremo 2A | -0.383  | -0.763    | -0.095    | 0.1947   | -0.003     | 4.5529     |
| 4     | 1       | Extremo 2A | -0.383  | 6.91      | -0.095    | 0.1947   | 0.0447     | 3.016      |
| 5     | 0       | Extremo 1A | 0.244   | -7.17     | 0.05      | 0.1496   | 0.0247     | 2.9023     |
| 5     | 0.5     | Extremo 1A | 0.244   | 0.503     | 0.05      | 0.1496   | -0.0006865 | 4.569      |
| 5     | 1       | Extremo 1A | 0.244   | 8.175     | 0.05      | 0.1496   | -0.0249    | 2.3995     |
| 5     | 0       | Extremo 2A | -0.49   | -7.169    | -0.086    | 0.1496   | -0.0445    | 2.9015     |
| 5     | 0.5     | Extremo 2A | -0.49   | 0.503     | -0.086    | 0.1496   | -0.0016    | 4.568      |
| 5     | 1       | Extremo 2A | -0.49   | 8.176     | -0.086    | 0.1496   | 0.0413     | 2.3983     |
| 6     | 0       | Extremo 1A | 0.3     | -5.764    | 0.046     | 0.2441   | 0.0226     | 2.458      |
| 6     | 0.5     | Extremo 1A | 0.3     | 1.909     | 0.046     | 0.2441   | -0.0006921 | 3.4218     |
| 6     | 1       | Extremo 1A | 0.3     | 9.581     | 0.046     | 0.2441   | -0.0239    | 0.5494     |
| 6     | 0       | Extremo 2A | -0.589  | -5.764    | -0.079    | 0.2441   | -0.0397    | 2.4569     |
| 6     | 0.5     | Extremo 2A | -0.589  | 1.909     | -0.079    | 0.2441   | -0.0004752 | 3.4206     |
| 6     | 1       | Extremo 2A | -0.589  | 9.581     | -0.079    | 0.2441   | 0.0388     | 0.548      |
| 7     | 0       | Extremo 1A | 0.354   | -4.405    | 0.044     | 0.5364   | 0.021      | 0.7129     |
| 7     | 0.5     | Extremo 1A | 0.354   | 3.267     | 0.044     | 0.5364   | -0.0012    | 0.9974     |
| 7     | 1       | Extremo 1A | 0.354   | 10.94     | 0.044     | 0.5364   | -0.0233    | -2.5543    |
| 7     | 0       | Extremo 2A | -0.681  | -4.405    | -0.074    | 0.5365   | -0.0367    | 0.7115     |
| 7     | 0.5     | Extremo 2A | -0.681  | 3.268     | -0.074    | 0.5365   | 0.0004429  | 0.9958     |
| 7     | 1       | Extremo 2A | -0.681  | 10.94     | -0.074    | 0.5365   | 0.0376     | -2.556     |
| 8     | 0       | Extremo 1A | 0.406   | -3.507    | 0.043     | 1.0475   | 0.02       | -2.6309    |
| 8     | 0.5     | Extremo 1A | 0.406   | 4.166     | 0.043     | 1.0475   | -0.0014    | -2.7957    |
| 8     | 1       | Extremo 1A | 0.406   | 11.838    | 0.043     | 1.0475   | -0.0228    | -6.7967    |
| 8     | 0       | Extremo 2A | -0.769  | -3.506    | -0.072    | 1.0476   | -0.0348    | -2.6326    |
| 8     | 0.5     | Extremo 2A | -0.769  | 4.166     | -0.072    | 1.0476   | 0.0012     | -2.7975    |
| 8     | 1       | Extremo 2A | -0.769  | 11.839    | -0.072    | 1.0476   | 0.0372     | -6.7987    |
| 9     | 0       | Extremo 1A | 0.458   | -4.124    | 0.042     | 1.3933   | 0.02       | -7.6926    |
| 9     | 0.5     | Extremo 1A | 0.458   | 3.548     | 0.042     | 1.3933   | -0.0009179 | -7.5486    |
| 9     | 1       | Extremo 1A | 0.458   | 11.221    | 0.042     | 1.3933   | -0.0218    | -11.2408   |
| 9     | 0       | Extremo 2A | -0.854  | -4.124    | -0.07     | 1.3934   | -0.0333    | -7.6947    |
| 9     | 0.5     | Extremo 2A | -0.854  | 3.548     | -0.07     | 1.3934   | 0.0015     | -7.5508    |
| 9     | 1       | Extremo 2A | -0.854  | 11.221    | -0.07     | 1.3934   | 0.0364     | -11.2431   |
| 10    | 0       | Extremo 1A | 0.513   | -7.145    | 0.046     | 0.7586   | 0.0239     | -12.9158   |
| 10    | 0.5     | Extremo 1A | 0.513   | 0.527     | 0.046     | 0.7586   | 0.0008512  | -11.2612   |
| 10    | 1       | Extremo 1A | 0.513   | 8.2       | 0.046     | 0.7586   | -0.0222    | -13.4429   |
| 10    | 0       | Extremo 2A | -0.933  | -7.146    | -0.065    | 0.7587   | -0.0321    | -12.9182   |
| 10    | 0.5     | Extremo 2A | -0.933  | 0.527     | -0.065    | 0.7587   | 0.0005512  | -11.2636   |
| 10    | 1       | Extremo 2A | -0.933  | 8.199     | -0.065    | 0.7587   | 0.0332     | -13.4452   |
| 11    | 0       | Extremo 1A | 0.577   | -9.896    | 0.068     | -0.3835  | 0.0351     | -13.7577   |
| 11    | 0.5     | Extremo 1A | 0.577   | -2.224    | 0.068     | -0.3835  | 0.0008908  | -10.7277   |
| 11    | 1       | Extremo 1A | 0.577   | 5.449     | 0.068     | -0.3835  | -0.0333    | -11.534    |
| 11    | 0       | Extremo 2A | -1.007  | -9.897    | -0.069    | -0.3835  | -0.0352    | -13.76     |
| 11    | 0.5     | Extremo 2A | -1.007  | -2.224    | -0.069    | -0.3835  | -0.0007052 | -10.7298   |
| 11    | 1       | Extremo 2A | -1.007  | 5.448     | -0.069    | -0.3835  | 0.0338     | -11.5359   |
| 13    | 0       | Extremo 1A | -62.65  | -1992.495 | -3898.579 | 566.2896 | -1533.524  | -1216.9401 |
| 13    | 0.26    | Extremo 1A | -62.65  | -1992.495 | -3898.579 | 566.2896 | -519.8934  | -698.8914  |
| 13    | 0.52    | Extremo 1A | -62.65  | -1992.495 | -3898.579 | 566.2896 | 493.7372   | -180.8427  |
| 13    | 0       | Extremo 2A | -65.531 | -1997.521 | -3895.818 | 595.7371 | -1536.0496 | -1228.883  |

|    |      |            |           |           |           |           |            |             |
|----|------|------------|-----------|-----------|-----------|-----------|------------|-------------|
| 13 | 0.26 | Extremo 2A | -65.531   | -1997.521 | -3895.818 | 595.7371  | -523.1369  | -709.5274   |
| 13 | 0.52 | Extremo 2A | -65.531   | -1997.521 | -3895.818 | 595.7371  | 489.7758   | -190.1718   |
| 14 | 0    | Extremo 1A | -69.806   | -2030.423 | 3987.785  | -657.5197 | 1575.8007  | -1265.7706  |
| 14 | 0.26 | Extremo 1A | -69.806   | -2030.423 | 3987.785  | -657.5197 | 538.9767   | -737.8607   |
| 14 | 0.52 | Extremo 1A | -69.806   | -2030.423 | 3987.785  | -657.5197 | -497.8474  | -209.9508   |
| 14 | 0    | Extremo 2A | -66.721   | -1976.246 | 3906.108  | -631.5144 | 1540.1339  | -1226.4686  |
| 14 | 0.26 | Extremo 2A | -66.721   | -1976.246 | 3906.108  | -631.5144 | 524.5458   | -712.6446   |
| 14 | 0.52 | Extremo 2A | -66.721   | -1976.246 | 3906.108  | -631.5144 | -491.0423  | -198.8205   |
| 15 | 0    | Extremo 1A | 4966.128  | -3292.336 | -44.946   | 22.1595   | 23.5868    | -6624.121   |
| 15 | 0.5  | Extremo 1A | 4966.128  | -3292.336 | -44.946   | 22.1595   | 46.0597    | -4977.953   |
| 15 | 0    | Extremo 2A | 4840.831  | -3230.267 | -51.869   | 0.3591    | 16.2439    | -6524.5493  |
| 15 | 0.5  | Extremo 2A | 4840.831  | -3230.267 | -51.869   | 0.3591    | 42.1783    | -4909.4157  |
| 16 | 0    | Extremo 1A | -6658.658 | -4721.793 | -89.649   | 73.085    | 6.6692     | -8848.8375  |
| 16 | 0.5  | Extremo 1A | -6658.658 | -4721.793 | -89.649   | 73.085    | 51.4938    | -6487.9412  |
| 16 | 0    | Extremo 2A | -6554.943 | -4635.283 | -90.459   | 40.0163   | 4.5735     | -8746.9083  |
| 16 | 0.5  | Extremo 2A | -6554.943 | -4635.283 | -90.459   | 40.0163   | 49.803     | -6429.2668  |
| 17 | 0    | Extremo 1A | -6530.987 | -4636.129 | 92.721    | 30.4266   | -0.0046    | -8730.1086  |
| 17 | 0.5  | Extremo 1A | -6530.987 | -4636.129 | 92.721    | 30.4266   | -46.365    | -6412.044   |
| 17 | 0    | Extremo 2A | -6511.484 | -4614.883 | 90.012    | -2.323    | -2.2021    | -8682.0714  |
| 17 | 0.5  | Extremo 2A | -6511.484 | -4614.883 | 90.012    | -2.323    | -47.2082   | -6374.63    |
| 18 | 0    | Extremo 1A | 4842.113  | -3220.512 | 58.272    | 49.1051   | -12.6743   | -6528.1096  |
| 18 | 0.5  | Extremo 1A | 4842.113  | -3220.512 | 58.272    | 49.1051   | -41.8102   | -4917.8538  |
| 18 | 0    | Extremo 2A | 4843.301  | -3213.647 | 49.87     | 27.2367   | -19.9512   | -6473.2937  |
| 18 | 0.5  | Extremo 2A | 4843.301  | -3213.647 | 49.87     | 27.2367   | -44.8862   | -4866.4699  |
| 20 | 0    | Extremo 1A | -6677.466 | -4695.906 | 90.998    | -70.6885  | -4.7355    | -8807.7854  |
| 20 | 0.5  | Extremo 1A | -6677.466 | -4695.906 | 90.998    | -70.6885  | -50.2345   | -6459.8324  |
| 20 | 0    | Extremo 2A | -6690.59  | -4575.906 | 88.443    | -76.1144  | -8.3307    | -8101.9702  |
| 20 | 0.5  | Extremo 2A | -6690.59  | -4575.906 | 88.443    | -76.1144  | -52.552    | -5814.0172  |
| 21 | 0    | Extremo 1A | -67.66    | -2033.82  | -3986.164 | 631.4519  | -1572.3103 | -1264.041   |
| 21 | 0.26 | Extremo 1A | -67.66    | -2033.82  | -3986.164 | 631.4519  | -535.9075  | -735.2479   |
| 21 | 0.52 | Extremo 1A | -67.66    | -2033.82  | -3986.164 | 631.4519  | 500.4952   | -206.4547   |
| 21 | 0    | Extremo 2A | -71.145   | -2148.873 | -3997.815 | 528.5422  | -1580.9973 | -1327.4047  |
| 21 | 0.26 | Extremo 2A | -71.145   | -2148.873 | -3997.815 | 528.5422  | -541.5655  | -768.6977   |
| 21 | 0.52 | Extremo 2A | -71.145   | -2148.873 | -3997.815 | 528.5422  | 497.8664   | -209.9906   |
| 22 | 0    | Extremo 1A | 4954.273  | -3330.03  | 51.234    | -23.5073  | -17.1842   | -6676.6624  |
| 22 | 0.5  | Extremo 1A | 4954.273  | -3330.03  | 51.234    | -23.5073  | -42.8011   | -5011.6473  |
| 22 | 0    | Extremo 2A | 4972.613  | -3322.582 | 44.172    | -23.3789  | -23.2378   | -6312.6342  |
| 22 | 0.5  | Extremo 2A | 4972.613  | -3322.582 | 44.172    | -23.3789  | -45.3236   | -4651.3432  |
| 23 | 0    | Extremo 1A | -65.585   | -2019.941 | 3936.97   | -542.2139 | 1551.4759  | -1235.299   |
| 23 | 0.26 | Extremo 1A | -65.585   | -2019.941 | 3936.97   | -542.2139 | 527.8638   | -710.1143   |
| 23 | 0.52 | Extremo 1A | -65.585   | -2019.941 | 3936.97   | -542.2139 | -495.7483  | -184.9296   |
| 23 | 0    | Extremo 2A | -65.052   | -2060.644 | 3889.135  | -459.986  | 1531.448   | -1260.8904  |
| 23 | 0.26 | Extremo 2A | -65.052   | -2060.644 | 3889.135  | -459.986  | 520.2728   | -725.123    |
| 23 | 0.52 | Extremo 2A | -65.052   | -2060.644 | 3889.135  | -459.986  | -490.9023  | -189.3557   |
| 24 | 0    | Extremo 1A | -6577.558 | -4636.046 | -92.277   | -28.272   | 1.9353     | -8710.6532  |
| 24 | 0.5  | Extremo 1A | -6577.558 | -4636.046 | -92.277   | -28.272   | 48.0738    | -6392.6304  |
| 24 | 0    | Extremo 2A | -6500.366 | -4441.876 | -93.267   | -22.6467  | 0.4819     | -8049.4795  |
| 24 | 0.5  | Extremo 2A | -6500.366 | -4441.876 | -93.267   | -22.6467  | 47.1152    | -5828.5413  |
| 25 | 0    | Extremo 1A | 4895.679  | -3281.431 | -52.593   | -50.9449  | 19.1789    | -6597.6169  |
| 25 | 0.5  | Extremo 1A | 4895.679  | -3281.431 | -52.593   | -50.9449  | 45.4755    | -4956.9015  |
| 25 | 0    | Extremo 2A | 4835.331  | -3261.751 | -53.686   | -44.3426  | 17.5062    | -6258.1845  |
| 25 | 0.5  | Extremo 2A | 4835.331  | -3261.751 | -53.686   | -44.3426  | 44.3489    | -4627.309   |
| 26 | 0    | Extremo 1A | -338.833  | 1000.73   | 680.849   | 89.5453   | 81.3775    | -13256.6889 |
| 26 | 0.5  | Extremo 1A | -338.83   |           |           |           |            |             |



|    |      |            |           |           |           |            |            |             |
|----|------|------------|-----------|-----------|-----------|------------|------------|-------------|
| 31 | 0    | Extremo 2A | -4315.341 | -1137.722 | -668.829  | 153.3463   | -185.0153  | -14284.2606 |
| 31 | 0.5  | Extremo 2A | -4315.341 | -1114.674 | -668.829  | 153.3463   | 149.3994   | -13721.1616 |
| 31 | 0    | Extremo 1A | -4293.019 | -1111.611 | -669.301  | 118.4016   | -183.3467  | -14161.8043 |
| 31 | 0.5  | Extremo 1A | -4293.019 | -1088.563 | -669.301  | 118.4016   | 151.3039   | -13611.7608 |
| 32 | 0    | Extremo 1A | -4330.828 | 1121.679  | 674.155   | -151.1968  | 151.5452   | -13734.7219 |
| 32 | 0.5  | Extremo 2A | -4330.828 | 1144.726  | 674.155   | -151.1968  | -185.5321  | -14301.3232 |
| 32 | 0    | Extremo 2A | -4283.533 | 1173.966  | 664.594   | -144.2519  | 149.4526   | -12618.2807 |
| 32 | 0.5  | Extremo 2A | -4283.533 | 1197.013  | 664.594   | -144.2519  | -182.8444  | -13211.0256 |
| 33 | 0    | Extremo 1A | -361.926  | -986.097  | 666.636   | -1.5318    | 254.8135   | -13642.2561 |
| 33 | 0.5  | Extremo 1A | -361.926  | -963.05   | 666.636   | -1.5318    | -78.5043   | -13154.9692 |
| 33 | 0    | Extremo 1A | -361.826  | -988.1    | 657.577   | 9.6348     | 251.4189   | -12656.4192 |
| 33 | 0.5  | Extremo 2A | -361.826  | -965.053  | 657.577   | 9.6348     | -77.3694   | -12168.1309 |
| 34 | 0    | Extremo 2A | -3.81     | -2177.332 | -4023.464 | 607.756    | -1481.597  | -1171.7383  |
| 34 | 0.48 | Extremo 2A | -3.81     | -2177.332 | -4023.464 | 607.756    | 449.6655   | -126.6187   |
| 34 | 0    | Extremo 1A | -8.028    | -2124.054 | -3946.516 | 635.0986   | -1455.8309 | -1150.3342  |
| 34 | 0.48 | Extremo 1A | -8.028    | -2124.054 | -3946.516 | 635.0986   | 438.4968   | -130.7883   |
| 36 | 0    | Extremo 1A | -10.815   | 2103.195  | 3937.981  | -685.0647  | 434.3738   | -150.9997   |
| 36 | 0.48 | Extremo 2A | -10.815   | 2103.195  | 3937.981  | -685.0647  | -1455.8571 | -1160.5332  |
| 36 | 0    | Extremo 2A | -6.996    | 2102.066  | 3928.944  | -662.2374  | 436.1331   | -146.1561   |
| 36 | 0.48 | Extremo 2A | -6.996    | 2102.066  | 3928.944  | -662.2374  | -1449.7601 | -1155.148   |
| 37 | 0    | Extremo 1A | -7.519    | -2130.824 | -3968.902 | 659.0672   | -1464.7276 | -1172.4604  |
| 37 | 0.48 | Extremo 1A | -7.519    | -2130.824 | -3968.902 | 659.0672   | 440.3455   | -149.665    |
| 37 | 0    | Extremo 1A | -7.017    | -2185.114 | -3921.707 | 554.6063   | -1448.1561 | -1202.7414  |
| 37 | 0.48 | Extremo 2A | -7.017    | -2185.114 | -3921.707 | 554.6063   | 434.2633   | -153.8867   |
| 39 | 0    | Extremo 2A | -7.44     | 2183.091  | 4029.575  | -581.057   | 447.7529   | -128.0187   |
| 39 | 0.48 | Extremo 2A | -7.44     | 2183.091  | 4029.575  | -581.057   | -1486.443  | -1175.9025  |
| 39 | 0    | Extremo 1A | -3.329    | 2285.825  | 4040.155  | -476.1476  | 452.5172   | -125.9559   |
| 39 | 0.48 | Extremo 1A | -3.329    | 2285.825  | 4040.155  | -476.1476  | -1486.7575 | -1223.152   |
| 40 | 0    | Extremo 1A | -394.522  | 921.627   | -884.249  | -14.1914   | -170.6159  | -13398.1117 |
| 40 | 0.5  | Extremo 2A | -394.522  | 944.674   | -884.249  | -14.1914   | 271.5084   | -13864.687  |
| 40 | 0    | Extremo 2A | -477.921  | 923.963   | -868.341  | -41.4053   | -162.6815  | -13232.4075 |
| 40 | 0.5  | Extremo 2A | -477.921  | 947.011   | -868.341  | -41.4053   | 271.4889   | -13700.1509 |
| 41 | 0    | Extremo 1A | -4382.307 | -1085.749 | -954.055  | 195.7593   | -226.3389  | -14522.2066 |
| 41 | 0.5  | Extremo 1A | -4382.307 | -1062.701 | -954.055  | 195.7593   | 250.6885   | -13985.0942 |
| 41 | 0    | Extremo 1A | -4384.029 | -1029.236 | -935.062  | 157.4152   | -219.5534  | -14331.6653 |
| 41 | 0.5  | Extremo 2A | -4384.029 | -1006.188 | -935.062  | 157.4152   | 247.9776   | -13822.8092 |
| 42 | 0    | Extremo 2A | -4435.518 | 1058.664  | 953.514   | -191.8512  | 252.2187   | -13979.0818 |
| 42 | 0.5  | Extremo 2A | -4435.518 | 1081.711  | 953.514   | -191.8512  | -224.5384  | -14514.1755 |
| 42 | 0    | Extremo 1A | -4424.01  | 1210.945  | 958.554   | -198.3625  | 255.4648   | -12691.0284 |
| 42 | 0.5  | Extremo 1A | -4424.01  | 1233.993  | 958.554   | -198.3625  | -223.8121  | -13302.263  |
| 43 | 0    | Extremo 1A | -449.354  | -952.109  | 885.854   | 14.6035    | 275.9568   | -13882.7236 |
| 43 | 0.5  | Extremo 2A | -449.354  | -929.061  | 885.854   | 14.6035    | -166.9703  | -13412.4312 |
| 43 | 0    | Extremo 2A | -426.195  | -914.88   | 887.409   | 11.6281    | 274.0543   | -12773.7208 |
| 43 | 0.5  | Extremo 2A | -426.195  | -891.833  | 887.409   | 11.6281    | -169.6502  | -12322.0426 |
| 44 | 0    | Extremo 1A | -433.115  | 922.813   | 868.045   | 102.589    | 162.598    | -13204.8383 |
| 44 | 0.5  | Extremo 1A | -433.115  | 945.86    | 868.045   | 102.589    | -271.4244  | -13672.0066 |
| 44 | 0    | Extremo 1A | -393.248  | 935.221   | 864.545   | 75.284     | 166.1383   | -13089.8028 |
| 44 | 0.5  | Extremo 2A | -393.248  | 958.269   | 864.545   | 75.284     | -266.1342  | -13563.1753 |
| 45 | 0    | Extremo 2A | -4331.694 | -1046.635 | 930.695   | -78.2537   | 222.3127   | -14238.2962 |
| 45 | 0.5  | Extremo 2A | -4331.694 | -1023.587 | 930.695   | -78.2537   | -243.0349  | -13720.7407 |
| 45 | 0    | Extremo 1A | -4289.066 | -1039.253 | 930.076   | -114.8878  | 223.6415   | -14158.9124 |
| 45 | 0.5  | Extremo 1A | -4289.066 | -1016.205 | 930.076   | -114.8878  | -241.3964  | -13645.0479 |
| 46 | 0    | Extremo 1A | -4330.285 | 1031.286  | -940.146  | 79.0233    | -243.9957  | -13741.1952 |
| 46 | 0.5  | Extremo 2A | -4330.285 | 1054.333  | -940.146  | 79.0233    | 226.0775   | -14262.6    |
| 46 | 0    | Extremo 2A | -4283.32  | 1072.616  | -929.519  | 86.2346    | -241.0562  | -12671.8222 |
| 46 | 0.5  | Extremo 2A | -4283.32  | 1095.663  | -929.519  | 86.2346    | 223.7032   | -13213.892  |
| 47 | 0    | Extremo 1A | -393.316  | -965.608  | -874.561  | -105.9063  | -269.6709  | -13720.3861 |
| 47 | 0.5  | Extremo 1A | -393.316  | -942.56   | -874.561  | -105.9063  | 167.6099   | -13243.344  |
| 47 | 0    | Extremo 1A | -394.185  | -964.98   | -864.466  | -103.121   | -267.1991  | -12753.906  |
| 47 | 0.5  | Extremo 2A | -394.185  | -941.933  | -864.466  | -103.121   | 165.0342   | -12277.1778 |
| 48 | 0    | Extremo 2A | -322.491  | 1527.15   | -2426.534 | -2410.5239 | -189.5204  | -428.4592   |
| 48 | 0.26 | Extremo 2A | -322.491  | 1535.925  | -2426.534 | -2410.5239 | 441.3785   | -826.659    |
| 48 | 0.52 | Extremo 1A | -322.491  | 1544.7    | -2426.534 | -2410.5239 | 1072.2775  | -1227.1402  |
| 48 | 0    | Extremo 1A | -326.751  | 1517.409  | -2426.255 | -2358.3741 | -186.9362  | -428.6021   |
| 48 | 0.26 | Extremo 1A | -326.751  | 1526.184  | -2426.255 | -2358.3741 | 443.8901   | -824.2691   |
| 48 | 0.52 | Extremo 2A | -326.751  | 1534.959  | -2426.255 | -2358.3741 | 1074.7165  | -1222.2175  |
| 49 | 0    | Extremo 2A | -380.762  | -1675.812 | 2415.578  | 2507.3299  | 1030.4673  | -1178.0351  |
| 49 | 0.48 | Extremo 2A | -380.762  | -1659.612 | 2415.578  | 2507.3299  | -129.0103  | -377.5335   |
| 49 | 0    | Extremo 1A | -376.621  | -1678.689 | 2417.046  | 2508.0958  | 1029.8303  | -1194.9809  |
| 49 | 0.48 | Extremo 1A | -376.621  | -1662.489 | 2417.046  | 2508.0958  | -130.3517  | -393.0982   |
| 50 | 0    | Extremo 1A | -382.978  | 1741.42   | -2484.833 | -2614.3139 | -136.6561  | -404.8532   |
| 50 | 0.48 | Extremo 2A | -382.978  | 1757.62   | -2484.833 | -2614.3139 | 1056.0638  | -1244.6228  |

|    |      |            |          |           |           |            |            |            |
|----|------|------------|----------|-----------|-----------|------------|------------|------------|
| 50 | 0    | Extremo 2A | -378.985 | 1700.776  | -2420.863 | -2551.0525 | -130.8535  | -384.7459  |
| 50 | 0.48 | Extremo 2A | -378.985 | 1716.976  | -2420.863 | -2551.0525 | 1031.1606  | -1205.0064 |
| 51 | 0    | Extremo 1A | -338.032 | -1534.716 | 2481.295  | 2363.6391  | 1102.1235  | -1222.4632 |
| 51 | 0.26 | Extremo 1A | -338.032 | -1525.941 | 2481.295  | 2363.6391  | 456.9868   | -824.5778  |
| 51 | 0.52 | Extremo 1A | -338.032 | -1517.166 | 2481.295  | 2363.6391  | -188.1499  | -428.9738  |
| 51 | 0    | Extremo 2A | -327.117 | -1513.291 | 2419.969  | 2358.3632  | 1073.3388  | -1204.6472 |
| 51 | 0.26 | Extremo 2A | -327.117 | -1504.516 | 2419.969  | 2358.3632  | 444.147    | -812.3323  |
| 51 | 0.52 | Extremo 2A | -327.117 | -1495.741 | 2419.969  | 2358.3632  | -185.0449  | -422.2988  |
| 52 | 0    | Extremo 1A | 304.359  | 2178.46   | -3245.163 | 3038.7669  | -336.1794  | -391.3697  |
| 52 | 0.26 | Extremo 1A | 304.359  | 2187.235  | -3245.163 | 3038.7669  | 507.5629   | -958.9101  |
| 52 | 0.52 | Extremo 1A | 304.359  | 2196.01   | -3245.163 | 3038.7669  | 1351.3053  | -1528.7321 |
| 52 | 0    | Extremo 2A | 305.504  | 2172.251  | -3235.811 | 3054.7812  | -333.393   | -412.9273  |
| 52 | 0.26 | Extremo 2A | 305.504  | 2181.026  | -3235.811 | 3054.7812  | 507.9179   | -978.8533  |
| 52 | 0.52 | Extremo 2A | 305.504  | 2189.801  | -3235.811 | 3054.7812  | 1349.2288  | -1547.0607 |
| 53 | 0    | Extremo 1A | 397.079  | -2440.119 | 3285.824  | -3373.2771 | 1304.9403  | -1559.1587 |
| 53 | 0.48 | Extremo 1A | 397.079  | -2423.919 | 3285.824  | -3373.2771 | -272.2553  | -391.7896  |
| 53 | 0    | Extremo 1A | 395.517  | -2425.082 | 3275.673  | -3319.8488 | 1302.0206  | -1544.7377 |
| 53 | 0.48 | Extremo 2A | 395.517  | -2408.882 | 3275.673  | -3319.8488 | -270.3023  | -384.5863  |
| 54 | 0    | Extremo 2A | 403.926  | 2502.063  | -3352.966 | 3289.7144  | -278.7171  | -337.2112  |
| 54 | 0.48 | Extremo 2A | 403.926  | 2502.063  | -3352.966 | 3289.7144  | 1330.7063  | -1534.3132 |
| 54 | 0    | Extremo 1A | 396.743  | 2442.9    | -3301.153 | 3294.1322  | -276.3021  | -341.7233  |
| 54 | 0.48 | Extremo 1A | 396.743  | 2459.1    | -3301.153 | 3294.1322  | 1308.2512  | -1518.2036 |
| 55 | 0    | Extremo 1A | 314.277  | -2219.73  | 3305.692  | -3198.2268 | 1382.2001  | -1607.3983 |
| 55 | 0.26 | Extremo 2A | 314.277  | -2210.955 | 3305.692  | -3198.2268 | 522.7202   | -1031.4092 |
| 55 | 0.52 | Extremo 2A | 314.277  | -2202.18  | 3305.692  | -3198.2268 | -336.7597  | -457.7016  |
| 55 | 0    | Extremo 2A | 306.284  | -2176.183 | 3253.79   | -3135.1347 | 1358.0542  | -1558.2198 |
| 55 | 0.26 | Extremo 1A | 306.284  | -2167.408 | 3253.79   | -3135.1347 | 512.0687   | -993.5531  |
| 55 | 0.52 | Extremo 1A | 306.284  | -2158.633 | 3253.79   | -3135.1347 | -333.9167  | -431.1679  |
| 56 | 0    | Extremo 1A | 307.89   | 2177.54   | 3269.576  | -3030.8261 | 337.6544   | -399.5132  |
| 56 | 0.26 | Extremo 2A | 307.89   | 2186.315  | 3269.576  | -3030.8261 | -512.4355  | -966.8144  |
| 56 | 0.52 | Extremo 2A | 307.89   | 2195.09   | 3269.576  | -3030.8261 | -1362.5254 | -1536.3271 |
| 56 | 0    | Extremo 2A | 303.184  | 2085.624  | 3231.631  | -2776.3408 | 334.4918   | -442.2204  |
| 56 | 0.26 | Extremo 1A | 303.184  | 2094.399  | 3231.631  | -2776.3408 | -505.7324  | -985.6234  |
| 56 | 0.52 | Extremo 1A | 303.184  | 2103.174  | 3231.631  | -2776.3408 | -1345.9566 | -1531.3078 |
| 57 | 0    | Extremo 1A | 400.167  | -2440.955 | -3307.981 | 3361.8044  | -1314.4516 | -1564.669  |
| 57 | 0.48 | Extremo 2A | 400.167  | -2424.755 | -3307.981 | 3361.8044  | 273.3796   | -396.8985  |
| 57 | 0    | Extremo 2A | 396.45   | -2338.703 | -3268.735 | 3052.2005  | -1298.8414 | -1553.9545 |
| 57 | 0.48 | Extremo 2A | 396.45   | -2322.503 | -3268.735 | 3052.2005  | 270.1513   | -435.2652  |
| 58 | 0    | Extremo 1A | 404.538  | 2471.719  | 3363.699  | -3277.0393 | 280.4431   | -337.1086  |
| 58 | 0.48 | Extremo 1A | 404.538  | 2487.919  | 3363.699  | -3277.0393 | -1334.1324 | -1527.4219 |
| 58 | 0    | Extremo 1A | 405.036  | 2426.059  | 3376.531  | -2955.6899 | 284.1192   | -370.3221  |
| 58 | 0.48 | Extremo 2A | 405.036  | 2442.259  | 3376.53   |            |            |            |



|     |         |            |            |          |         |         |          |            |
|-----|---------|------------|------------|----------|---------|---------|----------|------------|
| 118 | 0.7398  | Extremo 2A | -22663.768 | -189.917 | -97.284 | 41.5781 | -78.7913 | -3348.4709 |
| 118 | 1.47961 | Extremo 2A | -22663.768 | -189.917 | -97.284 | 41.5781 | -6.8205  | -3207.9697 |
| 119 | 0       | Extremo 1A | -23121.321 | -177.094 | -20.128 | 25.5684 | -31.2702 | -3207.3146 |
| 119 | 0.7398  | Extremo 1A | -23121.321 | -177.094 | -20.128 | 25.5684 | -16.3793 | -3076.3    |
| 119 | 1.47961 | Extremo 1A | -23121.321 | -177.094 | -20.128 | 25.5684 | -1.4883  | -2945.2853 |
| 119 | 0       | Extremo 2A | -22664.561 | -187.992 | -7.181  | 14.287  | -7.522   | -3204      |
| 119 | 0.7398  | Extremo 2A | -22664.561 | -187.992 | -7.181  | 14.287  | -2.4396  | -3064.9231 |
| 119 | 1.47961 | Extremo 2A | -22664.561 | -187.992 | -7.181  | 14.287  | 2.8729   | -2925.8463 |
| 120 | 0       | Extremo 1A | -23110.759 | -175.335 | -10.308 | 15.3784 | -19.3649 | -2934.3014 |
| 120 | 0.7398  | Extremo 1A | -23110.759 | -175.335 | -10.308 | 15.3784 | -11.7391 | -2804.5882 |
| 120 | 1.47961 | Extremo 1A | -23110.759 | -175.335 | -10.308 | 15.3784 | -4.1132  | -2674.8749 |
| 120 | 0       | Extremo 2A | -22665.262 | -187.101 | 2.587   | 5.3981  | 1.6776   | -2923.8637 |
| 120 | 0.7398  | Extremo 2A | -22665.262 | -187.101 | 2.587   | 5.3981  | -0.236   | -2785.4456 |
| 120 | 1.47961 | Extremo 2A | -22665.262 | -187.101 | 2.587   | 5.3981  | -2.1495  | -2647.0275 |
| 121 | 0       | Extremo 1A | -23099.298 | -174.715 | -11.803 | 12.1112 | -21.2419 | -2665.0326 |
| 121 | 0.7398  | Extremo 1A | -23099.298 | -174.715 | -11.803 | 12.1112 | -12.5103 | -2535.7778 |
| 121 | 1.47961 | Extremo 1A | -23099.298 | -174.715 | -11.803 | 12.1112 | -3.7786  | -2406.5231 |
| 121 | 0       | Extremo 2A | -22665.941 | -186.783 | 1.099   | 2.5823  | -1.3097  | -2645.6375 |
| 121 | 0.7398  | Extremo 2A | -22665.941 | -186.783 | 1.099   | 2.5823  | -2.123   | -2507.4546 |
| 121 | 1.47961 | Extremo 2A | -22665.941 | -186.783 | 1.099   | 2.5823  | -2.9364  | -2369.2717 |
| 122 | 0       | Extremo 1A | -23087.614 | -174.522 | -12.219 | 11.0977 | -21.0261 | -2396.9946 |
| 122 | 0.7398  | Extremo 1A | -23087.614 | -174.522 | -12.219 | 11.0977 | -11.9864 | -2267.8826 |
| 122 | 1.47961 | Extremo 1A | -23087.614 | -174.522 | -12.219 | 11.0977 | -2.9468  | -2138.7706 |
| 122 | 0       | Extremo 2A | -22666.614 | -186.683 | 0.685   | 1.7082  | -1.8959  | -2368.0455 |
| 122 | 0.7398  | Extremo 2A | -22666.614 | -186.683 | 0.685   | 1.7082  | -2.4028  | -2229.9364 |
| 122 | 1.47961 | Extremo 2A | -22666.614 | -186.683 | 0.685   | 1.7082  | -2.9098  | -2091.8273 |
| 123 | 0       | Extremo 1A | -23075.875 | -174.467 | -12.22  | 10.7905 | -20.3113 | -2129.3228 |
| 123 | 0.7398  | Extremo 1A | -23075.875 | -174.467 | -12.22  | 10.7905 | -11.2713 | -2000.2516 |
| 123 | 1.47961 | Extremo 1A | -23075.875 | -174.467 | -12.22  | 10.7905 | -2.2312  | -1871.1805 |
| 123 | 0       | Extremo 2A | -22667.285 | -186.655 | 0.685   | 1.4407  | -1.907   | -2090.6435 |
| 123 | 0.7398  | Extremo 2A | -22667.285 | -186.655 | 0.685   | 1.4407  | -2.4135  | -1952.5557 |
| 123 | 1.47961 | Extremo 2A | -22667.285 | -186.655 | 0.685   | 1.4407  | -2.92    | -1814.4678 |
| 124 | 0       | Extremo 1A | -23064.122 | -174.452 | -12.208 | 10.6989 | -19.6251 | -1861.7521 |
| 124 | 0.7398  | Extremo 1A | -23064.122 | -174.452 | -12.208 | 10.6989 | -10.5933 | -1732.6918 |
| 124 | 1.47961 | Extremo 1A | -23064.122 | -174.452 | -12.208 | 10.6989 | -1.5616  | -1603.6316 |
| 124 | 0       | Extremo 2A | -22667.956 | -186.647 | 0.696   | 1.3595  | -1.927   | -1813.2942 |
| 124 | 0.7398  | Extremo 2A | -22667.956 | -186.647 | 0.696   | 1.3595  | -2.4418  | -1675.2121 |
| 124 | 1.47961 | Extremo 2A | -22667.956 | -186.647 | 0.696   | 1.3595  | -2.9567  | -1537.13   |
| 125 | 0       | Extremo 1A | -23052.367 | -174.448 | -12.207 | 10.6718 | -18.9604 | -1594.2075 |
| 125 | 0.7398  | Extremo 1A | -23052.367 | -174.448 | -12.207 | 10.6718 | -9.9295  | -1465.15   |
| 125 | 1.47961 | Extremo 1A | -23052.367 | -174.448 | -12.207 | 10.6718 | -0.8986  | -1336.0924 |
| 125 | 0       | Extremo 2A | -22668.628 | -186.645 | 0.697   | 1.3351  | -1.9637  | -1535.9586 |
| 125 | 0.7398  | Extremo 2A | -22668.628 | -186.645 | 0.697   | 1.3351  | -2.4794  | -1397.878  |
| 125 | 1.47961 | Extremo 2A | -22668.628 | -186.645 | 0.697   | 1.3351  | -2.9951  | -1259.7973 |
| 126 | 0       | Extremo 1A | -23040.61  | -174.448 | -12.207 | 10.6638 | -18.2984 | -1326.6693 |
| 126 | 0.7398  | Extremo 1A | -23040.61  | -174.448 | -12.207 | 10.6638 | -9.2674  | -1197.6123 |
| 126 | 1.47961 | Extremo 1A | -23040.61  | -174.448 | -12.207 | 10.6638 | -0.2363  | -1068.5554 |
| 126 | 0       | Extremo 2A | -22669.299 | -186.645 | 0.697   | 1.3277  | -2.0018  | -1258.6264 |
| 126 | 0.7398  | Extremo 2A | -22669.299 | -186.645 | 0.697   | 1.3277  | -2.5174  | -1120.546  |
| 126 | 1.47961 | Extremo 2A | -22669.299 | -186.645 | 0.697   | 1.3277  | -3.0329  | -982.4657  |
| 127 | 0       | Extremo 1A | -23028.853 | -174.447 | -12.207 | 10.6613 | -17.6363 | -1059.1324 |
| 127 | 0.7398  | Extremo 1A | -23028.853 | -174.447 | -12.207 | 10.6613 | -8.6052  | -930.0757  |
| 127 | 1.47961 | Extremo 1A | -23028.853 | -174.447 | -12.207 | 10.6613 | 0.4258   | -801.019   |
| 127 | 0       | Extremo 2A | -22669.97  | -186.645 | 0.697   | 1.3255  | -2.0397  | -981.2949  |
| 127 | 0.7398  | Extremo 2A | -22669.97  | -186.645 | 0.697   | 1.3255  | -2.5552  | -843.2146  |
| 127 | 1.47961 | Extremo 2A | -22669.97  | -186.645 | 0.697   | 1.3255  | -3.0707  | -705.1344  |
| 128 | 0       | Extremo 1A | -23017.097 | -174.447 | -12.207 | 10.6598 | -16.9741 | -791.5961  |
| 128 | 0.7398  | Extremo 1A | -23017.097 | -174.447 | -12.207 | 10.6598 | -7.943   | -662.5399  |
| 128 | 1.47961 | Extremo 1A | -23017.097 | -174.447 | -12.207 | 10.6598 | 1.0881   | -533.4836  |
| 128 | 0       | Extremo 2A | -22670.641 | -186.644 | 0.697   | 1.3247  | -2.0775  | -703.9636  |
| 128 | 0.7398  | Extremo 2A | -22670.641 | -186.644 | 0.697   | 1.3247  | -2.593   | -565.8834  |
| 128 | 1.47961 | Extremo 2A | -22670.641 | -186.644 | 0.697   | 1.3247  | -3.1085  | -427.8032  |
| 129 | 0       | Extremo 1A | -23005.34  | -174.445 | -12.207 | 10.6564 | -16.3111 | -524.0612  |
| 129 | 0.7398  | Extremo 1A | -23005.34  | -174.445 | -12.207 | 10.6564 | -7.28    | -395.0066  |
| 129 | 1.47961 | Extremo 1A | -23005.34  | -174.445 | -12.207 | 10.6564 | 1.7511   | -265.9519  |
| 129 | 0       | Extremo 2A | -22671.312 | -186.644 | 0.697   | 1.3241  | -2.1153  | -426.6325  |
| 129 | 0.7398  | Extremo 2A | -22671.312 | -186.644 | 0.697   | 1.3241  | -2.6308  | -288.5525  |
| 129 | 1.47961 | Extremo 2A | -22671.312 | -186.644 | 0.697   | 1.3241  | -3.1463  | -150.4725  |
| 130 | 0       | Extremo 1A | -22993.586 | -174.436 | -12.207 | 10.6435 | -15.6451 | -256.5322  |
| 130 | 0.7398  | Extremo 1A | -22993.586 | -174.436 | -12.207 | 10.6435 | -6.6141  | -127.4839  |
| 130 | 1.47961 | Extremo 1A | -22993.586 | -174.436 | -12.207 | 10.6435 | 2.417    | 1.5643     |
| 130 | 0       | Extremo 2A | -22671.983 | -186.643 | 0.697   | 1.3225  | -2.1533  | -149.3021  |

|     |         |            |            |          |         |          |          |            |
|-----|---------|------------|------------|----------|---------|----------|----------|------------|
| 130 | 0.7398  | Extremo 2A | -22671.983 | -186.643 | 0.697   | 1.3225   | -2.6689  | -11.2229   |
| 130 | 1.47961 | Extremo 2A | -22671.983 | -186.643 | 0.697   | 1.3225   | -3.1844  | 126.8563   |
| 131 | 0       | Extremo 1A | -22981.84  | -174.404 | -12.207 | 10.5965  | -14.9672 | 10.9723    |
| 131 | 0.7398  | Extremo 1A | -22981.84  | -174.404 | -12.207 | 10.5965  | -5.9361  | 139.9971   |
| 131 | 1.47961 | Extremo 1A | -22981.84  | -174.404 | -12.207 | 10.5965  | 3.095    | 269.0219   |
| 131 | 0       | Extremo 2A | -22672.653 | -186.639 | 0.697   | 1.3166   | -2.192   | 128.0253   |
| 131 | 0.7398  | Extremo 2A | -22672.653 | -186.639 | 0.697   | 1.3166   | -2.7076  | 266.1015   |
| 131 | 1.47961 | Extremo 2A | -22672.653 | -186.639 | 0.697   | 1.3166   | -3.2231  | 404.1778   |
| 132 | 0       | Extremo 1A | -22970.127 | -174.295 | -12.207 | 10.4354  | -14.2404 | 278.3821   |
| 132 | 0.7398  | Extremo 1A | -22970.127 | -174.295 | -12.207 | 10.4354  | -5.2094  | 407.3263   |
| 132 | 1.47961 | Extremo 1A | -22970.127 | -174.295 | -12.207 | 10.4354  | 3.8217   | 536.2705   |
| 132 | 0       | Extremo 2A | -22673.322 | -186.626 | 0.697   | 1.2966   | -2.2335  | 405.3408   |
| 132 | 0.7398  | Extremo 2A | -22673.322 | -186.626 | 0.697   | 1.2966   | -2.749   | 543.4071   |
| 132 | 1.47961 | Extremo 2A | -22673.322 | -186.626 | 0.697   | 1.2966   | -3.2645  | 681.4734   |
| 133 | 0       | Extremo 1A | -22958.547 | -173.955 | -12.207 | 9.9318   | -13.3163 | 545.4483   |
| 133 | 0.7398  | Extremo 1A | -22958.547 | -173.955 | -12.207 | 9.9318   | -4.2852  | 674.1408   |
| 133 | 1.47961 | Extremo 1A | -22958.547 | -173.955 | -12.207 | 9.9318   | 4.7459   | 802.8332   |
| 133 | 0       | Extremo 2A | -22673.983 | -186.583 | 0.697   | 1.234    | -2.2863  | 682.6137   |
| 133 | 0.7398  | Extremo 2A | -22673.983 | -186.583 | 0.697   | 1.234    | -2.8018  | 820.6487   |
| 133 | 1.47961 | Extremo 2A | -22673.983 | -186.583 | 0.697   | 1.234    | -3.3173  | 958.6837   |
| 134 | 0       | Extremo 1A | -22947.508 | -173.032 | -12.207 | 8.5665   | -11.5928 | 811.3592   |
| 134 | 0.7398  | Extremo 1A | -22947.508 | -173.032 | -12.207 | 8.5665   | -2.5618  | 939.3692   |
| 134 | 1.47961 | Extremo 1A | -22947.508 | -173.032 | -12.207 | 8.5665   | 6.4693   | 1067.3793  |
| 134 | 0       | Extremo 2A | -22674.613 | -186.469 | 0.697   | 1.0644   | -2.3847  | 959.743    |
| 134 | 0.7398  | Extremo 2A | -22674.613 | -186.469 | 0.697   | 1.0644   | -2.9002  | 1097.6932  |
| 134 | 1.47961 | Extremo 2A | -22674.613 | -186.469 | 0.697   | 1.0644   | -3.4157  | 1235.6434  |
| 135 | 0       | Extremo 1A | -22938.655 | -171.199 | -12.207 | 5.8533   | -6.6332  | 1073.7537  |
| 135 | 0.7398  | Extremo 1A | -22938.655 | -171.199 | -12.207 | 5.8533   | -2.3978  | 1200.4074  |
| 135 | 1.47961 | Extremo 1A | -22938.655 | -171.199 | -12.207 | 5.8533   | 11.4289  | 1327.0612  |
| 135 | 0       | Extremo 2A | -22675.119 | -186.241 | 0.697   | 0.7273   | -2.6678  | 1236.4355  |
| 135 | 0.7398  | Extremo 2A | -22675.119 | -186.241 | 0.697   | 0.7273   | -3.1833  | 1374.2172  |
| 135 | 1.47961 | Extremo 2A | -22675.119 | -186.241 | 0.697   | 0.7273   | -3.6988  | 1511.9988  |
| 136 | 0       | Extremo 1A | -23149.126 | -169.434 | 99.984  | -56.649  | 163.4636 | -3343.6319 |
| 136 | 0.7398  | Extremo 1A | -23149.126 | -169.434 | 99.984  | -56.649  | 89.4951  | -3218.2842 |
| 136 | 1.47961 | Extremo 1A | -23149.126 | -169.434 | 99.984  | -56.649  | 15.5266  | -3092.9366 |
| 136 | 0       | Extremo 2A | -23242.824 | -121.842 | 112.086 | -65.3126 | 190.2821 | -2794.0258 |
| 136 | 0.7398  | Extremo 2A | -23242.824 | -121.842 | 112.086 | -65.3126 | 107.3602 | -2703.8864 |
| 136 | 1.47961 | Extremo 2A | -23242.824 | -121.842 | 112.086 | -65.3126 | 24.4383  | -2613.747  |
| 137 | 0       | Extremo 1A | -23149.743 | -166.134 | 9.067   | -27.1998 | 16.7379  | -3076.8167 |
| 137 | 0.7398  | Extremo 1A | -23149.743 | -166.134 | 9.067   | -27.1998 | 10.0301  | -2953.9104 |
| 137 | 1.47961 | Extremo 1A | -23149.743 | -166.134 | 9.067   | -27.1998 | 3.3222   | -2831.0042 |
| 137 | 0       | Extremo 2A | -23239.126 | -121.475 | 15.676  | -37.6505 | 32.1552  | -2590.4957 |
| 137 | 0.7398  | Extremo 2A | -23239.126 | -121.475 | 15.676  | -37.6505 | 20.558   | -2500.628  |
| 137 | 1.47961 | Extremo 2A | -23        |          |         |          |          |            |



|     |         |            |            |          |        |          |          |            |
|-----|---------|------------|------------|----------|--------|----------|----------|------------|
| 142 | 0.7398  | Extremo 2A | -23205.358 | -120.886 | 7.236  | -24.6439 | 16.8648  | -1495.9791 |
| 142 | 1.47961 | Extremo 2A | -23205.358 | -120.886 | 7.236  | -24.6439 | 11.5115  | -1406.5469 |
| 143 | 0       | Extremo 1A | -23143.842 | -163.797 | 1.117  | -12.7275 | 9.5419   | -1548.1967 |
| 143 | 0.7398  | Extremo 1A | -23143.842 | -163.797 | 1.117  | -12.7275 | 8.7156   | -1427.0189 |
| 143 | 1.47961 | Extremo 1A | -23143.842 | -163.797 | 1.117  | -12.7275 | 7.8893   | -1305.8411 |
| 143 | 0       | Extremo 2A | -23198.39  | -120.885 | 7.235  | -24.6181 | 21.8236  | -1384.7961 |
| 143 | 0.7398  | Extremo 2A | -23198.39  | -120.885 | 7.235  | -24.6181 | 16.4711  | -1295.3649 |
| 143 | 1.47961 | Extremo 2A | -23198.39  | -120.885 | 7.235  | -24.6181 | 11.1187  | -1205.9336 |
| 144 | 0       | Extremo 1A | -23142.766 | -163.796 | 1.117  | -12.7196 | 9.4815   | -1294.6008 |
| 144 | 0.7398  | Extremo 1A | -23142.766 | -163.796 | 1.117  | -12.7196 | 8.6551   | -1173.4236 |
| 144 | 1.47961 | Extremo 1A | -23142.766 | -163.796 | 1.117  | -12.7196 | 7.8287   | -1052.2464 |
| 144 | 0       | Extremo 2A | -23191.422 | -120.885 | 7.235  | -24.6102 | 21.4313  | -1184.1832 |
| 144 | 0.7398  | Extremo 2A | -23191.422 | -120.885 | 7.235  | -24.6102 | 16.0788  | -1094.7522 |
| 144 | 1.47961 | Extremo 2A | -23191.422 | -120.885 | 7.235  | -24.6102 | 10.7262  | -1005.3212 |
| 145 | 0       | Extremo 1A | -23141.691 | -163.796 | 1.117  | -12.717  | 9.421    | -1041.0063 |
| 145 | 0.7398  | Extremo 1A | -23141.691 | -163.796 | 1.117  | -12.717  | 8.5945   | -919.8293  |
| 145 | 1.47961 | Extremo 1A | -23141.691 | -163.796 | 1.117  | -12.717  | 7.7681   | -798.6523  |
| 145 | 0       | Extremo 2A | -23184.454 | -120.884 | 7.235  | -24.6074 | 21.039   | -893.5708  |
| 145 | 0.7398  | Extremo 2A | -23184.454 | -120.884 | 7.235  | -24.6074 | 15.6863  | -824.1401  |
| 145 | 1.47961 | Extremo 2A | -23184.454 | -120.884 | 7.235  | -24.6074 | 10.3337  | -804.7093  |
| 146 | 0       | Extremo 1A | -23140.615 | -163.796 | 1.117  | -12.7154 | 9.3603   | -787.4123  |
| 146 | 0.7398  | Extremo 1A | -23140.615 | -163.796 | 1.117  | -12.7154 | 8.5339   | -666.2358  |
| 146 | 1.47961 | Extremo 1A | -23140.615 | -163.796 | 1.117  | -12.7154 | 7.7074   | -545.0593  |
| 146 | 0       | Extremo 2A | -23177.486 | -120.883 | 7.235  | -24.6048 | 20.6464  | -782.9592  |
| 146 | 0.7398  | Extremo 2A | -23177.486 | -120.883 | 7.235  | -24.6048 | 15.2938  | -693.5294  |
| 146 | 1.47961 | Extremo 2A | -23177.486 | -120.883 | 7.235  | -24.6048 | 9.9412   | -604.0995  |
| 147 | 0       | Extremo 1A | -23139.539 | -163.793 | 1.117  | -12.7113 | 9.2997   | -533.82    |
| 147 | 0.7398  | Extremo 1A | -23139.539 | -163.793 | 1.117  | -12.7113 | 8.4732   | -412.6454  |
| 147 | 1.47961 | Extremo 1A | -23139.539 | -163.793 | 1.117  | -12.7113 | 7.6468   | -291.4709  |
| 147 | 0       | Extremo 2A | -23170.518 | -120.878 | 7.235  | -24.5971 | 20.2535  | -582.3507  |
| 147 | 0.7398  | Extremo 2A | -23170.518 | -120.878 | 7.235  | -24.5971 | 14.9009  | -492.9246  |
| 147 | 1.47961 | Extremo 2A | -23170.518 | -120.878 | 7.235  | -24.5971 | 9.5483   | -403.4985  |
| 148 | 0       | Extremo 1A | -23138.463 | -163.783 | 1.117  | -12.696  | 9.2387   | -280.2347  |
| 148 | 0.7398  | Extremo 1A | -23138.463 | -163.783 | 1.117  | -12.696  | 8.4123   | -159.0678  |
| 148 | 1.47961 | Extremo 1A | -23138.463 | -163.783 | 1.117  | -12.696  | 7.5858   | -37.9008   |
| 148 | 0       | Extremo 2A | -23163.552 | -120.858 | 7.235  | -24.5676 | 19.8588  | -381.7557  |
| 148 | 0.7398  | Extremo 2A | -23163.552 | -120.858 | 7.235  | -24.5676 | 14.5062  | -292.3444  |
| 148 | 1.47961 | Extremo 2A | -23163.552 | -120.858 | 7.235  | -24.5676 | 9.1536   | -202.933   |
| 149 | 0       | Extremo 1A | -23137.388 | -163.745 | 1.117  | -12.6399 | 9.1767   | -26.6786   |
| 149 | 0.7398  | Extremo 1A | -23137.388 | -163.745 | 1.117  | -12.6399 | 8.3502   | 94.4603    |
| 149 | 1.47961 | Extremo 1A | -23137.388 | -163.745 | 1.117  | -12.6399 | 7.5238   | 215.5992   |
| 149 | 0       | Extremo 2A | -23156.59  | -120.785 | 7.235  | -24.459  | 19.457   | -181.2173  |
| 149 | 0.7398  | Extremo 2A | -23156.59  | -120.785 | 7.235  | -24.459  | 14.1044  | -91.8602   |
| 149 | 1.47961 | Extremo 2A | -23156.59  | -120.785 | 7.235  | -24.459  | 8.7518   | -2.5031    |
| 150 | 0       | Extremo 1A | -23136.316 | -163.615 | 1.117  | -12.4477 | 9.1102   | 226.7644   |
| 150 | 0.7398  | Extremo 1A | -23136.316 | -163.615 | 1.117  | -12.4477 | 8.2837   | 347.8072   |
| 150 | 1.47961 | Extremo 1A | -23136.316 | -163.615 | 1.117  | -12.4477 | 7.4573   | 468.8501   |
| 150 | 0       | Extremo 2A | -23149.648 | -120.534 | 7.235  | -24.0871 | 19.0263  | 19.1023    |
| 150 | 0.7398  | Extremo 2A | -23149.648 | -120.534 | 7.235  | -24.0871 | 13.6736  | 108.2735   |
| 150 | 1.47961 | Extremo 2A | -23149.648 | -120.534 | 7.235  | -24.0871 | 8.321    | 197.4447   |
| 151 | 0       | Extremo 1A | -23135.257 | -163.209 | 1.117  | -11.847  | 9.0256   | 479.7976   |
| 151 | 0.7398  | Extremo 1A | -23135.257 | -163.209 | 1.117  | -11.847  | 8.1992   | 600.5401   |
| 151 | 1.47961 | Extremo 1A | -23135.257 | -163.209 | 1.117  | -11.847  | 7.3727   | 721.2827   |
| 151 | 0       | Extremo 2A | -23142.785 | -119.748 | 7.235  | -22.9247 | 18.4785  | 218.6289   |
| 151 | 0.7398  | Extremo 2A | -23142.785 | -119.748 | 7.235  | -22.9247 | 13.1259  | 307.2191   |
| 151 | 1.47961 | Extremo 2A | -23142.785 | -119.748 | 7.235  | -22.9247 | 7.7733   | 395.8092   |
| 152 | 0       | Extremo 1A | -23134.246 | -162.109 | 1.117  | -10.2184 | 8.8679   | 731.4528   |
| 152 | 0.7398  | Extremo 1A | -23134.246 | -162.109 | 1.117  | -10.2184 | 8.0414   | 851.3813   |
| 152 | 1.47961 | Extremo 1A | -23134.246 | -162.109 | 1.117  | -10.2184 | 7.215    | 971.3097   |
| 152 | 0       | Extremo 2A | -23136.241 | -117.619 | 7.235  | -19.7733 | 17.4571  | 415.489    |
| 152 | 0.7398  | Extremo 2A | -23136.241 | -117.619 | 7.235  | -19.7733 | 12.1044  | 502.5039   |
| 152 | 1.47961 | Extremo 2A | -23136.241 | -117.619 | 7.235  | -19.7733 | 6.7518   | 589.5187   |
| 153 | 0       | Extremo 1A | -23133.436 | -159.922 | 1.117  | -6.982   | 8.414    | 978.9134   |
| 153 | 0.7398  | Extremo 1A | -23133.436 | -159.922 | 1.117  | -6.982   | 7.5876   | 1097.224   |
| 153 | 1.47961 | Extremo 1A | -23133.436 | -159.922 | 1.117  | -6.982   | 6.7611   | 1215.5347  |
| 153 | 0       | Extremo 2A | -23130.994 | -113.387 | 7.235  | -13.5106 | 14.5176  | 604.2322   |
| 153 | 0.7398  | Extremo 2A | -23130.994 | -113.387 | 7.235  | -13.5106 | 9.165    | 688.1166   |
| 153 | 1.47961 | Extremo 2A | -23130.994 | -113.387 | 7.235  | -13.5106 | 3.8123   | 772.0009   |
| 154 | 0       | Extremo 1A | -22623.807 | -180.612 | 86.284 | -15.094  | 116.5005 | -3453.3533 |
| 154 | 0.7398  | Extremo 1A | -22623.807 | -180.612 | 86.284 | -15.094  | 52.6671  | -3319.7362 |
| 154 | 1.47961 | Extremo 1A | -22623.807 | -180.612 | 86.284 | -15.094  | -11.1663 | -3186.1191 |
| 154 | 0       | Extremo 2A | -22585.412 | -184.955 | 98.677 | -29.2427 | 146.8826 | -3466.7522 |

|     |         |            |            |          |         |          |          |            |
|-----|---------|------------|------------|----------|---------|----------|----------|------------|
| 154 | 0.7398  | Extremo 2A | -22585.412 | -184.955 | 98.677  | -29.2427 | 73.8807  | -3329.9221 |
| 154 | 1.47961 | Extremo 2A | -22585.412 | -184.955 | 98.677  | -29.2427 | 0.8788   | -3193.092  |
| 155 | 0       | Extremo 1A | -22630.726 | -184.538 | -4.287  | 3.5862   | -19.2912 | -3200.9578 |
| 155 | 0.7398  | Extremo 1A | -22630.726 | -184.538 | -4.287  | 3.5862   | -16.12   | -3064.4359 |
| 155 | 1.47961 | Extremo 1A | -22630.726 | -184.538 | -4.287  | 3.5862   | -12.9488 | -2927.914  |
| 155 | 0       | Extremo 2A | -22584.618 | -186.88  | 8.575   | -7.6505  | 4.1588   | -3197.0617 |
| 155 | 0.7398  | Extremo 2A | -22584.618 | -186.88  | 8.575   | -7.6505  | -2.1848  | -3058.8072 |
| 155 | 1.47961 | Extremo 2A | -22584.618 | -186.88  | 8.575   | -7.6505  | -8.5284  | -2920.5527 |
| 156 | 0       | Extremo 1A | -22641.288 | -186.297 | -14.107 | 8.5692   | -26.3356 | -2938.8979 |
| 156 | 0.7398  | Extremo 1A | -22641.288 | -186.297 | -14.107 | 8.5692   | -15.8993 | -2801.0746 |
| 156 | 1.47961 | Extremo 1A | -22641.288 | -186.297 | -14.107 | 8.5692   | -5.4631  | -2663.2513 |
| 156 | 0       | Extremo 2A | -22583.917 | -187.77  | -1.193  | -1.3973  | -5.2572  | -2922.5353 |
| 156 | 0.7398  | Extremo 2A | -22583.917 | -187.77  | -1.193  | -1.3973  | -4.3747  | -2783.6221 |
| 156 | 1.47961 | Extremo 2A | -22583.917 | -187.77  | -1.193  | -1.3973  | -3.4921  | -2644.7088 |
| 157 | 0       | Extremo 1A | -22652.749 | -186.917 | -12.612 | 10.002   | -22.2611 | -2673.0937 |
| 157 | 0.7398  | Extremo 1A | -22652.749 | -186.917 | -12.612 | 10.002   | -12.9306 | -2534.8119 |
| 157 | 1.47961 | Extremo 1A | -22652.749 | -186.917 | -12.612 | 10.002   | -3.6001  | -2396.5301 |
| 157 | 0       | Extremo 2A | -22583.239 | -188.088 | 0.294   | 0.4774   | -2.3235  | -2646.0989 |
| 157 | 0.7398  | Extremo 2A | -22583.239 | -188.088 | 0.294   | 0.4774   | -2.5411  | -2506.9504 |
| 157 | 1.47961 | Extremo 2A | -22583.239 | -188.088 | 0.294   | 0.4774   | -2.7588  | -2367.802  |
| 158 | 0       | Extremo 1A | -22664.433 | -187.11  | -12.196 | 10.4444  | -20.9372 | -2406.0586 |
| 158 | 0.7398  | Extremo 1A | -22664.433 | -187.11  | -12.196 | 10.4444  | -11.9147 | -2267.634  |
| 158 | 1.47961 | Extremo 1A | -22664.433 | -187.11  | -12.196 | 10.4444  | -2.8922  | -2129.2095 |
| 158 | 0       | Extremo 2A | -22582.566 | -188.188 | 0.708   | 1.0562   | -1.8074  | -2369.0283 |
| 158 | 0.7398  | Extremo 2A | -22582.566 | -188.188 | 0.708   | 1.0562   | -2.3315  | -2229.806  |
| 158 | 1.47961 | Extremo 2A | -22582.566 | -188.188 | 0.708   | 1.0562   | -2.8555  | -2090.5837 |
| 159 | 0       | Extremo 1A | -22676.172 | -187.165 | -12.195 | 10.5882  | -20.2747 | -2138.6572 |
| 159 | 0.7398  | Extremo 1A | -22676.172 | -187.165 | -12.195 | 10.5882  | -11.2527 | -2000.1919 |
| 159 | 1.47961 | Extremo 1A | -22676.172 | -187.165 | -12.195 | 10.5882  | -2.2306  | -1861.7265 |
| 159 | 0       | Extremo 2A | -22581.894 | -188.217 | 0.709   | 1.2387   | -1.8705  | -2091.7676 |
| 159 | 0.7398  | Extremo 2A | -22581.894 | -188.217 | 0.709   | 1.2387   | -2.395   | -1952.5241 |
| 159 | 1.47961 | Extremo 2A | -22581.894 | -188.217 | 0.709   | 1.2387   | -2.9195  | -1813.2806 |
| 160 | 0       | Extremo 1A | -22687.925 | -187.18  | -12.206 | 10.6362  | -19.6239 | -1871.1548 |
| 160 | 0.7398  | Extremo 1A | -22687.925 | -187.18  | -12.206 | 10.6362  | -10.5934 | -1732.6786 |
| 160 | 1.47961 | Extremo 1A | -22687.925 | -187.18  | -12.206 | 10.6362  | -1.563   | -1594.2023 |
| 160 | 0       | Extremo 2A | -22581.223 | -188.225 | 0.698   | 1.297    | -1.9258  | -1814.4542 |
| 160 | 0.7398  | Extremo 2A | -22581.223 | -188.225 | 0.698   | 1.297    | -2.4419  | -1675.205  |
| 160 | 1.47961 | Extremo 2A | -22581.223 | -188.225 | 0.698   | 1.297    | -2.9581  | -1535.9558 |
| 161 | 0       | Extremo 1A | -22699.68  | -187.184 | -12.208 | 10.6524  | -18.9613 | -1603.6263 |
| 161 | 0.7398  | Extremo 1A | -22699.68  | -187.184 | -12.208 | 10.6524  | -9.93    | -1465.1473 |
| 161 | 1.47961 | Extremo 1A | -22699.68  | -187.184 | -12.208 | 10.6524  | -0.8988  | -1326.6684 |
| 161 | 0       | Extremo 2A | -22580.552 | -188.227 | 0.697   | 1.3157   | -1.9646  | -1537.1272 |
| 161 | 0.7398  | Extremo 2A | -22580.552 | -188.227 | 0.697   | 1.3157   | -2.4799  | -1397.8765 |
| 161 | 1.47961 | Extremo 2A | -22580.552 | -188.22  |         |          |          |            |



|     |         |            |            |          |         |          |           |            |
|-----|---------|------------|------------|----------|---------|----------|-----------|------------|
| 166 | 0.7398  | Extremo 2A | -22577.196 | -188.229 | 0.697   | 1.3224   | -2.6689   | -11.2184   |
| 166 | 1.47961 | Extremo 2A | -22577.196 | -188.229 | 0.697   | 1.3224   | -3.1844   | 128.0337   |
| 167 | 0       | Extremo 1A | -22770.207 | -187.228 | -12.207 | 10.5965  | -14.9672  | 1.6324     |
| 167 | 0.7398  | Extremo 1A | -22770.207 | -187.228 | -12.207 | 10.5965  | -5.9361   | 140.1441   |
| 167 | 1.47961 | Extremo 1A | -22770.207 | -187.228 | -12.207 | 10.5965  | 3.095     | 278.6559   |
| 167 | 0       | Extremo 2A | -22576.526 | -188.232 | 0.697   | 1.3166   | -2.192    | 126.8648   |
| 167 | 0.7398  | Extremo 2A | -22576.526 | -188.232 | 0.697   | 1.3166   | -2.7076   | 266.1198   |
| 167 | 1.47961 | Extremo 2A | -22576.526 | -188.232 | 0.697   | 1.3166   | -3.2231   | 405.3748   |
| 168 | 0       | Extremo 1A | -22781.92  | -187.337 | -12.207 | 10.4354  | -14.2404  | 269.2957   |
| 168 | 0.7398  | Extremo 1A | -22781.92  | -187.337 | -12.207 | 10.4354  | -5.2094   | 407.888    |
| 168 | 1.47961 | Extremo 1A | -22781.92  | -187.337 | -12.207 | 10.4354  | 3.8217    | 546.4803   |
| 168 | 0       | Extremo 2A | -22575.857 | -188.246 | 0.697   | 1.2966   | -2.2335   | 404.2118   |
| 168 | 0.7398  | Extremo 2A | -22575.857 | -188.246 | 0.697   | 1.2966   | -2.749    | 543.4769   |
| 168 | 1.47961 | Extremo 2A | -22575.857 | -188.246 | 0.697   | 1.2966   | -3.2645   | 682.7419   |
| 169 | 0       | Extremo 1A | -22793.5   | -187.677 | -12.207 | 9.9318   | -13.3163  | 537.3026   |
| 169 | 0.7398  | Extremo 1A | -22793.5   | -187.677 | -12.207 | 9.9318   | -4.2852   | 676.1467   |
| 169 | 1.47961 | Extremo 1A | -22793.5   | -187.677 | -12.207 | 9.9318   | 4.7459    | 814.9907   |
| 169 | 0       | Extremo 2A | -22575.196 | -188.288 | 0.697   | 1.234    | -2.2863   | 681.6016   |
| 169 | 0.7398  | Extremo 2A | -22575.196 | -188.288 | 0.697   | 1.234    | -2.8018   | 820.8979   |
| 169 | 1.47961 | Extremo 2A | -22575.196 | -188.288 | 0.697   | 1.234    | -3.3173   | 960.1942   |
| 170 | 0       | Extremo 1A | -22804.539 | -188.599 | -12.207 | 8.5665   | -11.5928  | 806.4647   |
| 170 | 0.7398  | Extremo 1A | -22804.539 | -188.599 | -12.207 | 8.5665   | -2.5618   | 945.9913   |
| 170 | 1.47961 | Extremo 1A | -22804.539 | -188.599 | -12.207 | 8.5665   | 6.4693    | 1085.5178  |
| 170 | 0       | Extremo 2A | -22574.566 | -188.403 | 0.697   | 1.0644   | -2.3847   | 959.1349   |
| 170 | 0.7398  | Extremo 2A | -22574.566 | -188.403 | 0.697   | 1.0644   | -2.9002   | 1098.516   |
| 170 | 1.47961 | Extremo 2A | -22574.566 | -188.403 | 0.697   | 1.0644   | -3.4157   | 1237.8971  |
| 171 | 0       | Extremo 1A | -22813.392 | -190.433 | -12.207 | 5.8533   | -6.6332   | 1079.1434  |
| 171 | 0.7398  | Extremo 1A | -22813.392 | -190.433 | -12.207 | 5.8533   | 2.3978    | 1220.0262  |
| 171 | 1.47961 | Extremo 1A | -22813.392 | -190.433 | -12.207 | 5.8533   | 11.4289   | 1360.9089  |
| 171 | 0       | Extremo 2A | -22574.061 | -188.631 | 0.697   | 0.7273   | -2.6678   | 1237.1051  |
| 171 | 0.7398  | Extremo 2A | -22574.061 | -188.631 | 0.697   | 0.7273   | -3.1833   | 1376.6547  |
| 171 | 1.47961 | Extremo 2A | -22574.061 | -188.631 | 0.697   | 0.7273   | -3.6988   | 1516.2044  |
| 172 | 0       | Extremo 1A | -22828.979 | -173.352 | -97.75  | 14.5297  | -136.8774 | -3314.3174 |
| 172 | 0.7398  | Extremo 1A | -22828.979 | -173.352 | -97.75  | 14.5297  | -64.5618  | -3186.0707 |
| 172 | 1.47961 | Extremo 1A | -22828.979 | -173.352 | -97.75  | 14.5297  | 7.7539    | -3057.8241 |
| 172 | 0       | Extremo 2A | -22568.905 | -149.327 | -97.616 | 13.2645  | -128.2844 | -2805.8873 |
| 172 | 0.7398  | Extremo 2A | -22568.905 | -149.327 | -97.616 | 13.2645  | -56.0678  | -2695.4144 |
| 172 | 1.47961 | Extremo 2A | -22568.905 | -149.327 | -97.616 | 13.2645  | 16.1489   | -2584.9416 |
| 173 | 0       | Extremo 1A | -22828.362 | -176.652 | -6.833  | -5.1514  | 4.7167    | -3073.9441 |
| 173 | 0.7398  | Extremo 1A | -22828.362 | -176.652 | -6.833  | -5.1514  | 9.7716    | -2943.256  |
| 173 | 1.47961 | Extremo 1A | -22828.362 | -176.652 | -6.833  | -5.1514  | 14.8266   | -2812.568  |
| 173 | 0       | Extremo 2A | -22572.602 | -149.695 | -1.206  | -13.3104 | 19.376    | -2608.1928 |
| 173 | 0.7398  | Extremo 2A | -22572.602 | -149.695 | -1.206  | -13.3104 | 20.2679   | -2497.4482 |
| 173 | 1.47961 | Extremo 2A | -22572.602 | -149.695 | -1.206  | -13.3104 | 21.1599   | -2386.7035 |
| 174 | 0       | Extremo 1A | -22829.02  | -178.195 | 3.024   | -10.4781 | 13.5467   | -2825.2262 |
| 174 | 0.7398  | Extremo 1A | -22829.02  | -178.195 | 3.024   | -10.4781 | 11.3096   | -2693.3972 |
| 174 | 1.47961 | Extremo 1A | -22829.02  | -178.195 | 3.024   | -10.4781 | 9.0725    | -2561.5682 |
| 174 | 0       | Extremo 2A | -22578.762 | -150.053 | 9.256   | -21.1808 | 27.8872   | -2408.9216 |
| 174 | 0.7398  | Extremo 2A | -22578.762 | -150.053 | 9.256   | -21.1808 | 21.0393   | -2297.9121 |
| 174 | 1.47961 | Extremo 2A | -22578.762 | -150.053 | 9.256   | -21.1808 | 14.1914   | -2186.9026 |
| 175 | 0       | Extremo 1A | -22829.992 | -178.748 | 1.523   | -12.0167 | 10.3461   | -2573.192  |
| 175 | 0.7398  | Extremo 1A | -22829.992 | -178.748 | 1.523   | -12.0167 | 9.2191    | -2440.9539 |
| 175 | 1.47961 | Extremo 1A | -22829.992 | -178.748 | 1.523   | -12.0167 | 8.0921    | -2308.7157 |
| 175 | 0       | Extremo 2A | -22585.531 | -150.208 | 7.666   | -23.553  | 24.0327   | -2208.7869 |
| 175 | 0.7398  | Extremo 2A | -22585.531 | -150.208 | 7.666   | -23.553  | 18.3613   | -2097.6625 |
| 175 | 1.47961 | Extremo 2A | -22585.531 | -150.208 | 7.666   | -23.553  | 12.6898   | -1986.5381 |
| 176 | 0       | Extremo 1A | -22831.043 | -178.922 | 1.105   | -12.4893 | 9.6916    | -2320.0531 |
| 176 | 0.7398  | Extremo 1A | -22831.043 | -178.922 | 1.105   | -12.4893 | 8.8738    | -2187.6862 |
| 176 | 1.47961 | Extremo 1A | -22831.043 | -178.922 | 1.105   | -12.4893 | 8.056     | -2055.3194 |
| 176 | 0       | Extremo 2A | -22592.45  | -150.262 | 7.223   | -24.2791 | 22.9774   | -2008.3242 |
| 176 | 0.7398  | Extremo 2A | -22592.45  | -150.262 | 7.223   | -24.2791 | 17.6339   | -1897.16   |
| 176 | 1.47961 | Extremo 2A | -22592.45  | -150.262 | 7.223   | -24.2791 | 12.2904   | -1785.9957 |
| 177 | 0       | Extremo 1A | -22832.112 | -178.972 | 1.105   | -12.6413 | 9.6479    | -2066.5825 |
| 177 | 0.7398  | Extremo 1A | -22832.112 | -178.972 | 1.105   | -12.6413 | 8.8305    | -1934.1785 |
| 177 | 1.47961 | Extremo 1A | -22832.112 | -178.972 | 1.105   | -12.6413 | 8.0131    | -1801.7745 |
| 177 | 0       | Extremo 2A | -22599.406 | -150.279 | 7.222   | -24.5042 | 22.5948   | -1807.755  |
| 177 | 0.7398  | Extremo 2A | -22599.406 | -150.279 | 7.222   | -24.5042 | 17.2518   | -1696.5784 |
| 177 | 1.47961 | Extremo 2A | -22599.406 | -150.279 | 7.222   | -24.5042 | 11.9088   | -1585.4018 |
| 178 | 0       | Extremo 1A | -22833.187 | -178.985 | 1.116   | -12.6914 | 9.6028    | -1813.0196 |
| 178 | 0.7398  | Extremo 1A | -22833.187 | -178.985 | 1.116   | -12.6914 | 8.777     | -1680.6057 |
| 178 | 1.47961 | Extremo 1A | -22833.187 | -178.985 | 1.116   | -12.6914 | 7.9513    | -1548.1917 |
| 178 | 0       | Extremo 2A | -22606.371 | -150.283 | 7.234   | -24.5745 | 22.2168   | -1607.1542 |

|     |         |            |            |            |       |          |         |            |
|-----|---------|------------|------------|------------|-------|----------|---------|------------|
| 178 | 0.7398  | Extremo 2A | -22606.371 | -150.283   | 7.234 | -24.5745 | 16.8649 | -1495.9741 |
| 178 | 1.47961 | Extremo 2A | -22606.371 | -150.283   | 7.234 | -24.5745 | 11.513  | -1384.794  |
| 179 | 0       | Extremo 1A | -22834.262 | -178.989   | 1.117 | -12.708  | 9.5427  | -1559.4328 |
| 179 | 0.7398  | Extremo 1A | -22834.262 | -178.989   | 1.117 | -12.708  | 8.7161  | -1427.0164 |
| 179 | 1.47961 | Extremo 1A | -22834.262 | -178.989   | 1.117 | -12.708  | 7.8895  | -1294.5999 |
| 179 | 0       | Extremo 2A | -22613.338 | -150.285   | 7.235 | -24.5966 | 21.8245 | -1406.5448 |
| 179 | 0.7398  | Extremo 2A | -22613.338 | -150.285   | 7.235 | -24.5966 | 16.4717 | -1295.3638 |
| 179 | 1.47961 | Extremo 2A | -22613.338 | -150.285   | 7.235 | -24.5966 | 11.1189 | -1184.1827 |
| 180 | 0       | Extremo 1A | -22835.338 | -178.99    | 1.117 | -12.7135 | 9.4816  | -1305.8402 |
| 180 | 0.7398  | Extremo 1A | -22835.338 | -178.99    | 1.117 | -12.7135 | 8.6551  | -1173.4231 |
| 180 | 1.47961 | Extremo 1A | -22835.338 | -178.99    | 1.117 | -12.7135 | 7.8287  | -1041.0061 |
| 180 | 0       | Extremo 2A | -22620.306 | -150.285   | 7.235 | -24.6035 | 21.4315 | -1205.9332 |
| 180 | 0.7398  | Extremo 2A | -22620.306 | -150.285   | 7.235 | -24.6035 | 16.0788 | -1094.7519 |
| 180 | 1.47961 | Extremo 2A | -22620.306 | -150.285   | 7.235 | -24.6035 | 10.7262 | -983.5706  |
| 181 | 0       | Extremo 1A | -22836.414 | -178.99    | 1.117 | -12.7152 | 9.421   | -1052.2462 |
| 181 | 0.7398  | Extremo 1A | -22836.414 | -178.99    | 1.117 | -12.7152 | 8.5945  | -919.8289  |
| 181 | 1.47961 | Extremo 1A | -22836.414 | -178.99    | 1.117 | -12.7152 | 7.768   | -787.4116  |
| 181 | 0       | Extremo 2A | -22627.274 | -150.285   | 7.235 | -24.6053 | 21.0389 | -1005.3209 |
| 181 | 0.7398  | Extremo 2A | -22627.274 | -150.285   | 7.235 | -24.6053 | 15.6863 | -894.1394  |
| 181 | 1.47961 | Extremo 2A | -22627.274 | -150.285   | 7.235 | -24.6053 | 10.3337 | -782.9578  |
| 182 | 0       | Extremo 1A | -22837.49  | -178.991   | 1.117 | -12.7148 | 9.3603  | -798.6516  |
| 182 | 0.7398  | Extremo 1A | -22837.49  | -178.991   | 1.117 | -12.7148 | 8.5339  | -666.2338  |
| 182 | 1.47961 | Extremo 1A | -22837.49  | -178.991   | 1.117 | -12.7148 | 7.7074  | -533.816   |
| 182 | 0       | Extremo 2A | -22634.242 | -150.286   | 7.235 | -24.6042 | 20.6464 | -804.7079  |
| 182 | 0.7398  | Extremo 2A | -22634.242 | -150.286   | 7.235 | -24.6042 | 15.2938 | -693.5255  |
| 182 | 1.47961 | Extremo 2A | -22634.242 | -150.286   | 7.235 | -24.6042 | 9.9412  | -582.343   |
| 183 | 0       | Extremo 1A | -22838.566 | -178.993   | 1.117 | -12.7112 | 9.2997  | -545.0554  |
| 183 | 0.7398  | Extremo 1A | -22838.566 | -178.993   | 1.117 | -12.7112 | 8.4732  | -412.6357  |
| 183 | 1.47961 | Extremo 1A | -22838.566 | -178.993   | 1.117 | -12.7112 | 7.6468  | -280.216   |
| 183 | 0       | Extremo 2A | -22641.21  | -150.292   | 7.235 | -24.5969 | 20.2535 | -604.0919  |
| 183 | 0.7398  | Extremo 2A | -22641.21  | -150.292   | 7.235 | -24.5969 | 14.9009 | -492.9057  |
| 183 | 1.47961 | Extremo 2A | -22641.21  | -150.292   | 7.235 | -24.5969 | 9.5483  | -381.7195  |
| 184 | 0       | Extremo 1A | -22839.641 | -179.003   | 1.117 | -12.696  | 9.2387  | -291.4522  |
| 184 | 0.7398  | Extremo 1A | -22839.641 | -179.003   | 1.117 | -12.696  | 8.4123  | -159.0248  |
| 184 | 1.47961 | Extremo 1A | -22839.641 | -179.003   | 1.117 | -12.696  | 7.5858  | -26.5975   |
| 184 | 0       | Extremo 2A | -22648.177 | -150.311   | 7.235 | -24.5675 | 19.8588 | -403.4622  |
| 184 | 0.7398  | Extremo 2A | -22648.177 | -150.311   | 7.235 | -24.5675 | 14.5062 | -292.2612  |
| 184 | 1.47961 | Extremo 2A | -22648.177 | -150.311   | 7.235 | -24.5675 | 9.1536  | -181.0603  |
| 185 | 0       | Extremo 1A | -22840.716 | -179.041   | 1.117 | -12.6399 | 9.1767  | -37.8197   |
| 185 | 0.7398  | Extremo 1A | -22840.716 | -179.041   | 1.117 | -12.6399 | 8.3502  | 94.6357    |
| 185 | 1.47961 | Extremo 1A | -22840.716 | -179.041   | 1.117 | -12.6399 | 7.5238  | 227.091    |
| 185 | 0       | Extremo 2A | -22655.138 | -150.385   | 7.235 | -24.459  | 19.457  | -202.776   |
| 185 | 0.7398  | Extremo 2A | -22655.138 | -150.385   | 7.235 | -24.459  | 14.1044 | -91.5208   |
| 185 | 1.47961 | Extremo 2A | -22655.138 | -150.385</ |       |          |         |            |



|     |         |            |            |        |        |         |              |              |
|-----|---------|------------|------------|--------|--------|---------|--------------|--------------|
| 190 | 1.97333 | Extremo 2A | -1.521E-11 | -3.188 | 8.46   | -6.3744 | -4.1737      | 1.5728       |
| 190 | 2.46667 | Extremo 2A | -1.521E-11 | -3.188 | 8.46   | -6.3744 | -8.3473      | 3.1456       |
| 190 | 2.96    | Extremo 1A | -1.521E-11 | -3.188 | 8.46   | -6.3744 | -12.521      | 4.7184       |
| 190 | 0       | Extremo 1A | -1.516E-11 | 0.463  | -0.305 | -0.792  | -0.4515      | 0.685        |
| 190 | 0.49333 | Extremo 1A | -1.516E-11 | 0.463  | -0.305 | -0.792  | -0.301       | 0.4566       |
| 190 | 0.98667 | Extremo 2A | -1.516E-11 | 0.463  | -0.305 | -0.792  | -0.1505      | 0.2283       |
| 190 | 1.48    | Extremo 2A | -1.516E-11 | 0.463  | -0.305 | -0.792  | -8.495E-08   | -1.341E-07   |
| 190 | 1.97333 | Extremo 2A | -1.516E-11 | 0.463  | -0.305 | -0.792  | 0.1505       | -0.2283      |
| 190 | 2.46667 | Extremo 1A | -1.516E-11 | 0.463  | -0.305 | -0.792  | 0.301        | -0.4566      |
| 190 | 2.96    | Extremo 1A | -1.516E-11 | 0.463  | -0.305 | -0.792  | 0.4515       | -0.685       |
| 191 | 0       | Extremo 1A | -1.751E-10 | -5.127 | 9.82   | -8.526  | 14.5338      | -7.5886      |
| 191 | 0.49333 | Extremo 2A | -1.751E-10 | -5.127 | 9.82   | -8.526  | 9.6892       | -5.0591      |
| 191 | 0.98667 | Extremo 1A | -1.751E-10 | -5.127 | 9.82   | -8.526  | 4.8446       | -2.5295      |
| 191 | 1.48    | Extremo 2A | -1.751E-10 | -5.127 | 9.82   | -8.526  | -3.012E-07   | -4.755E-07   |
| 191 | 1.97333 | Extremo 1A | -1.751E-10 | -5.127 | 9.82   | -8.526  | -4.8446      | 2.5295       |
| 191 | 2.46667 | Extremo 1A | -1.751E-10 | -5.127 | 9.82   | -8.526  | -9.6892      | 5.0591       |
| 191 | 2.96    | Extremo 1A | -1.751E-10 | -5.127 | 9.82   | -8.526  | -14.5338     | 7.5886       |
| 191 | 0       | Extremo 2A | -1.743E-10 | 0.434  | -0.471 | -1.0593 | -0.6972      | 0.6423       |
| 191 | 0.49333 | Extremo 2A | -1.743E-10 | 0.434  | -0.471 | -1.0593 | -0.4648      | 0.4282       |
| 191 | 0.98667 | Extremo 2A | -1.743E-10 | 0.434  | -0.471 | -1.0593 | -0.2324      | 0.2141       |
| 191 | 1.48    | Extremo 1A | -1.743E-10 | 0.434  | -0.471 | -1.0593 | -3.006E-07   | -4.745E-07   |
| 191 | 1.97333 | Extremo 1A | -1.743E-10 | 0.434  | -0.471 | -1.0593 | 0.2324       | -0.2141      |
| 191 | 2.46667 | Extremo 1A | -1.743E-10 | 0.434  | -0.471 | -1.0593 | 0.4648       | -0.4282      |
| 191 | 2.96    | Extremo 2A | -1.743E-10 | 0.434  | -0.471 | -1.0593 | 0.6972       | -0.6423      |
| 192 | 0       | Extremo 2A | -8.572E-11 | -5.908 | 9.965  | -9.1777 | 14.748       | -8.7443      |
| 192 | 0.49333 | Extremo 2A | -8.572E-11 | -5.908 | 9.965  | -9.1777 | 9.832        | -5.8295      |
| 192 | 0.98667 | Extremo 1A | -8.572E-11 | -5.908 | 9.965  | -9.1777 | 4.916        | -2.9148      |
| 192 | 1.48    | Extremo 1A | -8.572E-11 | -5.908 | 9.965  | -9.1777 | -9.803E-07   | -0.000001548 |
| 192 | 1.97333 | Extremo 1A | -8.572E-11 | -5.908 | 9.965  | -9.1777 | -4.916       | 2.9148       |
| 192 | 2.46667 | Extremo 2A | -8.572E-11 | -5.908 | 9.965  | -9.1777 | -9.832       | 5.8295       |
| 192 | 2.96    | Extremo 2A | -8.572E-11 | -5.908 | 9.965  | -9.1777 | -14.748      | 8.7443       |
| 192 | 0       | Extremo 2A | -8.536E-11 | 0.389  | -0.536 | -1.1403 | -0.793       | 0.5763       |
| 192 | 0.49333 | Extremo 1A | -8.536E-11 | 0.389  | -0.536 | -1.1403 | -0.5287      | 0.3842       |
| 192 | 0.98667 | Extremo 1A | -8.536E-11 | 0.389  | -0.536 | -1.1403 | -0.2643      | 0.1921       |
| 192 | 1.48    | Extremo 1A | -8.536E-11 | 0.389  | -0.536 | -1.1403 | -9.783E-07   | -0.000001545 |
| 192 | 1.97333 | Extremo 2A | -8.536E-11 | 0.389  | -0.536 | -1.1403 | 0.2643       | -0.1921      |
| 192 | 2.46667 | Extremo 2A | -8.536E-11 | 0.389  | -0.536 | -1.1403 | 0.5287       | -0.3842      |
| 192 | 2.96    | Extremo 2A | -8.536E-11 | 0.389  | -0.536 | -1.1403 | 0.793        | -0.5763      |
| 193 | 0       | Extremo 1A | 6.094E-09  | -6.175 | 9.954  | -9.3602 | 14.7315      | -9.1392      |
| 193 | 0.49333 | Extremo 1A | 6.094E-09  | -6.175 | 9.954  | -9.3602 | 9.821        | -6.0928      |
| 193 | 0.98667 | Extremo 1A | 6.094E-09  | -6.175 | 9.954  | -9.3602 | 4.9105       | -3.0464      |
| 193 | 1.48    | Extremo 2A | 6.094E-09  | -6.175 | 9.954  | -9.3602 | -0.000003167 | -0.000005002 |
| 193 | 1.97333 | Extremo 2A | 6.094E-09  | -6.175 | 9.954  | -9.3602 | -4.9105      | 3.0464       |
| 193 | 2.46667 | Extremo 2A | 6.094E-09  | -6.175 | 9.954  | -9.3602 | -9.821       | 6.0928       |
| 193 | 2.96    | Extremo 1A | 6.094E-09  | -6.175 | 9.954  | -9.3602 | -14.7315     | 9.1392       |
| 193 | 0       | Extremo 1A | 6.062E-09  | 0.369  | -0.558 | -1.163  | -0.8253      | 0.5464       |
| 193 | 0.49333 | Extremo 1A | 6.062E-09  | 0.369  | -0.558 | -1.163  | -0.5502      | 0.3642       |
| 193 | 0.98667 | Extremo 2A | 6.062E-09  | 0.369  | -0.558 | -1.163  | -0.2751      | 0.1821       |
| 193 | 1.48    | Extremo 2A | 6.062E-09  | 0.369  | -0.558 | -1.163  | -0.000003161 | -0.000004992 |
| 193 | 1.97333 | Extremo 2A | 6.062E-09  | 0.369  | -0.558 | -1.163  | 0.2751       | -0.1821      |
| 193 | 2.46667 | Extremo 1A | 6.062E-09  | 0.369  | -0.558 | -1.163  | 0.5502       | -0.3642      |
| 193 | 2.96    | Extremo 1A | 6.062E-09  | 0.369  | -0.558 | -1.163  | 0.8253       | -0.5464      |
| 194 | 0       | Extremo 1A | 2.531E-08  | -6.258 | 9.94   | -9.408  | 14.7116      | -9.2617      |
| 194 | 0.49333 | Extremo 2A | 2.531E-08  | -6.258 | 9.94   | -9.408  | 9.8077       | -6.1745      |
| 194 | 0.98667 | Extremo 2A | 2.531E-08  | -6.258 | 9.94   | -9.408  | 4.9039       | -3.0873      |
| 194 | 1.48    | Extremo 2A | 2.531E-08  | -6.258 | 9.94   | -9.408  | -0.00001023  | -0.00001615  |
| 194 | 1.97333 | Extremo 1A | 2.531E-08  | -6.258 | 9.94   | -9.408  | -4.9039      | 3.0872       |
| 194 | 2.46667 | Extremo 1A | 2.531E-08  | -6.258 | 9.94   | -9.408  | -9.8078      | 6.1745       |
| 194 | 2.96    | Extremo 1A | 2.531E-08  | -6.258 | 9.94   | -9.408  | -14.7116     | 9.2617       |
| 194 | 0       | Extremo 2A | 2.519E-08  | 0.362  | -0.564 | -1.1689 | -0.8352      | 0.5359       |
| 194 | 0.49333 | Extremo 2A | 2.519E-08  | 0.362  | -0.564 | -1.1689 | -0.5568      | 0.3572       |
| 194 | 0.98667 | Extremo 2A | 2.519E-08  | 0.362  | -0.564 | -1.1689 | -0.2784      | 0.1786       |
| 194 | 1.48    | Extremo 1A | 2.519E-08  | 0.362  | -0.564 | -1.1689 | -0.00001021  | -0.00001611  |
| 194 | 1.97333 | Extremo 1A | 2.519E-08  | 0.362  | -0.564 | -1.1689 | 0.2784       | -0.1786      |
| 194 | 2.46667 | Extremo 1A | 2.519E-08  | 0.362  | -0.564 | -1.1689 | 0.5568       | -0.3573      |
| 194 | 2.96    | Extremo 2A | 2.519E-08  | 0.362  | -0.564 | -1.1689 | 0.8352       | -0.5359      |
| 195 | 0       | Extremo 2A | -1.312E-07 | -6.282 | 9.935  | -9.4197 | 14.7034      | -9.2971      |
| 195 | 0.49333 | Extremo 2A | -1.312E-07 | -6.282 | 9.935  | -9.4197 | 9.8023       | -6.1981      |
| 195 | 0.98667 | Extremo 1A | -1.312E-07 | -6.282 | 9.935  | -9.4197 | 4.9011       | -3.0991      |
| 195 | 1.48    | Extremo 1A | -1.312E-07 | -6.282 | 9.935  | -9.4197 | -0.00003304  | -0.00005211  |
| 195 | 1.97333 | Extremo 1A | -1.312E-07 | -6.282 | 9.935  | -9.4197 | -4.9012      | 3.099        |
| 195 | 2.46667 | Extremo 2A | -1.312E-07 | -6.282 | 9.935  | -9.4197 | -9.8024      | 6.198        |

|     |         |            |              |        |        |         |             |            |
|-----|---------|------------|--------------|--------|--------|---------|-------------|------------|
| 195 | 2.96    | Extremo 2A | -1.312E-07   | -6.282 | 9.935  | -9.4197 | -14.7035    | 9.297      |
| 195 | 0       | Extremo 2A | -1.305E-07   | 0.36   | -0.566 | -1.1704 | -0.8381     | 0.5326     |
| 195 | 0.49333 | Extremo 1A | -1.305E-07   | 0.36   | -0.566 | -1.1704 | -0.5587     | 0.355      |
| 195 | 0.98667 | Extremo 1A | -1.305E-07   | 0.36   | -0.566 | -1.1704 | -0.2794     | 0.1775     |
| 195 | 1.48    | Extremo 1A | -1.305E-07   | 0.36   | -0.566 | -1.1704 | -0.00003298 | -0.000052  |
| 195 | 1.97333 | Extremo 2A | -1.305E-07   | 0.36   | -0.566 | -1.1704 | 0.2793      | -0.1776    |
| 195 | 2.46667 | Extremo 2A | -1.305E-07   | 0.36   | -0.566 | -1.1704 | 0.5587      | -0.3552    |
| 195 | 2.96    | Extremo 2A | -1.305E-07   | 0.36   | -0.566 | -1.1704 | 0.838       | -0.5327    |
| 196 | 0       | Extremo 1A | -0.000001406 | -6.288 | 9.933  | -9.4224 | 14.7008     | -9.3069    |
| 196 | 0.49333 | Extremo 1A | -0.000001406 | -6.288 | 9.933  | -9.4224 | 9.8005      | -6.2046    |
| 196 | 0.98667 | Extremo 1A | -0.000001406 | -6.288 | 9.933  | -9.4224 | 4.9002      | -3.1024    |
| 196 | 1.48    | Extremo 2A | -0.000001406 | -6.288 | 9.933  | -9.4224 | -0.0001066  | -0.0001683 |
| 196 | 1.97333 | Extremo 2A | -0.000001406 | -6.288 | 9.933  | -9.4224 | -4.9004     | 3.1021     |
| 196 | 2.46667 | Extremo 2A | -0.000001406 | -6.288 | 9.933  | -9.4224 | -9.8007     | 6.2043     |
| 196 | 2.96    | Extremo 1A | -0.000001406 | -6.288 | 9.933  | -9.4224 | -14.701     | 9.3065     |
| 196 | 0       | Extremo 1A | -0.000001399 | 0.359  | -0.567 | -1.1707 | -0.8389     | 0.5316     |
| 196 | 0.49333 | Extremo 1A | -0.000001399 | 0.359  | -0.567 | -1.1707 | -0.5593     | 0.3543     |
| 196 | 0.98667 | Extremo 2A | -0.000001399 | 0.359  | -0.567 | -1.1707 | -0.2797     | 0.1771     |
| 196 | 1.48    | Extremo 2A | -0.000001399 | 0.359  | -0.567 | -1.1707 | -0.0001064  | -0.0001679 |
| 196 | 1.97333 | Extremo 2A | -0.000001399 | 0.359  | -0.567 | -1.1707 | 0.2795      | -0.1774    |
| 196 | 2.46667 | Extremo 1A | -0.000001399 | 0.359  | -0.567 | -1.1707 | 0.5591      | -0.3547    |
| 196 | 2.96    | Extremo 1A | -0.000001399 | 0.359  | -0.567 | -1.1707 | 0.8387      | -0.5319    |
| 197 | 0       | Extremo 1A | -3.104E-07   | -6.29  | 9.933  | -9.4229 | 14.6999     | -9.3097    |
| 197 | 0.49333 | Extremo 2A | -3.104E-07   | -6.29  | 9.933  | -9.4229 | 9.7998      | -6.2066    |
| 197 | 0.98667 | Extremo 2A | -3.104E-07   | -6.29  | 9.933  | -9.4229 | 4.8997      | -3.1036    |
| 197 | 1.48    | Extremo 2A | -3.104E-07   | -6.29  | 9.933  | -9.4229 | -0.0003432  | -0.0005439 |
| 197 | 1.97333 | Extremo 1A | -3.104E-07   | -6.29  | 9.933  | -9.4229 | -4.9004     | 3.1025     |
| 197 | 2.46667 | Extremo 1A | -3.104E-07   | -6.29  | 9.933  | -9.4229 | -9.8005     | 6.2056     |
| 197 | 2.96    | Extremo 1A | -3.104E-07   | -6.29  | 9.933  | -9.4229 | -14.7005    | 9.3086     |
| 197 | 0       | Extremo 2A | -3.098E-07   | 0.359  | -0.567 | -1.1708 | -0.8394     | 0.531      |
| 197 | 0.49333 | Extremo 2A | -3.098E-07   | 0.359  | -0.567 | -1.1708 | -0.5597     | 0.3538     |
| 197 | 0.98667 | Extremo 2A | -3.098E-07   | 0.359  | -0.567 | -1.1708 | -0.28       | 0.1766     |
| 197 | 1.48    | Extremo 1A | -3.098E-07   | 0.359  | -0.567 | -1.1708 | -0.0003425  | -0.0005427 |
| 197 | 1.97333 | Extremo 1A | -3.098E-07   | 0.359  | -0.567 | -1.1708 | 0.2793      | -0.1777    |
| 197 | 2.46667 | Extremo 1A | -3.098E-07   | 0.359  | -0.567 | -1.1708 | 0.559       | -0.3549    |
| 197 | 2.96    | Extremo 2A | -3.098E-07   | 0.359  | -0.567 | -1.1708 | 0.8387      | -0.5321    |
| 198 | 0       | Extremo 2A | 0.00005042   | -6.29  | 9.932  | -9.423  | 14.699      | -9.3113    |
| 198 | 0.49333 | Extremo 2A | 0.00005042   | -6.29  | 9.932  | -9.423  | 9.7989      | -6.2081    |
| 198 | 0.98667 | Extremo 1A | 0.00005042   | -6.29  | 9.932  | -9.423  | 4.8989      | -3.1049    |
| 198 | 1.48    | Extremo 1A | 0.00005042   | -6.29  | 9.932  | -9.423  | -0.0011     | -0.0018    |
| 198 | 1.97333 | Extremo 1A | 0.00005042   | -6.29  | 9.932  | -9.423  | -4.9011     | 3.1014     |
| 198 | 2.46667 | Extremo 2A | 0.00005042   | -6.29  | 9.932  | -9.423  | -9.8012     | 6.2046     |
| 198 | 2.96    | Extremo 2A | 0.00005042   | -6.29  | 9.932  | -9.423  | -14.7012    | 9.3078     |
| 198 | 0       | Extremo 2A | 0.00005016   | 0.359  | -0.567 | -1.1708 | -0.8401     | 0.5298     |
| 198 | 0.49333 | Extremo 1A | 0.00005016   | 0.359  | -0.567 | -1.1708 | -0.5604     | 0.3526     |
| 198 | 0.98667 | Extremo 1A | 0.00005016   | 0.359  | -0.567 | -1.1708 | -0.2808     | 0.1754     |
| 198 | 1.48    | Extremo 1A | 0.00005016   | 0.359  | -0.567 | -1.1708 | -0.0011     | -0.0018    |
| 198 | 1.97333 | Extremo 2A | 0.00005016   | 0.359  | -0.567 | -1.1708 | 0.2786      | -0.1789    |
| 198 | 2.46667 |            |              |        |        |         |             |            |



|     |         |            |           |         |        |         |            |          |
|-----|---------|------------|-----------|---------|--------|---------|------------|----------|
| 200 | 0.49333 | Extremo 2A | -0.001132 | 0.361   | -0.566 | -1.1713 | -0.5702    | 0.3378   |
| 200 | 0.98667 | Extremo 2A | -0.001132 | 0.361   | -0.566 | -1.1713 | -0.291     | 0.1599   |
| 200 | 1.48    | Extremo 1A | -0.001132 | 0.361   | -0.566 | -1.1713 | -0.0118    | -0.0181  |
| 200 | 1.97333 | Extremo 1A | -0.001132 | 0.361   | -0.566 | -1.1713 | 0.2674     | -0.1961  |
| 200 | 2.46667 | Extremo 1A | -0.001132 | 0.361   | -0.566 | -1.1713 | 0.5466     | -0.374   |
| 200 | 2.96    | Extremo 2A | -0.001132 | 0.361   | -0.566 | -1.1713 | 0.8258     | -0.552   |
| 201 | 0       | Extremo 2A | 0.654     | -12.923 | 0.075  | -1.0157 | 0.0359     | -10.4909 |
| 201 | 0.5     | Extremo 2A | 0.654     | -5.25   | 0.075  | -1.0157 | -0.0014    | -5.9477  |
| 201 | 1       | Extremo 1A | 0.654     | 2.422   | 0.075  | -1.0157 | -0.0387    | -5.2407  |
| 201 | 0       | Extremo 1A | -1.086    | -12.923 | -0.07  | -1.0158 | -0.0357    | -10.4928 |
| 201 | 0.5     | Extremo 1A | -1.086    | -5.251  | -0.07  | -1.0158 | -0.0006052 | -5.9492  |
| 201 | 1       | Extremo 2A | -1.086    | 2.422   | -0.07  | -1.0158 | 0.0345     | -5.2419  |
| 202 | 0       | Extremo 2A | 0.735     | -13.553 | 0.073  | -0.6669 | 0.0333     | -4.9844  |
| 202 | 0.5     | Extremo 2A | 0.735     | -5.881  | 0.073  | -0.6669 | -0.0031    | -0.126   |
| 202 | 1       | Extremo 1A | 0.735     | 1.792   | 0.073  | -0.6669 | -0.0394    | 0.8961   |
| 202 | 0       | Extremo 1A | -1.164    | -13.554 | -0.065 | -0.667  | -0.0324    | -4.9856  |
| 202 | 0.5     | Extremo 1A | -1.164    | -5.881  | -0.065 | -0.667  | 0.0001656  | -0.1268  |
| 202 | 1       | Extremo 2A | -1.164    | 1.791   | -0.065 | -0.667  | 0.0327     | 0.8957   |
| 203 | 0       | Extremo 2A | 0.816     | -12.679 | 0.07   | -0.1578 | 0.0306     | 0.3217   |
| 203 | 0.5     | Extremo 2A | 0.816     | -5.006  | 0.07   | -0.1578 | -0.0041    | 4.743    |
| 203 | 1       | Extremo 1A | 0.816     | 2.666   | 0.07   | -0.1578 | -0.0389    | 5.328    |
| 203 | 0       | Extremo 1A | -1.236    | -12.68  | -0.058 | -0.1578 | -0.0282    | 0.3213   |
| 203 | 0.5     | Extremo 1A | -1.236    | -5.007  | -0.058 | -0.1578 | 0.000889   | 4.743    |
| 203 | 1       | Extremo 2A | -1.236    | 2.665   | -0.058 | -0.1578 | 0.03       | 5.3284   |
| 204 | 0       | Extremo 2A | 0.894     | -11.359 | 0.067  | 0.1164  | 0.0283     | 4.5054   |
| 204 | 0.5     | Extremo 2A | 0.894     | -3.687  | 0.067  | 0.1164  | -0.005     | 8.267    |
| 204 | 1       | Extremo 1A | 0.894     | 3.986   | 0.067  | 0.1164  | -0.0384    | 8.1924   |
| 204 | 0       | Extremo 1A | -1.302    | -11.36  | -0.052 | 0.1164  | -0.0244    | 4.5057   |
| 204 | 0.5     | Extremo 1A | -1.302    | -3.688  | -0.052 | 0.1164  | 0.0015     | 8.2677   |
| 204 | 1       | Extremo 2A | -1.302    | 3.985   | -0.052 | 0.1164  | 0.0275     | 8.1935   |
| 205 | 0       | Extremo 2A | 0.969     | -9.988  | 0.064  | 0.1682  | 0.0264     | 7.4945   |
| 205 | 0.5     | Extremo 2A | 0.969     | -2.316  | 0.064  | 0.1682  | -0.0058    | 10.5706  |
| 205 | 1       | Extremo 1A | 0.969     | 5.357   | 0.064  | 0.1682  | -0.0381    | 9.8105   |
| 205 | 0       | Extremo 1A | -1.361    | -9.989  | -0.047 | 0.1682  | -0.0214    | 7.4955   |
| 205 | 0.5     | Extremo 1A | -1.361    | -2.317  | -0.047 | 0.1682  | 0.0022     | 10.5721  |
| 205 | 1       | Extremo 2A | -1.361    | 5.356   | -0.047 | 0.1682  | 0.0257     | 9.8123   |
| 206 | 0       | Extremo 2A | 1.042     | -8.638  | 0.063  | 0.0984  | 0.0248     | 9.3868   |
| 206 | 0.5     | Extremo 2A | 1.042     | -0.966  | 0.063  | 0.0984  | -0.0066    | 11.7879  |
| 206 | 1       | Extremo 1A | 1.042     | 6.707   | 0.063  | 0.0984  | -0.0381    | 10.3528  |
| 206 | 0       | Extremo 1A | -1.414    | -8.639  | -0.044 | 0.0984  | -0.0192    | 9.3886   |
| 206 | 0.5     | Extremo 1A | -1.414    | -0.967  | -0.044 | 0.0984  | 0.0028     | 11.7901  |
| 206 | 1       | Extremo 2A | -1.414    | 6.706   | -0.044 | 0.0984  | 0.0248     | 10.3553  |
| 207 | 0       | Extremo 2A | 1.114     | -7.303  | 0.062  | -0.0176 | 0.0236     | 10.2494  |
| 207 | 0.5     | Extremo 2A | 1.114     | 0.37    | 0.062  | -0.0176 | -0.0074    | 11.9827  |
| 207 | 1       | Extremo 1A | 1.114     | 8.042   | 0.062  | -0.0176 | -0.0384    | 9.8797   |
| 207 | 0       | Extremo 1A | -1.466    | -7.304  | -0.043 | -0.0175 | -0.0179    | 10.2518  |
| 207 | 0.5     | Extremo 1A | -1.466    | 0.369   | -0.043 | -0.0175 | 0.0034     | 11.9855  |
| 207 | 1       | Extremo 2A | -1.466    | 8.041   | -0.043 | -0.0175 | 0.0248     | 9.8829   |
| 208 | 0       | Extremo 2A | 1.185     | -5.966  | 0.062  | -0.1292 | 0.0226     | 10.1053  |
| 208 | 0.5     | Extremo 2A | 1.185     | 1.707   | 0.062  | -0.1292 | -0.0082    | 11.1701  |
| 208 | 1       | Extremo 1A | 1.185     | 9.379   | 0.062  | -0.1292 | -0.039     | 8.3987   |
| 208 | 0       | Extremo 1A | -1.516    | -5.967  | -0.043 | -0.1292 | -0.0175    | 10.1084  |
| 208 | 0.5     | Extremo 1A | -1.516    | 1.706   | -0.043 | -0.1292 | 0.004      | 11.1736  |
| 208 | 1       | Extremo 2A | -1.516    | 9.378   | -0.043 | -0.1292 | 0.0256     | 8.4026   |
| 209 | 0       | Extremo 2A | 1.255     | -4.612  | 0.062  | -0.1829 | 0.0219     | 8.9409   |
| 209 | 0.5     | Extremo 2A | 1.255     | 3.061   | 0.062  | -0.1829 | -0.0089    | 9.3286   |
| 209 | 1       | Extremo 1A | 1.255     | 10.733  | 0.062  | -0.1829 | -0.0398    | 5.8799   |
| 209 | 0       | Extremo 1A | -1.568    | -4.612  | -0.045 | -0.1829 | -0.0179    | 8.9448   |
| 209 | 0.5     | Extremo 1A | -1.568    | 3.06    | -0.045 | -0.1829 | 0.0046     | 9.3328   |
| 209 | 1       | Extremo 2A | -1.568    | 10.733  | -0.045 | -0.1829 | 0.0271     | 5.8846   |
| 210 | 0       | Extremo 2A | 1.327     | -3.233  | 0.062  | -0.0927 | 0.0215     | 6.6837   |
| 210 | 0.5     | Extremo 2A | 1.327     | 4.439   | 0.062  | -0.0927 | -0.0096    | 6.3821   |
| 210 | 1       | Extremo 1A | 1.327     | 12.112  | 0.062  | -0.0927 | -0.0408    | 2.2443   |
| 210 | 0       | Extremo 1A | -1.624    | -3.234  | -0.049 | -0.0927 | -0.0191    | 6.6882   |
| 210 | 0.5     | Extremo 1A | -1.624    | 4.438   | -0.049 | -0.0927 | 0.0052     | 6.3871   |
| 210 | 1       | Extremo 2A | -1.624    | 12.111  | -0.049 | -0.0927 | 0.0295     | 2.2497   |
| 211 | 0       | Extremo 2A | 1.399     | -1.916  | 0.063  | 0.2586  | 0.0212     | 3.1335   |
| 211 | 0.5     | Extremo 2A | 1.399     | 5.756   | 0.063  | 0.2586  | -0.0103    | 2.1734   |
| 211 | 1       | Extremo 1A | 1.399     | 13.429  | 0.063  | 0.2586  | -0.0418    | -2.6229  |
| 211 | 0       | Extremo 1A | -1.685    | -1.917  | -0.053 | 0.2585  | -0.0209    | 3.1389   |
| 211 | 0.5     | Extremo 1A | -1.685    | 5.756   | -0.053 | 0.2585  | 0.0058     | 2.1792   |
| 211 | 1       | Extremo 2A | -1.685    | 13.428  | -0.053 | 0.2585  | 0.0324     | -2.6167  |

|     |     |            |        |         |        |         |         |          |
|-----|-----|------------|--------|---------|--------|---------|---------|----------|
| 212 | 0   | Extremo 2A | 1.473  | -1.119  | 0.064  | 0.8852  | 0.0212  | -2.0846  |
| 212 | 0.5 | Extremo 2A | 1.473  | 6.554   | 0.064  | 0.8852  | -0.0106 | -3.4434  |
| 212 | 1   | Extremo 1A | 1.473  | 14.226  | 0.064  | 0.8852  | -0.0425 | -8.6384  |
| 212 | 0   | Extremo 1A | -1.751 | -1.119  | -0.058 | 0.885   | -0.0229 | -2.0784  |
| 212 | 0.5 | Extremo 1A | -1.751 | 6.553   | -0.058 | 0.885   | 0.0063  | -3.4368  |
| 212 | 1   | Extremo 2A | -1.751 | 14.226  | -0.058 | 0.885   | 0.0355  | -8.6314  |
| 213 | 0   | Extremo 2A | 1.551  | -2.073  | 0.065  | 1.3281  | 0.0224  | -9.1321  |
| 213 | 0.5 | Extremo 2A | 1.551  | 5.599   | 0.065  | 1.3281  | -0.01   | -10.0135 |
| 213 | 1   | Extremo 1A | 1.551  | 13.272  | 0.065  | 1.3281  | -0.0424 | -14.7313 |
| 213 | 0   | Extremo 1A | -1.821 | -2.074  | -0.062 | 1.3278  | -0.0243 | -9.1248  |
| 213 | 0.5 | Extremo 1A | -1.821 | 5.599   | -0.062 | 1.3278  | 0.0065  | -10.0061 |
| 213 | 1   | Extremo 2A | -1.821 | 13.271  | -0.062 | 1.3278  | 0.0373  | -14.7236 |
| 214 | 0   | Extremo 2A | 1.635  | -5.816  | 0.073  | 0.6331  | 0.0284  | -16.2096 |
| 214 | 0.5 | Extremo 2A | 1.635  | 1.856   | 0.073  | 0.6331  | -0.0079 | -15.2196 |
| 214 | 1   | Extremo 1A | 1.635  | 9.529   | 0.073  | 0.6331  | -0.0442 | -18.0658 |
| 214 | 0   | Extremo 1A | -1.891 | -5.816  | -0.061 | 0.633   | -0.0247 | -16.2016 |
| 214 | 0.5 | Extremo 1A | -1.891 | 1.857   | -0.061 | 0.633   | 0.0056  | -15.2118 |
| 214 | 1   | Extremo 2A | -1.891 | 9.529   | -0.061 | 0.633   | 0.0359  | -18.0584 |
| 215 | 0   | Extremo 2A | 1.734  | -9.242  | 0.104  | -0.6526 | 0.0439  | -18.0403 |
| 215 | 0.5 | Extremo 2A | 1.734  | -1.57   | 0.104  | -0.6526 | -0.0082 | -15.3373 |
| 215 | 1   | Extremo 1A | 1.734  | 6.103   | 0.104  | -0.6526 | -0.0604 | -16.4706 |
| 215 | 0   | Extremo 1A | -1.959 | -9.241  | -0.064 | -0.6525 | -0.028  | -18.0327 |
| 215 | 0.5 | Extremo 1A | -1.959 | -1.568  | -0.064 | -0.6525 | 0.0042  | -15.3305 |
| 215 | 1   | Extremo 2A | -1.959 | 6.104   | -0.064 | -0.6525 | 0.0364  | -16.4645 |
| 216 | 0   | Extremo 2A | 1.852  | -12.985 | 0.114  | -1.3476 | 0.0452  | -14.9411 |
| 216 | 0.5 | Extremo 2A | 1.852  | -5.313  | 0.114  | -1.3476 | -0.0116 | -10.3666 |
| 216 | 1   | Extremo 1A | 1.852  | 2.36    | 0.114  | -1.3476 | -0.0683 | -9.6284  |
| 216 | 0   | Extremo 1A | -2.033 | -12.983 | -0.067 | -1.3473 | -0.0297 | -14.9352 |
| 216 | 0.5 | Extremo 1A | -2.033 | -5.31   | -0.067 | -1.3473 | 0.004   | -10.362  |
| 216 | 1   | Extremo 2A | -2.033 | 2.362   | -0.067 | -1.3473 | 0.0377  | -9.6251  |
| 217 | 0   | Extremo 2A | 1.977  | -13.94  | 0.112  | -0.9047 | 0.0422  | -9.0836  |
| 217 | 0.5 | Extremo 2A | 1.977  | -6.267  | 0.112  | -0.9047 | -0.014  | -4.0319  |
| 217 | 1   | Extremo 1A | 1.977  | 1.405   | 0.112  | -0.9047 | -0.0702 | -2.8165  |
| 217 | 0   | Extremo 1A | -2.109 | -13.937 | -0.064 | -0.9045 | -0.0275 | -9.0802  |
| 217 | 0.5 | Extremo 1A | -2.109 | -6.264  | -0.064 | -0.9045 | 0.0046  | -4.03    |
| 217 | 1   | Extremo 2A | -2.109 | 1.408   | -0.064 | -0.9045 | 0.0366  | -2.816   |
| 218 | 0   | Extremo 2A | 2.102  | -13.142 | 0.109  | -0.278  | 0.039   | -3.3035  |
| 218 | 0.5 | Extremo 2A | 2.102  | -5.47   | 0.109  | -0.278  | -0.0157 | 1.3495   |
| 218 | 1   | Extremo 1A | 2.102  | 2.203   | 0.109  | -0.278  | -0.0703 | 2.1662   |
| 218 | 0   | Extremo 1A | -2.181 | -13.139 | -0.059 | -0.2779 | -0.0241 | -3.3028  |
| 218 | 0.5 | Extremo 1A | -2.181 | -5.467  | -0.059 | -0.2779 | 0.0052  | 1.3487   |
| 218 | 1   | Extremo 2A | -2.181 | 2.206   | -0.059 | -0.2779 | 0.0345  | 2.1638   |
| 219 | 0   | Extremo 2A | 2.225  | -11.825 | 0.107  | 0.0734  | 0.0363  | 1.3282   |
| 219 | 0.5 | Extremo 2A | 2.225  | -4.152  | 0.107  | 0.0734  | -0.017  | 5.3225   |
| 219 | 1   | Extremo 1A | 2.225  | 3.52    | 0.107  | 0.0734  | -0.0703 | 5.4806   |
| 219 | 0   | Extremo 1A | -2.247 | -11.822 | -0.053 | 0.0734  | -0.0208 | 1.3263   |
| 219 | 0.5 | Extremo 1A | -2.247 | -4.149  | -0.053 | 0.0734  | 0.0059  | 5.3191   |
| 219 | 1   | Extremo 2A | -2.247 | 3.523   | -0.053 | 0.0734  | 0.0326  | 5.4756   |
| 220 | 0   | Extremo 2A | 2.346  | -10.446 | 0.104  | 0.1641  | 0.0339  | 4.7281   |
| 220 | 0.5 | Extremo 2A | 2.346  | -2.774  | 0.104  | 0.1641  | -0.0183 | 8.0331   |
| 220 | 1   | Extremo 1A | 2.346  | 4.899   | 0.104  | 0.1641  | -0.0706 | 7.5018   |
| 220 | 0   | Extremo 1A | -2.308 | -10.443 | -0.049 | 0.1641  | -0.0182 | 4.7235   |
| 220 | 0.5 | Extremo 1A | -2.308 | -2.771  | -0.049 | 0.1641  | 0.0065  | 8.027    |
| 220 | 1   | Extremo 2A | -2.308 | 4.902   | -0.049 | 0.1641  | 0.0313  | 7.4943   |
| 221 | 0   | Extremo 2A | 2.464  | -9.091  | 0.103  | 0.1115  | 0.0319  | 7.0107   |
| 221 | 0.5 | Extremo 2A | 2.464  | -1.419  | 0.103  | 0.1115  | -0.0196 | 9.6382   |
| 221 | 1   | Extremo 1A | 2.464  | 6.254   | 0.103  | 0.1115  | -0.0711 | 8.4295   |
| 221 | 0   | Extremo 1A | -2.365 | -9.088  | -0.047 | 0.1114  | -0.0164 | 7.0035   |
| 221 | 0.5 |            |        |         |        |         |         |          |





|     |     |            |        |         |        |         |         |          |
|-----|-----|------------|--------|---------|--------|---------|---------|----------|
| 224 | 0   | Extremo 2A | 2.813  | -5.063  | 0.102  | -0.1613 | 0.0275  | 7.7007   |
| 224 | 0.5 | Extremo 2A | 2.813  | 2.61    | 0.102  | -0.1613 | -0.0233 | 8.3139   |
| 224 | 1   | Extremo 1A | 2.813  | 10.282  | 0.102  | -0.1613 | -0.0742 | 5.0909   |
| 224 | 0   | Extremo 1A | -2.531 | -5.06   | -0.049 | -0.1613 | -0.0155 | 7.6857   |
| 224 | 0.5 | Extremo 1A | -2.531 | 2.613   | -0.049 | -0.1613 | 0.0091  | 8.2974   |
| 224 | 1   | Extremo 2A | -2.531 | 10.285  | -0.049 | -0.1613 | 0.0337  | 5.0729   |
| 225 | 0   | Extremo 2A | 2.93   | -3.687  | 0.102  | -0.0758 | 0.0265  | 5.8215   |
| 225 | 0.5 | Extremo 2A | 2.93   | 3.986   | 0.102  | -0.0758 | -0.0245 | 5.7466   |
| 225 | 1   | Extremo 1A | 2.93   | 11.658  | 0.102  | -0.0758 | -0.0756 | 1.8355   |
| 225 | 0   | Extremo 1A | -2.592 | -3.683  | -0.053 | -0.0757 | -0.0168 | 5.804    |
| 225 | 0.5 | Extremo 1A | -2.592 | 3.989   | -0.053 | -0.0757 | 0.0097  | 5.7275   |
| 225 | 1   | Extremo 2A | -2.592 | 11.662  | -0.053 | -0.0757 | 0.0363  | 1.8148   |
| 226 | 0   | Extremo 2A | 3.047  | -2.371  | 0.103  | 0.2641  | 0.0258  | 2.6561   |
| 226 | 0.5 | Extremo 2A | 3.047  | 5.302   | 0.103  | 0.2641  | -0.0256 | 1.9233   |
| 226 | 1   | Extremo 1A | 3.047  | 12.974  | 0.103  | 0.2641  | -0.0769 | -2.6457  |
| 226 | 0   | Extremo 1A | -2.658 | -2.368  | -0.058 | 0.2645  | -0.0187 | 2.6357   |
| 226 | 0.5 | Extremo 1A | -2.658 | 5.305   | -0.058 | 0.2645  | 0.0103  | 1.9013   |
| 226 | 1   | Extremo 2A | -2.658 | 12.977  | -0.058 | 0.2645  | 0.0394  | -2.6692  |
| 227 | 0   | Extremo 2A | 3.167  | -1.562  | 0.103  | 0.8727  | 0.0253  | -2.1613  |
| 227 | 0.5 | Extremo 2A | 3.167  | 6.111   | 0.103  | 0.8727  | -0.0263 | -3.2985  |
| 227 | 1   | Extremo 1A | 3.167  | 13.783  | 0.103  | 0.8727  | -0.0779 | -8.272   |
| 227 | 0   | Extremo 1A | -2.729 | -1.559  | -0.063 | 0.8736  | -0.0208 | -2.1849  |
| 227 | 0.5 | Extremo 1A | -2.729 | 6.114   | -0.063 | 0.8736  | 0.0109  | -3.3236  |
| 227 | 1   | Extremo 2A | -2.729 | 13.786  | -0.063 | 0.8736  | 0.0427  | -8.2985  |
| 228 | 0   | Extremo 2A | 3.29   | -2.459  | 0.104  | 1.3033  | 0.0262  | -8.7879  |
| 228 | 0.5 | Extremo 2A | 3.29   | 5.213   | 0.104  | 1.3033  | -0.0259 | -9.4763  |
| 228 | 1   | Extremo 1A | 3.29   | 12.886  | 0.104  | 1.3033  | -0.078  | -14.001  |
| 228 | 0   | Extremo 1A | -2.805 | -2.458  | -0.067 | 1.3045  | -0.022  | -8.8154  |
| 228 | 0.5 | Extremo 1A | -2.805 | 5.214   | -0.067 | 1.3045  | 0.0114  | -9.5044  |
| 228 | 1   | Extremo 2A | -2.805 | 12.887  | -0.067 | 1.3045  | 0.0447  | -14.0297 |
| 229 | 0   | Extremo 2A | 3.421  | -6.072  | 0.114  | 0.6269  | 0.0334  | -15.4728 |
| 229 | 0.5 | Extremo 2A | 3.421  | 1.6     | 0.114  | 0.6269  | -0.0237 | -14.3549 |
| 229 | 1   | Extremo 1A | 3.421  | 9.273   | 0.114  | 0.6269  | -0.0808 | -17.0732 |
| 229 | 0   | Extremo 1A | -2.88  | -6.075  | -0.065 | 0.6275  | -0.0217 | -15.5032 |
| 229 | 0.5 | Extremo 1A | -2.88  | 1.598   | -0.065 | 0.6275  | 0.0108  | -14.3841 |
| 229 | 1   | Extremo 2A | -2.88  | 9.27    | -0.065 | 0.6275  | 0.0432  | -17.1012 |
| 230 | 0   | Extremo 2A | 3.572  | -9.377  | 0.154  | -0.6243 | 0.0523  | -17.0796 |
| 230 | 0.5 | Extremo 2A | 3.572  | -1.704  | 0.154  | -0.6243 | -0.0245 | -14.3094 |
| 230 | 1   | Extremo 1A | 3.572  | 5.968   | 0.154  | -0.6243 | -0.1013 | -15.3755 |
| 230 | 0   | Extremo 1A | -2.95  | -9.382  | -0.066 | -0.6247 | -0.0234 | -17.1081 |
| 230 | 0.5 | Extremo 1A | -2.95  | -1.71   | -0.066 | -0.6247 | 0.0094  | -14.335  |
| 230 | 1   | Extremo 2A | -2.95  | 5.963   | -0.066 | -0.6247 | 0.0422  | -15.3982 |
| 231 | 0   | Extremo 2A | 3.746  | -12.989 | 0.165  | -1.3007 | 0.0534  | -13.9164 |
| 231 | 0.5 | Extremo 2A | 3.746  | -5.317  | 0.165  | -1.3007 | -0.029  | -9.3399  |
| 231 | 1   | Extremo 1A | 3.746  | 2.356   | 0.165  | -1.3007 | -0.1115 | -8.5997  |
| 231 | 0   | Extremo 1A | -3.026 | -12.999 | -0.068 | -1.3017 | -0.0249 | -13.9384 |
| 231 | 0.5 | Extremo 1A | -3.026 | -5.326  | -0.068 | -1.3017 | 0.0089  | -9.3572  |
| 231 | 1   | Extremo 2A | -3.026 | 2.346   | -0.068 | -1.3017 | 0.0428  | -8.6122  |
| 232 | 0   | Extremo 2A | 3.928  | -13.887 | 0.164  | -0.8701 | 0.0494  | -8.0965  |
| 232 | 0.5 | Extremo 2A | 3.928  | -6.214  | 0.164  | -0.8701 | -0.0324 | -3.0712  |
| 232 | 1   | Extremo 1A | 3.928  | 1.458   | 0.164  | -0.8701 | -0.1142 | -1.8821  |
| 232 | 0   | Extremo 1A | -3.103 | -13.898 | -0.065 | -0.8708 | -0.0228 | -8.1091  |
| 232 | 0.5 | Extremo 1A | -3.103 | -6.226  | -0.065 | -0.8708 | 0.0094  | -3.0782  |
| 232 | 1   | Extremo 2A | -3.103 | 1.447   | -0.065 | -0.8708 | 0.0417  | -1.8836  |
| 233 | 0   | Extremo 2A | 4.111  | -13.078 | 0.16   | -0.2614 | 0.0454  | -2.3794  |
| 233 | 0.5 | Extremo 2A | 4.111  | -5.406  | 0.16   | -0.2614 | -0.0348 | 2.2415   |
| 233 | 1   | Extremo 1A | 4.111  | 2.267   | 0.16   | -0.2614 | -0.1149 | 3.0262   |
| 233 | 0   | Extremo 1A | -3.176 | -13.089 | -0.059 | -0.2616 | -0.0195 | -2.3817  |
| 233 | 0.5 | Extremo 1A | -3.176 | -5.417  | -0.059 | -0.2616 | 0.01    | 2.2449   |
| 233 | 1   | Extremo 2A | -3.176 | 2.256   | -0.059 | -0.2616 | 0.0396  | 3.0352   |
| 234 | 0   | Extremo 2A | 4.292  | -11.762 | 0.157  | 0.0787  | 0.0419  | 2.1927   |
| 234 | 0.5 | Extremo 2A | 4.292  | -4.09   | 0.157  | 0.0787  | -0.0368 | 6.1558   |
| 234 | 1   | Extremo 1A | 4.292  | 3.583   | 0.157  | 0.0787  | -0.1155 | 6.2826   |
| 234 | 0   | Extremo 1A | -3.243 | -11.774 | -0.054 | 0.0788  | -0.0164 | 2.2004   |
| 234 | 0.5 | Extremo 1A | -3.243 | -4.101  | -0.054 | 0.0788  | 0.0107  | 6.1692   |
| 234 | 1   | Extremo 2A | -3.243 | 3.571   | -0.054 | 0.0788  | 0.0377  | 6.3017   |
| 235 | 0   | Extremo 2A | 4.47   | -10.386 | 0.155  | 0.1643  | 0.0389  | 5.5388   |
| 235 | 0.5 | Extremo 2A | 4.47   | -2.714  | 0.155  | 0.1643  | -0.0387 | 8.8138   |
| 235 | 1   | Extremo 1A | 4.47   | 4.959   | 0.155  | 0.1643  | -0.1162 | 8.2527   |
| 235 | 0   | Extremo 1A | -3.304 | -10.398 | -0.05  | 0.1645  | -0.0138 | 5.5564   |
| 235 | 0.5 | Extremo 1A | -3.304 | -2.725  | -0.05  | 0.1645  | 0.0113  | 8.8371   |
| 235 | 1   | Extremo 2A | -3.304 | 4.947   | -0.05  | 0.1645  | 0.0365  | 8.2816   |

|     |     |            |        |        |        |           |         |          |
|-----|-----|------------|--------|--------|--------|-----------|---------|----------|
| 236 | 0   | Extremo 2A | 4.646  | -9.033 | 0.153  | 0.1099    | 0.0361  | 7.7705   |
| 236 | 0.5 | Extremo 2A | 4.646  | -1.361 | 0.153  | 0.1099    | -0.0406 | 10.369   |
| 236 | 1   | Extremo 1A | 4.646  | 6.312  | 0.153  | 0.1099    | -0.1173 | 9.1312   |
| 236 | 0   | Extremo 1A | -3.362 | -9.044 | -0.048 | 0.1103    | -0.012  | 7.798    |
| 236 | 0.5 | Extremo 1A | -3.362 | -1.372 | -0.048 | 0.1103    | 0.012   | 10.4021  |
| 236 | 1   | Extremo 2A | -3.362 | 6.301  | -0.048 | 0.1103    | 0.036   | 9.1699   |
| 237 | 0   | Extremo 2A | 4.82   | -7.696 | 0.152  | 0.0006465 | 0.0337  | 8.9647   |
| 237 | 0.5 | Extremo 2A | 4.82   | -0.024 | 0.152  | 0.0006465 | -0.0424 | 10.8947  |
| 237 | 1   | Extremo 1A | 4.82   | 7.649  | 0.152  | 0.0006465 | -0.1186 | 8.9885   |
| 237 | 0   | Extremo 1A | -3.418 | -7.708 | -0.047 | 0.0009821 | -0.0109 | 9.0019   |
| 237 | 0.5 | Extremo 1A | -3.418 | -0.035 | -0.047 | 0.0009821 | 0.0126  | 10.9376  |
| 237 | 1   | Extremo 2A | -3.418 | 7.637  | -0.047 | 0.0009821 | 0.0362  | 9.0371   |
| 238 | 0   | Extremo 2A | 4.993  | -6.36  | 0.152  | -0.1087   | 0.0316  | 9.1489   |
| 238 | 0.5 | Extremo 2A | 4.993  | 1.313  | 0.152  | -0.1087   | -0.0443 | 10.4106  |
| 238 | 1   | Extremo 1A | 4.993  | 8.985  | 0.152  | -0.1087   | -0.1202 | 7.836    |
| 238 | 0   | Extremo 1A | -3.474 | -6.371 | -0.048 | -0.1084   | -0.0107 | 9.1959   |
| 238 | 0.5 | Extremo 1A | -3.474 | 1.301  | -0.048 | -0.1084   | 0.0133  | 10.4633  |
| 238 | 1   | Extremo 2A | -3.474 | 8.974  | -0.048 | -0.1084   | 0.0373  | 7.8944   |
| 239 | 0   | Extremo 2A | 5.166  | -5.007 | 0.152  | -0.1635   | 0.0298  | 8.3119   |
| 239 | 0.5 | Extremo 2A | 5.166  | 2.666  | 0.152  | -0.1635   | -0.0461 | 8.8972   |
| 239 | 1   | Extremo 1A | 5.166  | 10.338 | 0.152  | -0.1635   | -0.1219 | 5.6462   |
| 239 | 0   | Extremo 1A | -3.532 | -5.018 | -0.05  | -0.1634   | -0.0112 | 8.3687   |
| 239 | 0.5 | Extremo 1A | -3.532 | 2.654  | -0.05  | -0.1634   | 0.014   | 8.9598   |
| 239 | 1   | Extremo 2A | -3.532 | 10.327 | -0.05  | -0.1634   | 0.0392  | 5.7146   |
| 240 | 0   | Extremo 2A | 5.339  | -3.632 | 0.152  | -0.0792   | 0.0281  | 6.3838   |
| 240 | 0.5 | Extremo 2A | 5.339  | 4.041  | 0.152  | -0.0792   | -0.0479 | 6.2815   |
| 240 | 1   | Extremo 1A | 5.339  | 11.713 | 0.152  | -0.0792   | -0.1239 | 2.3429   |
| 240 | 0   | Extremo 1A | -3.594 | -3.643 | -0.054 | -0.0796   | -0.0126 | 6.4506   |
| 240 | 0.5 | Extremo 1A | -3.594 | 4.029  | -0.054 | -0.0796   | 0.0146  | 6.3542   |
| 240 | 1   | Extremo 2A | -3.594 | 11.702 | -0.054 | -0.0796   | 0.0418  | 2.4216   |
| 241 | 0   | Extremo 2A | 5.513  | -2.317 | 0.152  | 0.2579    | 0.0267  | 3.1711   |
| 241 | 0.5 | Extremo 2A | 5.513  | 5.356  | 0.152  | 0.2579    | -0.0495 | 2.4113   |
| 241 | 1   | Extremo 1A | 5.513  | 13.028 | 0.152  | 0.2579    | -0.1257 | -2.1847  |
| 241 | 0   | Extremo 1A | -3.661 | -2.329 | -0.059 | 0.2563    | -0.0145 | 3.2486   |
| 241 | 0.5 | Extremo 1A | -3.661 | 5.344  | -0.059 | 0.2563    | 0.0153  | 2.4948   |
| 241 | 1   | Extremo 2A | -3.661 | 13.016 | -0.059 | 0.2563    | 0.045   | -2.0952  |
| 242 | 0   | Extremo 2A | 5.689  | -1.505 | 0.153  | 0.8619    | 0.0255  | -1.6891  |
| 242 | 0.5 | Extremo 2A | 5.689  | 6.168  | 0.153  | 0.8619    | -0.0508 | -2.8548  |
| 242 | 1   | Extremo 1A | 5.689  | 13.84  | 0.153  | 0.8619    | -0.1271 | -7.8567  |
| 242 | 0   | Extremo 1A | -3.734 | -1.516 | -0.065 | 0.8584    | -0.0166 | -1.5992  |
| 242 | 0.5 | Extremo 1A | -3.734 | 6.157  | -0.065 | 0.8584    | 0.0159  | -2.7594  |
| 242 | 1   | Extremo 2A | -3.734 | 13.829 | -0.065 | 0.8584    | 0.0484  | -7.7559  |
| 243 | 0   | Extremo 2A | 5.869  | -2.387 | 0.154  | 1.2895    | 0.0261  | -8.3532  |
| 243 | 0.5 | Extremo 2A | 5.869  | 5.286  | 0.154  | 1.2895    | -0.0507 | -9.078   |
| 243 | 1   | Extremo 1A | 5.869  | 12.958 | 0.154  | 1.2895    | -0.1275 | -13.639  |
| 243 | 0   | Extremo 1A | -3.811 | -2.391 | -0.068 | 1.2848    | -0.0176 | -8.2487  |
| 243 | 0.5 | Extremo 1A | -3.811 | 5.281  | -0.068 | 1.2848    | 0.0165  | -8.9712  |
| 243 | 1   | Extremo 2A | -3.811 | 12.954 | -0.068 | 1.2848    | 0.0506  | -13.5299 |
| 244 | 0   | Extremo 2A | 6.059  | -5.962 | 0.165  | 0.6192    | 0.0341  | -15.0841 |
| 244 | 0.5 | Extremo 2A | 6.059  | 1.71   | 0.165  | 0.6192    | -0.0485 | -14.021  |
| 244 | 1   | Extremo 1A | 6.059  | 9.383  | 0.165  | 0.6192    | -0.1311 | -16.7942 |
| 244 | 0   | Extremo 1A | -3.887 | -5.953 | -0.066 | 0.6166    | -0.0166 | -14.9682 |
| 244 | 0.5 | Extremo 1A | -3.887 | 1.72   | -0.066 | 0.6166    | 0.0162  | -13.9099 |
| 244 | 1   | Extremo 2A | -3.887 | 9.392  | -0.066 | 0.6166    | 0.049   | -16.6878 |
| 245 | 0   | Extremo 2A | 6.271  | -9.232 | 0.211  | -0.6212   | 0.0556  | -16.7861 |
| 245 | 0.5 | Extremo 2A | 6.271  | -1.56  | 0.211  | -0.6212   | -0.05   | -14.088  |
| 245 | 1   | Extremo 1A | 6.271  | 6.113  | 0.211  | -0.6212   | -0.1556 | -15.2262 |
| 245 | 0   | Extremo 1A | -3.956 | -9.21  | -0.063 | -0.6199   | -0.0166 | -16.6774 |
| 245 | 0.5 | Extremo 1A | -3.956 | -1.537 | -0.063 | -0.       |         |          |



|     |     |            |        |         |        |         |         |          |
|-----|-----|------------|--------|---------|--------|---------|---------|----------|
| 248 | 0   | Extremo 2A | 7.008  | -12.878 | 0.219  | -0.2602 | 0.0463  | -2.5783  |
| 248 | 0.5 | Extremo 2A | 7.008  | -5.205  | 0.219  | -0.2602 | -0.0632 | 1.9425   |
| 248 | 1   | Extremo 1A | 7.008  | 2.467   | 0.219  | -0.2602 | -0.1728 | 2.6271   |
| 248 | 0   | Extremo 1A | -4.171 | -12.834 | -0.056 | -0.2599 | -0.0131 | -2.5689  |
| 248 | 0.5 | Extremo 1A | -4.171 | -5.161  | -0.056 | -0.2599 | 0.0149  | 1.9299   |
| 248 | 1   | Extremo 2A | -4.171 | 2.511   | -0.056 | -0.2599 | 0.0428  | 2.5925   |
| 249 | 0   | Extremo 2A | 7.255  | -11.563 | 0.216  | 0.0767  | 0.0419  | 1.8156   |
| 249 | 0.5 | Extremo 2A | 7.255  | -3.89   | 0.216  | 0.0767  | -0.066  | 5.6789   |
| 249 | 1   | Extremo 1A | 7.255  | 3.782   | 0.216  | 0.0767  | -0.1738 | 5.7059   |
| 249 | 0   | Extremo 1A | -4.234 | -11.519 | -0.051 | 0.0758  | -0.0101 | 1.7867   |
| 249 | 0.5 | Extremo 1A | -4.234 | -3.846  | -0.051 | 0.0758  | 0.0154  | 5.628    |
| 249 | 1   | Extremo 2A | -4.234 | 3.826   | -0.051 | 0.0758  | 0.041   | 5.633    |
| 250 | 0   | Extremo 2A | 7.499  | -10.187 | 0.213  | 0.1606  | 0.0379  | 4.9854   |
| 250 | 0.5 | Extremo 2A | 7.499  | -2.515  | 0.213  | 0.1606  | -0.0686 | 8.1609   |
| 250 | 1   | Extremo 1A | 7.499  | 5.158   | 0.213  | 0.1606  | -0.1751 | 7.5001   |
| 250 | 0   | Extremo 1A | -4.293 | -10.144 | -0.047 | 0.1592  | -0.0077 | 4.9187   |
| 250 | 0.5 | Extremo 1A | -4.293 | -2.471  | -0.047 | 0.1592  | 0.0161  | 8.0724   |
| 250 | 1   | Extremo 2A | -4.293 | 5.201   | -0.047 | 0.1592  | 0.0398  | 7.3898   |
| 251 | 0   | Extremo 2A | 7.74   | -8.834  | 0.211  | 0.1054  | 0.0343  | 7.0419   |
| 251 | 0.5 | Extremo 2A | 7.74   | -1.161  | 0.211  | 0.1054  | -0.0712 | 9.5407   |
| 251 | 1   | Extremo 1A | 7.74   | 6.511   | 0.211  | 0.1054  | -0.1766 | 8.2033   |
| 251 | 0   | Extremo 1A | -4.348 | -8.79   | -0.045 | 0.1037  | -0.0061 | 6.9378   |
| 251 | 0.5 | Extremo 1A | -4.348 | -1.118  | -0.045 | 0.1037  | 0.0167  | 9.4149   |
| 251 | 1   | Extremo 2A | -4.348 | 6.555   | -0.045 | 0.1037  | 0.0394  | 8.0557   |
| 252 | 0   | Extremo 2A | 7.979  | -7.496  | 0.209  | -0.0045 | 0.0309  | 8.0615   |
| 252 | 0.5 | Extremo 2A | 7.979  | 0.176   | 0.209  | -0.0045 | -0.0737 | 9.8916   |
| 252 | 1   | Extremo 1A | 7.979  | 7.849   | 0.209  | -0.0045 | -0.1784 | 7.8854   |
| 252 | 0   | Extremo 1A | -4.401 | -7.453  | -0.045 | -0.0061 | -0.0052 | 7.9202   |
| 252 | 0.5 | Extremo 1A | -4.401 | 0.22    | -0.045 | -0.0061 | 0.0173  | 9.7284   |
| 252 | 1   | Extremo 2A | -4.401 | 7.892   | -0.045 | -0.0061 | 0.0399  | 7.7004   |
| 253 | 0   | Extremo 2A | 8.217  | -6.158  | 0.208  | -0.1139 | 0.0278  | 8.0719   |
| 253 | 0.5 | Extremo 2A | 8.217  | 1.515   | 0.208  | -0.1139 | -0.0762 | 9.2327   |
| 253 | 1   | Extremo 1A | 8.217  | 9.187   | 0.208  | -0.1139 | -0.1803 | 6.5573   |
| 253 | 0   | Extremo 1A | -4.455 | -6.114  | -0.046 | -0.1151 | -0.0053 | 7.8932   |
| 253 | 0.5 | Extremo 1A | -4.455 | 1.559   | -0.046 | -0.1151 | 0.018   | 9.0321   |
| 253 | 1   | Extremo 2A | -4.455 | 9.231   | -0.046 | -0.1151 | 0.0412  | 6.3347   |
| 254 | 0   | Extremo 2A | 8.453  | -4.801  | 0.207  | -0.1663 | 0.0249  | 7.0613   |
| 254 | 0.5 | Extremo 2A | 8.453  | 2.871   | 0.207  | -0.1663 | -0.0787 | 7.5438   |
| 254 | 1   | Extremo 1A | 8.453  | 10.544  | 0.207  | -0.1663 | -0.1823 | 4.19     |
| 254 | 0   | Extremo 1A | -4.512 | -4.757  | -0.049 | -0.1665 | -0.0061 | 6.845    |
| 254 | 0.5 | Extremo 1A | -4.512 | 2.916   | -0.049 | -0.1665 | 0.0186  | 7.3053   |
| 254 | 1   | Extremo 2A | -4.512 | 10.588  | -0.049 | -0.1665 | 0.0433  | 3.9293   |
| 255 | 0   | Extremo 2A | 8.688  | -3.419  | 0.206  | -0.0734 | 0.0221  | 4.9567   |
| 255 | 0.5 | Extremo 2A | 8.688  | 4.253   | 0.206  | -0.0734 | -0.0811 | 4.7483   |
| 255 | 1   | Extremo 1A | 8.688  | 11.926  | 0.206  | -0.0734 | -0.1844 | 0.7037   |
| 255 | 0   | Extremo 1A | -4.573 | -3.374  | -0.054 | -0.0709 | -0.0078 | 4.7017   |
| 255 | 0.5 | Extremo 1A | -4.573 | 4.298   | -0.054 | -0.0709 | 0.0193  | 4.4706   |
| 255 | 1   | Extremo 2A | -4.573 | 11.971  | -0.054 | -0.0709 | 0.0463  | 0.4033   |
| 256 | 0   | Extremo 2A | 8.923  | -2.099  | 0.206  | 0.2845  | 0.0194  | 1.5553   |
| 256 | 0.5 | Extremo 2A | 8.923  | 5.573   | 0.206  | 0.2845  | -0.0834 | 0.6867   |
| 256 | 1   | Extremo 1A | 8.923  | 13.246  | 0.206  | 0.2845  | -0.1862 | -4.0181  |
| 256 | 0   | Extremo 1A | -4.641 | -2.053  | -0.06  | 0.2925  | -0.0102 | 1.2582   |
| 256 | 0.5 | Extremo 1A | -4.641 | 5.619   | -0.06  | 0.2925  | 0.0199  | 0.3667   |
| 256 | 1   | Extremo 2A | -4.641 | 13.292  | -0.06  | 0.2925  | 0.05    | -4.361   |
| 257 | 0   | Extremo 2A | 9.159  | -1.308  | 0.204  | 0.9219  | 0.0169  | -3.525   |
| 257 | 0.5 | Extremo 2A | 9.159  | 6.365   | 0.204  | 0.9219  | -0.0852 | -4.7892  |
| 257 | 1   | Extremo 1A | 9.159  | 14.037  | 0.204  | 0.9219  | -0.1873 | -9.8897  |
| 257 | 0   | Extremo 1A | -4.715 | -1.268  | -0.067 | 0.9385  | -0.0128 | -3.8718  |
| 257 | 0.5 | Extremo 1A | -4.715 | 6.405   | -0.067 | 0.9385  | 0.0206  | -5.1562  |
| 257 | 1   | Extremo 2A | -4.715 | 14.077  | -0.067 | 0.9385  | 0.0541  | -10.2768 |
| 258 | 0   | Extremo 2A | 9.396  | -2.305  | 0.203  | 1.3699  | 0.0161  | -10.448  |
| 258 | 0.5 | Extremo 2A | 9.396  | 5.367   | 0.203  | 1.3699  | -0.0856 | -11.2135 |
| 258 | 1   | Extremo 1A | 9.396  | 13.04   | 0.203  | 1.3699  | -0.1873 | -15.8152 |
| 258 | 0   | Extremo 1A | -4.795 | -2.291  | -0.072 | 1.3927  | -0.0144 | -10.8539 |
| 258 | 0.5 | Extremo 1A | -4.795 | 5.382   | -0.072 | 1.3927  | 0.0214  | -11.6268 |
| 258 | 1   | Extremo 2A | -4.795 | 13.054  | -0.072 | 1.3927  | 0.0572  | -16.2358 |
| 259 | 0   | Extremo 2A | 9.642  | -6.151  | 0.214  | 0.6532  | 0.0234  | -17.3738 |
| 259 | 0.5 | Extremo 2A | 9.642  | 1.521   | 0.214  | 0.6532  | -0.0836 | -16.2163 |
| 259 | 1   | Extremo 1A | 9.642  | 9.194   | 0.214  | 0.6532  | -0.1906 | -18.8949 |
| 259 | 0   | Extremo 1A | -4.875 | -6.194  | -0.07  | 0.6691  | -0.0133 | -17.8274 |
| 259 | 0.5 | Extremo 1A | -4.875 | 1.478   | -0.07  | 0.6691  | 0.0215  | -16.6483 |
| 259 | 1   | Extremo 2A | -4.875 | 9.151   | -0.07  | 0.6691  | 0.0563  | -19.3054 |

|     |     |            |        |         |        |         |         |          |
|-----|-----|------------|--------|---------|--------|---------|---------|----------|
| 260 | 0   | Extremo 2A | 9.91   | -9.672  | 0.261  | -0.6678 | 0.045   | -18.9075 |
| 260 | 0.5 | Extremo 2A | 9.91   | -2      | 0.261  | -0.6678 | -0.0857 | -15.9895 |
| 260 | 1   | Extremo 1A | 9.91   | 5.673   | 0.261  | -0.6678 | -0.2164 | -16.9078 |
| 260 | 0   | Extremo 1A | -4.948 | -9.769  | -0.065 | -0.6659 | -0.0123 | -19.3359 |
| 260 | 0.5 | Extremo 1A | -4.948 | -2.097  | -0.065 | -0.6659 | 0.0202  | -16.3695 |
| 260 | 1   | Extremo 2A | -4.948 | 5.576   | -0.065 | -0.6659 | 0.0526  | -17.2392 |
| 261 | 0   | Extremo 2A | 10.202 | -13.518 | 0.272  | -1.3844 | 0.0435  | -15.3743 |
| 261 | 0.5 | Extremo 2A | 10.202 | -5.846  | 0.272  | -1.3844 | -0.0923 | -10.5333 |
| 261 | 1   | Extremo 1A | 10.202 | 1.827   | 0.272  | -1.3844 | -0.2282 | -9.5285  |
| 261 | 0   | Extremo 1A | -5.026 | -13.673 | -0.068 | -1.3897 | -0.0149 | -15.7086 |
| 261 | 0.5 | Extremo 1A | -5.026 | -6      | -0.068 | -1.3897 | 0.0191  | -10.7903 |
| 261 | 1   | Extremo 2A | -5.026 | 1.672   | -0.068 | -1.3897 | 0.0531  | -9.7082  |
| 262 | 0   | Extremo 2A | 10.5   | -14.516 | 0.265  | -0.9365 | 0.0354  | -8.9954  |
| 262 | 0.5 | Extremo 2A | 10.5   | -6.843  | 0.265  | -0.9365 | -0.0974 | -3.6556  |
| 262 | 1   | Extremo 1A | 10.5   | 0.829   | 0.265  | -0.9365 | -0.2301 | -2.1522  |
| 262 | 0   | Extremo 1A | -5.107 | -14.696 | -0.068 | -0.9358 | -0.0149 | -9.1917  |
| 262 | 0.5 | Extremo 1A | -5.107 | -7.023  | -0.068 | -0.9358 | 0.0193  | -3.762   |
| 262 | 1   | Extremo 2A | -5.107 | 0.649   | -0.068 | -0.9358 | 0.0535  | -2.1685  |
| 263 | 0   | Extremo 2A | 10.793 | -13.724 | 0.255  | -0.2989 | 0.0267  | -2.6705  |
| 263 | 0.5 | Extremo 2A | 10.793 | -6.052  | 0.255  | -0.2989 | -0.101  | 2.2736   |
| 263 | 1   | Extremo 1A | 10.793 | 1.621   | 0.255  | -0.2989 | -0.2286 | 3.3814   |
| 263 | 0   | Extremo 1A | -5.188 | -13.91  | -0.068 | -0.2903 | -0.0141 | -2.718   |
| 263 | 0.5 | Extremo 1A | -5.188 | -6.237  | -0.068 | -0.2903 | 0.02    | 2.3188   |
| 263 | 1   | Extremo 2A | -5.188 | 1.435   | -0.068 | -0.2903 | 0.054   | 3.5193   |
| 264 | 0   | Extremo 2A | 11.075 | -12.404 | 0.244  | 0.0592  | 0.0179  | 2.5044   |
| 264 | 0.5 | Extremo 2A | 11.075 | -4.731  | 0.244  | 0.0592  | -0.104  | 6.7883   |
| 264 | 1   | Extremo 1A | 11.075 | 2.941   | 0.244  | 0.0592  | -0.2259 | 7.2359   |
| 264 | 0   | Extremo 1A | -5.27  | -12.588 | -0.069 | 0.0723  | -0.0139 | 2.6046   |
| 264 | 0.5 | Extremo 1A | -5.27  | -4.916  | -0.069 | 0.0723  | 0.0208  | 6.9807   |
| 264 | 1   | Extremo 2A | -5.27  | 2.757   | -0.069 | 0.0723  | 0.0554  | 7.5205   |
| 265 | 0   | Extremo 2A | 11.342 | -11.022 | 0.231  | 0.1524  | 0.0085  | 6.4435   |
| 265 | 0.5 | Extremo 2A | 11.342 | -3.35   | 0.231  | 0.1524  | -0.1068 | 10.0364  |
| 265 | 1   | Extremo 1A | 11.342 | 4.323   | 0.231  | 0.1524  | -0.2222 | 9.7931   |
| 265 | 0   | Extremo 1A | -5.356 | -11.205 | -0.073 | 0.1663  | -0.0151 | 6.6893   |
| 265 | 0.5 | Extremo 1A | -5.356 | -3.532  | -0.073 | 0.1663  | 0.0217  | 10.3736  |
| 265 | 1   | Extremo 2A | -5.356 | 4.14    | -0.073 | 0.1663  | 0.0584  | 10.2217  |
| 266 | 0   | Extremo 2A | 11.593 | -9.666  | 0.215  | 0.1003  | -0.0018 | 9.2626   |
| 266 | 0.5 | Extremo 2A | 11.593 | -1.993  | 0.215  | 0.1003  | -0.1094 | 12.1773  |
| 266 | 1   | Extremo 1A | 11.593 | 5.679   | 0.215  | 0.1003  | -0.2171 | 11.2557  |
| 266 | 0   | Extremo 1A | -5.448 | -9.847  | -0.081 | 0.1122  | -0.0179 | 9.654    |
| 266 | 0.5 | Extremo 1A | -5.448 | -2.174  | -0.081 | 0.1122  | 0.0227  | 12.6592  |
| 266 | 1   | Extremo 2A | -5.448 | 5.498   | -0.081 | 0.1122  | 0.0634  | 11.8282  |
| 267 | 0   | Extremo 2A | 11.823 | -8.328  | 0.197  | -0.0095 | -0.0133 | 11.0413  |
| 267 | 0.5 | Extremo 2A | 11.823 | -0.655  | 0.197  | -0.0095 | -0.1118 | 13.2871  |
| 267 | 1   | Extremo 1A | 11.823 | 7.017   | 0.197  | -0.0095 | -0.2103 | 11.6966  |
| 267 | 0   | Extremo 1A | -5.552 | -8.507  | -0.093 | -0.0023 | -0.0228 | 11.5801  |
| 267 | 0.5 | Extremo 1A | -5.552 | -0.834  | -0.093 | -0.0023 | 0.024   | 13.9153  |
| 267 | 1   | Extremo 2A | -5.552 | 6.838   | -0.093 | -0.0023 | 0.0707  | 12.4142  |
| 268 | 0   | Extremo 2A | 12.029 | -6.993  | 0.174  | -0.1229 | -0.0267 | 11.8079  |
| 268 | 0.5 | Extremo 2A | 12.029 | 0.679   | 0.174  | -0.1229 | -0.1139 | 13.3863  |
| 268 | 1   | Extremo 1A | 12.029 | 8.352   | 0.174  | -0.1229 | -0.2011 | 11.1285  |
| 268 | 0   | Extremo 1A | -5.673 | -7.168  | -0.111 | -0.1242 | -0.03   | 12.4981  |
| 268 | 0.5 | Extremo 1A | -5.673 | 0.504   | -0.111 | -0.1242 | 0.0254  | 14.1641  |
| 268 | 1   | Extremo 2A | -5.673 | 8.177   | -0.111 | -0.1242 | 0.0809  | 11.9939  |
| 269 | 0   | Extremo 2A | 12.205 | -5.648  | 0.146  | -0.1918 | -0.0424 | 11.5533  |
| 269 | 0.5 | Extremo 2A | 12.205 | 2.024   | 0.146  | -0.1918 | -0.1156 | 12.4592  |
| 269 | 1   | Extremo 1A | 12.205 | 9.697   | 0.146  | -0.1918 | -0.1889 | 9.5289   |
| 269 | 0   | Extremo 1A | -5.82  | -5.817  | -0.135 | -0.207  | -0.0402 | 12.4021  |
| 269 | 0.5 | Extremo 1A | -5.82  | 1.855</ |        |         |         |          |



|     |     |            |         |         |        |         |         |          |
|-----|-----|------------|---------|---------|--------|---------|---------|----------|
| 272 | 0   | Extremo 2A | 12.469  | -2.143  | 0.011  | 0.5295  | -0.1117 | 3.5723   |
| 272 | 0.5 | Extremo 2A | 12.469  | 5.529   | 0.011  | 0.5295  | -0.1174 | 2.7259   |
| 272 | 1   | Extremo 1A | 12.469  | 13.202  | 0.011  | 0.5295  | -0.1231 | -1.9568  |
| 272 | 0   | Extremo 1A | -6.502  | -2.227  | -0.261 | 0.4207  | -0.0954 | 4.9982   |
| 272 | 0.5 | Extremo 1A | -6.502  | 5.445   | -0.261 | 0.4207  | 0.0351  | 4.1938   |
| 272 | 1   | Extremo 2A | -6.502  | 13.118  | -0.261 | 0.4207  | 0.1656  | -0.4468  |
| 273 | 0   | Extremo 2A | 12.431  | -2.668  | -0.058 | 0.795   | -0.1445 | -2.0538  |
| 273 | 0.5 | Extremo 2A | 12.431  | 5.005   | -0.058 | 0.795   | -0.1153 | -2.6379  |
| 273 | 1   | Extremo 1A | 12.431  | 12.677  | -0.058 | 0.795   | -0.0861 | -7.0584  |
| 273 | 0   | Extremo 1A | -6.851  | -2.641  | -0.327 | 0.6562  | -0.124  | -0.3973  |
| 273 | 0.5 | Extremo 1A | -6.851  | 5.031   | -0.327 | 0.6562  | 0.0395  | -0.9949  |
| 273 | 1   | Extremo 2A | -6.851  | 12.704  | -0.327 | 0.6562  | 0.2031  | -5.4287  |
| 274 | 0   | Extremo 2A | 12.307  | -5.245  | -0.137 | 0.2266  | -0.1792 | -7.7015  |
| 274 | 0.5 | Extremo 2A | 12.307  | 2.427   | -0.137 | 0.2266  | -0.1105 | -6.9971  |
| 274 | 1   | Extremo 1A | 12.307  | 10.1    | -0.137 | 0.2266  | -0.0418 | -10.1289 |
| 274 | 0   | Extremo 1A | -7.283  | -5.045  | -0.404 | 0.0839  | -0.1571 | -5.8256  |
| 274 | 0.5 | Extremo 1A | -7.283  | 2.628   | -0.404 | 0.0839  | 0.0451  | -5.2713  |
| 274 | 1   | Extremo 2A | -7.283  | 10.3    | -0.404 | 0.0839  | 0.2472  | -8.5033  |
| 275 | 0   | Extremo 2A | 12.083  | -7.474  | -0.21  | -0.6038 | -0.213  | -9.4396  |
| 275 | 0.5 | Extremo 2A | 12.083  | 0.199   | -0.21  | -0.6038 | -0.1078 | -7.6208  |
| 275 | 1   | Extremo 1A | 12.083  | 7.871   | -0.21  | -0.6038 | -0.0026 | -9.6382  |
| 275 | 0   | Extremo 1A | -7.816  | -7.14   | -0.493 | -0.7607 | -0.1963 | -7.6294  |
| 275 | 0.5 | Extremo 1A | -7.816  | 0.533   | -0.493 | -0.7607 | 0.05    | -5.9775  |
| 275 | 1   | Extremo 2A | -7.816  | 8.205   | -0.493 | -0.7607 | 0.2963  | -8.1619  |
| 276 | 0   | Extremo 2A | 11.726  | -10.422 | -0.347 | -1.0037 | -0.28   | -8.2365  |
| 276 | 0.5 | Extremo 2A | 11.726  | -2.75   | -0.347 | -1.0037 | -0.1065 | -4.9435  |
| 276 | 1   | Extremo 1A | 11.726  | 4.923   | -0.347 | -1.0037 | 0.0669  | -5.4869  |
| 276 | 0   | Extremo 1A | -8.485  | -9.965  | -0.624 | -1.2013 | -0.2566 | -6.4998  |
| 276 | 0.5 | Extremo 1A | -8.485  | -2.293  | -0.624 | -1.2013 | 0.0555  | -3.4354  |
| 276 | 1   | Extremo 2A | -8.485  | 5.38    | -0.624 | -1.2013 | 0.3677  | -4.2073  |
| 277 | 0   | Extremo 2A | 11.18   | -11.067 | -0.53  | -0.4987 | -0.3658 | -5.2053  |
| 277 | 0.5 | Extremo 2A | 11.18   | -3.395  | -0.53  | -0.4987 | -0.1009 | -1.5899  |
| 277 | 1   | Extremo 1A | 11.18   | 4.278   | -0.53  | -0.4987 | 0.164   | -1.8107  |
| 277 | 0   | Extremo 1A | -9.336  | -10.558 | -0.795 | -0.7518 | -0.3329 | -3.5566  |
| 277 | 0.5 | Extremo 1A | -9.336  | -2.885  | -0.795 | -0.7518 | 0.0646  | -0.1959  |
| 277 | 1   | Extremo 2A | -9.336  | 4.787   | -0.795 | -0.7518 | 0.4621  | -0.6714  |
| 278 | 0   | Extremo 2A | 10.388  | -10.285 | -0.762 | 0.0913  | -0.4729 | -2.4901  |
| 278 | 0.5 | Extremo 2A | 10.388  | -2.613  | -0.762 | 0.0913  | -0.0916 | 0.7344   |
| 278 | 1   | Extremo 1A | 10.388  | 5.06    | -0.762 | 0.0913  | 0.2896  | 0.1227   |
| 278 | 0   | Extremo 1A | -10.419 | -9.757  | -1.014 | -0.2015 | -0.4299 | -0.9085  |
| 278 | 0.5 | Extremo 1A | -10.419 | -2.085  | -1.014 | -0.2015 | 0.0771  | 2.0519   |
| 278 | 1   | Extremo 2A | -10.419 | 5.588   | -1.014 | -0.2015 | 0.5841  | 1.176    |
| 279 | 0   | Extremo 2A | 9.281   | -9.135  | -1.06  | 0.4092  | -0.6085 | -0.8429  |
| 279 | 0.5 | Extremo 2A | 9.281   | -1.462  | -1.06  | 0.4092  | -0.0785 | 1.8064   |
| 279 | 1   | Extremo 1A | 9.281   | 6.21    | -1.06  | 0.4092  | 0.4515  | 0.6195   |
| 279 | 0   | Extremo 1A | -11.801 | -8.591  | -1.297 | 0.1022  | -0.5548 | 0.6823   |
| 279 | 0.5 | Extremo 1A | -11.801 | -0.918  | -1.297 | 0.1022  | 0.0938  | 3.0596   |
| 279 | 1   | Extremo 2A | -11.801 | 6.754   | -1.297 | 0.1022  | 0.7423  | 1.6006   |
| 280 | 0   | Extremo 2A | 7.769   | -7.961  | -1.44  | 0.5183  | -0.7806 | -0.2468  |
| 280 | 0.5 | Extremo 2A | 7.769   | -0.289  | -1.44  | 0.5183  | -0.0605 | 1.8156   |
| 280 | 1   | Extremo 1A | 7.769   | 7.384   | -1.44  | 0.5183  | 0.6596  | 0.0418   |
| 280 | 0   | Extremo 1A | -13.568 | -7.408  | -1.66  | 0.214   | -0.7139 | 1.1985   |
| 280 | 0.5 | Extremo 1A | -13.568 | 0.264   | -1.66  | 0.214   | 0.1162  | 2.9846   |
| 280 | 1   | Extremo 2A | -13.568 | 7.937   | -1.66  | 0.214   | 0.9464  | 0.9345   |
| 281 | 0   | Extremo 2A | 5.742   | -6.893  | -1.92  | 0.5352  | -0.9273 | -0.6158  |
| 281 | 0.5 | Extremo 2A | 5.742   | 0.779   | -1.92  | 0.5352  | -0.0373 | 0.9128   |
| 281 | 1   | Extremo 1A | 5.742   | 8.452   | -1.92  | 0.5352  | 0.9227  | -1.3949  |
| 281 | 0   | Extremo 1A | -15.829 | -6.362  | -2.111 | 0.2266  | -0.9126 | 0.7149   |
| 281 | 0.5 | Extremo 1A | -15.829 | 1.311   | -2.111 | 0.2266  | 0.143   | 1.9776   |
| 281 | 1   | Extremo 2A | -15.829 | 8.983   | -2.111 | 0.2266  | 1.1986  | -0.5959  |
| 282 | 0   | Extremo 2A | 3.052   | -6.218  | -2.546 | 0.4473  | -1.2797 | -1.8454  |
| 282 | 0.5 | Extremo 2A | 3.052   | 1.454   | -2.546 | 0.4473  | -0.0068 | -0.6543  |
| 282 | 1   | Extremo 1A | 3.052   | 9.127   | -2.546 | 0.4473  | 1.2662  | -3.2994  |
| 282 | 0   | Extremo 1A | -18.72  | -5.72   | -2.712 | 0.1293  | -1.1807 | -0.5846  |
| 282 | 0.5 | Extremo 1A | -18.72  | 1.953   | -2.712 | 0.1293  | 0.1754  | 0.3573   |
| 282 | 1   | Extremo 2A | -18.72  | 9.625   | -2.712 | 0.1293  | 1.5314  | -2.5371  |
| 283 | 0   | Extremo 2A | -0.489  | -5.668  | -3.342 | 0.3572  | -1.6362 | -3.5298  |
| 283 | 0.5 | Extremo 2A | -0.489  | 2.004   | -3.342 | 0.3572  | 0.0348  | -2.6837  |
| 283 | 1   | Extremo 1A | -0.489  | 9.677   | -3.342 | 0.3572  | 1.7059  | -5.604   |
| 283 | 0   | Extremo 1A | -22.433 | -5.185  | -3.489 | 0.0412  | -1.526  | -2.3692  |
| 283 | 0.5 | Extremo 1A | -22.433 | 2.487   | -3.489 | 0.0412  | 0.2183  | -1.6946  |
| 283 | 1   | Extremo 2A | -22.433 | 10.16   | -3.489 | 0.0412  | 1.9625  | -4.8563  |

|     |     |            |          |        |         |         |          |          |
|-----|-----|------------|----------|--------|---------|---------|----------|----------|
| 284 | 0   | Extremo 2A | -5.115   | -5.199 | -4.357  | 0.2294  | -2.0887  | -5.7645  |
| 284 | 0.5 | Extremo 2A | -5.115   | 2.473  | -4.357  | 0.2294  | 0.0898   | -5.083   |
| 284 | 1   | Extremo 1A | -5.115   | 10.146 | -4.357  | 0.2294  | 2.2684   | -8.2377  |
| 284 | 0   | Extremo 1A | -27.204  | -4.712 | -4.483  | -0.0718 | -1.9661  | -4.5595  |
| 284 | 0.5 | Extremo 1A | -27.204  | 2.961  | -4.483  | -0.0718 | 0.2753   | -4.1218  |
| 284 | 1   | Extremo 2A | -27.204  | 10.633 | -4.483  | -0.0718 | 2.5166   | -7.5203  |
| 285 | 0   | Extremo 2A | -11.118  | -4.762 | -5.643  | 0.0568  | -2.6588  | -8.0887  |
| 285 | 0.5 | Extremo 2A | -11.118  | 2.911  | -5.643  | 0.0568  | 0.163    | -7.6258  |
| 285 | 1   | Extremo 1A | -11.118  | 10.583 | -5.643  | 0.0568  | 2.9847   | -10.9992 |
| 285 | 0   | Extremo 1A | -33.324  | -4.268 | -5.741  | -0.2239 | -2.5193  | -6.9426  |
| 285 | 0.5 | Extremo 1A | -33.324  | 3.404  | -5.741  | -0.2239 | 0.3511   | -6.7266  |
| 285 | 1   | Extremo 2A | -33.324  | 11.077 | -5.741  | -0.2239 | 3.2216   | -10.3467 |
| 286 | 0   | Extremo 2A | -18.864  | -4.157 | -7.231  | 0.0256  | -3.3666  | -10.3753 |
| 286 | 0.5 | Extremo 2A | -18.864  | 3.515  | -7.231  | 0.0256  | 0.2488   | -10.215  |
| 286 | 1   | Extremo 1A | -18.864  | 11.188 | -7.231  | 0.0256  | 3.8642   | -13.8908 |
| 286 | 0   | Extremo 1A | -41.147  | -3.688 | -7.282  | -0.2501 | -3.2022  | -9.3319  |
| 286 | 0.5 | Extremo 1A | -41.147  | 3.985  | -7.282  | -0.2501 | 0.4386   | -9.406   |
| 286 | 1   | Extremo 2A | -41.147  | 11.657 | -7.282  | -0.2501 | 4.0795   | -13.3164 |
| 287 | 0   | Extremo 2A | -28.833  | -3.661 | -9.319  | 0.1045  | -4.3073  | -13.5367 |
| 287 | 0.5 | Extremo 2A | -28.833  | 4.012  | -9.319  | 0.1045  | 0.3519   | -13.4446 |
| 287 | 1   | Extremo 1A | -28.833  | 11.684 | -9.319  | 0.1045  | 5.0112   | -17.3687 |
| 287 | 0   | Extremo 1A | -51.133  | -3.231 | -9.319  | -0.1768 | -4.1188  | -12.3743 |
| 287 | 0.5 | Extremo 1A | -51.133  | 4.442  | -9.319  | -0.1768 | 0.5409   | -12.6772 |
| 287 | 1   | Extremo 2A | -51.133  | 12.114 | -9.319  | -0.1768 | 5.2007   | -16.8163 |
| 288 | 0   | Extremo 2A | -41.649  | -3.181 | -11.952 | 0.228   | -5.4912  | -17.0131 |
| 288 | 0.5 | Extremo 2A | -41.649  | 4.491  | -11.952 | 0.228   | 0.4849   | -17.3405 |
| 288 | 1   | Extremo 1A | -41.649  | 12.164 | -11.952 | 0.228   | 6.4609   | -21.5042 |
| 288 | 0   | Extremo 1A | -63.902  | -2.774 | -11.899 | -0.0535 | -5.2775  | -16.0496 |
| 288 | 0.5 | Extremo 1A | -63.902  | 4.898  | -11.899 | -0.0535 | 0.6721   | -16.5807 |
| 288 | 1   | Extremo 2A | -63.902  | 12.571 | -11.899 | -0.0535 | 6.6217   | -20.948  |
| 289 | 0   | Extremo 2A | -58.049  | -2.894 | -15.239 | 0.2811  | -6.9736  | -21.27   |
| 289 | 0.5 | Extremo 2A | -58.049  | 4.778  | -15.239 | 0.2811  | 0.6459   | -21.7409 |
| 289 | 1   | Extremo 1A | -58.049  | 12.451 | -15.239 | 0.2811  | 8.2653   | -26.0482 |
| 289 | 0   | Extremo 1A | -80.179  | -2.492 | -15.119 | 0.0043  | -6.7285  | -20.308  |
| 289 | 0.5 | Extremo 1A | -80.179  | 5.18   | -15.119 | 0.0043  | 0.8311   | -20.9801 |
| 289 | 1   | Extremo 2A | -80.179  | 12.853 | -15.119 | 0.0043  | 8.3908   | -25.4884 |
| 290 | 0   | Extremo 2A | -78.911  | -2.993 | -19.316 | 0.1446  | -8.8236  | -25.7948 |
| 290 | 0.5 | Extremo 2A | -78.911  | 4.679  | -19.316 | 0.1446  | 0.8344   | -26.2163 |
| 290 | 1   | Extremo 1A | -78.911  | 12.352 | -19.316 | 0.1446  | 10.4923  | -30.4741 |
| 290 | 0   | Extremo 1A | -100.824 | -2.583 | -19.111 | -0.1243 | -8.5381  | -24.8367 |
| 290 | 0.5 | Extremo 1A | -100.824 | 5.09   | -19.111 | -0.1243 | 1.0174   | -25.4634 |
| 290 | 1   | Extremo 2A | -100.824 | 12.762 | -19.111 | -0.1243 | 10.5729  | -29.9263 |
| 291 | 0   | Extremo 2A | -105.232 | -3.299 | -24.255 | -0.1405 | -11.0792 | -29.7853 |
| 291 | 0.5 | Extremo 2A | -105.232 | 4.373  | -24.255 | -0.1405 | 1.0481   | -30.0539 |
| 291 | 1   | Extremo 1A | -105.232 | 12.046 | -24.255 | -0.1405 | 13.1755  | -34.1587 |
| 291 | 0   | Extremo 1A | -126.811 | -2.88  | -23.942 | -0.4029 | -10.7418 | -28.853  |
| 291 | 0.5 | Extremo 1A | -126.811 | 4.792  | -23.942 | -0.4029 | 1.2292   | -29.3311 |
| 291 | 1   | Extremo 2A | -126.811 | 12.465 | -23.942 | -0.4029 | 13.2001  | -33.6454 |
| 292 | 0   | Extremo 2A | -137.999 | -2.974 | -29.928 | 0.0014  | -13.7295 | -32.6405 |
| 292 | 0.5 | Extremo 2A | -137.999 | 4.698  | -29.928 | 0.0014  | 1.2343   | -33.0715 |
| 292 | 1   | Extremo 1A | -137.999 | 12.371 | -29.928 | 0.0014  | 16.198   | -37.3388 |
| 292 | 0   | Extremo 1A | -159.099 | -2.568 | -29.478 | -0.2723 | -13.3263 | -31.7583 |
| 292 | 0.5 | Extremo 1A | -159.099 | 5.104  | -29.478 | -0.2723 | 1.4127   | -32.3923 |
| 292 | 1   | Extremo 2A | -159.099 | 12.777 | -29.478 | -0.2723 | 16.1517  | -36.8625 |
| 293 | 0   | Extremo 2A | -178.045 | -2.219 | -36.672 | 0.6563  | -16.9521 | -36.5878 |
| 293 | 0.5 | Extremo 2A | -178.045 | 5.453  | -36.672 | 0.6563  | 1.3837   | -37.3964 |
| 293 | 1   | Extremo 1A | -178.045 | 13.126 | -36.672 | 0.6563  | 19.7195  | -42.0413 |
|     |     |            |          |        |         |         |          |          |



|     |     |            |          |         |         |         |          |          |
|-----|-----|------------|----------|---------|---------|---------|----------|----------|
| 296 | 0   | Extremo 2A | -333.381 | -5.6    | -47.859 | 1.7155  | -22.1883 | -56.0327 |
| 296 | 0.5 | Extremo 2A | -333.381 | 2.073   | -47.859 | 1.7155  | 1.741    | -55.151  |
| 296 | 1   | Extremo 1A | -333.381 | 9.745   | -47.859 | 1.7155  | 25.6703  | -58.1056 |
| 296 | 0   | Extremo 1A | -350.866 | -5.043  | -46.853 | 1.2982  | -21.4939 | -54.9124 |
| 296 | 0.5 | Extremo 1A | -350.866 | 2.629   | -46.853 | 1.2982  | 1.9328   | -54.3089 |
| 296 | 1   | Extremo 2A | -350.866 | 10.302  | -46.853 | 1.2982  | 25.3595  | -57.5418 |
| 297 | 0   | Extremo 2A | -383.404 | -8.592  | -43.334 | 1.1279  | -21.5693 | -59.7529 |
| 297 | 0.5 | Extremo 2A | -383.404 | -0.92   | -43.334 | 1.1279  | 0.0979   | -57.375  |
| 297 | 1   | Extremo 1A | -383.404 | 6.753   | -43.334 | 1.1279  | 21.7652  | -58.8333 |
| 297 | 0   | Extremo 1A | -399.698 | -7.88   | -42.144 | 0.6797  | -20.7656 | -58.5614 |
| 297 | 0.5 | Extremo 1A | -399.698 | -0.208  | -42.144 | 0.6797  | 0.3063   | -56.5393 |
| 297 | 1   | Extremo 2A | -399.698 | 7.465   | -42.144 | 0.6797  | 21.3782  | -58.3534 |
| 298 | 0   | Extremo 2A | -433.866 | -11.955 | -49.474 | 0.2621  | -26.2484 | -60.5719 |
| 298 | 0.5 | Extremo 2A | -433.866 | -4.282  | -49.474 | 0.2621  | -1.5111  | -56.5128 |
| 298 | 1   | Extremo 1A | -433.866 | 3.39    | -49.474 | 0.2621  | 23.2261  | -56.2898 |
| 298 | 0   | Extremo 1A | -448.826 | -11.04  | -48.144 | -0.2029 | -25.3798 | -59.3989 |
| 298 | 0.5 | Extremo 1A | -448.826 | -3.368  | -48.144 | -0.2029 | -1.3078  | -55.7968 |
| 298 | 1   | Extremo 2A | -448.826 | 4.305   | -48.144 | -0.2029 | 22.7642  | -56.0309 |
| 299 | 0   | Extremo 2A | -490.617 | -16.221 | -52.151 | -0.4154 | -27.7128 | -56.7262 |
| 299 | 0.5 | Extremo 2A | -490.617 | -8.548  | -52.151 | -0.4154 | -1.6374  | -50.5341 |
| 299 | 1   | Extremo 1A | -490.617 | -0.876  | -52.151 | -0.4154 | 24.4381  | -48.1782 |
| 299 | 0   | Extremo 1A | -504.126 | -15.138 | -50.853 | -0.9214 | -26.8779 | -55.7072 |
| 299 | 0.5 | Extremo 1A | -504.126 | -7.465  | -50.853 | -0.9214 | -1.4515  | -50.0566 |
| 299 | 1   | Extremo 2A | -504.126 | 0.207   | -50.853 | -0.9214 | 23.9748  | -48.2422 |
| 300 | 0   | Extremo 2A | -547.842 | -18.152 | -47.709 | 0.0056  | -25.1292 | -49.3504 |
| 300 | 0.5 | Extremo 2A | -547.842 | -10.48  | -47.709 | 0.0056  | -1.2749  | -42.1924 |
| 300 | 1   | Extremo 1A | -547.842 | -2.807  | -47.709 | 0.0056  | 22.5794  | -38.8706 |
| 300 | 0   | Extremo 1A | -559.951 | -16.986 | -46.566 | -0.5639 | -24.3874 | -48.5503 |
| 300 | 0.5 | Extremo 1A | -559.951 | -9.313  | -46.566 | -0.5639 | -1.1042  | -41.9755 |
| 300 | 1   | Extremo 2A | -559.951 | -1.641  | -46.566 | -0.5639 | 22.179   | -39.2369 |
| 301 | 0   | Extremo 2A | -600.26  | -18.31  | -41.245 | 0.8722  | -21.7012 | -41.3128 |
| 301 | 0.5 | Extremo 2A | -600.26  | -10.638 | -41.245 | 0.8722  | -1.0784  | -34.0757 |
| 301 | 1   | Extremo 1A | -600.26  | -2.965  | -41.245 | 0.8722  | 19.5443  | -30.6748 |
| 301 | 0   | Extremo 1A | -611.123 | -17.094 | -40.28  | 0.245   | -21.0576 | -40.7264 |
| 301 | 0.5 | Extremo 1A | -611.123 | -9.421  | -40.28  | 0.245   | -0.9174  | -34.0977 |
| 301 | 1   | Extremo 2A | -611.123 | -1.749  | -40.28  | 0.245   | 19.2228  | -31.3052 |
| 302 | 0   | Extremo 2A | -645.814 | -18.042 | -34.896 | 1.5961  | -18.4384 | -34.2233 |
| 302 | 0.5 | Extremo 2A | -645.814 | -10.369 | -34.896 | 1.5961  | -0.9906  | -27.1206 |
| 302 | 1   | Extremo 1A | -645.814 | -2.697  | -34.896 | 1.5961  | 16.4572  | -23.8542 |
| 302 | 0   | Extremo 1A | -655.618 | -16.759 | -34.093 | 0.9329  | -17.8836 | -33.8393 |
| 302 | 0.5 | Extremo 1A | -655.618 | -9.086  | -34.093 | 0.9329  | -0.8372  | -27.3781 |
| 302 | 1   | Extremo 2A | -655.618 | -1.414  | -34.093 | 0.9329  | 16.2092  | -24.753  |
| 303 | 0   | Extremo 2A | -684.589 | -18.022 | -29.879 | 1.8533  | -15.8289 | -28.1178 |
| 303 | 0.5 | Extremo 2A | -684.589 | -10.349 | -29.879 | 1.8533  | -0.8894  | -21.0251 |
| 303 | 1   | Extremo 1A | -684.589 | -2.677  | -29.879 | 1.8533  | 14.0502  | -17.7688 |
| 303 | 0   | Extremo 1A | -693.506 | -16.673 | -29.208 | 1.1636  | -15.3477 | -27.9814 |
| 303 | 0.5 | Extremo 1A | -693.506 | -9.001  | -29.208 | 1.1636  | -0.7437  | -21.5629 |
| 303 | 1   | Extremo 2A | -693.506 | -1.328  | -29.208 | 1.1636  | 13.8602  | -18.9805 |
| 304 | 0   | Extremo 2A | -717.89  | -18.414 | -25.746 | 1.7954  | -13.5752 | -21.5213 |
| 304 | 0.5 | Extremo 2A | -717.89  | -10.741 | -25.746 | 1.7954  | -0.7024  | -14.2325 |
| 304 | 1   | Extremo 1A | -717.89  | -3.069  | -25.746 | 1.7954  | 12.1704  | -10.78   |
| 304 | 0   | Extremo 1A | -726.066 | -17.036 | -25.183 | 1.0689  | -13.1566 | -21.6493 |
| 304 | 0.5 | Extremo 1A | -726.066 | -9.363  | -25.183 | 1.0689  | -0.5648  | -15.0496 |
| 304 | 1   | Extremo 2A | -726.066 | -1.691  | -25.183 | 1.0689  | 12.0269  | -12.2862 |
| 305 | 0   | Extremo 2A | -746.545 | -18.638 | -22.215 | 1.8713  | -11.5917 | -14.409  |
| 305 | 0.5 | Extremo 2A | -746.545 | -10.966 | -22.215 | 1.8713  | -0.4842  | -7.0081  |
| 305 | 1   | Extremo 1A | -746.545 | -3.293  | -22.215 | 1.8713  | 10.6233  | -3.4435  |
| 305 | 0   | Extremo 1A | -754.102 | -17.239 | -21.74  | 1.1086  | -11.2241 | -14.7835 |
| 305 | 0.5 | Extremo 1A | -754.102 | -9.567  | -21.74  | 1.1086  | -0.354   | -8.082   |
| 305 | 1   | Extremo 2A | -754.102 | -1.894  | -21.74  | 1.1086  | 10.5162  | -5.2166  |
| 306 | 0   | Extremo 2A | -771.248 | -18.748 | -19.253 | 2.041   | -9.9079  | -7.3065  |
| 306 | 0.5 | Extremo 2A | -771.248 | -11.076 | -19.253 | 2.041   | -0.2813  | 0.1494   |
| 306 | 1   | Extremo 1A | -771.248 | -3.403  | -19.253 | 2.041   | 9.3452   | 3.769    |
| 306 | 0   | Extremo 1A | -778.28  | -17.311 | -18.846 | 1.249   | -9.5805  | -7.9072  |
| 306 | 0.5 | Extremo 1A | -778.28  | -9.638  | -18.846 | 1.249   | -0.1576  | -1.1699  |
| 306 | 1   | Extremo 2A | -778.28  | -1.966  | -18.846 | 1.249   | 9.2653   | 1.7312   |
| 307 | 0   | Extremo 2A | -792.565 | -19.122 | -16.676 | 2.0803  | -8.463   | -0.3665  |
| 307 | 0.5 | Extremo 2A | -792.565 | -11.449 | -16.676 | 2.0803  | -0.1251  | 7.2762   |
| 307 | 1   | Extremo 1A | -792.565 | -3.777  | -16.676 | 2.0803  | 8.2127   | 11.0826  |
| 307 | 0   | Extremo 1A | -799.142 | -17.603 | -16.318 | 1.2743  | -8.1659  | -1.196   |
| 307 | 0.5 | Extremo 1A | -799.142 | -9.93   | -16.318 | 1.2743  | -0.0068  | 5.6871   |
| 307 | 1   | Extremo 2A | -799.142 | -2.258  | -16.318 | 1.2743  | 8.1522   | 8.734    |

|     |     |            |          |         |         |        |         |         |
|-----|-----|------------|----------|---------|---------|--------|---------|---------|
| 308 | 0   | Extremo 2A | -810.896 | -19.759 | -14.365 | 1.8931 | -7.2611 | 7.0137  |
| 308 | 0.5 | Extremo 2A | -810.896 | -12.086 | -14.365 | 1.8931 | -0.0785 | 14.9749 |
| 308 | 1   | Extremo 1A | -810.896 | -4.414  | -14.365 | 1.8931 | 7.1041  | 19.0998 |
| 308 | 0   | Extremo 1A | -817.066 | -18.106 | -14.039 | 1.0945 | -6.9842 | 5.8831  |
| 308 | 0.5 | Extremo 1A | -817.066 | -10.434 | -14.039 | 1.0945 | 0.0354  | 13.018  |
| 308 | 1   | Extremo 2A | -817.066 | -2.761  | -14.039 | 1.0945 | 7.0549  | 16.3166 |
| 309 | 0   | Extremo 2A | -826.794 | -19.674 | -12.951 | 1.9559 | -6.5671 | 15.5864 |
| 309 | 0.5 | Extremo 2A | -826.794 | -12.001 | -12.951 | 1.9559 | -0.0915 | 23.505  |
| 309 | 1   | Extremo 1A | -826.794 | -4.329  | -12.951 | 1.9559 | 6.3841  | 27.5874 |
| 309 | 0   | Extremo 1A | -832.584 | -17.923 | -12.634 | 1.1413 | -6.2991 | 13.9807 |
| 309 | 0.5 | Extremo 1A | -832.584 | -10.251 | -12.634 | 1.1413 | 0.0178  | 21.0242 |
| 309 | 1   | Extremo 2A | -832.584 | -2.578  | -12.634 | 1.1413 | 6.3347  | 24.2314 |
| 310 | 0   | Extremo 2A | -841.353 | -19.109 | -11.989 | 2.2646 | -6.0413 | 23.5856 |
| 310 | 0.5 | Extremo 2A | -841.353 | -11.436 | -11.989 | 2.2646 | -0.0469 | 31.2219 |
| 310 | 1   | Extremo 1A | -841.353 | -3.764  | -11.989 | 2.2646 | 5.9476  | 35.022  |
| 310 | 0   | Extremo 1A | -846.766 | -17.341 | -11.667 | 1.3945 | -5.7763 | 21.5108 |
| 310 | 0.5 | Extremo 1A | -846.766 | -9.668  | -11.667 | 1.3945 | 0.057   | 28.2632 |
| 310 | 1   | Extremo 2A | -846.766 | -1.996  | -11.667 | 1.3945 | 5.8903  | 31.1793 |
| 311 | 0   | Extremo 2A | -854.664 | -18.784 | -10.866 | 2.3805 | -5.388  | 30.6006 |
| 311 | 0.5 | Extremo 2A | -854.664 | -11.111 | -10.866 | 2.3805 | 0.0453  | 38.0744 |
| 311 | 1   | Extremo 1A | -854.664 | -3.439  | -10.866 | 2.3805 | 5.4785  | 41.712  |
| 311 | 0   | Extremo 1A | -859.686 | -16.991 | -10.525 | 1.475  | -5.1195 | 28.1247 |
| 311 | 0.5 | Extremo 1A | -859.686 | -9.319  | -10.525 | 1.475  | 0.1431  | 34.7022 |
| 311 | 1   | Extremo 2A | -859.686 | -1.646  | -10.525 | 1.475  | 5.4057  | 37.4434 |
| 312 | 0   | Extremo 2A | -866.516 | -19.144 | -9.515  | 2.0232 | -4.6421 | 37.3125 |
| 312 | 0.5 | Extremo 2A | -866.516 | -11.472 | -9.515  | 2.0232 | 0.1157  | 44.9664 |
| 312 | 1   | Extremo 1A | -866.516 | -3.799  | -9.515  | 2.0232 | 4.8734  | 48.7841 |
| 312 | 0   | Extremo 1A | -871.112 | -17.259 | -9.137  | 1.134  | -4.3617 | 34.4399 |
| 312 | 0.5 | Extremo 1A | -871.112 | -9.586  | -9.137  | 1.134  | 0.207   | 41.1511 |
| 312 | 1   | Extremo 2A | -871.112 | -1.914  | -9.137  | 1.134  | 4.7757  | 44.026  |
| 313 | 0   | Extremo 2A | -876.676 | -19.713 | -7.987  | 1.2977 | -3.8962 | 45.2628 |
| 313 | 0.5 | Extremo 2A | -876.676 | -12.041 | -7.987  | 1.2977 | 0.0975  | 53.2013 |
| 313 | 1   | Extremo 1A | -876.676 | -4.368  | -7.987  | 1.2977 | 4.0913  | 57.3036 |
| 313 | 0   | Extremo 1A | -880.785 | -17.682 | -7.548  | 0.4789 | -3.5929 | 41.8511 |
| 313 | 0.5 | Extremo 1A | -880.785 | -10.01  | -7.548  | 0.4789 | 0.1813  | 48.774  |
| 313 | 1   | Extremo 2A | -880.785 | -2.337  | -7.548  | 0.4789 | 3.9555  | 51.8606 |
| 314 | 0   | Extremo 2A | -885.203 | -18.993 | -6.961  | 1.1259 | -3.4521 | 55.3017 |
| 314 | 0.5 | Extremo 2A | -885.203 | -11.32  | -6.961  | 1.1259 | 0.0285  | 62.8799 |
| 314 | 1   | Extremo 1A | -885.203 | -3.648  | -6.961  | 1.1259 | 3.5092  | 66.6218 |
| 314 | 0   | Extremo 1A | -888.728 | -16.883 | -6.427  | 0.3711 | -3.111  | 51.0703 |
| 314 | 0.5 | Extremo 1A | -888.728 | -9.211  | -6.427  | 0.3711 | 0.1026  | 57.5938 |
| 314 | 1   | Extremo 2A | -888.728 | -1.538  | -6.427  | 0.3711 | 3.3162  | 60.2811 |
| 315 | 0   | Extremo 2A | -892.82  | -17.157 | -6.224  | 1.4652 | -3.0951 | 63.7668 |
| 315 | 0.5 | Extremo 2A | -892.82  | -9.485  | -6.224  | 1.4652 | 0.0167  | 70.4274 |
| 315 | 1   | Extremo 1A | -892.82  | -1.812  | -6.224  | 1.4652 | 3.1285  | 73.2517 |
| 315 | 0   | Extremo 1A | -895.617 | -15.081 | -5.558  | 0.7803 | -2.7009 | 58.6882 |
| 315 | 0.5 | Extremo 1A | -895.617 | -7.408  | -5.558  | 0.7803 | 0.0781  | 64.3104 |
| 315 | 1   | Extremo 2A | -895.617 | 0.264   | -5.558  | 0.7803 | 2.8571  | 66.0964 |
| 316 | 0   | Extremo 2A | -899.512 | -15.259 | -5.281  | 1.5005 | -2.5811 | 70.0002 |
| 316 | 0.5 | Extremo 2A | -899.512 | -7.587  | -5.281  | 1.5005 | 0.0594  | 75.7117 |
| 316 | 1   | Extremo 1A | -899.512 | 0.086   | -5.281  | 1.5005 | 2.7     | 77.587  |
| 316 | 0   | Extremo 1A | -901.38  | -13.232 | -4.441  | 1.019  | -2.1152 | 64.0539 |
| 316 | 0.5 | Extremo 1A | -901.38  | -5.559  | -4.441  | 1.019  | 0.1051  | 68.7517 |
| 316 | 1   | Extremo 2A | -901.38  | -2.113  | -4.441  | 1.019  |         |         |



|     |     |            |          |        |        |         |         |         |
|-----|-----|------------|----------|--------|--------|---------|---------|---------|
| 320 | 0   | Extremo 2A | -914.341 | -5.246 | -0.568 | -0.1069 | -0.2155 | 82.8765 |
| 320 | 0.5 | Extremo 2A | -914.341 | 2.427  | -0.568 | -0.1069 | 0.0688  | 83.5811 |
| 320 | 1   | Extremo 1A | -914.341 | 10.099 | -0.568 | -0.1069 | 0.353   | 80.4495 |
| 320 | 0   | Extremo 1A | -910.196 | -8.049 | 0.667  | 0.3536  | 0.4894  | 72.6829 |
| 320 | 0.5 | Extremo 1A | -910.196 | -0.377 | 0.667  | 0.3536  | 0.156   | 74.7893 |
| 320 | 1   | Extremo 2A | -910.196 | 7.296  | 0.667  | 0.3536  | -0.1774 | 73.0594 |
| 321 | 0   | Extremo 2A | -914.264 | -3.271 | 0.928  | -0.7581 | 0.5349  | 81.6216 |
| 321 | 0.5 | Extremo 2A | -914.264 | 4.401  | 0.928  | -0.7581 | 0.0708  | 81.3391 |
| 321 | 1   | Extremo 1A | -914.264 | 12.074 | 0.928  | -0.7581 | -0.3933 | 77.2203 |
| 321 | 0   | Extremo 1A | -908.658 | -6.846 | 1.947  | 0.1249  | -1.1213 | 72.7678 |
| 321 | 0.5 | Extremo 1A | -908.658 | 0.827  | 1.947  | 0.1249  | 0.1479  | 74.2727 |
| 321 | 1   | Extremo 2A | -908.658 | 8.499  | 1.947  | 0.1249  | -0.8255 | 71.9413 |
| 322 | 0   | Extremo 2A | -912.368 | -1.879 | 2.455  | -1.3511 | 1.2985  | 79.4715 |
| 322 | 0.5 | Extremo 2A | -912.368 | 5.794  | 2.455  | -1.3511 | 0.0711  | 78.4928 |
| 322 | 1   | Extremo 1A | -912.368 | 13.466 | 2.455  | -1.3511 | -1.1563 | 73.6778 |
| 322 | 0   | Extremo 1A | -905.622 | -5.534 | 3.241  | -0.0606 | 1.7507  | 72.073  |
| 322 | 0.5 | Extremo 1A | -905.622 | 2.139  | 3.241  | -0.0606 | 0.1305  | 72.9217 |
| 322 | 1   | Extremo 2A | -905.622 | 9.811  | 3.241  | -0.0606 | -1.4898 | 69.9341 |
| 323 | 0   | Extremo 2A | -908.723 | -0.336 | 3.915  | -1.6192 | 2.0156  | 76.6141 |
| 323 | 0.5 | Extremo 2A | -908.723 | 7.337  | 3.915  | -1.6192 | 0.0579  | 74.8639 |
| 323 | 1   | Extremo 1A | -908.723 | 15.009 | 3.915  | -1.6192 | -1.8998 | 69.2775 |
| 323 | 0   | Extremo 1A | -901.122 | -3.974 | 4.508  | -0.1058 | 2.3563  | 70.4533 |
| 323 | 0.5 | Extremo 1A | -901.122 | 3.699  | 4.508  | -0.1058 | 0.1021  | 70.522  |
| 323 | 1   | Extremo 2A | -901.122 | 11.371 | 4.508  | -0.1058 | -2.152  | 66.7545 |
| 324 | 0   | Extremo 2A | -903.514 | 1.565  | 5.184  | -1.469  | 2.6341  | 72.4774 |
| 324 | 0.5 | Extremo 2A | -903.514 | 9.237  | 5.184  | -1.469  | 0.0421  | 69.7769 |
| 324 | 1   | Extremo 1A | -903.514 | 16.91  | 5.184  | -1.469  | -2.55   | 63.2401 |
| 324 | 0   | Extremo 1A | -895.279 | -2.054 | 5.629  | 0.1294  | 2.8889  | 67.4365 |
| 324 | 0.5 | Extremo 1A | -895.279 | 5.619  | 5.629  | 0.1294  | 0.0741  | 66.5451 |
| 324 | 1   | Extremo 2A | -895.279 | 13.291 | 5.629  | 0.1294  | -2.7406 | 61.8175 |
| 325 | 0   | Extremo 2A | -897.011 | 3.403  | 6.168  | -1.0722 | 3.1596  | 65.9802 |
| 325 | 0.5 | Extremo 2A | -897.011 | 11.076 | 6.168  | -1.0722 | 0.0758  | 62.3605 |
| 325 | 1   | Extremo 1A | -897.011 | 18.748 | 6.168  | -1.0722 | -3.008  | 54.9044 |
| 325 | 0   | Extremo 1A | -888.304 | -0.148 | 6.503  | 0.5447  | 3.3492  | 62.0477 |
| 325 | 0.5 | Extremo 1A | -888.304 | 7.524  | 6.503  | 0.5447  | 0.0974  | 60.2036 |
| 325 | 1   | Extremo 2A | -888.304 | 15.197 | 6.503  | 0.5447  | -3.1543 | 54.5232 |
| 326 | 0   | Extremo 2A | -889.329 | 4.134  | 7.381  | -1.2122 | 3.8528  | 56.7693 |
| 326 | 0.5 | Extremo 2A | -889.329 | 11.807 | 7.381  | -1.2122 | 0.1621  | 52.784  |
| 326 | 1   | Extremo 1A | -889.329 | 19.479 | 7.381  | -1.2122 | -3.5286 | 44.9626 |
| 326 | 0   | Extremo 1A | -880.27  | 0.747  | 7.629  | 0.4239  | 3.9897  | 53.9242 |
| 326 | 0.5 | Extremo 1A | -880.27  | 8.419  | 7.629  | 0.4239  | 0.175   | 51.6327 |
| 326 | 1   | Extremo 2A | -880.27  | 16.092 | 7.629  | 0.4239  | -3.6397 | 45.505  |
| 327 | 0   | Extremo 2A | -879.811 | 3.58   | 9.05   | -1.9183 | 4.7176  | 48.3207 |
| 327 | 0.5 | Extremo 2A | -879.811 | 11.252 | 9.05   | -1.9183 | 0.1928  | 44.6127 |
| 327 | 1   | Extremo 1A | -879.811 | 18.925 | 9.05   | -1.9183 | -4.332  | 37.0685 |
| 327 | 0   | Extremo 1A | -870.498 | 0.372  | 9.227  | -0.2811 | 4.813   | 46.3666 |
| 327 | 0.5 | Extremo 1A | -870.498 | 8.045  | 9.227  | -0.2811 | 0.1997  | 44.2623 |
| 327 | 1   | Extremo 2A | -870.498 | 15.717 | 9.227  | -0.2811 | -4.4137 | 38.3218 |
| 328 | 0   | Extremo 2A | -868.454 | 3.228  | 10.5   | -2.268  | 5.3818  | 41.2942 |
| 328 | 0.5 | Extremo 2A | -868.454 | 10.901 | 10.5   | -2.268  | 0.1316  | 37.762  |
| 328 | 1   | Extremo 1A | -868.454 | 18.573 | 10.5   | -2.268  | -5.1186 | 30.3936 |
| 328 | 0   | Extremo 1A | -858.96  | 0.14   | 10.626 | -0.6692 | 5.4478  | 40.1059 |
| 328 | 0.5 | Extremo 1A | -858.96  | 7.812  | 10.626 | -0.6692 | 0.1346  | 38.1177 |
| 328 | 1   | Extremo 2A | -858.96  | 15.485 | 10.626 | -0.6692 | -5.1786 | 32.2934 |
| 329 | 0   | Extremo 2A | -855.534 | 3.555  | 11.694 | -2.1529 | 5.8938  | 34.6412 |
| 329 | 0.5 | Extremo 2A | -855.534 | 11.228 | 11.694 | -2.1529 | 0.0469  | 30.9455 |
| 329 | 1   | Extremo 1A | -855.534 | 18.9   | 11.694 | -2.1529 | -5.7999 | 23.4135 |
| 329 | 0   | Extremo 1A | -845.912 | 0.579  | 11.783 | -0.5992 | 5.9384  | 34.1762 |
| 329 | 0.5 | Extremo 1A | -845.912 | 8.251  | 11.783 | -0.5992 | 0.0468  | 31.9686 |
| 329 | 1   | Extremo 2A | -845.912 | 15.924 | 11.783 | -0.5992 | -5.8448 | 25.9248 |
| 330 | 0   | Extremo 2A | -841.292 | 4.122  | 12.707 | -1.8485 | 6.3625  | 27.249  |
| 330 | 0.5 | Extremo 2A | -841.292 | 11.795 | 12.707 | -1.8485 | 0.0091  | 23.2698 |
| 330 | 1   | Extremo 1A | -841.292 | 19.467 | 12.707 | -1.8485 | -6.3442 | 15.4544 |
| 330 | 0   | Extremo 1A | -831.581 | 1.297  | 12.769 | -0.3239 | 6.3904  | 27.4548 |
| 330 | 0.5 | Extremo 1A | -831.581 | 8.97   | 12.769 | -0.3239 | 0.0057  | 24.888  |
| 330 | 1   | Extremo 2A | -831.581 | 16.642 | 12.769 | -0.3239 | -6.379  | 18.4851 |
| 331 | 0   | Extremo 2A | -825.659 | 4.218  | 14.163 | -1.7868 | 7.1093  | 18.812  |
| 331 | 0.5 | Extremo 2A | -825.659 | 11.891 | 14.163 | -1.7868 | 0.0278  | 14.7846 |
| 331 | 1   | Extremo 1A | -825.659 | 19.563 | 14.163 | -1.7868 | -7.0536 | 6.921   |
| 331 | 0   | Extremo 1A | -815.89  | 1.567  | 14.196 | -0.2879 | 7.1195  | 19.5568 |
| 331 | 0.5 | Extremo 1A | -815.89  | 9.24   | 14.196 | -0.2879 | 0.0213  | 16.8551 |
| 331 | 1   | Extremo 2A | -815.89  | 16.912 | 14.196 | -0.2879 | -7.0769 | 10.3171 |

|       |     |            |          |        |        |         |          |          |
|-------|-----|------------|----------|--------|--------|---------|----------|----------|
| 332   | 0   | Extremo 2A | -807.548 | 3.596  | 16.503 | -1.9737 | 8.2364   | 10.8302  |
| 332   | 0.5 | Extremo 2A | -807.548 | 11.268 | 16.503 | -1.9737 | -0.0149  | 7.1143   |
| 332   | 1   | Extremo 1A | -807.548 | 18.941 | 16.503 | -1.9737 | -8.2662  | -0.438   |
| 332   | 0   | Extremo 1A | -797.76  | 1.045  | 16.505 | -0.5385 | 8.2294   | 12.0159  |
| 332   | 0.5 | Extremo 1A | -797.76  | 8.718  | 16.505 | -0.5385 | -0.0229  | 9.5753   |
| 332   | 1   | Extremo 2A | -797.76  | 16.39  | 16.505 | -0.5385 | -8.2752  | 3.2984   |
| 333   | 0   | Extremo 2A | -786.425 | 3.23   | 19.096 | -1.9366 | 9.3799   | 3.5399   |
| 333   | 0.5 | Extremo 2A | -786.425 | 10.903 | 19.096 | -1.9366 | -0.1679  | 0.0068   |
| 333   | 1   | Extremo 1A | -786.425 | 18.575 | 19.096 | -1.9366 | -9.7158  | -7.3626  |
| 333   | 0   | Extremo 1A | -776.653 | 0.71   | 19.069 | -0.5795 | 9.3585   | 5.1841   |
| 333   | 0.5 | Extremo 1A | -776.653 | 8.382  | 19.069 | -0.5795 | -0.1758  | 2.9112   |
| 333   | 1   | Extremo 2A | -776.653 | 16.055 | 19.069 | -0.5795 | -9.7102  | -3.1979  |
| 334   | 0   | Extremo 2A | -761.899 | 3.124  | 22.065 | -1.771  | 10.6646  | -3.6528  |
| 334   | 0.5 | Extremo 2A | -761.899 | 10.796 | 22.065 | -1.771  | -0.3677  | -7.1327  |
| 334   | 1   | Extremo 1A | -761.899 | 18.469 | 22.065 | -1.771  | -11.4    | -14.4488 |
| 334   | 0   | Extremo 1A | -752.183 | 0.65   | 22.006 | -0.4742 | 10.6283  | -1.4949  |
| 334   | 0.5 | Extremo 1A | -752.183 | 8.323  | 22.006 | -0.4742 | -0.3746  | -3.7381  |
| 334   | 1   | Extremo 2A | -752.183 | 15.995 | 22.006 | -0.4742 | -11.3774 | -9.8175  |
| 335   | 0   | Extremo 2A | -733.417 | 2.901  | 25.596 | -1.7007 | 12.2155  | -10.9677 |
| 335   | 0.5 | Extremo 2A | -733.417 | 10.574 | 25.596 | -1.7007 | -0.5825  | -14.3363 |
| 335   | 1   | Extremo 1A | -733.417 | 18.246 | 25.596 | -1.7007 | -13.3805 | -21.5412 |
| 335   | 0   | Extremo 1A | -723.801 | 0.534  | 25.496 | -0.4382 | 12.1604  | -8.2836  |
| 335   | 0.5 | Extremo 1A | -723.801 | 8.206  | 25.496 | -0.4382 | -0.5875  | -10.4686 |
| 335   | 1   | Extremo 2A | -723.801 | 15.879 | 25.496 | -0.4382 | -13.3353 | -16.4899 |
| 336   | 0   | Extremo 2A | -700.292 | 2.512  | 29.725 | -1.7653 | 14.097   | -17.9293 |
| 336   | 0.5 | Extremo 2A | -700.292 | 10.184 | 29.725 | -1.7653 | -0.7654  | -21.1033 |
| 336   | 1   | Extremo 1A | -700.292 | 17.857 | 29.725 | -1.7653 | -15.6278 | -28.1135 |
| 336   | 0   | Extremo 1A | -690.84  | 0.302  | 29.567 | -0.5203 | 14.016   | -14.8073 |
| 336   | 0.5 | Extremo 1A | -690.84  | 7.975  | 29.567 | -0.5203 | -0.7677  | -16.8766 |
| 336   | 1   | Extremo 2A | -690.84  | 15.647 | 29.567 | -0.5203 | -15.5514 | -22.7821 |
| 337   | 0   | Extremo 2A | -661.703 | 2.54   | 34.735 | -1.5148 | 16.5053  | -23.9815 |
| 337   | 0.5 | Extremo 2A | -661.703 | 10.213 | 34.735 | -1.5148 | -0.8623  | -27.1698 |
| 337   | 1   | Extremo 1A | -661.703 | 17.885 | 34.735 | -1.5148 | -18.2299 | -34.1943 |
| 337   | 0   | Extremo 1A | -652.507 | 0.435  | 34.489 | -0.3457 | 16.3843  | -20.606  |
| 337   | 0.5 | Extremo 1A | -652.507 | 8.107  | 34.489 | -0.3457 | -0.8603  | -22.7414 |
| 337   | 1   | Extremo 2A | -652.507 | 15.78  | 34.489 | -0.3457 | -18.1049 | -28.713  |
| 338   | 0   | Extremo 2A | -616.344 | 2.82   | 41.072 | -0.8001 | 19.5899  | -30.7706 |
| 338   | 0.5 | Extremo 2A | -616.344 | 10.493 | 41.072 | -0.8001 | -0.9463  | -34.0988 |
| 338   | 1   | Extremo 1A | -616.344 | 18.165 | 41.072 | -0.8001 | -21.4825 | -41.2633 |
| 338   | 0   | Extremo 1A | -607.554 | 0.673  | 40.699 | 0.164   | 19.4129  | -27.0754 |
| 338   | 0.5 | Extremo 1A | -607.554 | 8.345  | 40.699 | 0.164   | -0.9366  | -29.3299 |
| 338   | 1   | Extremo 2A | -607.554 | 16.018 | 40.699 | 0.164   | -21.286  | -35.4207 |
| 339   | 0   | Extremo 2A | -564.142 | 2.676  | 47.513 | 0.0533  | 22.6177  | -38.9306 |
| 339   | 0.5 | Extremo 2A | -564.142 | 10.349 | 47.513 | 0.0533  | -1.1387  | -42.1868 |
| 339   | 1   | Extremo 1A | -564.142 | 18.021 | 47.513 | 0.0533  | -24.8952 | -49.2793 |
| 339   | 0   | Extremo 1A | -555.964 | 0.476  | 46.979 | 0.7051  | 22.3716  | -34.6082 |
| 339   | 0.5 | Extremo 1A | -555.964 | 8.149  | 46.979 | 0.7051  | -1.1178  | -36.7644 |
| 339   | 1   | Extremo 2A | -555.964 | 15.821 | 46.979 | 0.7051  | -24.6071 | -42.7568 |
| 340   | 0   | Extremo 2A | -507.159 | 0.772  | 51.919 | 0.4615  | 24.4643  | -48.1953 |
| 340   | 0.5 | Extremo 2A | -507.159 | 8.444  | 51.919 | 0.4615  | -1.4953  | -50.4993 |
| 340   | 1   | Extremo 1A | -507.159 | 16.117 | 51.919 | 0.4615  | -27.455  | -56.6395 |
| 340   | 0   | Extremo 1A | -499.839 | -0.951 | 51.242 | 0.8492  | 24.1514  | -42.7424 |
| 340   | 0.5 | Extremo 1A | -499.839 | 6.722  | 51.242 | 0.8492  | -1.4694  | -44.1851 |
| 340   | 1   | Extremo 2A | -499.839 | 14.394 | 51.242 | 0.8492  | -27.0901 | -49.4641 |
| 341</ |     |            |          |        |        |         |          |          |



|     |     |            |          |         |        |         |          |          |
|-----|-----|------------|----------|---------|--------|---------|----------|----------|
| 344 | 0   | Extremo 2A | -296.132 | -12.601 | 49.119 | -1.9431 | 26.6489  | -54.0281 |
| 344 | 0.5 | Extremo 2A | -296.132 | -4.929  | 49.119 | -1.9431 | 2.0895   | -49.6455 |
| 344 | 1   | Extremo 1A | -296.132 | 2.744   | 49.119 | -1.9431 | -22.4699 | -49.0992 |
| 344 | 0   | Extremo 1A | -292.34  | -11.821 | 48.663 | -2.0762 | 26.3674  | -49.334  |
| 344 | 0.5 | Extremo 1A | -292.34  | -4.149  | 48.663 | -2.0762 | 2.0356   | -45.3414 |
| 344 | 1   | Extremo 2A | -292.34  | 3.524   | 48.663 | -2.0762 | -22.2961 | -45.185  |
| 345 | 0   | Extremo 2A | -242.69  | -13.564 | 43.85  | -1.4579 | 23.6824  | -47.9227 |
| 345 | 0.5 | Extremo 2A | -242.69  | -5.891  | 43.85  | -1.4579 | 1.7575   | -43.059  |
| 345 | 1   | Extremo 1A | -242.69  | 1.781   | 43.85  | -1.4579 | -20.1675 | -42.0316 |
| 345 | 0   | Extremo 1A | -239.378 | -12.903 | 43.523 | -1.699  | 23.4812  | -43.5699 |
| 345 | 0.5 | Extremo 1A | -239.378 | -5.23   | 43.523 | -1.699  | 1.7197   | -39.0366 |
| 345 | 1   | Extremo 2A | -239.378 | 2.442   | 43.523 | -1.699  | -20.0417 | -38.3396 |
| 346 | 0   | Extremo 2A | -195.037 | -13.179 | 36.791 | -0.7099 | 19.9473  | -41.8111 |
| 346 | 0.5 | Extremo 2A | -195.037 | -5.506  | 36.791 | -0.7099 | 1.552    | -37.1397 |
| 346 | 1   | Extremo 1A | -195.037 | 2.166   | 36.791 | -0.7099 | -16.8433 | -36.3046 |
| 346 | 0   | Extremo 1A | -192.065 | -12.603 | 36.553 | -1.0135 | 19.7992  | -37.6645 |
| 346 | 0.5 | Extremo 1A | -192.065 | -4.931  | 36.553 | -1.0135 | 1.5226   | -33.2811 |
| 346 | 1   | Extremo 2A | -192.065 | 2.742   | 36.553 | -1.0135 | -16.7541 | -32.7339 |
| 347 | 0   | Extremo 2A | -154.859 | -12.439 | 30.053 | -0.064  | 16.4283  | -36.9855 |
| 347 | 0.5 | Extremo 2A | -154.859 | -4.766  | 30.053 | -0.064  | 1.402    | -32.6842 |
| 347 | 1   | Extremo 1A | -154.859 | 2.906   | 30.053 | -0.064  | -13.6242 | -32.2191 |
| 347 | 0   | Extremo 1A | -152.138 | -11.926 | 29.87  | -0.4229 | 16.3123  | -32.8981 |
| 347 | 0.5 | Extremo 1A | -152.138 | -4.253  | 29.87  | -0.4229 | 1.3773   | -28.8535 |
| 347 | 1   | Extremo 2A | -152.138 | 3.419   | 29.87  | -0.4229 | -13.5576 | -28.6451 |
| 348 | 0   | Extremo 2A | -121.945 | -12.118 | 24.391 | 0.0763  | 13.4103  | -33.6533 |
| 348 | 0.5 | Extremo 2A | -121.945 | -4.446  | 24.391 | 0.0763  | 1.2149   | -29.5123 |
| 348 | 1   | Extremo 1A | -121.945 | 3.227   | 24.391 | 0.0763  | -10.9806 | -29.2076 |
| 348 | 0   | Extremo 1A | -119.421 | -11.57  | 24.239 | -0.2851 | 13.3131  | -29.4746 |
| 348 | 0.5 | Extremo 1A | -119.421 | -3.897  | 24.239 | -0.2851 | 1.1937   | -25.6078 |
| 348 | 1   | Extremo 2A | -119.421 | 3.775   | 24.239 | -0.2851 | -10.9257 | -25.5772 |
| 349 | 0   | Extremo 2A | -95.47   | -12.422 | 19.457 | -0.2037 | 10.7278  | -29.8211 |
| 349 | 0.5 | Extremo 2A | -95.47   | -4.75   | 19.457 | -0.2037 | 0.9993   | -25.5281 |
| 349 | 1   | Extremo 1A | -95.47   | 2.923   | 19.457 | -0.2037 | -8.7291  | -25.0714 |
| 349 | 0   | Extremo 1A | -93.11   | -11.769 | 19.326 | -0.5293 | 10.644   | -25.6673 |
| 349 | 0.5 | Extremo 1A | -93.11   | -4.097  | 19.326 | -0.5293 | 0.9811   | -21.7008 |
| 349 | 1   | Extremo 2A | -93.11   | 3.576   | 19.326 | -0.5293 | -8.6818  | -21.5706 |
| 350 | 0   | Extremo 2A | -74.45   | -12.525 | 15.382 | -0.3354 | 8.5006   | -25.2586 |
| 350 | 0.5 | Extremo 2A | -74.45   | -4.852  | 15.382 | -0.3354 | 0.8094   | -20.9144 |
| 350 | 1   | Extremo 1A | -74.45   | 2.82    | 15.382 | -0.3354 | -6.8817  | -20.4064 |
| 350 | 0   | Extremo 1A | -72.233  | -11.8   | 15.265 | -0.6476 | 8.4257   | -21.2713 |
| 350 | 0.5 | Extremo 1A | -72.233  | -4.128  | 15.265 | -0.6476 | 0.7932   | -17.2893 |
| 350 | 1   | Extremo 2A | -72.233  | 3.545   | 15.265 | -0.6476 | -6.8392  | -17.1435 |
| 351 | 0   | Extremo 2A | -57.889  | -12.257 | 12.097 | -0.2827 | 6.6957   | -20.5815 |
| 351 | 0.5 | Extremo 2A | -57.889  | -4.585  | 12.097 | -0.2827 | 0.6473   | -16.3711 |
| 351 | 1   | Extremo 1A | -57.889  | 3.088   | 12.097 | -0.2827 | -5.4011  | -15.997  |
| 351 | 0   | Extremo 1A | -55.802  | -11.523 | 11.988 | -0.6121 | 6.6267   | -16.8242 |
| 351 | 0.5 | Extremo 1A | -55.802  | -3.85   | 11.988 | -0.6121 | 0.6326   | -12.9809 |
| 351 | 1   | Extremo 2A | -55.802  | 3.822   | 11.988 | -0.6121 | -5.3615  | -12.9739 |
| 352 | 0   | Extremo 2A | -44.907  | -11.82  | 9.466  | -0.1711 | 5.2462   | -16.2938 |
| 352 | 0.5 | Extremo 2A | -44.907  | -4.147  | 9.466  | -0.1711 | 0.5134   | -12.3022 |
| 352 | 1   | Extremo 1A | -44.907  | 3.525   | 9.466  | -0.1711 | -4.2193  | -12.1468 |
| 352 | 0   | Extremo 1A | -42.943  | -11.124 | 9.362  | -0.545  | 5.1806   | -12.7423 |
| 352 | 0.5 | Extremo 1A | -42.943  | -3.451  | 9.362  | -0.545  | 0.4998   | -9.0986  |
| 352 | 1   | Extremo 2A | -42.943  | 4.221   | 9.362  | -0.545  | -4.1809  | -9.2912  |
| 353 | 0   | Extremo 2A | -34.766  | -11.371 | 7.386  | -0.1127 | 4.1022   | -12.599  |
| 353 | 0.5 | Extremo 2A | -34.766  | -3.699  | 7.386  | -0.1127 | 0.4094   | -8.8315  |
| 353 | 1   | Extremo 1A | -34.766  | 3.974   | 7.386  | -0.1127 | -3.2835  | -8.9002  |
| 353 | 0   | Extremo 1A | -32.922  | -10.702 | 7.282  | -0.5378 | 4.0376   | -9.1357  |
| 353 | 0.5 | Extremo 1A | -32.922  | -3.03   | 7.282  | -0.5378 | 0.3968   | -5.7028  |
| 353 | 1   | Extremo 2A | -32.922  | 4.643   | 7.282  | -0.5378 | -3.244   | -6.106   |
| 354 | 0   | Extremo 2A | -26.833  | -10.777 | 5.813  | -0.1449 | 3.228    | -9.4017  |
| 354 | 0.5 | Extremo 2A | -26.833  | -3.104  | 5.813  | -0.1449 | 0.3213   | -5.9314  |
| 354 | 1   | Extremo 1A | -26.833  | 4.568   | 5.813  | -0.1449 | -2.5854  | -6.2973  |
| 354 | 0   | Extremo 1A | -25.111  | -10.053 | 5.705  | -0.5741 | 3.1628   | -5.9135  |
| 354 | 0.5 | Extremo 1A | -25.111  | -2.38   | 5.705  | -0.5741 | 0.3103   | -2.8052  |
| 354 | 1   | Extremo 2A | -25.111  | 5.292   | 5.705  | -0.5741 | -2.5422  | -3.5332  |
| 355 | 0   | Extremo 2A | -20.631  | -10.322 | 4.537  | -0.3023 | 2.5138   | -6.3644  |
| 355 | 0.5 | Extremo 2A | -20.631  | -2.65   | 4.537  | -0.3023 | 0.2452   | -3.1214  |
| 355 | 1   | Extremo 1A | -20.631  | 5.023   | 4.537  | -0.3023 | -2.0233  | -3.7146  |
| 355 | 0   | Extremo 1A | -19.034  | -9.492  | 4.426  | -0.7052 | 2.4493   | -2.9766  |
| 355 | 0.5 | Extremo 1A | -19.034  | -1.82   | 4.426  | -0.7052 | 0.2361   | -0.1486  |
| 355 | 1   | Extremo 2A | -19.034  | 5.853   | 4.426  | -0.7052 | -1.9771  | -1.1569  |

|     |     |            |         |         |       |         |         |          |
|-----|-----|------------|---------|---------|-------|---------|---------|----------|
| 356 | 0   | Extremo 2A | -15.796 | -9.853  | 3.532 | -0.4318 | 1.9539  | -3.4968  |
| 356 | 0.5 | Extremo 2A | -15.796 | -2.18   | 3.532 | -0.4318 | 0.1878  | -0.4886  |
| 356 | 1   | Extremo 1A | -15.796 | 5.492   | 3.532 | -0.4318 | -1.5784 | -1.3166  |
| 356 | 0   | Extremo 1A | -14.329 | -8.948  | 3.418 | -0.8327 | 1.8892  | -0.341   |
| 356 | 0.5 | Extremo 1A | -14.329 | -1.276  | 3.418 | -0.8327 | 0.1802  | 2.2149   |
| 356 | 1   | Extremo 2A | -14.329 | 6.397   | 3.418 | -0.8327 | -1.5289 | 0.9345   |
| 357 | 0   | Extremo 2A | -12.029 | -9.337  | 2.75  | -0.5551 | 1.5194  | -0.948   |
| 357 | 0.5 | Extremo 2A | -12.029 | -1.665  | 2.75  | -0.5551 | 0.1442  | 1.8025   |
| 357 | 1   | Extremo 1A | -12.029 | 6.008   | 2.75  | -0.5551 | -1.2309 | 0.7167   |
| 357 | 0   | Extremo 1A | -10.698 | -8.401  | 2.63  | -0.9807 | 1.4528  | 1.9298   |
| 357 | 0.5 | Extremo 1A | -10.698 | -0.729  | 2.63  | -0.9807 | 0.138   | 4.2123   |
| 357 | 1   | Extremo 2A | -10.698 | 6.944   | 2.63  | -0.9807 | -1.1768 | 2.6586   |
| 358 | 0   | Extremo 2A | -9.09   | -8.701  | 2.147 | -0.7016 | 1.1851  | 1.2955   |
| 358 | 0.5 | Extremo 2A | -9.09   | -1.028  | 2.147 | -0.7016 | 0.1115  | 3.7279   |
| 358 | 1   | Extremo 1A | -9.09   | 6.644   | 2.147 | -0.7016 | -0.9622 | 2.324    |
| 358 | 0   | Extremo 1A | -7.907  | -7.73   | 2.015 | -1.1506 | 1.1144  | 3.9255   |
| 358 | 0.5 | Extremo 1A | -7.907  | -0.058  | 2.015 | -1.1506 | 0.1067  | 5.8724   |
| 358 | 1   | Extremo 2A | -7.907  | 7.615   | 2.015 | -1.1506 | -0.9009 | 3.9832   |
| 359 | 0   | Extremo 2A | -6.782  | -7.621  | 1.701 | -0.7386 | 0.935   | 3.1971   |
| 359 | 0.5 | Extremo 2A | -6.782  | 0.051   | 1.701 | -0.7386 | 0.0846  | 5.0897   |
| 359 | 1   | Extremo 1A | -6.782  | 7.724   | 1.701 | -0.7386 | -0.7658 | 3.1461   |
| 359 | 0   | Extremo 1A | -5.763  | -6.583  | 1.553 | -1.1723 | 0.8583  | 5.5903   |
| 359 | 0.5 | Extremo 1A | -5.763  | 1.089   | 1.553 | -1.1723 | 0.0819  | 6.9638   |
| 359 | 1   | Extremo 2A | -5.763  | 8.762   | 1.553 | -1.1723 | -0.6945 | 4.501    |
| 360 | 0   | Extremo 2A | -4.956  | -6.418  | 1.353 | -0.7258 | 0.7379  | 4.1929   |
| 360 | 0.5 | Extremo 2A | -4.956  | 1.254   | 1.353 | -0.7258 | 0.0614  | 5.484    |
| 360 | 1   | Extremo 1A | -4.956  | 8.927   | 1.353 | -0.7258 | -0.6152 | 2.9389   |
| 360 | 0   | Extremo 1A | -4.117  | -5.304  | 1.189 | -1.1052 | 0.6558  | 6.2333   |
| 360 | 0.5 | Extremo 1A | -4.117  | 2.369   | 1.189 | -1.1052 | 0.0612  | 6.9671   |
| 360 | 1   | Extremo 2A | -4.117  | 10.041  | 1.189 | -1.1052 | -0.5334 | 3.8646   |
| 361 | 0   | Extremo 2A | -3.499  | -5.353  | 1.093 | -0.7179 | 0.5883  | 4.0964   |
| 361 | 0.5 | Extremo 2A | -3.499  | 2.319   | 1.093 | -0.7179 | 0.0418  | 4.8549   |
| 361 | 1   | Extremo 1A | -3.499  | 9.992   | 1.093 | -0.7179 | -0.5048 | 1.7771   |
| 361 | 0   | Extremo 1A | -2.857  | -4.212  | 0.912 | -1.0201 | 0.5006  | 5.645    |
| 361 | 0.5 | Extremo 1A | -2.857  | 3.46    | 0.912 | -1.0201 | 0.0448  | 5.8329   |
| 361 | 1   | Extremo 2A | -2.857  | 11.133  | 0.912 | -1.0201 | -0.4111 | 2.1846   |
| 362 | 0   | Extremo 2A | -2.321  | -4.824  | 0.902 | -0.9156 | 0.4737  | 2.8859   |
| 362 | 0.5 | Extremo 2A | -2.321  | 2.849   | 0.902 | -0.9156 | 0.0225  | 3.3797   |
| 362 | 1   | Extremo 1A | -2.321  | 10.521  | 0.902 | -0.9156 | -0.4286 | 0.0374   |
| 362 | 0   | Extremo 1A | -1.887  | -3.79   | 0.708 | -1.134  | 0.3851  | 3.8134   |
| 362 | 0.5 | Extremo 1A | -1.887  | 3.882   | 0.708 | -1.134  | 0.0309  | 3.7905   |
| 362 | 1   | Extremo 2A | -1.887  | 11.555  | 0.708 | -1.134  | -0.3232 | -0.0687  |
| 363 | 0   | Extremo 2A | -1.361  | -5.047  | 0.76  | -1.7337 | 0.3772  | 1.1803   |
| 363 | 0.5 | Extremo 2A | -1.361  | 2.625   | 0.76  | -1.7337 | -0.003  | 1.7857   |
| 363 | 1   | Extremo 1A | -1.361  | 10.298  | 0.76  | -1.7337 | -0.3832 | -1.4451  |
| 363 | 0   | Extremo 1A | -1.122  | -4.349  | 0.584 | -1.9119 | 0.3057  | 1.455    |
| 363 | 0.5 | Extremo 1A | -1.122  | 3.324   | 0.584 | -1.9119 | 0.0138  | 1.7112   |
| 363 | 1   | Extremo 2A | -1.122  | 10.996  | 0.584 | -1.9119 | -0.278  | -1.8688  |
| 364 | 0   | Extremo 2A | -0.584  | -3.933  | 0.6   | -2.7316 | 0.253   | 0.7399   |
| 364 | 0.5 | Extremo 2A | -0.584  | 3.739   | 0.6   | -2.7316 | -0.0471 | 0.7885   |
| 364 | 1   | Extremo 1A | -0.584  | 11.412  | 0.6   | -2.7316 | -0.3472 | -2.9991  |
| 364 | 0   | Extremo 1A | -0.491  | -3.669  | 0.515 | -2.9009 | 0.2288  | 0.653    |
| 364 | 0.5 | Extremo 1A | -0.491  | 4.003   | 0.515 | -2.9009 | -0.0286 | 0.5695   |
| 364 | 1   | Extremo 2A | -0.491  | 11.676  | 0.515 | -2.9009 | -0.286  | -3.3503  |
| 365 | 0   | Extremo 2A | 0.066   | -14.931 | 0.066 | 3.3912  | 0.0464  | -5.0102  |
| 365 | 0.5 | Extremo 2A | 0.066   | -5.879  | 0.066 | 3.3912  | 0.0134  | 0.1925   |
| 365 | 1   | Extremo 1A | 0.066   | 3.172   | 0.066 | 3.3912  | -0.0196 | 0.8692</ |



|     |     |            |        |         |        |         |           |          |
|-----|-----|------------|--------|---------|--------|---------|-----------|----------|
| 368 | 0   | Extremo 2A | 0.334  | -12.134 | 0.107  | 0.2186  | 0.0566    | 6.6543   |
| 368 | 0.5 | Extremo 2A | 0.334  | -3.083  | 0.107  | 0.2186  | 0.0029    | 10.4585  |
| 368 | 1   | Extremo 1A | 0.334  | 5.969   | 0.107  | 0.2186  | -0.0508   | 9.7369   |
| 368 | 0   | Extremo 1A | -0.758 | -12.133 | -0.187 | 0.2186  | -0.1043   | 6.6531   |
| 368 | 0.5 | Extremo 1A | -0.758 | -3.081  | -0.187 | 0.2186  | -0.0106   | 10.4568  |
| 368 | 1   | Extremo 2A | -0.758 | 5.97    | -0.187 | 0.2186  | 0.083     | 9.7346   |
| 369 | 0   | Extremo 2A | 0.408  | -7.417  | 0.098  | 0.1414  | 0.0492    | 9.0959   |
| 369 | 0.5 | Extremo 2A | 0.408  | 1.634   | 0.098  | 0.1414  | 0.0002577 | 10.5417  |
| 369 | 1   | Extremo 1A | 0.408  | 10.686  | 0.098  | 0.1414  | -0.0487   | 7.4616   |
| 369 | 0   | Extremo 1A | -0.885 | -7.416  | -0.162 | 0.1414  | -0.0864   | 9.094    |
| 369 | 0.5 | Extremo 1A | -0.885 | 1.636   | -0.162 | 0.1414  | -0.0053   | 10.5392  |
| 369 | 1   | Extremo 2A | -0.885 | 10.687  | -0.162 | 0.1414  | 0.0758    | 7.4585   |
| 370 | 0   | Extremo 2A | 0.473  | -2.429  | 0.092  | -0.0099 | 0.0441    | 8.8571   |
| 370 | 0.5 | Extremo 2A | 0.473  | 6.623   | 0.092  | -0.0099 | -0.0018   | 7.8085   |
| 370 | 1   | Extremo 1A | 0.473  | 15.675  | 0.092  | -0.0099 | -0.0476   | 2.2341   |
| 370 | 0   | Extremo 1A | -0.99  | -2.428  | -0.147 | -0.0099 | -0.0745   | 8.8545   |
| 370 | 0.5 | Extremo 1A | -0.99  | 6.624   | -0.147 | -0.0099 | -0.0012   | 7.8053   |
| 370 | 1   | Extremo 2A | -0.99  | 15.676  | -0.147 | -0.0099 | 0.0722    | 2.2303   |
| 371 | 0   | Extremo 2A | 0.536  | -2.463  | 0.089  | 0.1614  | 0.0409    | 5.6948   |
| 371 | 0.5 | Extremo 2A | 0.536  | 11.515  | 0.089  | 0.1614  | -0.0035   | 2.2001   |
| 371 | 1   | Extremo 1A | 0.536  | 20.567  | 0.089  | 0.1614  | -0.048    | -5.8204  |
| 371 | 0   | Extremo 1A | -1.088 | -2.465  | -0.141 | 0.1614  | -0.0682   | 5.6915   |
| 371 | 0.5 | Extremo 1A | -1.088 | 11.516  | -0.141 | 0.1614  | 0.0025    | 2.1962   |
| 371 | 1   | Extremo 2A | -1.088 | 20.568  | -0.141 | 0.1614  | 0.0732    | -5.8249  |
| 372 | 0   | Extremo 2A | 0.601  | -6.444  | 0.089  | 1.2138  | 0.0396    | -1.2081  |
| 372 | 0.5 | Extremo 2A | 0.601  | 15.496  | 0.089  | 1.2138  | -0.0049   | -6.693   |
| 372 | 1   | Extremo 1A | 0.601  | 24.547  | 0.089  | 1.2138  | -0.0494   | -16.7037 |
| 372 | 0   | Extremo 1A | -1.194 | -6.445  | -0.145 | 1.2139  | -0.0663   | -1.2122  |
| 372 | 0.5 | Extremo 1A | -1.194 | 15.497  | -0.145 | 1.2139  | 0.0061    | -6.6976  |
| 372 | 1   | Extremo 2A | -1.194 | 24.549  | -0.145 | 1.2139  | 0.0784    | -16.709  |
| 373 | 0   | Extremo 2A | 0.673  | -6.638  | 0.091  | 3.2225  | 0.0411    | -13.5754 |
| 373 | 0.5 | Extremo 2A | 0.673  | 15.69   | 0.091  | 3.2225  | -0.0047   | -19.1573 |
| 373 | 1   | Extremo 1A | 0.673  | 24.742  | 0.091  | 3.2225  | -0.0504   | -29.2652 |
| 373 | 0   | Extremo 1A | -1.32  | -6.639  | -0.153 | 3.2227  | -0.0675   | -13.5804 |
| 373 | 0.5 | Extremo 1A | -1.32  | 15.691  | -0.153 | 3.2227  | 0.0088    | -19.1628 |
| 373 | 1   | Extremo 2A | -1.32  | 24.742  | -0.153 | 3.2227  | 0.0852    | -29.2711 |
| 374 | 0   | Extremo 2A | 0.754  | -3.452  | 0.101  | 3.4318  | 0.0508    | -31.2383 |
| 374 | 0.5 | Extremo 2A | 0.754  | 5.6     | 0.101  | 3.4318  | 0.0001468 | -31.7754 |
| 374 | 1   | Extremo 1A | 0.754  | 14.652  | 0.101  | 3.4318  | -0.0505   | -36.8384 |
| 374 | 0   | Extremo 1A | -1.467 | -3.452  | -0.157 | 3.432   | -0.0719   | -31.2445 |
| 374 | 0.5 | Extremo 1A | -1.467 | 5.6     | -0.157 | 3.432   | 0.0064    | -31.7815 |
| 374 | 1   | Extremo 2A | -1.467 | 14.652  | -0.157 | 3.432   | 0.0847    | -36.8445 |
| 375 | 0   | Extremo 2A | 0.852  | -20.892 | 0.153  | -2.4941 | 0.0801    | -38.597  |
| 375 | 0.5 | Extremo 2A | 0.852  | -11.84  | 0.153  | -2.4941 | 0.0037    | -30.4139 |
| 375 | 1   | Extremo 1A | 0.852  | -2.789  | 0.153  | -2.4941 | -0.0727   | -26.7567 |
| 375 | 0   | Extremo 1A | -1.608 | -20.894 | -0.167 | -2.4943 | -0.0898   | -38.6033 |
| 375 | 0.5 | Extremo 1A | -1.608 | -11.842 | -0.167 | -2.4943 | -0.0065   | -30.4195 |
| 375 | 1   | Extremo 2A | -1.608 | -2.79   | -0.167 | -2.4943 | 0.0768    | -26.7615 |
| 376 | 0   | Extremo 2A | 0.973  | -31.003 | 0.158  | -2.2755 | 0.0765    | -28.3117 |
| 376 | 0.5 | Extremo 2A | 0.973  | -21.951 | 0.158  | -2.2755 | -0.0024   | -15.073  |
| 376 | 1   | Extremo 1A | 0.973  | -12.9   | 0.158  | -2.2755 | -0.0814   | -6.3603  |
| 376 | 0   | Extremo 1A | -1.761 | -31.006 | -0.157 | -2.2757 | -0.0844   | -28.3168 |
| 376 | 0.5 | Extremo 1A | -1.761 | -21.954 | -0.157 | -2.2757 | -0.006    | -15.0769 |
| 376 | 1   | Extremo 2A | -1.761 | -12.902 | -0.157 | -2.2757 | 0.0723    | -6.3628  |
| 377 | 0   | Extremo 2A | 1.087  | -30.857 | 0.15   | -0.2488 | 0.0682    | -13.0512 |
| 377 | 0.5 | Extremo 2A | 1.087  | -21.805 | 0.15   | -0.2488 | -0.0068   | 0.1143   |
| 377 | 1   | Extremo 1A | 1.087  | -12.753 | 0.15   | -0.2488 | -0.0819   | 8.7539   |
| 377 | 0   | Extremo 1A | -1.888 | -30.86  | -0.135 | -0.2488 | -0.0702   | -13.0545 |
| 377 | 0.5 | Extremo 1A | -1.888 | -21.808 | -0.135 | -0.2488 | -0.0025   | 0.1124   |
| 377 | 1   | Extremo 2A | -1.888 | -12.756 | -0.135 | -0.2488 | 0.0651    | 8.7534   |
| 378 | 0   | Extremo 2A | 1.191  | -26.961 | 0.142  | 0.8249  | 0.0612    | 0.5174   |
| 378 | 0.5 | Extremo 2A | 1.191  | -17.909 | 0.142  | 0.8249  | -0.0098   | 11.7348  |
| 378 | 1   | Extremo 1A | 1.191  | -8.857  | 0.142  | 0.8249  | -0.0808   | 18.4263  |
| 378 | 0   | Extremo 1A | -1.985 | -26.964 | -0.115 | 0.825   | -0.0571   | 0.5159   |
| 378 | 0.5 | Extremo 1A | -1.985 | -17.912 | -0.115 | 0.825   | 0.0005196 | 11.7347  |
| 378 | 1   | Extremo 2A | -1.985 | -8.86   | -0.115 | 0.825   | 0.0582    | 18.4277  |
| 379 | 0   | Extremo 2A | 1.286  | -22.196 | 0.136  | 0.9958  | 0.0557    | 11.2591  |
| 379 | 0.5 | Extremo 2A | 1.286  | -13.144 | 0.136  | 0.9958  | -0.0122   | 20.0943  |
| 379 | 1   | Extremo 1A | 1.286  | -4.093  | 0.136  | 0.9958  | -0.08     | 24.4036  |
| 379 | 0   | Extremo 1A | -2.061 | -22.199 | -0.1   | 0.9959  | -0.0471   | 11.2595  |
| 379 | 0.5 | Extremo 1A | -2.061 | -13.147 | -0.1   | 0.9959  | 0.003     | 20.0961  |
| 379 | 1   | Extremo 2A | -2.061 | -4.096  | -0.1   | 0.9959  | 0.053     | 24.4068  |

|     |     |            |        |         |        |         |         |          |
|-----|-----|------------|--------|---------|--------|---------|---------|----------|
| 380 | 0   | Extremo 2A | 1.377  | -17.343 | 0.131  | 0.7507  | 0.0512  | 19.2573  |
| 380 | 0.5 | Extremo 2A | 1.377  | -8.291  | 0.131  | 0.7507  | -0.0144 | 25.6658  |
| 380 | 1   | Extremo 1A | 1.377  | 0.761   | 0.131  | 0.7507  | -0.08   | 27.5484  |
| 380 | 0   | Extremo 1A | -2.122 | -17.346 | -0.089 | 0.7508  | -0.0397 | 19.2595  |
| 380 | 0.5 | Extremo 1A | -2.122 | -8.294  | -0.089 | 0.7508  | 0.005   | 25.6694  |
| 380 | 1   | Extremo 2A | -2.122 | 0.758   | -0.089 | 0.7508  | 0.0497  | 27.5535  |
| 381 | 0   | Extremo 2A | 1.464  | -12.535 | 0.128  | 0.3655  | 0.0477  | 24.651   |
| 381 | 0.5 | Extremo 2A | 1.464  | -3.483  | 0.128  | 0.3655  | -0.0164 | 28.6556  |
| 381 | 1   | Extremo 1A | 1.464  | 5.568   | 0.128  | 0.3655  | -0.0805 | 28.1344  |
| 381 | 0   | Extremo 1A | -2.175 | -12.538 | -0.083 | 0.3656  | -0.0348 | 24.655   |
| 381 | 0.5 | Extremo 1A | -2.175 | -3.486  | -0.083 | 0.3656  | 0.0068  | 28.661   |
| 381 | 1   | Extremo 2A | -2.175 | 5.566   | -0.083 | 0.3656  | 0.0484  | 28.1412  |
| 382 | 0   | Extremo 2A | 1.549  | -7.76   | 0.127  | -0.0556 | 0.0449  | 27.5107  |
| 382 | 0.5 | Extremo 2A | 1.549  | 1.292   | 0.127  | -0.0556 | -0.0184 | 29.1277  |
| 382 | 1   | Extremo 1A | 1.549  | 10.344  | 0.127  | -0.0556 | -0.0817 | 26.2189  |
| 382 | 0   | Extremo 1A | -2.224 | -7.763  | -0.081 | -0.0555 | -0.0318 | 27.5165  |
| 382 | 0.5 | Extremo 1A | -2.224 | 1.289   | -0.081 | -0.0555 | 0.0085  | 29.1349  |
| 382 | 1   | Extremo 2A | -2.224 | 10.341  | -0.081 | -0.0555 | 0.0488  | 26.2275  |
| 383 | 0   | Extremo 2A | 1.634  | -2.981  | 0.126  | -0.4745 | 0.0427  | 27.8664  |
| 383 | 0.5 | Extremo 2A | 1.634  | 6.07    | 0.126  | -0.4745 | -0.0204 | 27.0941  |
| 383 | 1   | Extremo 1A | 1.634  | 15.122  | 0.126  | -0.4745 | -0.0834 | 21.7959  |
| 383 | 0   | Extremo 1A | -2.273 | -2.984  | -0.081 | -0.4744 | -0.0306 | 27.874   |
| 383 | 0.5 | Extremo 1A | -2.273 | 6.068   | -0.081 | -0.4744 | 0.0102  | 27.1031  |
| 383 | 1   | Extremo 2A | -2.273 | 15.119  | -0.081 | -0.4744 | 0.0509  | 21.8064  |
| 384 | 0   | Extremo 2A | 1.72   | -1.837  | 0.127  | -0.8492 | 0.0411  | 25.7195  |
| 384 | 0.5 | Extremo 2A | 1.72   | 10.889  | 0.127  | -0.8492 | -0.0223 | 22.5378  |
| 384 | 1   | Extremo 1A | 1.72   | 19.241  | 0.127  | -0.8492 | -0.0857 | 14.8303  |
| 384 | 0   | Extremo 1A | -2.325 | -1.835  | -0.086 | -0.8491 | -0.0311 | 25.7289  |
| 384 | 0.5 | Extremo 1A | -2.325 | 10.886  | -0.086 | -0.8491 | 0.0119  | 22.5486  |
| 384 | 1   | Extremo 2A | -2.325 | 19.238  | -0.086 | -0.8491 | 0.0549  | 14.8425  |
| 385 | 0   | Extremo 2A | 1.808  | -6.707  | 0.129  | -1.0577 | 0.0401  | 20.9986  |
| 385 | 0.5 | Extremo 2A | 1.808  | 15.759  | 0.129  | -1.0577 | -0.0243 | 15.382   |
| 385 | 1   | Extremo 1A | 1.808  | 24.811  | 0.129  | -1.0577 | -0.0886 | 5.2395   |
| 385 | 0   | Extremo 1A | -2.384 | -6.704  | -0.094 | -1.0577 | -0.0334 | 21.0098  |
| 385 | 0.5 | Extremo 1A | -2.384 | 15.756  | -0.094 | -1.0577 | 0.0138  | 15.3947  |
| 385 | 1   | Extremo 2A | -2.384 | 24.808  | -0.094 | -1.0577 | 0.061   | 5.2536   |
| 386 | 0   | Extremo 2A | 1.9    | -11.468 | 0.132  | -0.7781 | 0.0397  | 13.3812  |
| 386 | 0.5 | Extremo 2A | 1.9    | 20.52   | 0.132  | -0.7781 | -0.0262 | 5.3843   |
| 386 | 1   | Extremo 1A | 1.9    | 29.571  | 0.132  | -0.7781 | -0.0922 | -7.1384  |
| 386 | 0   | Extremo 1A | -2.456 | -11.465 | -0.107 | -0.7781 | -0.0376 | 13.3942  |
| 386 | 0.5 | Extremo 1A | -2.456 | 20.517  | -0.107 | -0.7781 | 0.016   | 5.3988   |
| 386 | 1   | Extremo 2A | -2.456 | 29.568  | -0.107 | -0.7781 | 0.0697  | -7.1224  |
| 387 | 0   | Extremo 2A | 1.999  | -15.208 | 0.136  | 0.5574  | 0.0404  | 1.8588   |
| 387 | 0.5 | Extremo 2A | 1.999  | 24.26   | 0.136  | 0.5574  | -0.0278 | -8.0081  |
| 387 | 1   | Extremo 1A | 1.999  | 33.312  | 0.136  | 0.5574  | -0.096  | -22.4009 |
| 387 | 0   | Extremo 1A | -2.55  | -15.205 | -0.124 | 0.5571  | -0.0435 | 1.8738   |
| 387 | 0.5 | Extremo 1A | -2.55  | 24.257  | -0.124 | 0.5571  | 0.0186  | -7.9916  |
| 387 | 1   | Extremo 2A | -2.55  | 33.309  | -0.124 | 0.5571  | 0.0807  | -22.3829 |
| 388 | 0   | Extremo 2A | 2.108  | -14.574 | 0.142  | 3.0081  | 0.0437  | -15.6039 |
| 388 | 0.5 | Extremo 2A | 2.108  | 23.626  | 0.142  | 3.0081  | -0.0275 | -25.154  |
| 388 | 1   | Extremo 1A | 2.108  | 32.678  | 0.142  | 3.0081  | -0.0986 | -39.23   |
| 388 | 0   | Extremo 1A | -2.671 | -14.572 | -0.142 | 3.0074  | -0.0501 | -15.5862 |
| 388 | 0.5 | Extremo 1A | -2.671 | 23.624  | -0.142 | 3.0074  | 0.021   | -25.1353 |
| 388 | 1   | Extremo 2A | -2.671 | 32.676  | -0.142 | 3.0074  | 0.0921  | -39.2103 |
| 389 | 0   | Extremo 2A | 2.229  | -2.002  | 0.158  | 3.3647  | 0.0574  | -38.8248 |
| 389 | 0.5 | Extremo 2A | 2.229  | 11.054  | 0.158  | 3.3647  | -0.0216 | -42.0888 |
| 389 | 1   | Extremo 1A | 2.229  | 20.106  | 0.158  | 3.3647  | -0.1006 | -49.8787 |
| 389 | 0   | Extremo 1A | -2.818 | -2.003  | -0.152 | 3.3639  |         |          |



|     |     |            |        |         |        |         |         |          |
|-----|-----|------------|--------|---------|--------|---------|---------|----------|
| 392 | 0   | Extremo 2A | 2.723  | -32.308 | 0.233  | -0.6068 | 0.0824  | -23.3966 |
| 392 | 0,5 | Extremo 2A | 2.723  | -23.256 | 0.233  | -0.6068 | -0.034  | -9.5055  |
| 392 | 1   | Extremo 1A | 2.723  | -14.205 | 0.233  | -0.6068 | -0.1505 | -0.1403  |
| 392 | 0   | Extremo 1A | -3.243 | -32.298 | -0.136 | -0.6066 | -0.0594 | -23.3869 |
| 392 | 0,5 | Extremo 1A | -3.243 | -23.246 | -0.136 | -0.6066 | 0.0083  | -9.501   |
| 392 | 1   | Extremo 2A | -3.243 | -14.194 | -0.136 | -0.6066 | 0.0761  | -0.1409  |
| 393 | 0   | Extremo 2A | 2.884  | -28.567 | 0.225  | 0.7286  | 0.0743  | -8.7329  |
| 393 | 0,5 | Extremo 2A | 2.884  | -19.516 | 0.225  | 0.7286  | -0.0383 | 3.2879   |
| 393 | 1   | Extremo 1A | 2.884  | -10.464 | 0.225  | 0.7286  | -0.1509 | 10.7827  |
| 393 | 0   | Extremo 1A | -3.343 | -28.557 | -0.118 | 0.7285  | -0.0477 | -8.7299  |
| 393 | 0,5 | Extremo 1A | -3.343 | -19.505 | -0.118 | 0.7285  | 0.0112  | 3.2856   |
| 393 | 1   | Extremo 2A | -3.343 | -10.453 | -0.118 | 0.7285  | 0.0702  | 10.7752  |
| 394 | 0   | Extremo 2A | 3.037  | -23.806 | 0.219  | 1.0082  | 0.0677  | 3.0462   |
| 394 | 0,5 | Extremo 2A | 3.037  | -14.754 | 0.219  | 1.0082  | -0.0419 | 12.6862  |
| 394 | 1   | Extremo 1A | 3.037  | -5.703  | 0.219  | 1.0082  | -0.1515 | 17.8004  |
| 394 | 0   | Extremo 1A | -3.423 | -23.796 | -0.104 | 1.008   | -0.0386 | 3.0424   |
| 394 | 0,5 | Extremo 1A | -3.423 | -14.744 | -0.104 | 1.008   | 0.0136  | 12.6773  |
| 394 | 1   | Extremo 2A | -3.423 | -5.692  | -0.104 | 1.008   | 0.0659  | 17.7864  |
| 395 | 0   | Extremo 2A | 3.186  | -18.935 | 0.215  | 0.7996  | 0.0622  | 12.0379  |
| 395 | 0,5 | Extremo 2A | 3.186  | -9.883  | 0.215  | 0.7996  | -0.0453 | 19.2424  |
| 395 | 1   | Extremo 1A | 3.186  | -0.831  | 0.215  | 0.7996  | -0.1527 | 21.921   |
| 395 | 0   | Extremo 1A | -3.489 | -18.925 | -0.095 | 0.7994  | -0.032  | 12.0275  |
| 395 | 0,5 | Extremo 1A | -3.489 | -9.873  | -0.095 | 0.7994  | 0.0157  | 19.2269  |
| 395 | 1   | Extremo 2A | -3.489 | -0.821  | -0.095 | 0.7994  | 0.0634  | 21.9004  |
| 396 | 0   | Extremo 2A | 3.331  | -14.114 | 0.212  | 0.4252  | 0.0575  | 18.4042  |
| 396 | 0,5 | Extremo 2A | 3.331  | -5.062  | 0.212  | 0.4252  | -0.0485 | 23.1984  |
| 396 | 1   | Extremo 1A | 3.331  | 3.989   | 0.212  | 0.4252  | -0.1545 | 23.4667  |
| 396 | 0   | Extremo 1A | -3.547 | -14.104 | -0.09  | 0.425   | -0.0275 | 18.3872  |
| 396 | 0,5 | Extremo 1A | -3.547 | -5.052  | -0.09  | 0.425   | 0.0176  | 23.1763  |
| 396 | 1   | Extremo 2A | -3.547 | 4       | -0.09  | 0.425   | 0.0626  | 23.4395  |
| 397 | 0   | Extremo 2A | 3.474  | -9.333  | 0.21   | 0.0075  | 0.0535  | 22.2271  |
| 397 | 0,5 | Extremo 2A | 3.474  | -0.281  | 0.21   | 0.0075  | -0.0517 | 24.6304  |
| 397 | 1   | Extremo 1A | 3.474  | 8.771   | 0.21   | 0.0075  | -0.1568 | 22.5078  |
| 397 | 0   | Extremo 1A | -3.602 | -9.322  | -0.088 | 0.0073  | -0.0249 | 22.2035  |
| 397 | 0,5 | Extremo 1A | -3.602 | -0.27   | -0.088 | 0.0073  | 0.0193  | 24.6017  |
| 397 | 1   | Extremo 2A | -3.602 | 8.781   | -0.088 | 0.0073  | 0.0635  | 22.474   |
| 398 | 0   | Extremo 2A | 3.617  | -4.552  | 0.21   | -0.41   | 0.0501  | 23.5409  |
| 398 | 0,5 | Extremo 2A | 3.617  | 4.5     | 0.21   | -0.41   | -0.0548 | 23.554   |
| 398 | 1   | Extremo 1A | 3.617  | 13.551  | 0.21   | -0.41   | -0.1597 | 19.0413  |
| 398 | 0   | Extremo 1A | -3.657 | -4.542  | -0.09  | -0.4102 | -0.0239 | 23.5108  |
| 398 | 0,5 | Extremo 1A | -3.657 | 4.51    | -0.09  | -0.4102 | 0.0211  | 23.5188  |
| 398 | 1   | Extremo 2A | -3.657 | 13.562  | -0.09  | -0.4102 | 0.0661  | 19.0009  |
| 399 | 0   | Extremo 2A | 3.761  | 0.264   | 0.21   | -0.7841 | 0.0473  | 22.3487  |
| 399 | 0,5 | Extremo 2A | 3.761  | 9.316   | 0.21   | -0.7841 | -0.0579 | 19.9538  |
| 399 | 1   | Extremo 1A | 3.761  | 18.367  | 0.21   | -0.7841 | -0.1631 | 13.0331  |
| 399 | 0   | Extremo 1A | -3.715 | 0.274   | -0.095 | -0.7844 | -0.0246 | 22.3121  |
| 399 | 0,5 | Extremo 1A | -3.715 | 9.326   | -0.095 | -0.7844 | 0.023   | 19.912   |
| 399 | 1   | Extremo 2A | -3.715 | 18.378  | -0.095 | -0.7844 | 0.0705  | 12.986   |
| 400 | 0   | Extremo 2A | 3.907  | 5.127   | 0.212  | -0.9953 | 0.045   | 18.5811  |
| 400 | 0,5 | Extremo 2A | 3.907  | 14.178  | 0.212  | -0.9953 | -0.0611 | 13.7548  |
| 400 | 1   | Extremo 1A | 3.907  | 23.23   | 0.212  | -0.9953 | -0.1672 | 4.4027   |
| 400 | 0   | Extremo 1A | -3.781 | 5.137   | -0.104 | -0.9956 | -0.027  | 18.5381  |
| 400 | 0,5 | Extremo 1A | -3.781 | 14.189  | -0.104 | -0.9956 | 0.025   | 13.7065  |
| 400 | 1   | Extremo 2A | -3.781 | 23.241  | -0.104 | -0.9956 | 0.077   | 4.3489   |
| 401 | 0   | Extremo 2A | 4.057  | 9.879   | 0.215  | -0.7292 | 0.0434  | 11.923   |
| 401 | 0,5 | Extremo 2A | 4.057  | 18.931  | 0.215  | -0.7292 | -0.0642 | 4.7205   |
| 401 | 1   | Extremo 1A | 4.057  | 27.983  | 0.215  | -0.7292 | -0.1717 | -7.0079  |
| 401 | 0   | Extremo 1A | -3.86  | 9.89    | -0.117 | -0.7291 | -0.0312 | 11.8735  |
| 401 | 0,5 | Extremo 1A | -3.86  | 18.942  | -0.117 | -0.7291 | 0.0274  | 4.6653   |
| 401 | 1   | Extremo 2A | -3.86  | 27.994  | -0.117 | -0.7291 | 0.086   | -7.0686  |
| 402 | 0   | Extremo 2A | 4.214  | 13.634  | 0.219  | 0.5672  | 0.0429  | 1.3912   |
| 402 | 0,5 | Extremo 2A | 4.214  | 22.685  | 0.219  | 0.5672  | -0.0668 | -7.6886  |
| 402 | 1   | Extremo 1A | 4.214  | 31.737  | 0.219  | 0.5672  | -0.1765 | -21.2942 |
| 402 | 0   | Extremo 1A | -3.96  | 13.644  | -0.135 | 0.5683  | -0.0371 | 1.3342   |
| 402 | 0,5 | Extremo 1A | -3.96  | 22.696  | -0.135 | 0.5683  | 0.0302  | -7.751   |
| 402 | 1   | Extremo 2A | -3.96  | 31.748  | -0.135 | 0.5683  | 0.0974  | -21.3621 |
| 403 | 0   | Extremo 2A | 4.381  | 13.125  | 0.225  | 2.9519  | 0.0456  | -14.9975 |
| 403 | 0,5 | Extremo 2A | 4.381  | 22.176  | 0.225  | 2.9519  | -0.067  | -23.8227 |
| 403 | 1   | Extremo 1A | 4.381  | 31.228  | 0.225  | 2.9519  | -0.1796 | -37.1738 |
| 403 | 0   | Extremo 1A | -4.089 | 13.132  | -0.153 | 2.9548  | -0.0434 | -15.0642 |
| 403 | 0,5 | Extremo 1A | -4.089 | 22.184  | -0.153 | 2.9548  | 0.0329  | -23.8932 |
| 403 | 1   | Extremo 2A | -4.089 | 31.236  | -0.153 | 2.9548  | 0.1093  | -37.2481 |

|     |     |            |        |         |        |         |         |          |
|-----|-----|------------|--------|---------|--------|---------|---------|----------|
| 404 | 0   | Extremo 2A | 4.561  | 0.99    | 0.244  | 3.3006  | 0.0614  | -37.0663 |
| 404 | 0,5 | Extremo 2A | 4.561  | 10.042  | 0.244  | 3.3006  | -0.0606 | -39.8244 |
| 404 | 1   | Extremo 1A | 4.561  | 19.094  | 0.244  | 3.3006  | -0.1827 | -47.1083 |
| 404 | 0   | Extremo 1A | -4.243 | 0.985   | -0.162 | 3.3036  | -0.0492 | -37.1449 |
| 404 | 0,5 | Extremo 1A | -4.243 | 10.037  | -0.162 | 3.3036  | 0.0315  | -39.9006 |
| 404 | 1   | Extremo 2A | -4.243 | 19.089  | -0.162 | 3.3036  | 0.1123  | -47.1821 |
| 405 | 0   | Extremo 2A | 4.772  | -19.451 | 0.333  | -3.2942 | 0.1074  | -47.1713 |
| 405 | 0,5 | Extremo 2A | 4.772  | -10.399 | 0.333  | -3.2942 | -0.0593 | -39.7087 |
| 405 | 1   | Extremo 1A | 4.772  | -1.348  | 0.333  | -3.2942 | -0.2261 | -36.7719 |
| 405 | 0   | Extremo 1A | -4.389 | -19.475 | -0.163 | -3.2967 | -0.0632 | -47.2501 |
| 405 | 0,5 | Extremo 1A | -4.389 | -10.423 | -0.163 | -3.2967 | 0.0184  | -39.7757 |
| 405 | 1   | Extremo 2A | -4.389 | -1.371  | -0.163 | -3.2967 | 0.1     | -36.8272 |
| 406 | 0   | Extremo 2A | 5.021  | -31.586 | 0.346  | -2.9455 | 0.1018  | -37.0055 |
| 406 | 0,5 | Extremo 2A | 5.021  | -22.534 | 0.346  | -2.9455 | -0.0714 | -23.4756 |
| 406 | 1   | Extremo 1A | 5.021  | -13.482 | 0.346  | -2.9455 | -0.2445 | -14.4716 |
| 406 | 0   | Extremo 1A | -4.544 | -31.621 | -0.155 | -2.9479 | -0.0601 | -37.0663 |
| 406 | 0,5 | Extremo 1A | -4.544 | -22.57  | -0.155 | -2.9479 | 0.0173  | -23.5185 |
| 406 | 1   | Extremo 2A | -4.544 | -13.518 | -0.155 | -2.9479 | 0.0948  | -14.4966 |
| 407 | 0   | Extremo 2A | 5.265  | -32.095 | 0.339  | -0.5607 | 0.09    | -20.8945 |
| 407 | 0,5 | Extremo 2A | 5.265  | -23.043 | 0.339  | -0.5607 | -0.0797 | -7.11    |
| 407 | 1   | Extremo 1A | 5.265  | -13.991 | 0.339  | -0.5607 | -0.2494 | 2.1485   |
| 407 | 0   | Extremo 1A | -4.674 | -32.134 | -0.137 | -0.5613 | -0.0481 | -20.9306 |
| 407 | 0,5 | Extremo 1A | -4.674 | -23.082 | -0.137 | -0.5613 | 0.0202  | -7.1265  |
| 407 | 1   | Extremo 2A | -4.674 | -14.031 | -0.137 | -0.5613 | 0.0886  | 2.1517   |
| 408 | 0   | Extremo 2A | 5.5    | -28.341 | 0.331  | 0.7359  | 0.0801  | -6.377   |
| 408 | 0,5 | Extremo 2A | 5.5    | -19.289 | 0.331  | 0.7359  | -0.0856 | 5.5304   |
| 408 | 1   | Extremo 1A | 5.5    | -10.237 | 0.331  | 0.7359  | -0.2514 | 12.9119  |
| 408 | 0   | Extremo 1A | -4.776 | -28.38  | -0.119 | 0.7363  | -0.0365 | -6.3876  |
| 408 | 0,5 | Extremo 1A | -4.776 | -19.328 | -0.119 | 0.7363  | 0.0231  | 5.5396   |
| 408 | 1   | Extremo 2A | -4.776 | -10.277 | -0.119 | 0.7363  | 0.0828  | 12.9409  |
| 409 | 0   | Extremo 2A | 5.726  | -23.589 | 0.325  | 1.0023  | 0.0717  | 5.2647   |
| 409 | 0,5 | Extremo 2A | 5.726  | -14.537 | 0.325  | 1.0023  | -0.0908 | 14.7961  |
| 409 | 1   | Extremo 1A | 5.726  | -5.485  | 0.325  | 1.0023  | -0.2533 | 19.8016  |
| 409 | 0   | Extremo 1A | -4.856 | -23.628 | -0.106 | 1.0031  | -0.0275 | 5.2794   |
| 409 | 0,5 | Extremo 1A | -4.856 | -14.576 | -0.106 | 1.0031  | 0.0255  | 14.8304  |
| 409 | 1   | Extremo 2A | -4.856 | -5.524  | -0.106 | 1.0031  | 0.0785  | 19.8556  |
| 410 | 0   | Extremo 2A | 5.947  | -18.727 | 0.32   | 0.7915  | 0.0646  | 14.1259  |
| 410 | 0,5 | Extremo 2A | 5.947  | -9.675  | 0.32   | 0.7915  | -0.0957 | 21.2263  |
| 410 | 1   | Extremo 1A | 5.947  | -0.623  | 0.32   | 0.7915  | -0.2559 | 23.8008  |
| 410 | 0   | Extremo 1A | -4.923 | -18.766 | -0.097 | 0.7924  | -0.0209 | 14.1658  |
| 410 | 0,5 | Extremo 1A | -4.923 | -9.714  | -0.097 | 0.7924  | 0.0276  | 21.2857  |
| 410 | 1   | Extremo 2A | -4.923 | -0.662  | -0.097 | 0.7924  | 0.0761  | 23.8797  |
| 411 | 0   | Extremo 2A | 6.165  | -13.912 | 0.317  | 0.4181  | 0.0582  | 20.3646  |
| 411 | 0,5 | Extremo 2A | 6.165  | -4.86   | 0.317  | 0.4181  | -0.1004 | 25.0577  |
| 411 | 1   | Extremo 1A | 6.165  | 4.192   | 0.317  | 0.4181  | -0.2591 | 25.2249  |
| 411 | 0   | Extremo 1A | -4.983 | -13.951 | -0.092 | 0.419   | -0.0165 | 20.4295  |
| 411 | 0,5 | Extremo 1A | -4.983 | -4.899  | -0.092 | 0.419   | 0.0295  | 25.142   |
| 411 | 1   | Extremo 2A | -4.983 | 4.153   | -0.092 | 0.419   | 0.0755  | 25.3286  |
| 412 | 0   | Extremo 2A | 6.381  | -9.134  | 0.315  | 0.0018  | 0.0527  | 24.0609  |
| 412 | 0,5 | Extremo 2A | 6.381  | -0.082  | 0.315  | 0.0018  | -0.1051 | 26.365   |
| 412 | 1   | Extremo 1A | 6.381  | 8.969   | 0.315  | 0.0018  | -0.2628 | 24.1432  |
| 412 | 0   | Extremo 1A | -5.039 | -9.173  | -0.09  | 0.0027  | -0.0139 | 24.1505  |
| 412 | 0,5 | Extremo 1A | -5.039 | -0.121  | -0.09  | 0.0027  | 0.0313  | 26.4742  |
| 412 | 1   | Extremo 2A | -5.039 | 8.93    | -0.09  | 0.0027  | 0.0765  | 24.2719  |
| 413 | 0   | Extremo 2A | 6.596  | -4.357  | 0.315  | -0.4144 | 0.0477  | 25.2481  |
| 413 | 0,5 | Extremo 2A | 6.596  | 4.695   | 0.315  | -0.4144 | -0.1097 | 25.1635  |
| 413 | 1   | Extremo 1A | 6.596  | 13.747  | 0.315  | -0.4144 | -0.2671 | 20.553   |
| 413 | 0   | Extremo 1A | -5.095 | -4.396  | -0.092 | -0.4134 | -0.013  | 25       |





|     |     |            |        |         |        |         |           |          |
|-----|-----|------------|--------|---------|--------|---------|-----------|----------|
| 416 | 0   | Extremo 2A | 7.253  | 10.064  | 0.319  | -0.7352 | 0.0362    | 13.2503  |
| 416 | 0.5 | Extremo 2A | 7.253  | 19.116  | 0.319  | -0.7352 | -0.1234   | 5.9554   |
| 416 | 1   | Extremo 1A | 7.253  | 28.167  | 0.319  | -0.7352 | -0.2831   | -5.8654  |
| 416 | 0   | Extremo 1A | -5.303 | 10.022  | -0.12  | -0.7355 | -0.0204   | 13.4388  |
| 416 | 0.5 | Extremo 1A | -5.303 | 19.073  | -0.12  | -0.7355 | 0.0395    | 6.165    |
| 416 | 1   | Extremo 2A | -5.303 | 28.125  | -0.12  | -0.7355 | 0.0994    | -5.6346  |
| 417 | 0   | Extremo 2A | 7.482  | 13.82   | 0.323  | 0.5513  | 0.0341    | 2.6007   |
| 417 | 0.5 | Extremo 2A | 7.482  | 22.872  | 0.323  | 0.5513  | -0.1274   | -6.5723  |
| 417 | 1   | Extremo 1A | 7.482  | 31.924  | 0.323  | 0.5513  | -0.2889   | -20.2712 |
| 417 | 0   | Extremo 1A | -5.405 | 13.779  | -0.137 | 0.547   | -0.0263   | 2.8176   |
| 417 | 0.5 | Extremo 1A | -5.405 | 22.831  | -0.137 | 0.547   | 0.0424    | -6.3349  |
| 417 | 1   | Extremo 2A | -5.405 | 31.883  | -0.137 | 0.547   | 0.1111    | -20.0132 |
| 418 | 0   | Extremo 2A | 7.721  | 13.344  | 0.329  | 2.9188  | 0.0358    | -13.8827 |
| 418 | 0.5 | Extremo 2A | 7.721  | 22.396  | 0.329  | 2.9188  | -0.1285   | -22.8177 |
| 418 | 1   | Extremo 1A | 7.721  | 31.448  | 0.329  | 2.9188  | -0.2929   | -36.2787 |
| 418 | 0   | Extremo 1A | -5.535 | 13.316  | -0.156 | 2.9074  | -0.0324   | -13.6284 |
| 418 | 0.5 | Extremo 1A | -5.535 | 22.368  | -0.156 | 2.9074  | 0.0455    | -22.5496 |
| 418 | 1   | Extremo 2A | -5.535 | 31.42   | -0.156 | 2.9074  | 0.1234    | -35.9965 |
| 419 | 0   | Extremo 2A | 7.974  | 1.333   | 0.35   | 3.2673  | 0.0528    | -36.0251 |
| 419 | 0.5 | Extremo 2A | 7.974  | 10.385  | 0.35   | 3.2673  | -0.1223   | -38.9545 |
| 419 | 1   | Extremo 1A | 7.974  | 19.436  | 0.35   | 3.2673  | -0.2974   | -46.4097 |
| 419 | 0   | Extremo 1A | -5.691 | 1.352   | -0.163 | 3.2554  | -0.0367   | -35.7252 |
| 419 | 0.5 | Extremo 1A | -5.691 | 10.404  | -0.163 | 3.2554  | 0.0449    | -38.6643 |
| 419 | 1   | Extremo 2A | -5.691 | 19.456  | -0.163 | 3.2554  | 0.1265    | -46.1292 |
| 420 | 0   | Extremo 2A | 8.264  | -18.921 | 0.454  | -3.2722 | 0.1047    | -46.3222 |
| 420 | 0.5 | Extremo 2A | 8.264  | -9.869  | 0.454  | -3.2722 | -0.1225   | -39.1249 |
| 420 | 1   | Extremo 1A | 8.264  | -0.817  | 0.454  | -3.2722 | -0.3498   | -36.4535 |
| 420 | 0   | Extremo 1A | -5.835 | -18.829 | -0.157 | -3.2635 | -0.0468   | -46.0212 |
| 420 | 0.5 | Extremo 1A | -5.835 | -9.777  | -0.157 | -3.2635 | 0.0317    | -38.8697 |
| 420 | 1   | Extremo 2A | -5.835 | -0.725  | -0.157 | -3.2635 | 0.1102    | -36.244  |
| 421 | 0   | Extremo 2A | 8.597  | -30.932 | 0.47   | -2.9237 | 0.0972    | -36.5321 |
| 421 | 0.5 | Extremo 2A | 8.597  | -21.88  | 0.47   | -2.9237 | -0.1377   | -23.3291 |
| 421 | 1   | Extremo 1A | 8.597  | -12.828 | 0.47   | -2.9237 | -0.3726   | -14.652  |
| 421 | 0   | Extremo 1A | -5.986 | -30.793 | -0.147 | -2.9156 | -0.0439   | -36.2993 |
| 421 | 0.5 | Extremo 1A | -5.986 | -21.741 | -0.147 | -2.9156 | 0.0298    | -23.1658 |
| 421 | 1   | Extremo 2A | -5.986 | -12.689 | -0.147 | -2.9156 | 0.1035    | -14.5581 |
| 422 | 0   | Extremo 2A | 8.926  | -31.408 | 0.463  | -0.5565 | 0.0829    | -20.8654 |
| 422 | 0.5 | Extremo 2A | 8.926  | -22.356 | 0.463  | -0.5565 | -0.1484   | -7.4246  |
| 422 | 1   | Extremo 1A | 8.926  | -13.304 | 0.463  | -0.5565 | -0.3797   | 1.4904   |
| 422 | 0   | Extremo 1A | -6.111 | -31.255 | -0.129 | -0.5553 | -0.0324   | -20.7266 |
| 422 | 0.5 | Extremo 1A | -6.111 | -22.204 | -0.129 | -0.5553 | 0.0323    | -7.3619  |
| 422 | 1   | Extremo 2A | -6.111 | -13.152 | -0.129 | -0.5553 | 0.097     | 1.477    |
| 423 | 0   | Extremo 2A | 9.245  | -27.651 | 0.454  | 0.7298  | 0.0708    | -6.8002  |
| 423 | 0.5 | Extremo 2A | 9.245  | -18.599 | 0.454  | 0.7298  | -0.1562   | 4.7623   |
| 423 | 1   | Extremo 1A | 9.245  | -9.547  | 0.454  | 0.7298  | -0.3831   | 11.7989  |
| 423 | 0   | Extremo 1A | -6.208 | -27.497 | -0.112 | 0.7268  | -0.0212   | -6.7585  |
| 423 | 0.5 | Extremo 1A | -6.208 | -18.446 | -0.112 | 0.7268  | 0.035     | 4.7273   |
| 423 | 1   | Extremo 2A | -6.208 | -9.394  | -0.112 | 0.7268  | 0.0912    | 11.6872  |
| 424 | 0   | Extremo 2A | 9.556  | -22.902 | 0.447  | 0.9926  | 0.0604    | 4.3919   |
| 424 | 0.5 | Extremo 2A | 9.556  | -13.85  | 0.447  | 0.9926  | -0.1631   | 13.5797  |
| 424 | 1   | Extremo 1A | 9.556  | -4.798  | 0.447  | 0.9926  | -0.3865   | 18.2417  |
| 424 | 0   | Extremo 1A | -6.284 | -22.749 | -0.1   | 0.9883  | -0.0125   | 4.3375   |
| 424 | 0.5 | Extremo 1A | -6.284 | -13.697 | -0.1   | 0.9883  | 0.0373    | 13.4491  |
| 424 | 1   | Extremo 2A | -6.284 | -4.646  | -0.1   | 0.9883  | 0.0871    | 18.0349  |
| 425 | 0   | Extremo 2A | 9.861  | -18.041 | 0.442  | 0.7808  | 0.0511    | 12.8058  |
| 425 | 0.5 | Extremo 2A | 9.861  | -8.989  | 0.442  | 0.7808  | -0.1697   | 19.5635  |
| 425 | 1   | Extremo 1A | 9.861  | 0.062   | 0.442  | 0.7808  | -0.3905   | 21.7952  |
| 425 | 0   | Extremo 1A | -6.347 | -17.89  | -0.091 | 0.7762  | -0.0062   | 12.6561  |
| 425 | 0.5 | Extremo 1A | -6.347 | -8.838  | -0.091 | 0.7762  | 0.0393    | 19.338   |
| 425 | 1   | Extremo 2A | -6.347 | 0.214   | -0.091 | 0.7762  | 0.0848    | 21.494   |
| 426 | 0   | Extremo 2A | 10.162 | -13.226 | 0.438  | 0.4063  | 0.0427    | 18.5989  |
| 426 | 0.5 | Extremo 2A | 10.162 | -4.174  | 0.438  | 0.4063  | -0.1761   | 22.9488  |
| 426 | 1   | Extremo 1A | 10.162 | 4.878   | 0.438  | 0.4063  | -0.395    | 22.773   |
| 426 | 0   | Extremo 1A | -6.402 | -13.075 | -0.087 | 0.4017  | -0.0022   | 18.3542  |
| 426 | 0.5 | Extremo 1A | -6.402 | -4.023  | -0.087 | 0.4017  | 0.0411    | 22.6286  |
| 426 | 1   | Extremo 2A | -6.402 | 5.029   | -0.087 | 0.4017  | 0.0844    | 22.3771  |
| 427 | 0   | Extremo 2A | 10.461 | -8.444  | 0.435  | -0.0121 | 0.0349    | 21.8514  |
| 427 | 0.5 | Extremo 2A | 10.461 | 0.607   | 0.435  | -0.0121 | -0.1825   | 23.8107  |
| 427 | 1   | Extremo 1A | 10.461 | 9.659   | 0.435  | -0.0121 | -0.3999   | 21.2441  |
| 427 | 0   | Extremo 1A | -6.454 | -8.293  | -0.086 | -0.0168 | 2.629E-05 | 21.5121  |
| 427 | 0.5 | Extremo 1A | -6.454 | 0.759   | -0.086 | -0.0168 | 0.0429    | 23.3956  |
| 427 | 1   | Extremo 2A | -6.454 | 9.811   | -0.086 | -0.0168 | 0.0857    | 20.7532  |

|     |     |            |        |         |        |         |           |          |
|-----|-----|------------|--------|---------|--------|---------|-----------|----------|
| 428 | 0   | Extremo 2A | 10.76  | -3.659  | 0.433  | -0.4319 | 0.0277    | 22.5983  |
| 428 | 0.5 | Extremo 2A | 10.76  | 5.393   | 0.433  | -0.4319 | -0.1888   | 22.1649  |
| 428 | 1   | Extremo 1A | 10.76  | 14.444  | 0.433  | -0.4319 | -0.4053   | 17.2057  |
| 428 | 0   | Extremo 1A | -6.507 | -3.507  | -0.088 | -0.4367 | 0.0004806 | 22.1645  |
| 428 | 0.5 | Extremo 1A | -6.507 | 5.545   | -0.088 | -0.4367 | 0.0446    | 21.655   |
| 428 | 1   | Extremo 2A | -6.507 | 14.597  | -0.088 | -0.4367 | 0.0887    | 16.6195  |
| 429 | 0   | Extremo 2A | 11.058 | 1.169   | 0.432  | -0.8093 | 0.0209    | 20.8435  |
| 429 | 0.5 | Extremo 2A | 11.058 | 10.22   | 0.432  | -0.8093 | -0.195    | 17.9963  |
| 429 | 1   | Extremo 1A | 11.058 | 19.272  | 0.432  | -0.8093 | -0.411    | 10.6232  |
| 429 | 0   | Extremo 1A | -6.564 | 1.323   | -0.095 | -0.8139 | -0.000801 | 20.3156  |
| 429 | 0.5 | Extremo 1A | -6.564 | 10.375  | -0.095 | -0.8139 | 0.0465    | 17.3913  |
| 429 | 1   | Extremo 2A | -6.564 | 19.426  | -0.095 | -0.8139 | 0.0937    | 9.941    |
| 430 | 0   | Extremo 2A | 11.357 | 6.052   | 0.432  | -1.0203 | 0.0146    | 16.5175  |
| 430 | 0.5 | Extremo 2A | 11.357 | 15.104  | 0.432  | -1.0203 | -0.2012   | 11.2285  |
| 430 | 1   | Extremo 1A | 11.357 | 24.156  | 0.432  | -1.0203 | -0.417    | 1.4136   |
| 430 | 0   | Extremo 1A | -6.629 | 6.209   | -0.105 | -1.023  | -0.0039   | 15.895   |
| 430 | 0.5 | Extremo 1A | -6.629 | 15.261  | -0.105 | -1.023  | 0.0486    | 10.5274  |
| 430 | 1   | Extremo 2A | -6.629 | 24.313  | -0.105 | -1.023  | 0.1011    | 0.6339   |
| 431 | 0   | Extremo 2A | 11.659 | 10.83   | 0.432  | -0.7367 | 0.0087    | 9.2943   |
| 431 | 0.5 | Extremo 2A | 11.659 | 19.882  | 0.432  | -0.7367 | -0.2073   | 1.6163   |
| 431 | 1   | Extremo 1A | 11.659 | 28.934  | 0.432  | -0.7367 | -0.4233   | -10.5876 |
| 431 | 0   | Extremo 1A | -6.708 | 10.99   | -0.12  | -0.7323 | -0.0091   | 8.5731   |
| 431 | 0.5 | Extremo 1A | -6.708 | 20.041  | -0.12  | -0.7323 | 0.051     | 0.8154   |
| 431 | 1   | Extremo 2A | -6.708 | 29.093  | -0.12  | -0.7323 | 0.1111    | -11.4682 |
| 432 | 0   | Extremo 2A | 11.967 | 14.575  | 0.433  | 0.6206  | 0.0038    | -1.8521  |
| 432 | 0.5 | Extremo 2A | 11.967 | 23.627  | 0.433  | 0.6206  | -0.2127   | -11.4025 |
| 432 | 1   | Extremo 1A | 11.967 | 32.679  | 0.433  | 0.6206  | -0.4292   | -25.4789 |
| 432 | 0   | Extremo 1A | -6.81  | 14.726  | -0.14  | 0.6438  | -0.0159   | -2.6871  |
| 432 | 0.5 | Extremo 1A | -6.81  | 23.778  | -0.14  | 0.6438  | 0.0541    | -12.3129 |
| 432 | 1   | Extremo 2A | -6.81  | 32.829  | -0.14  | 0.6438  | 0.1241    | -26.4647 |
| 433 | 0   | Extremo 2A | 12.283 | 13.861  | 0.435  | 3.1119  | 0.0027    | -19.998  |
| 433 | 0.5 | Extremo 2A | 12.283 | 22.913  | 0.435  | 3.1119  | -0.215    | -28.1915 |
| 433 | 1   | Extremo 1A | 12.283 | 31.965  | 0.435  | 3.1119  | -0.4326   | -41.9108 |
| 433 | 0   | Extremo 1A | -6.942 | 13.954  | -0.161 | 3.1664  | -0.0228   | -19.9854 |
| 433 | 0.5 | Extremo 1A | -6.942 | 23.005  | -0.161 | 3.1664  | 0.0576    | -29.2251 |
| 433 | 1   | Extremo 2A | -6.942 | 32.057  | -0.161 | 3.1664  | 0.1381    | -42.9907 |
| 434 | 0   | Extremo 2A | 12.611 | 0.953   | 0.454  | 3.4573  | 0.0181    | -41.9554 |
| 434 | 0.5 | Extremo 2A | 12.611 | 10.004  | 0.454  | 3.4573  | -0.2091   | -44.6946 |
| 434 | 1   | Extremo 1A | 12.611 | 19.056  | 0.454  | 3.4573  | -0.4363   | -51.9598 |
| 434 | 0   | Extremo 1A | -7.099 | 0.85    | -0.17  | 3.5183  | -0.027    | -43.1313 |
| 434 | 0.5 | Extremo 1A | -7.099 | 9.901   | -0.17  | 3.5183  | 0.058     | -45.819  |
| 434 | 1   | Extremo 2A | -7.099 | 18.953  | -0.17  | 3.5183  | 0.143     | -53.0326 |
| 435 | 0   | Extremo 2A | 12.978 | -20.675 | 0.564  | -3.4944 | 0.071     | -52.1922 |
| 435 | 0.5 | Extremo 2A | 12.978 | -11.623 | 0.564  | -3.4944 | -0.2107   | -44.1178 |
| 435 | 1   | Extremo 1A | 12.978 | -2.571  | 0.564  | -3.4944 | -0.4925   | -40.5693 |
| 435 | 0   | Extremo 1A | -7.245 | -21.072 | -0.159 | -3.5099 | -0.0343   | -53.3827 |
| 435 | 0.5 | Extremo 1A | -7.245 | -12.02  | -0.159 | -3.5099 | 0.045     | -45.1097 |
| 435 | 1   | Extremo 2A | -7.245 | -2.968  | -0.159 | -3.5099 | 0.1242    | -41.3626 |
| 436 | 0   | Extremo 2A | 13.388 | -33.583 | 0.574  | -3.149  | 0.0586    | -40.9894 |
| 436 | 0.5 | Extremo 2A | 13.388 | -24.531 | 0.574  | -3.149  | -0.2283   | -26.4609 |
| 436 | 1   | Extremo 1A | 13.388 | -15.479 | 0.574  | -3.149  | -0.5151   | -16.4582 |
| 436 | 0   | Extremo 1A | -7.395 | -34.176 | -0.152 | -3.1582 | -0.0339   | -41.922  |
| 436 | 0.5 | Extremo 1A | -7.395 | -25.124 | -0.152 | -3.1582 | 0.0423    | -27.0971 |
| 436 | 1   | Extremo 2A | -7.395 | -16.072 | -0.152 | -3.1582 | 0.1185    | -16.7981 |
| 437 | 0   | Extremo 2A | 13.791 | -34.297 | 0.557  | -0.6576 | 0.0382    | -23.4037 |
| 437 | 0.5 | Extremo 2A | 13.791 | -25.245 | 0.557  | -0.6576 | -0.2405   | -8.5182  |
| 437 | 1   | Extremo 1A | 13.791 | -16.193 | 0.557  | -0.6576 | -0.5192   | 1.8414   |
| 437 |     |            |        |         |        |         |           |          |



|     |     |            |         |         |        |         |         |          |
|-----|-----|------------|---------|---------|--------|---------|---------|----------|
| 440 | 0   | Extremo 2A | 14.904  | -20.891 | 0.491  | 0.774   | -0.0188 | 16.1572  |
| 440 | 0.5 | Extremo 2A | 14.904  | -11.839 | 0.491  | 0.774   | -0.2642 | 24.3396  |
| 440 | 1   | Extremo 1A | 14.904  | -2.787  | 0.491  | 0.774   | -0.5096 | 27.9961  |
| 440 | 0   | Extremo 1A | -7.796  | -21.538 | -0.136 | 0.8177  | -0.0148 | 16.6892  |
| 440 | 0.5 | Extremo 1A | -7.796  | -12.486 | -0.136 | 0.8177  | 0.0533  | 25.1952  |
| 440 | 1   | Extremo 2A | -7.796  | -3.434  | -0.136 | 0.8177  | 0.1214  | 29.1754  |
| 441 | 0   | Extremo 2A | 15.244  | -16.065 | 0.463  | 0.3989  | -0.0392 | 23.8893  |
| 441 | 0.5 | Extremo 2A | 15.244  | -7.013  | 0.463  | 0.3989  | -0.2707 | 29.6588  |
| 441 | 1   | Extremo 1A | 15.244  | 2.039   | 0.463  | 0.3989  | -0.5021 | 30.9025  |
| 441 | 0   | Extremo 1A | -7.879  | -16.704 | -0.149 | 0.4379  | -0.0185 | 24.7891  |
| 441 | 0.5 | Extremo 1A | -7.879  | -7.653  | -0.149 | 0.4379  | 0.0562  | 30.8784  |
| 441 | 1   | Extremo 2A | -7.879  | 1.399   | -0.149 | 0.4379  | 0.1309  | 32.4418  |
| 442 | 0   | Extremo 2A | 15.566  | -11.285 | 0.429  | -0.0163 | -0.0618 | 29.0723  |
| 442 | 0.5 | Extremo 2A | 15.566  | -2.234  | 0.429  | -0.0163 | -0.2765 | 32.452   |
| 442 | 1   | Extremo 1A | 15.566  | 6.818   | 0.429  | -0.0163 | -0.4911 | 31.3058  |
| 442 | 0   | Extremo 1A | -7.969  | -11.914 | -0.171 | 0.0139  | -0.0262 | 30.3444  |
| 442 | 0.5 | Extremo 1A | -7.969  | -2.862  | -0.171 | 0.0139  | 0.0594  | 34.0384  |
| 442 | 1   | Extremo 2A | -7.969  | 6.19    | -0.171 | 0.0139  | 0.145   | 33.2065  |
| 443 | 0   | Extremo 2A | 15.868  | -6.517  | 0.388  | -0.4275 | -0.0875 | 31.736   |
| 443 | 0.5 | Extremo 2A | 15.868  | 2.534   | 0.388  | -0.4275 | -0.2816 | 32.7318  |
| 443 | 1   | Extremo 1A | 15.868  | 11.586  | 0.388  | -0.4275 | -0.4757 | 29.2017  |
| 443 | 0   | Extremo 1A | -8.073  | -7.129  | -0.203 | -0.412  | -0.0382 | 33.3893  |
| 443 | 0.5 | Extremo 1A | -8.073  | 1.923   | -0.203 | -0.412  | 0.0631  | 34.6907  |
| 443 | 1   | Extremo 2A | -8.073  | 10.975  | -0.203 | -0.412  | 0.1645  | 31.4662  |
| 444 | 0   | Extremo 2A | 16.143  | -1.731  | 0.337  | -0.7958 | -0.1172 | 31.8777  |
| 444 | 0.5 | Extremo 2A | 16.143  | 7.32    | 0.337  | -0.7958 | -0.2857 | 30.4805  |
| 444 | 1   | Extremo 1A | 16.143  | 16.372  | 0.337  | -0.7958 | -0.4542 | 24.5574  |
| 444 | 0   | Extremo 1A | -8.199  | -2.313  | -0.246 | -0.8051 | -0.0554 | 33.9278  |
| 444 | 0.5 | Extremo 1A | -8.199  | 6.738   | -0.246 | -0.8051 | 0.0676  | 32.8216  |
| 444 | 1   | Extremo 2A | -8.199  | 15.79   | -0.246 | -0.8051 | 0.1906  | 27.1895  |
| 445 | 0   | Extremo 2A | 16.386  | 3.075   | 0.273  | -1.0227 | -0.1523 | 29.4305  |
| 445 | 0.5 | Extremo 2A | 16.386  | 12.127  | 0.273  | -1.0227 | -0.2887 | 25.6299  |
| 445 | 1   | Extremo 1A | 16.386  | 21.179  | 0.273  | -1.0227 | -0.4252 | 17.3035  |
| 445 | 0   | Extremo 1A | -8.353  | 2.544   | -0.304 | -1.0742 | -0.079  | 31.9049  |
| 445 | 0.5 | Extremo 1A | -8.353  | 11.595  | -0.304 | -1.0742 | 0.0731  | 28.3702  |
| 445 | 1   | Extremo 2A | -8.353  | 20.647  | -0.304 | -1.0742 | 0.2252  | 20.3095  |
| 446 | 0   | Extremo 2A | 16.588  | 7.761   | 0.192  | -0.8641 | -0.1942 | 24.1303  |
| 446 | 0.5 | Extremo 2A | 16.588  | 16.813  | 0.192  | -0.8641 | -0.2903 | 17.9868  |
| 446 | 1   | Extremo 1A | 16.588  | 25.865  | 0.192  | -0.8641 | -0.3864 | 7.3173   |
| 446 | 0   | Extremo 1A | -8.549  | 7.319   | -0.381 | -0.9851 | -0.1104 | 27.0762  |
| 446 | 0.5 | Extremo 1A | -8.549  | 16.371  | -0.381 | -0.9851 | 0.0801  | 21.1536  |
| 446 | 1   | Extremo 2A | -8.549  | 25.423  | -0.381 | -0.9851 | 0.2705  | 10.7052  |
| 447 | 0   | Extremo 2A | 16.739  | 11.586  | 0.09   | 0.0769  | -0.2448 | 15.209   |
| 447 | 0.5 | Extremo 2A | 16.739  | 20.637  | 0.09   | 0.0769  | -0.2898 | 7.1533   |
| 447 | 1   | Extremo 1A | 16.739  | 29.689  | 0.09   | 0.0769  | -0.3349 | -5.4283  |
| 447 | 0   | Extremo 1A | -8.801  | 11.314  | -0.481 | -0.149  | -0.1515 | 18.7041  |
| 447 | 0.5 | Extremo 1A | -8.801  | 20.365  | -0.481 | -0.149  | 0.0891  | 10.7844  |
| 447 | 1   | Extremo 2A | -8.801  | 29.417  | -0.481 | -0.149  | 0.3297  | -1.6611  |
| 448 | 0   | Extremo 2A | 16.825  | 11.923  | -0.039 | 1.7218  | -0.3044 | -1.2599  |
| 448 | 0.5 | Extremo 2A | 16.825  | 20.974  | -0.039 | 1.7218  | -0.2851 | -6.9644  |
| 448 | 1   | Extremo 1A | 16.825  | 30.026  | -0.039 | 1.7218  | -0.2658 | -19.7146 |
| 448 | 0   | Extremo 1A | -9.127  | 11.996  | -0.609 | 1.3776  | -0.2033 | 5.4038   |
| 448 | 0.5 | Extremo 1A | -9.127  | 21.048  | -0.609 | 1.3776  | 0.1012  | -2.8572  |
| 448 | 1   | Extremo 2A | -9.127  | 30.1    | -0.609 | 1.3776  | 0.4056  | -15.644  |
| 449 | 0   | Extremo 2A | 16.835  | 3.211   | -0.187 | 1.5332  | -0.366  | -16.9169 |
| 449 | 0.5 | Extremo 2A | 16.835  | 12.263  | -0.187 | 1.5332  | -0.2723 | -20.7853 |
| 449 | 1   | Extremo 1A | 16.835  | 21.315  | -0.187 | 1.5332  | -0.1786 | -29.1797 |
| 449 | 0   | Extremo 1A | -9.544  | 3.948   | -0.759 | 1.153   | -0.2636 | -12.1468 |
| 449 | 0.5 | Extremo 1A | -9.544  | 13      | -0.759 | 1.153   | 0.1159  | -16.3838 |
| 449 | 1   | Extremo 2A | -9.544  | 22.052  | -0.759 | 1.153   | 0.4953  | -25.1466 |
| 450 | 0   | Extremo 2A | 16.78   | -10.624 | -0.3   | -3.3309 | -0.4165 | -24.5753 |
| 450 | 0.5 | Extremo 2A | 16.78   | -1.572  | -0.3   | -3.3309 | -0.2664 | -21.5263 |
| 450 | 1   | Extremo 1A | 16.78   | 7.48    | -0.3   | -3.3309 | -0.1163 | -23.0031 |
| 450 | 0   | Extremo 1A | -10.038 | -9.177  | -0.912 | -3.6796 | -0.3339 | -19.7837 |
| 450 | 0.5 | Extremo 1A | -10.038 | -0.126  | -0.912 | -3.6796 | 0.1221  | -17.458  |
| 450 | 1   | Extremo 2A | -10.038 | 8.926   | -0.912 | -3.6796 | 0.5782  | -19.6581 |
| 451 | 0   | Extremo 2A | 16.622  | -22.386 | -0.552 | -2.2088 | -0.5395 | -20.9189 |
| 451 | 0.5 | Extremo 2A | 16.622  | -13.334 | -0.552 | -2.2088 | -0.2635 | -11.9887 |
| 451 | 1   | Extremo 1A | 16.622  | -4.283  | -0.552 | -2.2088 | 0.0126  | -7.5844  |
| 451 | 0   | Extremo 1A | -10.643 | -20.406 | -1.145 | -2.755  | -0.4374 | -16.2577 |
| 451 | 0.5 | Extremo 1A | -10.643 | -11.354 | -1.145 | -2.755  | 0.1349  | -8.3176  |
| 451 | 1   | Extremo 2A | -10.643 | -2.303  | -1.145 | -2.755  | 0.7073  | -4.9033  |

|     |     |            |         |         |         |         |         |          |
|-----|-----|------------|---------|---------|---------|---------|---------|----------|
| 452 | 0   | Extremo 2A | 16.303  | -22.659 | -0.883  | 0.2663  | -0.6897 | -12.4453 |
| 452 | 0.5 | Extremo 2A | 16.303  | -13.607 | -0.883  | 0.2663  | -0.2482 | -3.3789  |
| 452 | 1   | Extremo 1A | 16.303  | -4.555  | -0.883  | 0.2663  | 0.1934  | 1.1617   |
| 452 | 0   | Extremo 1A | -11.381 | -20.483 | -1.444  | -0.4588 | -0.5633 | -7.931   |
| 452 | 0.5 | Extremo 1A | -11.381 | -11.431 | -1.444  | -0.4588 | 0.1588  | 0.0477   |
| 452 | 1   | Extremo 2A | -11.381 | -2.38   | -1.444  | -0.4588 | 0.881   | 3.5005   |
| 453 | 0   | Extremo 2A | 15.775  | -19.21  | -1.304  | 1.4581  | -0.8759 | -5.7219  |
| 453 | 0.5 | Extremo 2A | 15.775  | -10.158 | -1.304  | 1.4581  | -0.2238 | 1.6201   |
| 453 | 1   | Extremo 1A | 15.775  | -1.107  | -1.304  | 1.4581  | 0.4283  | 4.4363   |
| 453 | 0   | Extremo 1A | -12.292 | -16.956 | -1.832  | 0.6415  | -0.7251 | -1.2962  |
| 453 | 0.5 | Extremo 1A | -12.292 | -7.904  | -1.832  | 0.6415  | 0.1908  | 4.9188   |
| 453 | 1   | Extremo 2A | -12.292 | 1.148   | -1.832  | 0.6415  | 1.1067  | 6.608    |
| 454 | 0   | Extremo 2A | 14.977  | -15.047 | -1.845  | 1.6564  | -1.1127 | -1.5411  |
| 454 | 0.5 | Extremo 2A | 14.977  | -5.995  | -1.845  | 1.6564  | -0.1902 | 3.7193   |
| 454 | 1   | Extremo 1A | 14.977  | 3.057   | -1.845  | 1.6564  | 0.7323  | 4.4539   |
| 454 | 0   | Extremo 1A | -13.434 | -12.737 | -2.337  | 0.8226  | -0.9362 | 2.8084   |
| 454 | 0.5 | Extremo 1A | -13.434 | -3.685  | -2.337  | 0.8226  | 0.2325  | 6.914    |
| 454 | 1   | Extremo 2A | -13.434 | 5.366   | -2.337  | 0.8226  | 1.4012  | 6.4937   |
| 455 | 0   | Extremo 2A | 13.832  | -10.779 | -2.539  | 1.4366  | -1.4134 | 0.3912   |
| 455 | 0.5 | Extremo 2A | 13.832  | -1.728  | -2.539  | 1.4366  | -0.1439 | 3.518    |
| 455 | 1   | Extremo 1A | 13.832  | 7.324   | -2.539  | 1.4366  | 1.1256  | 2.1189   |
| 455 | 0   | Extremo 1A | -14.89  | -8.421  | -2.993  | 0.6453  | -1.2064 | 4.5781   |
| 455 | 0.5 | Extremo 1A | -14.89  | 0.631   | -2.993  | 0.6453  | 0.2902  | 6.5256   |
| 455 | 1   | Extremo 2A | -14.89  | 9.683   | -2.993  | 0.6453  | 1.7868  | 3.9473   |
| 456 | 0   | Extremo 2A | 12.251  | -6.305  | -3.404  | 1.1854  | -1.7896 | 0.2741   |
| 456 | 0.5 | Extremo 2A | 12.251  | 2.747   | -3.404  | 1.1854  | -0.0876 | 1.1638   |
| 456 | 1   | Extremo 1A | 12.251  | 11.798  | -3.404  | 1.1854  | 1.6143  | -2.4724  |
| 456 | 0   | Extremo 1A | -16.758 | -4.037  | -3.8    | 0.3986  | -1.5386 | 4.0827   |
| 456 | 0.5 | Extremo 1A | -16.758 | 5.015   | -3.8    | 0.3986  | 0.3615  | 3.8382   |
| 456 | 1   | Extremo 2A | -16.758 | 14.067  | -3.8    | 0.3986  | 2.2617  | -0.9323  |
| 457 | 0   | Extremo 2A | 10.102  | -4.286  | -4.537  | 0.9741  | -2.2808 | -2.6633  |
| 457 | 0.5 | Extremo 2A | 10.102  | 4.765   | -4.537  | 0.9741  | -0.012  | -2.783   |
| 457 | 1   | Extremo 1A | 10.102  | 13.817  | -4.537  | 0.9741  | 2.2567  | -7.4286  |
| 457 | 0   | Extremo 1A | -19.151 | -2.125  | -4.895  | 0.1592  | -2.007  | 0.9812   |
| 457 | 0.5 | Extremo 1A | -19.151 | 6.927   | -4.895  | 0.1592  | 0.4403  | -0.2193  |
| 457 | 1   | Extremo 2A | -19.151 | 15.979  | -4.895  | 0.1592  | 2.8876  | -5.9456  |
| 458 | 0   | Extremo 2A | 7.23    | -2.034  | -5.974  | 0.8934  | -2.8931 | -6.6962  |
| 458 | 0.5 | Extremo 2A | 7.23    | 7.018   | -5.974  | 0.8934  | 0.094   | -7.9423  |
| 458 | 1   | Extremo 1A | 7.23    | 16.07   | -5.974  | 0.8934  | 3.0812  | -13.7142 |
| 458 | 0   | Extremo 1A | -22.25  | 0.084   | -6.299  | 0.083   | -2.602  | -3.1019  |
| 458 | 0.5 | Extremo 1A | -22.25  | 9.136   | -6.299  | 0.083   | 0.5478  | -5.407   |
| 458 | 1   | Extremo 2A | -22.25  | 18.188  | -6.299  | 0.083   | 3.6975  | -12.2379 |
| 459 | 0   | Extremo 2A | 3.428   | 0.125   | -7.816  | 0.643   | -3.6729 | -11.9604 |
| 459 | 0.5 | Extremo 2A | 3.428   | 9.177   | -7.816  | 0.643   | 0.2351  | -14.2861 |
| 459 | 1   | Extremo 1A | 3.428   | 18.229  | -7.816  | 0.643   | 4.1431  | -21.1377 |
| 459 | 0   | Extremo 1A | -26.259 | 2.249   | -8.101  | -0.1335 | -3.359  | -8.406   |
| 459 | 0.5 | Extremo 1A | -26.259 | 11.301  | -8.101  | -0.1335 | 0.6915  | -11.7936 |
| 459 | 1   | Extremo 2A | -26.259 | 20.353  | -8.101  | -0.1335 | 4.7421  | -19.7071 |
| 460 | 0   | Extremo 2A | -1.593  | 1.995   | -10.177 | -0.0374 | -4.6606 | -17.6852 |
| 460 | 0.5 | Extremo 2A | -1.593  | 11.047  | -10.177 | -0.0374 | 0.4278  | -20.9457 |
| 460 | 1   | Extremo 1A | -1.593  | 20.099  | -10.177 | -0.0374 | 5.5162  | -28.732  |
| 460 | 0   | Extremo 1A | -31.458 | 4.152   | -10.407 | -0.7459 | -4.3128 | -14.2629 |
| 460 | 0.5 | Extremo 1A | -31.458 | 13.203  | -10.407 | -0.7459 | 0.8909  | -18.6017 |
| 460 | 1   | Extremo 2A | -31.458 | 22.255  | -10.407 | -0.7459 | 6.0946  | -27.4663 |
| 461 | 0   | Extremo 2A | -8.193  | 4.883   | -13.07  | -0.3243 | -5.878  | -22.0265 |
| 461 | 0.5 | Extremo 2A | -8.193  | 13.935  | -13.07  | -0.3243 | 0.6571  | -26.7312 |
| 461 | 1   | Extremo 1A | -8.193  | 22.987  | -13.07  | -0.3243 | 7.1922  | -35.9617 |
| 461 | 0   | Ext        |         |         |         |         |         |          |



|     |     |            |          |         |          |         |          |           |
|-----|-----|------------|----------|---------|----------|---------|----------|-----------|
| 464 | 0   | Extremo 2A | -43.824  | 9.631   | -28.232  | 0.7269  | -12.3208 | -49.1558  |
| 464 | 0,5 | Extremo 2A | -43.824  | 18.683  | -28.232  | 0.7269  | 1.7952   | -56.2342  |
| 464 | 1   | Extremo 1A | -43.824  | 27.734  | -28.232  | 0.7269  | 15.9112  | -67.8385  |
| 464 | 0   | Extremo 1A | -73.982  | 11.474  | -28.087  | 0.0335  | -11.7927 | -46.2852  |
| 464 | 0,5 | Extremo 1A | -73.982  | 20.526  | -28.087  | 0.0335  | 2.2508   | -54.2853  |
| 464 | 1   | Extremo 2A | -73.982  | 29.578  | -28.087  | 0.0335  | 16.2942  | -66.8112  |
| 465 | 0   | Extremo 2A | -64.514  | 10.2    | -36.353  | 0.4793  | -15.7574 | -68.8857  |
| 465 | 0,5 | Extremo 2A | -64.514  | 19.252  | -36.353  | 0.4793  | 2.4189   | -68.2487  |
| 465 | 1   | Extremo 1A | -64.514  | 28.304  | -36.353  | 0.4793  | 20.5952  | -80.1375  |
| 465 | 0   | Extremo 1A | -94.561  | 12.06   | -36.039  | -0.1967 | -15.1556 | -58.0182  |
| 465 | 0,5 | Extremo 1A | -94.561  | 21.112  | -36.039  | -0.1967 | 2.864    | -66.3111  |
| 465 | 1   | Extremo 2A | -94.561  | 30.163  | -36.039  | -0.1967 | 20.8836  | -79.1299  |
| 466 | 0   | Extremo 2A | -92.745  | 9.392   | -46.735  | -0.7247 | -20.1301 | -71.4966  |
| 466 | 0,5 | Extremo 2A | -92.745  | 18.444  | -46.735  | -0.7247 | 3.2376   | -78.4557  |
| 466 | 1   | Extremo 1A | -92.745  | 27.496  | -46.735  | -0.7247 | 26.6052  | -89.9407  |
| 466 | 0   | Extremo 1A | -122.523 | 11.297  | -46.198  | -1.3687 | -19.4272 | -68.6863  |
| 466 | 0,5 | Extremo 1A | -122.523 | 20.349  | -46.198  | -1.3687 | 3.6716   | -76.5979  |
| 466 | 1   | Extremo 2A | -122.523 | 29.401  | -46.198  | -1.3687 | 26.7704  | -89.0353  |
| 467 | 0   | Extremo 2A | -131.688 | 10.997  | -59.418  | -0.8125 | -25.5321 | -76.0317  |
| 467 | 0,5 | Extremo 2A | -131.688 | 20.049  | -59.418  | -0.8125 | 4.1769   | -83.7932  |
| 467 | 1   | Extremo 1A | -131.688 | 29.101  | -59.418  | -0.8125 | 33.8859  | -96.0807  |
| 467 | 0   | Extremo 1A | -160.976 | 12.842  | -58.584  | -1.468  | -24.6912 | -73.4315  |
| 467 | 0,5 | Extremo 1A | -160.976 | 21.894  | -58.584  | -1.468  | 4.6008   | -82.1156  |
| 467 | 1   | Extremo 2A | -160.976 | 30.946  | -58.584  | -1.468  | 33.8928  | -95.3256  |
| 468 | 0   | Extremo 2A | -185.877 | 13.651  | -75.999  | 0.8929  | -32.8061 | -85.3671  |
| 468 | 0,5 | Extremo 2A | -185.877 | 22.703  | -75.999  | 0.8929  | 5.1935   | -94.4557  |
| 468 | 1   | Extremo 1A | -185.877 | 31.755  | -75.999  | 0.8929  | 43.1931  | -108.0702 |
| 468 | 0   | Extremo 1A | -214.338 | 15.462  | -74.812  | 0.1836  | -31.812  | -82.7897  |
| 468 | 0,5 | Extremo 1A | -214.338 | 24.513  | -74.812  | 0.1836  | 5.5937   | -92.7834  |
| 468 | 1   | Extremo 2A | -214.338 | 33.565  | -74.812  | 0.1836  | 42.9995  | -107.303  |
| 469 | 0   | Extremo 2A | -261.156 | 15.041  | -95.836  | 2.5887  | -41.3112 | -99.4393  |
| 469 | 0,5 | Extremo 2A | -261.156 | 24.093  | -95.836  | 2.5887  | 6.6068   | -109.223  |
| 469 | 1   | Extremo 1A | -261.156 | 33.145  | -95.836  | 2.5887  | 54.5248  | -123.5325 |
| 469 | 0   | Extremo 1A | -288.357 | 16.919  | -94.228  | 1.8066  | -40.1355 | -96.7467  |
| 469 | 0,5 | Extremo 1A | -288.357 | 25.97   | -94.228  | 1.8066  | 6.9787   | -107.4689 |
| 469 | 1   | Extremo 2A | -288.357 | 35.022  | -94.228  | 1.8066  | 54.0928  | -122.717  |
| 470 | 0   | Extremo 2A | -362.303 | 12.654  | -116.245 | 4.4415  | -49.5792 | -117.6381 |
| 470 | 0,5 | Extremo 2A | -362.303 | 21.706  | -116.245 | 4.4415  | 8.5434   | -126.2283 |
| 470 | 1   | Extremo 1A | -362.303 | 30.758  | -116.245 | 4.4415  | 66.666   | -139.3443 |
| 470 | 0   | Extremo 1A | -387.694 | 14.743  | -114.161 | 3.5488  | -48.1884 | -114.7032 |
| 470 | 0,5 | Extremo 1A | -387.694 | 23.795  | -114.161 | 3.5488  | 8.892    | -124.3375 |
| 470 | 1   | Extremo 2A | -387.694 | 32.846  | -114.161 | 3.5488  | 65.9724  | -138.4977 |
| 471 | 0   | Extremo 2A | -484.826 | 1.835   | -125.116 | 5.1344  | -53.8685 | -138.6339 |
| 471 | 0,5 | Extremo 2A | -484.826 | 10.887  | -125.116 | 5.1344  | 8.6895   | -141.8144 |
| 471 | 1   | Extremo 1A | -484.826 | 19.939  | -125.116 | 5.1344  | 71.2474  | -149.5207 |
| 471 | 0   | Extremo 1A | -507.884 | 4.383   | -122.635 | 4.1138  | -52.2445 | -135.3287 |
| 471 | 0,5 | Extremo 1A | -507.884 | 13.435  | -122.635 | 4.1138  | 9.073    | -139.783  |
| 471 | 1   | Extremo 2A | -507.884 | 22.486  | -122.635 | 4.1138  | 70.3906  | -148.7633 |
| 472 | 0   | Extremo 2A | -598.839 | -13.856 | -119.663 | 3.0842  | -59.1994 | -151.7664 |
| 472 | 0,5 | Extremo 2A | -598.839 | -4.804  | -119.663 | 3.0842  | 0.6322   | -147.1014 |
| 472 | 1   | Extremo 1A | -598.839 | 4.248   | -119.663 | 3.0842  | 60.4638  | -146.9622 |
| 472 | 0   | Extremo 1A | -619.495 | -10.654 | -116.675 | 1.9646  | -57.1902 | -148.1365 |
| 472 | 0,5 | Extremo 1A | -619.495 | -1.602  | -116.675 | 1.9646  | 1.1473   | -145.0724 |
| 472 | 1   | Extremo 2A | -619.495 | 7.449   | -116.675 | 1.9646  | 59.4849  | -146.5342 |
| 473 | 0   | Extremo 2A | -711.274 | -32.58  | -129.493 | -0.859  | -72.6613 | -160.8156 |
| 473 | 0,5 | Extremo 2A | -711.274 | -23.528 | -129.493 | -0.859  | -7.9146  | -146.7884 |
| 473 | 1   | Extremo 1A | -711.274 | -14.477 | -129.493 | -0.859  | 56.8321  | -137.2872 |
| 473 | 0   | Extremo 1A | -729.253 | -28.182 | -126.329 | -2.0124 | -70.4967 | -156.8956 |
| 473 | 0,5 | Extremo 1A | -729.253 | -19.13  | -126.329 | -2.0124 | -7.3321  | -145.0678 |
| 473 | 1   | Extremo 2A | -729.253 | -10.078 | -126.329 | -2.0124 | 55.8326  | -137.7658 |
| 474 | 0   | Extremo 2A | -839.078 | -48.924 | -123.915 | -1.162  | -69.7494 | -150.775  |
| 474 | 0,5 | Extremo 2A | -839.078 | -39.872 | -123.915 | -1.162  | -7.792   | -128.5758 |
| 474 | 1   | Extremo 1A | -839.078 | -30.821 | -123.915 | -1.162  | 54.1654  | -110.9026 |
| 474 | 0   | Extremo 1A | -854.24  | -43.875 | -121.045 | -2.4879 | -67.7813 | -147.1981 |
| 474 | 0,5 | Extremo 1A | -854.24  | -34.823 | -121.045 | -2.4879 | -7.2589  | -127.5237 |
| 474 | 1   | Extremo 2A | -854.24  | -25.771 | -121.045 | -2.4879 | 53.2635  | -112.3753 |
| 475 | 0   | Extremo 2A | -948.388 | -53.84  | -105.192 | 1.0235  | -58.3181 | -130.8882 |
| 475 | 0,5 | Extremo 2A | -948.388 | -44.788 | -105.192 | 1.0235  | -5.7222  | -106.2312 |
| 475 | 1   | Extremo 1A | -948.388 | -35.736 | -105.192 | 1.0235  | 46.8737  | -86.1     |
| 475 | 0   | Extremo 1A | -961.231 | -48.496 | -102.817 | -0.4771 | -56.6557 | -127.8122 |
| 475 | 0,5 | Extremo 1A | -961.231 | -39.444 | -102.817 | -0.4771 | -5.2472  | -105.8272 |
| 475 | 1   | Extremo 2A | -961.231 | -30.392 | -102.817 | -0.4771 | 46.1614  | -88.368   |

|     |     |            |           |         |         |        |          |           |
|-----|-----|------------|-----------|---------|---------|--------|----------|-----------|
| 476 | 0   | Extremo 2A | -1033.42  | -53.777 | -86.865 | 3.1765 | -47.6813 | -110.3292 |
| 476 | 0,5 | Extremo 2A | -1033.42  | -44.725 | -86.865 | 3.1765 | -4.2489  | -85.7038  |
| 476 | 1   | Extremo 1A | -1033.42  | -35.673 | -86.865 | 3.1765 | 39.1835  | -65.6043  |
| 476 | 0   | Extremo 1A | -1044.513 | -48.257 | -84.946 | 1.546  | -46.2893 | -107.7311 |
| 476 | 0,5 | Extremo 1A | -1044.513 | -39.206 | -84.946 | 1.546  | -3.8165  | -85.8654  |
| 476 | 1   | Extremo 2A | -1044.513 | -30.154 | -84.946 | 1.546  | 38.6563  | -68.5256  |
| 477 | 0   | Extremo 2A | -1098.496 | -52.69  | -71.401 | 4.9741 | -39.0851 | -92.7528  |
| 477 | 0,5 | Extremo 2A | -1098.496 | -43.638 | -71.401 | 4.9741 | -3.3846  | -68.6708  |
| 477 | 1   | Extremo 1A | -1098.496 | -34.586 | -71.401 | 4.9741 | 32.3159  | -49.1146  |
| 477 | 0   | Extremo 1A | -1108.295 | -46.953 | -69.858 | 3.263  | -37.9135 | -90.5831  |
| 477 | 0,5 | Extremo 1A | -1108.295 | -37.901 | -69.858 | 3.263  | -2.9845  | -69.3697  |
| 477 | 1   | Extremo 2A | -1108.295 | -28.849 | -69.858 | 3.263  | 31.9445  | -52.6821  |
| 478 | 0   | Extremo 2A | -1148.44  | -52.373 | -59.984 | 5.0467 | -32.9916 | -78.8972  |
| 478 | 0,5 | Extremo 2A | -1148.44  | -43.321 | -59.984 | 5.0467 | -2.9999  | -54.9738  |
| 478 | 1   | Extremo 1A | -1148.44  | -34.269 | -59.984 | 5.0467 | 26.9919  | -35.5762  |
| 478 | 0   | Extremo 1A | -1157.275 | -46.322 | -58.72  | 3.2817 | -31.9889 | -77.3207  |
| 478 | 0,5 | Extremo 1A | -1157.275 | -37.27  | -58.72  | 3.2817 | -2.6287  | -56.4226  |
| 478 | 1   | Extremo 2A | -1157.275 | -28.219 | -58.72  | 3.2817 | 26.7315  | -40.0503  |
| 479 | 0   | Extremo 2A | -1189.085 | -53.424 | -50.78  | 4.4272 | -27.5983 | -61.6816  |
| 479 | 0,5 | Extremo 2A | -1189.085 | -44.372 | -50.78  | 4.4272 | -2.2081  | -37.2327  |
| 479 | 1   | Extremo 1A | -1189.085 | -35.32  | -50.78  | 4.4272 | 23.1821  | -17.3096  |
| 479 | 0   | Extremo 1A | -1197.177 | -47.279 | -49.736 | 2.5715 | -26.7307 | -60.7703  |
| 479 | 0,5 | Extremo 1A | -1197.177 | -38.227 | -49.736 | 2.5715 | -1.8626  | -39.3939  |
| 479 | 1   | Extremo 2A | -1197.177 | -29.175 | -49.736 | 2.5715 | 23.0056  | -22.5433  |
| 480 | 0   | Extremo 2A | -1222.669 | -53.379 | -43.474 | 4.6443 | -23.1254 | -42.7564  |
| 480 | 0,5 | Extremo 2A | -1222.669 | -44.327 | -43.474 | 4.6443 | -1.3886  | -18.3299  |
| 480 | 1   | Extremo 1A | -1222.669 | -35.275 | -43.474 | 4.6443 | 20.3481  | 1.5707    |
| 480 | 0   | Extremo 1A | -1230.168 | -47.147 | -42.597 | 2.7146 | -22.3626 | -42.4436  |
| 480 | 0,5 | Extremo 1A | -1230.168 | -38.095 | -42.597 | 2.7146 | -1.0642  | -21.1332  |
| 480 | 1   | Extremo 2A | -1230.168 | -29.043 | -42.597 | 2.7146 | 20.2342  | -4.3486   |
| 481 | 0   | Extremo 2A | -1251.494 | -53.03  | -37.962 | 5.2036 | -19.6481 | -24.3333  |
| 481 | 0,5 | Extremo 2A | -1251.494 | -43.978 | -37.962 | 5.2036 | -0.6672  | -0.0812   |
| 481 | 1   | Extremo 1A | -1251.494 | -34.927 | -37.962 | 5.2036 | 18.3137  | 19.6451   |
| 481 | 0   | Extremo 1A | -1258.506 | -46.669 | -37.21  | 3.2099 | -18.9651 | -24.568   |
| 481 | 0,5 | Extremo 1A | -1258.506 | -37.617 | -37.21  | 3.2099 | -0.36    | -3.4964   |
| 481 | 1   | Extremo 2A | -1258.506 | -28.566 | -37.21  | 3.2099 | 18.245   | 13.0493   |
| 482 | 0   | Extremo 2A | -1277.411 | -53.545 | -33.694 | 5.5627 | -16.9537 | -6.995    |
| 482 | 0,5 | Extremo 2A | -1277.411 | -44.493 | -33.694 | 5.5627 | -0.1069  | 17.5143   |
| 482 | 1   | Extremo 1A | -1277.411 | -35.441 | -33.694 | 5.5627 | 16.74    | 37.4978   |
| 482 | 0   | Extremo 1A | -1284.006 | -46.96  | -33.033 | 3.5261 | -16.3304 | -7.7607   |
| 482 | 0,5 | Extremo 1A | -1284.006 | -37.908 | -33.033 | 3.5261 | 0.1863   | 13.4564   |
| 482 | 1   | Extremo 2A | -1284.006 | -28.857 | -33.033 | 3.5261 | 16.703   | 30.1477   |
| 483 | 0   | Extremo 2A | -1301.145 | -56.141 | -29.931 | 5.0101 | -14.9582 | 10.6611   |
| 483 | 0,5 | Extremo 2A | -1301.145 | -47.09  | -29.931 | 5.0101 | 0.0074   | 36.4689   |
| 483 | 1   | Extremo 1A | -1301.145 | -38.038 | -29.931 | 5.0101 | 14.9731  | 57.7508   |
| 483 | 0   | Extremo 1A | -1307.376 | -49.123 | -29.331 | 3.0002 | -14.3752 | 9.2429    |
| 483 | 0,5 | Extremo 1A | -1307.376 | -40.071 | -29.331 | 3.0002 | 0.2904   | 31.5412   |
| 483 | 1   | Extremo 2A | -1307.376 | -31.019 | -29.331 | 3.0002 | 14.9561  | 49.3136   |
| 484 | 0   | Extremo 2A | -1322.254 | -55.187 | -27.476 | 4.9391 | -14.1968 | 34.344    |
| 484 | 0,5 | Extremo 2A | -1322.254 | -46.135 | -27.476 | 4.9391 | -0.4587  | 59.6744   |
| 484 | 1   | Extremo 1A | -1322.254 | -37.083 | -27.476 | 4.9391 | 13.2794  | 80.4788   |



|     |     |            |           |         |         |         |         |          |
|-----|-----|------------|-----------|---------|---------|---------|---------|----------|
| 488 | 0   | Extremo 2A | -1395.642 | -53.515 | -17.917 | 3.4486  | -8.6364 | 107.7689 |
| 488 | 0,5 | Extremo 2A | -1395.642 | -44.464 | -17.917 | 3.4486  | 0.3223  | 132.2636 |
| 488 | 1   | Extremo 1A | -1395.642 | -35.412 | -17.917 | 3.4486  | 9.2811  | 152.2325 |
| 488 | 0   | Extremo 1A | -1400.249 | -45.266 | -17.168 | 1.2931  | -8.0464 | 100.8428 |
| 488 | 0,5 | Extremo 1A | -1400.249 | -36.214 | -17.168 | 1.2931  | 0.5375  | 121.2127 |
| 488 | 1   | Extremo 2A | -1400.249 | -27.162 | -17.168 | 1.2931  | 9.1214  | 137.0567 |
| 489 | 0   | Extremo 2A | -1408.895 | -50.187 | -15.77  | 2.9636  | -8.1455 | 137.4455 |
| 489 | 0,5 | Extremo 2A | -1408.895 | -41.136 | -15.77  | 2.9636  | -0.2606 | 160.2763 |
| 489 | 1   | Extremo 1A | -1408.895 | -32.084 | -15.77  | 2.9636  | 7.6243  | 178.5812 |
| 489 | 0   | Extremo 1A | -1413.142 | -41.656 | -14.875 | 0.8811  | -7.5054 | 128.234  |
| 489 | 0,5 | Extremo 1A | -1413.142 | -32.604 | -14.875 | 0.8811  | -0.068  | 146.7991 |
| 489 | 1   | Extremo 2A | -1413.142 | -23.553 | -14.875 | 0.8811  | 7.3694  | 160.8383 |
| 490 | 0   | Extremo 2A | -1421.125 | -43.3   | -13.635 | 4.613   | -7.1024 | 159.5364 |
| 490 | 0,5 | Extremo 2A | -1421.125 | -34.249 | -13.635 | 4.613   | -0.2848 | 178.9236 |
| 490 | 1   | Extremo 1A | -1421.125 | -25.197 | -13.635 | 4.613   | 6.5329  | 193.785  |
| 490 | 0   | Extremo 1A | -1424.931 | -35.017 | -12.53  | 2.4788  | -6.3901 | 148.2621 |
| 490 | 0,5 | Extremo 1A | -1424.931 | -25.965 | -12.53  | 2.4788  | -0.1252 | 163.5075 |
| 490 | 1   | Extremo 2A | -1424.931 | -16.913 | -12.53  | 2.4788  | 6.1396  | 174.2269 |
| 491 | 0   | Extremo 2A | -1431.15  | -37.191 | -11.089 | 4.7788  | -5.6348 | 174.7506 |
| 491 | 0,5 | Extremo 2A | -1431.15  | -28.14  | -11.089 | 4.7788  | -0.0903 | 191.0834 |
| 491 | 1   | Extremo 1A | -1431.15  | -19.088 | -11.089 | 4.7788  | 5.4542  | 202.8903 |
| 491 | 0   | Extremo 1A | -1434.335 | -29.178 | -9.673  | 2.9033  | -4.8175 | 161.5952 |
| 491 | 0,5 | Extremo 1A | -1434.335 | -20.126 | -9.673  | 2.9033  | 0.0188  | 173.9212 |
| 491 | 1   | Extremo 2A | -1434.335 | -11.074 | -9.673  | 2.9033  | 4.8552  | 181.7212 |
| 492 | 0   | Extremo 2A | -1438.954 | -31.997 | -8.635  | 3.6997  | -4.1926 | 186.4527 |
| 492 | 0,5 | Extremo 2A | -1438.954 | -22.946 | -8.635  | 3.6997  | 0.1251  | 200.1884 |
| 492 | 1   | Extremo 1A | -1438.954 | -13.894 | -8.635  | 3.6997  | 4.4429  | 209.3982 |
| 492 | 0   | Extremo 1A | -1441.063 | -24.185 | -6.744  | 2.5932  | -3.2245 | 171.0687 |
| 492 | 0,5 | Extremo 1A | -1441.063 | -15.133 | -6.744  | 2.5932  | 0.1476  | 180.8981 |
| 492 | 1   | Extremo 2A | -1441.063 | -6.081  | -6.744  | 2.5932  | 3.5197  | 186.2015 |
| 493 | 0   | Extremo 2A | -1445.474 | -26.619 | -6.516  | 1.5932  | -2.913  | 197.0807 |
| 493 | 0,5 | Extremo 2A | -1445.474 | -17.567 | -6.516  | 1.5932  | 0.345   | 208.1274 |
| 493 | 1   | Extremo 1A | -1445.474 | -8.516  | -6.516  | 1.5932  | 3.6029  | 214.6482 |
| 493 | 0   | Extremo 1A | -1445.314 | -19.61  | -3.938  | 2.0638  | -1.7407 | 177.9792 |
| 493 | 0,5 | Extremo 1A | -1445.314 | -10.559 | -3.938  | 2.0638  | 0.2284  | 185.5215 |
| 493 | 1   | Extremo 2A | -1445.314 | -1.507  | -3.938  | 2.0638  | 2.1975  | 188.5378 |
| 494 | 0   | Extremo 2A | -1452.902 | -11.719 | -4.222  | 0.4623  | -1.9748 | 208.8994 |
| 494 | 0,5 | Extremo 2A | -1452.902 | -2.667  | -4.222  | 0.4623  | 0.1361  | 212.4961 |
| 494 | 1   | Extremo 1A | -1452.902 | 6.384   | -4.222  | 0.4623  | 2.247   | 211.5669 |
| 494 | 0   | Extremo 1A | -1447.343 | -15.223 | -1.255  | 1.4952  | -0.3615 | 182.7616 |
| 494 | 0,5 | Extremo 1A | -1447.343 | -6.171  | -1.255  | 1.4952  | 0.2661  | 188.1101 |
| 494 | 1   | Extremo 2A | -1447.343 | 2.881   | -1.255  | 1.4952  | 0.8937  | 188.9326 |
| 495 | 0   | Extremo 2A | -1458.246 | 3.118   | -1.16   | -0.6702 | -0.6917 | 213.9787 |
| 495 | 0,5 | Extremo 2A | -1458.246 | 12.17   | -1.16   | -0.6702 | -0.1116 | 210.1568 |
| 495 | 1   | Extremo 1A | -1458.246 | 21.221  | -1.16   | -0.6702 | 0.4684  | 201.809  |
| 495 | 0   | Extremo 1A | -1447.302 | -10.882 | 1.381   | 0.9198  | 0.9556  | 185.571  |
| 495 | 0,5 | Extremo 1A | -1447.302 | -1.83   | 1.381   | 0.9198  | 0.2651  | 188.749  |
| 495 | 1   | Extremo 2A | -1447.302 | 7.222   | 1.381   | 0.9198  | -0.4254 | 187.401  |
| 496 | 0   | Extremo 2A | -1458.361 | 8.287   | 2.249   | -2.819  | 1.1113  | 210.7469 |
| 496 | 0,5 | Extremo 2A | -1458.361 | 17.338  | 2.249   | -2.819  | -0.0131 | 204.3406 |
| 496 | 1   | Extremo 1A | -1458.361 | 26.39   | 2.249   | -2.819  | -1.1375 | 193.4085 |
| 496 | 0   | Extremo 1A | -1445.188 | -6.465  | 4.065   | 0.3364  | 2.2581  | 186.4704 |
| 496 | 0,5 | Extremo 1A | -1445.188 | 2.587   | 4.065   | 0.3364  | 0.2254  | 187.4398 |
| 496 | 1   | Extremo 2A | -1445.188 | 11.639  | 4.065   | 0.3364  | -1.8073 | 183.8833 |
| 497 | 0   | Extremo 2A | -1455.03  | 13.022  | 5.573   | -4.1441 | 2.7757  | 206.4858 |
| 497 | 0,5 | Extremo 2A | -1455.03  | 22.074  | 5.573   | -4.1441 | -0.0107 | 197.7117 |
| 497 | 1   | Extremo 1A | -1455.03  | 31.126  | 5.573   | -4.1441 | -2.7971 | 184.4118 |
| 497 | 0   | Extremo 1A | -1440.853 | -1.826  | 6.874   | -0.2216 | 3.5797  | 185.4486 |
| 497 | 0,5 | Extremo 1A | -1440.853 | 7.226   | 6.874   | -0.2216 | 0.1426  | 184.0985 |
| 497 | 1   | Extremo 2A | -1440.853 | 16.278  | 6.874   | -0.2216 | -3.2946 | 178.2225 |
| 498 | 0   | Extremo 2A | -1448.733 | 18.213  | 8.858   | -4.7978 | 4.3354  | 200.595  |
| 498 | 0,5 | Extremo 2A | -1448.733 | 27.265  | 8.858   | -4.7978 | -0.0934 | 189.2254 |
| 498 | 1   | Extremo 1A | -1448.733 | 36.317  | 8.858   | -4.7978 | -4.5223 | 173.3299 |
| 498 | 0   | Extremo 1A | -1434.039 | 3.283   | 9.807   | -0.5662 | 4.9153  | 182.3005 |
| 498 | 0,5 | Extremo 1A | -1434.039 | 12.335  | 9.807   | -0.5662 | 0.0116  | 178.3961 |
| 498 | 1   | Extremo 2A | -1434.039 | 21.387  | 9.807   | -0.5662 | -4.8921 | 169.9658 |
| 499 | 0   | Extremo 2A | -1439.541 | 24.266  | 11.971  | -4.4585 | 5.7763  | 191.7949 |
| 499 | 0,5 | Extremo 2A | -1439.541 | 33.318  | 11.971  | -4.4585 | -0.209  | 177.3989 |
| 499 | 1   | Extremo 1A | -1439.541 | 42.37   | 11.971  | -4.4585 | -6.1943 | 158.477  |
| 499 | 0   | Extremo 1A | -1424.546 | 9.323   | 12.671  | -0.1561 | 6.2006  | 176.1206 |
| 499 | 0,5 | Extremo 1A | -1424.546 | 18.374  | 12.671  | -0.1561 | -0.1349 | 169.1963 |
| 499 | 1   | Extremo 2A | -1424.546 | 27.426  | 12.671  | -0.1561 | -6.4704 | 157.7462 |

|     |     |            |           |        |        |         |          |          |
|-----|-----|------------|-----------|--------|--------|---------|----------|----------|
| 500 | 0   | Extremo 2A | -1427.851 | 31.104 | 14.503 | -2.7454 | 7.1212   | 176.8238 |
| 500 | 0,5 | Extremo 2A | -1427.851 | 40.156 | 14.503 | -2.7454 | -0.1303  | 159.0087 |
| 500 | 1   | Extremo 1A | -1427.851 | 49.208 | 14.503 | -2.7454 | -7.3818  | 136.6677 |
| 500 | 0   | Extremo 1A | -1412.663 | 16.292 | 15.025 | 1.481   | 7.4316   | 163.8811 |
| 500 | 0,5 | Extremo 1A | -1412.663 | 25.343 | 15.025 | 1.481   | -0.0807  | 153.4723 |
| 500 | 1   | Extremo 2A | -1412.663 | 34.395 | 15.025 | 1.481   | -7.593   | 138.5377 |
| 501 | 0   | Extremo 2A | -1415.001 | 34.452 | 16.944 | -3.1895 | 8.9689   | 150.7391 |
| 501 | 0,5 | Extremo 2A | -1415.001 | 43.504 | 16.944 | -3.1895 | 0.497    | 131.2503 |
| 501 | 1   | Extremo 1A | -1415.001 | 52.555 | 16.944 | -3.1895 | -7.975   | 107.2356 |
| 501 | 0   | Extremo 1A | -1399.673 | 20.308 | 17.325 | 1.0354  | 9.1844   | 140.7875 |
| 501 | 0,5 | Extremo 1A | -1399.673 | 29.359 | 17.325 | 1.0354  | 0.5218   | 128.3708 |
| 501 | 1   | Extremo 2A | -1399.673 | 38.411 | 17.325 | 1.0354  | -8.1408  | 111.4282 |
| 502 | 0   | Extremo 2A | -1399.405 | 32.088 | 19.864 | -5.5554 | 10.5111  | 129.5363 |
| 502 | 0,5 | Extremo 2A | -1399.405 | 41.14  | 19.864 | -5.5554 | 0.5793   | 111.2293 |
| 502 | 1   | Extremo 1A | -1399.405 | 50.192 | 19.864 | -5.5554 | -9.3525  | 88.3964  |
| 502 | 0   | Extremo 1A | -1383.994 | 18.481 | 20.135 | -1.3713 | 10.6583  | 121.7597 |
| 502 | 0,5 | Extremo 1A | -1383.994 | 27.533 | 20.135 | -1.3713 | 0.591    | 110.2562 |
| 502 | 1   | Extremo 2A | -1383.994 | 36.585 | 20.135 | -1.3713 | -9.4763  | 94.2268  |
| 503 | 0   | Extremo 2A | -1382.02  | 31.871 | 22.39  | -6.1548 | 11.4867  | 113.3139 |
| 503 | 0,5 | Extremo 2A | -1382.02  | 40.923 | 22.39  | -6.1548 | 0.2915   | 95.1152  |
| 503 | 1   | Extremo 1A | -1382.02  | 49.975 | 22.39  | -6.1548 | -10.9036 | 72.3907  |
| 503 | 0   | Extremo 1A | -1366.559 | 18.594 | 22.582 | -2.0907 | 11.5873  | 107.4576 |
| 503 | 0,5 | Extremo 1A | -1366.559 | 27.646 | 22.582 | -2.0907 | 0.2963   | 95.8976  |
| 503 | 1   | Extremo 2A | -1366.559 | 36.698 | 22.582 | -2.0907 | -10.9947 | 79.8117  |
| 504 | 0   | Extremo 2A | -1363.055 | 33.559 | 24.828 | -5.6721 | 12.3491  | 97.5528  |
| 504 | 0,5 | Extremo 2A | -1363.055 | 42.611 | 24.828 | -5.6721 | -0.0648  | 78.5104  |
| 504 | 1   | Extremo 1A | -1363.055 | 51.662 | 24.828 | -5.6721 | -12.4788 | 54.9422  |
| 504 | 0   | Extremo 1A | -1347.569 | 20.619 | 24.96  | -1.7248 | 12.4145  | 93.5885  |
| 504 | 0,5 | Extremo 1A | -1347.569 | 29.67  | 24.96  | -1.7248 | -0.0654  | 81.0162  |
| 504 | 1   | Extremo 2A | -1347.569 | 38.722 | 24.96  | -1.7248 | -12.5452 | 63.918   |
| 505 | 0   | Extremo 2A | -1342.578 | 36.187 | 27.062 | -4.6641 | 13.3222  | 79.4177  |
| 505 | 0,5 | Extremo 2A | -1342.578 | 45.239 | 27.062 | -4.6641 | -0.209   | 59.0611  |
| 505 | 1   | Extremo 1A | -1342.578 | 54.291 | 27.062 | -4.6641 | -13.7402 | 34.1786  |
| 505 | 0   | Extremo 1A | -1327.084 | 23.726 | 27.149 | -0.7846 | 13.3576  | 77.2641  |
| 505 | 0,5 | Extremo 1A | -1327.084 | 32.777 | 27.149 | -0.7846 | -0.2172  | 63.1383  |
| 505 | 1   | Extremo 2A | -1327.084 | 41.829 | 27.149 | -0.7846 | -13.7919 | 44.4867  |
| 506 | 0   | Extremo 2A | -1321.634 | 37.192 | 29.587 | -4.7407 | 15.0689  | 56.8484  |
| 506 | 0,5 | Extremo 2A | -1321.634 | 46.244 | 29.587 | -4.7407 | 0.2754   | 35.9894  |
| 506 | 1   | Extremo 1A | -1321.634 | 55.295 | 29.587 | -4.7407 | -14.518  | 10.6046  |
| 506 | 0   | Extremo 1A | -1306.135 | 25.506 | 29.628 | -0.9285 | 15.0682  | 56.1522  |
| 506 | 0,5 | Extremo 1A | -1306.135 | 34.558 | 29.628 | -0.9285 | 0.254    | 41.136   |
| 506 | 1   | Extremo 2A | -1306.135 | 43.61  | 29.628 | -0.9285 | -14.5601 | 21.594   |
| 507 | 0   | Extremo 2A | -1298.038 | 34.64  | 33.39  | -5.2926 | 16.8645  | 36.682   |
| 507 | 0,5 | Extremo 2A | -1298.038 | 43.691 | 33.39  | -5.2926 | 0.1695   | 17.0992  |
| 507 | 1   | Extremo 1A | -1298.038 | 52.743 | 33.39  | -5.2926 | -16.5255 | -7.0094  |
| 507 | 0   | Extremo 1A | -1282.554 | 23.206 | 33.389 | -1.701  | 16.8386  | 37.0346  |
| 507 | 0,5 | Extremo 1A | -1282.554 | 32.258 | 33.389 | -1.701  | 0.1441   | 23.1688  |
| 507 | 1   | Extremo 2A | -1282.554 | 41.309 | 33.389 | -1.701  | -16.5504 | 4.7771   |
| 508 | 0   | Extremo 2A | -1272.256 | 34.147 | 37.678 | -4.9396 | 18.4538  | 18.885   |
| 508 | 0,5 | Extremo 2A | -1272.256 | 43.199 | 37.678 | -4.9396 | -0.3851  | -0.4516  |
| 508 | 1   | Extremo 1A | -1272.256 | 52.251 | 37.678 | -4.9396 | -19.2241 | -24.314  |
| 508 | 0   |            |           |        |        |         |          |          |



|     |     |            |           |         |         |         |          |           |
|-----|-----|------------|-----------|---------|---------|---------|----------|-----------|
| 512 | 0   | Extremo 2A | -1119.782 | 33.883  | 71.126  | -4.757  | 32.4965  | -49.6047  |
| 512 | 0.5 | Extremo 2A | -1119.782 | 42.935  | 71.126  | -4.757  | -3.0662  | -68.8091  |
| 512 | 1   | Extremo 1A | -1119.782 | 51.986  | 71.126  | -4.757  | -38.629  | -92.5394  |
| 512 | 0   | Extremo 1A | -1104.319 | 24.174  | 70.796  | -1.6164 | 32.3214  | -43.4909  |
| 512 | 0.5 | Extremo 1A | -1104.319 | 33.226  | 70.796  | -1.6164 | -3.0765  | -57.841   |
| 512 | 1   | Extremo 2A | -1104.319 | 42.278  | 70.796  | -1.6164 | -38.4745 | -76.717   |
| 513 | 0   | Extremo 2A | -1054.841 | 35.009  | 86.565  | -2.9793 | 39.3614  | -66.0209  |
| 513 | 0.5 | Extremo 2A | -1054.841 | 44.061  | 86.565  | -2.9793 | -3.9213  | -85.7884  |
| 513 | 1   | Extremo 1A | -1054.841 | 53.113  | 86.565  | -2.9793 | -47.2039 | -110.0818 |
| 513 | 0   | Extremo 1A | -1039.461 | 25.174  | 86.04   | -0.2364 | 39.1138  | -59.2935  |
| 513 | 0.5 | Extremo 1A | -1039.461 | 34.226  | 86.04   | -0.2364 | -3.9063  | -74.1433  |
| 513 | 1   | Extremo 2A | -1039.461 | 43.277  | 86.04   | -0.2364 | -46.9264 | -93.5191  |
| 514 | 0   | Extremo 2A | -969.968  | 35.122  | 104.853 | -0.8587 | 47.0407  | -86.4277  |
| 514 | 0.5 | Extremo 2A | -969.968  | 44.174  | 104.853 | -0.8587 | -5.3858  | -106.2516 |
| 514 | 1   | Extremo 1A | -969.968  | 53.225  | 104.853 | -0.8587 | -57.8122 | -130.6014 |
| 514 | 0   | Extremo 1A | -954.973  | 24.988  | 103.998 | 1.332   | 46.6909  | -78.441   |
| 514 | 0.5 | Extremo 1A | -954.973  | 34.04   | 103.998 | 1.332   | -5.3083  | -93.1981  |
| 514 | 1   | Extremo 2A | -954.973  | 43.092  | 103.998 | 1.332   | -57.3074 | -112.481  |
| 515 | 0   | Extremo 2A | -860.854  | 30.304  | 123.516 | 1.287   | 54.3142  | -111.1045 |
| 515 | 0.5 | Extremo 2A | -860.854  | 39.356  | 123.516 | 1.287   | -7.4436  | -128.5195 |
| 515 | 1   | Extremo 1A | -860.854  | 48.408  | 123.516 | 1.287   | -69.2014 | -150.4604 |
| 515 | 0   | Extremo 1A | -847.243  | 20.046  | 122.138 | 2.4019  | 53.8232  | -100.6682 |
| 515 | 0.5 | Extremo 1A | -847.243  | 29.098  | 122.138 | 2.4019  | -7.2456  | -112.9543 |
| 515 | 1   | Extremo 2A | -847.243  | 38.15   | 122.138 | 2.4019  | -68.3144 | -129.7663 |
| 516 | 0   | Extremo 2A | -733.317  | 14.147  | 128.994 | 0.9554  | 56.9663  | -137.3461 |
| 516 | 0.5 | Extremo 2A | -733.317  | 23.199  | 128.994 | 0.9554  | -7.5305  | -146.6825 |
| 516 | 1   | Extremo 1A | -733.317  | 32.25   | 128.994 | 0.9554  | -72.0273 | -160.5447 |
| 516 | 0   | Extremo 1A | -724.053  | 12.333  | 127.41  | 2.0945  | 56.1196  | -121.4971 |
| 516 | 0.5 | Extremo 1A | -724.053  | 21.384  | 127.41  | 2.0945  | -7.5855  | -129.9263 |
| 516 | 1   | Extremo 2A | -724.053  | 30.436  | 127.41  | 2.0945  | -71.2907 | -142.8814 |
| 517 | 0   | Extremo 2A | -621.239  | -4.38   | 119.207 | -3.0116 | 60.6952  | -146.9932 |
| 517 | 0.5 | Extremo 2A | -621.239  | 4.671   | 119.207 | -3.0116 | 1.0918   | -147.066  |
| 517 | 1   | Extremo 1A | -621.239  | 13.723  | 119.207 | -3.0116 | -58.5117 | -151.6646 |
| 517 | 0   | Extremo 1A | -616.216  | 1.063   | 118.104 | -2.0772 | 59.808   | -130.4724 |
| 517 | 0.5 | Extremo 1A | -616.216  | 10.115  | 118.104 | -2.0772 | 0.7558   | -133.2669 |
| 517 | 1   | Extremo 2A | -616.216  | 19.167  | 118.104 | -2.0772 | -58.2965 | -140.5872 |
| 518 | 0   | Extremo 2A | -507.334  | -19.973 | 125.178 | -5.1631 | 71.7549  | -149.5474 |
| 518 | 0.5 | Extremo 2A | -507.334  | -10.921 | 125.178 | -5.1631 | 9.1658   | -141.8241 |
| 518 | 1   | Extremo 1A | -507.334  | -1.869  | 125.178 | -5.1631 | -53.4234 | -138.6266 |
| 518 | 0   | Extremo 1A | -503.58   | -16.075 | 124.261 | -5.5275 | 71.0803  | -136.0169 |
| 518 | 0.5 | Extremo 1A | -503.58   | -7.024  | 124.261 | -5.5275 | 8.9496   | -130.2421 |
| 518 | 1   | Extremo 2A | -503.58   | 2.028   | 124.261 | -5.5275 | -53.1811 | -128.9933 |
| 519 | 0   | Extremo 2A | -384.694  | -30.838 | 116.479 | -4.5408 | 67.2219  | -139.2507 |
| 519 | 0.5 | Extremo 2A | -384.694  | -21.786 | 116.479 | -4.5408 | 8.9824   | -126.0948 |
| 519 | 1   | Extremo 1A | -384.694  | -12.734 | 116.479 | -4.5408 | -49.2571 | -117.4648 |
| 519 | 0   | Extremo 1A | -381.281  | -27.638 | 115.831 | -5.2045 | 66.7832  | -126.8975 |
| 519 | 0.5 | Extremo 1A | -381.281  | -18.587 | 115.831 | -5.2045 | 8.8677   | -115.3412 |
| 519 | 1   | Extremo 2A | -381.281  | -9.535  | 115.831 | -5.2045 | -49.0478 | -108.3108 |
| 520 | 0   | Extremo 2A | -283.357  | -33.242 | 96.108  | -2.7137 | 55.0821  | -123.2156 |
| 520 | 0.5 | Extremo 2A | -283.357  | -24.19  | 96.108  | -2.7137 | 7.0283   | -108.8576 |
| 520 | 1   | Extremo 1A | -283.357  | -15.138 | 96.108  | -2.7137 | -41.0255 | -99.0255  |
| 520 | 0   | Extremo 1A | -280.017  | -30.244 | 95.647  | -3.4165 | 54.7783  | -111.5517 |
| 520 | 0.5 | Extremo 1A | -280.017  | -21.192 | 95.647  | -3.4165 | 6.955    | -98.6926  |
| 520 | 1   | Extremo 2A | -280.017  | -12.141 | 95.647  | -3.4165 | -40.8684 | -90.3594  |
| 521 | 0   | Extremo 2A | -207.873  | -31.874 | 76.275  | -1.0332 | 43.7489  | -107.4946 |
| 521 | 0.5 | Extremo 2A | -207.873  | -22.822 | 76.275  | -1.0332 | 5.6115   | -93.8206  |
| 521 | 1   | Extremo 1A | -207.873  | -13.77  | 76.275  | -1.0332 | -32.526  | -84.6724  |
| 521 | 0   | Extremo 1A | -204.562  | -29.064 | 75.924  | -1.7994 | 43.5153  | -96.3852  |
| 521 | 0.5 | Extremo 1A | -204.562  | -20.013 | 75.924  | -1.7994 | 5.5533   | -84.1159  |
| 521 | 1   | Extremo 2A | -204.562  | -10.961 | 75.924  | -1.7994 | -32.4087 | -76.3725  |
| 522 | 0   | Extremo 2A | -153.481  | -29.27  | 59.697  | 0.6471  | 34.4437  | -95.2008  |
| 522 | 0.5 | Extremo 2A | -153.481  | -20.218 | 59.697  | 0.6471  | 4.5951   | -82.8288  |
| 522 | 1   | Extremo 1A | -153.481  | -11.166 | 59.697  | 0.6471  | -25.2534 | -74.9828  |
| 522 | 0   | Extremo 1A | -150.218  | -26.722 | 59.406  | -0.2824 | 34.2464  | -84.3112  |
| 522 | 0.5 | Extremo 1A | -150.218  | -17.67  | 59.406  | -0.2824 | 4.5433   | -73.2131  |
| 522 | 1   | Extremo 2A | -150.218  | -8.619  | 59.406  | -0.2824 | -25.1599 | -66.6408  |
| 523 | 0   | Extremo 2A | -114.324  | -27.672 | 47.035  | 0.5517  | 27.167   | -88.6386  |
| 523 | 0.5 | Extremo 2A | -114.324  | -18.62  | 47.035  | 0.5517  | 3.6495   | -77.0655  |
| 523 | 1   | Extremo 1A | -114.324  | -9.568  | 47.035  | 0.5517  | -19.868  | -70.0183  |
| 523 | 0   | Extremo 1A | -111.144  | -24.956 | 46.772  | -0.3773 | 26.9893  | -77.2307  |
| 523 | 0.5 | Extremo 1A | -111.144  | -15.904 | 46.772  | -0.3773 | 3.6035   | -67.0158  |
| 523 | 1   | Extremo 2A | -111.144  | -6.852  | 46.772  | -0.3773 | -19.7823 | -61.3268  |

|     |     |            |         |         |        |         |          |          |
|-----|-----|------------|---------|---------|--------|---------|----------|----------|
| 524 | 0   | Extremo 2A | -85.877 | -28.47  | 36.662 | -0.6356 | 21.1573  | -78.4551 |
| 524 | 0.5 | Extremo 2A | -85.877 | -19.419 | 36.662 | -0.6356 | 2.8265   | -66.4829 |
| 524 | 1   | Extremo 1A | -85.877 | -10.367 | 36.662 | -0.6356 | -15.5043 | -59.0365 |
| 524 | 0   | Extremo 1A | -82.804 | -25.388 | 36.42  | -1.444  | 20.9954  | -67.1155 |
| 524 | 0.5 | Extremo 1A | -82.804 | -16.336 | 36.42  | -1.444  | 2.7852   | -56.6843 |
| 524 | 1   | Extremo 2A | -82.804 | -7.285  | 36.42  | -1.444  | -15.4249 | -50.779  |
| 525 | 0   | Extremo 2A | -64.966 | -27.916 | 28.546 | -0.8701 | 16.4731  | -65.8158 |
| 525 | 0.5 | Extremo 2A | -64.966 | -18.864 | 28.546 | -0.8701 | 2.2003   | -54.121  |
| 525 | 1   | Extremo 1A | -64.966 | -9.812  | 28.546 | -0.8701 | -12.0725 | -46.952  |
| 525 | 0   | Extremo 1A | -62.014 | -24.645 | 28.32  | -1.6575 | 16.3222  | -54.9688 |
| 525 | 0.5 | Extremo 1A | -62.014 | -15.594 | 28.32  | -1.6575 | 2.1623   | -44.9091 |
| 525 | 1   | Extremo 2A | -62.014 | -6.542  | 28.32  | -1.6575 | -11.9977 | -39.3752 |
| 526 | 0   | Extremo 2A | -49.365 | -26.469 | 22.226 | -0.648  | 12.824   | -53.297  |
| 526 | 0.5 | Extremo 2A | -49.365 | -17.417 | 22.226 | -0.648  | 1.7111   | -42.3254 |
| 526 | 1   | Extremo 1A | -49.365 | -8.366  | 22.226 | -0.648  | -9.4018  | -35.8797 |
| 526 | 0   | Extremo 1A | -46.542 | -23.157 | 22.011 | -1.47   | 12.6812  | -43.0758 |
| 526 | 0.5 | Extremo 1A | -46.542 | -14.105 | 22.011 | -1.47   | 1.6756   | -33.7604 |
| 526 | 1   | Extremo 2A | -46.542 | -5.053  | 22.011 | -1.47   | -9.3299  | -28.9708 |
| 527 | 0   | Extremo 2A | -37.6   | -24.774 | 17.272 | -0.2546 | 9.9677   | -42.0538 |
| 527 | 0.5 | Extremo 2A | -37.6   | -15.722 | 17.272 | -0.2546 | 1.3318   | -31.9297 |
| 527 | 1   | Extremo 1A | -37.6   | -6.671  | 17.272 | -0.2546 | -7.3042  | -26.3314 |
| 527 | 0   | Extremo 1A | -34.907 | -21.55  | 17.064 | -1.1726 | 9.8304   | -32.4192 |
| 527 | 0.5 | Extremo 1A | -34.907 | -12.498 | 17.064 | -1.1726 | 1.2983   | -23.9072 |
| 527 | 1   | Extremo 2A | -34.907 | -3.446  | 17.064 | -1.1726 | -7.2339  | -19.921  |
| 528 | 0   | Extremo 2A | -28.692 | -23.513 | 13.388 | 0.0986  | 7.7511   | -32.7634 |
| 528 | 0.5 | Extremo 2A | -28.692 | -14.461 | 13.388 | 0.0986  | 1.0573   | -23.2698 |
| 528 | 1   | Extremo 1A | -28.692 | -5.41   | 13.388 | 0.0986  | -5.6365  | -18.3021 |
| 528 | 0   | Extremo 1A | -26.131 | -20.43  | 13.18  | -1.0006 | 7.6159   | -23.3889 |
| 528 | 0.5 | Extremo 1A | -26.131 | -11.378 | 13.18  | -1.0006 | 1.0257   | -15.4368 |
| 528 | 1   | Extremo 2A | -26.131 | -2.327  | 13.18  | -1.0006 | -5.5645  | -12.0106 |
| 529 | 0   | Extremo 2A | -21.87  | -20.647 | 10.524 | -0.1915 | 6.0801   | -24.6383 |
| 529 | 0.5 | Extremo 2A | -21.87  | -11.595 | 10.524 | -0.1915 | 0.8181   | -16.5779 |
| 529 | 1   | Extremo 1A | -21.87  | -2.543  | 10.524 | -0.1915 | -4.4439  | -13.0435 |
| 529 | 0   | Extremo 1A | -19.447 | -17.314 | 10.308 | -1.2944 | 5.9448   | -14.9196 |
| 529 | 0.5 | Extremo 1A | -19.447 | -8.262  | 10.308 | -1.2944 | 0.791    | -8.5257  |
| 529 | 1   | Extremo 2A | -19.447 | 0.79    | 10.308 | -1.2944 | -4.3628  | -6.6577  |
| 530 | 0   | Extremo 2A | -16.62  | -18.703 | 8.184  | -0.8041 | 4.7101   | -16.3482 |
| 530 | 0.5 | Extremo 2A | -16.62  | -9.651  | 8.184  | -0.8041 | 0.618    | -9.2598  |
| 530 | 1   | Extremo 1A | -16.62  | -0.599  | 8.184  | -0.8041 | -3.4742  | -6.6973  |
| 530 | 0   | Extremo 1A | -14.338 | -15.004 | 7.964  | -1.8014 | 4.5776   | -6.8949  |
| 530 | 0.5 | Extremo 1A | -14.338 | -5.952  | 7.964  | -1.8014 | 0.5955   | -1.6559  |
| 530 | 1   | Extremo 2A | -14.338 | 3.1     | 7.964  | -1.8014 | -3.3866  | -0.9427  |
| 531 | 0   | Extremo 2A | -12.576 | -16.537 | 6.364  | -1.0412 | 3.6538   | -8.3862  |
| 531 | 0.5 | Extremo 2A | -12.576 | -7.485  | 6.364  | -1.0412 | 0.472    | -2.3809  |
| 531 | 1   | Extremo 1A | -12.576 | 1.567   | 6.364  | -1.0412 | -2.7098  | -0.9015  |
| 531 | 0   | Extremo 1A | -10.436 | -12.625 | 6.137  | -2.0413 | 3.5219   | -0.4047  |
| 531 | 0.5 | Extremo 1A | -10.436 | -3.573  | 6.137  | -2.0413 | 0.4532   | 4.4544   |
| 531 | 1   | Extremo 2A | -10.436 | 5.478   | 6.137  | -2.0413 | -2.6155  | 3.9782   |
| 532 | 0   | Extremo 2A | -9.447  | -14.371 | 4.951  | -1.1825 | 2.8377   | -1.5576  |
| 532 | 0.5 | Extremo 2A | -9.447  | -5.319  | 4.951  | -1.1825 | 0.3623   | 3.3648   |
| 532 | 1   | Extremo 1A | -9.447  | 3.733   | 4.951  | -1.1825 | -2.1132  | 3.7613   |
| 532 | 0   | Extremo 1A | -7.455  | -10.368 | 4.714  | -2.2642 | 2.7036   | 6.4828   |
| 532 | 0.5 | Extremo 1A | -7.455  | -1.317  | 4.714  | -2.2642 | 0.3467   |          |



|     |     |            |        |         |          |         |           |          |
|-----|-----|------------|--------|---------|----------|---------|-----------|----------|
| 536 | 0   | Extremo 2A | -2.521 | 0.549   | 1.939    | -1.8857 | 1.0791    | 14.0176  |
| 536 | 0.5 | Extremo 2A | -2.521 | 9.601   | 1.939    | -1.8857 | 0.1095    | 11.4801  |
| 536 | 1   | Extremo 1A | -2.521 | 18.653  | 1.939    | -1.8857 | -0.8602   | 4.4167   |
| 536 | 0   | Extremo 1A | -1.321 | 5.225   | 1.574    | -2.8413 | 0.9078    | 19.0215  |
| 536 | 0.5 | Extremo 1A | -1.321 | 14.277  | 1.574    | -2.8413 | 0.1207    | 14.1461  |
| 536 | 1   | Extremo 2A | -1.321 | 23.329  | 1.574    | -2.8413 | -0.6664   | 4.7447   |
| 537 | 0   | Extremo 2A | -1.623 | 3.247   | 1.578    | -1.4456 | 0.8554    | 11.2595  |
| 537 | 0.5 | Extremo 2A | -1.623 | 12.299  | 1.578    | -1.4456 | 0.0663    | 7.3731   |
| 537 | 1   | Extremo 1A | -1.623 | 21.35   | 1.578    | -1.4456 | -0.7227   | -1.0391  |
| 537 | 0   | Extremo 1A | -0.728 | 7.665   | 1.169    | -2.1682 | 0.6768    | 14.7279  |
| 537 | 0.5 | Extremo 1A | -0.728 | 16.716  | 1.169    | -2.1682 | 0.0923    | 8.6326   |
| 537 | 1   | Extremo 2A | -0.728 | 25.768  | 1.169    | -2.1682 | -0.4921   | -1.9885  |
| 538 | 0   | Extremo 2A | -0.932 | 1.693   | 1.295    | -1.6212 | 0.6626    | 4.7622   |
| 538 | 0.5 | Extremo 2A | -0.932 | 10.745  | 1.295    | -1.6212 | 0.0151    | 1.6526   |
| 538 | 1   | Extremo 1A | -0.932 | 19.797  | 1.295    | -1.6212 | -0.6324   | -5.9829  |
| 538 | 0   | Extremo 1A | -0.389 | 5.011   | 0.885    | -2.1304 | 0.5069    | 6.303    |
| 538 | 0.5 | Extremo 1A | -0.389 | 14.063  | 0.885    | -2.1304 | 0.0643    | 1.5344   |
| 538 | 1   | Extremo 2A | -0.389 | 23.115  | 0.885    | -2.1304 | -0.3783   | -7.7601  |
| 539 | 0   | Extremo 2A | -0.378 | -3.969  | 1.055    | -4.0242 | 0.4426    | -0.321   |
| 539 | 0.5 | Extremo 2A | -0.378 | 5.083   | 1.055    | -4.0242 | -0.085    | -0.5996  |
| 539 | 1   | Extremo 1A | -0.378 | 14.135  | 1.055    | -4.0242 | -0.6126   | -5.4042  |
| 539 | 0   | Extremo 1A | -0.136 | -2.679  | 0.822    | -4.6369 | 0.3728    | -0.229   |
| 539 | 0.5 | Extremo 1A | -0.136 | 6.373   | 0.822    | -4.6369 | -0.0384   | -1.1524  |
| 539 | 1   | Extremo 2A | -0.136 | 15.425  | 0.822    | -4.6369 | -0.4496   | -6.6018  |
| 540 | 0   | Extremo 2A | 0.061  | -13.804 | -0.062   | -2.742  | -0.0346   | -3.712   |
| 540 | 0.5 | Extremo 2A | 0.061  | -4.752  | -0.062   | -2.742  | -0.0038   | 0.9272   |
| 540 | 1   | Extremo 1A | 0.061  | 4.299   | -0.062   | -2.742  | 0.027     | 1.0405   |
| 540 | 0   | Extremo 1A | -0.169 | -13.804 | 0.168    | -2.742  | 0.1053    | -3.7118  |
| 540 | 0.5 | Extremo 1A | -0.169 | -4.752  | 0.168    | -2.742  | 0.0211    | 0.9272   |
| 540 | 1   | Extremo 2A | -0.169 | 4.3     | 0.168    | -2.742  | -0.0631   | 1.0403   |
| 541 | 0   | Extremo 2A | 0.109  | -13.744 | -0.029   | -0.3744 | -0.0174   | -1.388   |
| 541 | 0.5 | Extremo 2A | 0.109  | -4.692  | -0.029   | -0.3744 | -0.0029   | 3.2208   |
| 541 | 1   | Extremo 1A | 0.109  | 4.36    | -0.029   | -0.3744 | 0.0115    | 3.3038   |
| 541 | 0   | Extremo 1A | -0.337 | -13.743 | 0.171    | -0.3745 | 0.1064    | -1.388   |
| 541 | 0.5 | Extremo 1A | -0.337 | -4.691  | 0.171    | -0.3745 | 0.0208    | 3.2205   |
| 541 | 1   | Extremo 2A | -0.337 | 4.361   | 0.171    | -0.3745 | -0.0648   | 3.3031   |
| 542 | 0   | Extremo 2A | 0.14   | -12.989 | -0.016   | 0.3793  | -0.0128   | 2.6709   |
| 542 | 0.5 | Extremo 2A | 0.14   | -3.937  | -0.016   | 0.3793  | -0.005    | 6.9023   |
| 542 | 1   | Extremo 1A | 0.14   | 5.115   | -0.016   | 0.3793  | 0.0027    | 6.6077   |
| 542 | 0   | Extremo 1A | -0.497 | -12.987 | 0.154    | 0.3792  | 0.0941    | 2.6704   |
| 542 | 0.5 | Extremo 1A | -0.497 | -3.936  | 0.154    | 0.3792  | 0.0171    | 6.9012   |
| 542 | 1   | Extremo 2A | -0.497 | 5.116   | 0.154    | 0.3792  | -0.06     | 6.6061   |
| 543 | 0   | Extremo 2A | 0.157  | -10.252 | -0.00602 | 0.217   | -0.0081   | 6.2608   |
| 543 | 0.5 | Extremo 2A | 0.157  | -1.2    | -0.00602 | 0.217   | -0.0051   | 9.1237   |
| 543 | 1   | Extremo 1A | 0.157  | 7.852   | -0.00602 | 0.217   | -0.002    | 7.4607   |
| 543 | 0   | Extremo 1A | -0.622 | -10.251 | 0.128    | 0.217   | 0.0763    | 6.2596   |
| 543 | 0.5 | Extremo 1A | -0.622 | -1.199  | 0.128    | 0.217   | 0.0122    | 9.1219   |
| 543 | 1   | Extremo 2A | -0.622 | 7.853   | 0.128    | 0.217   | -0.052    | 7.4584   |
| 544 | 0   | Extremo 2A | 0.161  | -6.676  | 0.001098 | -0.0297 | -0.0039   | 7.8654   |
| 544 | 0.5 | Extremo 2A | 0.161  | 2.376   | 0.001098 | -0.0297 | -0.0045   | 8.9404   |
| 544 | 1   | Extremo 1A | 0.161  | 11.428  | 0.001098 | -0.0297 | -0.005    | 5.4895   |
| 544 | 0   | Extremo 1A | -0.713 | -6.675  | 0.106    | -0.0297 | 0.0614    | 7.8635   |
| 544 | 0.5 | Extremo 1A | -0.713 | 2.377   | 0.106    | -0.0297 | 0.0082    | 8.9379   |
| 544 | 1   | Extremo 2A | -0.713 | 11.429  | 0.106    | -0.0297 | -0.045    | 5.4864   |
| 545 | 0   | Extremo 2A | 0.159  | -2.873  | 0.004985 | -0.281  | -0.0015   | 7.0884   |
| 545 | 0.5 | Extremo 2A | 0.159  | 6.179   | 0.004985 | -0.281  | -0.0039   | 6.2617   |
| 545 | 1   | Extremo 1A | 0.159  | 15.231  | 0.004985 | -0.281  | -0.0064   | 0.9092   |
| 545 | 0   | Extremo 1A | -0.783 | -2.871  | 0.093    | -0.281  | 0.0515    | 7.0858   |
| 545 | 0.5 | Extremo 1A | -0.783 | 6.18    | 0.093    | -0.281  | 0.0051    | 6.2586   |
| 545 | 1   | Extremo 2A | -0.783 | 15.232  | 0.093    | -0.281  | -0.0414   | 0.9054   |
| 546 | 0   | Extremo 2A | 0.154  | 0.839   | 0.005505 | -0.7702 | -0.000623 | 3.7133   |
| 546 | 0.5 | Extremo 2A | 0.154  | 9.891   | 0.005505 | -0.7702 | -0.0034   | 1.0307   |
| 546 | 1   | Extremo 1A | 0.154  | 18.943  | 0.005505 | -0.7702 | -0.0061   | -6.1778  |
| 546 | 0   | Extremo 1A | -0.847 | 0.841   | 0.088    | -0.7703 | 0.0464    | 3.71     |
| 546 | 0.5 | Extremo 1A | -0.847 | 9.892   | 0.088    | -0.7703 | 0.0022    | 1.0268   |
| 546 | 1   | Extremo 2A | -0.847 | 18.944  | 0.088    | -0.7703 | -0.042    | -6.1823  |
| 547 | 0   | Extremo 2A | 0.153  | 3.731   | 0.003182 | -1.8264 | -0.000816 | -2.8223  |
| 547 | 0.5 | Extremo 2A | 0.153  | 12.783  | 0.003182 | -1.8264 | -0.0024   | -6.9509  |
| 547 | 1   | Extremo 1A | 0.153  | 21.835  | 0.003182 | -1.8264 | -0.004    | -15.6053 |
| 547 | 0   | Extremo 1A | -0.917 | 3.732   | 0.092    | -1.8266 | 0.0451    | -2.8264  |
| 547 | 0.5 | Extremo 1A | -0.917 | 12.784  | 0.092    | -1.8266 | -0.000654 | -6.9555  |
| 547 | 1   | Extremo 2A | -0.917 | 21.836  | 0.092    | -1.8266 | -0.0464   | -15.6105 |

|     |     |            |        |         |           |         |           |          |
|-----|-----|------------|--------|---------|-----------|---------|-----------|----------|
| 548 | 0   | Extremo 2A | 0.158  | 3.541   | 0.0007126 | -3.2623 | 0.0002475 | -13.4918 |
| 548 | 0.5 | Extremo 2A | 0.158  | 12.593  | 0.0007126 | -3.2623 | -0.000109 | -17.5251 |
| 548 | 1   | Extremo 1A | 0.158  | 21.644  | 0.0007126 | -3.2623 | -0.000465 | -26.0843 |
| 548 | 0   | Extremo 1A | -1.006 | 3.542   | 0.098     | -3.2626 | 0.0452    | -13.4969 |
| 548 | 0.5 | Extremo 1A | -1.006 | 12.593  | 0.098     | -3.2626 | -0.0036   | -17.5306 |
| 548 | 1   | Extremo 2A | -1.006 | 21.645  | 0.098     | -3.2626 | -0.0524   | -26.0902 |
| 549 | 0   | Extremo 2A | 0.166  | -4.141  | 0.011     | -2.6286 | 0.009     | -27.2655 |
| 549 | 0.5 | Extremo 2A | 0.166  | 4.911   | 0.011     | -2.6286 | 0.0036    | -27.4579 |
| 549 | 1   | Extremo 1A | 0.166  | 13.962  | 0.011     | -2.6286 | -0.0019   | -32.1762 |
| 549 | 0   | Extremo 1A | -1.109 | -4.141  | 0.094     | -2.6288 | 0.0437    | -27.2716 |
| 549 | 0.5 | Extremo 1A | -1.109 | 4.91    | 0.094     | -2.6288 | -0.0032   | -27.4639 |
| 549 | 1   | Extremo 2A | -1.109 | 13.962  | 0.094     | -2.6288 | -0.05     | -32.1821 |
| 550 | 0   | Extremo 2A | 0.149  | -16.58  | 0.064     | 3.4065  | 0.0298    | -32.1354 |
| 550 | 0.5 | Extremo 2A | 0.149  | -7.528  | 0.064     | 3.4065  | -0.0021   | -26.1084 |
| 550 | 1   | Extremo 1A | 0.149  | 1.524   | 0.064     | 3.4065  | -0.0339   | -24.6073 |
| 550 | 0   | Extremo 1A | -1.193 | -16.581 | 0.074     | 3.4067  | 0.0467    | -32.1417 |
| 550 | 0.5 | Extremo 1A | -1.193 | -7.53   | 0.074     | 3.4067  | 0.0098    | -26.1139 |
| 550 | 1   | Extremo 2A | -1.193 | 1.522   | 0.074     | 3.4067  | -0.0271   | -24.612  |
| 551 | 0   | Extremo 2A | 0.114  | -24.296 | 0.077     | 4.0171  | 0.0292    | -23.3658 |
| 551 | 0.5 | Extremo 2A | 0.114  | -15.244 | 0.077     | 4.0171  | -0.0092   | -13.4807 |
| 551 | 1   | Extremo 1A | 0.114  | -6.193  | 0.077     | 4.0171  | -0.0477   | -8.1215  |
| 551 | 0   | Extremo 1A | -1.279 | -24.299 | 0.061     | 4.0173  | 0.0443    | -23.3709 |
| 551 | 0.5 | Extremo 1A | -1.279 | -15.247 | 0.061     | 4.0173  | 0.0137    | -13.4845 |
| 551 | 1   | Extremo 2A | -1.279 | -6.195  | 0.061     | 4.0173  | -0.017    | -8.124   |
| 552 | 0   | Extremo 2A | 0.069  | -24.563 | 0.083     | 2.532   | 0.0295    | -10.243  |
| 552 | 0.5 | Extremo 2A | 0.069  | -15.512 | 0.083     | 2.532   | -0.0122   | -0.2243  |
| 552 | 1   | Extremo 1A | 0.069  | -6.46   | 0.083     | 2.532   | -0.0538   | 5.2686   |
| 552 | 0   | Extremo 1A | -1.341 | -24.566 | 0.043     | 2.5322  | 0.0343    | -10.2464 |
| 552 | 0.5 | Extremo 1A | -1.341 | -15.515 | 0.043     | 2.5322  | 0.0128    | -0.2262  |
| 552 | 1   | Extremo 2A | -1.341 | -6.463  | 0.043     | 2.5322  | -0.0088   | 5.2681   |
| 553 | 0   | Extremo 2A | 0.014  | -21.806 | 0.088     | 1.3986  | 0.0305    | 1.7784   |
| 553 | 0.5 | Extremo 2A | 0.014  | -12.754 | 0.088     | 1.3986  | -0.0136   | 10.4185  |
| 553 | 1   | Extremo 1A | 0.014  | -3.703  | 0.088     | 1.3986  | -0.0577   | 14.5327  |
| 553 | 0   | Extremo 1A | -1.377 | -21.809 | 0.026     | 1.3987  | 0.0245    | 1.7769   |
| 553 | 0.5 | Extremo 1A | -1.377 | -12.757 | 0.026     | 1.3987  | 0.0115    | 10.4185  |
| 553 | 1   | Extremo 2A | -1.377 | -3.706  | 0.026     | 1.3987  | -0.0015   | 14.5342  |
| 554 | 0   | Extremo 2A | -0.048 | -18.3   | 0.092     | 0.8134  | 0.0311    | 11.4007  |
| 554 | 0.5 | Extremo 2A | -0.048 | -9.248  | 0.092     | 0.8134  | -0.0148   | 18.2878  |
| 554 | 1   | Extremo 1A | -0.048 | -0.197  | 0.092     | 0.8134  | -0.0607   | 20.649   |
| 554 | 0   | Extremo 1A | -1.393 | -18.303 | 0.013     | 0.8134  | 0.0169    | 11.401   |
| 554 | 0.5 | Extremo 1A | -1.393 | -9.251  | 0.013     | 0.8134  | 0.0105    | 18.2896  |
| 554 | 1   | Extremo 2A | -1.393 | -0.2    | 0.013     | 0.8134  | 0.0041    | 20.6523  |
| 555 | 0   | Extremo 2A | -0.113 | -14.748 | 0.094     | 0.4836  | 0.0311    | 18.4904  |
| 555 | 0.5 | Extremo 2A | -0.113 | -5.696  | 0.094     | 0.4836  | -0.016    | 23.6014  |
| 555 | 1   | Extremo 1A | -0.113 | 3.356   | 0.094     | 0.4836  | -0.0631   | 24.1865  |
| 555 | 0   | Extremo 1A | -1.397 | -14.751 | 0.003742  | 0.4836  | 0.0117    | 18.4925  |
| 555 | 0.5 | Extremo 1A | -1.397 | -5.699  | 0.003742  | 0.4836  | 0.0098    | 23.605   |
| 555 | 1   | Extremo 2A | -1.397 | 3.353   | 0.003742  | 0.4836  | 0.0079    | 24.1916  |
| 556 | 0   | Extremo 2A | -0.181 | -11.277 | 0.095     | 0.2234  | 0.0304    | 23.09    |
| 556 | 0.5 | Extremo 2A | -0.181 | -2.226  | 0.095     | 0.2234  | -0.0173   | 26.4658  |
| 556 | 1   | Extremo 1A | -0.181 | 6.826   | 0.095     | 0.2234  | -0.0649   | 25.3157  |
| 556 | 0   | Extremo 1A | -1.392 | -11.28  | -0.001635 | 0.2234  | 0.0085    | 23.0939  |
| 556 | 0.5 | Extremo 1A | -1.392 | -2.229  | -0.001635 | 0.2234  | 0.0093    | 26.4712  |
| 556 | 1   | Extremo 2A | -1.392 | 6.823   | -0.001635 | 0.2234  | 0.0101    | 25.3226  |
| 557 | 0   | Extremo 2A | -0.251 | -7.859  | 0.095     | -0.0269 | 0.0291    | 25.2423  |
| 557 | 0.5 | Extremo 2A | -0.251 | 1.193   | 0.095     | -0.0269 | -0.0185   | 26.9088  |
| 557 | 1   | Extremo 1A | -0.251 | 10.245  | 0.095     | -0.0269 | -0.0661   | 24.0493  |
| 557 | 0   | Extremo 1A | -1.384 | -7.     |           |         |           |          |



|     |     |            |        |         |           |         |         |          |
|-----|-----|------------|--------|---------|-----------|---------|---------|----------|
| 560 | 0   | Extremo 2A | -0.451 | 2.683   | 0.087     | -0.839  | 0.0217  | 17.3142  |
| 560 | 0.5 | Extremo 2A | -0.451 | 11.735  | 0.087     | -0.839  | -0.0219 | 13.7096  |
| 560 | 1   | Extremo 1A | -0.451 | 20.787  | 0.087     | -0.839  | -0.0656 | 5.5791   |
| 560 | 0   | Extremo 1A | -1.372 | 2.68    | 0.009771  | -0.839  | 0.0123  | 17.3253  |
| 560 | 0.5 | Extremo 1A | -1.372 | 11.732  | 0.009771  | -0.839  | 0.0074  | 13.7222  |
| 560 | 1   | Extremo 2A | -1.372 | 20.784  | 0.009771  | -0.839  | 0.0025  | 5.5933   |
| 561 | 0   | Extremo 2A | -0.51  | 6.248   | 0.082     | -1.4475 | 0.0181  | 9.6972   |
| 561 | 0.5 | Extremo 2A | -0.51  | 15.3    | 0.082     | -1.4475 | -0.0227 | 4.3101   |
| 561 | 1   | Extremo 1A | -0.51  | 24.352  | 0.082     | -1.4475 | -0.0636 | -5.6027  |
| 561 | 0   | Extremo 1A | -1.386 | 6.245   | 0.022     | -1.4474 | 0.0172  | 9.7101   |
| 561 | 0.5 | Extremo 1A | -1.386 | 15.297  | 0.022     | -1.4474 | 0.0064  | 4.3246   |
| 561 | 1   | Extremo 2A | -1.386 | 24.349  | 0.022     | -1.4474 | -0.0044 | -5.5867  |
| 562 | 0   | Extremo 2A | -0.562 | 8.958   | 0.075     | -2.6838 | 0.0144  | -1.1602  |
| 562 | 0.5 | Extremo 2A | -0.562 | 18.01   | 0.075     | -2.6838 | -0.0229 | -7.902   |
| 562 | 1   | Extremo 1A | -0.562 | 27.061  | 0.075     | -2.6838 | -0.0602 | -19.1697 |
| 562 | 0   | Extremo 1A | -1.42  | 8.955   | 0.037     | -2.6833 | 0.0235  | -1.1451  |
| 562 | 0.5 | Extremo 1A | -1.42  | 18.007  | 0.037     | -2.6833 | 0.005   | -7.8855  |
| 562 | 1   | Extremo 2A | -1.42  | 27.059  | 0.037     | -2.6833 | -0.0134 | -19.1518 |
| 563 | 0   | Extremo 2A | -0.604 | 8.183   | 0.069     | -4.3229 | 0.0134  | -16.3858 |
| 563 | 0.5 | Extremo 2A | -0.604 | 17.234  | 0.069     | -4.3229 | -0.0211 | -22.7401 |
| 563 | 1   | Extremo 1A | -0.604 | 26.286  | 0.069     | -4.3229 | -0.0555 | -33.6202 |
| 563 | 0   | Extremo 1A | -1.479 | 8.181   | 0.052     | -4.322  | 0.0295  | -16.3681 |
| 563 | 0.5 | Extremo 1A | -1.479 | 17.233  | 0.052     | -4.322  | 0.0035  | -22.7215 |
| 563 | 1   | Extremo 2A | -1.479 | 26.284  | 0.052     | -4.322  | -0.0226 | -33.6008 |
| 564 | 0   | Extremo 2A | -0.643 | -1.193  | 0.08      | -3.5426 | 0.0232  | -34.7921 |
| 564 | 0.5 | Extremo 2A | -0.643 | 7.858   | 0.08      | -3.5426 | -0.0168 | -36.4583 |
| 564 | 1   | Extremo 1A | -0.643 | 16.91   | 0.08      | -3.5426 | -0.0568 | -42.6504 |
| 564 | 0   | Extremo 1A | -1.558 | -1.192  | 0.056     | -3.5419 | 0.0335  | -34.7714 |
| 564 | 0.5 | Extremo 1A | -1.558 | 7.86    | 0.056     | -3.5419 | 0.0054  | -36.4384 |
| 564 | 1   | Extremo 2A | -1.558 | 16.912  | 0.056     | -3.5419 | -0.0227 | -42.6313 |
| 565 | 0   | Extremo 2A | -0.713 | -16.034 | 0.149     | 3.495   | 0.0507  | -42.5119 |
| 565 | 0.5 | Extremo 2A | -0.713 | -6.983  | 0.149     | 3.495   | -0.0237 | -36.7576 |
| 565 | 1   | Extremo 1A | -0.713 | 2.069   | 0.149     | 3.495   | -0.098  | -35.5292 |
| 565 | 0   | Extremo 1A | -1.624 | -16.028 | 0.048     | 3.4941  | 0.0429  | -42.4914 |
| 565 | 0.5 | Extremo 1A | -1.624 | -6.977  | 0.048     | 3.4941  | 0.0191  | -36.7401 |
| 565 | 1   | Extremo 2A | -1.624 | 2.075   | 0.048     | 3.4941  | -0.0048 | -35.5148 |
| 566 | 0   | Extremo 2A | -0.806 | -25.41  | 0.164     | 4.2755  | 0.0482  | -34.0801 |
| 566 | 0.5 | Extremo 2A | -0.806 | -16.358 | 0.164     | 4.2755  | -0.0338 | -23.638  |
| 566 | 1   | Extremo 1A | -0.806 | -7.307  | 0.164     | 4.2755  | -0.1158 | -17.7217 |
| 566 | 0   | Extremo 1A | -1.696 | -25.401 | 0.04      | 4.2746  | 0.0429  | -34.0641 |
| 566 | 0.5 | Extremo 1A | -1.696 | -16.349 | 0.04      | 4.2746  | 0.0228  | -23.6266 |
| 566 | 1   | Extremo 2A | -1.696 | -7.297  | 0.04      | 4.2746  | 0.0027  | -17.715  |
| 567 | 0   | Extremo 2A | -0.911 | -26.185 | 0.169     | 2.637   | 0.0458  | -20.2277 |
| 567 | 0.5 | Extremo 2A | -0.911 | -17.133 | 0.169     | 2.637   | -0.0388 | -9.3983  |
| 567 | 1   | Extremo 1A | -0.911 | -8.081  | 0.169     | 2.637   | -0.1233 | -3.0949  |
| 567 | 0   | Extremo 1A | -1.747 | -26.174 | 0.025     | 2.6365  | 0.0345  | -20.2179 |
| 567 | 0.5 | Extremo 1A | -1.747 | -17.122 | 0.025     | 2.6365  | 0.022   | -9.3938  |
| 567 | 1   | Extremo 2A | -1.747 | -8.071  | 0.025     | 2.6365  | 0.0096  | -3.0956  |
| 568 | 0   | Extremo 2A | -1.025 | -23.473 | 0.173     | 1.4019  | 0.0448  | -7.2581  |
| 568 | 0.5 | Extremo 2A | -1.025 | -14.422 | 0.173     | 1.4019  | -0.0417 | 2.2157   |
| 568 | 1   | Extremo 1A | -1.025 | -5.37   | 0.173     | 1.4019  | -0.1282 | 7.1636   |
| 568 | 0   | Extremo 1A | -1.773 | -23.463 | 0.009735  | 1.4017  | 0.0259  | -7.2549  |
| 568 | 0.5 | Extremo 1A | -1.773 | -14.411 | 0.009735  | 1.4017  | 0.021   | 2.2135   |
| 568 | 1   | Extremo 2A | -1.773 | -5.359  | 0.009735  | 1.4017  | 0.0161  | 7.156    |
| 569 | 0   | Extremo 2A | -1.144 | -19.906 | 0.176     | 0.7954  | 0.0436  | 3.3276   |
| 569 | 0.5 | Extremo 2A | -1.144 | -10.854 | 0.176     | 0.7954  | -0.0442 | 11.0177  |
| 569 | 1   | Extremo 1A | -1.144 | -1.803  | 0.176     | 0.7954  | -0.132  | 14.1819  |
| 569 | 0   | Extremo 1A | -1.779 | -19.895 | -0.002014 | 0.7953  | 0.0193  | 3.3241   |
| 569 | 0.5 | Extremo 1A | -1.779 | -10.844 | -0.002014 | 0.7953  | 0.0203  | 11.0088  |
| 569 | 1   | Extremo 2A | -1.779 | -1.792  | -0.002014 | 0.7953  | 0.0213  | 14.1676  |
| 570 | 0   | Extremo 2A | -1.268 | -16.293 | 0.177     | 0.479   | 0.0419  | 11.3732  |
| 570 | 0.5 | Extremo 2A | -1.268 | -7.241  | 0.177     | 0.479   | -0.0467 | 17.2566  |
| 570 | 1   | Extremo 1A | -1.268 | 1.811   | 0.177     | 0.479   | -0.1353 | 18.6141  |
| 570 | 0   | Extremo 1A | -1.773 | -16.282 | -0.01     | 0.4789  | 0.0148  | 11.363   |
| 570 | 0.5 | Extremo 1A | -1.773 | -7.23   | -0.01     | 0.4789  | 0.0198  | 17.2411  |
| 570 | 1   | Extremo 2A | -1.773 | 1.821   | -0.01     | 0.4789  | 0.0248  | 18.5933  |
| 571 | 0   | Extremo 2A | -1.394 | -12.781 | 0.178     | 0.2375  | 0.0397  | 16.9249  |
| 571 | 0.5 | Extremo 2A | -1.394 | -3.73   | 0.178     | 0.2375  | -0.0492 | 21.0527  |
| 571 | 1   | Extremo 1A | -1.394 | 5.322   | 0.178     | 0.2375  | -0.138  | 20.6546  |
| 571 | 0   | Extremo 1A | -1.76  | -12.771 | -0.015    | 0.2374  | 0.0123  | 16.9082  |
| 571 | 0.5 | Extremo 1A | -1.76  | -3.719  | -0.015    | 0.2374  | 0.0195  | 21.0306  |
| 571 | 1   | Extremo 2A | -1.76  | 5.333   | -0.015    | 0.2374  | 0.0268  | 20.6271  |

|     |     |            |        |         |           |         |         |          |
|-----|-----|------------|--------|---------|-----------|---------|---------|----------|
| 572 | 0   | Extremo 2A | -1.52  | -9.339  | 0.177     | 0.0015  | 0.0369  | 20.0283  |
| 572 | 0.5 | Extremo 2A | -1.52  | -0.288  | 0.177     | 0.0015  | -0.0516 | 22.435   |
| 572 | 1   | Extremo 1A | -1.52  | 8.764   | 0.177     | 0.0015  | -0.1402 | 20.3159  |
| 572 | 0   | Extremo 1A | -1.744 | -9.329  | -0.016    | 0.0015  | 0.0113  | 20.005   |
| 572 | 0.5 | Extremo 1A | -1.744 | -0.277  | -0.016    | 0.0015  | 0.0193  | 22.4064  |
| 572 | 1   | Extremo 2A | -1.744 | 8.775   | -0.016    | 0.0015  | 0.0273  | 20.2819  |
| 573 | 0   | Extremo 2A | -1.646 | -5.899  | 0.175     | -0.2348 | 0.0336  | 20.7199  |
| 573 | 0.5 | Extremo 2A | -1.646 | 3.153   | 0.175     | -0.2348 | -0.0541 | 21.4064  |
| 573 | 1   | Extremo 1A | -1.646 | 12.205  | 0.175     | -0.2348 | -0.1418 | 17.5671  |
| 573 | 0   | Extremo 1A | -1.727 | -5.888  | -0.014    | -0.2348 | 0.0119  | 20.6902  |
| 573 | 0.5 | Extremo 1A | -1.727 | 3.164   | -0.014    | -0.2348 | 0.0191  | 21.3712  |
| 573 | 1   | Extremo 2A | -1.727 | 12.215  | -0.014    | -0.2348 | 0.0264  | 17.5264  |
| 574 | 0   | Extremo 2A | -1.77  | -2.392  | 0.172     | -0.4766 | 0.0298  | 19.031   |
| 574 | 0.5 | Extremo 2A | -1.77  | 6.66    | 0.172     | -0.4766 | -0.0564 | 17.9641  |
| 574 | 1   | Extremo 1A | -1.77  | 15.711  | 0.172     | -0.4766 | -0.1427 | 12.3714  |
| 574 | 0   | Extremo 1A | -1.714 | -2.381  | -0.009746 | -0.4766 | 0.014   | 18.9947  |
| 574 | 0.5 | Extremo 1A | -1.714 | 6.671   | -0.009746 | -0.4766 | 0.0188  | 17.9223  |
| 574 | 1   | Extremo 2A | -1.714 | 15.722  | -0.009746 | -0.4766 | 0.0237  | 12.3241  |
| 575 | 0   | Extremo 2A | -1.891 | 1.214   | 0.168     | -0.7903 | 0.0254  | 14.9501  |
| 575 | 0.5 | Extremo 2A | -1.891 | 10.266  | 0.168     | -0.7903 | -0.0587 | 12.08    |
| 575 | 1   | Extremo 1A | -1.891 | 19.318  | 0.168     | -0.7903 | -0.1427 | 4.684    |
| 575 | 0   | Extremo 1A | -1.708 | 1.226   | -0.001593 | -0.7904 | 0.0176  | 14.9073  |
| 575 | 0.5 | Extremo 1A | -1.708 | 10.277  | -0.001593 | -0.7904 | 0.0184  | 12.0316  |
| 575 | 1   | Extremo 2A | -1.708 | 19.329  | -0.001593 | -0.7904 | 0.0192  | 4.6301   |
| 576 | 0   | Extremo 2A | -2.007 | 4.779   | 0.162     | -1.3837 | 0.0204  | 8.2907   |
| 576 | 0.5 | Extremo 2A | -2.007 | 13.831  | 0.162     | -1.3837 | -0.0606 | 3.6383   |
| 576 | 1   | Extremo 1A | -2.007 | 22.883  | 0.162     | -1.3837 | -0.1416 | -5.5401  |
| 576 | 0   | Extremo 1A | -1.715 | 4.79    | 0.01      | -1.3842 | 0.0228  | 8.2411   |
| 576 | 0.5 | Extremo 1A | -1.715 | 13.842  | 0.01      | -1.3842 | 0.0176  | 3.5831   |
| 576 | 1   | Extremo 2A | -1.715 | 22.894  | 0.01      | -1.3842 | 0.0125  | -5.6008  |
| 577 | 0   | Extremo 2A | -2.115 | 7.518   | 0.154     | -2.5843 | 0.0154  | -1.58    |
| 577 | 0.5 | Extremo 2A | -2.115 | 16.569  | 0.154     | -2.5843 | -0.0618 | -7.6017  |
| 577 | 1   | Extremo 1A | -2.115 | 25.621  | 0.154     | -2.5843 | -0.1389 | -18.1493 |
| 577 | 0   | Extremo 1A | -1.741 | 7.528   | 0.026     | -2.5859 | 0.0293  | -1.6372  |
| 577 | 0.5 | Extremo 1A | -1.741 | 16.58   | 0.026     | -2.5859 | 0.0165  | -7.6641  |
| 577 | 1   | Extremo 2A | -1.741 | 25.631  | 0.026     | -2.5859 | 0.0036  | -18.2168 |
| 578 | 0   | Extremo 2A | -2.214 | 6.88    | 0.148     | -4.1734 | 0.0138  | -15.7546 |
| 578 | 0.5 | Extremo 2A | -2.214 | 15.932  | 0.148     | -4.1734 | -0.0605 | -21.4577 |
| 578 | 1   | Extremo 1A | -2.214 | 24.984  | 0.148     | -4.1734 | -0.1347 | -31.6867 |
| 578 | 0   | Extremo 1A | -1.792 | 6.886   | 0.041     | -4.1766 | 0.0358  | -15.8216 |
| 578 | 0.5 | Extremo 1A | -1.792 | 15.938  | 0.041     | -4.1766 | 0.0153  | -21.5276 |
| 578 | 1   | Extremo 2A | -1.792 | 24.99   | 0.041     | -4.1766 | -0.0052 | -31.7596 |
| 579 | 0   | Extremo 2A | -2.31  | -2.097  | 0.163     | -3.4131 | 0.0255  | -33.0801 |
| 579 | 0.5 | Extremo 2A | -2.31  | 6.955   | 0.163     | -3.4131 | -0.0558 | -34.2947 |
| 579 | 1   | Extremo 1A | -2.31  | 16.007  | 0.163     | -3.4131 | -0.1372 | -40.0351 |
| 579 | 0   | Extremo 1A | -1.864 | -2.103  | 0.047     | -3.4159 | 0.0414  | -33.1577 |
| 579 | 0.5 | Extremo 1A | -1.864 | 6.949   | 0.047     | -3.4159 | 0.0181  | -34.3692 |
| 579 | 1   | Extremo 2A | -1.864 | 16.001  | 0.047     | -3.4159 | -0.0052 | -40.1066 |
| 580 | 0   | Extremo 2A | -2.443 | -16.374 | 0.248     | 3.419   | 0.06    | -40.1031 |
| 580 | 0.5 | Extremo 2A | -2.443 | -7.322  | 0.248     | 3.419   | -0.064  | -34.179  |
| 580 | 1   | Extremo 1A | -2.443 | 1.729   | 0.248     | 3.419   | -0.1881 | -32.7807 |
| 580 | 0   | Extremo 1A | -1.926 | -16.397 | 0.045     | 3.4222  | 0.0544  | -40.1801 |
| 580 | 0.5 | Extremo 1A | -1.926 | -7.346  | 0.045     | 3.4222  | 0.0318  | -34.2443 |
| 580 | 1   | Extremo 2A | -1.926 | 1.706   | 0.045     | 3.4222  | 0.0093  | -32.8345 |
| 581 | 0   | Extremo 2A | -2.607 | -25.351 | 0.267     | 4.1792  | 0.056   | -31.5234 |
| 581 | 0.5 | Extremo 2A | -2.607 | -16.3   | 0.267     | 4.1792  | -0.0773 | -21.1107 |
| 581 | 1   | Extremo 1A | -2.607 | -7.248  | 0.267     | 4.1792  | -0.2106 | -15.2238 |
| 581 | 0   | Extremo 1A | -1.996 | -25.387 | 0.039     | 4.      |         |          |



|     |     |            |        |         |           |           |         |          |
|-----|-----|------------|--------|---------|-----------|-----------|---------|----------|
| 584 | 0   | Extremo 2A | -3.159 | -19.687 | 0.277     | 0.7952    | 0.0456  | 5.5404   |
| 584 | 0.5 | Extremo 2A | -3.159 | -10.635 | 0.277     | 0.7952    | -0.0931 | 13.1208  |
| 584 | 1   | Extremo 1A | -3.159 | -1.583  | 0.277     | 0.7952    | -0.2318 | 16.1753  |
| 584 | 0   | Extremo 1A | -2.076 | -19.727 | -0.003571 | 0.7957    | 0.0304  | 5.5545   |
| 584 | 0.5 | Extremo 1A | -2.076 | -10.675 | -0.003571 | 0.7957    | 0.0321  | 13.1551  |
| 584 | 1   | Extremo 2A | -2.076 | -1.624  | -0.003571 | 0.7957    | 0.0339  | 16.2299  |
| 585 | 0   | Extremo 2A | -3.354 | -16.081 | 0.279     | 0.4808    | 0.0422  | 13.4581  |
| 585 | 0.5 | Extremo 2A | -3.354 | -7.029  | 0.279     | 0.4808    | -0.0971 | 19.2358  |
| 585 | 1   | Extremo 1A | -3.354 | 2.022   | 0.279     | 0.4808    | -0.2364 | 20.4876  |
| 585 | 0   | Extremo 1A | -2.069 | -16.122 | -0.012    | 0.4811    | 0.0259  | 13.4972  |
| 585 | 0.5 | Extremo 1A | -2.069 | -7.07   | -0.012    | 0.4811    | 0.0317  | 19.2951  |
| 585 | 1   | Extremo 2A | -2.069 | 1.982   | -0.012    | 0.4811    | 0.0375  | 20.5672  |
| 586 | 0   | Extremo 2A | -3.55  | -12.576 | 0.279     | 0.2379    | 0.0384  | 18.8835  |
| 586 | 0.5 | Extremo 2A | -3.55  | -3.525  | 0.279     | 0.2379    | -0.1011 | 22.9088  |
| 586 | 1   | Extremo 1A | -3.55  | 5.527   | 0.279     | 0.2379    | -0.2405 | 22.4081  |
| 586 | 0   | Extremo 1A | -2.055 | -12.617 | -0.016    | 0.2381    | 0.0233  | 18.9475  |
| 586 | 0.5 | Extremo 1A | -2.055 | -3.565  | -0.016    | 0.2381    | 0.0315  | 22.993   |
| 586 | 1   | Extremo 2A | -2.055 | 5.487   | -0.016    | 0.2381    | 0.0396  | 22.5126  |
| 587 | 0   | Extremo 2A | -3.747 | -9.139  | 0.278     | 2.929E-05 | 0.034   | 21.861   |
| 587 | 0.5 | Extremo 2A | -3.747 | -0.087  | 0.278     | 2.929E-05 | -0.1051 | 24.1675  |
| 587 | 1   | Extremo 1A | -3.747 | 8.965   | 0.278     | 2.929E-05 | -0.2441 | 21.9481  |
| 587 | 0   | Extremo 1A | -2.037 | -9.179  | -0.018    | 0.0001456 | 0.0224  | 21.9497  |
| 587 | 0.5 | Extremo 1A | -2.037 | -0.128  | -0.018    | 0.0001456 | 0.0313  | 24.2765  |
| 587 | 1   | Extremo 2A | -2.037 | 8.924   | -0.018    | 0.0001456 | 0.0402  | 22.0275  |
| 588 | 0   | Extremo 2A | -3.944 | -5.702  | 0.276     | -0.2379   | 0.0291  | 22.4266  |
| 588 | 0.5 | Extremo 2A | -3.944 | 3.35    | 0.276     | -0.2379   | -0.109  | 23.0145  |
| 588 | 1   | Extremo 1A | -3.944 | 12.402  | 0.276     | -0.2379   | -0.2471 | 19.0766  |
| 588 | 0   | Extremo 1A | -2.019 | -5.743  | -0.016    | -0.2379   | 0.0229  | 22.54    |
| 588 | 0.5 | Extremo 1A | -2.019 | 3.309   | -0.016    | -0.2379   | 0.0311  | 23.1484  |
| 588 | 1   | Extremo 2A | -2.019 | 12.361  | -0.016    | -0.2379   | 0.0393  | 19.2309  |
| 589 | 0   | Extremo 2A | -4.139 | -2.198  | 0.273     | -0.4806   | 0.0237  | 20.6114  |
| 589 | 0.5 | Extremo 2A | -4.139 | 6.854   | 0.273     | -0.4806   | -0.1128 | 19.4474  |
| 589 | 1   | Extremo 1A | -4.139 | 15.906  | 0.273     | -0.4806   | -0.2493 | 13.7575  |
| 589 | 0   | Extremo 1A | -2.005 | -2.239  | -0.012    | -0.4806   | 0.025   | 20.7493  |
| 589 | 0.5 | Extremo 1A | -2.005 | 6.812   | -0.012    | -0.4806   | 0.0308  | 19.6061  |
| 589 | 1   | Extremo 2A | -2.005 | 15.864  | -0.012    | -0.4806   | 0.0367  | 13.937   |
| 590 | 0   | Extremo 2A | -4.33  | 1.406   | 0.268     | -0.7936   | 0.0176  | 16.4048  |
| 590 | 0.5 | Extremo 2A | -4.33  | 10.458  | 0.268     | -0.7936   | -0.1165 | 13.4388  |
| 590 | 1   | Extremo 1A | -4.33  | 19.51   | 0.268     | -0.7936   | -0.2507 | 5.947    |
| 590 | 0   | Extremo 1A | -1.998 | 1.364   | -0.003669 | -0.7933   | 0.0286  | 16.5673  |
| 590 | 0.5 | Extremo 1A | -1.998 | 10.416  | -0.003669 | -0.7933   | 0.0304  | 13.6224  |
| 590 | 1   | Extremo 2A | -1.998 | 19.467  | -0.003669 | -0.7933   | 0.0323  | 6.1517   |
| 591 | 0   | Extremo 2A | -4.517 | 4.97    | 0.262     | -1.3825   | 0.011   | 9.6225   |
| 591 | 0.5 | Extremo 2A | -4.517 | 14.022  | 0.262     | -1.3825   | -0.1199 | 4.8743   |
| 591 | 1   | Extremo 1A | -4.517 | 23.074  | 0.262     | -1.3825   | -0.2509 | -4.3997  |
| 591 | 0   | Extremo 1A | -2.003 | 4.928   | 0.008154  | -1.3806   | 0.0338  | 9.8105   |
| 591 | 0.5 | Extremo 1A | -2.003 | 13.98   | 0.008154  | -1.3806   | 0.0297  | 5.0835   |
| 591 | 1   | Extremo 2A | -2.003 | 23.031  | 0.008154  | -1.3806   | 0.0256  | -4.1692  |
| 592 | 0   | Extremo 2A | -4.695 | 7.719   | 0.254     | -2.5715   | 0.0047  | -0.3613  |
| 592 | 0.5 | Extremo 2A | -4.695 | 16.771  | 0.254     | -2.5715   | -0.1224 | -6.4836  |
| 592 | 1   | Extremo 1A | -4.695 | 25.822  | 0.254     | -2.5715   | -0.2494 | -17.1319 |
| 592 | 0   | Extremo 1A | -2.028 | 7.68    | 0.023     | -2.5655   | 0.0403  | -0.1444  |
| 592 | 0.5 | Extremo 1A | -2.028 | 16.732  | 0.023     | -2.5655   | 0.0287  | -6.2472  |
| 592 | 1   | Extremo 2A | -2.028 | 25.783  | 0.023     | -2.5655   | 0.017   | -16.8759 |
| 593 | 0   | Extremo 2A | -4.864 | 7.126   | 0.248     | -4.1439   | 0.0021  | -14.628  |
| 593 | 0.5 | Extremo 2A | -4.864 | 16.178  | 0.248     | -4.1439   | -0.122  | -20.454  |
| 593 | 1   | Extremo 1A | -4.864 | 25.23   | 0.248     | -4.1439   | -0.2461 | -30.8059 |
| 593 | 0   | Extremo 1A | -2.078 | 7.103   | 0.039     | -4.1321   | 0.0472  | -14.3747 |
| 593 | 0.5 | Extremo 1A | -2.078 | 16.155  | 0.039     | -4.1321   | 0.0279  | -20.1891 |
| 593 | 1   | Extremo 2A | -2.078 | 25.206  | 0.039     | -4.1321   | 0.0085  | -30.5294 |
| 594 | 0   | Extremo 2A | -5.031 | -1.725  | 0.265     | -3.3878   | 0.0152  | -32.0351 |
| 594 | 0.5 | Extremo 2A | -5.031 | 7.326   | 0.265     | -3.3878   | -0.1175 | -33.4354 |
| 594 | 1   | Extremo 1A | -5.031 | 16.378  | 0.265     | -3.3878   | -0.2502 | -39.3615 |
| 594 | 0   | Extremo 1A | -2.149 | -1.703  | 0.046     | -3.378    | 0.0543  | -31.742  |
| 594 | 0.5 | Extremo 1A | -2.149 | 7.348   | 0.046     | -3.378    | 0.0314  | -33.1533 |
| 594 | 1   | Extremo 2A | -2.149 | 16.4    | 0.046     | -3.378    | 0.0084  | -39.0904 |
| 595 | 0   | Extremo 2A | -5.241 | -15.826 | 0.365     | 3.3837    | 0.0552  | -39.2561 |
| 595 | 0.5 | Extremo 2A | -5.241 | -6.775  | 0.365     | 3.3837    | -0.1273 | -33.6058 |
| 595 | 1   | Extremo 1A | -5.241 | 2.277   | 0.365     | 3.3837    | -0.3099 | -32.4814 |
| 595 | 0   | Extremo 1A | -2.213 | -15.74  | 0.052     | 3.3708    | 0.0712  | -38.966  |
| 595 | 0.5 | Extremo 1A | -2.213 | -6.689  | 0.052     | 3.3708    | 0.0451  | -33.3587 |
| 595 | 1   | Extremo 2A | -2.213 | 2.363   | 0.052     | 3.3708    | 0.019   | -32.2773 |

|     |     |            |        |         |           |           |         |          |
|-----|-----|------------|--------|---------|-----------|-----------|---------|----------|
| 596 | 0   | Extremo 2A | -5.488 | -24.678 | 0.387     | 4.1399    | 0.0495  | -31.0413 |
| 596 | 0.5 | Extremo 2A | -5.488 | -15.626 | 0.387     | 4.1399    | -0.1438 | -20.9653 |
| 596 | 1   | Extremo 1A | -5.488 | -6.574  | 0.387     | 4.1399    | -0.337  | -15.4152 |
| 596 | 0   | Extremo 1A | -2.288 | -24.547 | 0.048     | 4.1251    | 0.0711  | -30.8156 |
| 596 | 0.5 | Extremo 1A | -2.288 | -15.495 | 0.048     | 4.1251    | 0.0473  | -20.8053 |
| 596 | 1   | Extremo 2A | -2.288 | -6.443  | 0.048     | 4.1251    | 0.0236  | -15.3208 |
| 597 | 0   | Extremo 2A | -5.748 | -25.27  | 0.392     | 2.5677    | 0.0427  | -17.7079 |
| 597 | 0.5 | Extremo 2A | -5.748 | -16.218 | 0.392     | 2.5677    | -0.1532 | -7.3358  |
| 597 | 1   | Extremo 1A | -5.748 | -7.167  | 0.392     | 2.5677    | -0.349  | -1.4895  |
| 597 | 0   | Extremo 1A | -2.344 | -25.123 | 0.032     | 2.5587    | 0.0621  | -17.5725 |
| 597 | 0.5 | Extremo 1A | -2.344 | -16.071 | 0.032     | 2.5587    | 0.0459  | -7.274   |
| 597 | 1   | Extremo 2A | -2.344 | -7.019  | 0.032     | 2.5587    | 0.0298  | -1.5013  |
| 598 | 0   | Extremo 2A | -6.016 | -22.521 | 0.395     | 1.379     | 0.0378  | -5.3162  |
| 598 | 0.5 | Extremo 2A | -6.016 | -13.469 | 0.395     | 1.379     | -0.1597 | 3.6814   |
| 598 | 1   | Extremo 1A | -6.016 | -4.418  | 0.395     | 1.379     | -0.3572 | 8.1532   |
| 598 | 0   | Extremo 1A | -2.375 | -22.37  | 0.017     | 1.3743    | 0.0532  | -5.2762  |
| 598 | 0.5 | Extremo 1A | -2.375 | -13.319 | 0.017     | 1.3743    | 0.0446  | 3.6461   |
| 598 | 1   | Extremo 2A | -2.375 | -4.267  | 0.017     | 1.3743    | 0.0361  | 8.0426   |
| 599 | 0   | Extremo 2A | -6.29  | -18.956 | 0.397     | 0.7907    | 0.0331  | 4.6902   |
| 599 | 0.5 | Extremo 2A | -6.29  | -9.904  | 0.397     | 0.7907    | -0.1656 | 11.9053  |
| 599 | 1   | Extremo 1A | -6.29  | -0.852  | 0.397     | 0.7907    | -0.3643 | 14.5944  |
| 599 | 0   | Extremo 1A | -2.386 | -18.805 | 0.005309  | 0.7877    | 0.0464  | 4.635    |
| 599 | 0.5 | Extremo 1A | -2.386 | -9.753  | 0.005309  | 0.7877    | 0.0437  | 11.7746  |
| 599 | 1   | Extremo 2A | -2.386 | -0.702  | 0.005309  | 0.7877    | 0.0411  | 14.3884  |
| 600 | 0   | Extremo 2A | -6.569 | -15.351 | 0.399     | 0.4785    | 0.028   | 12.1611  |
| 600 | 0.5 | Extremo 2A | -6.569 | -6.299  | 0.399     | 0.4785    | -0.1714 | 17.5735  |
| 600 | 1   | Extremo 1A | -6.569 | 2.753   | 0.399     | 0.4785    | -0.3708 | 18.4599  |
| 600 | 0   | Extremo 1A | -2.385 | -15.2   | -0.002591 | 0.4761    | 0.0419  | 12.011   |
| 600 | 0.5 | Extremo 1A | -2.385 | -6.148  | -0.002591 | 0.4761    | 0.0432  | 17.3482  |
| 600 | 1   | Extremo 2A | -2.385 | 2.903   | -0.002591 | 0.4761    | 0.0445  | 18.1594  |
| 601 | 0   | Extremo 2A | -6.849 | -11.844 | 0.399     | 0.237     | 0.0225  | 17.1412  |
| 601 | 0.5 | Extremo 2A | -6.849 | -2.793  | 0.399     | 0.237     | -0.1772 | 20.8005  |
| 601 | 1   | Extremo 1A | -6.849 | 6.259   | 0.399     | 0.237     | -0.3769 | 19.9339  |
| 601 | 0   | Extremo 1A | -2.377 | -11.694 | -0.006927 | 0.235     | 0.0393  | 16.8968  |
| 601 | 0.5 | Extremo 1A | -2.377 | -2.642  | -0.006927 | 0.235     | 0.0428  | 20.4808  |
| 601 | 1   | Extremo 2A | -2.377 | 6.41    | -0.006927 | 0.235     | 0.0462  | 19.5389  |
| 602 | 0   | Extremo 2A | -7.131 | -8.403  | 0.399     | 0.0006662 | 0.0165  | 19.675   |
| 602 | 0.5 | Extremo 2A | -7.131 | 0.648   | 0.399     | 0.0006662 | -0.183  | 21.6138  |
| 602 | 1   | Extremo 1A | -7.131 | 9.7     | 0.399     | 0.0006662 | -0.3825 | 19.0267  |
| 602 | 0   | Extremo 1A | -2.365 | -8.252  | -0.008006 | -0.000725 | 0.0384  | 19.3368  |
| 602 | 0.5 | Extremo 1A | -2.365 | 0.8     | -0.008006 | -0.000725 | 0.0424  | 21.2     |
| 602 | 1   | Extremo 2A | -2.365 | 9.851   | -0.008006 | -0.000725 | 0.0464  | 18.5372  |
| 603 | 0   | Extremo 2A | -7.412 | -4.96   | 0.398     | -0.2357   | 0.0102  | 19.7988  |
| 603 | 0.5 | Extremo 2A | -7.412 | 4.092   | 0.398     | -0.2357   | -0.1887 | 20.0159  |
| 603 | 1   | Extremo 1A | -7.412 | 13.144  | 0.398     | -0.2357   | -0.3876 | 15.7071  |
| 603 | 0   | Extremo 1A | -2.354 | -4.807  | -0.005928 | -0.2362   | 0.0391  | 19.3677  |
| 603 | 0.5 | Extremo 1A | -2.354 | 4.245   | -0.005928 | -0.2362   | 0.0421  | 19.5082  |
| 603 | 1   | Extremo 2A | -2.354 | 13.297  | -0.005928 | -0.2362   | 0.0451  | 15.1229  |
| 604 | 0   | Extremo 2A | -7.692 | -1.446  | 0.395     | -0.4792   | 0.0034  | 17.5432  |
| 604 | 0.5 | Extremo 2A | -7.692 | 7.605   | 0.395     | -0.4792   | -0.1944 | 16.0034  |
| 604 | 1   | Extremo 1A | -7.692 | 16.657  | 0.395     | -0.4792   | -0.3921 | 9.9378   |
| 604 | 0   | Extremo 1A | -2.347 | -1.29   | -0.000542 | -0.4787   | 0.0414  | 17.0201  |
| 604 | 0.5 | Extremo 1A | -2.347 | 7.761   | -0.000542 | -0.4787   | 0.0417  | 15.4024  |
| 604 | 1   | Extremo 2A | -2.347 | 16.813  | -0.000542 | -0.4787   | 0.042   | 9.2588   |
| 605 | 0   | Extremo 2A | -7.969 | 2.168   | 0.392     | -0.8028   | -0.0039 | 12.8924  |
| 605 | 0.5 | Extremo 2A | -7.969 | 11.22   | 0.392     | -0.8028   | -0.1999 | 9.5453   |
| 605 | 1   | Extremo 1A | -7.969 | 20.272  | 0.392     | -0.802    |         |          |





|     |     |            |         |         |       |         |           |          |
|-----|-----|------------|---------|---------|-------|---------|-----------|----------|
| 608 | 0   | Extremo 2A | -8.766  | 7.465   | 0.378 | -4.4111 | -0.0215   | -19.8505 |
| 608 | 0.5 | Extremo 2A | -8.766  | 16.517  | 0.378 | -4.4111 | -0.2106   | -25.846  |
| 608 | 1   | Extremo 1A | -8.766  | 25.569  | 0.378 | -4.4111 | -0.3996   | -36.3674 |
| 608 | 0   | Extremo 1A | -2.456  | 7.569   | 0.056 | -4.4434 | 0.0664    | -20.7898 |
| 608 | 0.5 | Extremo 1A | -2.456  | 16.621  | 0.056 | -4.4434 | 0.0382    | -26.8373 |
| 608 | 1   | Extremo 2A | -2.456  | 25.673  | 0.056 | -4.4434 | 0.0101    | -37.4108 |
| 609 | 0   | Extremo 2A | -9.024  | -2.331  | 0.401 | -3.6281 | -0.0068   | -38.0385 |
| 609 | 0.5 | Extremo 2A | -9.024  | 6.721   | 0.401 | -3.6281 | -0.2071   | -39.1361 |
| 609 | 1   | Extremo 1A | -9.024  | 15.773  | 0.401 | -3.6281 | -0.4074   | -44.7595 |
| 609 | 0   | Extremo 1A | -2.539  | -2.383  | 0.068 | -3.6487 | 0.0764    | -39.1158 |
| 609 | 0.5 | Extremo 1A | -2.539  | 6.668   | 0.068 | -3.6487 | 0.0423    | -40.187  |
| 609 | 1   | Extremo 2A | -2.539  | 15.72   | 0.068 | -3.6487 | 0.0082    | -45.7841 |
| 610 | 0   | Extremo 2A | -9.332  | -17.756 | 0.515 | 3.5921  | 0.0384    | -45.1741 |
| 610 | 0.5 | Extremo 2A | -9.332  | -8.704  | 0.515 | 3.5921  | -0.2191   | -38.5591 |
| 610 | 1   | Extremo 1A | -9.332  | 0.348   | 0.515 | 3.5921  | -0.4765   | -36.4699 |
| 610 | 0   | Extremo 1A | -2.621  | -18.032 | 0.087 | 3.6592  | 0.0991    | -46.2308 |
| 610 | 0.5 | Extremo 1A | -2.621  | -8.98   | 0.087 | 3.6592  | 0.0555    | -39.4777 |
| 610 | 1   | Extremo 2A | -2.621  | 0.072   | 0.087 | 3.6592  | 0.0119    | -37.2506 |
| 611 | 0   | Extremo 2A | -9.684  | -27.552 | 0.544 | 4.3753  | 0.0331    | -35.6279 |
| 611 | 0.5 | Extremo 2A | -9.684  | -18.5   | 0.544 | 4.3753  | -0.2388   | -24.115  |
| 611 | 1   | Extremo 1A | -9.684  | -9.448  | 0.544 | 4.3753  | -0.5107   | -17.128  |
| 611 | 0   | Extremo 1A | -2.721  | -27.984 | 0.089 | 4.4542  | 0.1009    | -36.4387 |
| 611 | 0.5 | Extremo 1A | -2.721  | -18.933 | 0.089 | 4.4542  | 0.0563    | -24.7094 |
| 611 | 1   | Extremo 2A | -2.721  | -9.881  | 0.089 | 4.4542  | 0.0116    | -17.5061 |
| 612 | 0   | Extremo 2A | -10.053 | -28.483 | 0.556 | 2.6743  | 0.0271    | -20.4382 |
| 612 | 0.5 | Extremo 2A | -10.053 | -19.432 | 0.556 | 2.6743  | -0.251    | -8.4595  |
| 612 | 1   | Extremo 1A | -10.053 | -10.38  | 0.556 | 2.6743  | -0.5291   | -1.0067  |
| 612 | 0   | Extremo 1A | -2.805  | -28.967 | 0.08  | 2.7359  | 0.094     | -20.9077 |
| 612 | 0.5 | Extremo 1A | -2.805  | -19.915 | 0.08  | 2.7359  | 0.0537    | -8.6871  |
| 612 | 1   | Extremo 2A | -2.805  | -10.864 | 0.08  | 2.7359  | 0.0135    | -0.9923  |
| 613 | 0   | Extremo 2A | -10.435 | -25.814 | 0.568 | 1.3955  | 0.0239    | -6.0889  |
| 613 | 0.5 | Extremo 2A | -10.435 | -16.762 | 0.568 | 1.3955  | -0.2603   | 4.5551   |
| 613 | 1   | Extremo 1A | -10.435 | -7.71   | 0.568 | 1.3955  | -0.5444   | 10.6732  |
| 613 | 0   | Extremo 1A | -2.867  | -26.305 | 0.073 | 1.4451  | 0.088     | -6.1983  |
| 613 | 0.5 | Extremo 1A | -2.867  | -17.254 | 0.073 | 1.4451  | 0.0514    | 4.6915   |
| 613 | 1   | Extremo 2A | -2.867  | -8.202  | 0.073 | 1.4451  | 0.0148    | 11.0554  |
| 614 | 0   | Extremo 2A | -10.829 | -22.252 | 0.582 | 0.7705  | 0.0221    | 5.8768   |
| 614 | 0.5 | Extremo 2A | -10.829 | -13.2   | 0.582 | 0.7705  | -0.269    | 14.7397  |
| 614 | 1   | Extremo 1A | -10.829 | -4.148  | 0.582 | 0.7705  | -0.56     | 19.0767  |
| 614 | 0   | Extremo 1A | -2.915  | -22.74  | 0.072 | 0.816   | 0.0853    | 6.1282   |
| 614 | 0.5 | Extremo 1A | -2.915  | -13.688 | 0.072 | 0.816   | 0.0494    | 15.2352  |
| 614 | 1   | Extremo 2A | -2.915  | -4.636  | 0.072 | 0.816   | 0.0136    | 19.8162  |
| 615 | 0   | Extremo 2A | -11.235 | -18.634 | 0.598 | 0.4504  | 0.0213    | 15.2998  |
| 615 | 0.5 | Extremo 2A | -11.235 | -9.582  | 0.598 | 0.4504  | -0.2778   | 22.3538  |
| 615 | 1   | Extremo 1A | -11.235 | -0.53   | 0.598 | 0.4504  | -0.5768   | 24.8819  |
| 615 | 0   | Extremo 1A | -2.958  | -19.118 | 0.077 | 0.495   | 0.086     | 15.9102  |
| 615 | 0.5 | Extremo 1A | -2.958  | -10.066 | 0.077 | 0.495   | 0.0476    | 23.2061  |
| 615 | 1   | Extremo 2A | -2.958  | -1.014  | 0.077 | 0.495   | 0.0091    | 25.9762  |
| 616 | 0   | Extremo 2A | -11.652 | -15.115 | 0.617 | 0.2135  | 0.0218    | 22.2294  |
| 616 | 0.5 | Extremo 2A | -11.652 | -6.063  | 0.617 | 0.2135  | -0.2868   | 27.524   |
| 616 | 1   | Extremo 1A | -11.652 | 2.988   | 0.617 | 0.2135  | -0.5954   | 28.2927  |
| 616 | 0   | Extremo 1A | -3.001  | -15.596 | 0.09  | 0.257   | 0.0903    | 23.1968  |
| 616 | 0.5 | Extremo 1A | -3.001  | -6.545  | 0.09  | 0.257   | 0.0455    | 28.7321  |
| 616 | 1   | Extremo 2A | -3.001  | 2.507   | 0.09  | 0.257   | 0.0007473 | 29.7415  |
| 617 | 0   | Extremo 2A | -12.082 | -11.663 | 0.641 | -0.0101 | 0.024     | 26.7149  |
| 617 | 0.5 | Extremo 2A | -12.082 | -2.611  | 0.641 | -0.0101 | -0.2962   | 30.2834  |
| 617 | 1   | Extremo 1A | -12.082 | 6.441   | 0.641 | -0.0101 | -0.6165   | 29.326   |
| 617 | 0   | Extremo 1A | -3.052  | -12.144 | 0.11  | 0.0299  | 0.0984    | 28.0361  |
| 617 | 0.5 | Extremo 1A | -3.052  | -3.092  | 0.11  | 0.0299  | 0.0432    | 31.8452  |
| 617 | 1   | Extremo 2A | -3.052  | 5.959   | 0.11  | 0.0299  | -0.0119   | 31.1285  |
| 618 | 0   | Extremo 2A | -12.528 | -8.206  | 0.669 | -0.2205 | 0.0287    | 28.7996  |
| 618 | 0.5 | Extremo 2A | -12.528 | 0.846   | 0.669 | -0.2205 | -0.306    | 30.6396  |
| 618 | 1   | Extremo 1A | -12.528 | 9.898   | 0.669 | -0.2205 | -0.6408   | 27.9538  |
| 618 | 0   | Extremo 1A | -3.117  | -8.691  | 0.14  | -0.1887 | 0.1106    | 30.4682  |
| 618 | 0.5 | Extremo 1A | -3.117  | 0.361   | 0.14  | -0.1887 | 0.0404    | 32.5508  |
| 618 | 1   | Extremo 2A | -3.117  | 9.412   | 0.14  | -0.1887 | -0.0297   | 30.1076  |
| 619 | 0   | Extremo 2A | -12.99  | -4.668  | 0.706 | -0.406  | 0.0365    | 28.5297  |
| 619 | 0.5 | Extremo 2A | -12.99  | 4.383   | 0.706 | -0.406  | -0.3164   | 28.6009  |
| 619 | 1   | Extremo 1A | -12.99  | 13.435  | 0.706 | -0.406  | -0.6692   | 24.1462  |
| 619 | 0   | Extremo 1A | -3.202  | -5.165  | 0.182 | -0.3907 | 0.1277    | 30.5334  |
| 619 | 0.5 | Extremo 1A | -3.202  | 3.887   | 0.182 | -0.3907 | 0.0369    | 30.8528  |
| 619 | 1   | Extremo 2A | -3.202  | 12.939  | 0.182 | -0.3907 | -0.0539   | 26.6463  |

|     |     |            |         |         |       |         |         |          |
|-----|-----|------------|---------|---------|-------|---------|---------|----------|
| 620 | 0   | Extremo 2A | -13.475 | -0.991  | 0.751 | -0.5909 | 0.0483  | 25.9352  |
| 620 | 0.5 | Extremo 2A | -13.475 | 8.061   | 0.751 | -0.5909 | -0.3274 | 24.1676  |
| 620 | 1   | Extremo 1A | -13.475 | 17.113  | 0.751 | -0.5909 | -0.7031 | 17.8741  |
| 620 | 0   | Extremo 1A | -3.316  | -1.512  | 0.237 | -0.6068 | 0.1509  | 28.2506  |
| 620 | 0.5 | Extremo 1A | -3.316  | 7.54    | 0.237 | -0.6068 | 0.0324  | 26.7435  |
| 620 | 1   | Extremo 2A | -3.316  | 16.592  | 0.237 | -0.6068 | -0.0861 | 20.7106  |
| 621 | 0   | Extremo 2A | -13.984 | 2.768   | 0.81  | -0.8919 | 0.0657  | 20.9408  |
| 621 | 0.5 | Extremo 2A | -13.984 | 11.82   | 0.81  | -0.8919 | -0.3392 | 17.2939  |
| 621 | 1   | Extremo 1A | -13.984 | 20.872  | 0.81  | -0.8919 | -0.7441 | 9.1211   |
| 621 | 0   | Extremo 1A | -3.472  | 2.198   | 0.31  | -0.9631 | 0.1816  | 23.5256  |
| 621 | 0.5 | Extremo 1A | -3.472  | 11.25   | 0.31  | -0.9631 | 0.0266  | 20.1637  |
| 621 | 1   | Extremo 2A | -3.472  | 20.302  | 0.31  | -0.9631 | -0.1284 | 12.2759  |
| 622 | 0   | Extremo 2A | -14.524 | 6.082   | 0.885 | -1.4929 | 0.0908  | 13.1858  |
| 622 | 0.5 | Extremo 2A | -14.524 | 15.134  | 0.885 | -1.4929 | -0.3518 | 7.8818   |
| 622 | 1   | Extremo 1A | -14.524 | 24.186  | 0.885 | -1.4929 | -0.7943 | -1.9481  |
| 622 | 0   | Extremo 1A | -3.682  | 5.424   | 0.405 | -1.657  | 0.2219  | 15.9662  |
| 622 | 0.5 | Extremo 1A | -3.682  | 14.475  | 0.405 | -1.657  | 0.0192  | 10.9915  |
| 622 | 1   | Extremo 2A | -3.682  | 23.527  | 0.405 | -1.657  | -0.1834 | 1.4909   |
| 623 | 0   | Extremo 2A | -15.104 | 7.131   | 0.986 | -2.1585 | 0.1284  | 2.067    |
| 623 | 0.5 | Extremo 2A | -15.104 | 16.182  | 0.986 | -2.1585 | -0.3647 | -3.7613  |
| 623 | 1   | Extremo 1A | -15.104 | 25.234  | 0.986 | -2.1585 | -0.8578 | -14.1155 |
| 623 | 0   | Extremo 1A | -3.967  | 6.327   | 0.527 | -2.4648 | 0.2739  | 4.92     |
| 623 | 0.5 | Extremo 1A | -3.967  | 15.379  | 0.527 | -2.4648 | 0.0104  | -0.5065  |
| 623 | 1   | Extremo 2A | -3.967  | 24.431  | 0.527 | -2.4648 | -0.2532 | -10.4588 |
| 624 | 0   | Extremo 2A | -15.749 | 2.422   | 1.136 | -0.936  | 0.1887  | -11.1773 |
| 624 | 0.5 | Extremo 2A | -15.749 | 11.474  | 1.136 | -0.936  | -0.3793 | -14.6512 |
| 624 | 1   | Extremo 1A | -15.749 | 20.525  | 1.136 | -0.936  | -0.9473 | -22.651  |
| 624 | 0   | Extremo 1A | -4.341  | 1.408   | 0.679 | -1.4163 | 0.3415  | -8.4356  |
| 624 | 0.5 | Extremo 1A | -4.341  | 10.459  | 0.679 | -1.4163 | 0.0021  | -11.4024 |
| 624 | 1   | Extremo 2A | -4.341  | 19.511  | 0.679 | -1.4163 | -0.3373 | -18.895  |
| 625 | 0   | Extremo 2A | -16.522 | -5.471  | 1.379 | 4.0783  | 0.2796  | -16.5555 |
| 625 | 0.5 | Extremo 2A | -16.522 | 3.581   | 1.379 | 4.0783  | -0.4099 | -16.083  |
| 625 | 1   | Extremo 1A | -16.522 | 12.633  | 1.379 | 4.0783  | -1.0993 | -20.1365 |
| 625 | 0   | Extremo 1A | -4.81   | -6.712  | 0.873 | 3.5014  | 0.4337  | -14.0971 |
| 625 | 0.5 | Extremo 1A | -4.81   | 2.339   | 0.873 | 3.5014  | -0.0029 | -13.0038 |
| 625 | 1   | Extremo 2A | -4.81   | 11.391  | 0.873 | 3.5014  | -0.4396 | -16.4364 |
| 626 | 0   | Extremo 2A | -17.426 | -13.121 | 1.629 | 4.2012  | 0.374   | -13.7839 |
| 626 | 0.5 | Extremo 2A | -17.426 | -4.069  | 1.629 | 4.2012  | -0.4407 | -9.4863  |
| 626 | 1   | Extremo 1A | -17.426 | 4.982   | 1.629 | 4.2012  | -1.2553 | -9.7145  |
| 626 | 0   | Extremo 1A | -5.405  | -14.675 | 1.101 | 3.584   | 0.5306  | -11.5305 |
| 626 | 0.5 | Extremo 1A | -5.405  | -5.623  | 1.101 | 3.584   | -0.0197 | -6.456   |
| 626 | 1   | Extremo 2A | -5.405  | 3.429   | 1.101 | 3.584   | -0.57   | -5.9075  |
| 627 | 0   | Extremo 2A | -18.502 | -12.934 | 1.94  | 2.7126  | 0.498   | -7.1248  |
| 627 | 0.5 | Extremo 2A | -18.502 | -3.882  | 1.94  | 2.7126  | -0.472  | -2.9208  |
| 627 | 1   | Extremo 1A | -18.502 | 5.17    | 1.94  | 2.7126  | -1.442  | -3.2426  |
| 627 | 0   | Extremo 1A | -6.131  | -14.696 | 1.381 | 2.0383  | 0.6462  | -4.9291  |
| 627 | 0.5 | Extremo 1A | -6.131  | -5.644  | 1.381 | 2.0383  | -0.0444 | 0.1559   |
| 627 | 1   | Extremo 2A | -6.131  | 3.408   | 1.381 | 2.0383  | -0.7349 | 0.715    |
| 628 | 0   | Extremo 2A | -19.783 | -9.984  | 2.33  | 1.8251  | 0.6554  | -1.6557  |
| 628 | 0.5 | Extremo 2A | -19.783 | -0.932  | 2.33  | 1.8251  | -0.5094 | 1.0734   |
| 628 | 1   | Extremo 1A | -19.783 | 8.12    | 2.33  | 1.8251  | -1.6743 | -0.7235  |
| 628 | 0   | Extremo 1A | -7.023  | -11.851 | 1.744 | 1.092   | 0.7965  | 0.5418   |
| 628 | 0.5 | Extremo 1A | -7.023  | -2.799  | 1.744 | 1.092   | -0.0753 | 4.2043   |
| 628 | 1   | Extremo 2A | -7.023  | 6.253   | 1.744 | 1.092   | -0.9471 | 3.341    |
| 629 | 0   | Extremo 2A | -21.318 | -6.548  | 2.822 | 1.5274  | 0.854   | 1.6719   |
| 629 | 0.5 | Extremo 2A | -21.318 | 2.504   | 2.822 | 1.5274  | -0.5572 | 2.683    |
| 629 | 1   | Extremo 1A | -21.318 | 11.555  | 2.822 | 1.5274  | -1.9684 | -0.8318  |
| 629 | 0   | Extremo 1A | -8.137  | -8.443  | 2.218 | 0.7396  |         |          |



|     |     |            |          |        |        |         |          |           |
|-----|-----|------------|----------|--------|--------|---------|----------|-----------|
| 632 | 0   | Extremo 2A | -28.159  | 1.613  | 5.204  | 1.2709  | 1.8293   | -0.7472   |
| 632 | 0,5 | Extremo 2A | -28.159  | 10.665 | 5.204  | 1.2709  | -0.7725  | -3.8166   |
| 632 | 1   | Extremo 1A | -28.159  | 19.716 | 5.204  | 1.2709  | -3.3743  | -11.412   |
| 632 | 0   | Extremo 1A | -13.672  | -0.176 | 4.604  | 0.4817  | 1.9917   | 1.0539    |
| 632 | 0,5 | Extremo 1A | -13.672  | 8.875  | 4.604  | 0.4817  | -0.3104  | -1.1209   |
| 632 | 1   | Extremo 2A | -13.672  | 17.927 | 4.604  | 0.4817  | -2.6124  | -7.8215   |
| 633 | 0   | Extremo 2A | -31.587  | 3.274  | 6.527  | 1.057   | 2.3855   | -4.9014   |
| 633 | 0,5 | Extremo 2A | -31.587  | 12.326 | 6.527  | 1.057   | -0.8782  | -8.8013   |
| 633 | 1   | Extremo 1A | -31.587  | 21.377 | 6.527  | 1.057   | -4.1419  | -17.2271  |
| 633 | 0   | Extremo 1A | -16.657  | 1.481  | 5.916  | 0.303   | 2.5472   | -3.1668   |
| 633 | 0,5 | Extremo 1A | -16.657  | 10.533 | 5.916  | 0.303   | -0.411   | -6.1702   |
| 633 | 1   | Extremo 2A | -16.657  | 19.584 | 5.916  | 0.303   | -3.3692  | -13.6995  |
| 634 | 0   | Extremo 2A | -35.894  | 4.904  | 8.216  | 1.0607  | 3.0873   | -10.2177  |
| 634 | 0,5 | Extremo 2A | -35.894  | 13.956 | 8.216  | 1.0607  | -1.0209  | -14.9328  |
| 634 | 1   | Extremo 1A | -35.894  | 23.008 | 8.216  | 1.0607  | -5.1291  | -24.1737  |
| 634 | 0   | Extremo 1A | -20.514  | 3.144  | 7.6    | 0.3118  | 3.254    | -8.5134   |
| 634 | 0,5 | Extremo 1A | -20.514  | 12.196 | 7.6    | 0.3118  | -0.546   | -12.3483  |
| 634 | 1   | Extremo 2A | -20.514  | 21.248 | 7.6    | 0.3118  | -4.346   | -20.7092  |
| 635 | 0   | Extremo 2A | -41.347  | 6.417  | 10.361 | 1.4654  | 3.9627   | -16.003   |
| 635 | 0,5 | Extremo 2A | -41.347  | 15.468 | 10.361 | 1.4654  | -1.218   | -21.4742  |
| 635 | 1   | Extremo 1A | -41.347  | 24.52  | 10.361 | 1.4654  | -6.3988  | -31.4713  |
| 635 | 0   | Extremo 1A | -25.518  | 4.729  | 9.751  | 0.6972  | 4.1426   | -14.369   |
| 635 | 0,5 | Extremo 1A | -25.518  | 13.781 | 9.751  | 0.6972  | -0.7331  | -18.9965  |
| 635 | 1   | Extremo 2A | -25.518  | 22.833 | 9.751  | 0.6972  | -5.6088  | -28.15    |
| 636 | 0   | Extremo 2A | -48.282  | 8.617  | 12.942 | 1.5271  | 5.0208   | -21.0128  |
| 636 | 0,5 | Extremo 2A | -48.282  | 17.669 | 12.942 | 1.5271  | -1.4499  | -27.5845  |
| 636 | 1   | Extremo 1A | -48.282  | 26.721 | 12.942 | 1.5271  | -7.9207  | -38.682   |
| 636 | 0   | Extremo 1A | -32.01   | 7.027  | 12.361 | 0.7704  | 5.2235   | -19.5706  |
| 636 | 0,5 | Extremo 1A | -32.01   | 16.078 | 12.361 | 0.7704  | -0.957   | -25.3468  |
| 636 | 1   | Extremo 2A | -32.01   | 25.13  | 12.361 | 0.7704  | -7.1375  | -35.6488  |
| 637 | 0   | Extremo 2A | -57.148  | 9.561  | 16.482 | 0.9056  | 6.5414   | -28.5211  |
| 637 | 0,5 | Extremo 2A | -57.148  | 18.612 | 16.482 | 0.9056  | -1.6998  | -35.5644  |
| 637 | 1   | Extremo 1A | -57.148  | 27.664 | 16.482 | 0.9056  | -9.941   | -47.1335  |
| 637 | 0   | Extremo 1A | -40.443  | 7.949  | 15.901 | 0.2092  | 6.7444   | -27.2516  |
| 637 | 0,5 | Extremo 1A | -40.443  | 17.001 | 15.901 | 0.2092  | -1.2063  | -33.4892  |
| 637 | 1   | Extremo 2A | -40.443  | 26.053 | 15.901 | 0.2092  | -9.157   | -44.2527  |
| 638 | 0   | Extremo 2A | -68.721  | 10.911 | 21.009 | 0.3167  | 8.459    | -37.607   |
| 638 | 0,5 | Extremo 2A | -68.721  | 19.962 | 21.009 | 0.3167  | -2.0452  | -45.3252  |
| 638 | 1   | Extremo 1A | -68.721  | 29.014 | 21.009 | 0.3167  | -12.5495 | -57.5693  |
| 638 | 0   | Extremo 1A | -51.572  | 9.272  | 20.421 | -0.345  | 8.6613   | -36.4128  |
| 638 | 0,5 | Extremo 1A | -51.572  | 18.324 | 20.421 | -0.345  | -1.549   | -43.3118  |
| 638 | 1   | Extremo 2A | -51.572  | 27.376 | 20.421 | -0.345  | -11.7593 | -54.7367  |
| 639 | 0   | Extremo 2A | -83.922  | 12.041 | 26.758 | 0.0163  | 10.8883  | -48.1459  |
| 639 | 0,5 | Extremo 2A | -83.922  | 21.093 | 26.758 | 0.0163  | -2.491   | -56.4293  |
| 639 | 1   | Extremo 1A | -83.922  | 30.144 | 26.758 | 0.0163  | -15.8702 | -69.2386  |
| 639 | 0   | Extremo 1A | -66.321  | 10.401 | 26.17  | -0.6342 | 11.0943  | -46.9756  |
| 639 | 0,5 | Extremo 1A | -66.321  | 19.453 | 26.17  | -0.6342 | -1.9906  | -54.439   |
| 639 | 1   | Extremo 2A | -66.321  | 28.505 | 26.17  | -0.6342 | -15.0754 | -66.4283  |
| 640 | 0   | Extremo 2A | -104.12  | 12.475 | 34.107 | 0.2734  | 13.9938  | -59.4687  |
| 640 | 0,5 | Extremo 2A | -104.12  | 21.527 | 34.107 | 0.2734  | -3.0597  | -67.9692  |
| 640 | 1   | Extremo 1A | -104.12  | 30.579 | 34.107 | 0.2734  | -20.1133 | -80.9955  |
| 640 | 0   | Extremo 1A | -86.066  | 10.857 | 33.527 | -0.3822 | 14.2086  | -58.3143  |
| 640 | 0,5 | Extremo 1A | -86.066  | 19.909 | 33.527 | -0.3822 | -2.5546  | -66.0057  |
| 640 | 1   | Extremo 2A | -86.066  | 28.96  | 33.527 | -0.3822 | -19.3179 | -78.223   |
| 641 | 0   | Extremo 2A | -131.366 | 12.069 | 43.441 | 1.4014  | 17.9146  | -69.6395  |
| 641 | 0,5 | Extremo 2A | -131.366 | 21.121 | 43.441 | 1.4014  | -3.8057  | -77.9371  |
| 641 | 1   | Extremo 1A | -131.366 | 30.173 | 43.441 | 1.4014  | -25.5261 | -90.7606  |
| 641 | 0   | Extremo 1A | -112.864 | 10.497 | 42.881 | 0.7233  | 18.1456  | -68.5381  |
| 641 | 0,5 | Extremo 1A | -112.864 | 19.548 | 42.881 | 0.7233  | -3.295   | -76.0494  |
| 641 | 1   | Extremo 2A | -112.864 | 28.6   | 42.881 | 0.7233  | -24.7356 | -88.0865  |
| 642 | 0   | Extremo 2A | -168.544 | 13.491 | 54.717 | 1.4996  | 22.7085  | -75.2804  |
| 642 | 0,5 | Extremo 2A | -168.544 | 22.543 | 54.717 | 1.4996  | -4.6499  | -84.2888  |
| 642 | 1   | Extremo 1A | -168.544 | 31.594 | 54.717 | 1.4996  | -32.0083 | -97.8231  |
| 642 | 0   | Extremo 1A | -149.606 | 11.972 | 54.204 | 0.8102  | 22.9658  | -74.3306  |
| 642 | 0,5 | Extremo 1A | -149.606 | 21.023 | 54.204 | 0.8102  | -4.136   | -82.5794  |
| 642 | 1   | Extremo 2A | -149.606 | 30.075 | 54.204 | 0.8102  | -31.2378 | -95.354   |
| 643 | 0   | Extremo 2A | -219.628 | 15.622 | 69.46  | -0.0627 | 29.2043  | -84.6383  |
| 643 | 0,5 | Extremo 2A | -219.628 | 24.674 | 69.46  | -0.0627 | -5.5259  | -94.7123  |
| 643 | 1   | Extremo 1A | -219.628 | 33.726 | 69.46  | -0.0627 | -40.2561 | -109.3122 |
| 643 | 0   | Extremo 1A | -200.275 | 14.041 | 68.969 | -0.7462 | 29.4686  | -83.8611  |
| 643 | 0,5 | Extremo 1A | -200.275 | 23.093 | 68.969 | -0.7462 | -5.0161  | -93.1448  |
| 643 | 1   | Extremo 2A | -200.275 | 32.145 | 68.969 | -0.7462 | -39.5008 | -106.9543 |

|     |     |            |           |         |         |         |          |           |
|-----|-----|------------|-----------|---------|---------|---------|----------|-----------|
| 644 | 0   | Extremo 2A | -289.883  | 16.939  | 86.951  | -1.5336 | 36.7046  | -97.9106  |
| 644 | 0,5 | Extremo 2A | -289.883  | 25.991  | 86.951  | -1.5336 | -6.7708  | -108.6432 |
| 644 | 1   | Extremo 1A | -289.883  | 35.043  | 86.951  | -1.5336 | -50.2462 | -123.9017 |
| 644 | 0   | Extremo 1A | -270.12   | 15.266  | 86.485  | -2.2495 | 36.9837  | -97.2801  |
| 644 | 0,5 | Extremo 1A | -270.12   | 24.318  | 86.485  | -2.2495 | -6.259   | -107.1762 |
| 644 | 1   | Extremo 2A | -270.12   | 33.37   | 86.485  | -2.2495 | -49.5017 | -121.598  |
| 645 | 0   | Extremo 2A | -383.149  | 15.087  | 104.38  | -2.7733 | 43.6727  | -114.4987 |
| 645 | 0,5 | Extremo 2A | -383.149  | 24.139  | 104.38  | -2.7733 | -8.5171  | -124.3053 |
| 645 | 1   | Extremo 1A | -383.149  | 33.191  | 104.38  | -2.7733 | -60.7069 | -138.6378 |
| 645 | 0   | Extremo 1A | -363.002  | 13.298  | 103.99  | -3.5666 | 44.0085  | -114.0442 |
| 645 | 0,5 | Extremo 1A | -363.002  | 22.35   | 103.99  | -3.5666 | -7.9866  | -122.9563 |
| 645 | 1   | Extremo 2A | -363.002  | 31.402  | 103.99  | -3.5666 | -59.9817 | -136.3944 |
| 646 | 0   | Extremo 2A | -494.23   | 6.508   | 110.272 | -2.5147 | 46.6143  | -132.6055 |
| 646 | 0,5 | Extremo 2A | -494.23   | 15.56   | 110.272 | -2.5147 | -8.5216  | -138.1227 |
| 646 | 1   | Extremo 1A | -494.23   | 24.612  | 110.272 | -2.5147 | -63.6575 | -148.1657 |
| 646 | 0   | Extremo 1A | -473.812  | 4.577   | 110.143 | -3.4396 | 47.1141  | -132.4208 |
| 646 | 0,5 | Extremo 1A | -473.812  | 13.629  | 110.143 | -3.4396 | -7.9573  | -136.9724 |
| 646 | 1   | Extremo 2A | -473.812  | 22.681  | 110.143 | -3.4396 | -63.0287 | -146.0498 |
| 647 | 0   | Extremo 2A | -595.302  | -5.37   | 102.989 | 0.6546  | 50.822   | -143.2238 |
| 647 | 0,5 | Extremo 2A | -595.302  | 3.682   | 102.989 | 0.6546  | -0.6724  | -142.8018 |
| 647 | 1   | Extremo 1A | -595.302  | 12.734  | 102.989 | 0.6546  | -52.1669 | -146.9057 |
| 647 | 0   | Extremo 1A | -574.944  | -7.524  | 103.513 | -0.4425 | 51.5976  | -143.5126 |
| 647 | 0,5 | Extremo 1A | -574.944  | 1.528   | 103.513 | -0.4425 | -0.1588  | -142.0137 |
| 647 | 1   | Extremo 2A | -574.944  | 10.58   | 103.513 | -0.4425 | -51.9151 | -145.0407 |
| 648 | 0   | Extremo 2A | -694.426  | -17.844 | 112.883 | 5.4349  | 64.181   | -148.0722 |
| 648 | 0,5 | Extremo 2A | -694.426  | -8.792  | 112.883 | 5.4349  | 7.7393   | -141.4134 |
| 648 | 1   | Extremo 1A | -694.426  | 0.26    | 112.883 | 5.4349  | -48.7024 | -139.2804 |
| 648 | 0   | Extremo 1A | -674.39   | -20.697 | 113.402 | 4.2092  | 64.8431  | -149.0074 |
| 648 | 0,5 | Extremo 1A | -674.39   | -11.645 | 113.402 | 4.2092  | 8.1421   | -140.9219 |
| 648 | 1   | Extremo 2A | -674.39   | -2.593  | 113.402 | 4.2092  | -48.5589 | -137.3623 |
| 649 | 0   | Extremo 2A | -809.333  | -30.44  | 109.792 | 6.9586  | 62.8141  | -138.2685 |
| 649 | 0,5 | Extremo 2A | -809.333  | -21.388 | 109.792 | 6.9586  | 7.9182   | -125.3116 |
| 649 | 1   | Extremo 1A | -809.333  | -12.336 | 109.792 | 6.9586  | -46.9776 | -116.8806 |
| 649 | 0   | Extremo 1A | -789.5    | -33.58  | 110.163 | 5.5697  | 63.3547  | -139.6188 |
| 649 | 0,5 | Extremo 1A | -789.5    | -24.528 | 110.163 | 5.5697  | 8.2733   | -125.092  |
| 649 | 1   | Extremo 2A | -789.5    | -15.476 | 110.163 | 5.5697  | -46.8081 | -115.091  |
| 650 | 0   | Extremo 2A | -909.067  | -34.4   | 93.887  | 5.8461  | 53.0641  | -119.5979 |
| 650 | 0,5 | Extremo 2A | -909.067  | -25.348 | 93.887  | 5.8461  | 6.1206   | -104.661  |
| 650 | 1   | Extremo 1A | -909.067  | -16.296 | 93.887  | 5.8461  | -40.8229 | -94.25    |
| 650 | 0   | Extremo 1A | -889.353  | -37.676 | 94.168  | 4.3299  | 53.5421  | -121.3824 |
| 650 | 0,5 | Extremo 1A | -889.353  | -28.624 | 94.168  | 4.3299  | 6.4582   | -104.8075 |
| 650 | 1   | Extremo 2A | -889.353  | -19.572 | 94.168  | 4.3299  | -40.6257 | -92.7585  |
| 651 | 0   | Extremo 2A | -987.257  | -34.156 | 77.739  | 4.345   | 43.7333  | -99.7193  |
| 651 | 0,5 | Extremo 2A | -987.257  | -25.104 | 77.739  | 4.345   | 4.8636   | -84.9042  |
| 651 | 1   | Extremo 1A | -987.257  | -16.052 | 77.739  | 4.345   | -34.0061 | -74.6151  |
| 651 | 0   | Extremo 1A | -967.618  | -37.49  | 77.958  | 2.7252  | 44.1672  | -101.9975 |
| 651 | 0,5 | Extremo 1A | -967.618  | -28.438 | 77.958  | 2.7252  | 5.188    | -85.5153  |
| 651 | 1   | Extremo 2A | -967.618  | -19.387 | 77.958  | 2.7252  | -33.7912 | -73.559   |
| 652 | 0   | Extremo 2A | -1047.256 | -32.916 | 63.936  | 3.0504  | 36.1442  | -81.9722  |
| 652 | 0,5 | Extremo 2A | -1047.256 | -23.865 | 63.936  | 3.0504  | 4.1761   | -67.7769  |
| 652 | 1   | Extremo 1A | -1047.256 | -14.813 | 63.936  | 3.0504  | -27.792  | -58.1075  |
| 652 | 0   | Extremo 1A | -1027.664 | -36.295 | 64.108  | 1.3307  | 36.5415  | -84.8558  |
| 652 | 0,5 | Extremo 1A | -1027.664 | -27.243 | 64.108  | 1.3307  | 4.4874   | -68.9     |



|     |     |            |           |         |        |        |          |          |
|-----|-----|------------|-----------|---------|--------|--------|----------|----------|
| 656 | 0   | Extremo 2A | -1188.824 | -31.278 | 34.033 | 4.0322 | 18.9086  | -12.8014 |
| 656 | 0.5 | Extremo 2A | -1188.824 | -22.227 | 34.033 | 4.0322 | 1.892    | 0.5749   |
| 656 | 1   | Extremo 1A | -1188.824 | -13.175 | 34.033 | 4.0322 | -15.1247 | 9.4252   |
| 656 | 0   | Extremo 1A | -1169.307 | -34.855 | 34.12  | 2.1517 | 19.2305  | -18.2732 |
| 656 | 0.5 | Extremo 1A | -1169.307 | -25.804 | 34.12  | 2.1517 | 2.1702   | -3.1085  |
| 656 | 1   | Extremo 2A | -1169.307 | -16.752 | 34.12  | 2.1517 | -14.89   | 7.5304   |
| 657 | 0   | Extremo 2A | -1212.655 | -31.632 | 30.027 | 4.054  | 16.4297  | 5.113    |
| 657 | 0.5 | Extremo 2A | -1212.655 | -22.58  | 30.027 | 4.054  | 1.4162   | 18.6659  |
| 657 | 1   | Extremo 1A | -1212.655 | -13.528 | 30.027 | 4.054  | -13.5973 | 27.693   |
| 657 | 0   | Extremo 1A | -1193.144 | -35.096 | 30.107 | 2.0819 | 16.7448  | -1.0841  |
| 657 | 0.5 | Extremo 1A | -1193.144 | -26.044 | 30.107 | 2.0819 | 1.6911   | 14.201   |
| 657 | 1   | Extremo 2A | -1193.144 | -16.993 | 30.107 | 2.0819 | -13.3626 | 24.9603  |
| 658 | 0   | Extremo 2A | -1234.23  | -33.106 | 26.429 | 4.8767 | 14.5804  | 23.9086  |
| 658 | 0.5 | Extremo 2A | -1234.23  | -24.055 | 26.429 | 4.8767 | 1.3661   | 38.1989  |
| 658 | 1   | Extremo 1A | -1234.23  | -15.003 | 26.429 | 4.8767 | -11.8482 | 47.9633  |
| 658 | 0   | Extremo 1A | -1214.724 | -36.457 | 26.513 | 2.7408 | 14.8926  | 16.6908  |
| 658 | 0.5 | Extremo 1A | -1214.724 | -27.405 | 26.513 | 2.7408 | 1.6361   | 32.6561  |
| 658 | 1   | Extremo 2A | -1214.724 | -18.353 | 26.513 | 2.7408 | -11.6205 | 44.0956  |
| 659 | 0   | Extremo 2A | -1253.266 | -30.954 | 24.146 | 5.1133 | 13.9083  | 47.0012  |
| 659 | 0.5 | Extremo 2A | -1253.266 | -21.902 | 24.146 | 5.1133 | 1.8351   | 60.215   |
| 659 | 1   | Extremo 1A | -1253.266 | -12.85  | 24.146 | 5.1133 | -10.238  | 68.903   |
| 659 | 0   | Extremo 1A | -1233.78  | -34.504 | 24.247 | 2.9349 | 14.2177  | 38.3446  |
| 659 | 0.5 | Extremo 1A | -1233.78  | -25.452 | 24.247 | 2.9349 | 2.0942   | 53.3335  |
| 659 | 1   | Extremo 2A | -1233.78  | -16.4   | 24.247 | 2.9349 | -10.0294 | 63.7965  |
| 660 | 0   | Extremo 2A | -1271.937 | -28.659 | 22.238 | 4.4091 | 12.856   | 67.2943  |
| 660 | 0.5 | Extremo 2A | -1271.937 | -19.607 | 22.238 | 4.4091 | 1.7372   | 79.3609  |
| 660 | 1   | Extremo 1A | -1271.937 | -10.556 | 22.238 | 4.4091 | -9.3817  | 86.9017  |
| 660 | 0   | Extremo 1A | -1252.475 | -32.321 | 22.358 | 2.2865 | 13.1691  | 57.5313  |
| 660 | 0.5 | Extremo 1A | -1252.475 | -23.269 | 22.358 | 2.2865 | 1.99     | 71.4287  |
| 660 | 1   | Extremo 2A | -1252.475 | -14.217 | 22.358 | 2.2865 | -9.1892  | 80.8003  |
| 661 | 0   | Extremo 2A | -1289.305 | -27.251 | 20.079 | 4.134  | 11.4705  | 84.9894  |
| 661 | 0.5 | Extremo 2A | -1289.305 | -18.199 | 20.079 | 4.134  | 1.4312   | 96.3518  |
| 661 | 1   | Extremo 1A | -1289.305 | -9.147  | 20.079 | 4.134  | -8.6082  | 103.1883 |
| 661 | 0   | Extremo 1A | -1269.882 | -30.895 | 20.227 | 2.0194 | 11.793   | 74.3044  |
| 661 | 0.5 | Extremo 1A | -1269.882 | -21.843 | 20.227 | 2.0194 | 1.6797   | 87.489   |
| 661 | 1   | Extremo 2A | -1269.882 | -12.792 | 20.227 | 2.0194 | -8.4336  | 96.1478  |
| 662 | 0   | Extremo 2A | -1305.183 | -27.27  | 17.751 | 4.9169 | 10.0642  | 101.8289 |
| 662 | 0.5 | Extremo 2A | -1305.183 | -18.218 | 17.751 | 4.9169 | 1.1889   | 113.2009 |
| 662 | 1   | Extremo 1A | -1305.183 | -9.166  | 17.751 | 4.9169 | -7.6865  | 120.047  |
| 662 | 0   | Extremo 1A | -1285.822 | -30.745 | 17.935 | 2.7276 | 10.4002  | 90.1973  |
| 662 | 0.5 | Extremo 1A | -1285.822 | -21.693 | 17.935 | 2.7276 | 1.4329   | 103.3067 |
| 662 | 1   | Extremo 2A | -1285.822 | -12.641 | 17.935 | 2.7276 | -7.5343  | 111.8903 |
| 663 | 0   | Extremo 2A | -1319.269 | -28.369 | 15.039 | 7.0556 | 8.8163   | 121.3916 |
| 663 | 0.5 | Extremo 2A | -1319.269 | -19.318 | 15.039 | 7.0556 | 1.297    | 133.3133 |
| 663 | 1   | Extremo 1A | -1319.269 | -10.266 | 15.039 | 7.0556 | -6.2224  | 140.7091 |
| 663 | 0   | Extremo 1A | -1299.996 | -31.594 | 15.274 | 4.7262 | 9.1708   | 108.4811 |
| 663 | 0.5 | Extremo 1A | -1299.996 | -22.542 | 15.274 | 4.7262 | 1.5339   | 122.015  |
| 663 | 1   | Extremo 2A | -1299.996 | -13.49  | 15.274 | 4.7262 | -6.103   | 131.023  |
| 664 | 0   | Extremo 2A | -1330.768 | -24.908 | 12.915 | 7.0432 | 8.3409   | 147.8786 |
| 664 | 0.5 | Extremo 2A | -1330.768 | -15.856 | 12.915 | 7.0432 | 1.8836   | 158.0696 |
| 664 | 1   | Extremo 1A | -1330.768 | -6.804  | 12.915 | 7.0432 | -4.5737  | 163.7348 |
| 664 | 0   | Extremo 1A | -1311.632 | -28.13  | 13.218 | 4.8481 | 8.7153   | 133.2068 |
| 664 | 0.5 | Extremo 1A | -1311.632 | -19.078 | 13.218 | 4.8481 | 2.1065   | 145.0089 |
| 664 | 1   | Extremo 2A | -1311.632 | -10.026 | 13.218 | 4.8481 | -4.5024  | 152.285  |
| 665 | 0   | Extremo 2A | -1341.295 | -20.299 | 10.848 | 4.7624 | 7.3964   | 167.3744 |
| 665 | 0.5 | Extremo 2A | -1341.295 | -11.247 | 10.848 | 4.7624 | 1.9725   | 175.2608 |
| 665 | 1   | Extremo 1A | -1341.295 | -2.195  | 10.848 | 4.7624 | -3.4513  | 178.6212 |
| 665 | 0   | Extremo 1A | -1322.34  | -23.337 | 11.232 | 2.9916 | 7.8001   | 151.6433 |
| 665 | 0.5 | Extremo 1A | -1322.34  | -14.285 | 11.232 | 2.9916 | 2.184    | 161.0489 |
| 665 | 1   | Extremo 2A | -1322.34  | -5.234  | 11.232 | 2.9916 | -3.432   | 165.9286 |
| 666 | 0   | Extremo 2A | -1349.696 | -16.534 | 8.26   | 3.18   | 5.9936   | 180.4833 |
| 666 | 0.5 | Extremo 2A | -1349.696 | -7.482  | 8.26   | 3.18   | 1.8634   | 186.4874 |
| 666 | 1   | Extremo 1A | -1349.696 | 1.569   | 8.26   | 3.18   | -2.2667  | 187.9656 |
| 666 | 0   | Extremo 1A | -1330.987 | -19.046 | 8.747  | 1.9267 | 6.4363   | 164.3585 |
| 666 | 0.5 | Extremo 1A | -1330.987 | -9.995  | 8.747  | 1.9267 | 2.0629   | 171.6187 |
| 666 | 1   | Extremo 2A | -1330.987 | -0.943  | 8.747  | 1.9267 | -2.3106  | 174.353  |
| 667 | 0   | Extremo 2A | -1355.623 | -13.77  | 5.546  | 2.1262 | 4.5411   | 189.342  |
| 667 | 0.5 | Extremo 2A | -1355.623 | -4.718  | 5.546  | 2.1262 | 1.7682   | 193.964  |
| 667 | 1   | Extremo 1A | -1355.623 | 4.334   | 5.546  | 2.1262 | -1.0047  | 194.0602 |
| 667 | 0   | Extremo 1A | -1337.243 | -15.324 | 6.151  | 1.5216 | 5.026    | 173.4138 |
| 667 | 0.5 | Extremo 1A | -1337.243 | -6.272  | 6.151  | 1.5216 | 1.9502   | 178.8128 |
| 667 | 1   | Extremo 2A | -1337.243 | 2.78    | 6.151  | 1.5216 | -1.1255  | 179.686  |

|     |     |            |           |         |         |         |         |          |
|-----|-----|------------|-----------|---------|---------|---------|---------|----------|
| 668 | 0   | Extremo 2A | -1359.209 | -11.793 | 2.921   | 1.1751  | 3.1852  | 195.0178 |
| 668 | 0.5 | Extremo 2A | -1359.209 | -2.741  | 2.921   | 1.1751  | 1.7249  | 198.6513 |
| 668 | 1   | Extremo 1A | -1359.209 | 6.311   | 2.921   | 1.1751  | 0.2645  | 197.759  |
| 668 | 0   | Extremo 1A | -1341.241 | -11.927 | 3.642   | 1.3719  | 3.7002  | 179.8678 |
| 668 | 0.5 | Extremo 1A | -1341.241 | -2.875  | 3.642   | 1.3719  | 1.8794  | 183.5684 |
| 668 | 1   | Extremo 2A | -1341.241 | 6.176   | 3.642   | 1.3719  | 0.0586  | 182.7432 |
| 669 | 0   | Extremo 2A | -1360.683 | -10.316 | 0.447   | 0.194   | 1.9521  | 197.9801 |
| 669 | 0.5 | Extremo 2A | -1360.683 | -1.264  | 0.447   | 0.194   | 1.7286  | 200.8751 |
| 669 | 1   | Extremo 1A | -1360.683 | 7.788   | 0.447   | 0.194   | 1.505   | 199.2443 |
| 669 | 0   | Extremo 1A | -1343.192 | -8.69   | 1.232   | 1.2913  | 2.4617  | 184.1274 |
| 669 | 0.5 | Extremo 1A | -1343.192 | 0.362   | 1.232   | 1.2913  | 1.8458  | 186.2093 |
| 669 | 1   | Extremo 2A | -1343.192 | 9.414   | 1.232   | 1.2913  | 1.2299  | 183.7654 |
| 670 | 0   | Extremo 2A | -1360.22  | -8.895  | -1.904  | -0.7761 | 0.8132  | 198.5518 |
| 670 | 0.5 | Extremo 2A | -1360.22  | 0.157   | -1.904  | -0.7761 | 1.7654  | 200.7364 |
| 670 | 1   | Extremo 1A | -1360.22  | 9.208   | -1.904  | -0.7761 | 2.7177  | 198.3952 |
| 670 | 0   | Extremo 1A | -1343.225 | -5.497  | -1.139  | 1.2222  | 1.2757  | 186.3447 |
| 670 | 0.5 | Extremo 1A | -1343.225 | 3.555   | -1.139  | 1.2222  | 1.8451  | 186.8304 |
| 670 | 1   | Extremo 2A | -1343.225 | 12.606  | -1.139  | 1.2222  | 2.4144  | 182.7902 |
| 671 | 0   | Extremo 2A | -1357.865 | -7.102  | -4.246  | -1.6567 | -0.2966 | 196.9502 |
| 671 | 0.5 | Extremo 2A | -1357.865 | 1.95    | -4.246  | -1.6567 | 1.8261  | 198.238  |
| 671 | 1   | Extremo 1A | -1357.865 | 11.002  | -4.246  | -1.6567 | 3.9489  | 195      |
| 671 | 0   | Extremo 1A | -1341.338 | -2.248  | -3.549  | 1.14    | 0.1028  | 186.5669 |
| 671 | 0.5 | Extremo 1A | -1341.338 | 6.804   | -3.549  | 1.14    | 1.8772  | 185.4279 |
| 671 | 1   | Extremo 2A | -1341.338 | 15.856  | -3.549  | 1.14    | 3.6516  | 179.7631 |
| 672 | 0   | Extremo 2A | -1353.506 | -4.706  | -6.685  | -2.44   | -1.428  | 193.2118 |
| 672 | 0.5 | Extremo 2A | -1353.506 | 4.346   | -6.685  | -2.44   | 1.9147  | 193.302  |
| 672 | 1   | Extremo 1A | -1353.506 | 13.397  | -6.685  | -2.44   | 5.2573  | 188.8663 |
| 672 | 0   | Extremo 1A | -1337.404 | 1.175   | -6.059  | 0.982   | -1.083  | 184.7464 |
| 672 | 0.5 | Extremo 1A | -1337.404 | 10.227  | -6.059  | 0.982   | 1.9466  | 181.8961 |
| 672 | 1   | Extremo 2A | -1337.404 | 19.278  | -6.059  | 0.982   | 4.9762  | 174.5198 |
| 673 | 0   | Extremo 2A | -1346.923 | -1.583  | -9.229  | -3.3129 | -2.5744 | 187.1085 |
| 673 | 0.5 | Extremo 2A | -1346.923 | 7.469   | -9.229  | -3.3129 | 2.04    | 185.6372 |
| 673 | 1   | Extremo 1A | -1346.923 | 16.52   | -9.229  | -3.3129 | 6.6543  | 179.6399 |
| 673 | 0   | Extremo 1A | -1331.212 | 4.944   | -8.655  | 0.5466  | -2.27   | 180.62   |
| 673 | 0.5 | Extremo 1A | -1331.212 | 13.996  | -8.655  | 0.5466  | 2.0577  | 175.885  |
| 673 | 1   | Extremo 2A | -1331.212 | 23.048  | -8.655  | 0.5466  | 6.3854  | 166.6241 |
| 674 | 0   | Extremo 2A | -1337.969 | 2.43    | -11.679 | -4.7377 | -3.6682 | 177.7804 |
| 674 | 0.5 | Extremo 2A | -1337.969 | 11.482  | -11.679 | -4.7377 | 2.1714  | 174.3022 |
| 674 | 1   | Extremo 1A | -1337.969 | 20.534  | -11.679 | -4.7377 | 8.0109  | 166.2982 |
| 674 | 0   | Extremo 1A | -1322.627 | 9.313   | -11.142 | -0.6035 | -3.3937 | 173.309  |
| 674 | 0.5 | Extremo 1A | -1322.627 | 18.365  | -11.142 | -0.6035 | 2.1772  | 166.3895 |
| 674 | 1   | Extremo 2A | -1322.627 | 27.417  | -11.142 | -0.6035 | 7.7481  | 154.9441 |
| 675 | 0   | Extremo 2A | -1326.965 | 7.187   | -13.639 | -6.8967 | -4.7188 | 162.9478 |
| 675 | 0.5 | Extremo 2A | -1326.965 | 16.239  | -13.639 | -6.8967 | 2.1007  | 157.0914 |
| 675 | 1   | Extremo 1A | -1326.965 | 25.291  | -13.639 | -6.8967 | 8.9203  | 146.709  |
| 675 | 0   | Extremo 1A | -1311.98  | 14.188  | -13.129 | -2.6218 | -4.4671 | 160.5259 |
| 675 | 0.5 | Extremo 1A | -1311.98  | 23.24   | -13.129 | -2.6218 | 2.0977  | 151.169  |
| 675 | 1   | Extremo 2A | -1311.98  | 32.291  | -13.129 | -2.6218 | 8.6624  | 137.2863 |
| 676 | 0   | Extremo 2A | -1315.048 | 10.721  | -15.679 | -6.8383 | -6.3111 | 140.0296 |
| 676 | 0.5 | Extremo 2A | -1315.048 | 19.773  | -15.679 | -6.8383 | 1.5282  | 132.4061 |
| 676 | 1   | Extremo 1A | -1315.048 | 28.825  | -15.679 | -6.8383 | 9.3675  | 120.2567 |
| 676 | 0   | Extremo 1A | -1300.403 | 17.499  | -15.191 | -2.5664 | -6.0722 |          |



|     |     |            |           |           |          |         |          |           |
|-----|-----|------------|-----------|-----------|----------|---------|----------|-----------|
| 680 | 0   | Extremo 2A | -1247.622 | 13.419    | -24.669  | -4.8336 | -10.2241 | 68.5308   |
| 680 | 0,5 | Extremo 2A | -1247.622 | 22.471    | -24.669  | -4.8336 | 2.1105   | 59.5581   |
| 680 | 1   | Extremo 1A | -1247.622 | 31.523    | -24.669  | -4.8336 | 14.4452  | 46.0596   |
| 680 | 0   | Extremo 1A | -1234.381 | 20.563    | -24.174  | -1.1299 | -10.0097 | 75.2515   |
| 680 | 0,5 | Extremo 1A | -1234.381 | 29.614    | -24.174  | -1.1299 | 2.0772   | 62.7072   |
| 680 | 1   | Extremo 2A | -1234.381 | 38.666    | -24.174  | -1.1299 | 14.1642  | 45.6372   |
| 681 | 0   | Extremo 2A | -1228.253 | 15.545    | -26.942  | -4.5983 | -11.8211 | 47.6825   |
| 681 | 0,5 | Extremo 2A | -1228.253 | 24.597    | -26.942  | -4.5983 | 1.6498   | 37.6471   |
| 681 | 1   | Extremo 1A | -1228.253 | 33.648    | -26.942  | -4.5983 | 15.1207  | 23.0858   |
| 681 | 0   | Extremo 1A | -1215.365 | 22.331    | -26.444  | -1.0179 | -11.605  | 55.2232   |
| 681 | 0,5 | Extremo 1A | -1215.365 | 31.383    | -26.444  | -1.0179 | 1.6167   | 41.7947   |
| 681 | 1   | Extremo 2A | -1215.365 | 40.435    | -26.444  | -1.0179 | 14.8385  | 23.8403   |
| 682 | 0   | Extremo 2A | -1206.34  | 14.077    | -30.562  | -3.7918 | -13.5747 | 27.5035   |
| 682 | 0,5 | Extremo 2A | -1206.34  | 23.129    | -30.562  | -3.7918 | 1.7061   | 18.202    |
| 682 | 1   | Extremo 1A | -1206.34  | 32.181    | -30.562  | -3.7918 | 16.9868  | 4.3745    |
| 682 | 0   | Extremo 1A | -1193.818 | 20.671    | -30.039  | -0.2665 | -13.3499 | 36.2397   |
| 682 | 0,5 | Extremo 1A | -1193.818 | 29.723    | -30.039  | -0.2665 | 1.6695   | 23.6413   |
| 682 | 1   | Extremo 2A | -1193.818 | 38.774    | -30.039  | -0.2665 | 16.689   | 6.5171    |
| 683 | 0   | Extremo 2A | -1182.149 | 13.732    | -34.606  | -3.7807 | -15.1121 | 9.299     |
| 683 | 0,5 | Extremo 2A | -1182.149 | 22.784    | -34.606  | -3.7807 | 2.1908   | 0.1699    |
| 683 | 1   | Extremo 1A | -1182.149 | 31.836    | -34.606  | -3.7807 | 19.4938  | -13.4852  |
| 683 | 0   | Extremo 1A | -1170.011 | 20.257    | -34.05   | -0.3253 | -14.8794 | 19.3154   |
| 683 | 0,5 | Extremo 1A | -1170.011 | 29.308    | -34.05   | -0.3253 | 2.1458   | 6.9241    |
| 683 | 1   | Extremo 2A | -1170.011 | 38.36     | -34.05   | -0.3253 | 19.1709  | -9.9231   |
| 684 | 0   | Extremo 2A | -1155.082 | 14.078    | -39.693  | -4.0228 | -17.0164 | -8.7682   |
| 684 | 0,5 | Extremo 2A | -1155.082 | 23.13     | -39.693  | -4.0228 | 2.8299   | -18.0703  |
| 684 | 1   | Extremo 1A | -1155.082 | 32.182    | -39.693  | -4.0228 | 22.6763  | -31.8983  |
| 684 | 0   | Extremo 1A | -1143.351 | 20.577    | -39.092  | -0.6682 | -16.772  | 2.4798    |
| 684 | 0,5 | Extremo 1A | -1143.351 | 29.629    | -39.092  | -0.6682 | 2.7741   | -10.0717  |
| 684 | 1   | Extremo 2A | -1143.351 | 38.681    | -39.092  | -0.6682 | 22.3202  | -27.1491  |
| 685 | 0   | Extremo 2A | -1123.515 | 14.273    | -46.32   | -3.9124 | -19.6063 | -27.1562  |
| 685 | 0,5 | Extremo 2A | -1123.515 | 23.325    | -46.32   | -3.9124 | 3.5536   | -36.5555  |
| 685 | 1   | Extremo 1A | -1123.515 | 32.376    | -46.32   | -3.9124 | 26.7134  | -50.4807  |
| 685 | 0   | Extremo 1A | -1112.232 | 20.8      | -45.659  | -0.748  | -19.3443 | -14.8342  |
| 685 | 0,5 | Extremo 1A | -1112.232 | 29.851    | -45.659  | -0.748  | 3.4853   | -27.497   |
| 685 | 1   | Extremo 2A | -1112.232 | 38.903    | -45.659  | -0.748  | 26.3148  | -44.6857  |
| 686 | 0   | Extremo 2A | -1085.393 | 13.933    | -54.573  | -3.0173 | -23.0524 | -44.568   |
| 686 | 0,5 | Extremo 2A | -1085.393 | 22.985    | -54.573  | -3.0173 | 4.2339   | -53.7973  |
| 686 | 1   | Extremo 1A | -1085.393 | 32.036    | -54.573  | -3.0173 | 31.5202  | -67.5525  |
| 686 | 0   | Extremo 1A | -1074.619 | 20.493    | -53.838  | -0.1954 | -22.7661 | -31.6099  |
| 686 | 0,5 | Extremo 1A | -1074.619 | 29.545    | -53.838  | -0.1954 | 4.1529   | -44.1193  |
| 686 | 1   | Extremo 2A | -1074.619 | 38.597    | -53.838  | -0.1954 | 31.0719  | -61.1546  |
| 687 | 0   | Extremo 2A | -1038.666 | 15.316    | -64.83   | -2.8326 | -27.8854 | -58.0891  |
| 687 | 0,5 | Extremo 2A | -1038.666 | 24.368    | -64.83   | -2.8326 | 4.5296   | -68.01    |
| 687 | 1   | Extremo 1A | -1038.666 | 33.42     | -64.83   | -2.8326 | 36.9446  | -82.4569  |
| 687 | 0   | Extremo 1A | -1028.483 | 21.372    | -64.007  | -0.2677 | -27.5638 | -45.3981  |
| 687 | 0,5 | Extremo 1A | -1028.483 | 30.423    | -64.007  | -0.2677 | 4.4397   | -58.3468  |
| 687 | 1   | Extremo 2A | -1028.483 | 39.475    | -64.007  | -0.2677 | 36.4431  | -75.8215  |
| 688 | 0   | Extremo 2A | -977.94   | 16.535    | -78.794  | -4.1531 | -34.1646 | -74.5724  |
| 688 | 0,5 | Extremo 2A | -977.94   | 25.586    | -78.794  | -4.1531 | 5.2326   | -85.1026  |
| 688 | 1   | Extremo 1A | -977.94   | 34.638    | -78.794  | -4.1531 | 44.6298  | -100.1588 |
| 688 | 0   | Extremo 1A | -968.485  | 21.797    | -77.848  | -1.7704 | -33.7934 | -61.8462  |
| 688 | 0,5 | Extremo 1A | -968.485  | 30.848    | -77.848  | -1.7704 | 5.1305   | -75.0074  |
| 688 | 1   | Extremo 2A | -968.485  | 39.9      | -77.848  | -1.7704 | 44.0544  | -92.6945  |
| 689 | 0   | Extremo 2A | -898.824  | 16.747    | -95.139  | -5.6907 | -41.059  | -94.2156  |
| 689 | 0,5 | Extremo 2A | -898.824  | 25.799    | -95.139  | -5.6907 | 6.5108   | -104.8521 |
| 689 | 1   | Extremo 1A | -898.824  | 34.851    | -95.139  | -5.6907 | 54.0805  | -120.0144 |
| 689 | 0   | Extremo 1A | -890.287  | 21.173    | -94.045  | -3.6436 | -40.6292 | -81.3317  |
| 689 | 0,5 | Extremo 1A | -890.287  | 30.225    | -94.045  | -3.6436 | 6.3936   | -94.1812  |
| 689 | 1   | Extremo 2A | -890.287  | 39.277    | -94.045  | -3.6436 | 53.4163  | -111.5566 |
| 690 | 0   | Extremo 2A | -797.922  | 12.727    | -111.259 | -6.8607 | -47.2905 | -116.9057 |
| 690 | 0,5 | Extremo 2A | -797.922  | 21.779    | -111.259 | -6.8607 | 8.3388   | -125.5322 |
| 690 | 1   | Extremo 1A | -797.922  | 30.831    | -111.259 | -6.8607 | 63.9681  | -138.6846 |
| 690 | 0   | Extremo 1A | -790.539  | 16.298    | -110.001 | -5.3084 | -46.7937 | -104.0119 |
| 690 | 0,5 | Extremo 1A | -790.539  | 25.349    | -110.001 | -5.3084 | 8.2067   | -114.4236 |
| 690 | 1   | Extremo 2A | -790.539  | 34.401    | -110.001 | -5.3084 | 63.2072  | -129.3612 |
| 691 | 0   | Extremo 2A | -681.637  | -0.001111 | -114.475 | -5.4189 | -49.0425 | -139.4568 |
| 691 | 0,5 | Extremo 2A | -681.637  | 9.051     | -114.475 | -5.4189 | 8.195    | -141.7192 |
| 691 | 1   | Extremo 1A | -681.637  | 18.102    | -114.475 | -5.4189 | 65.4324  | -148.5074 |
| 691 | 0   | Extremo 1A | -675.598  | 2.792     | -113.138 | -4.5468 | -48.4981 | -127.0003 |
| 691 | 0,5 | Extremo 1A | -675.598  | 11.844    | -113.138 | -4.5468 | 8.0709   | -130.6595 |
| 691 | 1   | Extremo 2A | -675.598  | 20.896    | -113.138 | -4.5468 | 64.6399  | -138.8445 |

|     |     |            |          |         |          |         |          |           |
|-----|-----|------------|----------|---------|----------|---------|----------|-----------|
| 692 | 0   | Extremo 2A | -581.212 | -12.808 | -104.438 | -0.6861 | -52.4404 | -147.356  |
| 692 | 0,5 | Extremo 2A | -581.212 | -3.756  | -104.438 | -0.6861 | -0.2216  | -143.2148 |
| 692 | 1   | Extremo 1A | -581.212 | 5.295   | -104.438 | -0.6861 | 51.9972  | -143.5995 |
| 692 | 0   | Extremo 1A | -576.383 | -11.353 | -103.128 | -0.3577 | -51.8302 | -136.3822 |
| 692 | 0,5 | Extremo 1A | -576.383 | -2.301  | -103.128 | -0.3577 | -0.2663  | -132.9687 |
| 692 | 1   | Extremo 2A | -576.383 | 6.751   | -103.128 | -0.3577 | 51.2976  | -134.081  |
| 693 | 0   | Extremo 2A | -479.053 | -25.064 | -111.285 | 2.5047  | -63.7669 | -148.7475 |
| 693 | 0,5 | Extremo 2A | -479.053 | -16.012 | -111.285 | 2.5047  | -8.1244  | -138.4786 |
| 693 | 1   | Extremo 1A | -479.053 | -6.96   | -111.285 | 2.5047  | 47.5181  | -132.7357 |
| 693 | 0   | Extremo 1A | -475.425 | -24.742 | -110.061 | 2.5784  | -63.1234 | -138.4981 |
| 693 | 0,5 | Extremo 1A | -475.425 | -15.69  | -110.061 | 2.5784  | -8.0931  | -128.3903 |
| 693 | 1   | Extremo 2A | -475.425 | -6.638  | -110.061 | 2.5784  | 46.9371  | -122.8083 |
| 694 | 0   | Extremo 2A | -367.028 | -33.944 | -105.155 | 2.7314  | -60.7321 | -139.1011 |
| 694 | 0,5 | Extremo 2A | -367.028 | -24.892 | -105.155 | 2.7314  | -8.1545  | -124.392  |
| 694 | 1   | Extremo 1A | -367.028 | -15.841 | -105.155 | 2.7314  | 44.423   | -114.2088 |
| 694 | 0   | Extremo 1A | -364.623 | -34.268 | -104.109 | 2.4913  | -60.167  | -129.3315 |
| 694 | 0,5 | Extremo 1A | -364.623 | -25.216 | -104.109 | 2.4913  | -8.1127  | -114.4605 |
| 694 | 1   | Extremo 2A | -364.623 | -16.164 | -104.109 | 2.4913  | 43.9417  | -104.1154 |
| 695 | 0   | Extremo 2A | -273.069 | -35.946 | -87.517  | 1.4378  | -50.1678 | -124.1164 |
| 695 | 0,5 | Extremo 2A | -273.069 | -26.895 | -87.517  | 1.4378  | -6.4094  | -108.4062 |
| 695 | 1   | Extremo 1A | -273.069 | -17.843 | -87.517  | 1.4378  | 37.349   | -97.2218  |
| 695 | 0   | Extremo 1A | -271.621 | -36.698 | -86.707  | 0.9692  | -49.7308 | -114.8311 |
| 695 | 0,5 | Extremo 1A | -271.621 | -27.646 | -86.707  | 0.9692  | -6.3773  | -98.7453  |
| 695 | 1   | Extremo 2A | -271.621 | -18.594 | -86.707  | 0.9692  | 36.9763  | -87.1853  |
| 696 | 0   | Extremo 2A | -202.356 | -34.716 | -69.854  | -0.0701 | -40.0832 | -109.2451 |
| 696 | 0,5 | Extremo 2A | -202.356 | -25.665 | -69.854  | -0.0701 | -5.1564  | -94.1499  |
| 696 | 1   | Extremo 1A | -202.356 | -16.613 | -69.854  | -0.0701 | 29.7704  | -83.5805  |
| 696 | 0   | Extremo 1A | -201.575 | -35.841 | -69.25   | -0.644  | -39.7603 | -100.4193 |
| 696 | 0,5 | Extremo 1A | -201.575 | -26.79  | -69.25   | -0.644  | -5.1353  | -84.7615  |
| 696 | 1   | Extremo 2A | -201.575 | -17.738 | -69.25   | -0.644  | 29.4898  | -73.6295  |
| 697 | 0   | Extremo 2A | -150.995 | -32.668 | -54.966  | -1.6414 | -31.7545 | -97.4443  |
| 697 | 0,5 | Extremo 2A | -150.995 | -23.616 | -54.966  | -1.6414 | -4.2713  | -83.3735  |
| 697 | 1   | Extremo 1A | -150.995 | -14.564 | -54.966  | -1.6414 | 23.2119  | -73.8285  |
| 697 | 0   | Extremo 1A | -150.653 | -34.176 | -54.534  | -2.1931 | -31.5282 | -88.8497  |
| 697 | 0,5 | Extremo 1A | -150.653 | -25.124 | -54.534  | -2.1931 | -4.2612  | -74.0246  |
| 697 | 1   | Extremo 2A | -150.653 | -16.072 | -54.534  | -2.1931 | 23.0058  | -63.7255  |
| 698 | 0   | Extremo 2A | -113.683 | -31.3   | -43.565  | -1.5535 | -25.2059 | -89.9765  |
| 698 | 0,5 | Extremo 2A | -113.683 | -22.248 | -43.565  | -1.5535 | -3.4235  | -76.5895  |
| 698 | 1   | Extremo 1A | -113.683 | -13.196 | -43.565  | -1.5535 | 18.359   | -67.7284  |
| 698 | 0   | Extremo 1A | -113.611 | -32.914 | -43.272  | -2.1959 | -25.0585 | -81.0571  |
| 698 | 0,5 | Extremo 1A | -113.611 | -23.862 | -43.272  | -2.1959 | -3.4226  | -66.8631  |
| 698 | 1   | Extremo 2A | -113.611 | -14.81  | -43.272  | -2.1959 | 18.2133  | -57.1951  |
| 699 | 0   | Extremo 2A | -86.399  | -31.717 | -34.138  | -0.4537 | -19.743  | -79.8226  |
| 699 | 0,5 | Extremo 2A | -86.399  | -22.666 | -34.138  | -0.4537 | -2.674   | -66.2268  |
| 699 | 1   | Extremo 1A | -86.399  | -13.614 | -34.138  | -0.4537 | 14.3949  | -57.1569  |
| 699 | 0   | Extremo 1A | -86.479  | -33.151 | -33.952  | -1.2949 | -19.6562 | -70.9748  |
| 699 | 0,5 | Extremo 1A | -86.479  | -24.099 | -33.952  | -1.2949 | -2.6802  | -56.6624  |
| 699 | 1   | Extremo 2A | -86.479  | -15.047 | -33.952  | -1.2949 | 14.2959  | -46.8759  |
| 700 | 0   | Extremo 2A | -66.23   | -31.305 | -26.723  | -0.2158 | -15.4634 | -67.7106  |
| 700 | 0,5 | Extremo 2A | -66.23   | -22.253 | -26.723  | -0.2158 | -2.1021  | -54.3211  |
| 700 | 1   | Extremo 1A | -66.23   | -13.201 | -26.723  | -0.2158 | 11.2592  | -45.4574  |



|     |     |            |         |         |         |         |         |          |
|-----|-----|------------|---------|---------|---------|---------|---------|----------|
| 704 | 0   | Extremo 2A | -24.043 | -26.038 | -10.205 | -1.5809 | -5.9278 | -27.9067 |
| 704 | 0.5 | Extremo 2A | -24.043 | -16.986 | -10.205 | -1.5809 | -0.8252 | -17.1508 |
| 704 | 1   | Extremo 1A | -24.043 | -7.934  | -10.205 | -1.5809 | 4.2774  | -10.9208 |
| 704 | 0   | Extremo 1A | -24.078 | -27.735 | -10.28  | -2.4386 | -5.9867 | -21.0211 |
| 704 | 0.5 | Extremo 1A | -24.078 | -18.683 | -10.28  | -2.4386 | -0.8467 | -9.4166  |
| 704 | 1   | Extremo 2A | -24.078 | -9.631  | -10.28  | -2.4386 | 4.2933  | -2.3379  |
| 705 | 0   | Extremo 2A | -18.719 | -24.491 | -8.051  | -1.2414 | -4.6564 | -19.9188 |
| 705 | 0.5 | Extremo 2A | -18.719 | -15.439 | -8.051  | -1.2414 | -0.631  | -9.9361  |
| 705 | 1   | Extremo 1A | -18.719 | -6.388  | -8.051  | -1.2414 | 3.3944  | -4.4793  |
| 705 | 0   | Extremo 1A | -18.671 | -26.006 | -8.143  | -2.2721 | -4.7232 | -13.3229 |
| 705 | 0.5 | Extremo 1A | -18.671 | -16.954 | -8.143  | -2.2721 | -0.6517 | -2.583   |
| 705 | 1   | Extremo 2A | -18.671 | -7.902  | -8.143  | -2.2721 | 3.4197  | 3.631    |
| 706 | 0   | Extremo 2A | -14.543 | -22.863 | -6.367  | -1.2502 | -3.6728 | -12.3995 |
| 706 | 0.5 | Extremo 2A | -14.543 | -13.811 | -6.367  | -1.2502 | -0.4894 | -3.2309  |
| 706 | 1   | Extremo 1A | -14.543 | -4.759  | -6.367  | -1.2502 | 2.6941  | 1.4117   |
| 706 | 0   | Extremo 1A | -14.405 | -24.255 | -6.467  | -2.3509 | -3.7429 | -6.4395  |
| 706 | 0.5 | Extremo 1A | -14.405 | -15.203 | -6.467  | -2.3509 | -0.5096 | 3.425    |
| 706 | 1   | Extremo 2A | -14.405 | -6.151  | -6.467  | -2.3509 | 2.7237  | 8.7637   |
| 707 | 0   | Extremo 2A | -11.241 | -21.265 | -5.06   | -1.3985 | -2.9134 | -5.9945  |
| 707 | 0.5 | Extremo 2A | -11.241 | -12.214 | -5.06   | -1.3985 | -0.3833 | 2.3753   |
| 707 | 1   | Extremo 1A | -11.241 | -3.162  | -5.06   | -1.3985 | 2.1469  | 6.2192   |
| 707 | 0   | Extremo 1A | -11.012 | -22.613 | -5.16   | -2.4846 | -2.9838 | -0.7908  |
| 707 | 0.5 | Extremo 1A | -11.012 | -13.561 | -5.16   | -2.4846 | -0.4036 | 8.2527   |
| 707 | 1   | Extremo 2A | -11.012 | -4.509  | -5.16   | -2.4846 | 2.1766  | 12.7702  |
| 708 | 0   | Extremo 2A | -8.613  | -19.936 | -4.057  | -1.3932 | -2.3342 | -0.7309  |
| 708 | 0.5 | Extremo 2A | -8.613  | -10.884 | -4.057  | -1.3932 | -0.3058 | 6.9743   |
| 708 | 1   | Extremo 1A | -8.613  | -1.833  | -4.057  | -1.3932 | 1.7227  | 10.1536  |
| 708 | 0   | Extremo 1A | -8.298  | -21.288 | -4.153  | -2.4137 | -2.4032 | 3.772    |
| 708 | 0.5 | Extremo 1A | -8.298  | -12.237 | -4.153  | -2.4137 | -0.3269 | 12.1532  |
| 708 | 1   | Extremo 2A | -8.298  | -3.185  | -4.153  | -2.4137 | 1.7494  | 16.0086  |
| 709 | 0   | Extremo 2A | -6.474  | -16.571 | -3.339  | -1.3893 | -1.9032 | 4.487    |
| 709 | 0.5 | Extremo 2A | -6.474  | -7.519  | -3.339  | -1.3893 | -0.2336 | 10.5094  |
| 709 | 1   | Extremo 1A | -6.474  | 1.533   | -3.339  | -1.3893 | 1.4359  | 12.0058  |
| 709 | 0   | Extremo 1A | -6.08   | -17.906 | -3.428  | -2.4101 | -1.9687 | 8.4925   |
| 709 | 0.5 | Extremo 1A | -6.08   | -8.854  | -3.428  | -2.4101 | -0.2548 | 15.1823  |
| 709 | 1   | Extremo 2A | -6.08   | 0.198   | -3.428  | -2.4101 | 1.4591  | 17.3463  |
| 710 | 0   | Extremo 2A | -4.718  | -13.048 | -2.758  | -1.4516 | -1.5478 | 7.6087   |
| 710 | 0.5 | Extremo 2A | -4.718  | -3.996  | -2.758  | -1.4516 | -0.1689 | 11.8697  |
| 710 | 1   | Extremo 1A | -4.718  | 0.556   | -2.758  | -1.4516 | 1.2101  | 11.6048  |
| 710 | 0   | Extremo 1A | -4.266  | -14.187 | -2.824  | -2.519  | -1.6018 | 10.9528  |
| 710 | 0.5 | Extremo 1A | -4.266  | -5.135  | -2.824  | -2.519  | -0.1896 | 15.7834  |
| 710 | 1   | Extremo 2A | -4.266  | 3.916   | -2.824  | -2.519  | 1.2225  | 16.0882  |
| 711 | 0   | Extremo 2A | -3.267  | -9.586  | -2.318  | -1.5211 | -1.2726 | 8.5118   |
| 711 | 0.5 | Extremo 2A | -3.267  | -0.534  | -2.318  | -1.5211 | -0.1137 | 11.0417  |
| 711 | 1   | Extremo 1A | -3.267  | 8.518   | -2.318  | -1.5211 | 1.0453  | 9.0457   |
| 711 | 0   | Extremo 1A | -2.791  | -10.487 | -2.351  | -2.5563 | -1.3101 | 11.0486  |
| 711 | 0.5 | Extremo 1A | -2.791  | -1.435  | -2.351  | -2.5563 | -0.1346 | 14.029   |
| 711 | 1   | Extremo 2A | -2.791  | 7.617   | -2.351  | -2.5563 | 1.0409  | 12.4834  |
| 712 | 0   | Extremo 2A | -2.056  | -6.78   | -1.977  | -1.5112 | -1.0399 | 6.9814   |
| 712 | 0.5 | Extremo 2A | -2.056  | 2.272   | -1.977  | -1.5112 | -0.0516 | 8.1086   |
| 712 | 1   | Extremo 1A | -2.056  | 11.323  | -1.977  | -1.5112 | 0.9367  | 4.7099   |
| 712 | 0   | Extremo 1A | -1.608  | -7.429  | -1.969  | -2.4464 | -1.0552 | 8.6649   |
| 712 | 0.5 | Extremo 1A | -1.608  | 1.622   | -1.969  | -2.4464 | -0.0708 | 10.1167  |
| 712 | 1   | Extremo 2A | -1.608  | 10.674  | -1.969  | -2.4464 | 0.9136  | 7.0425   |
| 713 | 0   | Extremo 2A | -1.068  | -6.114  | -1.629  | -0.6546 | -0.7758 | 3.1307   |
| 713 | 0.5 | Extremo 2A | -1.068  | 2.937   | -1.629  | -0.6546 | 0.0388  | 3.9249   |
| 713 | 1   | Extremo 1A | -1.068  | 11.989  | -1.629  | -0.6546 | 0.8534  | 0.1933   |
| 713 | 0   | Extremo 1A | -0.708  | -6.568  | -1.567  | -1.4012 | -0.754  | 3.9805   |
| 713 | 0.5 | Extremo 1A | -0.708  | 2.484   | -1.567  | -1.4012 | 0.0294  | 5.0015   |
| 713 | 1   | Extremo 2A | -0.708  | 11.536  | -1.567  | -1.4012 | 0.8128  | 1.4967   |
| 714 | 0   | Extremo 2A | -0.375  | -6.82   | -0.996  | 1.9803  | -0.3719 | 0.2842   |
| 714 | 0.5 | Extremo 2A | -0.375  | 2.232   | -0.996  | 1.9803  | 0.1259  | 1.431    |
| 714 | 1   | Extremo 1A | -0.375  | 11.284  | -0.996  | 1.9803  | 0.6237  | -1.9481  |
| 714 | 0   | Extremo 1A | -0.169  | -7.075  | -0.801  | 1.5686  | -0.2843 | 0.5585   |
| 714 | 0.5 | Extremo 1A | -0.169  | 1.977   | -0.801  | 1.5686  | 0.1163  | 1.8332   |
| 714 | 1   | Extremo 2A | -0.169  | 11.028  | -0.801  | 1.5686  | 0.5168  | -1.418   |
| 715 | 0   | Extremo 2A | 0.017   | -11.268 | -0.022  | -2.2821 | -0.0128 | -2.2952  |
| 715 | 0.5 | Extremo 2A | 0.017   | -3.596  | -0.022  | -2.2821 | -0.0016 | 1.4207   |
| 715 | 1   | Extremo 1A | 0.017   | 4.077   | -0.022  | -2.2821 | 0.0096  | 1.3003   |
| 715 | 0   | Extremo 1A | -0.055  | -11.268 | 0.061   | -2.2821 | 0.0387  | -2.2952  |
| 715 | 0.5 | Extremo 1A | -0.055  | -3.595  | 0.061   | -2.2821 | 0.0083  | 1.4207   |
| 715 | 1   | Extremo 2A | -0.055  | 4.077   | 0.061   | -2.2821 | -0.0221 | 1.3002   |

|     |     |            |        |        |           |         |           |          |
|-----|-----|------------|--------|--------|-----------|---------|-----------|----------|
| 716 | 0   | Extremo 2A | 0.034  | -9.103 | -0.012    | -1.3132 | -0.0064   | -0.1617  |
| 716 | 0.5 | Extremo 2A | 0.034  | -1.43  | -0.012    | -1.3132 | -0.000467 | 2.4714   |
| 716 | 1   | Extremo 1A | 0.034  | 6.242  | -0.012    | -1.3132 | 0.0055    | 1.2683   |
| 716 | 0   | Extremo 1A | -0.126 | -9.102 | 0.073     | -1.3133 | 0.0428    | -0.1618  |
| 716 | 0.5 | Extremo 1A | -0.126 | -1.43  | 0.073     | -1.3133 | 0.0062    | 2.4712   |
| 716 | 1   | Extremo 2A | -0.126 | 6.243  | 0.073     | -1.3133 | -0.0303   | 1.268    |
| 717 | 0   | Extremo 2A | 0.046  | -8.58  | -0.007135 | -0.444  | -0.0047   | 0.9832   |
| 717 | 0.5 | Extremo 2A | 0.046  | -0.907 | -0.007135 | -0.444  | -0.0012   | 3.3551   |
| 717 | 1   | Extremo 1A | 0.046  | 6.765  | -0.007135 | -0.444  | 0.0024    | 1.8907   |
| 717 | 0   | Extremo 1A | -0.207 | -8.58  | 0.073     | -0.4441 | 0.0413    | 0.9829   |
| 717 | 0.5 | Extremo 1A | -0.207 | -0.907 | 0.073     | -0.4441 | 0.0048    | 3.3547   |
| 717 | 1   | Extremo 2A | -0.207 | 6.765  | 0.073     | -0.4441 | -0.0317   | 1.8901   |
| 718 | 0   | Extremo 2A | 0.055  | -7.945 | -0.004378 | -0.1355 | -0.0037   | 1.9211   |
| 718 | 0.5 | Extremo 2A | 0.055  | -0.272 | -0.004378 | -0.1355 | -0.0015   | 3.9754   |
| 718 | 1   | Extremo 1A | 0.055  | 7.4    | -0.004378 | -0.1355 | 0.0006764 | 2.1933   |
| 718 | 0   | Extremo 1A | -0.289 | -7.944 | 0.066     | -0.1355 | 0.0368    | 1.9206   |
| 718 | 0.5 | Extremo 1A | -0.289 | -0.272 | 0.066     | -0.1355 | 0.0036    | 3.9747   |
| 718 | 1   | Extremo 2A | -0.289 | 7.401  | 0.066     | -0.1355 | -0.0295   | 2.1925   |
| 719 | 0   | Extremo 2A | 0.061  | -7.025 | -0.002028 | -0.1406 | -0.0026   | 2.2411   |
| 719 | 0.5 | Extremo 2A | 0.061  | 0.647  | -0.002028 | -0.1406 | -0.0016   | 3.8357   |
| 719 | 1   | Extremo 1A | 0.061  | 8.32   | -0.002028 | -0.1406 | -0.000562 | 1.594    |
| 719 | 0   | Extremo 1A | -0.365 | -7.025 | 0.058     | -0.1406 | 0.0319    | 2.2403   |
| 719 | 0.5 | Extremo 1A | -0.365 | 0.647  | 0.058     | -0.1406 | 0.0027    | 3.8347   |
| 719 | 1   | Extremo 2A | -0.365 | 8.32   | 0.058     | -0.1406 | -0.0264   | 1.5929   |
| 720 | 0   | Extremo 2A | 0.065  | -5.997 | -0.000458 | -0.3031 | -0.0018   | 1.6328   |
| 720 | 0.5 | Extremo 2A | 0.065  | 1.675  | -0.000458 | -0.3031 | -0.0016   | 2.7133   |
| 720 | 1   | Extremo 1A | 0.065  | 9.348  | -0.000458 | -0.3031 | -0.0013   | -0.0424  |
| 720 | 0   | Extremo 1A | -0.433 | -5.997 | 0.052     | -0.3032 | 0.0281    | 1.6317   |
| 720 | 0.5 | Extremo 1A | -0.433 | 1.675  | 0.052     | -0.3032 | 0.002     | 2.7121   |
| 720 | 1   | Extremo 2A | -0.433 | 9.348  | 0.052     | -0.3032 | -0.0241   | -0.0438  |
| 721 | 0   | Extremo 2A | 0.066  | -5.026 | 8.471E-05 | -0.6093 | -0.0015   | -0.0822  |
| 721 | 0.5 | Extremo 2A | 0.066  | 2.646  | 8.471E-05 | -0.6093 | -0.0015   | 0.5129   |
| 721 | 1   | Extremo 1A | 0.066  | 10.319 | 8.471E-05 | -0.6093 | -0.0015   | -2.7283  |
| 721 | 0   | Extremo 1A | -0.495 | -5.026 | 0.049     | -0.6094 | 0.0257    | -0.0836  |
| 721 | 0.5 | Extremo 1A | -0.495 | 2.646  | 0.049     | -0.6094 | 0.0014    | 0.5113   |
| 721 | 1   | Extremo 2A | -0.495 | 10.319 | 0.049     | -0.6094 | -0.0229   | -2.73    |
| 722 | 0   | Extremo 2A | 0.067  | -4.466 | -7.32E-05 | -1.0062 | -0.0013   | -3.0815  |
| 722 | 0.5 | Extremo 2A | 0.067  | 3.207  | -7.32E-05 | -1.0062 | -0.0012   | -2.7668  |
| 722 | 1   | Extremo 1A | 0.067  | 10.879 | -7.32E-05 | -1.0062 | -0.0012   | -6.2883  |
| 722 | 0   | Extremo 1A | -0.553 | -4.465 | 0.047     | -1.0063 | 0.0242    | -3.0832  |
| 722 | 0.5 | Extremo 1A | -0.553 | 3.207  | 0.047     | -1.0063 | 0.0008068 | -2.7686  |
| 722 | 1   | Extremo 2A | -0.553 | 10.88  | 0.047     | -1.0063 | -0.0225   | -6.2903  |
| 723 | 0   | Extremo 2A | 0.065  | -5.076 | 0.0009861 | -1.1364 | 5.724E-05 | -7.2766  |
| 723 | 0.5 | Extremo 2A | 0.065  | 2.596  | 0.0009861 | -1.1364 | -0.000436 | -6.6565  |
| 723 | 1   | Extremo 1A | 0.065  | 10.269 | 0.0009861 | -1.1364 | -0.000929 | -9.8727  |
| 723 | 0   | Extremo 1A | -0.607 | -5.076 | 0.044     | -1.1365 | 0.0222    | -7.2787  |
| 723 | 0.5 | Extremo 1A | -0.607 | 2.596  | 0.044     | -1.1365 | 0.000269  | -6.6587  |
| 723 | 1   | Extremo 2A | -0.607 | 10.269 | 0.044     | -1.1365 | -0.0216   | -9.8749  |
| 724 | 0   | Extremo 2A | 0.055  | -7.26  | 0.0098    | -0.4096 | 0.0057    | -11.2116 |
| 724 | 0.5 | Extremo 2A | 0.055  | 0.412  | 0.0098    | -0.4096 | 0.0008322 | -9.4997  |
| 724 | 1   | Extremo 1A | 0.055  | 8.085  | 0.0098    | -0.4096 | -0.0041   | -11.6241 |
| 724 | 0   | Extremo 1A | -0.653 | -7.26  | 0.035     | -0.4096 | 0.0182    | -11.214  |
| 724 | 0.5 | Extremo 1A | -0.653 | 0.412  | 0.035     | -0.4096 | 0.0005278 | -9.502   |
| 724 | 1   | Extremo 2A | -0.653 | 8.085  | 0.035     | -0.4096 | -0.0171   | -11.6263 |
| 725 | 0   | Extremo 2A | 0.029  | -8.85  | 0.034     | 0.7005  | 0.0166    | -11.4804 |
| 725 | 0.5 | Extremo 2A | 0.029  | -1.177 | 0.034     | 0.7005  | -0.000167 | -8.9736  |
| 725 | 1   | Extremo 1A | 0.029  | 6.495  | 0.034     | 0.7005  | -0.017    | -10.3031 |
| 725 | 0   | Ext        |        |        |           |         |           |          |



|     |     |            |        |         |          |         |           |          |
|-----|-----|------------|--------|---------|----------|---------|-----------|----------|
| 728 | 0   | Extremo 2A | -0.097 | -11.145 | 0.043    | 0.8369  | 0.0161    | 0.5159   |
| 728 | 0.5 | Extremo 2A | -0.097 | -3.472  | 0.043    | 0.8369  | -0.0052   | 4.1702   |
| 728 | 1   | Extremo 1A | -0.097 | 4.2     | 0.043    | 0.8369  | -0.0265   | 3.9883   |
| 728 | 0   | Extremo 1A | -0.766 | -11.146 | 0.015    | 0.8369  | 0.0113    | 0.5154   |
| 728 | 0.5 | Extremo 1A | -0.766 | -3.473  | 0.015    | 0.8369  | 0.004     | 4.1702   |
| 728 | 1   | Extremo 2A | -0.766 | 4.199   | 0.015    | 0.8369  | -0.0033   | 3.9887   |
| 729 | 0   | Extremo 2A | -0.146 | -10.226 | 0.044    | 0.4892  | 0.016     | 4.2077   |
| 729 | 0.5 | Extremo 2A | -0.146 | -2.554  | 0.044    | 0.4892  | -0.0058   | 7.4026   |
| 729 | 1   | Extremo 1A | -0.146 | 5.119   | 0.044    | 0.4892  | -0.0277   | 6.7612   |
| 729 | 0   | Extremo 1A | -0.783 | -10.227 | 0.009413 | 0.4892  | 0.0086    | 4.208    |
| 729 | 0.5 | Extremo 1A | -0.783 | -2.554  | 0.009413 | 0.4892  | 0.0039    | 7.4033   |
| 729 | 1   | Extremo 2A | -0.783 | 5.118   | 0.009413 | 0.4892  | -0.00081  | 6.7623   |
| 730 | 0   | Extremo 2A | -0.195 | -9.249  | 0.045    | 0.265   | 0.0159    | 6.8515   |
| 730 | 0.5 | Extremo 2A | -0.195 | -1.577  | 0.045    | 0.265   | -0.0064   | 9.558    |
| 730 | 1   | Extremo 1A | -0.195 | 6.096   | 0.045    | 0.265   | -0.0287   | 8.4283   |
| 730 | 0   | Extremo 1A | -0.794 | -9.25   | 0.005418 | 0.265   | 0.0065    | 6.8525   |
| 730 | 0.5 | Extremo 1A | -0.794 | -1.578  | 0.005418 | 0.265   | 0.0038    | 9.5594   |
| 730 | 1   | Extremo 2A | -0.794 | 6.095   | 0.005418 | 0.265   | 0.0011    | 8.4301   |
| 731 | 0   | Extremo 2A | -0.246 | -8.291  | 0.045    | 0.1135  | 0.0155    | 8.4788   |
| 731 | 0.5 | Extremo 2A | -0.246 | -0.618  | 0.045    | 0.1135  | -0.0069   | 10.7062  |
| 731 | 1   | Extremo 1A | -0.246 | 7.054   | 0.045    | 0.1135  | -0.0294   | 9.0973   |
| 731 | 0   | Extremo 1A | -0.8   | -8.292  | 0.002886 | 0.1135  | 0.0051    | 8.4806   |
| 731 | 0.5 | Extremo 1A | -0.8   | -0.619  | 0.002886 | 0.1135  | 0.0037    | 10.7083  |
| 731 | 1   | Extremo 2A | -0.8   | 7.053   | 0.002886 | 0.1135  | 0.0023    | 9.0998   |
| 732 | 0   | Extremo 2A | -0.296 | -7.348  | 0.045    | -0.0096 | 0.0149    | 9.1297   |
| 732 | 0.5 | Extremo 2A | -0.296 | 0.324   | 0.045    | -0.0096 | -0.0075   | 10.8856  |
| 732 | 1   | Extremo 1A | -0.296 | 7.997   | 0.045    | -0.0096 | -0.0299   | 8.8052   |
| 732 | 0   | Extremo 1A | -0.805 | -7.349  | 0.001869 | -0.0096 | 0.0045    | 9.1321   |
| 732 | 0.5 | Extremo 1A | -0.805 | 0.324   | 0.001869 | -0.0096 | 0.0036    | 10.8884  |
| 732 | 1   | Extremo 2A | -0.805 | 7.996   | 0.001869 | -0.0096 | 0.0027    | 8.8085   |
| 733 | 0   | Extremo 2A | -0.346 | -6.402  | 0.044    | -0.1327 | 0.014     | 8.8235   |
| 733 | 0.5 | Extremo 2A | -0.346 | 1.27    | 0.044    | -0.1327 | -0.008    | 10.1066  |
| 733 | 1   | Extremo 1A | -0.346 | 8.943   | 0.044    | -0.1327 | -0.03     | 7.5535   |
| 733 | 0   | Extremo 1A | -0.809 | -6.403  | 0.002356 | -0.1327 | 0.0047    | 8.8267   |
| 733 | 0.5 | Extremo 1A | -0.809 | 1.269   | 0.002356 | -0.1327 | 0.0035    | 10.1102  |
| 733 | 1   | Extremo 2A | -0.809 | 8.942   | 0.002356 | -0.1327 | 0.0023    | 7.5574   |
| 734 | 0   | Extremo 2A | -0.395 | -5.436  | 0.043    | -0.2866 | 0.0129    | 7.5581   |
| 734 | 0.5 | Extremo 2A | -0.395 | 2.237   | 0.043    | -0.2866 | -0.0085   | 8.3578   |
| 734 | 1   | Extremo 1A | -0.395 | 9.909   | 0.043    | -0.2866 | -0.0299   | 5.3213   |
| 734 | 0   | Extremo 1A | -0.815 | -5.437  | 0.004319 | -0.2866 | 0.0056    | 7.5619   |
| 734 | 0.5 | Extremo 1A | -0.815 | 2.236   | 0.004319 | -0.2866 | 0.0034    | 8.3621   |
| 734 | 1   | Extremo 2A | -0.815 | 9.908   | 0.004319 | -0.2866 | 0.0012    | 5.326    |
| 735 | 0   | Extremo 2A | -0.442 | -4.445  | 0.041    | -0.522  | 0.0114    | 5.2917   |
| 735 | 0.5 | Extremo 2A | -0.442 | 3.227   | 0.041    | -0.522  | -0.009    | 5.5963   |
| 735 | 1   | Extremo 1A | -0.442 | 10.9    | 0.041    | -0.522  | -0.0293   | 2.0645   |
| 735 | 0   | Extremo 1A | -0.824 | -4.446  | 0.007665 | -0.522  | 0.0072    | 5.2963   |
| 735 | 0.5 | Extremo 1A | -0.824 | 3.226   | 0.007665 | -0.522  | 0.0033    | 5.6013   |
| 735 | 1   | Extremo 2A | -0.824 | 10.899  | 0.007665 | -0.522  | -0.000508 | 2.0699   |
| 736 | 0   | Extremo 2A | -0.487 | -3.52   | 0.038    | -0.8979 | 0.0098    | 1.9011   |
| 736 | 0.5 | Extremo 2A | -0.487 | 4.153   | 0.038    | -0.8979 | -0.0094   | 1.7428   |
| 736 | 1   | Extremo 1A | -0.487 | 11.825  | 0.038    | -0.8979 | -0.0285   | -2.2518  |
| 736 | 0   | Extremo 1A | -0.837 | -3.52   | 0.012    | -0.8977 | 0.0093    | 1.9065   |
| 736 | 0.5 | Extremo 1A | -0.837 | 4.152   | 0.012    | -0.8977 | 0.0032    | 1.7486   |
| 736 | 1   | Extremo 2A | -0.837 | 11.825  | 0.012    | -0.8977 | -0.0028   | -2.2456  |
| 737 | 0   | Extremo 2A | -0.53  | -3.045  | 0.035    | -1.3657 | 0.0083    | -2.8143  |
| 737 | 0.5 | Extremo 2A | -0.53  | 4.627   | 0.035    | -1.3657 | -0.0095   | -3.2098  |
| 737 | 1   | Extremo 1A | -0.53  | 12.3    | 0.035    | -1.3657 | -0.0272   | -7.4416  |
| 737 | 0   | Extremo 1A | -0.856 | -3.046  | 0.017    | -1.3654 | 0.0115    | -2.808   |
| 737 | 0.5 | Extremo 1A | -0.856 | 4.627   | 0.017    | -1.3654 | 0.0032    | -3.2032  |
| 737 | 1   | Extremo 2A | -0.856 | 12.299  | 0.017    | -1.3654 | -0.0051   | -7.4347  |
| 738 | 0   | Extremo 2A | -0.573 | -3.904  | 0.035    | -1.5135 | 0.0086    | -8.7568  |
| 738 | 0.5 | Extremo 2A | -0.573 | 3.768   | 0.035    | -1.5135 | -0.0088   | -8.7227  |
| 738 | 1   | Extremo 1A | -0.573 | 11.441  | 0.035    | -1.5135 | -0.0262   | -12.5249 |
| 738 | 0   | Extremo 1A | -0.877 | -3.905  | 0.019    | -1.5132 | 0.0125    | -8.7495  |
| 738 | 0.5 | Extremo 1A | -0.877 | 3.768   | 0.019    | -1.5132 | 0.0031    | -8.7154  |
| 738 | 1   | Extremo 2A | -0.877 | 11.44   | 0.019    | -1.5132 | -0.0062   | -12.5175 |
| 739 | 0   | Extremo 2A | -0.624 | -6.567  | 0.044    | -0.6608 | 0.0149    | -14.2464 |
| 739 | 0.5 | Extremo 2A | -0.624 | 1.105   | 0.044    | -0.6608 | -0.0074   | -12.8808 |
| 739 | 1   | Extremo 1A | -0.624 | 8.778   | 0.044    | -0.6608 | -0.0296   | -15.3514 |
| 739 | 0   | Extremo 1A | -0.896 | -6.567  | 0.015    | -0.6607 | 0.0115    | -14.2385 |
| 739 | 0.5 | Extremo 1A | -0.896 | 1.106   | 0.015    | -0.6607 | 0.004     | -12.8732 |
| 739 | 1   | Extremo 2A | -0.896 | 8.778   | 0.015    | -0.6607 | -0.0035   | -15.3442 |

|     |     |            |        |         |           |           |           |          |
|-----|-----|------------|--------|---------|-----------|-----------|-----------|----------|
| 740 | 0   | Extremo 2A | -0.693 | -8.538  | 0.075     | 0.6422    | 0.0287    | -15.3491 |
| 740 | 0.5 | Extremo 2A | -0.693 | -0.865  | 0.075     | 0.6422    | -0.0089   | -12.9984 |
| 740 | 1   | Extremo 1A | -0.693 | 6.807   | 0.075     | 0.6422    | -0.0464   | -14.484  |
| 740 | 0   | Extremo 1A | -0.908 | -8.536  | 0.011     | 0.642     | 0.0115    | -15.3417 |
| 740 | 0.5 | Extremo 1A | -0.908 | -0.864  | 0.011     | 0.642     | 0.0059    | -12.9917 |
| 740 | 1   | Extremo 2A | -0.908 | 6.809   | 0.011     | 0.642     | 0.0002969 | -14.478  |
| 741 | 0   | Extremo 2A | -0.778 | -11.201 | 0.083     | 1.4951    | 0.0287    | -12.7577 |
| 741 | 0.5 | Extremo 2A | -0.778 | -3.528  | 0.083     | 1.4951    | -0.0127   | -9.0754  |
| 741 | 1   | Extremo 1A | -0.778 | 4.144   | 0.083     | 1.4951    | -0.0541   | -9.2295  |
| 741 | 0   | Extremo 1A | -0.922 | -11.198 | 0.013     | 1.4947    | 0.0137    | -12.752  |
| 741 | 0.5 | Extremo 1A | -0.922 | -3.526  | 0.013     | 1.4947    | 0.0074    | -9.0709  |
| 741 | 1   | Extremo 2A | -0.922 | 4.147   | 0.013     | 1.4947    | 0.001     | -9.2261  |
| 742 | 0   | Extremo 2A | -0.869 | -12.06  | 0.084     | 1.3476    | 0.0268    | -7.9092  |
| 742 | 0.5 | Extremo 2A | -0.869 | -4.387  | 0.084     | 1.3476    | -0.0151   | -3.7976  |
| 742 | 1   | Extremo 1A | -0.869 | 3.285   | 0.084     | 1.3476    | -0.057    | -3.5221  |
| 742 | 0   | Extremo 1A | -0.938 | -12.057 | 0.01      | 1.3473    | 0.013     | -7.906   |
| 742 | 0.5 | Extremo 1A | -0.938 | -4.384  | 0.01      | 1.3473    | 0.0077    | -3.7957  |
| 742 | 1   | Extremo 2A | -0.938 | 3.288   | 0.01      | 1.3473    | 0.0025    | -3.5216  |
| 743 | 0   | Extremo 2A | -0.962 | -11.585 | 0.084     | 0.8805    | 0.0256    | -2.9541  |
| 743 | 0.5 | Extremo 2A | -0.962 | -3.912  | 0.084     | 0.8805    | -0.0165   | 0.9202   |
| 743 | 1   | Extremo 1A | -0.962 | 3.76    | 0.084     | 0.8805    | -0.0586   | 0.9583   |
| 743 | 0   | Extremo 1A | -0.949 | -11.582 | 0.006058  | 0.8803    | 0.0108    | -2.9534  |
| 743 | 0.5 | Extremo 1A | -0.949 | -3.909  | 0.006058  | 0.8803    | 0.0078    | 0.9194   |
| 743 | 1   | Extremo 2A | -0.949 | 3.763   | 0.006058  | 0.8803    | 0.0048    | 0.956    |
| 744 | 0   | Extremo 2A | -1.058 | -10.659 | 0.085     | 0.5057    | 0.0247    | 1.1281   |
| 744 | 0.5 | Extremo 2A | -1.058 | -2.986  | 0.085     | 0.5057    | -0.0177   | 4.5393   |
| 744 | 1   | Extremo 1A | -1.058 | 4.686   | 0.085     | 0.5057    | -0.0601   | 4.1142   |
| 744 | 0   | Extremo 1A | -0.956 | -10.656 | 0.00173   | 0.5056    | 0.0087    | 1.1261   |
| 744 | 0.5 | Extremo 1A | -0.956 | -2.983  | 0.00173   | 0.5056    | 0.0078    | 4.5358   |
| 744 | 1   | Extremo 2A | -0.956 | 4.689   | 0.00173   | 0.5056    | 0.007     | 4.1093   |
| 745 | 0   | Extremo 2A | -1.154 | -9.667  | 0.085     | 0.272     | 0.0238    | 4.1516   |
| 745 | 0.5 | Extremo 2A | -1.154 | -1.995  | 0.085     | 0.272     | -0.0188   | 7.0671   |
| 745 | 1   | Extremo 1A | -1.154 | 5.678   | 0.085     | 0.272     | -0.0613   | 6.1463   |
| 745 | 0   | Extremo 1A | -0.958 | -9.664  | -0.001617 | 0.272     | 0.007     | 4.147    |
| 745 | 0.5 | Extremo 1A | -0.958 | -1.992  | -0.001617 | 0.272     | 0.0078    | 7.061    |
| 745 | 1   | Extremo 2A | -0.958 | 5.681   | -0.001617 | 0.272     | 0.0086    | 6.1388   |
| 746 | 0   | Extremo 2A | -1.251 | -8.699  | 0.085     | 0.1206    | 0.0227    | 6.1519   |
| 746 | 0.5 | Extremo 2A | -1.251 | -1.026  | 0.085     | 0.1206    | -0.0198   | 8.5832   |
| 746 | 1   | Extremo 1A | -1.251 | 6.646   | 0.085     | 0.1206    | -0.0624   | 7.1782   |
| 746 | 0   | Extremo 1A | -0.957 | -8.696  | -0.003666 | 0.1206    | 0.006     | 6.1447   |
| 746 | 0.5 | Extremo 1A | -0.957 | -1.023  | -0.003666 | 0.1206    | 0.0078    | 8.5745   |
| 746 | 1   | Extremo 2A | -0.957 | 6.649   | -0.003666 | 0.1206    | 0.0097    | 7.1681   |
| 747 | 0   | Extremo 2A | -1.347 | -7.75   | 0.085     | 0.0009096 | 0.0215    | 7.174    |
| 747 | 0.5 | Extremo 2A | -1.347 | -0.078  | 0.085     | 0.0009096 | -0.0208   | 9.1311   |
| 747 | 1   | Extremo 1A | -1.347 | 7.595   | 0.085     | 0.0009096 | -0.0632   | 7.2518   |
| 747 | 0   | Extremo 1A | -0.954 | -7.747  | -0.004328 | 0.0008846 | 0.0056    | 7.1642   |
| 747 | 0.5 | Extremo 1A | -0.954 | -0.075  | -0.004328 | 0.0008846 | 0.0078    | 9.1198   |
| 747 | 1   | Extremo 2A | -0.954 | 7.598   | -0.004328 | 0.0008846 | 0.01      | 7.2391   |
| 748 | 0   | Extremo 2A | -1.442 | -6.802  | 0.084     | -0.1184   | 0.02      | 7.2395   |
| 748 | 0.5 | Extremo 2A | -1.442 | 0.87    | 0.084     | -0.1184   | -0.0219   | 8.7224   |
| 748 | 1   | Extremo 1A | -1.442 | 8.543   | 0.084     | -0.1184   | -0.0637   | 6.3692   |
| 748 | 0   | Extremo 1A | -0.952 | -6.799  | -0.003584 | -0.1184   | 0.006     | 7.2271   |
| 748 | 0.5 | Extremo 1A | -0.952 | 0.873   | -0.003584 | -0.1184   | 0.0078    | 8.7086   |
| 748 | 1   | Extremo 2A | -0.952 | 8.546   | -0.003584 | -0.1184   | 0.0096    | 6.3539   |
| 749 | 0   | Extremo 2A | -1.536 | -5.835  | 0.082     | -0.268    | 0.0182    | 6.3469   |
| 749 | 0.5 | Extremo 2A | -1.536 | 1.837   | 0.082     | -0.268    | -0.0228   | 7.3463   |
| 749 | 1   | Extremo 1A | -1.536 | 9.51    | 0.082     | -0.268    | -0.0639   | 4.5095   |
| 749 | 0   | Extremo 1A | -0.951 | -5.832  | -0.001446 | -0.2681   | 0.0       |          |



|     |     |            |        |         |           |           |         |          |
|-----|-----|------------|--------|---------|-----------|-----------|---------|----------|
| 752 | 0   | Extremo 2A | -1.805 | -3.428  | 0.074     | -1.3162   | 0.0118  | -2.8727  |
| 752 | 0.5 | Extremo 2A | -1.805 | 4.244   | 0.074     | -1.3162   | -0.0251 | -3.0766  |
| 752 | 1   | Extremo 1A | -1.805 | 11.917  | 0.074     | -1.3162   | -0.0621 | -7.1169  |
| 752 | 0   | Extremo 1A | -0.972 | -3.426  | 0.011     | -1.3172   | 0.0133  | -2.8964  |
| 752 | 0.5 | Extremo 1A | -0.972 | 4.247   | 0.011     | -1.3172   | 0.0078  | -3.1016  |
| 752 | 1   | Extremo 2A | -0.972 | 11.919  | 0.011     | -1.3172   | 0.0023  | -7.1431  |
| 753 | 0   | Extremo 2A | -1.893 | -4.231  | 0.073     | -1.4593   | 0.012   | -8.4097  |
| 753 | 0.5 | Extremo 2A | -1.893 | 3.442   | 0.073     | -1.4593   | -0.0247 | -8.2124  |
| 753 | 1   | Extremo 1A | -1.893 | 11.114  | 0.073     | -1.4593   | -0.0613 | -11.8513 |
| 753 | 0   | Extremo 1A | -0.987 | -4.23   | 0.013     | -1.4605   | 0.0146  | -8.4371  |
| 753 | 0.5 | Extremo 1A | -0.987 | 3.442   | 0.013     | -1.4605   | 0.008   | -8.2401  |
| 753 | 1   | Extremo 2A | -0.987 | 11.115  | 0.013     | -1.4605   | 0.0014  | -11.8794 |
| 754 | 0   | Extremo 2A | -1.99  | -6.783  | 0.085     | -0.6313   | 0.0194  | -13.5337 |
| 754 | 0.5 | Extremo 2A | -1.99  | 0.89    | 0.085     | -0.6313   | -0.0231 | -12.0604 |
| 754 | 1   | Extremo 1A | -1.99  | 8.562   | 0.085     | -0.6313   | -0.0656 | -14.4234 |
| 754 | 0   | Extremo 1A | -1.001 | -6.785  | 0.01      | -0.6318   | 0.0143  | -13.5634 |
| 754 | 0.5 | Extremo 1A | -1.001 | 0.887   | 0.01      | -0.6318   | 0.0091  | -12.0889 |
| 754 | 1   | Extremo 2A | -1.001 | 8.56    | 0.01      | -0.6318   | 0.0039  | -14.4506 |
| 755 | 0   | Extremo 2A | -2.11  | -8.662  | 0.123     | 0.6336    | 0.0363  | -14.4278 |
| 755 | 0.5 | Extremo 2A | -2.11  | -0.989  | 0.123     | 0.6336    | -0.0252 | -12.0149 |
| 755 | 1   | Extremo 1A | -2.11  | 6.683   | 0.123     | 0.6336    | -0.0866 | -13.4384 |
| 755 | 0   | Extremo 1A | -1.009 | -8.667  | 0.009736  | 0.6342    | 0.0159  | -14.4553 |
| 755 | 0.5 | Extremo 1A | -1.009 | -0.995  | 0.009736  | 0.6342    | 0.0111  | -12.0398 |
| 755 | 1   | Extremo 2A | -1.009 | 6.678   | 0.009736  | 0.6342    | 0.0062  | -13.4606 |
| 756 | 0   | Extremo 2A | -2.249 | -11.214 | 0.133     | 1.4615    | 0.0363  | -11.7648 |
| 756 | 0.5 | Extremo 2A | -2.249 | -3.541  | 0.133     | 1.4615    | -0.0302 | -8.076   |
| 756 | 1   | Extremo 1A | -2.249 | 4.131   | 0.133     | 1.4615    | -0.0966 | -8.2235  |
| 756 | 0   | Extremo 1A | -1.022 | -11.223 | 0.012     | 1.4629    | 0.0184  | -11.7861 |
| 756 | 0.5 | Extremo 1A | -1.022 | -3.55   | 0.012     | 1.4629    | 0.0123  | -8.0929  |
| 756 | 1   | Extremo 2A | -1.022 | 4.122   | 0.012     | 1.4629    | 0.0063  | -8.236   |
| 757 | 0   | Extremo 2A | -2.397 | -12.016 | 0.134     | 1.3184    | 0.0334  | -6.9395  |
| 757 | 0.5 | Extremo 2A | -2.397 | -4.344  | 0.134     | 1.3184    | -0.0335 | -2.8494  |
| 757 | 1   | Extremo 1A | -2.397 | 3.329   | 0.134     | 1.3184    | -0.1004 | -2.5956  |
| 757 | 0   | Extremo 1A | -1.037 | -12.027 | 0.009897  | 1.3195    | 0.0175  | -6.9517  |
| 757 | 0.5 | Extremo 1A | -1.037 | -4.354  | 0.009897  | 1.3195    | 0.0126  | -2.8563  |
| 757 | 1   | Extremo 2A | -1.037 | 3.318   | 0.009897  | 1.3195    | 0.0076  | -2.5973  |
| 758 | 0   | Extremo 2A | -2.547 | -11.526 | 0.134     | 0.8642    | 0.0313  | -2.0384  |
| 758 | 0.5 | Extremo 2A | -2.547 | -3.854  | 0.134     | 0.8642    | -0.0356 | 1.8067   |
| 758 | 1   | Extremo 1A | -2.547 | 3.819   | 0.134     | 0.8642    | -0.1026 | 1.8156   |
| 758 | 0   | Extremo 1A | -1.047 | -11.537 | 0.005434  | 0.8649    | 0.0153  | -2.0405  |
| 758 | 0.5 | Extremo 1A | -1.047 | -3.865  | 0.005434  | 0.8649    | 0.0126  | 1.81     |
| 758 | 1   | Extremo 2A | -1.047 | 3.808   | 0.005434  | 0.8649    | 0.0099  | 1.8244   |
| 759 | 0   | Extremo 2A | -2.699 | -10.6   | 0.134     | 0.4988    | 0.0297  | 1.9879   |
| 759 | 0.5 | Extremo 2A | -2.699 | -2.927  | 0.134     | 0.4988    | -0.0374 | 5.3695   |
| 759 | 1   | Extremo 1A | -2.699 | 4.745   | 0.134     | 0.4988    | -0.1045 | 4.9149   |
| 759 | 0   | Extremo 1A | -1.053 | -10.611 | 0.001022  | 0.4992    | 0.0131  | 1.9957   |
| 759 | 0.5 | Extremo 1A | -1.053 | -2.938  | 0.001022  | 0.4992    | 0.0126  | 5.3829   |
| 759 | 1   | Extremo 2A | -1.053 | 4.734   | 0.001022  | 0.4992    | 0.0121  | 4.9338   |
| 760 | 0   | Extremo 2A | -2.852 | -9.61   | 0.134     | 0.2695    | 0.0281  | 4.9589   |
| 760 | 0.5 | Extremo 2A | -2.852 | -1.938  | 0.134     | 0.2695    | -0.0391 | 7.8458   |
| 760 | 1   | Extremo 1A | -2.852 | 5.735   | 0.134     | 0.2695    | -0.1063 | 6.8965   |
| 760 | 0   | Extremo 1A | -1.055 | -9.621  | -0.002392 | 0.2697    | 0.0114  | 4.9767   |
| 760 | 0.5 | Extremo 1A | -1.055 | -1.949  | -0.002392 | 0.2697    | 0.0126  | 7.8691   |
| 760 | 1   | Extremo 2A | -1.055 | 5.724   | -0.002392 | 0.2697    | 0.0138  | 6.9253   |
| 761 | 0   | Extremo 2A | -3.004 | -8.643  | 0.134     | 0.1196    | 0.0263  | 6.9089   |
| 761 | 0.5 | Extremo 2A | -3.004 | -0.971  | 0.134     | 0.1196    | -0.0408 | 9.3125   |
| 761 | 1   | Extremo 1A | -3.004 | 6.702   | 0.134     | 0.1196    | -0.1079 | 7.8798   |
| 761 | 0   | Extremo 1A | -1.053 | -8.654  | -0.004498 | 0.1198    | 0.0104  | 6.9365   |
| 761 | 0.5 | Extremo 1A | -1.053 | -0.982  | -0.004498 | 0.1198    | 0.0126  | 9.3456   |
| 761 | 1   | Extremo 2A | -1.053 | 6.691   | -0.004498 | 0.1198    | 0.0149  | 7.9184   |
| 762 | 0   | Extremo 2A | -3.157 | -7.696  | 0.134     | 0.0001689 | 0.0244  | 7.8817   |
| 762 | 0.5 | Extremo 2A | -3.157 | -0.024  | 0.134     | 0.0001689 | -0.0424 | 9.8116   |
| 762 | 1   | Extremo 1A | -3.157 | 7.649   | 0.134     | 0.0001689 | -0.1092 | 7.9052   |
| 762 | 0   | Extremo 1A | -1.049 | -7.707  | -0.005211 | 0.0002732 | 0.01    | 7.919    |
| 762 | 0.5 | Extremo 1A | -1.049 | -0.035  | -0.005211 | 0.0002732 | 0.0126  | 9.8544   |
| 762 | 1   | Extremo 2A | -1.049 | 7.638   | -0.005211 | 0.0002732 | 0.0152  | 7.9535   |
| 763 | 0   | Extremo 2A | -3.308 | -6.749  | 0.132     | -0.1191   | 0.0222  | 7.898    |
| 763 | 0.5 | Extremo 2A | -3.308 | 0.924   | 0.132     | -0.1191   | -0.044  | 9.3542   |
| 763 | 1   | Extremo 1A | -3.308 | 8.596   | 0.132     | -0.1191   | -0.1103 | 6.9742   |
| 763 | 0   | Extremo 1A | -1.045 | -6.76   | -0.00452  | -0.119    | 0.0104  | 7.9451   |
| 763 | 0.5 | Extremo 1A | -1.045 | 0.913   | -0.00452  | -0.119    | 0.0126  | 9.4069   |
| 763 | 1   | Extremo 2A | -1.045 | 8.585   | -0.00452  | -0.119    | 0.0149  | 7.0324   |

|     |     |            |        |         |           |         |         |          |
|-----|-----|------------|--------|---------|-----------|---------|---------|----------|
| 764 | 0   | Extremo 2A | -3.458 | -5.782  | 0.131     | -0.2683 | 0.0198  | 6.9565   |
| 764 | 0.5 | Extremo 2A | -3.458 | 1.89    | 0.131     | -0.2683 | -0.0456 | 7.9295   |
| 764 | 1   | Extremo 1A | -3.458 | 9.563   | 0.131     | -0.2683 | -0.111  | 5.0663   |
| 764 | 0   | Extremo 1A | -1.043 | -5.794  | -0.002438 | -0.268  | 0.0114  | 7.0134   |
| 764 | 0.5 | Extremo 1A | -1.043 | 1.879   | -0.002438 | -0.268  | 0.0126  | 7.992    |
| 764 | 1   | Extremo 2A | -1.043 | 9.551   | -0.002438 | -0.268  | 0.0138  | 5.1344   |
| 765 | 0   | Extremo 2A | -3.605 | -4.793  | 0.128     | -0.4959 | 0.017   | 5.0174   |
| 765 | 0.5 | Extremo 2A | -3.605 | 2.879   | 0.128     | -0.4959 | -0.0472 | 5.496    |
| 765 | 1   | Extremo 1A | -3.605 | 10.552  | 0.128     | -0.4959 | -0.1113 | 2.1382   |
| 765 | 0   | Extremo 1A | -1.044 | -4.805  | 0.0009459 | -0.495  | 0.0131  | 5.0844   |
| 765 | 0.5 | Extremo 1A | -1.044 | 2.868   | 0.0009459 | -0.495  | 0.0126  | 5.5686   |
| 765 | 1   | Extremo 2A | -1.044 | 10.54   | 0.0009459 | -0.495  | 0.0122  | 2.2166   |
| 766 | 0   | Extremo 2A | -3.75  | -3.866  | 0.125     | -0.858  | 0.0141  | 1.9628   |
| 766 | 0.5 | Extremo 2A | -3.75  | 3.807   | 0.125     | -0.858  | -0.0486 | 1.9776   |
| 766 | 1   | Extremo 1A | -3.75  | 11.479  | 0.125     | -0.858  | -0.1113 | -1.8438  |
| 766 | 0   | Extremo 1A | -1.05  | -3.877  | 0.005318  | -0.8559 | 0.0153  | 2.0405   |
| 766 | 0.5 | Extremo 1A | -1.05  | 3.795   | 0.005318  | -0.8559 | 0.0127  | 2.0609   |
| 766 | 1   | Extremo 2A | -1.05  | 11.468  | 0.005318  | -0.8559 | 0.01    | -1.7549  |
| 767 | 0   | Extremo 2A | -3.893 | -3.371  | 0.122     | -1.3076 | 0.0114  | -2.3925  |
| 767 | 0.5 | Extremo 2A | -3.893 | 4.302   | 0.122     | -1.3076 | -0.0496 | -2.6322  |
| 767 | 1   | Extremo 1A | -3.893 | 11.974  | 0.122     | -1.3076 | -0.1106 | -6.7012  |
| 767 | 0   | Extremo 1A | -1.061 | -3.38   | 0.009737  | -1.304  | 0.0176  | -2.3095  |
| 767 | 0.5 | Extremo 1A | -1.061 | 4.292   | 0.009737  | -1.304  | 0.0127  | -2.5376  |
| 767 | 1   | Extremo 2A | -1.061 | 11.965  | 0.009737  | -1.304  | 0.0079  | -6.6018  |
| 768 | 0   | Extremo 2A | -4.037 | -4.156  | 0.121     | -1.4488 | 0.0113  | -7.9751  |
| 768 | 0.5 | Extremo 2A | -4.037 | 3.517   | 0.121     | -1.4488 | -0.0495 | -7.8154  |
| 768 | 1   | Extremo 1A | -4.037 | 11.189  | 0.121     | -1.4488 | -0.1102 | -11.492  |
| 768 | 0   | Extremo 1A | -1.075 | -4.159  | 0.012     | -1.4447 | 0.0191  | -7.8717  |
| 768 | 0.5 | Extremo 1A | -1.075 | 3.514   | 0.012     | -1.4447 | 0.0131  | -7.7105  |
| 768 | 1   | Extremo 2A | -1.075 | 11.186  | 0.012     | -1.4447 | 0.0071  | -11.3856 |
| 769 | 0   | Extremo 2A | -4.191 | -6.673  | 0.135     | -0.6278 | 0.0195  | -13.1494 |
| 769 | 0.5 | Extremo 2A | -4.191 | 1       | 0.135     | -0.6278 | -0.048  | -11.7312 |
| 769 | 1   | Extremo 1A | -4.191 | 8.672   | 0.135     | -0.6278 | -0.1156 | -14.1492 |
| 769 | 0   | Extremo 1A | -1.089 | -6.663  | 0.01      | -0.6263 | 0.0196  | -13.037  |
| 769 | 0.5 | Extremo 1A | -1.089 | 1.009   | 0.01      | -0.6263 | 0.0145  | -11.6235 |
| 769 | 1   | Extremo 2A | -1.089 | 8.682   | 0.01      | -0.6263 | 0.0094  | -14.0463 |
| 770 | 0   | Extremo 2A | -4.372 | -8.523  | 0.18      | 0.6262  | 0.039   | -14.1415 |
| 770 | 0.5 | Extremo 2A | -4.372 | -0.851  | 0.18      | 0.6262  | -0.0507 | -11.7981 |
| 770 | 1   | Extremo 1A | -4.372 | 6.822   | 0.18      | 0.6262  | -0.1405 | -13.291  |
| 770 | 0   | Extremo 1A | -1.099 | -8.503  | 0.013     | 0.6236  | 0.023   | -14.0377 |
| 770 | 0.5 | Extremo 1A | -1.099 | -0.831  | 0.013     | 0.6236  | 0.0164  | -11.7042 |
| 770 | 1   | Extremo 2A | -1.099 | 6.842   | 0.013     | 0.6236  | 0.0099  | -13.207  |
| 771 | 0   | Extremo 2A | -4.576 | -11.04  | 0.191     | 1.4473  | 0.0387  | -11.6182 |
| 771 | 0.5 | Extremo 2A | -4.576 | -3.368  | 0.191     | 1.4473  | -0.057  | -8.0163  |
| 771 | 1   | Extremo 1A | -4.576 | 4.305   | 0.191     | 1.4473  | -0.1526 | -8.2507  |
| 771 | 0   | Extremo 1A | -1.116 | -11.008 | 0.016     | 1.442   | 0.0256  | -11.5383 |
| 771 | 0.5 | Extremo 1A | -1.116 | -3.335  | 0.016     | 1.442   | 0.0174  | -7.9526  |
| 771 | 1   | Extremo 2A | -1.116 | 4.337   | 0.016     | 1.442   | 0.0091  | -8.2032  |
| 772 | 0   | Extremo 2A | -4.789 | -11.825 | 0.192     | 1.3062  | 0.035   | -6.9613  |
| 772 | 0.5 | Extremo 2A | -4.789 | -4.152  | 0.192     | 1.3062  | -0.0612 | -2.967   |
| 772 | 1   | Extremo 1A | -4.789 | 3.52    | 0.192     | 1.3062  | -0.1574 | -2.809   |
| 772 | 0   | Extremo 1A | -1.134 | -11.786 | 0.014     | 1.3015  | 0.0246  | -6.9158  |
| 772 | 0.5 | Extremo 1A | -1.134 | -4.113  | 0.014     | 1.3015  | 0.0174  | -2.941   |
| 772 | 1   | Extremo 2A | -1.134 | 3.559   | 0.014     | 1.3015  | 0.0103  | -2.8024  |
| 773 | 0   | Extremo 2A | -5.006 | -11.33  | 0.192     | 0.8567  | 0.032   | -2.2377  |
| 773 | 0.5 | Extremo 2A | -5.006 | -3.657  | 0.192     | 0.8567  | -0.0642 | 1.5089   |
| 773 | 1   | Extremo 1A | -5.006 | 4.015   | 0.192     | 0.8567  | -0.1604 | 1.4193   |
| 773 | 0   | Extremo 1A | -1.15  | -11.289 | 0.009853  | 0.8536  | 0.02    |          |



|     |     |            |        |         |           |         |           |          |
|-----|-----|------------|--------|---------|-----------|---------|-----------|----------|
| 776 | 0   | Extremo 2A | -5.664 | -8.446  | 0.193     | 0.1185  | 0.0249    | 6.1797   |
| 776 | 0.5 | Extremo 2A | -5.664 | -0.773  | 0.193     | 0.1185  | -0.0715   | 8.4844   |
| 776 | 1   | Extremo 1A | -5.664 | 6.899   | 0.193     | 0.1185  | -0.168    | 6.9528   |
| 776 | 0   | Extremo 1A | -1.171 | -8.405  | 0.0002007 | 0.1176  | 0.0173    | 6.0746   |
| 776 | 0.5 | Extremo 1A | -1.171 | -0.732  | 0.0002007 | 0.1176  | 0.0172    | 8.3589   |
| 776 | 1   | Extremo 2A | -1.171 | 6.94    | 0.0002007 | 0.1176  | 0.0171    | 6.8069   |
| 777 | 0   | Extremo 2A | -5.884 | -7.497  | 0.193     | -0.001  | 0.0224    | 6.9774   |
| 777 | 0.5 | Extremo 2A | -5.884 | 0.175   | 0.193     | -0.001  | -0.0739   | 8.808    |
| 777 | 1   | Extremo 1A | -5.884 | 7.848   | 0.193     | -0.001  | -0.1701   | 6.8024   |
| 777 | 0   | Extremo 1A | -1.173 | -7.456  | -0.000283 | -0.0016 | 0.017     | 6.8355   |
| 777 | 0.5 | Extremo 1A | -1.173 | 0.216   | -0.000283 | -0.0016 | 0.0171    | 8.6456   |
| 777 | 1   | Extremo 2A | -1.173 | 7.889   | -0.000283 | -0.0016 | 0.0173    | 6.6195   |
| 778 | 0   | Extremo 2A | -6.103 | -6.549  | 0.192     | -0.1219 | 0.0196    | 6.8187   |
| 778 | 0.5 | Extremo 2A | -6.103 | 1.124   | 0.192     | -0.1219 | -0.0762   | 8.1749   |
| 778 | 1   | Extremo 1A | -6.103 | 8.796   | 0.192     | -0.1219 | -0.1721   | 5.6948   |
| 778 | 0   | Extremo 1A | -1.175 | -6.507  | 0.0007234 | -0.1225 | 0.0174    | 6.6401   |
| 778 | 0.5 | Extremo 1A | -1.175 | 1.165   | 0.0007234 | -0.1225 | 0.0171    | 7.9755   |
| 778 | 1   | Extremo 2A | -1.175 | 8.838   | 0.0007234 | -0.1225 | 0.0167    | 5.4748   |
| 779 | 0   | Extremo 2A | -6.321 | -5.579  | 0.19      | -0.2764 | 0.0167    | 5.7006   |
| 779 | 0.5 | Extremo 2A | -6.321 | 2.093   | 0.19      | -0.2764 | -0.0785   | 6.5722   |
| 779 | 1   | Extremo 1A | -6.321 | 9.766   | 0.19      | -0.2764 | -0.1738   | 3.6075   |
| 779 | 0   | Extremo 1A | -1.179 | -5.537  | 0.00322   | -0.2773 | 0.0186    | 5.4853   |
| 779 | 0.5 | Extremo 1A | -1.179 | 2.135   | 0.00322   | -0.2773 | 0.017     | 6.3358   |
| 779 | 1   | Extremo 2A | -1.179 | 9.808   | 0.00322   | -0.2773 | 0.0154    | 3.3501   |
| 780 | 0   | Extremo 2A | -6.537 | -4.588  | 0.189     | -0.5169 | 0.0135    | 3.579    |
| 780 | 0.5 | Extremo 2A | -6.537 | 3.085   | 0.189     | -0.5169 | -0.0808   | 3.9546   |
| 780 | 1   | Extremo 1A | -6.537 | 10.757  | 0.189     | -0.5169 | -0.1752   | 0.494    |
| 780 | 0   | Extremo 1A | -1.187 | -4.544  | 0.007141  | -0.5192 | 0.0205    | 3.3266   |
| 780 | 0.5 | Extremo 1A | -1.187 | 3.128   | 0.007141  | -0.5192 | 0.017     | 3.6806   |
| 780 | 1   | Extremo 2A | -1.187 | 10.801  | 0.007141  | -0.5192 | 0.0134    | 0.1984   |
| 781 | 0   | Extremo 2A | -6.751 | -3.664  | 0.186     | -0.9042 | 0.0102    | 0.3256   |
| 781 | 0.5 | Extremo 2A | -6.751 | 4.008   | 0.186     | -0.9042 | -0.083    | 0.2396   |
| 781 | 1   | Extremo 1A | -6.751 | 11.681  | 0.186     | -0.9042 | -0.1762   | -3.6826  |
| 781 | 0   | Extremo 1A | -1.201 | -3.621  | 0.012     | -0.9097 | 0.023     | 0.0339   |
| 781 | 0.5 | Extremo 1A | -1.201 | 4.052   | 0.012     | -0.9097 | 0.0169    | -0.0738  |
| 781 | 1   | Extremo 2A | -1.201 | 11.724  | 0.012     | -0.9097 | 0.0108    | -4.0177  |
| 782 | 0   | Extremo 2A | -6.965 | -3.208  | 0.184     | -1.3885 | 0.0074    | -4.2673  |
| 782 | 0.5 | Extremo 2A | -6.965 | 4.464   | 0.184     | -1.3885 | -0.0847   | -4.5814  |
| 782 | 1   | Extremo 1A | -6.965 | 12.137  | 0.184     | -1.3885 | -0.1768   | -8.7318  |
| 782 | 0   | Extremo 1A | -1.221 | -3.17   | 0.018     | -1.3984 | 0.0257    | -4.603   |
| 782 | 0.5 | Extremo 1A | -1.221 | 4.502   | 0.018     | -1.3984 | 0.0169    | -4.936   |
| 782 | 1   | Extremo 2A | -1.221 | 12.175  | 0.018     | -1.3984 | 0.0082    | -9.1052  |
| 783 | 0   | Extremo 2A | -7.182 | -4.127  | 0.185     | -1.5454 | 0.0074    | -10.1003 |
| 783 | 0.5 | Extremo 2A | -7.182 | 3.545   | 0.185     | -1.5454 | -0.0852   | -9.9547  |
| 783 | 1   | Extremo 1A | -7.182 | 11.218  | 0.185     | -1.5454 | -0.1777   | -13.6454 |
| 783 | 0   | Extremo 1A | -1.245 | -4.112  | 0.021     | -1.556  | 0.0279    | -10.4834 |
| 783 | 0.5 | Extremo 1A | -1.245 | 3.561   | 0.021     | -1.556  | 0.0173    | -10.3458 |
| 783 | 1   | Extremo 2A | -1.245 | 11.233  | 0.021     | -1.556  | 0.0067    | -14.0444 |
| 784 | 0   | Extremo 2A | -7.412 | -6.906  | 0.202     | -0.6741 | 0.0168    | -15.4446 |
| 784 | 0.5 | Extremo 2A | -7.412 | 0.767   | 0.202     | -0.6741 | -0.0842   | -13.9098 |
| 784 | 1   | Extremo 1A | -7.412 | 8.439   | 0.202     | -0.6741 | -0.1851   | -16.2113 |
| 784 | 0   | Extremo 1A | -1.272 | -6.934  | 0.022     | -0.6733 | 0.03      | -15.8583 |
| 784 | 0.5 | Extremo 1A | -1.272 | 0.738   | 0.022     | -0.6733 | 0.0189    | -14.3094 |
| 784 | 1   | Extremo 2A | -1.272 | 8.411   | 0.022     | -0.6733 | 0.0078    | -16.5967 |
| 785 | 0   | Extremo 2A | -7.674 | -8.972  | 0.253     | 0.6601  | 0.0388    | -16.251  |
| 785 | 0.5 | Extremo 2A | -7.674 | -1.3    | 0.253     | 0.6601  | -0.0877   | -13.683  |
| 785 | 1   | Extremo 1A | -7.674 | 6.373   | 0.253     | 0.6601  | -0.2143   | -14.9512 |
| 785 | 0   | Extremo 1A | -1.3   | -9.036  | 0.031     | 0.6777  | 0.0362    | -16.6305 |
| 785 | 0.5 | Extremo 1A | -1.3   | -1.364  | 0.031     | 0.6777  | 0.0207    | -14.0306 |
| 785 | 1   | Extremo 2A | -1.3   | 6.309   | 0.031     | 0.6777  | 0.0051    | -15.2669 |
| 786 | 0   | Extremo 2A | -7.964 | -11.751 | 0.269     | 1.5316  | 0.0394    | -13.2315 |
| 786 | 0.5 | Extremo 2A | -7.964 | -4.078  | 0.269     | 1.5316  | -0.0953   | -9.2742  |
| 786 | 1   | Extremo 1A | -7.964 | 3.594   | 0.269     | 1.5316  | -0.23     | -9.1532  |
| 786 | 0   | Extremo 1A | -1.339 | -11.859 | 0.038     | 1.5606  | 0.0403    | -13.5205 |
| 786 | 0.5 | Extremo 1A | -1.339 | -4.186  | 0.038     | 1.5606  | 0.021     | -9.5093  |
| 786 | 1   | Extremo 2A | -1.339 | 3.486   | 0.038     | 1.5606  | 0.0018    | -9.3343  |
| 787 | 0   | Extremo 2A | -8.269 | -12.67  | 0.274     | 1.3751  | 0.0364    | -7.8639  |
| 787 | 0.5 | Extremo 2A | -8.269 | -4.997  | 0.274     | 1.3751  | -0.1007   | -3.4471  |
| 787 | 1   | Extremo 1A | -8.269 | 2.675   | 0.274     | 1.3751  | -0.2379   | -2.8665  |
| 787 | 0   | Extremo 1A | -1.386 | -12.8   | 0.04      | 1.4033  | 0.0405    | -8.0235  |
| 787 | 0.5 | Extremo 1A | -1.386 | -5.127  | 0.04      | 1.4033  | 0.0206    | -3.5418  |
| 787 | 1   | Extremo 2A | -1.386 | 2.545   | 0.04      | 1.4033  | 0.0006841 | -2.8963  |

|     |     |            |         |         |       |         |           |         |
|-----|-----|------------|---------|---------|-------|---------|-----------|---------|
| 788 | 0   | Extremo 2A | -8.584  | -12.213 | 0.279 | 0.8917  | 0.0348    | -2.3606 |
| 788 | 0.5 | Extremo 2A | -8.584  | -4.541  | 0.279 | 0.8917  | -0.1048   | 1.828   |
| 788 | 1   | Extremo 1A | -8.584  | 3.132   | 0.279 | 0.8917  | -0.2443   | 2.1803  |
| 788 | 0   | Extremo 1A | -1.434  | -12.349 | 0.04  | 0.9153  | 0.04      | -2.3779 |
| 788 | 0.5 | Extremo 1A | -1.434  | -4.676  | 0.04  | 0.9153  | 0.0201    | 1.8783  |
| 788 | 1   | Extremo 2A | -1.434  | 2.996   | 0.04  | 0.9153  | 0.0002597 | 2.2983  |
| 789 | 0   | Extremo 2A | -8.906  | -11.29  | 0.286 | 0.506   | 0.0344    | 2.2708  |
| 789 | 0.5 | Extremo 2A | -8.906  | -3.617  | 0.286 | 0.506   | -0.1084   | 5.9975  |
| 789 | 1   | Extremo 1A | -8.906  | 4.055   | 0.286 | 0.506   | -0.2512   | 5.888   |
| 789 | 0   | Extremo 1A | -1.484  | -11.425 | 0.041 | 0.526   | 0.0402    | 2.3966  |
| 789 | 0.5 | Extremo 1A | -1.484  | -3.752  | 0.041 | 0.526   | 0.0196    | 6.1909  |
| 789 | 1   | Extremo 2A | -1.484  | 3.92    | 0.041 | 0.526   | -0.000888 | 6.1489  |
| 790 | 0   | Extremo 2A | -9.238  | -10.297 | 0.294 | 0.2687  | 0.0348    | 5.8402  |
| 790 | 0.5 | Extremo 2A | -9.238  | -2.625  | 0.294 | 0.2687  | -0.1121   | 9.0706  |
| 790 | 1   | Extremo 1A | -9.238  | 5.048   | 0.294 | 0.2687  | -0.2589   | 8.4647  |
| 790 | 0   | Extremo 1A | -1.537  | -10.431 | 0.045 | 0.2864  | 0.0416    | 6.1075  |
| 790 | 0.5 | Extremo 1A | -1.537  | -2.758  | 0.045 | 0.2864  | 0.0191    | 9.4048  |
| 790 | 1   | Extremo 2A | -1.537  | 4.914   | 0.045 | 0.2864  | -0.0035   | 8.8659  |
| 791 | 0   | Extremo 2A | -9.582  | -9.327  | 0.304 | 0.1204  | 0.0362    | 8.3855  |
| 791 | 0.5 | Extremo 2A | -9.582  | -1.654  | 0.304 | 0.1204  | -0.1158   | 11.1306 |
| 791 | 1   | Extremo 1A | -9.582  | 6.018   | 0.304 | 0.1204  | -0.2677   | 10.0396 |
| 791 | 0   | Extremo 1A | -1.597  | -9.46   | 0.053 | 0.1361  | 0.0447    | 8.7925  |
| 791 | 0.5 | Extremo 1A | -1.597  | -1.787  | 0.053 | 0.1361  | 0.0183    | 11.6043 |
| 791 | 1   | Extremo 2A | -1.597  | 5.885   | 0.053 | 0.1361  | -0.008    | 10.5798 |
| 792 | 0   | Extremo 2A | -9.939  | -8.376  | 0.317 | 0.0114  | 0.0387    | 9.9554  |
| 792 | 0.5 | Extremo 2A | -9.939  | -0.703  | 0.317 | 0.0114  | -0.1196   | 12.225  |
| 792 | 1   | Extremo 1A | -9.939  | 6.969   | 0.317 | 0.0114  | -0.2778   | 10.6585 |
| 792 | 0   | Extremo 1A | -1.668  | -8.509  | 0.064 | 0.0241  | 0.0497    | 10.5002 |
| 792 | 0.5 | Extremo 1A | -1.668  | -0.836  | 0.064 | 0.0241  | 0.0175    | 12.8364 |
| 792 | 1   | Extremo 2A | -1.668  | 6.836   | 0.064 | 0.0241  | -0.0147   | 11.3364 |
| 793 | 0   | Extremo 2A | -10.313 | -7.424  | 0.332 | -0.0842 | 0.0426    | 10.5768 |
| 793 | 0.5 | Extremo 2A | -10.313 | 0.248   | 0.332 | -0.0842 | -0.1236   | 12.3709 |
| 793 | 1   | Extremo 1A | -10.313 | 7.921   | 0.332 | -0.0842 | -0.2898   | 10.3287 |
| 793 | 0   | Extremo 1A | -1.757  | -7.558  | 0.081 | -0.0771 | 0.057     | 11.2562 |
| 793 | 0.5 | Extremo 1A | -1.757  | 0.114   | 0.081 | -0.0771 | 0.0164    | 13.1171 |
| 793 | 1   | Extremo 2A | -1.757  | 7.787   | 0.081 | -0.0771 | -0.0242   | 11.1418 |
| 794 | 0   | Extremo 2A | -10.708 | -6.452  | 0.353 | -0.1858 | 0.0485    | 10.2597 |
| 794 | 0.5 | Extremo 2A | -10.708 | 1.22    | 0.353 | -0.1858 | -0.1278   | 11.5678 |
| 794 | 1   | Extremo 1A | -10.708 | 8.893   | 0.353 | -0.1858 | -0.3041   | 9.0396  |
| 794 | 0   | Extremo 1A | -1.87   | -6.588  | 0.104 | -0.1883 | 0.067     | 11.0678 |
| 794 | 0.5 | Extremo 1A | -1.87   | 1.084   | 0.104 | -0.1883 | 0.015     | 12.4437 |
| 794 | 1   | Extremo 2A | -1.87   | 8.757   | 0.104 | -0.1883 | -0.037    | 9.9834  |
| 795 | 0   | Extremo 2A | -11.132 | -5.451  | 0.378 | -0.3219 | 0.0569    | 8.9889  |
| 795 | 0.5 | Extremo 2A | -11.132 | 2.222   | 0.378 | -0.3219 | -0.1323   | 9.7962  |
| 795 | 1   | Extremo 1A | -11.132 | 9.894   | 0.378 | -0.3219 | -0.3216   | 6.7672  |
| 795 | 0   | Extremo 1A | -2.014  | -5.591  | 0.134 | -0.3406 | 0.0805    | 9.9156  |
| 795 | 0.5 | Extremo 1A | -2.014  | 2.082   | 0.134 | -0.3406 | 0.0133    | 10.7929 |
| 795 | 1   | Extremo 2A | -2.014  | 9.754   | 0.134 | -0.3406 | -0.0538   | 7.8339  |
| 796 | 0   | Extremo 2A | -11.591 | -4.475  | 0.412 | -0.5237 | 0.0687    | 6.6997  |
| 796 | 0.5 | Extremo 2A | -11.591 | 3.197   | 0.412 | -0.5237 | -0.1373   | 7.0191  |
| 796 | 1   | Extremo 1A | -11.591 | 10.87   | 0.412 | -0.5237 | -0.3432   | 3.5022  |
| 796 | 0   | Extremo 1A | -2.201  | -4.624  | 0.174 | -0.5682 | 0.0981    | 7.7273  |
| 796 | 0.5 | Extremo 1A | -2.201  | 3.048   | 0.174 | -0.5682 | 0.0112    | 8.1212  |
| 796 | 1   | Extremo 2A | -2.201  | 10.721  | 0.174 | -0.5682 | -0.0756   | 4.6789  |
| 797 | 0   | Extremo 2A | -12.098 | -3.792  | 0.456 | -0.7475 | 0.0854    | 3.2876  |
| 797 | 0.5 | Extremo 2A | -12.098 | 3.881   | 0.456 | -0.7475 | -0.1425   | 3.2654  |
| 797 | 1   | Extremo 1A | -12.098 | 11.553  | 0.456 | -0.7475 | -0.3705   | -0.5931 |
| 797 | 0   | Extremo 1A | -2.442  | -3.957  | 0.224 | -0.8292 | 0.1207    | 4.3878  |
| 797 | 0.5 |            |         |         |       |         |           |         |





|     |     |            |         |        |       |        |         |           |
|-----|-----|------------|---------|--------|-------|--------|---------|-----------|
| 800 | 0   | Extremo 2A | -14.122 | -6.325 | 0.73  | 0.9104 | 0.2017  | -6.5089   |
| 800 | 0.5 | Extremo 2A | -14.122 | 1.347  | 0.73  | 0.9104 | -0.1635 | -5.2643   |
| 800 | 1   | Extremo 1A | -14.122 | 9.02   | 0.73  | 0.9104 | -0.5287 | -7.8561   |
| 800 | 0   | Extremo 1A | -3.647  | -6.611 | 0.474 | 0.6936 | 0.2347  | -5.4637   |
| 800 | 0.5 | Extremo 1A | -3.647  | 1.062  | 0.474 | 0.6936 | -0.0021 | -4.0764   |
| 800 | 1   | Extremo 2A | -3.647  | 8.734  | 0.474 | 0.6936 | -0.2388 | -6.5254   |
| 801 | 0   | Extremo 2A | -15.059 | -8.192 | 0.866 | 1.5145 | 0.2567  | -5.7404   |
| 801 | 0.5 | Extremo 2A | -15.059 | -0.519 | 0.866 | 1.5145 | -0.1764 | -3.5627   |
| 801 | 1   | Extremo 1A | -15.059 | 7.153  | 0.866 | 1.5145 | -0.6094 | -5.2213   |
| 801 | 0   | Extremo 1A | -4.292  | -8.54  | 0.605 | 1.2778 | 0.2933  | -4.7418   |
| 801 | 0.5 | Extremo 1A | -4.292  | -0.868 | 0.605 | 1.2778 | -0.0091 | -2.3898   |
| 801 | 1   | Extremo 2A | -4.292  | 6.805  | 0.605 | 1.2778 | -0.3115 | -3.874    |
| 802 | 0   | Extremo 2A | -16.18  | -8.634 | 1.036 | 1.3523 | 0.3281  | -3.5569   |
| 802 | 0.5 | Extremo 2A | -16.18  | -0.961 | 1.036 | 1.3523 | -0.1898 | -1.1581   |
| 802 | 1   | Extremo 1A | -16.18  | 6.711  | 1.036 | 1.3523 | -0.7077 | -2.5956   |
| 802 | 0   | Extremo 1A | -5.115  | -9.035 | 0.767 | 1.0967 | 0.3647  | -2.5693   |
| 802 | 0.5 | Extremo 1A | -5.115  | -1.363 | 0.767 | 1.0967 | -0.0187 | 0.0303    |
| 802 | 1   | Extremo 2A | -5.115  | 6.31   | 0.767 | 1.0967 | -0.4021 | -1.2064   |
| 803 | 0   | Extremo 2A | -17.533 | -8.037 | 1.252 | 0.9858 | 0.4204  | -1.5153   |
| 803 | 0.5 | Extremo 2A | -17.533 | -0.364 | 1.252 | 0.9858 | -0.2055 | 0.5824    |
| 803 | 1   | Extremo 1A | -17.533 | 7.308  | 1.252 | 0.9858 | -0.8315 | -1.1536   |
| 803 | 0   | Extremo 1A | -6.161  | -8.464 | 0.973 | 0.7086 | 0.4558  | -0.5207   |
| 803 | 0.5 | Extremo 1A | -6.161  | -0.792 | 0.973 | 0.7086 | -0.0309 | 1.7933    |
| 803 | 1   | Extremo 2A | -6.161  | 6.881  | 0.973 | 0.7086 | -0.5176 | 0.2711    |
| 804 | 0   | Extremo 2A | -19.18  | -7.144 | 1.527 | 0.7282 | 0.5382  | -0.301    |
| 804 | 0.5 | Extremo 2A | -19.18  | 0.528  | 1.527 | 0.7282 | -0.2253 | 1.353     |
| 804 | 1   | Extremo 1A | -19.18  | 8.201  | 1.527 | 0.7282 | -0.9888 | -0.8293   |
| 804 | 0   | Extremo 1A | -7.491  | -7.574 | 1.241 | 0.4293 | 0.5735  | 0.702     |
| 804 | 0.5 | Extremo 1A | -7.491  | 0.098  | 1.241 | 0.4293 | -0.0469 | 2.571     |
| 804 | 1   | Extremo 2A | -7.491  | 7.771  | 1.241 | 0.4293 | -0.6673 | 0.6038    |
| 805 | 0   | Extremo 2A | -21.199 | -6.246 | 1.871 | 0.5813 | 0.6848  | 0.0247    |
| 805 | 0.5 | Extremo 2A | -21.199 | 1.426  | 1.871 | 0.5813 | -0.2508 | 1.2296    |
| 805 | 1   | Extremo 1A | -21.199 | 9.099  | 1.871 | 0.5813 | -1.1864 | -1.4018   |
| 805 | 0   | Extremo 1A | -9.187  | -6.664 | 1.583 | 0.2645 | 0.7232  | 1.0081    |
| 805 | 0.5 | Extremo 1A | -9.187  | 1.008  | 1.583 | 0.2645 | -0.0684 | 2.422     |
| 805 | 1   | Extremo 2A | -9.187  | 8.681  | 1.583 | 0.2645 | -0.86   | -0.000284 |
| 806 | 0   | Extremo 2A | -23.684 | -5.46  | 2.287 | 0.4865 | 0.8648  | -0.4904   |
| 806 | 0.5 | Extremo 2A | -23.684 | 2.212  | 2.287 | 0.4865 | -0.2789 | 0.3216    |
| 806 | 1   | Extremo 1A | -23.684 | 9.885  | 2.287 | 0.4865 | -1.4226 | -2.7027   |
| 806 | 0   | Extremo 1A | -11.349 | -5.862 | 2.007 | 0.1643 | 0.9098  | 0.4387    |
| 806 | 0.5 | Extremo 1A | -11.349 | 1.811  | 2.007 | 0.1643 | -0.0938 | 1.4515    |
| 806 | 1   | Extremo 2A | -11.349 | 9.483  | 2.007 | 0.1643 | -1.0974 | -1.372    |
| 807 | 0   | Extremo 2A | -26.764 | -4.993 | 2.854 | 0.462  | 1.1158  | -1.7506   |
| 807 | 0.5 | Extremo 2A | -26.764 | 2.679  | 2.854 | 0.462  | -0.311  | -1.1719   |
| 807 | 1   | Extremo 1A | -26.764 | 10.352 | 2.854 | 0.462  | -1.7377 | -4.4296   |
| 807 | 0   | Extremo 1A | -14.107 | -5.389 | 2.572 | 0.1499 | 1.1618  | -0.8738   |
| 807 | 0.5 | Extremo 1A | -14.107 | 2.283  | 2.572 | 0.1499 | -0.1243 | -0.0974   |
| 807 | 1   | Extremo 2A | -14.107 | 9.956  | 2.572 | 0.1499 | -1.4104 | -3.1573   |
| 808 | 0   | Extremo 2A | -30.624 | -4.601 | 3.589 | 0.4386 | 1.4411  | -3.4988   |
| 808 | 0.5 | Extremo 2A | -30.624 | 3.071  | 3.589 | 0.4386 | -0.3536 | -3.1163   |
| 808 | 1   | Extremo 1A | -30.624 | 10.744 | 3.589 | 0.4386 | -2.1483 | -6.57     |
| 808 | 0   | Extremo 1A | -17.644 | -4.997 | 3.303 | 0.1382 | 1.4866  | -2.6552   |
| 808 | 0.5 | Extremo 1A | -17.644 | 2.676  | 3.303 | 0.1382 | -0.1647 | -2.0749   |
| 808 | 1   | Extremo 2A | -17.644 | 10.348 | 3.303 | 0.1382 | -1.816  | -5.3309   |
| 809 | 0   | Extremo 2A | -35.486 | -4.244 | 4.527 | 0.4559 | 1.8531  | -5.639    |
| 809 | 0.5 | Extremo 2A | -35.486 | 3.428  | 4.527 | 0.4559 | -0.4104 | -5.4351   |
| 809 | 1   | Extremo 1A | -35.486 | 11.101 | 4.527 | 0.4559 | -2.674  | -9.0674   |
| 809 | 0   | Extremo 1A | -22.179 | -4.63  | 4.237 | 0.1595 | 1.9003  | -4.8175   |
| 809 | 0.5 | Extremo 1A | -22.179 | 3.043  | 4.237 | 0.1595 | -0.2183 | -4.4208   |
| 809 | 1   | Extremo 2A | -22.179 | 10.715 | 4.237 | 0.1595 | -2.3369 | -7.8604   |
| 810 | 0   | Extremo 2A | -41.618 | -3.874 | 5.703 | 0.5096 | 2.3661  | -7.9709   |
| 810 | 0.5 | Extremo 2A | -41.618 | 3.798  | 5.703 | 0.5096 | -0.4855 | -7.9519   |
| 810 | 1   | Extremo 1A | -41.618 | 11.471 | 5.703 | 0.5096 | -3.3371 | -11.7692  |
| 810 | 0   | Extremo 1A | -27.985 | -4.24  | 5.417 | 0.2112 | 2.4189  | -7.1851   |
| 810 | 0.5 | Extremo 1A | -27.985 | 3.433  | 5.417 | 0.2112 | -0.2896 | -6.9832   |
| 810 | 1   | Extremo 2A | -27.985 | 11.105 | 5.417 | 0.2112 | -2.998  | -10.6177  |
| 811 | 0   | Extremo 2A | -49.345 | -3.408 | 7.128 | 0.4563 | 2.9945  | -10.3868  |
| 811 | 0.5 | Extremo 2A | -49.345 | 4.265  | 7.128 | 0.4563 | -0.5694 | -10.601   |
| 811 | 1   | Extremo 1A | -49.345 | 11.937 | 7.128 | 0.4563 | -4.1333 | -14.6515  |
| 811 | 0   | Extremo 1A | -35.393 | -3.754 | 6.856 | 0.1612 | 3.0569  | -9.6667   |
| 811 | 0.5 | Extremo 1A | -35.393 | 3.918  | 6.856 | 0.1612 | -0.3713 | -9.7076   |
| 811 | 1   | Extremo 2A | -35.393 | 11.591 | 6.856 | 0.1612 | -3.7994 | -13.5847  |

|     |     |            |          |        |        |         |          |          |
|-----|-----|------------|----------|--------|--------|---------|----------|----------|
| 812 | 0   | Extremo 2A | -59.092  | -3.092 | 9.024  | 0.3205  | 3.8472   | -13.4299 |
| 812 | 0.5 | Extremo 2A | -59.092  | 4.58   | 9.024  | 0.3205  | -0.6648  | -13.802  |
| 812 | 1   | Extremo 1A | -59.092  | 12.253 | 9.024  | 0.3205  | -5.1768  | -18.0103 |
| 812 | 0   | Extremo 1A | -44.83   | -3.438 | 8.756  | 0.0403  | 3.9121   | -12.771  |
| 812 | 0.5 | Extremo 1A | -44.83   | 4.235  | 8.756  | 0.0403  | -0.466   | -12.9703 |
| 812 | 1   | Extremo 2A | -44.83   | 11.907 | 8.756  | 0.0403  | -4.8441  | -17.0059 |
| 813 | 0   | Extremo 2A | -71.439  | -2.766 | 11.427 | 0.1524  | 4.9271   | -17.0564 |
| 813 | 0.5 | Extremo 2A | -71.439  | 4.907  | 11.427 | 0.1524  | -0.7866  | -17.5917 |
| 813 | 1   | Extremo 1A | -71.439  | 12.579 | 11.427 | 0.1524  | -6.5003  | -21.9633 |
| 813 | 0   | Extremo 1A | -56.871  | -3.12  | 11.159 | -0.1138 | 4.9929   | -16.4343 |
| 813 | 0.5 | Extremo 1A | -56.871  | 4.553  | 11.159 | -0.1138 | -0.5866  | -16.7925 |
| 813 | 1   | Extremo 2A | -56.871  | 12.225 | 11.159 | -0.1138 | -6.1662  | -20.987  |
| 814 | 0   | Extremo 2A | -87.059  | -2.568 | 14.415 | 0.074   | 6.2735   | -21.1961 |
| 814 | 0.5 | Extremo 2A | -87.059  | 5.105  | 14.415 | 0.074   | -0.9339  | -21.8304 |
| 814 | 1   | Extremo 1A | -87.059  | 12.777 | 14.415 | 0.074   | -8.1414  | -26.3009 |
| 814 | 0   | Extremo 1A | -72.188  | -2.924 | 14.148 | -0.1862 | 6.342    | -20.5908 |
| 814 | 0.5 | Extremo 1A | -72.188  | 4.748  | 14.148 | -0.1862 | -0.7322  | -21.0468 |
| 814 | 1   | Extremo 2A | -72.188  | 12.421 | 14.148 | -0.1862 | -7.8063  | -25.3391 |
| 815 | 0   | Extremo 2A | -106.731 | -2.627 | 18.096 | 0.1829  | 7.9427   | -25.5289 |
| 815 | 0.5 | Extremo 2A | -106.731 | 5.045  | 18.096 | 0.1829  | -1.1053  | -26.1334 |
| 815 | 1   | Extremo 1A | -106.731 | 12.718 | 18.096 | 0.1829  | -10.1533 | -30.5741 |
| 815 | 0   | Extremo 1A | -91.564  | -2.976 | 17.836 | -0.0792 | 8.0164   | -24.9363 |
| 815 | 0.5 | Extremo 1A | -91.564  | 4.696  | 17.836 | -0.0792 | -0.9015  | -25.3664 |
| 815 | 1   | Extremo 2A | -91.564  | 12.369 | 17.836 | -0.0792 | -9.8195  | -29.6327 |
| 816 | 0   | Extremo 2A | -131.321 | -2.76  | 22.511 | 0.4067  | 9.958    | -29.4006 |
| 816 | 0.5 | Extremo 2A | -131.321 | 4.912  | 22.511 | 0.4067  | -1.2977  | -29.9387 |
| 816 | 1   | Extremo 1A | -131.321 | 12.585 | 22.511 | 0.4067  | -12.5534 | -34.3129 |
| 816 | 0   | Extremo 1A | -115.871 | -3.095 | 22.266 | 0.1364  | 10.0409  | -28.8354 |
| 816 | 0.5 | Extremo 1A | -115.871 | 4.578  | 22.266 | 0.1364  | -1.0919  | -29.2061 |
| 816 | 1   | Extremo 2A | -115.871 | 12.25  | 22.266 | 0.1364  | -12.2247 | -33.413  |
| 817 | 0   | Extremo 2A | -161.651 | -2.463 | 27.506 | 0.2934  | 12.2958  | -32.4751 |
| 817 | 0.5 | Extremo 2A | -161.651 | 5.209  | 27.506 | 0.2934  | -1.4572  | -33.1616 |
| 817 | 1   | Extremo 1A | -161.651 | 12.882 | 27.506 | 0.2934  | -15.2102 | -37.6844 |
| 817 | 0   | Extremo 1A | -145.939 | -2.787 | 27.287 | 0.0143  | 12.3922  | -31.966  |
| 817 | 0.5 | Extremo 1A | -145.939 | 4.885  | 27.287 | 0.0143  | -1.2511  | -32.4905 |
| 817 | 1   | Extremo 2A | -145.939 | 12.558 | 27.287 | 0.0143  | -14.8944 | -36.8513 |
| 818 | 0   | Extremo 2A | -198.358 | -1.944 | 33.412 | -0.2165 | 15.1295  | -36.4488 |
| 818 | 0.5 | Extremo 2A | -198.358 | 5.729  | 33.412 | -0.2165 | -1.5766  | -37.3949 |
| 818 | 1   | Extremo 1A | -198.358 | 13.401 | 33.412 | -0.2165 | -18.2826 | -42.1773 |
| 818 | 0   | Extremo 1A | -182.416 | -2.276 | 33.211 | -0.5022 | 15.2342  | -36.0046 |
| 818 | 0.5 | Extremo 1A | -182.416 | 5.397  | 33.211 | -0.5022 | -1.3714  | -36.7848 |
| 818 | 1   | Extremo 2A | -182.416 | 13.069 | 33.211 | -0.5022 | -17.9771 | -41.4012 |
| 819 | 0   | Extremo 2A | -241.5   | -1.676 | 39.488 | -0.7765 | 17.9935  | -41.7265 |
| 819 | 0.5 | Extremo 2A | -241.5   | 5.996  | 39.488 | -0.7765 | -1.7506  | -42.8065 |
| 819 | 1   | Extremo 1A | -241.5   | 13.669 | 39.488 | -0.7765 | -21.4947 | -47.7228 |
| 819 | 0   | Extremo 1A | -225.363 | -2.028 | 39.307 | -1.0784 | 18.1102  | -41.3462 |
| 819 | 0.5 | Extremo 1A | -225.363 | 5.645  | 39.307 | -1.0784 | -1.5435  | -42.2505 |
| 819 | 1   | Extremo 2A | -225.363 | 13.317 | 39.307 | -1.0784 | -21.1972 | -46.9911 |
| 820 | 0   | Extremo 2A | -289.323 | -2.481 | 43.651 | -1.0024 | 19.784   | -47.9935 |
| 820 | 0.5 | Extremo 2A | -289.323 | 5.191  | 43.651 | -1.0024 | -2.0414  | -48.671  |
| 820 | 1   | Extremo 1A | -289.323 | 12.864 | 43.651 | -1.0024 | -23.8668 | -53.1848 |
| 820 | 0   | Extremo 1A | -273.052 | -2.854 | 43.52  | -1.3379 | 19.9345  | -47.6876 |
| 820 | 0.5 | Extremo 1A | -273.052 | 4.819  | 43.52  | -1.3379 | -1.8254  | -48.1788 |
| 820 | 1   | Extremo 2A | -273.052 | 12.491 | 43.52  | -1.3379 | -23.5853 | -52.5063 |
| 821 | 0   | Extremo 2A | -337.21  | -4.699 | 41.472 | -0.5052 | 18.9035  | -53.8311 |
| 821 | 0.5 | Extremo 2A | -337.21  | 2.973  | 41.472 | -0.5052 | -1.8323  | -53.3995 |
| 821 | 1   | Ext        |          |        |        |         |          |          |



|     |     |            |          |         |        |        |          |          |
|-----|-----|------------|----------|---------|--------|--------|----------|----------|
| 824 | 0   | Extremo 2A | -472.511 | -12.083 | 45.697 | 2.4791 | 24.6692  | -52.9705 |
| 824 | 0,5 | Extremo 2A | -472.511 | -4.411  | 45.697 | 2.4791 | 1.8209   | -48.847  |
| 824 | 1   | Extremo 1A | -472.511 | 3.262   | 45.697 | 2.4791 | -21.0274 | -48.5598 |
| 824 | 0   | Extremo 1A | -457.014 | -12.742 | 45.949 | 1.9503 | 24.9416  | -53.2648 |
| 824 | 0,5 | Extremo 1A | -457.014 | -5.069  | 45.949 | 1.9503 | 1.9671   | -48.812  |
| 824 | 1   | Extremo 2A | -457.014 | 2.603   | 45.949 | 1.9503 | -21.0074 | -48.1954 |
| 825 | 0   | Extremo 2A | -523.017 | -13.671 | 42.296 | 2.4757 | 22.6761  | -46.1537 |
| 825 | 0,5 | Extremo 2A | -523.017 | -5.999  | 42.296 | 2.4757 | 1.528    | -41.2362 |
| 825 | 1   | Extremo 1A | -523.017 | 1.674   | 42.296 | 2.4757 | -19.6202 | -40.1551 |
| 825 | 0   | Extremo 1A | -507.777 | -14.358 | 42.491 | 1.8933 | 22.9109  | -46.5971 |
| 825 | 0,5 | Extremo 1A | -507.777 | -6.686  | 42.491 | 1.8933 | 1.6656   | -41.336  |
| 825 | 1   | Extremo 2A | -507.777 | 0.987   | 42.491 | 1.8933 | -19.5797 | -39.9112 |
| 826 | 0   | Extremo 2A | -569.701 | -13.852 | 36.751 | 1.9852 | 19.7541  | -38.5221 |
| 826 | 0,5 | Extremo 2A | -569.701 | -6.179  | 36.751 | 1.9852 | 1.3787   | -33.5144 |
| 826 | 1   | Extremo 1A | -569.701 | 1.493   | 36.751 | 1.9852 | -16.9268 | -32.343  |
| 826 | 0   | Extremo 1A | -554.669 | -14.548 | 36.905 | 1.3546 | 19.9632  | -39.1474 |
| 826 | 0,5 | Extremo 1A | -554.669 | -6.875  | 36.905 | 1.3546 | 1.5105   | -33.7915 |
| 826 | 1   | Extremo 2A | -554.669 | 0.797   | 36.905 | 1.3546 | -16.9423 | -32.2719 |
| 827 | 0   | Extremo 2A | -610.484 | -13.579 | 31.169 | 1.5288 | 16.9195  | -31.4695 |
| 827 | 0,5 | Extremo 2A | -610.484 | -5.907  | 31.169 | 1.5288 | 1.335    | -26.598  |
| 827 | 1   | Extremo 1A | -610.484 | 1.766   | 31.169 | 1.5288 | -14.2495 | -25.5627 |
| 827 | 0   | Extremo 1A | -595.619 | -14.293 | 31.294 | 0.8608 | 17.1083  | -32.3221 |
| 827 | 0,5 | Extremo 1A | -595.619 | -6.62   | 31.294 | 0.8608 | 1.4614   | -27.094  |
| 827 | 1   | Extremo 2A | -595.619 | 1.052   | 31.294 | 0.8608 | -14.1856 | -25.7021 |
| 828 | 0   | Extremo 2A | -645.326 | -13.324 | 26.765 | 1.3994 | 14.659   | -25.1533 |
| 828 | 0,5 | Extremo 2A | -645.326 | -5.652  | 26.765 | 1.3994 | 1.2767   | -20.4094 |
| 828 | 1   | Extremo 1A | -645.326 | 2.021   | 26.765 | 1.3994 | -12.1055 | -19.5017 |
| 828 | 0   | Extremo 1A | -630.598 | -14.069 | 26.865 | 0.7098 | 14.8308  | -26.2562 |
| 828 | 0,5 | Extremo 1A | -630.598 | -6.397  | 26.865 | 0.7098 | 1.3983   | -21.1395 |
| 828 | 1   | Extremo 2A | -630.598 | 1.276   | 26.865 | 0.7098 | -12.0341 | -19.8592 |
| 829 | 0   | Extremo 2A | -675.331 | -13.453 | 23.126 | 1.5538 | 12.6938  | -18.5408 |
| 829 | 0,5 | Extremo 2A | -675.331 | -5.78   | 23.126 | 1.5538 | 1.1306   | -13.7325 |
| 829 | 1   | Extremo 1A | -675.331 | 1.892   | 23.126 | 1.5538 | -10.4325 | -12.7605 |
| 829 | 0   | Extremo 1A | -660.711 | -14.214 | 23.208 | 0.8469 | 12.8523  | -19.8832 |
| 829 | 0,5 | Extremo 1A | -660.711 | -6.541  | 23.208 | 0.8469 | 1.2485   | -14.6944 |
| 829 | 1   | Extremo 2A | -660.711 | 1.131   | 23.208 | 0.8469 | -10.3553 | -13.3418 |
| 830 | 0   | Extremo 2A | -701.19  | -13.598 | 19.97  | 1.6274 | 10.9325  | -11.5155 |
| 830 | 0,5 | Extremo 2A | -701.19  | -5.926  | 19.97  | 1.6274 | 0.9476   | -6.6345  |
| 830 | 1   | Extremo 1A | -701.19  | 1.747   | 19.97  | 1.6274 | -9.0373  | -5.5898  |
| 830 | 0   | Extremo 1A | -686.658 | -14.357 | 20.038 | 0.903  | 11.0815  | -13.0972 |
| 830 | 0,5 | Extremo 1A | -686.658 | -6.685  | 20.038 | 0.903  | 1.0625   | -7.8369  |
| 830 | 1   | Extremo 2A | -686.658 | 0.988   | 20.038 | 0.903  | -8.9564  | -6.4127  |
| 831 | 0   | Extremo 2A | -723.465 | -13.709 | 17.267 | 1.629  | 9.4085   | -4.3917  |
| 831 | 0,5 | Extremo 2A | -723.465 | -6.037  | 17.267 | 1.629  | 0.7752   | 0.5448   |
| 831 | 1   | Extremo 1A | -723.465 | 1.636   | 17.267 | 1.629  | -7.858   | 1.6451   |
| 831 | 0   | Extremo 1A | -709.007 | -14.446 | 17.326 | 0.8794 | 9.5509   | -6.2302  |
| 831 | 0,5 | Extremo 1A | -709.007 | -6.774  | 17.326 | 0.8794 | 0.8879   | -0.9251  |
| 831 | 1   | Extremo 2A | -709.007 | 0.899   | 17.326 | 0.8794 | -7.7752  | 0.5437   |
| 832 | 0   | Extremo 2A | -742.61  | -13.968 | 14.858 | 1.7332 | 8.0761   | 2.7735   |
| 832 | 0,5 | Extremo 2A | -742.61  | -6.295  | 14.858 | 1.7332 | 0.6469   | 7.8392   |
| 832 | 1   | Extremo 1A | -742.61  | 1.377   | 14.858 | 1.7332 | -6.7823  | 9.0686   |
| 832 | 0   | Extremo 1A | -728.22  | -14.667 | 14.915 | 0.9435 | 8.215    | 0.6266   |
| 832 | 0,5 | Extremo 1A | -728.22  | -6.995  | 14.915 | 0.9435 | 0.7575   | 6.0419   |
| 832 | 1   | Extremo 2A | -728.22  | 0.678   | 14.915 | 0.9435 | -6.6999  | 7.6211   |
| 833 | 0   | Extremo 2A | -758.958 | -14.212 | 12.673 | 1.9586 | 6.9612   | 10.4421  |
| 833 | 0,5 | Extremo 2A | -758.958 | -6.539  | 12.673 | 1.9586 | 0.6246   | 15.6299  |
| 833 | 1   | Extremo 1A | -758.958 | 1.133   | 12.673 | 1.9586 | -5.712   | 16.9815  |
| 833 | 0   | Extremo 1A | -744.638 | -14.898 | 12.734 | 1.1278 | 7.0998   | 7.8826   |
| 833 | 0,5 | Extremo 1A | -744.638 | -7.225  | 12.734 | 1.1278 | 0.733    | 13.4133  |
| 833 | 1   | Extremo 2A | -744.638 | 0.447   | 12.734 | 1.1278 | -5.6338  | 15.1077  |
| 834 | 0   | Extremo 2A | -773.031 | -13.851 | 11.353 | 1.9447 | 6.3362   | 18.8475  |
| 834 | 0,5 | Extremo 2A | -773.031 | -6.178  | 11.353 | 1.9447 | 0.6596   | 23.8548  |
| 834 | 1   | Extremo 1A | -773.031 | 1.494   | 11.353 | 1.9447 | -5.0171  | 25.0258  |
| 834 | 0   | Extremo 1A | -758.788 | -14.571 | 11.421 | 1.1057 | 6.4759   | 15.7969  |
| 834 | 0,5 | Extremo 1A | -758.788 | -6.898  | 11.421 | 1.1057 | 0.7652   | 21.1642  |
| 834 | 1   | Extremo 2A | -758.788 | 0.774   | 11.421 | 1.1057 | -4.9455  | 22.6953  |
| 835 | 0   | Extremo 2A | -785.841 | -13.363 | 10.479 | 1.7861 | 5.8769   | 26.6295  |
| 835 | 0,5 | Extremo 2A | -785.841 | -5.691  | 10.479 | 1.7861 | 0.6372   | 31.393   |
| 835 | 1   | Extremo 1A | -785.841 | 1.982   | 10.479 | 1.7861 | -4.6025  | 32.3203  |
| 835 | 0   | Extremo 1A | -771.683 | -14.112 | 10.556 | 0.9566 | 6.018    | 23.1488  |
| 835 | 0,5 | Extremo 1A | -771.683 | -6.439  | 10.556 | 0.9566 | 0.7401   | 28.2865  |
| 835 | 1   | Extremo 2A | -771.683 | 1.233   | 10.556 | 0.9566 | -4.5378  | 29.588   |

|     |     |            |          |         |       |        |         |         |
|-----|-----|------------|----------|---------|-------|--------|---------|---------|
| 836 | 0   | Extremo 2A | -797.47  | -13.115 | 9.42  | 1.7834 | 5.2759  | 33.6791 |
| 836 | 0,5 | Extremo 2A | -797.47  | -5.443  | 9.42  | 1.7834 | 0.5659  | 38.3186 |
| 836 | 1   | Extremo 1A | -797.47  | 2.23    | 9.42  | 1.7834 | -4.1441 | 39.1218 |
| 836 | 0   | Extremo 1A | -783.409 | -13.856 | 9.51  | 0.9532 | 5.4215  | 29.8167 |
| 836 | 0,5 | Extremo 1A | -783.409 | -6.184  | 9.51  | 0.9532 | 0.6664  | 34.8266 |
| 836 | 1   | Extremo 2A | -783.409 | 1.489   | 9.51  | 0.9532 | -4.0886 | 36.0003 |
| 837 | 0   | Extremo 2A | -807.684 | -13.272 | 8.093 | 2.1167 | 4.5623  | 40.621  |
| 837 | 0,5 | Extremo 2A | -807.684 | -5.599  | 8.093 | 2.1167 | 0.516   | 45.3387 |
| 837 | 1   | Extremo 1A | -807.684 | 2.073   | 8.093 | 2.1167 | -3.5302 | 46.2201 |
| 837 | 0   | Extremo 1A | -793.742 | -13.965 | 8.203 | 1.269  | 4.716   | 36.3559 |
| 837 | 0,5 | Extremo 1A | -793.742 | -6.292  | 8.203 | 1.269  | 0.6142  | 41.4202 |
| 837 | 1   | Extremo 2A | -793.742 | 1.38    | 8.203 | 1.269  | -3.4875 | 42.6482 |
| 838 | 0   | Extremo 2A | -816.228 | -13.339 | 6.568 | 2.5888 | 3.8387  | 48.5458 |
| 838 | 0,5 | Extremo 2A | -816.228 | -5.666  | 6.568 | 2.5888 | 0.5545  | 53.297  |
| 838 | 1   | Extremo 1A | -816.228 | 2.006   | 6.568 | 2.5888 | -2.7296 | 54.2119 |
| 838 | 0   | Extremo 1A | -802.436 | -13.993 | 6.709 | 1.7397 | 4.0042  | 43.7746 |
| 838 | 0,5 | Extremo 1A | -802.436 | -6.32   | 6.709 | 1.7397 | 0.6497  | 48.8529 |
| 838 | 1   | Extremo 2A | -802.436 | 1.352   | 6.709 | 1.7397 | -2.7047 | 50.0949 |
| 839 | 0   | Extremo 2A | -823.148 | -12.576 | 5.525 | 2.4863 | 3.4072  | 57.5542 |
| 839 | 0,5 | Extremo 2A | -823.148 | -4.903  | 5.525 | 2.4863 | 0.6446  | 61.9241 |
| 839 | 1   | Extremo 1A | -823.148 | 2.769   | 5.525 | 2.4863 | -2.118  | 62.4577 |
| 839 | 0   | Extremo 1A | -809.547 | -13.226 | 5.702 | 1.7167 | 3.5869  | 52.2139 |
| 839 | 0,5 | Extremo 1A | -809.547 | -5.553  | 5.702 | 1.7167 | 0.7358  | 56.9088 |
| 839 | 1   | Extremo 2A | -809.547 | 2.119   | 5.702 | 1.7167 | -2.1153 | 57.7673 |
| 840 | 0   | Extremo 2A | -829.089 | -11.357 | 4.755 | 1.8706 | 3.0583  | 64.8864 |
| 840 | 0,5 | Extremo 2A | -829.089 | -3.684  | 4.755 | 1.8706 | 0.6808  | 68.6466 |
| 840 | 1   | Extremo 1A | -829.089 | 3.988   | 4.755 | 1.8706 | -1.6968 | 68.5705 |
| 840 | 0   | Extremo 1A | -815.721 | -11.981 | 4.973 | 1.2614 | 3.2542  | 59.1531 |
| 840 | 0,5 | Extremo 1A | -815.721 | -4.308  | 4.973 | 1.2614 | 0.7675  | 63.2254 |
| 840 | 1   | Extremo 2A | -815.721 | 3.364   | 4.973 | 1.2614 | -1.7191 | 63.4614 |
| 841 | 0   | Extremo 2A | -834.001 | -10.139 | 3.741 | 1.2611 | 2.5349  | 70.1124 |
| 841 | 0,5 | Extremo 2A | -834.001 | -2.466  | 3.741 | 1.2611 | 0.6646  | 73.2638 |
| 841 | 1   | Extremo 1A | -834.001 | 5.206   | 3.741 | 1.2611 | -1.2058 | 72.5789 |
| 841 | 0   | Extremo 1A | -820.919 | -10.67  | 4.011 | 0.8618 | 2.7515  | 64.2059 |
| 841 | 0,5 | Extremo 1A | -820.919 | -2.997  | 4.011 | 0.8618 | 0.7462  | 67.6226 |
| 841 | 1   | Extremo 2A | -820.919 | 4.675   | 4.011 | 0.8618 | -1.2591 | 67.2031 |
| 842 | 0   | Extremo 2A | -837.676 | -9.211  | 2.564 | 0.799  | 1.9301  | 73.6062 |
| 842 | 0,5 | Extremo 2A | -837.676 | -1.538  | 2.564 | 0.799  | 0.6482  | 76.2935 |
| 842 | 1   | Extremo 1A | -837.676 | 6.134   | 2.564 | 0.799  | -0.6338 | 75.1445 |
| 842 | 0   | Extremo 1A | -824.94  | -9.544  | 2.894 | 0.6491 | 2.1696  | 67.7352 |
| 842 | 0,5 | Extremo 1A | -824.94  | -1.872  | 2.894 | 0.6491 | 0.7225  | 70.5891 |
| 842 | 1   | Extremo 2A | -824.94  | 5.801   | 2.894 | 0.6491 | -0.7246 | 69.6068 |
| 843 | 0   | Extremo 2A | -839.992 | -8.546  | 1.353 | 0.423  | 1.3217  | 75.7892 |
| 843 | 0,5 | Extremo 2A | -839.992 | -0.874  | 1.353 | 0.423  | 0.6451  | 78.1443 |
| 843 | 1   | Extremo 1A | -839.992 | 6.799   | 1.353 | 0.423  | -0.0314 | 76.6631 |
| 843 | 0   | Extremo 1A | -827.662 | -8.576  | 1.741 | 0.5556 | 1.5786  | 70.1381 |
| 843 | 0,5 | Extremo 1A | -827.662 | -0.903  | 1.741 | 0.5556 | 0.7081  | 72.5077 |
| 843 | 1   | Extremo 2A | -827.662 | 6.769   | 1.741 | 0.5556 | -0.1624 | 71.0411 |
| 844 | 0   | Extremo 2A | -840.922 | -8.032  | 0.175 | 0.0779 | 0.7411  | 76.9168 |
| 844 | 0,5 | Extremo 2A | -840.922 | -0.36   | 0.175 | 0.0779 | 0.6538  | 79.0149 |
| 844 | 1   | Extremo 1A | -840.922 | 7.313   | 0.175 | 0.0779 | 0.5665  | 77.2766 |
| 844 | 0   | Extremo 1A | -829.04  | -7.685  | 0.594 | 0.5116 | 0.9983  | 71.6339 |
| 844 | 0,5 | Extremo 1A | -829.04  | -0.013  | 0.594 | 0.5116 | 0.7015  | 73.5583 |
| 844 | 1   | Extremo 2A | -829.04  | 7.66    | 0.594 | 0.5116 | 0.4048  | 71.6464 |
| 845 | 0   | Extremo 2A |          |         |       |        |         |         |



|     |     |            |          |        |         |         |         |          |
|-----|-----|------------|----------|--------|---------|---------|---------|----------|
| 848 | 0   | Extremo 2A | -831.295 | -5.207 | -4.269  | -1.324  | -1.3982 | 72.3008  |
| 848 | 0,5 | Extremo 2A | -831.295 | 2.466  | -4.269  | -1.324  | 0,7362  | 72.986   |
| 848 | 1   | Extremo 1A | -831.295 | 10.138 | -4.269  | -1.324  | 2,8706  | 69.835   |
| 848 | 0   | Extremo 1A | -821.1   | -3.794 | -3.966  | 0.1003  | -1.2387 | 69.3017  |
| 848 | 0,5 | Extremo 1A | -821.1   | 3,878  | -3.966  | 0.1003  | 0,7441  | 69.2806  |
| 848 | 1   | Extremo 2A | -821.1   | 11.551 | -3.966  | 0.1003  | 2,7269  | 65.4233  |
| 849 | 0   | Extremo 2A | -825.806 | -3.935 | -5.207  | -1.8802 | -1.8426 | 68.2681  |
| 849 | 0,5 | Extremo 2A | -825.806 | 3,737  | -5.207  | -1.8802 | 0,7611  | 68.3177  |
| 849 | 1   | Extremo 1A | -825.806 | 11.41  | -5.207  | -1.8802 | 3,3648  | 64.531   |
| 849 | 0   | Extremo 1A | -815.953 | -2.452 | -4.929  | -0.3349 | -1.6997 | 65.9767  |
| 849 | 0,5 | Extremo 1A | -815.953 | 5,221  | -4.929  | -0.3349 | 0,7646  | 65.2845  |
| 849 | 1   | Extremo 2A | -815.953 | 12.893 | -4.929  | -0.3349 | 3,229   | 60.756   |
| 850 | 0   | Extremo 2A | -819.367 | -2.685 | -5.917  | -2.4504 | -2.2265 | 62.1508  |
| 850 | 0,5 | Extremo 2A | -819.367 | 4,988  | -5.917  | -2.4504 | 0,732   | 61.5751  |
| 850 | 1   | Extremo 1A | -819.367 | 12,66  | -5.917  | -2.4504 | 3,6905  | 57.1632  |
| 850 | 0   | Extremo 1A | -809.829 | -1.191 | -5.659  | -0.8339 | -2.0971 | 60.6062  |
| 850 | 0,5 | Extremo 1A | -809.829 | 6,482  | -5.659  | -0.8339 | 0,7321  | 59.2833  |
| 850 | 1   | Extremo 2A | -809.829 | 14.154 | -5.659  | -0.8339 | 3,5614  | 54.1242  |
| 851 | 0   | Extremo 2A | -812.011 | -1.906 | -6.912  | -2.521  | -2.8086 | 53.923   |
| 851 | 0,5 | Extremo 2A | -812.011 | 5,767  | -6.912  | -2.521  | 0,6474  | 52.9577  |
| 851 | 1   | Extremo 1A | -812.011 | 13.439 | -6.912  | -2.521  | 4,1035  | 48.1562  |
| 851 | 0   | Extremo 1A | -802.767 | -0.453 | -6.668  | -0.8749 | -2.6884 | 53.1626  |
| 851 | 0,5 | Extremo 1A | -802.767 | 7,22   | -6.668  | -0.8749 | 0,6454  | 51.4708  |
| 851 | 1   | Extremo 2A | -802.767 | 14.892 | -6.668  | -0.8749 | 3,9791  | 45.9427  |
| 852 | 0   | Extremo 2A | -803.079 | -1.96  | -8.405  | -2.0317 | -3.5893 | 45.9563  |
| 852 | 0,5 | Extremo 2A | -803.079 | 5,713  | -8.405  | -2.0317 | 0,6134  | 45.0182  |
| 852 | 1   | Extremo 1A | -803.079 | 13.385 | -8.405  | -2.0317 | 4,8161  | 40.2438  |
| 852 | 0   | Extremo 1A | -794.119 | -0.513 | -8.163  | -0.4067 | -3.4723 | 45.9943  |
| 852 | 0,5 | Extremo 1A | -794.119 | 7,16   | -8.163  | -0.4067 | 0,6093  | 44.3326  |
| 852 | 1   | Extremo 2A | -794.119 | 14.832 | -8.163  | -0.4067 | 4,691   | 38.8347  |
| 853 | 0   | Extremo 2A | -792.509 | -2.107 | -9.713  | -1.6888 | -4.1887 | 38.8809  |
| 853 | 0,5 | Extremo 2A | -792.509 | 5,565  | -9.713  | -1.6888 | 0,6678  | 38.0165  |
| 853 | 1   | Extremo 1A | -792.509 | 13.238 | -9.713  | -1.6888 | 5,5244  | 33.3158  |
| 853 | 0   | Extremo 1A | -783.833 | -0.619 | -9.47   | -0.1116 | -4.0742 | 39.6624  |
| 853 | 0,5 | Extremo 1A | -783.833 | 7,054  | -9.47   | -0.1116 | 0,6609  | 38.0538  |
| 853 | 1   | Extremo 2A | -783.833 | 14.726 | -9.47   | -0.1116 | 5,3961  | 32.6089  |
| 854 | 0   | Extremo 2A | -780.544 | -1.857 | -10.76  | -1.6849 | -4.636  | 32.1009  |
| 854 | 0,5 | Extremo 2A | -780.544 | 5,816  | -10.76  | -1.6849 | 0,7438  | 31.1112  |
| 854 | 1   | Extremo 1A | -780.544 | 13.488 | -10.76  | -1.6849 | 6,1236  | 26.2852  |
| 854 | 0   | Extremo 1A | -772.152 | -0.322 | -10.516 | -0.1674 | -4.5242 | 33.5297  |
| 854 | 0,5 | Extremo 1A | -772.152 | 7,351  | -10.516 | -0.1674 | 0,7338  | 31.7725  |
| 854 | 1   | Extremo 2A | -772.152 | 15.023 | -10.516 | -0.1674 | 5,9918  | 26.179   |
| 855 | 0   | Extremo 2A | -767.413 | -1.372 | -11.625 | -1.8389 | -5.0419 | 24.8317  |
| 855 | 0,5 | Extremo 2A | -767.413 | 6,3    | -11.625 | -1.8389 | 0,7705  | 23.5996  |
| 855 | 1   | Extremo 1A | -767.413 | 13.973 | -11.625 | -1.8389 | 6,583   | 18.5313  |
| 855 | 0   | Extremo 1A | -759.303 | 0.174  | -11.382 | -0.3848 | -4.9328 | 26.7807  |
| 855 | 0,5 | Extremo 1A | -759.303 | 7,846  | -11.382 | -0.3848 | 0,758   | 24.7756  |
| 855 | 1   | Extremo 2A | -759.303 | 15.519 | -11.382 | -0.3848 | 6,4487  | 18.9342  |
| 856 | 0   | Extremo 2A | -753.023 | -1.016 | -12.94  | -1.8515 | -5.7312 | 16.8201  |
| 856 | 0,5 | Extremo 2A | -753.023 | 6,656  | -12.94  | -1.8515 | 0,7389  | 15.4102  |
| 856 | 1   | Extremo 1A | -753.023 | 14.329 | -12.94  | -1.8515 | 7,209   | 10.164   |
| 856 | 0   | Extremo 1A | -745.199 | 0.462  | -12.694 | -0.431  | -5.6221 | 19.1772  |
| 856 | 0,5 | Extremo 1A | -745.199 | 8,134  | -12.694 | -0.431  | 0,7248  | 17.0281  |
| 856 | 1   | Extremo 2A | -745.199 | 15.807 | -12.694 | -0.431  | 7,0717  | 11.0428  |
| 857 | 0   | Extremo 2A | -736.354 | -1.261 | -15.136 | -1.6295 | -6.8039 | 8.94     |
| 857 | 0,5 | Extremo 2A | -736.354 | 6,411  | -15.136 | -1.6295 | 0,7641  | 7.6524   |
| 857 | 1   | Extremo 1A | -736.354 | 14.084 | -15.136 | -1.6295 | 8,332   | 2.5285   |
| 857 | 0   | Extremo 1A | -728.829 | 0.152  | -14.874 | -0.2335 | -6.6886 | 11.7605  |
| 857 | 0,5 | Extremo 1A | -728.829 | 7,824  | -14.874 | -0.2335 | 0,7483  | 9.7665   |
| 857 | 1   | Extremo 2A | -728.829 | 15.497 | -14.874 | -0.2335 | 8,1852  | 3.9362   |
| 858 | 0   | Extremo 2A | -716.87  | -1.517 | -17.565 | -1.5297 | -7.8864 | 1.5425   |
| 858 | 0,5 | Extremo 2A | -716.87  | 6,156  | -17.565 | -1.5297 | 0,896   | 0.3827   |
| 858 | 1   | Extremo 1A | -716.87  | 13.828 | -17.565 | -1.5297 | 9,6783  | -4.6134  |
| 858 | 0   | Extremo 1A | -709.666 | -0.126 | -17.282 | -0.1725 | -7.7635 | 4.859    |
| 858 | 0,5 | Extremo 1A | -709.666 | 7,546  | -17.282 | -0.1725 | 0,8773  | 3.004    |
| 858 | 1   | Extremo 2A | -709.666 | 15.219 | -17.282 | -0.1725 | 9,5182  | -2.6871  |
| 859 | 0   | Extremo 2A | -694.227 | -1.627 | -20.297 | -1.5318 | -9.0757 | -5.6732  |
| 859 | 0,5 | Extremo 2A | -694.227 | 6,046  | -20.297 | -1.5318 | 1,0726  | -6.778   |
| 859 | 1   | Extremo 1A | -694.227 | 13.718 | -20.297 | -1.5318 | 11,2208 | -11.7192 |
| 859 | 0   | Extremo 1A | -687.372 | -0.226 | -19.988 | -0.2338 | -8.9439 | -1.8824  |
| 859 | 0,5 | Extremo 1A | -687.372 | 7,446  | -19.988 | -0.2338 | 1,0504  | -3.6875  |
| 859 | 1   | Extremo 2A | -687.372 | 15.119 | -19.988 | -0.2338 | 11,0446 | -9.3288  |

|     |     |            |          |         |         |         |          |          |
|-----|-----|------------|----------|---------|---------|---------|----------|----------|
| 860 | 0   | Extremo 2A | -667.961 | -1.773  | -23.49  | -1.4617 | -10.4844 | -12.829  |
| 860 | 0,5 | Extremo 2A | -667.961 | 5,899   | -23.49  | -1.4617 | 1,2604   | -13.8605 |
| 860 | 1   | Extremo 1A | -667.961 | 13.572  | -23.49  | -1.4617 | 13,0052  | -18.7283 |
| 860 | 0   | Extremo 1A | -661.488 | -0.339  | -23.152 | -0.2572 | -10.3418 | -8.646   |
| 860 | 0,5 | Extremo 1A | -661.488 | 7,334   | -23.152 | -0.2572 | 1,2342   | -10.3947 |
| 860 | 1   | Extremo 2A | -661.488 | 15.006  | -23.152 | -0.2572 | 12,8102  | -15.9797 |
| 861 | 0   | Extremo 2A | -637.498 | -1.906  | -27.172 | -1.3116 | -12.1745 | -19.5576 |
| 861 | 0,5 | Extremo 2A | -637.498 | 5,767   | -27.172 | -1.3116 | 1,4116   | -20.5228 |
| 861 | 1   | Extremo 1A | -637.498 | 13.439  | -27.172 | -1.3116 | 14,9977  | -25.3242 |
| 861 | 0   | Extremo 1A | -631.446 | -0.461  | -26.802 | -0.2306 | -12.0193 | -15.1564 |
| 861 | 0,5 | Extremo 1A | -631.446 | 7,211   | -26.802 | -0.2306 | 1,3816   | -16.8439 |
| 861 | 1   | Extremo 2A | -631.446 | 14.884  | -26.802 | -0.2306 | 14,7824  | -22.3676 |
| 862 | 0   | Extremo 2A | -602.138 | -1.657  | -31.629 | -1.4478 | -14.3403 | -25.6073 |
| 862 | 0,5 | Extremo 2A | -602.138 | 6,016   | -31.629 | -1.4478 | 1,4743   | -26.697  |
| 862 | 1   | Extremo 1A | -602.138 | 13.688  | -31.629 | -1.4478 | 17,289   | -31.623  |
| 862 | 0   | Extremo 1A | -596.549 | -0.315  | -31.221 | -0.4664 | -14.1691 | -21.1959 |
| 862 | 0,5 | Extremo 1A | -596.549 | 7,357   | -31.221 | -0.4664 | 1,4415   | -22.9563 |
| 862 | 1   | Extremo 2A | -596.549 | 15.03   | -31.221 | -0.4664 | 17,0521  | -28.553  |
| 863 | 0   | Extremo 2A | -560.765 | -1.389  | -37.281 | -1.9161 | -17.1184 | -32.3805 |
| 863 | 0,5 | Extremo 2A | -560.765 | 6,283   | -37.281 | -1.9161 | 1,5222   | -33.6041 |
| 863 | 1   | Extremo 1A | -560.765 | 13.956  | -37.281 | -1.9161 | 20,1628  | -38.6639 |
| 863 | 0   | Extremo 1A | -555.694 | -0.23   | -36.826 | -1.0234 | -16.9258 | -27.9295 |
| 863 | 0,5 | Extremo 1A | -555.694 | 7,442   | -36.826 | -1.0234 | 1,4873   | -29.7324 |
| 863 | 1   | Extremo 2A | -555.694 | 15.115  | -36.826 | -1.0234 | 19,9005  | -35.3717 |
| 864 | 0   | Extremo 2A | -513.409 | -1.574  | -42.905 | -2.4244 | -19.7756 | -40.1976 |
| 864 | 0,5 | Extremo 2A | -513.409 | 6,098   | -42.905 | -2.4244 | 1,677    | -41.3286 |
| 864 | 1   | Extremo 1A | -513.409 | 13.771  | -42.905 | -2.4244 | 23,1297  | -46.2958 |
| 864 | 0   | Extremo 1A | -508.908 | -0.6    | -42.405 | -1.6638 | -19.562  | -35.6668 |
| 864 | 0,5 | Extremo 1A | -508.908 | 7,073   | -42.405 | -1.6638 | 1,6406   | -37.285  |
| 864 | 1   | Extremo 2A | -508.908 | 14.745  | -42.405 | -1.6638 | 22,8433  | -42.7394 |
| 865 | 0   | Extremo 2A | -462.167 | -3.175  | -46.376 | -2.4514 | -21.2087 | -48.6278 |
| 865 | 0,5 | Extremo 2A | -462.167 | 4,498   | -46.376 | -2.4514 | 1,9792   | -48.9585 |
| 865 | 1   | Extremo 1A | -462.167 | 12.17   | -46.376 | -2.4514 | 25,1671  | -53.1255 |
| 865 | 0   | Extremo 1A | -458.268 | -2.358  | -45.845 | -1.8793 | -20.9805 | -44.0615 |
| 865 | 0,5 | Extremo 1A | -458.268 | 5,314   | -45.845 | -1.8793 | 1,9421   | -44.8004 |
| 865 | 1   | Extremo 2A | -458.268 | 12.987  | -45.845 | -1.8793 | 24,8648  | -49.3756 |
| 866 | 0   | Extremo 2A | -412.098 | -6.364  | -42.981 | -1.5197 | -19.7343 | -55.5835 |
| 866 | 0,5 | Extremo 2A | -412.098 | 1,308   | -42.981 | -1.5197 | 1,756    | -54.3194 |
| 866 | 1   | Extremo 1A | -412.098 | 8.981   | -42.981 | -1.5197 | 23,2463  | -56.8916 |
| 866 | 0   | Extremo 1A | -408.79  | -5.719  | -42.469 | -1.1686 | -19.5109 | -51.1472 |
| 866 | 0,5 | Extremo 1A | -408.79  | 1,953   | -42.469 | -1.1686 | 1,7235   | -50.2058 |
| 866 | 1   | Extremo 2A | -408.79  | 9.626   | -42.469 | -1.1686 | 22,9579  | -53.1006 |
| 867 | 0   | Extremo 2A | -368.373 | -8.566  | -36.897 | -0.4198 | -18.3957 | -57.7443 |
| 867 | 0,5 | Extremo 2A | -368.373 | -0.894  | -36.897 | -0.4198 | 0,053    | -55.3793 |
| 867 | 1   | Extremo 1A | -368.373 | 6.779   | -36.897 | -0.4198 | 18,5017  | -56.8506 |
| 867 | 0   | Extremo 1A | -365.59  | -8.214  | -36.424 | -0.2279 | -18.1791 | -53.6462 |
| 867 | 0,5 | Extremo 1A | -365.59  | -0.541  | -36.424 | -0.2279 | 0,0328   | -51.4575 |
| 867 | 1   | Extremo 2A | -365.59  | 7.131   | -36.424 | -0.2279 | 18,2447  | -53.1051 |
| 868 | 0   | Extremo 2A | -324.883 | -10.733 | -41.889 | 0.4969  | -22.5999 | -56.9921 |
| 868 | 0,5 | Extremo 2A | -324.883 | -3.061  | -41.889 | 0.4969  | -1.6556  | -53.5437 |
| 868 | 1   | Extremo 1A | -324.883 | 4.612   | -41.889 | 0.4969  | 19,2886  | -53.9316 |
| 868 | 0   | Extremo 1A | -322.604 | -10.627 | -41.426 | 0.5705  | -22.3757 | -53.0906 |
| 868 | 0,5 | Extremo 1A | -322.604 | -2.954  | -41.426 | 0.5705  | -1.6628  | -49.6955 |
| 868 | 1   | Extremo 2A | -322.604 | 4.718   | -41.426 | 0.5705  | 19,05    | -50.1366 |
| 8   |     |            |          |         |         |         |          |          |



|     |     |            |          |         |         |         |          |          |
|-----|-----|------------|----------|---------|---------|---------|----------|----------|
| 872 | 0   | Extremo 2A | -147.953 | -13.141 | -27.649 | -0.3441 | -15.1255 | -37.4566 |
| 872 | 0,5 | Extremo 2A | -147.953 | -5.469  | -27.649 | -0.3441 | -1.3012  | -32.8041 |
| 872 | 1   | Extremo 1A | -147.953 | 2.204   | -27.649 | -0.3441 | 12.5231  | -31.9879 |
| 872 | 0   | Extremo 1A | -147.408 | -13.499 | -27.419 | -0.5492 | -15.0111 | -33.9593 |
| 872 | 0,5 | Extremo 1A | -147.408 | -5.827  | -27.419 | -0.5492 | -1.3017  | -29.1278 |
| 872 | 1   | Extremo 2A | -147.408 | 1.846   | -27.419 | -0.5492 | 12.4076  | -28.1326 |
| 873 | 0   | Extremo 2A | -117.473 | -12.857 | -22.597 | -0.4653 | -12.4392 | -33.9291 |
| 873 | 0,5 | Extremo 2A | -117.473 | -5.184  | -22.597 | -0.4653 | -1.1409  | -29.4188 |
| 873 | 1   | Extremo 1A | -117.473 | 2.488   | -22.597 | -0.4653 | 10.1575  | -28.7448 |
| 873 | 0   | Extremo 1A | -117.178 | -13.237 | -22.429 | -0.7107 | -12.3576 | -30.3647 |
| 873 | 0,5 | Extremo 1A | -117.178 | -5.564  | -22.429 | -0.7107 | -1.143   | -25.6645 |
| 873 | 1   | Extremo 2A | -117.178 | 2.108   | -22.429 | -0.7107 | 10.0716  | -24.8006 |
| 874 | 0   | Extremo 2A | -92.794  | -12.994 | -18.137 | -0.252  | -10.0164 | -30.0367 |
| 874 | 0,5 | Extremo 2A | -92.794  | -5.322  | -18.137 | -0.252  | -0.9481  | -25.4576 |
| 874 | 1   | Extremo 1A | -92.794  | 2.351   | -18.137 | -0.252  | 8.1202   | -24.7148 |
| 874 | 0   | Extremo 1A | -92.678  | -13.328 | -18.021 | -0.5631 | -9.9624  | -26.495  |
| 874 | 0,5 | Extremo 1A | -92.678  | -5.656  | -18.021 | -0.5631 | -0.9518  | -21.749  |
| 874 | 1   | Extremo 2A | -92.678  | 2.017   | -18.021 | -0.5631 | 8.0588   | -20.8394 |
| 875 | 0   | Extremo 2A | -73.079  | -13.06  | -14.422 | -0.1509 | -7.9873  | -25.6192 |
| 875 | 0,5 | Extremo 2A | -73.079  | -5.388  | -14.422 | -0.1509 | -0.7763  | -21.0071 |
| 875 | 1   | Extremo 1A | -73.079  | 2.285   | -14.422 | -0.1509 | 6.4348   | -20.2313 |
| 875 | 0   | Extremo 1A | -73.086  | -13.352 | -14.349 | -0.5063 | -7.9557  | -22.2223 |
| 875 | 0,5 | Extremo 1A | -73.086  | -5.68   | -14.349 | -0.5063 | -0.7815  | -17.4645 |
| 875 | 1   | Extremo 2A | -73.086  | 1.993   | -14.349 | -0.5063 | 6.3928   | -16.5428 |
| 876 | 0   | Extremo 2A | -57.454  | -12.88  | -11.411 | -0.2302 | -6.3338  | -21.1394 |
| 876 | 0,5 | Extremo 2A | -57.454  | -5.208  | -11.411 | -0.2302 | -0.6285  | -16.6175 |
| 876 | 1   | Extremo 1A | -57.454  | 2.465   | -11.411 | -0.2302 | 5.0768   | -15.9318 |
| 876 | 0   | Extremo 1A | -57.536  | -13.17  | -11.37  | -0.5989 | -6.32    | -17.9563 |
| 876 | 0,5 | Extremo 1A | -57.536  | -5.498  | -11.37  | -0.5989 | -0.6349  | -13.2894 |
| 876 | 1   | Extremo 2A | -57.536  | 2.175   | -11.37  | -0.5989 | 5.0501   | -12.4588 |
| 877 | 0   | Extremo 2A | -45.127  | -12.588 | -8.99   | -0.3885 | -5.0012  | -17.026  |
| 877 | 0,5 | Extremo 2A | -45.127  | -4.915  | -8.99   | -0.3885 | -0.506   | -12.6504 |
| 877 | 1   | Extremo 1A | -45.127  | 2.757   | -8.99   | -0.3885 | 3.9892   | -12.111  |
| 877 | 0   | Extremo 1A | -45.247  | -12.915 | -8.976  | -0.7447 | -5.0013  | -14.0548 |
| 877 | 0,5 | Extremo 1A | -45.247  | -5.242  | -8.976  | -0.7447 | -0.5135  | -9.5155  |
| 877 | 1   | Extremo 2A | -45.247  | 2.43    | -8.976  | -0.7447 | 3.9743   | -8.8124  |
| 878 | 0   | Extremo 2A | -35.422  | -12.311 | -7.08   | -0.5073 | -3.9499  | -13.4519 |
| 878 | 0,5 | Extremo 2A | -35.422  | -4.638  | -7.08   | -0.5073 | -0.41    | -9.2147  |
| 878 | 1   | Extremo 1A | -35.422  | 3.034   | -7.08   | -0.5073 | 3.1299   | -8.8137  |
| 878 | 0   | Extremo 1A | -35.552  | -12.686 | -7.086  | -0.8417 | -3.9614  | -10.6167 |
| 878 | 0,5 | Extremo 1A | -35.552  | -5.014  | -7.086  | -0.8417 | -0.4184  | -6.1918  |
| 878 | 1   | Extremo 2A | -35.552  | 2.659   | -7.086  | -0.8417 | 3.1247   | -5.6031  |
| 879 | 0   | Extremo 2A | -27.753  | -11.861 | -5.64   | -0.5579 | -3.1466  | -10.2827 |
| 879 | 0,5 | Extremo 2A | -27.753  | -4.189  | -5.64   | -0.5579 | -0.3264  | -6.2701  |
| 879 | 1   | Extremo 1A | -27.753  | 3.484   | -5.64   | -0.5579 | 2.4937   | -6.0238  |
| 879 | 0   | Extremo 1A | -27.872  | -12.248 | -5.664  | -0.9037 | -3.1672  | -7.487   |
| 879 | 0,5 | Extremo 1A | -27.872  | -4.575  | -5.664  | -0.9037 | -0.3351  | -3.2812  |
| 879 | 1   | Extremo 2A | -27.872  | 3.097   | -5.664  | -0.9037 | 2.497    | -2.9116  |
| 880 | 0   | Extremo 2A | -21.688  | -11.489 | -4.46   | -0.5144 | -2.4826  | -7.3095  |
| 880 | 0,5 | Extremo 2A | -21.688  | -3.816  | -4.46   | -0.5144 | -0.2525  | -3.4831  |
| 880 | 1   | Extremo 1A | -21.688  | 3.856   | -4.46   | -0.5144 | 1.9775   | -3.493   |
| 880 | 0   | Extremo 1A | -21.778  | -11.832 | -4.494  | -0.9045 | -2.508   | -4.6301  |
| 880 | 0,5 | Extremo 1A | -21.778  | -4.16   | -4.494  | -0.9045 | -0.2609  | -0.6321  |
| 880 | 1   | Extremo 2A | -21.778  | 3.513   | -4.494  | -0.9045 | 1.9861   | -0.4703  |
| 881 | 0   | Extremo 2A | -16.893  | -11.135 | -3.526  | -0.4926 | -1.9593  | -4.5656  |
| 881 | 0,5 | Extremo 2A | -16.893  | -3.462  | -3.526  | -0.4926 | -0.1964  | -0.9163  |
| 881 | 1   | Extremo 1A | -16.893  | 4.21    | -3.526  | -0.4926 | 1.5665   | -1.1032  |
| 881 | 0   | Extremo 1A | -16.946  | -11.434 | -3.564  | -0.9112 | -1.9867  | -2.1075  |
| 881 | 0,5 | Extremo 1A | -16.946  | -3.762  | -3.564  | -0.9112 | -0.2046  | 1.6914   |
| 881 | 1   | Extremo 2A | -16.946  | 3.911   | -3.564  | -0.9112 | 1.5775   | 1.6541   |
| 882 | 0   | Extremo 2A | -13.095  | -10.766 | -2.799  | -0.4819 | -1.5532  | -2.163   |
| 882 | 0,5 | Extremo 2A | -13.095  | -3.093  | -2.799  | -0.4819 | -0.1539  | 1.3016   |
| 882 | 1   | Extremo 1A | -13.095  | 4.579   | -2.799  | -0.4819 | 1.2454   | 0.93     |
| 882 | 0   | Extremo 1A | -13.107  | -11.049 | -2.838  | -0.9011 | -1.5809  | 0.0196   |
| 882 | 0,5 | Extremo 1A | -13.107  | -3.376  | -2.838  | -0.9011 | -0.1621  | 3.6258   |
| 882 | 1   | Extremo 2A | -13.107  | 4.296   | -2.838  | -0.9011 | 1.2567   | 3.3958   |
| 883 | 0   | Extremo 2A | -10.068  | -10.32  | -2.244  | -0.4451 | -1.2433  | -0.0931  |
| 883 | 0,5 | Extremo 2A | -10.068  | -2.648  | -2.244  | -0.4451 | -0.1215  | 3.149    |
| 883 | 1   | Extremo 1A | -10.068  | 5.025   | -2.244  | -0.4451 | 1.0002   | 2.5548   |
| 883 | 0   | Extremo 1A | -10.04   | -10.604 | -2.281  | -0.8485 | -1.2702  | 1.8228   |
| 883 | 0,5 | Extremo 1A | -10.04   | -2.932  | -2.281  | -0.8485 | -0.1298  | 5.2067   |
| 883 | 1   | Extremo 2A | -10.04   | 4.741   | -2.281  | -0.8485 | 1.0106   | 4.7543   |

|     |     |            |           |        |           |         |           |         |
|-----|-----|------------|-----------|--------|-----------|---------|-----------|---------|
| 884 | 0   | Extremo 2A | -7.622    | -9.53  | -1.84     | -0.465  | -1.0131   | 1.6536  |
| 884 | 0,5 | Extremo 2A | -7.622    | -1.857 | -1.84     | -0.465  | -0.0933   | 4.5003  |
| 884 | 1   | Extremo 1A | -7.622    | 5.815  | -1.84     | -0.465  | 0.8266    | 3.5107  |
| 884 | 0   | Extremo 1A | -7.558    | -9.804 | -1.874    | -0.8592 | -1.0383   | 3.3412  |
| 884 | 0,5 | Extremo 1A | -7.558    | -2.132 | -1.874    | -0.8592 | -0.1013   | 6.3253  |
| 884 | 1   | Extremo 2A | -7.558    | 5.541  | -1.874    | -0.8592 | 0.8357    | 5.473   |
| 885 | 0   | Extremo 2A | -5.622    | -8.616 | -1.52     | -0.4724 | -0.8273   | 2.6675  |
| 885 | 0,5 | Extremo 2A | -5.622    | -0.943 | -1.52     | -0.4724 | -0.0671   | 5.0572  |
| 885 | 1   | Extremo 1A | -5.622    | 6.729  | -1.52     | -0.4724 | 0.693     | 3.6107  |
| 885 | 0   | Extremo 1A | -5.53     | -8.844 | -1.546    | -0.8675 | -0.8474   | 4.0932  |
| 885 | 0,5 | Extremo 1A | -5.53     | -1.172 | -1.546    | -0.8675 | -0.0745   | 6.5973  |
| 885 | 1   | Extremo 2A | -5.53     | 6.501  | -1.546    | -0.8675 | 0.6984    | 5.2651  |
| 886 | 0   | Extremo 2A | -3.968    | -7.745 | -1.279    | -0.3765 | -0.6831   | 2.8409  |
| 886 | 0,5 | Extremo 2A | -3.968    | -0.072 | -1.279    | -0.3765 | -0.0433   | 4.7951  |
| 886 | 1   | Extremo 1A | -3.968    | 7.6    | -1.279    | -0.3765 | 0.5964    | 2.913   |
| 886 | 0   | Extremo 1A | -3.862    | -7.911 | -1.293    | -0.7557 | -0.6963   | 3.9588  |
| 886 | 0,5 | Extremo 1A | -3.862    | -0.238 | -1.293    | -0.7557 | -0.0498   | 5.9961  |
| 886 | 1   | Extremo 2A | -3.862    | 7.434  | -1.293    | -0.7557 | 0.5967    | 4.1971  |
| 887 | 0   | Extremo 2A | -2.591    | -7.121 | -1.095    | 0.0191  | -0.5631   | 2.2495  |
| 887 | 0,5 | Extremo 2A | -2.591    | 0.552  | -1.095    | 0.0191  | -0.0156   | 3.8918  |
| 887 | 1   | Extremo 1A | -2.591    | 8.224  | -1.095    | 0.0191  | 0.532     | 1.6978  |
| 887 | 0   | Extremo 1A | -2.487    | -7.231 | -1.095    | -0.3147 | -0.5677   | 3.0368  |
| 887 | 0,5 | Extremo 1A | -2.487    | 0.442  | -1.095    | -0.3147 | -0.0201   | 4.7341  |
| 887 | 1   | Extremo 2A | -2.487    | 8.114  | -1.095    | -0.3147 | 0.5276    | 2.5952  |
| 888 | 0   | Extremo 2A | -1.461    | -6.63  | -0.906    | 0.9994  | -0.4292   | 1.4293  |
| 888 | 0,5 | Extremo 2A | -1.461    | 1.043  | -0.906    | 0.9994  | 0.0236    | 2.826   |
| 888 | 1   | Extremo 1A | -1.461    | 8.715  | -0.906    | 0.9994  | 0.4765    | 0.3865  |
| 888 | 0   | Extremo 1A | -1.375    | -6.687 | -0.885    | 0.7441  | -0.4198   | 1.9079  |
| 888 | 0,5 | Extremo 1A | -1.375    | 0.985  | -0.885    | 0.7441  | 0.0226    | 3.3333  |
| 888 | 1   | Extremo 2A | -1.375    | 8.658  | -0.885    | 0.7441  | 0.465     | 0.9226  |
| 889 | 0   | Extremo 2A | -0.601    | -4.389 | -0.575    | 2.1056  | -0.2255   | 1.3917  |
| 889 | 0,5 | Extremo 2A | -0.601    | 3.283  | -0.575    | 2.1056  | 0.0617    | 1.6681  |
| 889 | 1   | Extremo 1A | -0.601    | 10.956 | -0.575    | 2.1056  | 0.349     | -1.8916 |
| 889 | 0   | Extremo 1A | -0.553    | -4.343 | -0.508    | 1.9408  | -0.1966   | 1.6385  |
| 889 | 0,5 | Extremo 1A | -0.553    | 3.33   | -0.508    | 1.9408  | 0.0575    | 1.8917  |
| 889 | 1   | Extremo 2A | -0.553    | 11.002 | -0.508    | 1.9408  | 0.3116    | -1.6913 |
| 890 | 0   | Extremo 2A | -0.001355 | -9.469 | 0.002368  | 0.455   | 0.0014    | -2.0768 |
| 890 | 0,5 | Extremo 2A | -0.001355 | -2.106 | 0.002368  | 0.455   | 0.0002058 | 0.8171  |
| 890 | 1   | Extremo 1A | -0.001355 | 5.257  | 0.002368  | 0.455   | -0.000978 | 0.0293  |
| 890 | 0   | Extremo 1A | -0.000723 | -9.469 | -0.006962 | 0.455   | -0.0039   | -2.0768 |
| 890 | 0,5 | Extremo 1A | -0.000723 | -2.106 | -0.006962 | 0.455   | -0.000426 | 0.8171  |
| 890 | 1   | Extremo 2A | -0.000723 | 5.257  | -0.006962 | 0.455   | 0.0031    | 0.0293  |
| 891 | 0   | Extremo 2A | 0.011     | -8.408 | 0.005198  | 0.249   | 0.0028    | -1.2927 |
| 891 | 0,5 | Extremo 2A | 0.011     | -1.044 | 0.005198  | 0.249   | 0.0001938 | 1.0703  |
| 891 | 1   | Extremo 1A | 0.011     | 6.319  | 0.005198  | 0.249   | -0.0024   | -0.2484 |
| 891 | 0   | Extremo 1A | -0.028    | -8.407 | -0.01     | 0.249   | -0.0055   | -1.2927 |
| 891 | 0,5 | Extremo 1A | -0.028    | -1.044 | -0.01     | 0.249   | -0.000345 | 1.0702  |
| 891 | 1   | Extremo 2A | -0.028    | 6.319  | -0.01     | 0.249   | 0.0048    | -0.2485 |
| 892 | 0   | Extremo 2A | 0.032     | -7.917 | 0.005909  | 0.0986  | 0.0031    | -0.8141 |
| 892 | 0,5 | Extremo 2A | 0.032     | -0.553 | 0.005909  | 0.0986  | 0.0001016 | 1.3034  |
| 892 | 1   | Extremo 1A | 0.032     | 6.81   | 0.005909  | 0.0986  | -0.0029   | -0.2607 |
| 892 | 0   | Extremo 1A | -0.067    | -7.917 | -0.011    | 0.0986  | -0.0057   | -0.8141 |
| 892 | 0,5 | Extremo 1A | -0.067    | -0.553 | -0.011    | 0.0986  | -0.000222 | 1.3033  |
| 892 | 1   | Extremo 2A | -0.067    | 6.81   | -0.011    | 0.0986  | 0.0052    | -0.2608 |
| 893 | 0   | Extremo 2A | 0.054     | -7.598 | 0.005665  | 0.0384  | 0.0029    | -0.4729 |
| 893 | 0,5 | Extremo 2A | 0.054     | -0.235 | 0.005665  | 0.0384  | 3.709E-05 | 1.4853  |
| 893 | 1   | Extremo 1A | 0.054     | 7.128  | 0.005665  | 0.0384  | -0.0028   | -0.2    |



|     |     |            |        |        |           |         |           |         |
|-----|-----|------------|--------|--------|-----------|---------|-----------|---------|
| 896 | 0   | Extremo 2A | 0.114  | -6.911 | 0.004669  | 0.0936  | 0.0023    | -0.9485 |
| 896 | 0.5 | Extremo 2A | 0.114  | 0.453  | 0.004669  | 0.0936  | -4.85E-05 | 0.6659  |
| 896 | 1   | Extremo 1A | 0.114  | 7.816  | 0.004669  | 0.0936  | -0.0024   | -1.4012 |
| 896 | 0   | Extremo 1A | -0.214 | -6.911 | -0.007871 | 0.0936  | -0.0039   | -0.9489 |
| 896 | 0.5 | Extremo 1A | -0.214 | 0.453  | -0.007871 | 0.0936  | 1.431E-05 | 0.6656  |
| 896 | 1   | Extremo 2A | -0.214 | 7.816  | -0.007871 | 0.0936  | 0.0039    | -1.4016 |
| 897 | 0   | Extremo 2A | 0.131  | -6.933 | 0.004467  | 0.1664  | 0.0022    | -1.8014 |
| 897 | 0.5 | Extremo 2A | 0.131  | 0.43   | 0.004467  | 0.1664  | -5.7E-05  | -0.1758 |
| 897 | 1   | Extremo 1A | 0.131  | 7.794  | 0.004467  | 0.1664  | -0.0023   | -2.2318 |
| 897 | 0   | Extremo 1A | -0.243 | -6.933 | -0.007579 | 0.1664  | -0.0037   | -1.8018 |
| 897 | 0.5 | Extremo 1A | -0.243 | 0.43   | -0.007579 | 0.1664  | 4.429E-05 | -0.1762 |
| 897 | 1   | Extremo 2A | -0.243 | 7.794  | -0.007579 | 0.1664  | 0.0038    | -2.2322 |
| 898 | 0   | Extremo 2A | 0.146  | -7.185 | 0.004333  | 0.2013  | 0.0021    | -2.9375 |
| 898 | 0.5 | Extremo 2A | 0.146  | 0.178  | 0.004333  | 0.2013  | -3.59E-05 | -1.1858 |
| 898 | 1   | Extremo 1A | 0.146  | 7.542  | 0.004333  | 0.2013  | -0.0022   | -3.1158 |
| 898 | 0   | Extremo 1A | -0.27  | -7.185 | -0.007233 | 0.2013  | -0.0036   | -2.938  |
| 898 | 0.5 | Extremo 1A | -0.27  | 0.178  | -0.007233 | 0.2013  | 0.0000554 | -1.1863 |
| 898 | 1   | Extremo 2A | -0.27  | 7.542  | -0.007233 | 0.2013  | 0.0037    | -3.1163 |
| 899 | 0   | Extremo 2A | 0.162  | -7.513 | 0.004788  | 0.1048  | 0.0024    | -3.8442 |
| 899 | 0.5 | Extremo 2A | 0.162  | -0.15  | 0.004788  | 0.1048  | 3.077E-05 | -1.9284 |
| 899 | 1   | Extremo 1A | 0.162  | 7.213  | 0.004788  | 0.1048  | -0.0024   | -3.6942 |
| 899 | 0   | Extremo 1A | -0.294 | -7.513 | -0.006715 | 0.1048  | -0.0033   | -3.8447 |
| 899 | 0.5 | Extremo 1A | -0.294 | -0.15  | -0.006715 | 0.1048  | 1.852E-05 | -1.9289 |
| 899 | 1   | Extremo 2A | -0.294 | 7.213  | -0.006715 | 0.1048  | 0.0034    | -3.6947 |
| 900 | 0   | Extremo 2A | 0.183  | -7.708 | 0.007147  | -0.0466 | 0.0036    | -3.8244 |
| 900 | 0.5 | Extremo 2A | 0.183  | -0.345 | 0.007147  | -0.0466 | 2.752E-05 | -1.8114 |
| 900 | 1   | Extremo 1A | 0.183  | 7.019  | 0.007147  | -0.0466 | -0.0035   | -3.4799 |
| 900 | 0   | Extremo 1A | -0.315 | -7.708 | -0.007086 | -0.0466 | -0.0036   | -3.8249 |
| 900 | 0.5 | Extremo 1A | -0.315 | -0.345 | -0.007086 | -0.0466 | -2.26E-05 | -1.8118 |
| 900 | 1   | Extremo 2A | -0.315 | 7.019  | -0.007086 | -0.0466 | 0.0035    | -3.4803 |
| 901 | 0   | Extremo 2A | 0.211  | -8.038 | 0.007859  | -0.1427 | 0.0039    | -3.013  |
| 901 | 0.5 | Extremo 2A | 0.211  | -0.675 | 0.007859  | -0.1427 | -6.32E-05 | -0.8348 |
| 901 | 1   | Extremo 1A | 0.211  | 6.688  | 0.007859  | -0.1427 | -0.004    | -2.3382 |
| 901 | 0   | Extremo 1A | -0.34  | -8.038 | -0.007294 | -0.1427 | -0.0037   | -3.0134 |
| 901 | 0.5 | Extremo 1A | -0.34  | -0.675 | -0.007294 | -0.1427 | -1.8E-05  | -0.8351 |
| 901 | 1   | Extremo 2A | -0.34  | 6.688  | -0.007294 | -0.1427 | 0.0036    | -2.3385 |
| 902 | 0   | Extremo 2A | 0.241  | -8.294 | 0.007687  | -0.1076 | 0.0037    | -1.896  |
| 902 | 0.5 | Extremo 2A | 0.241  | -0.93  | 0.007687  | -0.1076 | -0.000134 | 0.4099  |
| 902 | 1   | Extremo 1A | 0.241  | 6.433  | 0.007687  | -0.1076 | -0.004    | -0.9657 |
| 902 | 0   | Extremo 1A | -0.365 | -8.294 | -0.006836 | -0.1076 | -0.0034   | -1.8963 |
| 902 | 0.5 | Extremo 1A | -0.365 | -0.93  | -0.006836 | -0.1076 | 1.148E-05 | 0.4097  |
| 902 | 1   | Extremo 2A | -0.365 | 6.433  | -0.006836 | -0.1076 | 0.0034    | -0.9659 |
| 903 | 0   | Extremo 2A | 0.27   | -8.319 | 0.00735   | -0.0354 | 0.0035    | -0.8305 |
| 903 | 0.5 | Extremo 2A | 0.27   | -0.956 | 0.00735   | -0.0354 | -0.000182 | 1.4884  |
| 903 | 1   | Extremo 1A | 0.27   | 6.407  | 0.00735   | -0.0354 | -0.0039   | 0.1256  |
| 903 | 0   | Extremo 1A | -0.39  | -8.32  | -0.006148 | -0.0354 | -0.003    | -0.8306 |
| 903 | 0.5 | Extremo 1A | -0.39  | -0.956 | -0.006148 | -0.0354 | 4.063E-05 | 1.4884  |
| 903 | 1   | Extremo 2A | -0.39  | 6.407  | -0.006148 | -0.0354 | 0.0031    | 0.1257  |
| 904 | 0   | Extremo 2A | 0.298  | -8.162 | 0.007046  | 0.0096  | 0.0033    | 0.0396  |
| 904 | 0.5 | Extremo 2A | 0.298  | -0.799 | 0.007046  | 0.0096  | -0.000221 | 2.2798  |
| 904 | 1   | Extremo 1A | 0.298  | 6.565  | 0.007046  | 0.0096  | -0.0037   | 0.8383  |
| 904 | 0   | Extremo 1A | -0.413 | -8.162 | -0.005507 | 0.0096  | -0.0027   | 0.0397  |
| 904 | 0.5 | Extremo 1A | -0.413 | -0.799 | -0.005507 | 0.0096  | 6.827E-05 | 2.2799  |
| 904 | 1   | Extremo 2A | -0.413 | 6.564  | -0.005507 | 0.0096  | 0.0028    | 0.8386  |
| 905 | 0   | Extremo 2A | 0.324  | -7.904 | 0.006811  | 0.0215  | 0.0031    | 0.6862  |
| 905 | 0.5 | Extremo 2A | 0.324  | -0.54  | 0.006811  | 0.0215  | -0.000257 | 2.7972  |
| 905 | 1   | Extremo 1A | 0.324  | 6.823  | 0.006811  | 0.0215  | -0.0037   | 1.2266  |
| 905 | 0   | Extremo 1A | -0.434 | -7.904 | -0.005013 | 0.0215  | -0.0024   | 0.6865  |
| 905 | 0.5 | Extremo 1A | -0.434 | -0.541 | -0.005013 | 0.0215  | 9.581E-05 | 2.7975  |
| 905 | 1   | Extremo 2A | -0.434 | 6.823  | -0.005013 | 0.0215  | 0.0026    | 1.227   |
| 906 | 0   | Extremo 2A | 0.35   | -7.599 | 0.006646  | 0.0135  | 0.003     | 1.111   |
| 906 | 0.5 | Extremo 2A | 0.35   | -0.236 | 0.006646  | 0.0135  | -0.000292 | 3.0699  |
| 906 | 1   | Extremo 1A | 0.35   | 7.127  | 0.006646  | 0.0135  | -0.0036   | 1.3471  |
| 906 | 0   | Extremo 1A | -0.453 | -7.6   | -0.004694 | 0.0135  | -0.0022   | 1.1114  |
| 906 | 0.5 | Extremo 1A | -0.453 | -0.236 | -0.004694 | 0.0135  | 0.0001234 | 3.0704  |
| 906 | 1   | Extremo 2A | -0.453 | 7.127  | -0.004694 | 0.0135  | 0.0025    | 1.3477  |
| 907 | 0   | Extremo 2A | 0.375  | -7.279 | 0.006544  | -0.0026 | 0.0029    | 1.3155  |
| 907 | 0.5 | Extremo 2A | 0.375  | 0.085  | 0.006544  | -0.0026 | -0.000327 | 3.114   |
| 907 | 1   | Extremo 1A | 0.375  | 7.448  | 0.006544  | -0.0026 | -0.0036   | 1.2308  |
| 907 | 0   | Extremo 1A | -0.472 | -7.279 | -0.004552 | -0.0025 | -0.0021   | 1.316   |
| 907 | 0.5 | Extremo 1A | -0.472 | 0.084  | -0.004552 | -0.0025 | 0.0001507 | 3.1146  |
| 907 | 1   | Extremo 2A | -0.472 | 7.448  | -0.004552 | -0.0025 | 0.0024    | 1.2315  |

|     |     |            |        |        |           |         |           |         |
|-----|-----|------------|--------|--------|-----------|---------|-----------|---------|
| 908 | 0   | Extremo 2A | 0.4    | -6.959 | 0.006501  | -0.0178 | 0.0029    | 1.2947  |
| 908 | 0.5 | Extremo 2A | 0.4    | 0.404  | 0.006501  | -0.0178 | -0.000361 | 2.9336  |
| 908 | 1   | Extremo 1A | 0.4    | 7.767  | 0.006501  | -0.0178 | -0.0036   | 0.8909  |
| 908 | 0   | Extremo 1A | -0.49  | -6.96  | -0.004585 | -0.0178 | -0.0021   | 1.2954  |
| 908 | 0.5 | Extremo 1A | -0.49  | 0.404  | -0.004585 | -0.0178 | 0.0001776 | 2.9344  |
| 908 | 1   | Extremo 2A | -0.49  | 7.767  | -0.004585 | -0.0178 | 0.0025    | 0.8918  |
| 909 | 0   | Extremo 2A | 0.425  | -6.661 | 0.006509  | -0.023  | 0.0029    | 1.0331  |
| 909 | 0.5 | Extremo 2A | 0.425  | 0.702  | 0.006509  | -0.023  | -0.000393 | 2.5229  |
| 909 | 1   | Extremo 1A | 0.425  | 8.065  | 0.006509  | -0.023  | -0.0036   | 0.331   |
| 909 | 0   | Extremo 1A | -0.509 | -6.661 | -0.004788 | -0.023  | -0.0022   | 1.034   |
| 909 | 0.5 | Extremo 1A | -0.509 | 0.702  | -0.004788 | -0.023  | 0.0002038 | 2.5238  |
| 909 | 1   | Extremo 2A | -0.509 | 8.065  | -0.004788 | -0.023  | 0.0026    | 0.332   |
| 910 | 0   | Extremo 2A | 0.45   | -6.417 | 0.006555  | -0.0044 | 0.0029    | 0.4944  |
| 910 | 0.5 | Extremo 2A | 0.45   | 0.946  | 0.006555  | -0.0044 | -0.000424 | 1.8622  |
| 910 | 1   | Extremo 1A | 0.45   | 8.309  | 0.006555  | -0.0044 | -0.0037   | -0.4515 |
| 910 | 0   | Extremo 1A | -0.528 | -6.418 | -0.005146 | -0.0044 | -0.0023   | 0.4954  |
| 910 | 0.5 | Extremo 1A | -0.528 | 0.946  | -0.005146 | -0.0044 | 0.0002286 | 1.8633  |
| 910 | 1   | Extremo 2A | -0.528 | 8.309  | -0.005146 | -0.0044 | 0.0028    | -0.4503 |
| 911 | 0   | Extremo 2A | 0.475  | -6.292 | 0.006614  | 0.0529  | 0.0029    | -0.3877 |
| 911 | 0.5 | Extremo 2A | 0.475  | 1.071  | 0.006614  | 0.0529  | -0.00045  | 0.9175  |
| 911 | 1   | Extremo 1A | 0.475  | 8.434  | 0.006614  | 0.0529  | -0.0038   | -1.4589 |
| 911 | 0   | Extremo 1A | -0.549 | -6.292 | -0.005619 | 0.0529  | -0.0026   | -0.3865 |
| 911 | 0.5 | Extremo 1A | -0.549 | 1.071  | -0.005619 | 0.0529  | 0.0002513 | 0.9188  |
| 911 | 1   | Extremo 2A | -0.549 | 8.434  | -0.005619 | 0.0529  | 0.0031    | -1.4576 |
| 912 | 0   | Extremo 2A | 0.499  | -6.381 | 0.006647  | 0.1422  | 0.0029    | -1.6767 |
| 912 | 0.5 | Extremo 2A | 0.499  | 0.982  | 0.006647  | 0.1422  | -0.000463 | -0.3269 |
| 912 | 1   | Extremo 1A | 0.499  | 8.345  | 0.006647  | 0.1422  | -0.0038   | -2.6587 |
| 912 | 0   | Extremo 1A | -0.571 | -6.381 | -0.006096 | 0.1422  | -0.0028   | -1.6752 |
| 912 | 0.5 | Extremo 1A | -0.571 | 0.982  | -0.006096 | 0.1422  | 0.0002701 | -0.3254 |
| 912 | 1   | Extremo 2A | -0.571 | 8.345  | -0.006096 | 0.1422  | 0.0033    | -2.6572 |
| 913 | 0   | Extremo 2A | 0.522  | -6.739 | 0.00672   | 0.1889  | 0.0029    | -3.2592 |
| 913 | 0.5 | Extremo 2A | 0.522  | 0.625  | 0.00672   | 0.1889  | -0.000439 | -1.7307 |
| 913 | 1   | Extremo 1A | 0.522  | 7.988  | 0.00672   | 0.1889  | -0.0038   | -3.8838 |
| 913 | 0   | Extremo 1A | -0.593 | -6.739 | -0.006341 | 0.1888  | -0.0029   | -3.2575 |
| 913 | 0.5 | Extremo 1A | -0.593 | 0.625  | -0.006341 | 0.1888  | 0.0002763 | -1.7291 |
| 913 | 1   | Extremo 2A | -0.593 | 7.988  | -0.006341 | 0.1888  | 0.0034    | -3.8822 |
| 914 | 0   | Extremo 2A | 0.546  | -7.185 | 0.007582  | 0.0832  | 0.0034    | -4.5407 |
| 914 | 0.5 | Extremo 2A | 0.546  | 0.179  | 0.007582  | 0.0832  | -0.00036  | -2.7892 |
| 914 | 1   | Extremo 1A | 0.546  | 7.542  | 0.007582  | 0.0832  | -0.0042   | -4.7194 |
| 914 | 0   | Extremo 1A | -0.612 | -7.184 | -0.006185 | 0.0832  | -0.0029   | -4.5389 |
| 914 | 0.5 | Extremo 1A | -0.612 | 0.179  | -0.006185 | 0.0832  | 0.0002413 | -2.7875 |
| 914 | 1   | Extremo 2A | -0.612 | 7.542  | -0.006185 | 0.0832  | 0.0033    | -4.7178 |
| 915 | 0   | Extremo 2A | 0.58   | -7.474 | 0.011     | -0.0862 | 0.0051    | -4.7112 |
| 915 | 0.5 | Extremo 2A | 0.58   | -0.111 | 0.011     | -0.0862 | -0.000378 | -2.815  |
| 915 | 1   | Extremo 1A | 0.58   | 7.253  | 0.011     | -0.0862 | -0.0058   | -4.6005 |
| 915 | 0   | Extremo 1A | -0.631 | -7.474 | -0.006587 | -0.0862 | -0.0031   | -4.7096 |
| 915 | 0.5 | Extremo 1A | -0.631 | -0.11  | -0.006587 | -0.0862 | 0.0001945 | -2.8136 |
| 915 | 1   | Extremo 2A | -0.631 | 7.253  | -0.006587 | -0.0862 | 0.0035    | -4.5991 |
| 916 | 0   | Extremo 2A | 0.623  | -7.92  | 0.012     | -0.1919 | 0.0055    | -3.9273 |
| 916 | 0.5 | Extremo 2A | 0.623  | -0.557 | 0.012     | -0.1919 | -0.000513 | -1.8082 |
| 916 | 1   | Extremo 1A | 0.623  | 6.807  | 0.012     | -0.1919 | -0.0065   | -3.3707 |
| 916 | 0   | Extremo 1A | -0.654 | -7.919 | -0.006966 | -0.1918 | -0.0033   | -3.9261 |
| 916 | 0.5 | Extremo 1A | -0.654 | -0.556 | -0.006966 | -0.1918 | 0.0001856 | -1.8072 |
| 916 | 1   | Extremo 2A | -0.654 | 6.807  | -0.006966 | -0.1918 | 0.0037    | -3.3699 |
| 917 | 0   | Extremo 2A | 0.669  | -8.277 | 0.012     | -0      |           |         |



|     |     |            |        |        |           |           |           |         |
|-----|-----|------------|--------|--------|-----------|-----------|-----------|---------|
| 920 | 0   | Extremo 2A | 0.8    | -7.998 | 0.011     | 0.0201    | 0.0047    | 0.0806  |
| 920 | 0.5 | Extremo 2A | 0.8    | -0.634 | 0.011     | 0.0201    | -0.000808 | 2.2385  |
| 920 | 1   | Extremo 1A | 0.8    | 6.729  | 0.011     | 0.0201    | -0.0063   | 0.7149  |
| 920 | 0   | Extremo 1A | -0.746 | -7.997 | -0.005255 | 0.0201    | -0.0023   | 0.0796  |
| 920 | 0.5 | Extremo 1A | -0.746 | -0.634 | -0.005255 | 0.0201    | 0.0002874 | 2.2372  |
| 920 | 1   | Extremo 2A | -0.746 | 6.73   | -0.005255 | 0.0201    | 0.0029    | 0.7132  |
| 921 | 0   | Extremo 2A | 0.842  | -7.7   | 0.011     | 0.0151    | 0.0046    | 0.5884  |
| 921 | 0.5 | Extremo 2A | 0.842  | -0.336 | 0.011     | 0.0151    | -0.000864 | 2.5974  |
| 921 | 1   | Extremo 1A | 0.842  | 7.027  | 0.011     | 0.0151    | -0.0063   | 0.9247  |
| 921 | 0   | Extremo 1A | -0.767 | -7.699 | -0.005006 | 0.0151    | -0.0022   | 0.5868  |
| 921 | 0.5 | Extremo 1A | -0.767 | -0.336 | -0.005006 | 0.0151    | 0.0003158 | 2.5955  |
| 921 | 1   | Extremo 2A | -0.767 | 7.028  | -0.005006 | 0.0151    | 0.0028    | 0.9225  |
| 922 | 0   | Extremo 2A | 0.883  | -7.381 | 0.011     | 0.0003859 | 0.0045    | 0.8755  |
| 922 | 0.5 | Extremo 2A | 0.883  | -0.018 | 0.011     | 0.0003859 | -0.00092  | 2.7254  |
| 922 | 1   | Extremo 1A | 0.883  | 7.345  | 0.011     | 0.0003859 | -0.0063   | 0.8937  |
| 922 | 0   | Extremo 1A | -0.787 | -7.381 | -0.004918 | 0.0003732 | -0.0021   | 0.8733  |
| 922 | 0.5 | Extremo 1A | -0.787 | -0.018 | -0.004918 | 0.0003732 | 0.0003444 | 2.7229  |
| 922 | 1   | Extremo 2A | -0.787 | 7.346  | -0.004918 | 0.0003732 | 0.0028    | 0.8909  |
| 923 | 0   | Extremo 2A | 0.924  | -7.063 | 0.011     | -0.0145   | 0.0044    | 0.9374  |
| 923 | 0.5 | Extremo 2A | 0.924  | 0.3    | 0.011     | -0.0145   | -0.000974 | 2.6282  |
| 923 | 1   | Extremo 1A | 0.924  | 7.663  | 0.011     | -0.0145   | -0.0063   | 0.6373  |
| 923 | 0   | Extremo 1A | -0.806 | -7.063 | -0.004995 | -0.0145   | -0.0021   | 0.9347  |
| 923 | 0.5 | Extremo 1A | -0.806 | 0.301  | -0.004995 | -0.0145   | 0.000373  | 2.6251  |
| 923 | 1   | Extremo 2A | -0.806 | 7.664  | -0.004995 | -0.0145   | 0.0029    | 0.6339  |
| 924 | 0   | Extremo 2A | 0.965  | -6.765 | 0.011     | -0.0198   | 0.0043    | 0.7589  |
| 924 | 0.5 | Extremo 2A | 0.965  | 0.599  | 0.011     | -0.0198   | -0.001    | 2.3004  |
| 924 | 1   | Extremo 1A | 0.965  | 7.962  | 0.011     | -0.0198   | -0.0064   | 0.1603  |
| 924 | 0   | Extremo 1A | -0.827 | -6.764 | -0.005233 | -0.0198   | -0.0022   | 0.7556  |
| 924 | 0.5 | Extremo 1A | -0.827 | 0.599  | -0.005233 | -0.0198   | 0.0004012 | 2.2968  |
| 924 | 1   | Extremo 2A | -0.827 | 7.963  | -0.005233 | -0.0198   | 0.003     | 0.1563  |
| 925 | 0   | Extremo 2A | 1.005  | -6.519 | 0.011     | -0.002    | 0.0043    | 0.3045  |
| 925 | 0.5 | Extremo 2A | 1.005  | 0.844  | 0.011     | -0.002    | -0.0011   | 1.7233  |
| 925 | 1   | Extremo 1A | 1.005  | 8.207  | 0.011     | -0.002    | -0.0065   | 0.5395  |
| 925 | 0   | Extremo 1A | -0.848 | -6.519 | -0.005621 | -0.002    | -0.0024   | 0.3006  |
| 925 | 0.5 | Extremo 1A | -0.848 | 0.845  | -0.005621 | -0.002    | 0.0004284 | 1.7191  |
| 925 | 1   | Extremo 2A | -0.848 | 8.208  | -0.005621 | -0.002    | 0.0032    | -0.544  |
| 926 | 0   | Extremo 2A | 1.046  | -6.389 | 0.011     | 0.0535    | 0.0043    | -0.4903 |
| 926 | 0.5 | Extremo 2A | 1.046  | 0.974  | 0.011     | 0.0535    | -0.0011   | 0.8636  |
| 926 | 1   | Extremo 1A | 1.046  | 8.337  | 0.011     | 0.0535    | -0.0065   | -1.4641 |
| 926 | 0   | Extremo 1A | -0.871 | -6.389 | -0.006122 | 0.0535    | -0.0026   | -0.4949 |
| 926 | 0.5 | Extremo 1A | -0.871 | 0.974  | -0.006122 | 0.0535    | 0.0004539 | 0.8588  |
| 926 | 1   | Extremo 2A | -0.871 | 8.338  | -0.006122 | 0.0535    | 0.0035    | -1.4692 |
| 927 | 0   | Extremo 2A | 1.085  | -6.469 | 0.011     | 0.1401    | 0.0042    | -1.6873 |
| 927 | 0.5 | Extremo 2A | 1.085  | 0.895  | 0.011     | 0.1401    | -0.0012   | -0.2938 |
| 927 | 1   | Extremo 1A | 1.085  | 8.258  | 0.011     | 0.1401    | -0.0065   | -2.5819 |
| 927 | 0   | Extremo 1A | -0.894 | -6.468 | -0.006627 | 0.1403    | -0.0028   | -1.6928 |
| 927 | 0.5 | Extremo 1A | -0.894 | 0.895  | -0.006627 | 0.1403    | 0.000477  | -0.2993 |
| 927 | 1   | Extremo 2A | -0.894 | 8.258  | -0.006627 | 0.1403    | 0.0038    | -2.5875 |
| 928 | 0   | Extremo 2A | 1.124  | -6.81  | 0.011     | 0.1855    | 0.0043    | -3.1766 |
| 928 | 0.5 | Extremo 2A | 1.124  | 0.554  | 0.011     | 0.1855    | -0.0011   | -1.6126 |
| 928 | 1   | Extremo 1A | 1.124  | 7.917  | 0.011     | 0.1855    | -0.0066   | -3.7302 |
| 928 | 0   | Extremo 1A | -0.918 | -6.81  | -0.006883 | 0.1857    | -0.003    | -3.1829 |
| 928 | 0.5 | Extremo 1A | -0.918 | 0.553  | -0.006883 | 0.1857    | 0.0004909 | -1.6187 |
| 928 | 1   | Extremo 2A | -0.918 | 7.917  | -0.006883 | 0.1857    | 0.0039    | -3.7362 |
| 929 | 0   | Extremo 2A | 1.164  | -7.237 | 0.012     | 0.0827    | 0.0049    | -4.3792 |
| 929 | 0.5 | Extremo 2A | 1.164  | 0.126  | 0.012     | 0.0827    | -0.0011   | -2.6015 |
| 929 | 1   | Extremo 1A | 1.164  | 7.489  | 0.012     | 0.0827    | -0.007    | -4.5054 |
| 929 | 0   | Extremo 1A | -0.94  | -7.238 | -0.006639 | 0.0827    | -0.0029   | -4.3859 |
| 929 | 0.5 | Extremo 1A | -0.94  | 0.125  | -0.006639 | 0.0827    | 0.0004679 | -2.6078 |
| 929 | 1   | Extremo 2A | -0.94  | 7.489  | -0.006639 | 0.0827    | 0.0038    | -4.5113 |
| 930 | 0   | Extremo 2A | 1.215  | -7.512 | 0.016     | -0.0823   | 0.007     | -4.5069 |
| 930 | 0.5 | Extremo 2A | 1.215  | -0.149 | 0.016     | -0.0823   | -0.0011   | -2.5915 |
| 930 | 1   | Extremo 1A | 1.215  | 7.214  | 0.016     | -0.0823   | -0.0092   | -4.3577 |
| 930 | 0   | Extremo 1A | -0.96  | -7.514 | -0.006714 | -0.0823   | -0.0029   | -4.513  |
| 930 | 0.5 | Extremo 1A | -0.96  | -0.15  | -0.006714 | -0.0823   | 0.0004225 | -2.5971 |
| 930 | 1   | Extremo 2A | -0.96  | 7.213  | -0.006714 | -0.0823   | 0.0038    | -4.3627 |
| 931 | 0   | Extremo 2A | 1.279  | -7.94  | 0.017     | -0.1851   | 0.0074    | -3.7118 |
| 931 | 0.5 | Extremo 2A | 1.279  | -0.577 | 0.017     | -0.1851   | -0.0013   | -1.5826 |
| 931 | 1   | Extremo 1A | 1.279  | 6.787  | 0.017     | -0.1851   | -0.01     | -3.1352 |
| 931 | 0   | Extremo 1A | -0.982 | -7.941 | -0.007002 | -0.1852   | -0.0031   | -3.7163 |
| 931 | 0.5 | Extremo 1A | -0.982 | -0.578 | -0.007002 | -0.1852   | 0.0004043 | -1.5864 |
| 931 | 1   | Extremo 2A | -0.982 | 6.785  | -0.007002 | -0.1852   | 0.0039    | -3.1381 |

|     |     |            |        |           |           |           |           |         |
|-----|-----|------------|--------|-----------|-----------|-----------|-----------|---------|
| 932 | 0   | Extremo 2A | 1.346  | -8.281    | 0.017     | -0.1397   | 0.0072    | -2.5435 |
| 932 | 0.5 | Extremo 2A | 1.346  | -0.918    | 0.017     | -0.1397   | -0.0014   | -0.2439 |
| 932 | 1   | Extremo 1A | 1.346  | 6.446     | 0.017     | -0.1397   | -0.0101   | -1.6259 |
| 932 | 0   | Extremo 1A | -1.007 | -8.283    | -0.006746 | -0.1398   | -0.003    | -2.5461 |
| 932 | 0.5 | Extremo 1A | -1.007 | -0.92     | -0.006746 | -0.1398   | 0.0004211 | -0.2455 |
| 932 | 1   | Extremo 2A | -1.007 | 6.444     | -0.006746 | -0.1398   | 0.0038    | -1.6265 |
| 933 | 0   | Extremo 2A | 1.411  | -8.36     | 0.017     | -0.0531   | 0.0049    | -1.4058 |
| 933 | 0.5 | Extremo 2A | 1.411  | -0.997    | 0.017     | -0.0531   | -0.0015   | 0.9335  |
| 933 | 1   | Extremo 1A | 1.411  | 6.366     | 0.017     | -0.0531   | -0.01     | -0.4089 |
| 933 | 0   | Extremo 1A | -1.031 | -8.363    | -0.006235 | -0.0531   | -0.0027   | -1.4063 |
| 933 | 0.5 | Extremo 1A | -1.031 | -0.999    | -0.006235 | -0.0531   | 0.0004456 | 0.9342  |
| 933 | 1   | Extremo 2A | -1.031 | 6.364     | -0.006235 | -0.0531   | 0.0036    | -0.407  |
| 934 | 0   | Extremo 2A | 1.475  | -8.23     | 0.017     | 0.0025    | 0.0067    | -0.4613 |
| 934 | 0.5 | Extremo 2A | 1.475  | -0.867    | 0.017     | 0.0025    | -0.0016   | 1.8131  |
| 934 | 1   | Extremo 1A | 1.475  | 6.496     | 0.017     | 0.0025    | -0.0099   | 0.4059  |
| 934 | 0   | Extremo 1A | -1.054 | -8.233    | -0.005729 | 0.0025    | -0.0024   | -0.4596 |
| 934 | 0.5 | Extremo 1A | -1.054 | -0.87     | -0.005729 | 0.0025    | 0.0004719 | 1.816   |
| 934 | 1   | Extremo 2A | -1.054 | 6.494     | -0.005729 | 0.0025    | 0.0033    | 0.41    |
| 935 | 0   | Extremo 2A | 1.538  | -7.985    | 0.016     | 0.0202    | 0.0065    | 0.2583  |
| 935 | 0.5 | Extremo 2A | 1.538  | -0.622    | 0.016     | 0.0202    | -0.0017   | 2.4101  |
| 935 | 1   | Extremo 1A | 1.538  | 6.741     | 0.016     | 0.0202    | -0.0099   | 0.8802  |
| 935 | 0   | Extremo 1A | -1.076 | -7.988    | -0.005338 | 0.0203    | -0.0022   | 0.2622  |
| 935 | 0.5 | Extremo 1A | -1.076 | -0.624    | -0.005338 | 0.0203    | 0.0004997 | 2.4152  |
| 935 | 1   | Extremo 2A | -1.076 | 6.739     | -0.005338 | 0.0203    | 0.0032    | 0.8866  |
| 936 | 0   | Extremo 2A | 1.6    | -7.687    | 0.016     | 0.015     | 0.0063    | 0.7552  |
| 936 | 0.5 | Extremo 2A | 1.6    | -0.323    | 0.016     | 0.015     | -0.0018   | 2.7578  |
| 936 | 1   | Extremo 1A | 1.6    | 7.04      | 0.016     | 0.015     | -0.0099   | 1.0787  |
| 936 | 0   | Extremo 1A | -1.097 | -7.689    | -0.005097 | 0.015     | -0.002    | 0.7612  |
| 936 | 0.5 | Extremo 1A | -1.097 | -0.326    | -0.005097 | 0.015     | 0.0005285 | 2.765   |
| 936 | 1   | Extremo 2A | -1.097 | 7.037     | -0.005097 | 0.015     | 0.0031    | 1.0872  |
| 937 | 0   | Extremo 2A | 1.661  | -7.369    | 0.016     | 9.674E-05 | 0.0062    | 1.0315  |
| 937 | 0.5 | Extremo 2A | 1.661  | -0.005315 | 0.016     | 9.674E-05 | -0.0019   | 2.8749  |
| 937 | 1   | Extremo 1A | 1.661  | 7.358     | 0.016     | 9.674E-05 | -0.0099   | 1.0368  |
| 937 | 0   | Extremo 1A | -1.117 | -7.371    | -0.005019 | 0.0001467 | -0.002    | 1.0396  |
| 937 | 0.5 | Extremo 1A | -1.117 | -0.007842 | -0.005019 | 0.0001467 | 0.0005576 | 2.8843  |
| 937 | 1   | Extremo 2A | -1.117 | 7.355     | -0.005019 | 0.0001467 | 0.0031    | 1.0475  |
| 938 | 0   | Extremo 2A | 1.722  | -7.05     | 0.016     | -0.0148   | 0.006     | 1.0825  |
| 938 | 0.5 | Extremo 2A | 1.722  | 0.313     | 0.016     | -0.0148   | -0.002    | 2.7669  |
| 938 | 1   | Extremo 1A | 1.722  | 7.676     | 0.016     | -0.0148   | -0.01     | 0.7697  |
| 938 | 0   | Extremo 1A | -1.137 | -7.053    | -0.005105 | -0.0147   | -0.002    | 1.0928  |
| 938 | 0.5 | Extremo 1A | -1.137 | 0.31      | -0.005105 | -0.0147   | 0.0005868 | 2.7785  |
| 938 | 1   | Extremo 2A | -1.137 | 7.674     | -0.005105 | -0.0147   | 0.0031    | 0.7825  |
| 939 | 0   | Extremo 2A | 1.783  | -6.752    | 0.016     | -0.0201   | 0.006     | 0.8933  |
| 939 | 0.5 | Extremo 2A | 1.783  | 0.611     | 0.016     | -0.0201   | -0.002    | 2.4284  |
| 939 | 1   | Extremo 1A | 1.783  | 7.975     | 0.016     | -0.0201   | -0.01     | 0.2819  |
| 939 | 0   | Extremo 1A | -1.158 | -6.754    | -0.005353 | -0.0201   | -0.0021   | 0.9058  |
| 939 | 0.5 | Extremo 1A | -1.158 | 0.609     | -0.005353 | -0.0201   | 0.0006156 | 2.4422  |
| 939 | 1   | Extremo 2A | -1.158 | 7.972     | -0.005353 | -0.0201   | 0.0033    | 0.2969  |
| 940 | 0   | Extremo 2A | 1.843  | -6.506    | 0.016     | -0.0026   | 0.0059    | 0.4286  |
| 940 | 0.5 | Extremo 2A | 1.843  | 0.857     | 0.016     | -0.0026   | -0.0021   | 1.8408  |
| 940 | 1   | Extremo 1A | 1.843  | 8.22      | 0.016     | -0.0026   | -0.0101   | -0.4286 |
| 940 | 0   | Extremo 1A | -1.18  | -6.508    | -0.005753 | -0.0027   | -0.0022   | 0.4434  |
| 940 | 0.5 | Extremo 1A | -1.18  | 0.855     | -0.005753 | -0.0027   | 0.0006436 | 1.8568  |
| 940 | 1   | Extremo 2A | -1.18  | 8.218     | -0.005753 | -0.0027   | 0.0035    | -0.4114 |
| 941 | 0   | Extremo 2A | 1.903  | -6.375    | 0.016     | 0.0524    | 0.0058    | -0.3758 |
| 941 | 0.5 | Extremo 2A | 1.903  | 0.988     | 0.016     | 0.0524    | -0.0022   | 0.971   |
| 941 | 1   | Extremo 1A | 1.903  | 8.351</   |           |           |           |         |



|     |     |            |        |        |           |           |           |         |
|-----|-----|------------|--------|--------|-----------|-----------|-----------|---------|
| 944 | 0   | Extremo 2A | 2.08   | -7.211 | 0.017     | 0.0816    | 0.0065    | -4.2936 |
| 944 | 0.5 | Extremo 2A | 2.08   | 0.152  | 0.017     | 0.0816    | -0.0022   | -2.5289 |
| 944 | 1   | Extremo 1A | 2.08   | 7.515  | 0.017     | 0.0816    | -0.0108   | -4.4458 |
| 944 | 0   | Extremo 1A | -1.274 | -7.208 | -0.006711 | 0.0812    | -0.0027   | -4.268  |
| 944 | 0.5 | Extremo 1A | -1.274 | 0.155  | -0.006711 | 0.0812    | 0.000705  | -2.5047 |
| 944 | 1   | Extremo 2A | -1.274 | 7.518  | -0.006711 | 0.0812    | 0.0041    | -4.4231 |
| 945 | 0   | Extremo 2A | 2.153  | -7.483 | 0.022     | -0.0819   | 0.0089    | -4.4441 |
| 945 | 0.5 | Extremo 2A | 2.153  | -0.119 | 0.022     | -0.0819   | -0.0022   | -2.5436 |
| 945 | 1   | Extremo 1A | 2.153  | 7.244  | 0.022     | -0.0819   | -0.0133   | -4.3247 |
| 945 | 0   | Extremo 1A | -1.294 | -7.478 | -0.00642  | -0.0817   | -0.0026   | -4.4207 |
| 945 | 0.5 | Extremo 1A | -1.294 | -0.115 | -0.00642  | -0.0817   | 0.000659  | -2.5224 |
| 945 | 1   | Extremo 2A | -1.294 | 7.248  | -0.00642  | -0.0817   | 0.0039    | -4.3057 |
| 946 | 0   | Extremo 2A | 2.241  | -7.905 | 0.024     | -0.1838   | 0.0094    | -3.681  |
| 946 | 0.5 | Extremo 2A | 2.241  | -0.542 | 0.024     | -0.1838   | -0.0025   | -1.5692 |
| 946 | 1   | Extremo 1A | 2.241  | 6.821  | 0.024     | -0.1838   | -0.0143   | -3.1391 |
| 946 | 0   | Extremo 1A | -1.315 | -7.899 | -0.006609 | -0.1833   | -0.0027   | -3.6634 |
| 946 | 0.5 | Extremo 1A | -1.315 | -0.536 | -0.006609 | -0.1833   | 0.0006283 | -1.5548 |
| 946 | 1   | Extremo 2A | -1.315 | 6.828  | -0.006609 | -0.1833   | 0.0039    | -3.1279 |
| 947 | 0   | Extremo 2A | 2.331  | -8.242 | 0.024     | -0.1388   | 0.0091    | -2.5496 |
| 947 | 0.5 | Extremo 2A | 2.331  | -0.878 | 0.024     | -0.1388   | -0.0026   | -0.2696 |
| 947 | 1   | Extremo 1A | 2.331  | 6.485  | 0.024     | -0.1388   | -0.0144   | -1.6712 |
| 947 | 0   | Extremo 1A | -1.337 | -8.234 | -0.006365 | -0.1384   | -0.0025   | -2.5395 |
| 947 | 0.5 | Extremo 1A | -1.337 | -0.87  | -0.006365 | -0.1384   | 0.0006375 | -0.2636 |
| 947 | 1   | Extremo 2A | -1.337 | 6.493  | -0.006365 | -0.1384   | 0.0038    | -1.6692 |
| 948 | 0   | Extremo 2A | 2.42   | -8.318 | 0.023     | -0.0528   | 0.0088    | -1.4502 |
| 948 | 0.5 | Extremo 2A | 2.42   | -0.955 | 0.023     | -0.0528   | -0.0028   | 0.8681  |
| 948 | 1   | Extremo 1A | 2.42   | 6.408  | 0.023     | -0.0528   | -0.0143   | -0.4951 |
| 948 | 0   | Extremo 1A | -1.36  | -8.309 | -0.005882 | -0.0527   | -0.0023   | -1.4483 |
| 948 | 0.5 | Extremo 1A | -1.36  | -0.946 | -0.005882 | -0.0527   | 0.0006582 | 0.8655  |
| 948 | 1   | Extremo 2A | -1.36  | 6.417  | -0.005882 | -0.0527   | 0.0036    | -0.5024 |
| 949 | 0   | Extremo 2A | 2.508  | -8.187 | 0.023     | 0.0022    | 0.0085    | -0.5442 |
| 949 | 0.5 | Extremo 2A | 2.508  | -0.824 | 0.023     | 0.0022    | -0.0029   | 1.7086  |
| 949 | 1   | Extremo 1A | 2.508  | 6.539  | 0.023     | 0.0022    | -0.0143   | 0.2798  |
| 949 | 0   | Extremo 1A | -1.382 | -8.178 | -0.005406 | 0.0021    | -0.002    | -0.5505 |
| 949 | 0.5 | Extremo 1A | -1.382 | -0.814 | -0.005406 | 0.0021    | 0.0006823 | 1.6975  |
| 949 | 1   | Extremo 2A | -1.382 | 6.549  | -0.005406 | 0.0021    | 0.0034    | 0.2639  |
| 950 | 0   | Extremo 2A | 2.594  | -7.941 | 0.022     | 0.0197    | 0.0082    | 0.137   |
| 950 | 0.5 | Extremo 2A | 2.594  | -0.578 | 0.022     | 0.0197    | -0.003    | 2.2669  |
| 950 | 1   | Extremo 1A | 2.594  | 6.785  | 0.022     | 0.0197    | -0.0143   | 0.7151  |
| 950 | 0   | Extremo 1A | -1.403 | -7.932 | -0.005045 | 0.0195    | -0.0018   | 0.1225  |
| 950 | 0.5 | Extremo 1A | -1.403 | -0.568 | -0.005045 | 0.0195    | 0.0007085 | 2.2475  |
| 950 | 1   | Extremo 2A | -1.403 | 6.795  | -0.005045 | 0.0195    | 0.0032    | 0.6908  |
| 951 | 0   | Extremo 2A | 2.678  | -7.643 | 0.022     | 0.0143    | 0.008     | 0.5956  |
| 951 | 0.5 | Extremo 2A | 2.678  | -0.279 | 0.022     | 0.0143    | -0.0031   | 2.5761  |
| 951 | 1   | Extremo 1A | 2.678  | 7.084  | 0.022     | 0.0143    | -0.0143   | 0.8749  |
| 951 | 0   | Extremo 1A | -1.422 | -7.633 | -0.00484  | 0.014     | -0.0017   | 0.5729  |
| 951 | 0.5 | Extremo 1A | -1.422 | -0.269 | -0.00484  | 0.014     | 0.0007358 | 2.5485  |
| 951 | 1   | Extremo 2A | -1.422 | 7.094  | -0.00484  | 0.014     | 0.0032    | 0.8424  |
| 952 | 0   | Extremo 2A | 2.762  | -7.324 | 0.022     | -0.00683  | 0.0078    | 0.8336  |
| 952 | 0.5 | Extremo 2A | 2.762  | 0.039  | 0.022     | -0.00683  | -0.0033   | 2.6548  |
| 952 | 1   | Extremo 1A | 2.762  | 7.402  | 0.022     | -0.00683  | -0.0143   | 0.7944  |
| 952 | 0   | Extremo 1A | -1.442 | -7.314 | -0.004803 | -0.00916  | -0.0016   | 0.8027  |
| 952 | 0.5 | Extremo 1A | -1.442 | 0.049  | -0.004803 | -0.00916  | 0.0007638 | 2.619   |
| 952 | 1   | Extremo 2A | -1.442 | 7.412  | -0.004803 | -0.00916  | 0.0032    | 0.7537  |
| 953 | 0   | Extremo 2A | 2.846  | -7.006 | 0.022     | -0.0155   | 0.0076    | 0.8464  |
| 953 | 0.5 | Extremo 2A | 2.846  | 0.358  | 0.022     | -0.0155   | -0.0034   | 2.5084  |
| 953 | 1   | Extremo 1A | 2.846  | 7.721  | 0.022     | -0.0155   | -0.0143   | 0.4888  |
| 953 | 0   | Extremo 1A | -1.461 | -6.996 | -0.004941 | -0.0157   | -0.0017   | 0.8072  |
| 953 | 0.5 | Extremo 1A | -1.461 | 0.367  | -0.004941 | -0.0157   | 0.0007922 | 2.4643  |
| 953 | 1   | Extremo 2A | -1.461 | 7.731  | -0.004941 | -0.0157   | 0.0033    | 0.4398  |
| 954 | 0   | Extremo 2A | 2.929  | -6.708 | 0.022     | -0.0203   | 0.0074    | 0.6182  |
| 954 | 0.5 | Extremo 2A | 2.929  | 0.656  | 0.022     | -0.0203   | -0.0035   | 2.1311  |
| 954 | 1   | Extremo 1A | 2.929  | 8.019  | 0.022     | -0.0203   | -0.0144   | -0.0376 |
| 954 | 0   | Extremo 1A | -1.482 | -6.698 | -0.005254 | -0.0203   | -0.0018   | 0.5704  |
| 954 | 0.5 | Extremo 1A | -1.482 | 0.665  | -0.005254 | -0.0203   | 0.0008206 | 2.0786  |
| 954 | 1   | Extremo 2A | -1.482 | 8.028  | -0.005254 | -0.0203   | 0.0034    | -0.0947 |
| 955 | 0   | Extremo 2A | 3.011  | -6.464 | 0.022     | -0.0013   | 0.0073    | 0.1121  |
| 955 | 0.5 | Extremo 2A | 3.011  | 0.899  | 0.022     | -0.0013   | -0.0036   | 1.5034  |
| 955 | 1   | Extremo 1A | 3.011  | 8.262  | 0.022     | -0.0013   | -0.0144   | -0.7868 |
| 955 | 0   | Extremo 1A | -1.503 | -6.456 | -0.005736 | -0.000774 | -0.002    | 0.0551  |
| 955 | 0.5 | Extremo 1A | -1.503 | 0.907  | -0.005736 | -0.000774 | 0.0008488 | 1.4422  |
| 955 | 1   | Extremo 2A | -1.503 | 8.271  | -0.005736 | -0.000774 | 0.0037    | -0.8523 |

|     |     |            |         |        |           |           |           |         |
|-----|-----|------------|---------|--------|-----------|-----------|-----------|---------|
| 956 | 0   | Extremo 2A | 3.092   | -6.341 | 0.022     | 0.0572    | 0.0071    | -0.7392 |
| 956 | 0.5 | Extremo 2A | 3.092   | 1.022  | 0.022     | 0.0572    | -0.0037   | 0.5906  |
| 956 | 1   | Extremo 1A | 3.092   | 8.385  | 0.022     | 0.0572    | -0.0145   | -1.7612 |
| 956 | 0   | Extremo 1A | -1.527  | -6.335 | -0.006359 | 0.0585    | -0.0023   | -0.8069 |
| 956 | 0.5 | Extremo 1A | -1.527  | 1.028  | -0.006359 | 0.0585    | 0.0008768 | 0.5199  |
| 956 | 1   | Extremo 2A | -1.527  | 8.391  | -0.006359 | 0.0585    | 0.0041    | -1.835  |
| 957 | 0   | Extremo 2A | 3.172   | -6.436 | 0.021     | 0.1479    | 0.0069    | -2.0004 |
| 957 | 0.5 | Extremo 2A | 3.172   | 0.927  | 0.021     | 0.1479    | -0.0038   | -0.623  |
| 957 | 1   | Extremo 1A | 3.172   | 8.29   | 0.021     | 0.1479    | -0.0145   | -2.9272 |
| 957 | 0   | Extremo 1A | -1.552  | -6.435 | -0.007017 | 0.1505    | -0.0026   | -2.0807 |
| 957 | 0.5 | Extremo 1A | -1.552  | 0.928  | -0.007017 | 0.1505    | 0.0009058 | -0.7041 |
| 957 | 1   | Extremo 2A | -1.552  | 8.292  | -0.007017 | 0.1505    | 0.0044    | -3.0091 |
| 958 | 0   | Extremo 2A | 3.25    | -6.805 | 0.021     | 0.1949    | 0.0069    | -3.5554 |
| 958 | 0.5 | Extremo 2A | 3.25    | 0.558  | 0.021     | 0.1949    | -0.0038   | -1.9938 |
| 958 | 1   | Extremo 1A | 3.25    | 7.922  | 0.021     | 0.1949    | -0.0144   | -4.1138 |
| 958 | 0   | Extremo 1A | -1.578  | -6.811 | -0.007428 | 0.1982    | -0.0028   | -3.6493 |
| 958 | 0.5 | Extremo 1A | -1.578  | 0.552  | -0.007428 | 0.1982    | 0.0009347 | -2.0847 |
| 958 | 1   | Extremo 2A | -1.578  | 7.916  | -0.007428 | 0.1982    | 0.0046    | -4.2016 |
| 959 | 0   | Extremo 2A | 3.328   | -7.263 | 0.022     | 0.086     | 0.0075    | -4.7964 |
| 959 | 0.5 | Extremo 2A | 3.328   | 0.1    | 0.022     | 0.086     | -0.0037   | -3.0057 |
| 959 | 1   | Extremo 1A | 3.328   | 7.464  | 0.022     | 0.086     | -0.0149   | -4.8967 |
| 959 | 0   | Extremo 1A | -1.603  | -7.278 | -0.007144 | 0.0883    | -0.0026   | -4.8977 |
| 959 | 0.5 | Extremo 1A | -1.603  | 0.086  | -0.007144 | 0.0883    | 0.0009379 | -3.0997 |
| 959 | 1   | Extremo 2A | -1.603  | 7.449  | -0.007144 | 0.0883    | 0.0045    | -4.9834 |
| 960 | 0   | Extremo 2A | 3.42    | -7.561 | 0.027     | -0.0882   | 0.0099    | -4.8955 |
| 960 | 0.5 | Extremo 2A | 3.42    | -0.197 | 0.027     | -0.0882   | -0.0038   | -2.956  |
| 960 | 1   | Extremo 1A | 3.42    | 7.166  | 0.027     | -0.0882   | -0.0175   | -4.6981 |
| 960 | 0   | Extremo 1A | -1.624  | -7.582 | -0.00666  | -0.0878   | -0.0024   | -4.9888 |
| 960 | 0.5 | Extremo 1A | -1.624  | -0.219 | -0.00666  | -0.0878   | 0.0008941 | -3.0385 |
| 960 | 1   | Extremo 2A | -1.624  | 7.144  | -0.00666  | -0.0878   | 0.0042    | -4.7699 |
| 961 | 0   | Extremo 2A | 3.527   | -8.019 | 0.029     | -0.1971   | 0.0102    | -4.0131 |
| 961 | 0.5 | Extremo 2A | 3.527   | -0.655 | 0.029     | -0.1971   | -0.0041   | -1.8445 |
| 961 | 1   | Extremo 1A | 3.527   | 6.708  | 0.029     | -0.1971   | -0.0184   | -3.3576 |
| 961 | 0   | Extremo 1A | -1.646  | -8.049 | -0.007029 | -0.1978   | -0.0027   | -4.0846 |
| 961 | 0.5 | Extremo 1A | -1.646  | -0.685 | -0.007029 | -0.1978   | 0.0008534 | -1.9011 |
| 961 | 1   | Extremo 2A | -1.646  | 6.678  | -0.007029 | -0.1978   | 0.0044    | -3.3992 |
| 962 | 0   | Extremo 2A | 3.635   | -8.387 | 0.028     | -0.1502   | 0.0097    | -2.727  |
| 962 | 0.5 | Extremo 2A | 3.635   | -1.024 | 0.028     | -0.1502   | -0.0043   | -0.3742 |
| 962 | 1   | Extremo 1A | 3.635   | 6.339  | 0.028     | -0.1502   | -0.0183   | -1.7031 |
| 962 | 0   | Extremo 1A | -1.671  | -8.425 | -0.007174 | -0.1501   | -0.0027   | -2.7696 |
| 962 | 0.5 | Extremo 1A | -1.671  | -1.061 | -0.007174 | -0.1501   | 0.0008602 | -0.3981 |
| 962 | 1   | Extremo 2A | -1.671  | 6.302  | -0.007174 | -0.1501   | 0.0044    | -1.7083 |
| 963 | 0   | Extremo 2A | 3.738   | -8.482 | 0.027     | -0.0594   | 0.009     | -1.4615 |
| 963 | 0.5 | Extremo 2A | 3.738   | -1.119 | 0.027     | -0.0594   | -0.0044   | 0.9388  |
| 963 | 1   | Extremo 1A | 3.738   | 6.244  | 0.027     | -0.0594   | -0.0179   | -0.3425 |
| 963 | 0   | Extremo 1A | -1.699  | -8.524 | -0.007204 | -0.0582   | -0.0027   | -1.4729 |
| 963 | 0.5 | Extremo 1A | -1.699  | -1.161 | -0.007204 | -0.0582   | 0.0008856 | 0.9483  |
| 963 | 1   | Extremo 2A | -1.699  | 6.202  | -0.007204 | -0.0582   | 0.0045    | -0.3121 |
| 964 | 0   | Extremo 2A | 3.837   | -8.359 | 0.026     | -0.00934  | 0.0082    | -0.3878 |
| 964 | 0.5 | Extremo 2A | 3.837   | -0.996 | 0.026     | -0.00934  | -0.0046   | 1.9511  |
| 964 | 1   | Extremo 1A | 3.837   | 6.367  | 0.026     | -0.00934  | -0.0174   | 0.6083  |
| 964 | 0   | Extremo 1A | -1.728  | -8.403 | -0.007376 | 0.0009569 | -0.0028   | -0.3675 |
| 964 | 0.5 | Extremo 1A | -1.728  | -1.04  | -0.007376 | 0.0009569 | 0.0009192 | 1.9931  |
| 964 | 1   | Extremo 2A | -1.728  | 6.324  | -0.007376 | 0.0009569 | 0.0046    | 0.6721  |
| 965 | 0   | Extremo 2A | 3.931   | -8.116 | 0.024     | 0.0182    | 0.0074    | 0.4608  |
| 965 | 0.5 | Extremo 2A | 3.931   | -0.753 | 0.024     | 0.0182    | -0.0047   | 2.6781  |
| 965 | 1   | Extremo 1A | 3.931</ |        |           |           |           |         |



|     |     |            |        |        |           |         |          |         |
|-----|-----|------------|--------|--------|-----------|---------|----------|---------|
| 968 | 0   | Extremo 2A | 4.168  | -7.18  | 0.018     | -0.0174 | 0.0041   | 1.6714  |
| 968 | 0.5 | Extremo 2A | 4.168  | 0.183  | 0.018     | -0.0174 | -0.005   | 3.4205  |
| 968 | 1   | Extremo 1A | 4.168  | 7.547  | 0.018     | -0.0174 | -0.0141  | 1.4879  |
| 968 | 0   | Extremo 1A | -1.875 | -7.216 | -0.012    | -0.0178 | -0.0048  | 1.8248  |
| 968 | 0.5 | Extremo 1A | -1.875 | 0.147  | -0.012    | -0.0178 | 0.0011   | 3.592   |
| 968 | 1   | Extremo 2A | -1.875 | 7.511  | -0.012    | -0.0178 | 0.0071   | 1.6775  |
| 969 | 0   | Extremo 2A | 4.228  | -6.876 | 0.015     | -0.0255 | 0.0025   | 1.6144  |
| 969 | 0.5 | Extremo 2A | 4.228  | 0.487  | 0.015     | -0.0255 | -0.0051  | 3.2118  |
| 969 | 1   | Extremo 1A | 4.228  | 7.85   | 0.015     | -0.0255 | -0.0127  | 1.1275  |
| 969 | 0   | Extremo 1A | -1.929 | -6.906 | -0.014    | -0.0282 | -0.006   | 1.8058  |
| 969 | 0.5 | Extremo 1A | -1.929 | 0.457  | -0.014    | -0.0282 | 0.0012   | 3.4179  |
| 969 | 1   | Extremo 2A | -1.929 | 7.821  | -0.014    | -0.0282 | 0.0084   | 1.3483  |
| 970 | 0   | Extremo 2A | 4.273  | -6.617 | 0.011     | -0.0152 | 0.000596 | 1.2915  |
| 970 | 0.5 | Extremo 2A | 4.273  | 0.746  | 0.011     | -0.0152 | -0.0051  | 2.7591  |
| 970 | 1   | Extremo 1A | 4.273  | 8.11   | 0.011     | -0.0152 | -0.0109  | 0.545   |
| 970 | 0   | Extremo 1A | -1.995 | -6.635 | -0.018    | -0.0215 | -0.0076  | 1.5252  |
| 970 | 0.5 | Extremo 1A | -1.995 | 0.728  | -0.018    | -0.0215 | 0.0013   | 3.0021  |
| 970 | 1   | Extremo 2A | -1.995 | 8.091  | -0.018    | -0.0215 | 0.0102   | 0.7973  |
| 971 | 0   | Extremo 2A | 4.302  | -6.451 | 0.006741  | 0.0242  | -0.0018  | 0.6529  |
| 971 | 0.5 | Extremo 2A | 4.302  | 0.912  | 0.006741  | 0.0242  | -0.0052  | 2.0375  |
| 971 | 1   | Extremo 1A | 4.302  | 8.276  | 0.006741  | 0.0242  | -0.0085  | -0.2595 |
| 971 | 0   | Extremo 1A | -2.077 | -6.452 | -0.022    | 0.0129  | -0.0097  | 0.9351  |
| 971 | 0.5 | Extremo 1A | -2.077 | 0.911  | -0.022    | 0.0129  | 0.0014   | 2.3205  |
| 971 | 1   | Extremo 2A | -2.077 | 8.274  | -0.022    | 0.0129  | 0.0125   | 0.0243  |
| 972 | 0   | Extremo 2A | 4.307  | -6.451 | 0.000742  | 0.0855  | -0.0048  | -0.3428 |
| 972 | 0.5 | Extremo 2A | 4.307  | 0.912  | 0.000742  | 0.0855  | -0.0051  | 1.042   |
| 972 | 1   | Extremo 1A | 4.307  | 8.275  | 0.000742  | 0.0855  | -0.0055  | -1.2549 |
| 972 | 0   | Extremo 1A | -2.179 | -6.427 | -0.028    | 0.0685  | -0.0124  | -0.0059 |
| 972 | 0.5 | Extremo 1A | -2.179 | 0.936  | -0.028    | 0.0685  | 0.0016   | 1.367   |
| 972 | 1   | Extremo 2A | -2.179 | 8.299  | -0.028    | 0.0685  | 0.0155   | -0.9418 |
| 973 | 0   | Extremo 2A | 4.285  | -6.656 | -0.006734 | 0.1115  | -0.0084  | -1.5919 |
| 973 | 0.5 | Extremo 2A | 4.285  | 0.707  | -0.006734 | 0.1115  | -0.0051  | -0.1048 |
| 973 | 1   | Extremo 1A | 4.285  | 8.071  | -0.006734 | 0.1115  | -0.0017  | -2.2994 |
| 973 | 0   | Extremo 1A | -2.307 | -6.598 | -0.035    | 0.0904  | -0.0157  | -1.201  |
| 973 | 0.5 | Extremo 1A | -2.307 | 0.765  | -0.035    | 0.0904  | 0.0018   | 0.2574  |
| 973 | 1   | Extremo 2A | -2.307 | 8.128  | -0.035    | 0.0904  | 0.0192   | -1.9658 |
| 974 | 0   | Extremo 2A | 4.23   | -6.934 | -0.015    | 0.0288  | -0.0124  | -2.6297 |
| 974 | 0.5 | Extremo 2A | 4.23   | 0.429  | -0.015    | 0.0288  | -0.0049  | -1.0036 |
| 974 | 1   | Extremo 1A | 4.23   | 7.793  | -0.015    | 0.0288  | 0.0027   | -3.0591 |
| 974 | 0   | Extremo 1A | -2.466 | -6.841 | -0.043    | 0.0066  | -0.0195  | -2.2042 |
| 974 | 0.5 | Extremo 1A | -2.466 | 0.522  | -0.043    | 0.0066  | 0.002    | -0.6246 |
| 974 | 1   | Extremo 2A | -2.466 | 7.886  | -0.043    | 0.0066  | 0.0236   | -2.7266 |
| 975 | 0   | Extremo 2A | 4.142  | -7.145 | -0.023    | -0.0808 | -0.0162  | -2.8856 |
| 975 | 0.5 | Extremo 2A | 4.142  | 0.218  | -0.023    | -0.0808 | -0.0047  | -1.154  |
| 975 | 1   | Extremo 1A | 4.142  | 7.582  | -0.023    | -0.0808 | 0.0068   | -3.104  |
| 975 | 0   | Extremo 1A | -2.659 | -7.018 | -0.053    | -0.1056 | -0.024   | -2.4591 |
| 975 | 0.5 | Extremo 1A | -2.659 | 0.345  | -0.053    | -0.1056 | 0.0022   | -0.7908 |
| 975 | 1   | Extremo 2A | -2.659 | 7.708  | -0.053    | -0.1056 | 0.0285   | -2.804  |
| 976 | 0   | Extremo 2A | 4.009  | -7.51  | -0.038    | -0.1417 | -0.0234  | -2.5432 |
| 976 | 0.5 | Extremo 2A | 4.009  | -0.146 | -0.038    | -0.1417 | -0.0046  | -0.6292 |
| 976 | 1   | Extremo 1A | 4.009  | 7.217  | -0.038    | -0.1417 | 0.0142   | -2.3969 |
| 976 | 0   | Extremo 1A | -2.901 | -7.347 | -0.067    | -0.1723 | -0.0308  | -2.1267 |
| 976 | 0.5 | Extremo 1A | -2.901 | 0.016  | -0.067    | -0.1723 | 0.0025   | -0.2941 |
| 976 | 1   | Extremo 2A | -2.901 | 7.38   | -0.067    | -0.1723 | 0.0359   | -2.1432 |
| 977 | 0   | Extremo 2A | 3.805  | -7.819 | -0.057    | -0.083  | -0.033   | -1.9881 |
| 977 | 0.5 | Extremo 2A | 3.805  | -0.455 | -0.057    | -0.083  | -0.0044  | 0.0804  |
| 977 | 1   | Extremo 1A | 3.805  | 6.908  | -0.057    | -0.083  | 0.0242   | -1.5328 |
| 977 | 0   | Extremo 1A | -3.212 | -7.626 | -0.085    | -0.1215 | -0.0396  | -1.582  |
| 977 | 0.5 | Extremo 1A | -3.212 | -0.262 | -0.085    | -0.1215 | 0.0029   | 0.39    |
| 977 | 1   | Extremo 2A | -3.212 | 7.101  | -0.085    | -0.1215 | 0.0455   | -1.3197 |
| 978 | 0   | Extremo 2A | 3.508  | -7.895 | -0.082    | 0.0026  | -0.045   | -1.5021 |
| 978 | 0.5 | Extremo 2A | 3.508  | -0.532 | -0.082    | 0.0026  | -0.0039  | 0.6046  |
| 978 | 1   | Extremo 1A | 3.508  | 6.831  | -0.082    | 0.0026  | 0.0371   | -0.9703 |
| 978 | 0   | Extremo 1A | -3.611 | -7.683 | -0.109    | -0.0419 | -0.0508  | -1.1051 |
| 978 | 0.5 | Extremo 1A | -3.611 | -0.32  | -0.109    | -0.0419 | 0.0035   | 0.8956  |
| 978 | 1   | Extremo 2A | -3.611 | 7.043  | -0.109    | -0.0419 | 0.0578   | -0.7852 |
| 979 | 0   | Extremo 2A | 3.094  | -7.792 | -0.114    | 0.0557  | -0.0603  | -1.1965 |
| 979 | 0.5 | Extremo 2A | 3.094  | -0.428 | -0.114    | 0.0557  | -0.0033  | 0.8586  |
| 979 | 1   | Extremo 1A | 3.094  | 6.935  | -0.114    | 0.0557  | 0.0537   | -0.768  |
| 979 | 0   | Extremo 1A | -4.123 | -7.571 | -0.139    | 0.0088  | -0.0652  | -0.8107 |
| 979 | 0.5 | Extremo 1A | -4.123 | -0.207 | -0.139    | 0.0088  | 0.0043   | 1.1338  |
| 979 | 1   | Extremo 2A | -4.123 | 7.156  | -0.139    | 0.0088  | 0.0738   | -0.6032 |

|     |     |            |         |        |        |         |           |         |
|-----|-----|------------|---------|--------|--------|---------|-----------|---------|
| 980 | 0   | Extremo 2A | 2.531   | -7.602 | -0.155 | 0.0775  | -0.0798   | -1.0896 |
| 980 | 0.5 | Extremo 2A | 2.531   | -0.239 | -0.155 | 0.0775  | -0.0025   | 0.8706  |
| 980 | 1   | Extremo 1A | 2.531   | 7.124  | -0.155 | 0.0775  | 0.0748    | -0.8507 |
| 980 | 0   | Extremo 1A | -4.779  | -7.379 | -0.178 | 0.0304  | -0.0837   | -0.7221 |
| 980 | 0.5 | Extremo 1A | -4.779  | -0.016 | -0.178 | 0.0304  | 0.0053    | 1.1268  |
| 980 | 1   | Extremo 2A | -4.779  | 7.347  | -0.178 | 0.0304  | 0.0942    | -0.7059 |
| 981 | 0   | Extremo 2A | 1.779   | -7.402 | -0.206 | 0.0815  | -0.1045   | -1.1817 |
| 981 | 0.5 | Extremo 2A | 1.779   | -0.039 | -0.206 | 0.0815  | -0.0014   | 0.6785  |
| 981 | 1   | Extremo 1A | 1.779   | 7.325  | -0.206 | 0.0815  | 0.1016    | -1.143  |
| 981 | 0   | Extremo 1A | -5.615  | -7.181 | -0.226 | 0.0338  | -0.1066   | -0.8368 |
| 981 | 0.5 | Extremo 1A | -5.615  | 0.182  | -0.226 | 0.0338  | 0.0065    | 0.9129  |
| 981 | 1   | Extremo 2A | -5.615  | 7.545  | -0.226 | 0.0338  | 0.1196    | -1.0189 |
| 982 | 0   | Extremo 2A | 0.783   | -7.22  | -0.273 | 0.07    | -0.1365   | -1.4321 |
| 982 | 0.5 | Extremo 2A | 0.783   | 0.143  | -0.273 | 0.07    | -9.92E-06 | 0.3371  |
| 982 | 1   | Extremo 1A | 0.783   | 7.506  | -0.273 | 0.07    | 0.1365    | -1.5753 |
| 982 | 0   | Extremo 1A | -6.682  | -7.003 | -0.291 | 0.021   | -0.1373   | -1.1013 |
| 982 | 0.5 | Extremo 1A | -6.682  | 0.36   | -0.291 | 0.021   | 0.008     | 0.5594  |
| 982 | 1   | Extremo 2A | -6.682  | 7.724  | -0.291 | 0.021   | 0.1533    | -1.4616 |
| 983 | 0   | Extremo 2A | -0.528  | -7.068 | -0.358 | 0.055   | -0.1773   | -1.8008 |
| 983 | 0.5 | Extremo 2A | -0.528  | 0.295  | -0.358 | 0.055   | 0.0019    | -0.1075 |
| 983 | 1   | Extremo 1A | -0.528  | 7.658  | -0.358 | 0.055   | 0.1811    | -2.0958 |
| 983 | 0   | Extremo 1A | -8.054  | -6.855 | -0.374 | 0.0063  | -0.1769   | -0.4779 |
| 983 | 0.5 | Extremo 1A | -8.054  | 0.508  | -0.374 | 0.0063  | 0.01      | 0.109   |
| 983 | 1   | Extremo 2A | -8.054  | 7.871  | -0.374 | 0.0063  | 0.1968    | -1.9858 |
| 984 | 0   | Extremo 2A | -2.239  | -6.925 | -0.467 | 0.035   | -0.2291   | -2.251  |
| 984 | 0.5 | Extremo 2A | -2.239  | 0.439  | -0.467 | 0.035   | 0.0044    | -0.6295 |
| 984 | 1   | Extremo 1A | -2.239  | 7.802  | -0.467 | 0.035   | 0.2379    | -2.6896 |
| 984 | 0   | Extremo 1A | -9.816  | -6.716 | -0.48  | -0.0115 | -0.2275   | -1.9373 |
| 984 | 0.5 | Extremo 1A | -9.816  | 0.647  | -0.48  | -0.0115 | 0.0126    | -0.4199 |
| 984 | 1   | Extremo 2A | -9.816  | 8.01   | -0.48  | -0.0115 | 0.2526    | -2.5842 |
| 985 | 0   | Extremo 2A | -4.453  | -6.779 | -0.604 | 0.0122  | -0.2944   | -2.736  |
| 985 | 0.5 | Extremo 2A | -4.453  | 0.585  | -0.604 | 0.0122  | 0.0077    | -1.1875 |
| 985 | 1   | Extremo 1A | -4.453  | 7.948  | -0.604 | 0.0122  | 0.3098    | -3.3207 |
| 985 | 0   | Extremo 1A | -12.072 | -6.576 | -0.614 | -0.0315 | -0.2912   | -2.4388 |
| 985 | 0.5 | Extremo 1A | -12.072 | 0.787  | -0.614 | -0.0315 | 0.016     | -0.9915 |
| 985 | 1   | Extremo 2A | -12.072 | 8.15   | -0.614 | -0.0315 | 0.3232    | -3.2258 |
| 986 | 0   | Extremo 2A | -7.289  | -6.656 | -0.774 | 0.0074  | -0.3753   | -3.2585 |
| 986 | 0.5 | Extremo 2A | -7.289  | 0.707  | -0.774 | 0.0074  | 0.0116    | -1.7712 |
| 986 | 1   | Extremo 1A | -7.289  | 8.07   | -0.774 | 0.0074  | 0.3985    | -3.9656 |
| 986 | 0   | Extremo 1A | -14.934 | -6.46  | -0.779 | -0.0355 | -0.3695   | -2.9827 |
| 986 | 0.5 | Extremo 1A | -14.934 | 0.903  | -0.779 | -0.0355 | 0.02      | -1.5934 |
| 986 | 1   | Extremo 2A | -14.934 | 8.266  | -0.779 | -0.0355 | 0.4094    | -3.8857 |
| 987 | 0   | Extremo 2A | -10.915 | -6.568 | -0.996 | 0.0182  | -0.4817   | -3.9282 |
| 987 | 0.5 | Extremo 2A | -10.915 | 0.795  | -0.996 | 0.0182  | 0.0163    | -2.4849 |
| 987 | 1   | Extremo 1A | -10.915 | 8.158  | -0.996 | 0.0182  | 0.5143    | -4.7232 |
| 987 | 0   | Extremo 1A | -18.561 | -6.378 | -0.996 | -0.0254 | -0.4732   | -3.6647 |
| 987 | 0.5 | Extremo 1A | -18.561 | 0.985  | -0.996 | -0.0254 | 0.0246    | -2.3163 |
| 987 | 1   | Extremo 2A | -18.561 | 8.348  | -0.996 | -0.0254 | 0.5225    | -4.6495 |
| 988 | 0   | Extremo 2A | -15.544 | -6.511 | -1.276 | 0.0347  | -0.6156   | -4.7531 |
| 988 | 0.5 | Extremo 2A | -15.544 | 0.852  | -1.276 | 0.0347  | 0.0223    | -3.3385 |
| 988 | 1   | Extremo 1A | -15.544 | 8.216  | -1.276 | 0.0347  | 0.6602    | -5.6056 |
| 988 | 0   | Extremo 1A | -23.168 | -6.326 | -1.27  | -0.0089 | -0.6043   | -4.4942 |
| 988 | 0.5 | Extremo 1A | -23.168 | 1.037  | -1.27  | -0.0089 | 0.0305    | -3.172  |
| 988 | 1   | Extremo 2A | -23.168 | 8.401  | -1.27  | -0.0089 | 0.6654    | -5.5315 |
| 989 | 0   | Extremo 2A | -21.408 | -6.474 | -1.624 | 0.0406  | -0.7824   | -5.6913 |
| 989 | 0.5 | Extremo 2A | -21.408 | 0.89   | -1.624 | 0.0406  | 0.0294    | -4.2953 |
| 989 | 1   | Extremo 1A | -21.408 | 8.253  | -1.624 | 0.0406  | 0.8412    | -6.581  |
| 989 | 0   | Extremo 1A | -28.984 | -6.292 | -1.61  | -0.0023 | -0.7677   | -5.4338 |
| 989 | 0.5 | Extremo 1A | -28.984 | 1.072  | -1.61  | -0.0023 | 0.0376    | -4.1288 |





|      |     |            |          |         |        |         |         |          |
|------|-----|------------|----------|---------|--------|---------|---------|----------|
| 992  | 0   | Extremo 2A | -48.844  | -6.426  | -3.152 | 0.0129  | -1.5222 | -8.191   |
| 992  | 0,5 | Extremo 2A | -48.844  | 0.937   | -3.152 | 0.0129  | 0.0541  | -6.8189  |
| 992  | 1   | Extremo 1A | -48.844  | 8.301   | -3.152 | 0.0129  | 1.6303  | -9.1284  |
| 992  | 0   | Extremo 1A | -56.062  | -6.243  | -3.105 | -0.03   | -1.4905 | -7.949   |
| 992  | 0,5 | Extremo 1A | -56.062  | 1.12    | -3.105 | -0.03   | 0.0619  | -6.6682  |
| 992  | 1   | Extremo 2A | -56.062  | 8.483   | -3.105 | -0.03   | 1.6144  | -9.0691  |
| 993  | 0   | Extremo 2A | -61.887  | -6.511  | -3.84  | 0.1087  | -1.8601 | -9.2005  |
| 993  | 0,5 | Extremo 2A | -61.887  | 0.852   | -3.84  | 0.1087  | 0.0597  | -7.7858  |
| 993  | 1   | Extremo 1A | -61.887  | 8.216   | -3.84  | 0.1087  | 1.9796  | -10.0527 |
| 993  | 0   | Extremo 1A | -68.891  | -6.322  | -3.776 | 0.0615  | -1.8207 | -8.9539  |
| 993  | 0,5 | Extremo 1A | -68.891  | 1.042   | -3.776 | 0.0615  | 0.0675  | -7.6339  |
| 993  | 1   | Extremo 2A | -68.891  | 8.405   | -3.776 | 0.0615  | 1.9557  | -9.9256  |
| 994  | 0   | Extremo 2A | -76.964  | -6.719  | -4.544 | 0.22    | -2.2055 | -10.5765 |
| 994  | 0,5 | Extremo 2A | -76.964  | 0.644   | -4.544 | 0.22    | 0.0666  | -9.0578  |
| 994  | 1   | Extremo 1A | -76.964  | 8.007   | -4.544 | 0.22    | 2.3387  | -11.2207 |
| 994  | 0   | Extremo 1A | -83.708  | -6.515  | -4.465 | 0.1673  | -2.1582 | -10.3126 |
| 994  | 0,5 | Extremo 1A | -83.708  | 0.849   | -4.465 | 0.1673  | 0.0743  | -8.8961  |
| 994  | 1   | Extremo 2A | -83.708  | 8.212   | -4.465 | 0.1673  | 2.3068  | -11.1611 |
| 995  | 0   | Extremo 2A | -93.29   | -7.097  | -5.034 | 0.287   | -2.4401 | -12.1638 |
| 995  | 0,5 | Extremo 2A | -93.29   | 0.266   | -5.034 | 0.287   | 0.0767  | -10.4559 |
| 995  | 1   | Extremo 1A | -93.29   | 7.629   | -5.034 | 0.287   | 2.5935  | -12.4296 |
| 995  | 0   | Extremo 1A | -99.74   | -6.868  | -4.941 | 0.2281  | -2.3857 | -11.8728 |
| 995  | 0,5 | Extremo 1A | -99.74   | 0.496   | -4.941 | 0.2281  | 0.0845  | -10.2798 |
| 995  | 1   | Extremo 2A | -99.74   | 7.859   | -4.941 | 0.2281  | 2.5548  | -12.3685 |
| 996  | 0   | Extremo 2A | -108.537 | -7.559  | -4.838 | 0.2556  | -2.3516 | -13.54   |
| 996  | 0,5 | Extremo 2A | -108.537 | -0.195  | -4.838 | 0.2556  | 0.0673  | -11.6015 |
| 996  | 1   | Extremo 1A | -108.537 | 7.168   | -4.838 | 0.2556  | 2.4863  | -13.3446 |
| 996  | 0   | Extremo 1A | -114.679 | -7.293  | -4.735 | 0.1909  | -2.2917 | -13.2196 |
| 996  | 0,5 | Extremo 1A | -114.679 | 0.07    | -4.735 | 0.1909  | 0.0758  | -11.4138 |
| 996  | 1   | Extremo 2A | -114.679 | 7.433   | -4.735 | 0.1909  | 2.4434  | -13.2897 |
| 997  | 0   | Extremo 2A | -120.762 | -7.949  | -4.344 | 0.1702  | -2.1677 | -14.2154 |
| 997  | 0,5 | Extremo 2A | -120.762 | -0.586  | -4.344 | 0.1702  | 0.0043  | -12.0818 |
| 997  | 1   | Extremo 1A | -120.762 | 6.778   | -4.344 | 0.1702  | 2.1763  | -13.6298 |
| 997  | 0   | Extremo 1A | -126.558 | -7.641  | -4.222 | 0.1009  | -2.0976 | -13.8759 |
| 997  | 0,5 | Extremo 1A | -126.558 | -0.278  | -4.222 | 0.1009  | 0.0134  | -11.8962 |
| 997  | 1   | Extremo 2A | -126.558 | 7.085   | -4.222 | 0.1009  | 2.1244  | -13.5981 |
| 998  | 0   | Extremo 2A | -133.253 | -8.341  | -5.004 | 0.0507  | -2.5593 | -14.1939 |
| 998  | 0,5 | Extremo 2A | -133.253 | -0.978  | -5.004 | 0.0507  | -0.0572 | -11.8643 |
| 998  | 1   | Extremo 1A | -133.253 | 6.386   | -5.004 | 0.0507  | 2.445   | -13.2163 |
| 998  | 0   | Extremo 1A | -138.625 | -7.99   | -4.867 | -0.0219 | -2.4818 | -13.8587 |
| 998  | 0,5 | Extremo 1A | -138.625 | -0.626  | -4.867 | -0.0219 | -0.0484 | -11.7047 |
| 998  | 1   | Extremo 2A | -138.625 | 6.737   | -4.867 | -0.0219 | 2.3851  | -13.2324 |
| 999  | 0   | Extremo 2A | -149.305 | -8.905  | -5.355 | -0.0455 | -2.7423 | -13.2309 |
| 999  | 0,5 | Extremo 2A | -149.305 | -1.542  | -5.355 | -0.0455 | -0.0646 | -10.619  |
| 999  | 1   | Extremo 1A | -149.305 | 5.821   | -5.355 | -0.0455 | 2.613   | -11.6887 |
| 999  | 0   | Extremo 1A | -154.2   | -8.507  | -5.22  | -0.124  | -2.6665 | -12.9224 |
| 999  | 0,5 | Extremo 1A | -154.2   | -1.144  | -5.22  | -0.124  | -0.0565 | -10.5098 |
| 999  | 1   | Extremo 2A | -154.2   | 6.22    | -5.22  | -0.124  | 2.5534  | -11.7789 |
| 1000 | 0   | Extremo 2A | -166.854 | -9.456  | -4.953 | 0.0036  | -2.5298 | -11.7268 |
| 1000 | 0,5 | Extremo 2A | -166.854 | -2.092  | -4.953 | 0.0036  | -0.053  | -8.8398  |
| 1000 | 1   | Extremo 1A | -166.854 | 5.271   | -4.953 | 0.0036  | 2.4237  | -9.6343  |
| 1000 | 0   | Extremo 1A | -171.282 | -9.016  | -4.834 | -0.0842 | -2.4623 | -11.4548 |
| 1000 | 0,5 | Extremo 1A | -171.282 | -1.653  | -4.834 | -0.0842 | -0.0455 | -8.7875  |
| 1000 | 1   | Extremo 2A | -171.282 | 5.71    | -4.834 | -0.0842 | 2.3713  | -9.8018  |
| 1001 | 0   | Extremo 2A | -183.372 | -9.826  | -4.309 | 0.1268  | -2.2011 | -10.1371 |
| 1001 | 0,5 | Extremo 2A | -183.372 | -2.462  | -4.309 | 0.1268  | -0.0466 | -7.065   |
| 1001 | 1   | Extremo 1A | -183.372 | 4.901   | -4.309 | 0.1268  | 2.108   | -7.6746  |
| 1001 | 0   | Extremo 1A | -187.381 | -9.353  | -4.207 | 0.0303  | -2.1431 | -9.9022  |
| 1001 | 0,5 | Extremo 1A | -187.381 | -1.99   | -4.207 | 0.0303  | -0.0395 | -7.0663  |
| 1001 | 1   | Extremo 2A | -187.381 | 5.373   | -4.207 | 0.0303  | 2.0642  | -7.912   |
| 1002 | 0   | Extremo 2A | -197.968 | -10.042 | -3.662 | 0.2346  | -1.8742 | -8.6974  |
| 1002 | 0,5 | Extremo 2A | -197.968 | -2.679  | -3.662 | 0.2346  | -0.0434 | -5.5171  |
| 1002 | 1   | Extremo 1A | -197.968 | 4.684   | -3.662 | 0.2346  | 1.7874  | -6.0184  |
| 1002 | 0   | Extremo 1A | -201.615 | -9.543  | -3.576 | 0.1323  | -1.8249 | -8.5021  |
| 1002 | 0,5 | Extremo 1A | -201.615 | -2.179  | -3.576 | 0.1323  | -0.0366 | -5.5716  |
| 1002 | 1   | Extremo 2A | -201.615 | 5.184   | -3.576 | 0.1323  | 1.7516  | -6.3228  |
| 1003 | 0   | Extremo 2A | -210.685 | -10.155 | -3.146 | 0.2796  | -1.6118 | -7.3755  |
| 1003 | 0,5 | Extremo 2A | -210.685 | -2.792  | -3.146 | 0.2796  | -0.039  | -4.1387  |
| 1003 | 1   | Extremo 1A | -210.685 | 4.571   | -3.146 | 0.2796  | 1.5338  | -4.5835  |
| 1003 | 0   | Extremo 1A | -214.023 | -9.633  | -3.074 | 0.1727  | -1.5697 | -7.2298  |
| 1003 | 0,5 | Extremo 1A | -214.023 | -2.27   | -3.074 | 0.1727  | -0.0326 | -4.2542  |
| 1003 | 1   | Extremo 2A | -214.023 | 5.094   | -3.074 | 0.1727  | 1.5045  | -4.9602  |

|      |     |            |          |         |        |        |           |         |
|------|-----|------------|----------|---------|--------|--------|-----------|---------|
| 1004 | 0   | Extremo 2A | -221.862 | -10.231 | -2.718 | 0.2799 | -1.3904   | -5.9241 |
| 1004 | 0,5 | Extremo 2A | -221.862 | -2.868  | -2.718 | 0.2799 | -0.0312   | -2.6494 |
| 1004 | 1   | Extremo 1A | -221.862 | 4.496   | -2.718 | 0.2799 | 1.328     | -3.0563 |
| 1004 | 0   | Extremo 1A | -224.937 | -9.688  | -2.658 | 0.1675 | -1.3544   | -5.8293 |
| 1004 | 0,5 | Extremo 1A | -224.937 | -2.325  | -2.658 | 0.1675 | -0.0251   | -2.826  |
| 1004 | 1   | Extremo 2A | -224.937 | 5.038   | -2.658 | 0.1675 | 1.3041    | -3.5043 |
| 1005 | 0   | Extremo 2A | -231.653 | -10.315 | -2.349 | 0.2916 | -1.1968   | -4.3919 |
| 1005 | 0,5 | Extremo 2A | -231.653 | -2.952  | -2.349 | 0.2916 | -0.0221   | -1.0752 |
| 1005 | 1   | Extremo 1A | -231.653 | 4.411   | -2.349 | 0.2916 | 1.1526    | -1.4401 |
| 1005 | 0   | Extremo 1A | -234.503 | -9.754  | -2.299 | 0.1735 | -1.1656   | -4.3446 |
| 1005 | 0,5 | Extremo 1A | -234.503 | -2.391  | -2.299 | 0.1735 | -0.0163   | -1.3084 |
| 1005 | 1   | Extremo 2A | -234.503 | 4.972   | -2.299 | 0.1735 | 1.133     | -1.9538 |
| 1006 | 0   | Extremo 2A | -240.145 | -10.407 | -2.035 | 0.3137 | -1.0309   | -2.8668 |
| 1006 | 0,5 | Extremo 2A | -240.145 | -3.044  | -2.035 | 0.3137 | -0.0135   | 0.4961  |
| 1006 | 1   | Extremo 1A | -240.145 | 4.319   | -2.035 | 0.3137 | 1.0038    | 0.1774  |
| 1006 | 0   | Extremo 1A | -242.803 | -9.827  | -1.991 | 0.1912 | -1.0036   | -2.8643 |
| 1006 | 0,5 | Extremo 1A | -242.803 | -2.464  | -1.991 | 0.1912 | -0.0081   | 0.2084  |
| 1006 | 1   | Extremo 2A | -242.803 | 4.899   | -1.991 | 0.1912 | 0.9875    | -0.4005 |
| 1007 | 0   | Extremo 2A | -247.41  | -10.501 | -1.757 | 0.3173 | -0.8853   | -1.3345 |
| 1007 | 0,5 | Extremo 2A | -247.41  | -3.138  | -1.757 | 0.3173 | -0.0069   | 2.0751  |
| 1007 | 1   | Extremo 1A | -247.41  | 4.226   | -1.757 | 0.3173 | 0.8715    | 1.803   |
| 1007 | 0   | Extremo 1A | -249.901 | -9.897  | -1.719 | 0.1928 | -0.8609   | -1.3811 |
| 1007 | 0,5 | Extremo 1A | -249.901 | -2.534  | -1.719 | 0.1928 | -0.0017   | 1.7267  |
| 1007 | 1   | Extremo 2A | -249.901 | 4.829   | -1.719 | 0.1928 | 0.8576    | 1.1529  |
| 1008 | 0   | Extremo 2A | -253.511 | -10.557 | -1.508 | 0.296  | -0.7584   | 0.3343  |
| 1008 | 0,5 | Extremo 2A | -253.511 | -3.193  | -1.508 | 0.296  | -0.0045   | 3.7718  |
| 1008 | 1   | Extremo 1A | -253.511 | 4.17    | -1.508 | 0.296  | 0.7495    | 3.5277  |
| 1008 | 0   | Extremo 1A | -255.854 | -9.928  | -1.473 | 0.1719 | -0.736    | 0.2188  |
| 1008 | 0,5 | Extremo 1A | -255.854 | -2.565  | -1.473 | 0.1719 | 0.0005729 | 3.3419  |
| 1008 | 1   | Extremo 2A | -255.854 | 4.799   | -1.473 | 0.1719 | 0.7371    | 2.7834  |
| 1009 | 0   | Extremo 2A | -258.738 | -10.578 | -1.356 | 0.306  | -0.6823   | 2.1649  |
| 1009 | 0,5 | Extremo 2A | -258.738 | -3.215  | -1.356 | 0.306  | -0.0042   | 5.6131  |
| 1009 | 1   | Extremo 1A | -258.738 | 4.148   | -1.356 | 0.306  | 0.674     | 5.3797  |
| 1009 | 0   | Extremo 1A | -260.939 | -9.924  | -1.322 | 0.1793 | -0.6605   | 1.9509  |
| 1009 | 0,5 | Extremo 1A | -260.939 | -2.561  | -1.322 | 0.1793 | 0.0006569 | 5.0722  |
| 1009 | 1   | Extremo 2A | -260.939 | 4.802   | -1.322 | 0.1793 | 0.6618    | 4.5119  |
| 1010 | 0   | Extremo 2A | -263.511 | -10.577 | -1.255 | 0.3461 | -0.6298   | 3.8595  |
| 1010 | 0,5 | Extremo 2A | -263.511 | -3.213  | -1.255 | 0.3461 | -0.0021   | 7.307   |
| 1010 | 1   | Extremo 1A | -263.511 | 4.15    | -1.255 | 0.3461 | 0.6256    | 7.073   |
| 1010 | 0   | Extremo 1A | -265.57  | -9.899  | -1.221 | 0.2119 | -0.608    | 3.5527  |
| 1010 | 0,5 | Extremo 1A | -265.57  | -2.536  | -1.221 | 0.2119 | 0.0025    | 6.6615  |
| 1010 | 1   | Extremo 2A | -265.57  | 4.827   | -1.221 | 0.2119 | 0.6129    | 6.0887  |
| 1011 | 0   | Extremo 2A | -267.906 | -10.553 | -1.137 | 0.3584 | -0.5671   | 5.3926  |
| 1011 | 0,5 | Extremo 2A | -267.906 | -3.19   | -1.137 | 0.3584 | 0.0016    | 8.8356  |
| 1011 | 1   | Extremo 1A | -267.906 | 4.173   | -1.137 | 0.3584 | 0.5702    | 8.5899  |
| 1011 | 0   | Extremo 1A | -269.817 | -9.858  | -1.101 | 0.2194 | -0.5444   | 5.0085  |
| 1011 | 0,5 | Extremo 1A | -269.817 | -2.494  | -1.101 | 0.2194 | 0.0059    | 8.0965  |
| 1011 | 1   | Extremo 2A | -269.817 | 4.869   | -1.101 | 0.2194 | 0.5562    | 7.5028  |
| 1012 | 0   | Extremo 2A | -271.774 | -10.496 | -0.992 | 0.3042 | -0.4919   | 6.9764  |
| 1012 | 0,5 | Extremo 2A | -271.774 | -3.133  | -0.992 | 0.3042 | 0.0043    | 10.3836 |
| 1012 | 1   | Extremo 1A | -271.774 | 4.23    | -0.992 | 0.3042 | 0.5005    | 10.1092 |
| 1012 | 0   | Extremo 1A | -273.521 | -9.787  | -0.952 | 0.1679 | -0.4675   | 6.4907  |
| 1012 | 0,5 | Extremo 1A | -273.521 | -2.423  | -0.952 | 0.1679 | 0.0083    | 9.5432  |
| 1012 | 1   | Extremo 2A | -273.521 | 4.94    | -0.952 | 0.1679 | 0.4841    | 8.9141  |
| 1013 | 0   | Extremo 2A | -274.972 | -10.352 | -0.829 | 0.2078 | -0.411    | 8.8617  |
| 1013 | 0,5 | Extremo 2A | -274.972 | -2.988  | -0.829 | 0.2078 |           |         |



|      |     |            |          |        |        |         |         |         |
|------|-----|------------|----------|--------|--------|---------|---------|---------|
| 1016 | 0   | Extremo 2A | -282.165 | -9.474 | -0.553 | 0.2188  | -0.2737 | 14.21   |
| 1016 | 0.5 | Extremo 2A | -282.165 | -2.111 | -0.553 | 0.2188  | 0.0027  | 17.1064 |
| 1016 | 1   | Extremo 1A | -282.165 | 5.252  | -0.553 | 0.2188  | 0.2791  | 16.3211 |
| 1016 | 0   | Extremo 1A | -282.871 | -8.901 | -0.463 | 0.1516  | -0.2266 | 12.9477 |
| 1016 | 0.5 | Extremo 1A | -282.871 | -1.538 | -0.463 | 0.1516  | 0.0047  | 15.5575 |
| 1016 | 1   | Extremo 2A | -282.871 | 5.825  | -0.463 | 0.1516  | 0.236   | 14.4858 |
| 1017 | 0   | Extremo 2A | -284.015 | -8.952 | -0.444 | 0.1565  | -0.2175 | 15.3634 |
| 1017 | 0.5 | Extremo 2A | -284.015 | -1.589 | -0.444 | 0.1565  | 0.0044  | 17.9987 |
| 1017 | 1   | Extremo 1A | -284.015 | 5.774  | -0.444 | 0.1565  | 0.2263  | 16.9525 |
| 1017 | 0   | Extremo 1A | -284.305 | -8.568 | -0.332 | 0.1494  | -0.1603 | 13.7648 |
| 1017 | 0.5 | Extremo 1A | -284.305 | -1.205 | -0.332 | 0.1494  | 0.0057  | 16.2083 |
| 1017 | 1   | Extremo 2A | -284.305 | 6.158  | -0.332 | 0.1494  | 0.1718  | 14.9701 |
| 1018 | 0   | Extremo 2A | -285.44  | -8.286 | -0.327 | 0.0751  | -0.1584 | 16.3753 |
| 1018 | 0.5 | Extremo 2A | -285.44  | -0.923 | -0.327 | 0.0751  | 0.0053  | 18.6776 |
| 1018 | 1   | Extremo 1A | -285.44  | 6.44   | -0.327 | 0.0751  | 0.1689  | 17.2982 |
| 1018 | 0   | Extremo 1A | -285.274 | -8.232 | -0.197 | 0.1245  | -0.0923 | 14.3469 |
| 1018 | 0.5 | Extremo 1A | -285.274 | -0.869 | -0.197 | 0.1245  | 0.0064  | 16.6221 |
| 1018 | 1   | Extremo 2A | -285.274 | 6.494  | -0.197 | 0.1245  | 0.1051  | 15.2157 |
| 1019 | 0   | Extremo 2A | -286.349 | -7.578 | -0.2   | 0.0284  | -0.0955 | 17.0588 |
| 1019 | 0.5 | Extremo 2A | -286.349 | -0.215 | -0.2   | 0.0284  | 0.0044  | 19.007  |
| 1019 | 1   | Extremo 1A | -286.349 | 7.148  | -0.2   | 0.0284  | 0.1043  | 17.2736 |
| 1019 | 0   | Extremo 1A | -285.756 | -7.899 | -0.063 | 0.0908  | -0.025  | 14.7403 |
| 1019 | 0.5 | Extremo 1A | -285.756 | -0.535 | -0.063 | 0.0908  | 0.0067  | 16.8488 |
| 1019 | 1   | Extremo 2A | -285.756 | 6.828  | -0.063 | 0.0908  | 0.0384  | 15.2756 |
| 1020 | 0   | Extremo 2A | -286.761 | -6.872 | -0.058 | -0.0205 | -0.0259 | 17.2608 |
| 1020 | 0.5 | Extremo 2A | -286.761 | 0.491  | -0.058 | -0.0205 | 0.0031  | 18.856  |
| 1020 | 1   | Extremo 1A | -286.761 | 7.854  | -0.058 | -0.0205 | 0.0322  | 16.7696 |
| 1020 | 0   | Extremo 1A | -285.743 | -7.565 | 0.07   | 0.0548  | 0.0416  | 14.9629 |
| 1020 | 0.5 | Extremo 1A | -285.743 | -0.202 | 0.07   | 0.0548  | 0.0067  | 16.9047 |
| 1020 | 1   | Extremo 2A | -285.743 | 7.161  | 0.07   | 0.0548  | -0.0283 | 15.165  |
| 1021 | 0   | Extremo 2A | -286.699 | -6.209 | 0.096  | -0.1115 | 0.0511  | 17.1098 |
| 1021 | 0.5 | Extremo 2A | -286.699 | 1.154  | 0.096  | -0.1115 | 0.0031  | 18.3736 |
| 1021 | 1   | Extremo 1A | -286.699 | 8.517  | 0.096  | -0.1115 | -0.045  | 15.9559 |
| 1021 | 0   | Extremo 1A | -285.236 | -7.228 | 0.204  | 0.0201  | 0.1084  | 15.0169 |
| 1021 | 0.5 | Extremo 1A | -285.236 | 0.135  | 0.204  | 0.0201  | 0.0063  | 16.79   |
| 1021 | 1   | Extremo 2A | -285.236 | 7.499  | 0.204  | 0.0201  | -0.0957 | 14.8816 |
| 1022 | 0   | Extremo 2A | -286.101 | -5.683 | 0.254  | -0.1991 | 0.1302  | 16.7324 |
| 1022 | 0.5 | Extremo 2A | -286.101 | 1.681  | 0.254  | -0.1991 | 0.003   | 17.7328 |
| 1022 | 1   | Extremo 1A | -286.101 | 9.044  | 0.254  | -0.1991 | -0.1242 | 15.0516 |
| 1022 | 0   | Extremo 1A | -284.24  | -6.883 | 0.339  | -0.0064 | 0.1751  | 14.8871 |
| 1022 | 0.5 | Extremo 1A | -284.24  | 0.48   | 0.339  | -0.0064 | 0.0056  | 16.488  |
| 1022 | 1   | Extremo 2A | -284.24  | 7.843  | 0.339  | -0.0064 | -0.1638 | 14.4073 |
| 1023 | 0   | Extremo 2A | -284.962 | -5.251 | 0.406  | -0.2395 | 0.2053  | 16.125  |
| 1023 | 0.5 | Extremo 2A | -284.962 | 2.112  | 0.406  | -0.2395 | 0.0026  | 16.9099 |
| 1023 | 1   | Extremo 1A | -284.962 | 9.475  | 0.406  | -0.2395 | -0.2002 | 14.0132 |
| 1023 | 0   | Extremo 1A | -282.779 | -6.538 | 0.47   | -0.0102 | 0.2395  | 14.5185 |
| 1023 | 0.5 | Extremo 1A | -282.779 | 0.825  | 0.47   | -0.0102 | 0.0046  | 15.9468 |
| 1023 | 1   | Extremo 2A | -282.779 | 8.188  | 0.47   | -0.0102 | -0.2303 | 13.6934 |
| 1024 | 0   | Extremo 2A | -283.358 | -4.901 | 0.535  | -0.22   | 0.2697  | 15.1551 |
| 1024 | 0.5 | Extremo 2A | -283.358 | 2.462  | 0.535  | -0.22   | 0.0021  | 15.7647 |
| 1024 | 1   | Extremo 1A | -283.358 | 9.826  | 0.535  | -0.22   | -0.2655 | 12.6926 |
| 1024 | 0   | Extremo 1A | -280.924 | -6.218 | 0.584  | 0.0247  | 0.2954  | 13.7843 |
| 1024 | 0.5 | Extremo 1A | -280.924 | 1.145  | 0.584  | 0.0247  | 0.0036  | 15.0525 |
| 1024 | 1   | Extremo 2A | -280.924 | 8.509  | 0.584  | 0.0247  | -0.2883 | 12.6391 |
| 1025 | 0   | Extremo 2A | -281.418 | -4.646 | 0.636  | -0.1729 | 0.3213  | 13.6546 |
| 1025 | 0.5 | Extremo 2A | -281.418 | 2.717  | 0.636  | -0.1729 | 0.0035  | 14.1369 |
| 1025 | 1   | Extremo 1A | -281.418 | 10.08  | 0.636  | -0.1729 | -0.3144 | 10.9376 |
| 1025 | 0   | Extremo 1A | -278.792 | -5.959 | 0.672  | 0.0765  | 0.3406  | 12.5247 |
| 1025 | 0.5 | Extremo 1A | -278.792 | 1.405  | 0.672  | 0.0765  | 0.0045  | 13.6632 |
| 1025 | 1   | Extremo 2A | -278.792 | 8.768  | 0.672  | 0.0765  | -0.3317 | 11.12   |
| 1026 | 0   | Extremo 2A | -279.117 | -4.453 | 0.764  | -0.1951 | 0.3883  | 11.7179 |
| 1026 | 0.5 | Extremo 2A | -279.117 | 2.911  | 0.764  | -0.1951 | 0.0065  | 12.1034 |
| 1026 | 1   | Extremo 1A | -279.117 | 10.274 | 0.764  | -0.1951 | -0.3752 | 8.8072  |
| 1026 | 0   | Extremo 1A | -276.346 | -5.741 | 0.791  | 0.0574  | 0.4025  | 10.8199 |
| 1026 | 0.5 | Extremo 1A | -276.346 | 1.623  | 0.791  | 0.0574  | 0.0071  | 11.8495 |
| 1026 | 1   | Extremo 2A | -276.346 | 8.986  | 0.791  | 0.0574  | -0.3882 | 9.1974  |
| 1027 | 0   | Extremo 2A | -276.177 | -4.313 | 0.942  | -0.2883 | 0.4785  | 9.9895  |
| 1027 | 0.5 | Extremo 2A | -276.177 | 3.051  | 0.942  | -0.2883 | 0.0077  | 10.3051 |
| 1027 | 1   | Extremo 1A | -276.177 | 10.414 | 0.942  | -0.2883 | -0.4632 | 6.939   |
| 1027 | 0   | Extremo 1A | -273.3   | -5.564 | 0.961  | -0.0356 | 0.4886  | 9.2887  |
| 1027 | 0.5 | Extremo 1A | -273.3   | 1.799  | 0.961  | -0.0356 | 0.008   | 10.23   |
| 1027 | 1   | Extremo 2A | -273.3   | 9.162  | 0.961  | -0.0356 | -0.4726 | 7.4898  |

|      |     |            |          |        |       |         |           |         |
|------|-----|------------|----------|--------|-------|---------|-----------|---------|
| 1028 | 0   | Extremo 2A | -272.509 | -4.257 | 1.098 | -0.3412 | 0.5541    | 8.4793  |
| 1028 | 0.5 | Extremo 2A | -272.509 | 3.107  | 1.098 | -0.3412 | 0.0053    | 8.7668  |
| 1028 | 1   | Extremo 1A | -272.509 | 10.47  | 1.098 | -0.3412 | -0.5435   | 5.3726  |
| 1028 | 0   | Extremo 1A | -269.555 | -5.468 | 1.111 | -0.0938 | 0.5612    | 7.9551  |
| 1028 | 0.5 | Extremo 1A | -269.555 | 1.895  | 1.111 | -0.0938 | 0.0055    | 8.8484  |
| 1028 | 1   | Extremo 2A | -269.555 | 9.258  | 1.111 | -0.0938 | -0.5502   | 6.06    |
| 1029 | 0   | Extremo 2A | -268.271 | -4.233 | 1.223 | -0.329  | 0.6137    | 6.9711  |
| 1029 | 0.5 | Extremo 2A | -268.271 | 3.131  | 1.223 | -0.329  | 0.002     | 7.2466  |
| 1029 | 1   | Extremo 1A | -268.271 | 10.494 | 1.223 | -0.329  | -0.6097   | 3.8405  |
| 1029 | 0   | Extremo 1A | -265.262 | -5.403 | 1.233 | -0.0881 | 0.6187    | 6.6134  |
| 1029 | 0.5 | Extremo 1A | -265.262 | 1.96   | 1.233 | -0.0881 | 0.002     | 7.4741  |
| 1029 | 1   | Extremo 2A | -265.262 | 9.323  | 1.233 | -0.0881 | -0.6146   | 4.6532  |
| 1030 | 0   | Extremo 2A | -263.626 | -4.229 | 1.33  | -0.2894 | 0.6651    | 5.2879  |
| 1030 | 0.5 | Extremo 2A | -263.626 | 3.134  | 1.33  | -0.2894 | 0.0002534 | 5.5618  |
| 1030 | 1   | Extremo 1A | -263.626 | 10.497 | 1.33  | -0.2894 | -0.6646   | 2.154   |
| 1030 | 0   | Extremo 1A | -260.576 | -5.357 | 1.337 | -0.0533 | 0.6685    | 5.0812  |
| 1030 | 0.5 | Extremo 1A | -260.576 | 2.007  | 1.337 | -0.0533 | 0.0001167 | 5.9186  |
| 1030 | 1   | Extremo 2A | -260.576 | 9.37   | 1.337 | -0.0533 | -0.6683   | 3.0745  |
| 1031 | 0   | Extremo 2A | -258.505 | -4.248 | 1.486 | -0.2795 | 0.7433    | 3.4467  |
| 1031 | 0.5 | Extremo 2A | -258.505 | 3.115  | 1.486 | -0.2795 | 0.0002102 | 3.73    |
| 1031 | 1   | Extremo 1A | -258.505 | 10.478 | 1.486 | -0.2795 | -0.7428   | 0.3316  |
| 1031 | 0   | Extremo 1A | -255.429 | -5.332 | 1.49  | -0.048  | 0.7449    | 3.3628  |
| 1031 | 0.5 | Extremo 1A | -255.429 | 2.031  | 1.49  | -0.048  | -5.48E-05 | 4.1879  |
| 1031 | 1   | Extremo 2A | -255.429 | 9.395  | 1.49  | -0.048  | -0.745    | 1.3314  |
| 1032 | 0   | Extremo 2A | -252.491 | -4.301 | 1.738 | -0.3009 | 0.867     | 1.7298  |
| 1032 | 0.5 | Extremo 2A | -252.491 | 3.062  | 1.738 | -0.3009 | -0.0021   | 2.0396  |
| 1032 | 1   | Extremo 1A | -252.491 | 10.425 | 1.738 | -0.3009 | -0.8711   | -1.3322 |
| 1032 | 0   | Extremo 1A | -249.403 | -5.341 | 1.738 | -0.0786 | 0.8668    | 1.7555  |
| 1032 | 0.5 | Extremo 1A | -249.403 | 2.022  | 1.738 | -0.0786 | -0.0024   | 2.5854  |
| 1032 | 1   | Extremo 2A | -249.403 | 9.385  | 1.738 | -0.0786 | -0.8716   | -0.2664 |
| 1033 | 0   | Extremo 2A | -245.302 | -4.392 | 2.018 | -0.2975 | 1.0003    | 1.0099  |
| 1033 | 0.5 | Extremo 2A | -245.302 | 2.971  | 2.018 | -0.2975 | -0.0085   | 0.4651  |
| 1033 | 1   | Extremo 1A | -245.302 | 10.335 | 2.018 | -0.2975 | -1.0174   | -2.8613 |
| 1033 | 0   | Extremo 1A | -242.22  | -5.396 | 2.015 | -0.0869 | 0.9985    | 2.506   |
| 1033 | 0.5 | Extremo 1A | -242.22  | 1.968  | 2.015 | -0.0869 | -0.0089   | 1.1076  |
| 1033 | 1   | Extremo 2A | -242.22  | 9.331  | 2.015 | -0.0869 | -1.0162   | -1.717  |
| 1034 | 0   | Extremo 2A | -236.88  | -4.482 | 2.333 | -0.2761 | 1.1496    | -1.5024 |
| 1034 | 0.5 | Extremo 2A | -236.88  | 2.881  | 2.333 | -0.2761 | -0.017    | -1.1022 |
| 1034 | 1   | Extremo 1A | -236.88  | 10.244 | 2.333 | -0.2761 | -1.1835   | -4.3836 |
| 1034 | 0   | Extremo 1A | -233.82  | -5.452 | 2.327 | -0.0748 | 1.1461    | -1.2391 |
| 1034 | 0.5 | Extremo 1A | -233.82  | 1.911  | 2.327 | -0.0748 | -0.0172   | -0.3537 |
| 1034 | 1   | Extremo 2A | -233.82  | 9.274  | 2.327 | -0.0748 | -1.1805   | -3.1499 |
| 1035 | 0   | Extremo 2A | -227.157 | -4.564 | 2.702 | -0.2653 | 1.3252    | -3.1128 |
| 1035 | 0.5 | Extremo 2A | -227.157 | 2.8    | 2.702 | -0.2653 | -0.0259   | -2.6717 |
| 1035 | 1   | Extremo 1A | -227.157 | 10.163 | 2.702 | -0.2653 | -1.3771   | -5.9123 |
| 1035 | 0   | Extremo 1A | -224.14  | -5.498 | 2.691 | -0.0698 | 1.3195    | -7.2292 |
| 1035 | 0.5 | Extremo 1A | -224.14  | 1.865  | 2.691 | -0.0698 | -0.0261   | -1.8211 |
| 1035 | 1   | Extremo 2A | -224.14  | 9.229  | 2.691 | -0.0698 | -1.3717   | -4.5947 |
| 1036 | 0   | Extremo 2A | -216.05  | -4.636 | 3.129 | -0.266  | 1.5309    | -4.6326 |
| 1036 | 0.5 | Extremo 2A | -216.05  | 2.727  | 3.129 | -0.266  | -0.0336   | -4.1553 |
| 1036 | 1   | Extremo 1A | -216.05  | 10.09  | 3.129 | -0.266  | -1.598    | -7.3597 |
| 1036 | 0   | Extremo 1A | -213.101 | -5.529 | 3.112 | -0.0747 | 1.5222    | -4.1494 |
| 1036 | 0.5 | Extremo 1A | -213.101 | 1.834  | 3.112 | -0.0747 | -0.0336   | -3.2256 |
| 1036 | 1   | Extremo 2A | -213.101 | 9.197  | 3.112 | -0.0747 | -1.5894   | -5.9834 |
| 1037 | 0   | Extremo 2A | -203.407 | -4.745 | 3.644 | -0.2221 | 1.7844    | -6      |



|      |     |            |          |        |       |         |         |          |
|------|-----|------------|----------|--------|-------|---------|---------|----------|
| 1040 | 0   | Extremo 2A | -155.01  | -5.858 | 5.33  | 0.0526  | 2.6067  | -11.6986 |
| 1040 | 0.5 | Extremo 2A | -155.01  | 1.505  | 5.33  | 0.0526  | -0.0583 | -10.6105 |
| 1040 | 1   | Extremo 1A | -155.01  | 8.869  | 5.33  | 0.0526  | -2.7233 | -13.204  |
| 1040 | 0   | Extremo 1A | -152.764 | -6.307 | 5.261 | 0.1179  | 2.5729  | -10.5282 |
| 1040 | 0.5 | Extremo 1A | -152.764 | 1.056  | 5.261 | 0.1179  | -0.0575 | -9.2154  |
| 1040 | 1   | Extremo 2A | -152.764 | 8.419  | 5.261 | 0.1179  | -2.6879 | -11.5842 |
| 1041 | 0   | Extremo 2A | -139.084 | -6.411 | 4.974 | -0.0449 | 2.4369  | -13.2175 |
| 1041 | 0.5 | Extremo 2A | -139.084 | 0.952  | 4.974 | -0.0449 | -0.0502 | -11.8528 |
| 1041 | 1   | Extremo 1A | -139.084 | 8.316  | 4.974 | -0.0449 | -2.5373 | -14.1698 |
| 1041 | 0   | Extremo 1A | -137.025 | -6.65  | 4.905 | 0.0275  | 2.4014  | -11.8861 |
| 1041 | 0.5 | Extremo 1A | -137.025 | 0.713  | 4.905 | 0.0275  | -0.051  | -10.402  |
| 1041 | 1   | Extremo 2A | -137.025 | 8.077  | 4.905 | 0.0275  | -2.5035 | -12.5994 |
| 1042 | 0   | Extremo 2A | -126.723 | -6.792 | 4.318 | -0.1665 | 2.1715  | -13.6277 |
| 1042 | 0.5 | Extremo 2A | -126.723 | 0.571  | 4.318 | -0.1665 | 0.0123  | -12.0726 |
| 1042 | 1   | Extremo 1A | -126.723 | 7.935  | 4.318 | -0.1665 | -2.1468 | -14.1992 |
| 1042 | 0   | Extremo 1A | -124.832 | -6.832 | 4.258 | -0.0978 | 2.1383  | -12.3667 |
| 1042 | 0.5 | Extremo 1A | -124.832 | 0.531  | 4.258 | -0.0978 | 0.0093  | -10.7915 |
| 1042 | 1   | Extremo 2A | -124.832 | 7.894  | 4.258 | -0.0978 | -2.1197 | -12.8979 |
| 1043 | 0   | Extremo 2A | -114.562 | -7.171 | 4.837 | -0.2553 | 2.4941  | -13.3379 |
| 1043 | 0.5 | Extremo 2A | -114.562 | 0.192  | 4.837 | -0.2553 | 0.0758  | -11.5933 |
| 1043 | 1   | Extremo 1A | -114.562 | 7.556  | 4.837 | -0.2553 | -2.3426 | -13.5303 |
| 1043 | 0   | Extremo 1A | -112.903 | -7.04  | 4.775 | -0.2311 | 2.4598  | -12.1919 |
| 1043 | 0.5 | Extremo 1A | -112.903 | 0.323  | 4.775 | -0.2311 | 0.0725  | -10.5129 |
| 1043 | 1   | Extremo 2A | -112.903 | 7.687  | 4.775 | -0.2311 | -2.3149 | -12.5154 |
| 1044 | 0   | Extremo 2A | -99.3    | -7.625 | 5.043 | -0.2908 | 2.6062  | -12.4109 |
| 1044 | 0.5 | Extremo 2A | -99.3    | -0.262 | 5.043 | -0.2908 | 0.0846  | -10.4391 |
| 1044 | 1   | Extremo 1A | -99.3    | 7.101  | 5.043 | -0.2908 | -2.4369 | -12.149  |
| 1044 | 0   | Extremo 1A | -97.89   | -7.426 | 4.993 | -0.3067 | 2.5789  | -11.3554 |
| 1044 | 0.5 | Extremo 1A | -97.89   | -0.063 | 4.993 | -0.3067 | 0.0822  | -9.483   |
| 1044 | 1   | Extremo 2A | -97.89   | 7.3    | 4.993 | -0.3067 | -2.4145 | -11.2923 |
| 1045 | 0   | Extremo 2A | -82.932  | -8.001 | 4.556 | -0.2265 | 2.3522  | -11.1834 |
| 1045 | 0.5 | Extremo 2A | -82.932  | -0.638 | 4.556 | -0.2265 | 0.0742  | -9.0238  |
| 1045 | 1   | Extremo 1A | -82.932  | 6.726  | 4.556 | -0.2265 | -2.2039 | -10.5459 |
| 1045 | 0   | Extremo 1A | -81.723  | -7.783 | 4.52  | -0.2622 | 2.3325  | -10.1865 |
| 1045 | 0.5 | Extremo 1A | -81.723  | -0.42  | 4.52  | -0.2622 | 0.0724  | -8.1359  |
| 1045 | 1   | Extremo 2A | -81.723  | 6.944  | 4.52  | -0.2622 | -2.1876 | -9.767   |
| 1046 | 0   | Extremo 2A | -67.81   | -8.208 | 3.852 | -0.1169 | 1.9932  | -9.9921  |
| 1046 | 0.5 | Extremo 2A | -67.81   | -0.845 | 3.852 | -0.1169 | 0.0672  | -7.7288  |
| 1046 | 1   | Extremo 1A | -67.81   | 6.518  | 3.852 | -0.1169 | -1.8589 | -9.1471  |
| 1046 | 0   | Extremo 1A | -66.747  | -7.984 | 3.826 | -0.1635 | 1.9788  | -9.0287  |
| 1046 | 0.5 | Extremo 1A | -66.747  | -0.62  | 3.826 | -0.1635 | 0.0658  | -6.8778  |
| 1046 | 1   | Extremo 2A | -66.747  | 6.743  | 3.826 | -0.1635 | -1.8472 | -8.4084  |
| 1047 | 0   | Extremo 2A | -54.722  | -8.293 | 3.166 | -0.0224 | 1.6442  | -9.0392  |
| 1047 | 0.5 | Extremo 2A | -54.722  | -0.93  | 3.166 | -0.0224 | 0.0615  | -6.7334  |
| 1047 | 1   | Extremo 1A | -54.722  | 6.433  | 3.166 | -0.0224 | -1.5213 | -8.1092  |
| 1047 | 0   | Extremo 1A | -53.765  | -8.061 | 3.146 | -0.077  | 1.6331  | -8.0795  |
| 1047 | 0.5 | Extremo 1A | -53.765  | -0.698 | 3.146 | -0.077  | 0.0603  | -5.8897  |
| 1047 | 1   | Extremo 2A | -53.765  | 6.665  | 3.146 | -0.077  | -1.5124 | -7.3815  |
| 1048 | 0   | Extremo 2A | -43.679  | -8.298 | 2.581 | 0.0028  | 1.3445  | -8.2952  |
| 1048 | 0.5 | Extremo 2A | -43.679  | -0.935 | 2.581 | 0.0028  | 0.0539  | -5.9868  |
| 1048 | 1   | Extremo 1A | -43.679  | 6.428  | 2.581 | 0.0028  | -1.2367 | -7.3601  |
| 1048 | 0   | Extremo 1A | -42.802  | -8.058 | 2.565 | -0.0525 | 1.3353  | -7.3206  |
| 1048 | 0.5 | Extremo 1A | -42.802  | -0.695 | 2.565 | -0.0525 | 0.0529  | -5.1322  |
| 1048 | 1   | Extremo 2A | -42.802  | 6.668  | 2.565 | -0.0525 | -1.2294 | -6.6254  |
| 1049 | 0   | Extremo 2A | -34.536  | -8.271 | 2.067 | -0.0296 | 1.0784  | -7.4066  |
| 1049 | 0.5 | Extremo 2A | -34.536  | -0.908 | 2.067 | -0.0296 | 0.0449  | -5.1117  |
| 1049 | 1   | Extremo 1A | -34.536  | 6.455  | 2.067 | -0.0296 | -0.9887 | -6.4984  |
| 1049 | 0   | Extremo 1A | -33.724  | -8.022 | 2.053 | -0.0804 | 1.0705  | -6.444   |
| 1049 | 0.5 | Extremo 1A | -33.724  | -0.659 | 2.053 | -0.0804 | 0.044   | -4.2737  |
| 1049 | 1   | Extremo 2A | -33.724  | 6.704  | 2.053 | -0.0804 | -0.9825 | -5.7849  |
| 1050 | 0   | Extremo 2A | -27.129  | -8.25  | 1.639 | -0.0491 | 0.8559  | -6.3984  |
| 1050 | 0.5 | Extremo 2A | -27.129  | -0.887 | 1.639 | -0.0491 | 0.0366  | -4.1142  |
| 1050 | 1   | Extremo 1A | -27.129  | 6.476  | 1.639 | -0.0491 | -0.7827 | -5.5115  |
| 1050 | 0   | Extremo 1A | -26.372  | -7.991 | 1.626 | -0.098  | 0.8489  | -5.473   |
| 1050 | 0.5 | Extremo 1A | -26.372  | -0.628 | 1.626 | -0.098  | 0.0359  | -3.3184  |
| 1050 | 1   | Extremo 2A | -26.372  | 6.736  | 1.626 | -0.098  | -0.7772 | -4.8454  |
| 1051 | 0   | Extremo 2A | -21.21   | -8.217 | 1.291 | -0.0434 | 0.6749  | -5.3931  |
| 1051 | 0.5 | Extremo 2A | -21.21   | -0.854 | 1.291 | -0.0434 | 0.0294  | -3.1255  |
| 1051 | 1   | Extremo 1A | -21.21   | 6.51   | 1.291 | -0.0434 | -0.616  | -4.5395  |
| 1051 | 0   | Extremo 1A | -20.501  | -7.949 | 1.279 | -0.0949 | 0.6685  | -4.5129  |
| 1051 | 0.5 | Extremo 1A | -20.501  | -0.586 | 1.279 | -0.0949 | 0.0288  | -2.3793  |
| 1051 | 1   | Extremo 2A | -20.501  | 6.778  | 1.279 | -0.0949 | -0.6109 | -3.9273  |

|      |     |            |         |        |       |         |         |         |
|------|-----|------------|---------|--------|-------|---------|---------|---------|
| 1052 | 0   | Extremo 2A | -16.524 | -8.164 | 1.011 | -0.0287 | 0.5292  | -4.4741 |
| 1052 | 0.5 | Extremo 2A | -16.524 | -0.801 | 1.011 | -0.0287 | 0.0234  | -2.233  |
| 1052 | 1   | Extremo 1A | -16.524 | 6.563  | 1.011 | -0.0287 | -0.4823 | -3.6735 |
| 1052 | 0   | Extremo 1A | -15.859 | -7.887 | 1     | -0.0868 | 0.523   | -3.6289 |
| 1052 | 0.5 | Extremo 1A | -15.859 | -0.524 | 1     | -0.0868 | 0.0228  | -1.5262 |
| 1052 | 1   | Extremo 2A | -15.859 | 6.839  | 1     | -0.0868 | -0.4774 | -3.1051 |
| 1053 | 0   | Extremo 2A | -12.84  | -8.079 | 0.79  | -0.0206 | 0.4137  | -3.6649 |
| 1053 | 0.5 | Extremo 2A | -12.84  | -0.715 | 0.79  | -0.0206 | 0.0187  | -1.4664 |
| 1053 | 1   | Extremo 1A | -12.84  | 6.648  | 0.79  | -0.0206 | -0.3764 | -2.9495 |
| 1053 | 0   | Extremo 1A | -12.218 | -7.789 | 0.779 | -0.0857 | 0.4077  | -2.8309 |
| 1053 | 0.5 | Extremo 1A | -12.218 | -0.426 | 0.779 | -0.0857 | 0.0181  | -0.7769 |
| 1053 | 1   | Extremo 2A | -12.218 | 6.937  | 0.779 | -0.0857 | -0.3714 | -2.4046 |
| 1054 | 0   | Extremo 2A | -9.937  | -7.958 | 0.622 | -0.0256 | 0.3258  | -2.9551 |
| 1054 | 0.5 | Extremo 2A | -9.937  | -0.595 | 0.622 | -0.0256 | 0.0147  | -0.8167 |
| 1054 | 1   | Extremo 1A | -9.937  | 6.768  | 0.622 | -0.0256 | -0.2964 | -2.36   |
| 1054 | 0   | Extremo 1A | -9.359  | -7.657 | 0.611 | -0.0916 | 0.3196  | -2.12   |
| 1054 | 0.5 | Extremo 1A | -9.359  | -0.293 | 0.611 | -0.0916 | 0.0142  | -0.1324 |
| 1054 | 1   | Extremo 2A | -9.359  | 7.07   | 0.611 | -0.0916 | -0.2912 | -1.8265 |
| 1055 | 0   | Extremo 2A | -7.652  | -7.814 | 0.486 | -0.0468 | 0.2542  | -2.658  |
| 1055 | 0.5 | Extremo 2A | -7.652  | -0.451 | 0.486 | -0.0468 | 0.0113  | -0.1997 |
| 1055 | 1   | Extremo 1A | -7.652  | 6.913  | 0.486 | -0.0468 | -0.2317 | -1.8153 |
| 1055 | 0   | Extremo 1A | -7.119  | -7.499 | 0.474 | -0.1096 | 0.248   | -1.457  |
| 1055 | 0.5 | Extremo 1A | -7.119  | -0.135 | 0.474 | -0.1096 | 0.0109  | 0.4515  |
| 1055 | 1   | Extremo 2A | -7.119  | 7.228  | 0.474 | -0.1096 | -0.2263 | -1.3216 |
| 1056 | 0   | Extremo 2A | -5.866  | -7.669 | 0.378 | -0.0673 | 0.1979  | -1.6183 |
| 1056 | 0.5 | Extremo 2A | -5.866  | -0.306 | 0.378 | -0.0673 | 0.0086  | 0.3754  |
| 1056 | 1   | Extremo 1A | -5.866  | 7.057  | 0.378 | -0.0673 | -0.1806 | -1.3125 |
| 1056 | 0   | Extremo 1A | -5.38   | -7.339 | 0.366 | -0.1299 | 0.1915  | -0.8588 |
| 1056 | 0.5 | Extremo 1A | -5.38   | 0.025  | 0.366 | -0.1299 | 0.0083  | 0.9697  |
| 1056 | 1   | Extremo 2A | -5.38   | 7.388  | 0.366 | -0.1299 | -0.1749 | -0.8834 |
| 1057 | 0   | Extremo 2A | -4.475  | -7.512 | 0.295 | -0.0875 | 0.154   | -1.0354 |
| 1057 | 0.5 | Extremo 2A | -4.475  | -0.149 | 0.295 | -0.0875 | 0.0066  | 0.8797  |
| 1057 | 1   | Extremo 1A | -4.475  | 7.215  | 0.295 | -0.0875 | -0.1407 | -0.8868 |
| 1057 | 0   | Extremo 1A | -4.038  | -7.166 | 0.282 | -0.1533 | 0.1473  | -0.3314 |
| 1057 | 0.5 | Extremo 1A | -4.038  | 0.197  | 0.282 | -0.1533 | 0.0064  | 1.4107  |
| 1057 | 1   | Extremo 2A | -4.038  | 7.561  | 0.282 | -0.1533 | -0.1346 | -0.5288 |
| 1058 | 0   | Extremo 2A | -3.39   | -7.316 | 0.23  | -0.1079 | 0.1202  | -0.5164 |
| 1058 | 0.5 | Extremo 2A | -3.39   | 0.047  | 0.23  | -0.1079 | 0.0051  | 1.3009  |
| 1058 | 1   | Extremo 1A | -3.39   | 7.41   | 0.23  | -0.1079 | -0.11   | -0.5635 |
| 1058 | 0   | Extremo 1A | -3.006  | -6.956 | 0.216 | -0.1765 | 0.113   | -0.1353 |
| 1058 | 0.5 | Extremo 1A | -3.006  | 0.408  | 0.216 | -0.1765 | 0.0049  | 1.7723  |
| 1058 | 1   | Extremo 2A | -3.006  | 7.771  | 0.216 | -0.1765 | -0.1032 | -0.2723 |
| 1059 | 0   | Extremo 2A | -2.535  | -7.091 | 0.182 | -0.114  | 0.0951  | -0.1114 |
| 1059 | 0.5 | Extremo 2A | -2.535  | 0.273  | 0.182 | -0.114  | 0.0039  | 1.5932  |
| 1059 | 1   | Extremo 1A | -2.535  | 7.636  | 0.182 | -0.114  | -0.0873 | -0.3839 |
| 1059 | 0   | Extremo 1A | -2.21   | -6.723 | 0.167 | -0.1799 | 0.0871  | 0.4809  |
| 1059 | 0.5 | Extremo 1A | -2.21   | 0.64   | 0.167 | -0.1799 | 0.0038  | 2.0017  |
| 1059 | 1   | Extremo 2A | -2.21   | 8.003  | 0.167 | -0.1799 | -0.0796 | -0.1592 |
| 1060 | 0   | Extremo 2A | -1.854  | -6.851 | 0.145 | -0.1123 | 0.0754  | 0.0934  |
| 1060 | 0.5 | Extremo 2A | -1.854  | 0.512  | 0.145 | -0.1123 | 0.0028  | 1.678   |
| 1060 | 1   | Extremo 1A | -1.854  | 7.876  | 0.145 | -0.1123 | -0.0698 | -0.419  |
| 1060 | 0   | Extremo 1A | -1.594  | -6.488 | 0.128 | -0.1698 | 0.0667  | 0.5955  |
| 1060 | 0.5 | Extremo 1A | -1.594  | 0.875  | 0.128 | -0.1698 | 0.0028  | 1.9989  |
| 1060 | 1   | Extremo 2A | -1.594  | 8.238  | 0.128 | -0.1698 | -0.0611 | -0.2794 |
| 1061 | 0   | Extremo 2A | -1.304  | -6.632 | 0.118 | -0.1161 | 0.0607  | 0.0694  |
| 1061 | 0.5 | Extremo 2A | -1.304  | 0.732  | 0.118 | -0.1161 | 0.0019  | 1.5444  |
| 1061 | 1   | Extremo 1A | -1.304  | 8.095  | 0.118 | -0.1161 | -0.0569 | -0.6622 |
|      |     |            |         |        |       |         |         |         |



|      |     |            |           |        |           |         |           |         |
|------|-----|------------|-----------|--------|-----------|---------|-----------|---------|
| 1064 | 0   | Extremo 2A | -0.137    | -5.152 | 0.064     | -0.4992 | 0.0301    | -0.0079 |
| 1064 | 0.5 | Extremo 2A | -0.137    | 2.212  | 0.064     | -0.4992 | -0.0018   | 0.7272  |
| 1064 | 1   | Extremo 1A | -0.137    | 9.575  | 0.064     | -0.4992 | -0.0337   | -2.2194 |
| 1064 | 0   | Extremo 1A | -0.142    | -5.048 | 0.055     | -0.5225 | 0.0266    | -0.0061 |
| 1064 | 0.5 | Extremo 1A | -0.142    | 2.315  | 0.055     | -0.5225 | -0.0011   | 0.6769  |
| 1064 | 1   | Extremo 2A | -0.142    | 9.679  | 0.055     | -0.5225 | -0.0288   | -2.3216 |
| 1065 | 0   | Extremo 2A | 0.001941  | -9.388 | -0.002224 | -0.4373 | -0.0012   | -1.9812 |
| 1065 | 0.5 | Extremo 2A | 0.001941  | -2.025 | -0.002224 | -0.4373 | -6.41E-05 | 0.8719  |
| 1065 | 1   | Extremo 1A | 0.001941  | 5.339  | -0.002224 | -0.4373 | 0.001     | 0.0434  |
| 1065 | 0   | Extremo 1A | -0.000998 | -9.388 | 0.005971  | -0.4373 | 0.0033    | -1.9812 |
| 1065 | 0.5 | Extremo 1A | -0.000998 | -2.025 | 0.005971  | -0.4373 | 0.0003287 | 0.8719  |
| 1065 | 1   | Extremo 2A | -0.000998 | 5.339  | 0.005971  | -0.4373 | -0.0027   | 0.0434  |
| 1066 | 0   | Extremo 2A | 0.007277  | -8.266 | -0.001219 | -0.2356 | -0.000632 | -1.1915 |
| 1066 | 0.5 | Extremo 2A | 0.007277  | -0.903 | -0.001219 | -0.2356 | -2.22E-05 | 1.1009  |
| 1066 | 1   | Extremo 1A | 0.007277  | 6.46   | -0.001219 | -0.2356 | 0.0005871 | -0.2883 |
| 1066 | 0   | Extremo 1A | -0.022    | -8.266 | 0.002533  | -0.2356 | 0.004     | -1.1915 |
| 1066 | 0.5 | Extremo 1A | -0.022    | -0.903 | 0.002533  | -0.2356 | 0.0002594 | 1.1009  |
| 1066 | 1   | Extremo 2A | -0.022    | 6.46   | 0.002533  | -0.2356 | -0.0035   | -0.2883 |
| 1067 | 0   | Extremo 2A | 0.009995  | -7.762 | -0.000724 | -0.0897 | -0.000411 | -0.7901 |
| 1067 | 0.5 | Extremo 2A | 0.009995  | -0.399 | -0.000724 | -0.0897 | -4.88E-05 | 1.25    |
| 1067 | 1   | Extremo 1A | 0.009995  | 6.965  | -0.000724 | -0.0897 | 0.000313  | -0.3916 |
| 1067 | 0   | Extremo 1A | -0.049    | -7.762 | 0.00765   | -0.0897 | 0.004     | -0.7902 |
| 1067 | 0.5 | Extremo 1A | -0.049    | -0.399 | 0.00765   | -0.0897 | 0.0002046 | 1.2499  |
| 1067 | 1   | Extremo 2A | -0.049    | 6.965  | 0.00765   | -0.0897 | -0.0036   | -0.3917 |
| 1068 | 0   | Extremo 2A | 0.012     | -7.485 | -0.000459 | -0.0315 | -0.000294 | -0.5462 |
| 1068 | 0.5 | Extremo 2A | 0.012     | -0.122 | -0.000459 | -0.0315 | -6.43E-05 | 1.3557  |
| 1068 | 1   | Extremo 1A | 0.012     | 7.241  | -0.000459 | -0.0315 | 0.000165  | -0.4241 |
| 1068 | 0   | Extremo 1A | -0.077    | -7.485 | 0.007015  | -0.0315 | 0.0037    | -0.5463 |
| 1068 | 0.5 | Extremo 1A | -0.077    | -0.122 | 0.007015  | -0.0315 | 0.0001576 | 1.3555  |
| 1068 | 1   | Extremo 2A | -0.077    | 7.241  | 0.007015  | -0.0315 | -0.0033   | -0.4243 |
| 1069 | 0   | Extremo 2A | 0.013     | -7.289 | -0.000233 | -0.0275 | -0.000185 | -0.4929 |
| 1069 | 0.5 | Extremo 2A | 0.013     | 0.075  | -0.000233 | -0.0275 | -6.84E-05 | 1.3106  |
| 1069 | 1   | Extremo 1A | 0.013     | 7.438  | -0.000233 | -0.0275 | 4.816E-05 | -0.5674 |
| 1069 | 0   | Extremo 1A | -0.103    | -7.289 | 0.006214  | -0.0275 | 0.0032    | -0.4931 |
| 1069 | 0.5 | Extremo 1A | -0.103    | 0.075  | 0.006214  | -0.0275 | 0.0001208 | 1.3104  |
| 1069 | 1   | Extremo 2A | -0.103    | 7.438  | 0.006214  | -0.0275 | -0.003    | -0.5677 |
| 1070 | 0   | Extremo 2A | 0.015     | -7.138 | -7.87E-05 | -0.0528 | -0.000108 | -0.6738 |
| 1070 | 0.5 | Extremo 2A | 0.015     | 0.225  | -7.87E-05 | -0.0528 | -6.85E-05 | 1.0545  |
| 1070 | 1   | Extremo 1A | 0.015     | 7.588  | -7.87E-05 | -0.0528 | -2.91E-05 | -0.8988 |
| 1070 | 0   | Extremo 1A | -0.127    | -7.138 | 0.005571  | -0.0528 | 0.0029    | -0.6741 |
| 1070 | 0.5 | Extremo 1A | -0.127    | 0.225  | 0.005571  | -0.0528 | 9.125E-05 | 1.0542  |
| 1070 | 1   | Extremo 2A | -0.127    | 7.588  | 0.005571  | -0.0528 | -0.0027   | -0.8991 |
| 1071 | 0   | Extremo 2A | 0.016     | -7.06  | -2.52E-05 | -0.1001 | -7.84E-05 | -1.1273 |
| 1071 | 0.5 | Extremo 2A | 0.016     | 0.304  | -2.52E-05 | -0.1001 | -6.58E-05 | 0.5617  |
| 1071 | 1   | Extremo 1A | 0.016     | 7.667  | -2.52E-05 | -0.1001 | -5.32E-05 | -1.4309 |
| 1071 | 0   | Extremo 1A | -0.149    | -7.06  | 0.005172  | -0.1001 | 0.0027    | -1.1276 |
| 1071 | 0.5 | Extremo 1A | -0.149    | 0.304  | 0.005172  | -0.1001 | 6.582E-05 | 0.5614  |
| 1071 | 1   | Extremo 2A | -0.149    | 7.667  | 0.005172  | -0.1001 | -0.0025   | -1.4313 |
| 1072 | 0   | Extremo 2A | 0.016     | -7.1   | -3.91E-05 | -0.1543 | -7.45E-05 | -1.8665 |
| 1072 | 0.5 | Extremo 2A | 0.016     | 0.263  | -3.91E-05 | -0.1543 | -5.5E-05  | -0.1573 |
| 1072 | 1   | Extremo 1A | 0.016     | 7.626  | -3.91E-05 | -0.1543 | -3.54E-05 | -2.1297 |
| 1072 | 0   | Extremo 1A | -0.169    | -7.1   | 0.004924  | -0.1543 | 0.0025    | -1.8669 |
| 1072 | 0.5 | Extremo 1A | -0.169    | 0.263  | 0.004924  | -0.1543 | 4.239E-05 | -0.1577 |
| 1072 | 1   | Extremo 2A | -0.169    | 7.626  | 0.004924  | -0.1543 | -0.0024   | -2.1301 |
| 1073 | 0   | Extremo 2A | 0.017     | -7.264 | 9.755E-05 | -0.1598 | 2.571E-05 | -2.7666 |
| 1073 | 0.5 | Extremo 2A | 0.017     | 0.099  | 9.755E-05 | -0.1598 | -2.31E-05 | -0.9754 |
| 1073 | 1   | Extremo 1A | 0.017     | 7.462  | 9.755E-05 | -0.1598 | -7.18E-05 | -2.8658 |
| 1073 | 0   | Extremo 1A | -0.186    | -7.264 | 0.004531  | -0.1598 | 0.0023    | -2.7671 |
| 1073 | 0.5 | Extremo 1A | -0.186    | 0.099  | 0.004531  | -0.1598 | 2.308E-05 | -0.9759 |
| 1073 | 1   | Extremo 2A | -0.186    | 7.462  | 0.004531  | -0.1598 | -0.0022   | -2.8663 |
| 1074 | 0   | Extremo 2A | 0.015     | -7.401 | 0.001092  | -0.0518 | 0.0005701 | -3.3992 |
| 1074 | 0.5 | Extremo 2A | 0.015     | -0.038 | 0.001092  | -0.0518 | 2.415E-05 | -1.5394 |
| 1074 | 1   | Extremo 1A | 0.015     | 7.325  | 0.001092  | -0.0518 | -0.000522 | -3.3611 |
| 1074 | 0   | Extremo 1A | -0.199    | -7.401 | 0.003562  | -0.0518 | 0.0018    | -3.3997 |
| 1074 | 0.5 | Extremo 1A | -0.199    | -0.038 | 0.003562  | -0.0518 | 3.418E-05 | -1.5399 |
| 1074 | 1   | Extremo 2A | -0.199    | 7.325  | 0.003562  | -0.0518 | -0.0017   | -3.3616 |
| 1075 | 0   | Extremo 2A | 0.004248  | -7.384 | 0.003603  | 0.0964  | 0.0018    | -3.2756 |
| 1075 | 0.5 | Extremo 2A | 0.004248  | -0.021 | 0.003603  | 0.0964  | -1.51E-05 | -1.4243 |
| 1075 | 1   | Extremo 1A | 0.004248  | 7.342  | 0.003603  | 0.0964  | -0.0018   | -3.2546 |
| 1075 | 0   | Extremo 1A | -0.206    | -7.384 | 0.002541  | 0.0964  | 0.0014    | -3.2761 |
| 1075 | 0.5 | Extremo 1A | -0.206    | -0.021 | 0.002541  | 0.0964  | 9.479E-05 | -1.4247 |
| 1075 | 1   | Extremo 2A | -0.206    | 7.342  | 0.002541  | 0.0964  | -0.0012   | -3.2551 |

|      |     |            |        |        |           |         |           |         |
|------|-----|------------|--------|--------|-----------|---------|-----------|---------|
| 1076 | 0   | Extremo 2A | -0.013 | -7.527 | 0.004297  | 0.2027  | 0.002     | -2.5535 |
| 1076 | 0.5 | Extremo 2A | -0.013 | -0.164 | 0.004297  | 0.2027  | -0.000123 | -0.6307 |
| 1076 | 1   | Extremo 1A | -0.013 | 7.199  | 0.004297  | 0.2027  | -0.0023   | -2.3895 |
| 1076 | 0   | Extremo 1A | -0.212 | -7.527 | 0.002416  | 0.2027  | 0.0014    | -2.5539 |
| 1076 | 0.5 | Extremo 1A | -0.212 | -0.164 | 0.002416  | 0.2027  | 0.0001547 | -0.631  |
| 1076 | 1   | Extremo 2A | -0.212 | 7.199  | 0.002416  | 0.2027  | -0.0011   | -2.3898 |
| 1077 | 0   | Extremo 2A | -0.031 | -7.703 | 0.004419  | 0.1939  | 0.002     | -1.5949 |
| 1077 | 0.5 | Extremo 2A | -0.031 | -0.34  | 0.004419  | 0.1939  | -0.000189 | 0.4158  |
| 1077 | 1   | Extremo 1A | -0.031 | 7.024  | 0.004419  | 0.1939  | -0.0024   | -1.2551 |
| 1077 | 0   | Extremo 1A | -0.219 | -7.703 | 0.002072  | 0.1939  | 0.0012    | -1.5951 |
| 1077 | 0.5 | Extremo 1A | -0.219 | -0.34  | 0.002072  | 0.1939  | 0.0001714 | 0.4156  |
| 1077 | 1   | Extremo 2A | -0.219 | 7.023  | 0.002072  | 0.1939  | -0.000865 | -1.2552 |
| 1078 | 0   | Extremo 2A | -0.049 | -7.762 | 0.00451   | 0.1348  | 0.002     | -0.6787 |
| 1078 | 0.5 | Extremo 2A | -0.049 | -0.399 | 0.00451   | 0.1348  | -0.000228 | 1.3616  |
| 1078 | 1   | Extremo 1A | -0.049 | 6.964  | 0.00451   | 0.1348  | -0.0025   | -0.2797 |
| 1078 | 0   | Extremo 1A | -0.226 | -7.762 | 0.00154   | 0.1348  | 0.0009432 | -0.6788 |
| 1078 | 0.5 | Extremo 1A | -0.226 | -0.399 | 0.00154   | 0.1348  | 0.0001732 | 1.3616  |
| 1078 | 1   | Extremo 2A | -0.226 | 6.964  | 0.00154   | 0.1348  | -0.000597 | -0.2797 |
| 1079 | 0   | Extremo 2A | -0.066 | -7.71  | 0.004612  | 0.0806  | 0.002     | 0.0658  |
| 1079 | 0.5 | Extremo 2A | -0.066 | -0.346 | 0.004612  | 0.0806  | -0.000257 | 2.0798  |
| 1079 | 1   | Extremo 1A | -0.066 | 7.017  | 0.004612  | 0.0806  | -0.0026   | 0.4122  |
| 1079 | 0   | Extremo 1A | -0.231 | -7.71  | 0.00102   | 0.0806  | 0.000681  | 0.0659  |
| 1079 | 0.5 | Extremo 1A | -0.231 | -0.347 | 0.00102   | 0.0806  | 0.0001712 | 2.08    |
| 1079 | 1   | Extremo 2A | -0.231 | 7.017  | 0.00102   | 0.0806  | -0.000339 | 0.4125  |
| 1080 | 0   | Extremo 2A | -0.084 | -7.594 | 0.00469   | 0.0437  | 0.0021    | 0.6036  |
| 1080 | 0.5 | Extremo 2A | -0.084 | -0.231 | 0.00469   | 0.0437  | -0.000282 | 2.5597  |
| 1080 | 1   | Extremo 1A | -0.084 | 7.133  | 0.00469   | 0.0437  | -0.0026   | 0.8342  |
| 1080 | 0   | Extremo 1A | -0.235 | -7.594 | 0.0006111 | 0.0437  | 0.0004731 | 0.6038  |
| 1080 | 0.5 | Extremo 1A | -0.235 | -0.231 | 0.0006111 | 0.0437  | 0.0001676 | 2.56    |
| 1080 | 1   | Extremo 2A | -0.235 | 7.132  | 0.0006111 | 0.0437  | -0.000138 | 0.8346  |
| 1081 | 0   | Extremo 2A | -0.101 | -7.451 | 0.004724  | 0.0186  | 0.0021    | 0.9304  |
| 1081 | 0.5 | Extremo 2A | -0.101 | -0.087 | 0.004724  | 0.0186  | -0.000306 | 2.8149  |
| 1081 | 1   | Extremo 1A | -0.101 | 7.276  | 0.004724  | 0.0186  | -0.0027   | 1.0178  |
| 1081 | 0   | Extremo 1A | -0.238 | -7.451 | 0.0003491 | 0.0186  | 0.0003378 | 0.9308  |
| 1081 | 0.5 | Extremo 1A | -0.238 | -0.088 | 0.0003491 | 0.0186  | 0.0001632 | 2.8154  |
| 1081 | 1   | Extremo 2A | -0.238 | 7.276  | 0.0003491 | 0.0186  | -1.13E-05 | 1.0184  |
| 1082 | 0   | Extremo 2A | -0.119 | -7.298 | 0.004705  | -0.0015 | 0.002     | 1.0469  |
| 1082 | 0.5 | Extremo 2A | -0.119 | 0.065  | 0.004705  | -0.0015 | -0.000329 | 2.8552  |
| 1082 | 1   | Extremo 1A | -0.119 | 7.428  | 0.004705  | -0.0015 | -0.0027   | 0.9818  |
| 1082 | 0   | Extremo 1A | -0.24  | -7.298 | 0.0002428 | -0.0015 | 0.0002801 | 1.0474  |
| 1082 | 0.5 | Extremo 1A | -0.24  | 0.065  | 0.0002428 | -0.0015 | 0.0001587 | 2.8558  |
| 1082 | 1   | Extremo 2A | -0.24  | 7.428  | 0.0002428 | -0.0015 | 3.728E-05 | 0.9826  |
| 1083 | 0   | Extremo 2A | -0.137 | -7.145 | 0.004627  | -0.0217 | 0.002     | 0.9514  |
| 1083 | 0.5 | Extremo 2A | -0.137 | 0.218  | 0.004627  | -0.0217 | -0.000352 | 2.6833  |
| 1083 | 1   | Extremo 1A | -0.137 | 7.581  | 0.004627  | -0.0217 | -0.0027   | 0.7336  |
| 1083 | 0   | Extremo 1A | -0.242 | -7.146 | 0.0002923 | -0.0217 | 0.0003005 | 0.9521  |
| 1083 | 0.5 | Extremo 1A | -0.242 | 0.218  | 0.0002923 | -0.0217 | 0.0001543 | 2.6841  |
| 1083 | 1   | Extremo 2A | -0.242 | 7.581  | 0.0002923 | -0.0217 | 8.155E-06 | 0.7344  |
| 1084 | 0   | Extremo 2A | -0.153 | -7.002 | 0.004486  | -0.0474 | 0.0019    | 0.6358  |
| 1084 | 0.5 | Extremo 2A | -0.153 | 0.361  | 0.004486  | -0.0474 | -0.000374 | 2.296   |
| 1084 | 1   | Extremo 1A | -0.153 | 7.724  | 0.004486  | -0.0474 | -0.0026   | 0.2745  |
| 1084 | 0   | Extremo 1A | -0.244 | -7.002 | 0.0004935 | -0.0474 |           |         |



|      |     |            |        |        |           |           |           |         |
|------|-----|------------|--------|--------|-----------|-----------|-----------|---------|
| 1088 | 0   | Extremo 2A | -0.212 | -7.156 | 0.003662  | -0.2152   | 0.0014    | -3.1639 |
| 1088 | 0.5 | Extremo 2A | -0.212 | 0.207  | 0.003662  | -0.2152   | -0.000392 | -1.4266 |
| 1088 | 1   | Extremo 1A | -0.212 | 7.57   | 0.003662  | -0.2152   | -0.00022  | -3.371  |
| 1088 | 0   | Extremo 1A | -0.262 | -7.156 | 0.00185   | -0.2151   | 0.0011    | -3.1622 |
| 1088 | 0.5 | Extremo 1A | -0.262 | 0.207  | 0.00185   | -0.2151   | 0.0001477 | -1.425  |
| 1088 | 1   | Extremo 2A | -0.262 | 7.57   | 0.00185   | -0.2151   | -0.000778 | -3.3694 |
| 1089 | 0   | Extremo 2A | -0.228 | -7.341 | 0.00476   | -0.0886   | 0.002     | -4.0986 |
| 1089 | 0.5 | Extremo 2A | -0.228 | 0.023  | 0.00476   | -0.0886   | -0.000341 | -2.2691 |
| 1089 | 1   | Extremo 1A | -0.228 | 7.386  | 0.00476   | -0.0886   | -0.0027   | -4.1213 |
| 1089 | 0   | Extremo 1A | -0.265 | -7.34  | 0.00139   | -0.0886   | 0.000878  | -4.0968 |
| 1089 | 0.5 | Extremo 1A | -0.265 | 0.023  | 0.00139   | -0.0886   | 0.0001828 | -2.2675 |
| 1089 | 1   | Extremo 2A | -0.265 | 7.386  | 0.00139   | -0.0886   | -0.000512 | -4.1198 |
| 1090 | 0   | Extremo 2A | -0.254 | -7.342 | 0.007985  | 0.0857    | 0.0036    | -4.1251 |
| 1090 | 0.5 | Extremo 2A | -0.254 | 0.021  | 0.007985  | 0.0857    | -0.000401 | -2.2949 |
| 1090 | 1   | Extremo 1A | -0.254 | 7.384  | 0.007985  | 0.0857    | -0.0044   | -4.1463 |
| 1090 | 0   | Extremo 1A | -0.265 | -7.342 | 0.0009204 | 0.0857    | 0.0007508 | -4.1236 |
| 1090 | 0.5 | Extremo 1A | -0.265 | 0.021  | 0.0009204 | 0.0857    | 0.0002556 | -2.2935 |
| 1090 | 1   | Extremo 2A | -0.265 | 7.385  | 0.0009204 | 0.0857    | -0.00024  | -4.145  |
| 1091 | 0   | Extremo 2A | -0.289 | -7.526 | 0.008844  | 0.2123    | 0.0039    | -3.4263 |
| 1091 | 0.5 | Extremo 2A | -0.289 | -0.163 | 0.008844  | 0.2123    | -0.000557 | -1.504  |
| 1091 | 1   | Extremo 1A | -0.289 | 7.2    | 0.008844  | 0.2123    | -0.005    | -3.2633 |
| 1091 | 0   | Extremo 1A | -0.265 | -7.526 | 0.0012    | 0.2123    | 0.000916  | -3.4252 |
| 1091 | 0.5 | Extremo 1A | -0.265 | -0.163 | 0.0012    | 0.2123    | 0.0003161 | -1.503  |
| 1091 | 1   | Extremo 2A | -0.265 | 7.201  | 0.0012    | 0.2123    | -0.000284 | -3.2625 |
| 1092 | 0   | Extremo 2A | -0.325 | -7.748 | 0.008902  | 0.2063    | 0.0038    | -2.4206 |
| 1092 | 0.5 | Extremo 2A | -0.325 | -0.384 | 0.008902  | 0.2063    | -0.00066  | -0.3876 |
| 1092 | 1   | Extremo 1A | -0.325 | 6.979  | 0.008902  | 0.2063    | -0.0051   | -2.0363 |
| 1092 | 0   | Extremo 1A | -0.267 | -7.747 | 0.001038  | 0.2063    | 0.0008546 | -2.4199 |
| 1092 | 0.5 | Extremo 1A | -0.267 | -0.384 | 0.001038  | 0.2063    | 0.0003354 | -0.3872 |
| 1092 | 1   | Extremo 2A | -0.267 | 6.979  | 0.001038  | 0.2063    | -0.000184 | -2.0361 |
| 1093 | 0   | Extremo 2A | -0.36  | -7.834 | 0.008908  | 0.1423    | 0.0037    | -1.4304 |
| 1093 | 0.5 | Extremo 2A | -0.36  | -0.471 | 0.008908  | 0.1423    | -0.000726 | 0.6459  |
| 1093 | 1   | Extremo 1A | -0.36  | 6.892  | 0.008908  | 0.1423    | -0.0052   | -0.9593 |
| 1093 | 0   | Extremo 1A | -0.27  | -7.834 | 0.0006308 | 0.1423    | 0.0006572 | -1.4303 |
| 1093 | 0.5 | Extremo 1A | -0.27  | -0.471 | 0.0006308 | 0.1423    | 0.0003418 | 0.6458  |
| 1093 | 1   | Extremo 2A | -0.27  | 6.893  | 0.0006308 | 0.1423    | 2.646E-05 | -0.9598 |
| 1094 | 0   | Extremo 2A | -0.394 | -7.793 | 0.008942  | 0.0839    | 0.0037    | -0.6051 |
| 1094 | 0.5 | Extremo 2A | -0.394 | -0.429 | 0.008942  | 0.0839    | -0.000779 | 1.4503  |
| 1094 | 1   | Extremo 1A | -0.394 | 6.934  | 0.008942  | 0.0839    | -0.0053   | -0.1758 |
| 1094 | 0   | Extremo 1A | -0.272 | -7.792 | 0.0002031 | 0.0839    | 0.0004462 | -0.6056 |
| 1094 | 0.5 | Extremo 1A | -0.272 | -0.429 | 0.0002031 | 0.0839    | 0.0003446 | 1.4496  |
| 1094 | 1   | Extremo 2A | -0.272 | 6.935  | 0.0002031 | 0.0839    | 0.0002431 | -0.1769 |
| 1095 | 0   | Extremo 2A | -0.428 | -7.679 | 0.008968  | 0.0452    | 0.0037    | 0.0144  |
| 1095 | 0.5 | Extremo 2A | -0.428 | -0.315 | 0.008968  | 0.0452    | -0.000828 | 2.0129  |
| 1095 | 1   | Extremo 1A | -0.428 | 7.048  | 0.008968  | 0.0452    | -0.0053   | 0.3297  |
| 1095 | 0   | Extremo 1A | -0.272 | -7.678 | -0.000136 | 0.0451    | 0.0002776 | 0.0134  |
| 1095 | 0.5 | Extremo 1A | -0.272 | -0.315 | -0.000136 | 0.0451    | 0.0003455 | 2.0115  |
| 1095 | 1   | Extremo 2A | -0.272 | 7.049  | -0.000136 | 0.0451    | 0.0004134 | 0.3281  |
| 1096 | 0   | Extremo 2A | -0.462 | -7.534 | 0.008962  | 0.0198    | 0.0036    | 0.4231  |
| 1096 | 0.5 | Extremo 2A | -0.462 | -0.171 | 0.008962  | 0.0198    | -0.000874 | 2.3492  |
| 1096 | 1   | Extremo 1A | -0.462 | 7.193  | 0.008962  | 0.0198    | -0.0054   | 0.5938  |
| 1096 | 0   | Extremo 1A | -0.272 | -7.533 | -0.000346 | 0.0198    | 0.0001723 | 0.4215  |
| 1096 | 0.5 | Extremo 1A | -0.272 | -0.17  | -0.000346 | 0.0198    | 0.0003452 | 2.3473  |
| 1096 | 1   | Extremo 2A | -0.272 | 7.193  | -0.000346 | 0.0198    | 0.0005181 | 0.5916  |
| 1097 | 0   | Extremo 2A | -0.496 | -7.379 | 0.00891   | 0.0001571 | 0.0035    | 0.6216  |
| 1097 | 0.5 | Extremo 2A | -0.496 | -0.016 | 0.00891   | 0.0001571 | -0.000919 | 2.4704  |
| 1097 | 1   | Extremo 1A | -0.496 | 7.347  | 0.00891   | 0.0001571 | -0.0054   | 0.6376  |
| 1097 | 0   | Extremo 1A | -0.272 | -7.379 | -0.000414 | 0.0001525 | 0.0001376 | 0.6194  |
| 1097 | 0.5 | Extremo 1A | -0.272 | -0.015 | -0.000414 | 0.0001525 | 0.0003445 | 2.468   |
| 1097 | 1   | Extremo 2A | -0.272 | 7.348  | -0.000414 | 0.0001525 | 0.0005514 | 0.6349  |
| 1098 | 0   | Extremo 2A | -0.529 | -7.225 | 0.008802  | -0.0194   | 0.0034    | 0.6084  |
| 1098 | 0.5 | Extremo 2A | -0.529 | 0.139  | 0.008802  | -0.0194   | -0.000963 | 2.3799  |
| 1098 | 1   | Extremo 1A | -0.529 | 7.502  | 0.008802  | -0.0194   | -0.0054   | 0.4697  |
| 1098 | 0   | Extremo 1A | -0.271 | -7.224 | -0.000337 | -0.0195   | 0.0001753 | 0.6057  |
| 1098 | 0.5 | Extremo 1A | -0.271 | 0.139  | -0.000337 | -0.0195   | 0.0003437 | 2.3768  |
| 1098 | 1   | Extremo 2A | -0.271 | 7.503  | -0.000337 | -0.0195   | 0.0005121 | 0.4663  |
| 1099 | 0   | Extremo 2A | -0.562 | -7.079 | 0.008632  | -0.0444   | 0.0033    | 0.3755  |
| 1099 | 0.5 | Extremo 2A | -0.562 | 0.284  | 0.008632  | -0.0444   | -0.001    | 2.0743  |
| 1099 | 1   | Extremo 1A | -0.562 | 7.647  | 0.008632  | -0.0444   | -0.0053   | 0.0916  |
| 1099 | 0   | Extremo 1A | -0.271 | -7.079 | -0.000117 | -0.0444   | 0.0002848 | 0.3722  |
| 1099 | 0.5 | Extremo 1A | -0.271 | 0.285  | -0.000117 | -0.0444   | 0.0003433 | 2.0707  |
| 1099 | 1   | Extremo 2A | -0.271 | 7.648  | -0.000117 | -0.0444   | 0.0004017 | 0.0877  |

|      |     |            |        |           |           |         |           |         |
|------|-----|------------|--------|-----------|-----------|---------|-----------|---------|
| 1100 | 0   | Extremo 2A | -0.594 | -6.964    | 0.008394  | -0.0823 | 0.0031    | -0.0977 |
| 1100 | 0.5 | Extremo 2A | -0.594 | 0.4       | 0.008394  | -0.0823 | -0.001    | 1.5433  |
| 1100 | 1   | Extremo 1A | -0.594 | 7.763     | 0.008394  | -0.0823 | -0.0052   | -0.4973 |
| 1100 | 0   | Extremo 1A | -0.272 | -6.963    | 0.0002341 | -0.0824 | 0.0004608 | -0.1017 |
| 1100 | 0.5 | Extremo 1A | -0.272 | 0.4       | 0.0002341 | -0.0824 | 0.0003437 | 1.5391  |
| 1100 | 1   | Extremo 2A | -0.272 | 7.763     | 0.0002341 | -0.0824 | 0.0002267 | -0.5018 |
| 1101 | 0   | Extremo 2A | -0.625 | -6.918    | 0.008087  | -0.1392 | 0.003     | -0.8465 |
| 1101 | 0.5 | Extremo 2A | -0.625 | 0.446     | 0.008087  | -0.1392 | -0.0011   | 0.7715  |
| 1101 | 1   | Extremo 1A | -0.625 | 7.809     | 0.008087  | -0.1392 | -0.0051   | -1.2921 |
| 1101 | 0   | Extremo 1A | -0.274 | -6.917    | 0.0006775 | -0.1393 | 0.0006843 | -0.8512 |
| 1101 | 0.5 | Extremo 1A | -0.274 | 0.446     | 0.0006775 | -0.1393 | 0.0003455 | 0.7667  |
| 1101 | 1   | Extremo 2A | -0.274 | 7.809     | 0.0006775 | -0.1393 | 6.742E-06 | -1.2971 |
| 1102 | 0   | Extremo 2A | -0.654 | -6.996    | 0.007756  | -0.2015 | 0.0028    | -1.8857 |
| 1102 | 0.5 | Extremo 2A | -0.654 | 0.367     | 0.007756  | -0.2015 | -0.0011   | -0.2286 |
| 1102 | 1   | Extremo 1A | -0.654 | 7.731     | 0.007756  | -0.2015 | -0.005    | -2.253  |
| 1102 | 0   | Extremo 1A | -0.277 | -6.996    | 0.001104  | -0.2017 | 0.0009009 | -1.8912 |
| 1102 | 0.5 | Extremo 1A | -0.277 | 0.367     | 0.001104  | -0.2017 | 0.0003491 | -0.2341 |
| 1102 | 1   | Extremo 2A | -0.277 | 7.731     | 0.001104  | -0.2017 | -0.000203 | -2.2586 |
| 1103 | 0   | Extremo 2A | -0.683 | -7.204    | 0.007701  | -0.2073 | 0.0028    | -3.0762 |
| 1103 | 0.5 | Extremo 2A | -0.683 | 0.159     | 0.007701  | -0.2073 | -0.0011   | -1.3149 |
| 1103 | 1   | Extremo 1A | -0.683 | 7.522     | 0.007701  | -0.2073 | -0.0049   | -3.2353 |
| 1103 | 0   | Extremo 1A | -0.28  | -7.204    | 0.001262  | -0.2075 | 0.0009915 | -3.0824 |
| 1103 | 0.5 | Extremo 1A | -0.28  | 0.159     | 0.001262  | -0.2075 | 0.0003608 | -1.321  |
| 1103 | 1   | Extremo 2A | -0.28  | 7.522     | 0.001262  | -0.2075 | -0.00027  | -3.2413 |
| 1104 | 0   | Extremo 2A | -0.714 | -7.376    | 0.009034  | -0.0844 | 0.0035    | -3.3387 |
| 1104 | 0.5 | Extremo 2A | -0.714 | -0.013    | 0.009034  | -0.0844 | -0.001    | -2.0915 |
| 1104 | 1   | Extremo 1A | -0.714 | 7.35      | 0.009034  | -0.0844 | -0.0056   | -3.9259 |
| 1104 | 0   | Extremo 1A | -0.28  | -7.377    | 0.0009061 | -0.0845 | 0.000861  | -3.9452 |
| 1104 | 0.5 | Extremo 1A | -0.28  | -0.014    | 0.0009061 | -0.0845 | 0.000408  | -2.0977 |
| 1104 | 1   | Extremo 2A | -0.28  | 7.35      | 0.0009061 | -0.0845 | -4.51E-05 | -3.9317 |
| 1105 | 0   | Extremo 2A | -0.758 | -7.371    | 0.013     | 0.0848  | 0.0054    | -3.926  |
| 1105 | 0.5 | Extremo 2A | -0.758 | -0.007351 | 0.013     | 0.0848  | -0.0011   | -2.0815 |
| 1105 | 1   | Extremo 1A | -0.758 | 7.356     | 0.013     | 0.0848  | -0.0076   | -3.9186 |
| 1105 | 0   | Extremo 1A | -0.279 | -7.372    | 0.0008335 | 0.0849  | 0.0008992 | -3.9318 |
| 1105 | 0.5 | Extremo 1A | -0.279 | -0.008277 | 0.0008335 | 0.0849  | 0.0004825 | -2.0869 |
| 1105 | 1   | Extremo 2A | -0.279 | 7.355     | 0.0008335 | 0.0849  | 6.575E-05 | -3.9236 |
| 1106 | 0   | Extremo 2A | -0.813 | -7.543    | 0.014     | 0.2077  | 0.0057    | -3.2155 |
| 1106 | 0.5 | Extremo 2A | -0.813 | -0.179    | 0.014     | 0.2077  | -0.0013   | -1.285  |
| 1106 | 1   | Extremo 1A | -0.813 | 7.184     | 0.014     | 0.2077  | -0.0084   | -3.0362 |
| 1106 | 0   | Extremo 1A | -0.279 | -7.544    | 0.001145  | 0.2079  | 0.0011    | -3.2199 |
| 1106 | 0.5 | Extremo 1A | -0.279 | -0.181    | 0.001145  | 0.2079  | 0.0005343 | -1.2887 |
| 1106 | 1   | Extremo 2A | -0.279 | 7.183     | 0.001145  | 0.2079  | -3.81E-05 | -3.0392 |
| 1107 | 0   | Extremo 2A | -0.869 | -7.751    | 0.014     | 0.2018  | 0.0056    | -2.2133 |
| 1107 | 0.5 | Extremo 2A | -0.869 | -0.388    | 0.014     | 0.2018  | -0.0015   | -0.1787 |
| 1107 | 1   | Extremo 1A | -0.869 | 6.976     | 0.014     | 0.2018  | -0.0086   | -1.8258 |
| 1107 | 0   | Extremo 1A | -0.281 | -7.753    | 0.000987  | 0.202   | 0.001     | -2.2157 |
| 1107 | 0.5 | Extremo 1A | -0.281 | -0.389    | 0.000987  | 0.202   | 0.0005489 | -0.1803 |
| 1107 | 1   | Extremo 2A | -0.281 | 6.974     | 0.000987  | 0.202   | 5.542E-05 | -1.8264 |
| 1108 | 0   | Extremo 2A | -0.924 | -7.829    | 0.014     | 0.1396  | 0.0055    | -1.2324 |
| 1108 | 0.5 | Extremo 2A | -0.924 | -0.466    | 0.014     | 0.1396  | -0.0016   | 0.8413  |
| 1108 | 1   | Extremo 1A | -0.924 | 6.897     | 0.014     | 0.1396  | -0.0086   | -0.7666 |
| 1108 | 0   | Extremo 1A | -0.284 | -7.831    | 0.0005675 | 0.1397  | 0.0008376 | -1.2327 |
| 1108 |     |            |        |           |           |         |           |         |



|      |     |            |        |           |           |           |           |         |
|------|-----|------------|--------|-----------|-----------|-----------|-----------|---------|
| 1112 | 0   | Extremo 2A | -1.14  | -7.368    | 0.014     | 3.299E-05 | 0.0052    | 0.7765  |
| 1112 | 0.5 | Extremo 2A | -1.14  | -0.004878 | 0.014     | 3.299E-05 | -0.0019   | 2.6198  |
| 1112 | 1   | Extremo 1A | -1.14  | 7.358     | 0.014     | 3.299E-05 | -0.0089   | 0.7814  |
| 1112 | 0   | Extremo 1A | -0.284 | -7.37     | -0.000507 | 5.186E-05 | 0.0003039 | 0.7848  |
| 1112 | 0.5 | Extremo 1A | -0.284 | -0.007149 | -0.000507 | 5.186E-05 | 0.0005574 | 2.6292  |
| 1112 | 1   | Extremo 2A | -0.284 | 7.356     | -0.000507 | 5.186E-05 | 0.0008109 | 0.7919  |
| 1113 | 0   | Extremo 2A | -1.193 | -7.213    | 0.014     | -0.0195   | 0.005     | 0.7526  |
| 1113 | 0.5 | Extremo 2A | -1.193 | 0.15      | 0.014     | -0.0195   | -0.0019   | 2.5185  |
| 1113 | 1   | Extremo 1A | -1.193 | 7.513     | 0.014     | -0.0195   | -0.0089   | 0.6028  |
| 1113 | 0   | Extremo 1A | -0.284 | -7.216    | -0.000436 | -0.0195   | 0.0003392 | 0.763   |
| 1113 | 0.5 | Extremo 1A | -0.284 | 0.148     | -0.000436 | -0.0195   | 0.0005571 | 2.5301  |
| 1113 | 1   | Extremo 2A | -0.284 | 7.511     | -0.000436 | -0.0195   | 0.000775  | 0.6155  |
| 1114 | 0   | Extremo 2A | -1.245 | -7.068    | 0.014     | -0.0444   | 0.0049    | 0.5091  |
| 1114 | 0.5 | Extremo 2A | -1.245 | 0.295     | 0.014     | -0.0444   | -0.002    | 2.2024  |
| 1114 | 1   | Extremo 1A | -1.245 | 7.658     | 0.014     | -0.0444   | -0.0089   | 0.214   |
| 1114 | 0   | Extremo 1A | -0.283 | -7.07     | -0.000222 | -0.0444   | 0.0004461 | 0.5217  |
| 1114 | 0.5 | Extremo 1A | -0.283 | 0.293     | -0.000222 | -0.0444   | 0.0005573 | 2.2161  |
| 1114 | 1   | Extremo 2A | -0.283 | 7.656     | -0.000222 | -0.0444   | 0.0006684 | 0.2289  |
| 1115 | 0   | Extremo 2A | -1.296 | -6.952    | 0.014     | -0.0821   | 0.0047    | 0.0257  |
| 1115 | 0.5 | Extremo 2A | -1.296 | 0.411     | 0.014     | -0.0821   | -0.0021   | 1.6609  |
| 1115 | 1   | Extremo 1A | -1.296 | 7.774     | 0.014     | -0.0821   | -0.0088   | -0.3855 |
| 1115 | 0   | Extremo 1A | -0.284 | -6.954    | 0.0001208 | -0.0819   | 0.0006189 | 0.0407  |
| 1115 | 0.5 | Extremo 1A | -0.284 | 0.409     | 0.0001208 | -0.0819   | 0.0005585 | 1.6769  |
| 1115 | 1   | Extremo 2A | -0.284 | 7.772     | 0.0001208 | -0.0819   | 0.0004981 | -0.3685 |
| 1116 | 0   | Extremo 2A | -1.347 | -6.905    | 0.013     | -0.1385   | 0.0045    | -0.7324 |
| 1116 | 0.5 | Extremo 2A | -1.347 | 0.459     | 0.013     | -0.1385   | -0.0021   | 0.8791  |
| 1116 | 1   | Extremo 1A | -1.347 | 7.822     | 0.013     | -0.1385   | -0.0087   | -1.191  |
| 1116 | 0   | Extremo 1A | -0.285 | -6.906    | 0.0005536 | -0.1382   | 0.0008384 | -0.7148 |
| 1116 | 0.5 | Extremo 1A | -0.285 | 0.457     | 0.0005536 | -0.1382   | 0.0005615 | 0.8975  |
| 1116 | 1   | Extremo 2A | -0.285 | 7.82      | 0.0005536 | -0.1382   | 0.0002847 | -1.1719 |
| 1117 | 0   | Extremo 2A | -1.395 | -6.98     | 0.013     | -0.2002   | 0.0042    | -1.78   |
| 1117 | 0.5 | Extremo 2A | -1.395 | 0.383     | 0.013     | -0.2002   | -0.0022   | -0.1307 |
| 1117 | 1   | Extremo 1A | -1.395 | 7.746     | 0.013     | -0.2002   | -0.0086   | -2.1631 |
| 1117 | 0   | Extremo 1A | -0.287 | -6.981    | 0.000967  | -0.1996   | 0.0011    | -1.7594 |
| 1117 | 0.5 | Extremo 1A | -0.287 | 0.383     | 0.000967  | -0.1996   | 0.0005678 | -0.1099 |
| 1117 | 1   | Extremo 2A | -0.287 | 7.746     | 0.000967  | -0.1996   | 0.000843  | -2.142  |
| 1118 | 0   | Extremo 2A | -1.443 | -7.184    | 0.013     | -0.2059   | 0.0042    | -2.9791 |
| 1118 | 0.5 | Extremo 2A | -1.443 | 0.179     | 0.013     | -0.2059   | -0.0022   | -1.2279 |
| 1118 | 1   | Extremo 1A | -1.443 | 7.542     | 0.013     | -0.2059   | -0.0086   | -3.1583 |
| 1118 | 0   | Extremo 1A | -0.29  | -7.183    | 0.001129  | -0.2053   | 0.0012    | -2.9556 |
| 1118 | 0.5 | Extremo 1A | -0.29  | 0.18      | 0.001129  | -0.2053   | 0.0005858 | -1.2049 |
| 1118 | 1   | Extremo 2A | -0.29  | 7.543     | 0.001129  | -0.2053   | 2.129E-05 | -3.1358 |
| 1119 | 0   | Extremo 2A | -1.494 | -7.352    | 0.014     | -0.084    | 0.005     | -3.855  |
| 1119 | 0.5 | Extremo 2A | -1.494 | 0.011     | 0.014     | -0.084    | -0.0021   | -2.0199 |
| 1119 | 1   | Extremo 1A | -1.494 | 7.375     | 0.014     | -0.084    | -0.0093   | -3.8664 |
| 1119 | 0   | Extremo 1A | -0.29  | -7.349    | 0.0008873 | -0.0838   | 0.0011    | -3.8304 |
| 1119 | 0.5 | Extremo 1A | -0.29  | 0.014     | 0.0008873 | -0.0838   | 0.0006438 | -1.9965 |
| 1119 | 1   | Extremo 2A | -0.29  | 7.377     | 0.0008873 | -0.0838   | 0.0002001 | -3.8443 |
| 1120 | 0   | Extremo 2A | -1.559 | -7.344    | 0.019     | 0.0838    | 0.0072    | -3.8657 |
| 1120 | 0.5 | Extremo 2A | -1.559 | 0.019     | 0.019     | 0.0838    | -0.0023   | -2.0346 |
| 1120 | 1   | Extremo 1A | -1.559 | 7.383     | 0.019     | 0.0838    | -0.0118   | -3.8852 |
| 1120 | 0   | Extremo 1A | -0.289 | -7.34     | 0.001181  | 0.0834    | 0.0013    | -3.8437 |
| 1120 | 0.5 | Extremo 1A | -0.289 | 0.023     | 0.001181  | 0.0834    | 0.0007175 | -2.0143 |
| 1120 | 1   | Extremo 2A | -0.289 | 7.386     | 0.001181  | 0.0834    | 0.0001272 | -3.8665 |
| 1121 | 0   | Extremo 2A | -1.637 | -7.512    | 0.02      | 0.2056    | 0.0076    | -3.1869 |
| 1121 | 0.5 | Extremo 2A | -1.637 | -0.148    | 0.02      | 0.2056    | -0.0025   | -1.272  |
| 1121 | 1   | Extremo 1A | -1.637 | 7.215     | 0.02      | 0.2056    | -0.0127   | -3.0386 |
| 1121 | 0   | Extremo 1A | -0.29  | -7.507    | 0.001609  | 0.2049    | 0.0016    | -3.1706 |
| 1121 | 0.5 | Extremo 1A | -0.29  | -0.144    | 0.001609  | 0.2049    | 0.000757  | -1.258  |
| 1121 | 1   | Extremo 2A | -0.29  | 7.22      | 0.001609  | 0.2049    | -4.76E-05 | -3.0271 |
| 1122 | 0   | Extremo 2A | -1.717 | -7.715    | 0.02      | 0.2       | 0.0075    | -2.2211 |
| 1122 | 0.5 | Extremo 2A | -1.717 | -0.352    | 0.02      | 0.2       | -0.0027   | -0.2042 |
| 1122 | 1   | Extremo 1A | -1.717 | 7.011     | 0.02      | 0.2       | -0.0129   | -1.869  |
| 1122 | 0   | Extremo 1A | -0.295 | -7.709    | 0.001461  | 0.1992    | 0.0015    | -2.2121 |
| 1122 | 0.5 | Extremo 1A | -0.295 | -0.346    | 0.001461  | 0.1992    | 0.0007634 | -0.1984 |
| 1122 | 1   | Extremo 2A | -0.295 | 7.017     | 0.001461  | 0.1992    | 3.298E-05 | -1.8663 |
| 1123 | 0   | Extremo 2A | -1.796 | -7.791    | 0.02      | 0.1383    | 0.0073    | -1.2783 |
| 1123 | 0.5 | Extremo 2A | -1.796 | -0.428    | 0.02      | 0.1383    | -0.0028   | 0.7763  |
| 1123 | 1   | Extremo 1A | -1.796 | 6.936     | 0.02      | 0.1383    | -0.013    | -0.8508 |
| 1123 | 0   | Extremo 1A | -0.299 | -7.783    | 0.001037  | 0.1378    | 0.0013    | -1.2773 |
| 1123 | 0.5 | Extremo 1A | -0.299 | -0.42     | 0.001037  | 0.1378    | 0.000764  | 0.7736  |
| 1123 | 1   | Extremo 2A | -0.299 | 6.943     | 0.001037  | 0.1378    | 0.0002453 | -0.8571 |

|      |     |            |        |        |           |           |           |         |
|------|-----|------------|--------|--------|-----------|-----------|-----------|---------|
| 1124 | 0   | Extremo 2A | -1.874 | -7.743 | 0.02      | 0.0819    | 0.0072    | -0.5021 |
| 1124 | 0.5 | Extremo 2A | -1.874 | -0.38  | 0.02      | 0.0819    | -0.0029   | 1.5287  |
| 1124 | 1   | Extremo 1A | -1.874 | 6.983  | 0.02      | 0.0819    | -0.0131   | -0.1221 |
| 1124 | 0   | Extremo 1A | -0.303 | -7.735 | 0.0006014 | 0.0816    | 0.0011    | -0.5093 |
| 1124 | 0.5 | Extremo 1A | -0.303 | -0.372 | 0.0006014 | 0.0816    | 0.0007635 | 1.5176  |
| 1124 | 1   | Extremo 2A | -0.303 | 6.991  | 0.0006014 | 0.0816    | 0.0004628 | -0.1371 |
| 1125 | 0   | Extremo 2A | -1.952 | -7.627 | 0.02      | 0.0443    | 0.0071    | 0.0682  |
| 1125 | 0.5 | Extremo 2A | -1.952 | -0.264 | 0.02      | 0.0443    | -0.003    | 2.0408  |
| 1125 | 1   | Extremo 1A | -1.952 | 7.1    | 0.02      | 0.0443    | -0.0132   | 0.3319  |
| 1125 | 0   | Extremo 1A | -0.305 | -7.619 | 0.000264  | 0.0441    | 0.0008939 | 0.0529  |
| 1125 | 0.5 | Extremo 1A | -0.305 | -0.256 | 0.000264  | 0.0441    | 0.0007619 | 2.0215  |
| 1125 | 1   | Extremo 2A | -0.305 | 7.108  | 0.000264  | 0.0441    | 0.0006299 | 0.3085  |
| 1126 | 0   | Extremo 2A | -2.029 | -7.482 | 0.02      | 0.0194    | 0.007     | 0.4276  |
| 1126 | 0.5 | Extremo 2A | -2.029 | -0.118 | 0.02      | 0.0194    | -0.0032   | 2.3276  |
| 1126 | 1   | Extremo 1A | -2.029 | 7.245  | 0.02      | 0.0194    | -0.0133   | 0.546   |
| 1126 | 0   | Extremo 1A | -0.306 | -7.473 | 6.424E-05 | 0.0193    | 0.0007915 | 0.4043  |
| 1126 | 0.5 | Extremo 1A | -0.306 | -0.11  | 6.424E-05 | 0.0193    | 0.0007593 | 2.3001  |
| 1126 | 1   | Extremo 2A | -0.306 | 7.253  | 6.424E-05 | 0.0193    | 0.0007272 | 0.5143  |
| 1127 | 0   | Extremo 2A | -2.106 | -7.327 | 0.02      | -0.000214 | 0.0069    | 0.5769  |
| 1127 | 0.5 | Extremo 2A | -2.106 | 0.036  | 0.02      | -0.000214 | -0.0033   | 2.3995  |
| 1127 | 1   | Extremo 1A | -2.106 | 7.4    | 0.02      | -0.000214 | -0.0134   | 0.5405  |
| 1127 | 0   | Extremo 1A | -0.307 | -7.318 | 1.492E-05 | -0.000316 | 0.0007638 | 0.5454  |
| 1127 | 0.5 | Extremo 1A | -0.307 | 0.045  | 1.492E-05 | -0.000316 | 0.0007563 | 2.3639  |
| 1127 | 1   | Extremo 2A | -0.307 | 7.408  | 1.492E-05 | -0.000316 | 0.0007489 | 0.5007  |
| 1128 | 0   | Extremo 2A | -2.183 | -7.173 | 0.02      | -0.0201   | 0.0067    | 0.514   |
| 1128 | 0.5 | Extremo 2A | -2.183 | 0.191  | 0.02      | -0.0201   | -0.0034   | 2.2595  |
| 1128 | 1   | Extremo 1A | -2.183 | 7.554  | 0.02      | -0.0201   | -0.0135   | 0.3234  |
| 1128 | 0   | Extremo 1A | -0.309 | -7.164 | 0.0001196 | -0.0202   | 0.000813  | 0.4745  |
| 1128 | 0.5 | Extremo 1A | -0.309 | 0.199  | 0.0001196 | -0.0202   | 0.0007532 | 2.2157  |
| 1128 | 1   | Extremo 2A | -0.309 | 7.562  | 0.0001196 | -0.0202   | 0.0006934 | 0.2754  |
| 1129 | 0   | Extremo 2A | -2.259 | -7.029 | 0.02      | -0.046    | 0.0066    | 0.2302  |
| 1129 | 0.5 | Extremo 2A | -2.259 | 0.334  | 0.02      | -0.046    | -0.0035   | 1.9039  |
| 1129 | 1   | Extremo 1A | -2.259 | 7.697  | 0.02      | -0.046    | -0.0135   | -0.1039 |
| 1129 | 0   | Extremo 1A | -0.31  | -7.021 | 0.0003771 | -0.0462   | 0.000939  | 0.1825  |
| 1129 | 0.5 | Extremo 1A | -0.31  | 0.343  | 0.0003771 | -0.0462   | 0.0007504 | 1.852   |
| 1129 | 1   | Extremo 2A | -0.31  | 7.706  | 0.0003771 | -0.0462   | 0.0005619 | -0.16   |
| 1130 | 0   | Extremo 2A | -2.335 | -6.918 | 0.02      | -0.0858   | 0.0064    | -0.2968 |
| 1130 | 0.5 | Extremo 2A | -2.335 | 0.445  | 0.02      | -0.0858   | -0.0036   | 1.3214  |
| 1130 | 1   | Extremo 1A | -2.335 | 7.809  | 0.02      | -0.0858   | -0.0135   | -0.7421 |
| 1130 | 0   | Extremo 1A | -0.313 | -6.91  | 0.000777  | -0.0863   | 0.0011    | -0.3531 |
| 1130 | 0.5 | Extremo 1A | -0.313 | 0.453  | 0.000777  | -0.0863   | 0.0007486 | 1.2611  |
| 1130 | 1   | Extremo 2A | -0.313 | 7.817  | 0.000777  | -0.0863   | 0.0003601 | -0.8064 |
| 1131 | 0   | Extremo 2A | -2.41  | -6.882 | 0.02      | -0.1462   | 0.0062    | -1.1047 |
| 1131 | 0.5 | Extremo 2A | -2.41  | 0.481  | 0.02      | -0.1462   | -0.0037   | 0.4955  |
| 1131 | 1   | Extremo 1A | -2.41  | 7.845  | 0.02      | -0.1462   | -0.0135   | -1.586  |
| 1131 | 0   | Extremo 1A | -0.318 | -6.875 | 0.001282  | -0.1471   | 0.0014    | -1.1704 |
| 1131 | 0.5 | Extremo 1A | -0.318 | 0.488  | 0.001282  | -0.1471   | 0.0007485 | 0.4264  |
| 1131 | 1   | Extremo 2A | -0.318 | 7.851  | 0.001282  | -0.1471   | 0.0001076 | -1.6584 |
| 1132 | 0   | Extremo 2A | -2.483 | -6.979 | 0.019     | -0.2127   | 0.006     | -2.2097 |
| 1132 | 0.5 | Extremo 2A | -2.483 | 0.384  | 0.019     | -0.2127   | -0.0037   | -0.5608 |
| 1132 | 1   | Extremo 1A | -2.483 | 7.747  | 0.019     | -0.2127   | -0.0134   | -2.5936 |
| 1132 | 0   | Extremo 1A | -0.323 | -6.976 | 0.001788  | -0.2142   | 0.0016    | -2.2859 |
| 1132 | 0.5 | Extremo 1A | -0.323 | 0.388  | 0.001788  | -0.2142   | 0.0007528 | -0.6389 |
| 1132 | 1   | Extremo 2A | -0.323 | 7.751  | 0.001788  | -0.2142   | -0.000141 | -2.6735 |
| 1133 | 0   | Extremo 2A | -2.5   |        |           |           |           |         |



|      |     |            |        |           |          |         |           |         |
|------|-----|------------|--------|-----------|----------|---------|-----------|---------|
| 1136 | 0   | Extremo 2A | -2.836 | -7.627    | 0.029    | 0.2175  | 0.0101    | -3.5206 |
| 1136 | 0.5 | Extremo 2A | -2.836 | -0.264    | 0.029    | 0.2175  | -0.0042   | -1.5477 |
| 1136 | 1   | Extremo 1A | -2.836 | 7.099     | 0.029    | 0.2175  | -0.0185   | -3.2564 |
| 1136 | 0   | Extremo 1A | -0.349 | -7.639    | 0.003953 | 0.2217  | 0.0029    | -3.5779 |
| 1136 | 0.5 | Extremo 1A | -0.349 | -0.276    | 0.003953 | 0.2217  | 0.000917  | -1.599  |
| 1136 | 1   | Extremo 2A | -0.349 | 7.087     | 0.003953 | 0.2217  | -0.0011   | -3.3019 |
| 1137 | 0   | Extremo 2A | -2.949 | -7.864    | 0.029    | 0.2106  | 0.0101    | -2.4031 |
| 1137 | 0.5 | Extremo 2A | -2.949 | -0.501    | 0.029    | 0.2106  | -0.0044   | -0.3119 |
| 1137 | 1   | Extremo 1A | -2.949 | 6.862     | 0.029    | 0.2106  | -0.019    | -1.9023 |
| 1137 | 0   | Extremo 1A | -0.363 | -7.881    | 0.004186 | 0.215   | 0.003     | -2.4324 |
| 1137 | 0.5 | Extremo 1A | -0.363 | -0.517    | 0.004186 | 0.215   | 0.0009028 | -0.3329 |
| 1137 | 1   | Extremo 2A | -0.363 | 6.846     | 0.004186 | 0.215   | -0.0012   | -1.915  |
| 1138 | 0   | Extremo 2A | -3.063 | -7.961    | 0.03     | 0.1443  | 0.0101    | -1.2956 |
| 1138 | 0.5 | Extremo 2A | -3.063 | -0.598    | 0.03     | 0.1443  | -0.0046   | 0.8441  |
| 1138 | 1   | Extremo 1A | -3.063 | 6.765     | 0.03     | 0.1443  | -0.0194   | -0.6978 |
| 1138 | 0   | Extremo 1A | -0.38  | -7.981    | 0.00423  | 0.148   | 0.003     | -1.2946 |
| 1138 | 0.5 | Extremo 1A | -0.38  | -0.617    | 0.00423  | 0.148   | 0.0008844 | 0.8549  |
| 1138 | 1   | Extremo 2A | -0.38  | 6.746     | 0.00423  | 0.148   | -0.0012   | -0.6772 |
| 1139 | 0   | Extremo 2A | -3.178 | -7.924    | 0.03     | 0.0842  | 0.0103    | -0.3515 |
| 1139 | 0.5 | Extremo 2A | -3.178 | -0.561    | 0.03     | 0.0842  | -0.0048   | 1.7699  |
| 1139 | 1   | Extremo 1A | -3.178 | 6.802     | 0.03     | 0.0842  | -0.0199   | 0.2095  |
| 1139 | 0   | Extremo 1A | -0.397 | -7.945    | 0.004402 | 0.0874  | 0.0031    | -0.3198 |
| 1139 | 0.5 | Extremo 1A | -0.397 | -0.582    | 0.004402 | 0.0874  | 0.0008632 | 1.8121  |
| 1139 | 1   | Extremo 2A | -0.397 | 6.781     | 0.004402 | 0.0874  | -0.0013   | 0.2623  |
| 1140 | 0   | Extremo 2A | -3.296 | -7.812    | 0.031    | 0.0449  | 0.0106    | 0.3875  |
| 1140 | 0.5 | Extremo 2A | -3.296 | -0.448    | 0.031    | 0.0449  | -0.0049   | 2.4525  |
| 1140 | 1   | Extremo 1A | -3.296 | 6.915     | 0.031    | 0.0449  | -0.0205   | 0.8359  |
| 1140 | 0   | Extremo 1A | -0.417 | -7.833    | 0.004853 | 0.0477  | 0.0033    | 0.4498  |
| 1140 | 0.5 | Extremo 1A | -0.417 | -0.47     | 0.004853 | 0.0477  | 0.0008371 | 2.5257  |
| 1140 | 1   | Extremo 2A | -0.417 | 6.893     | 0.004853 | 0.0477  | -0.0016   | 0.92    |
| 1141 | 0   | Extremo 2A | -3.417 | -7.665    | 0.032    | 0.0201  | 0.0109    | 0.9169  |
| 1141 | 0.5 | Extremo 2A | -3.417 | -0.302    | 0.032    | 0.0201  | -0.0051   | 2.9087  |
| 1141 | 1   | Extremo 1A | -3.417 | 7.061     | 0.032    | 0.0201  | -0.0212   | 1.2189  |
| 1141 | 0   | Extremo 1A | -0.439 | -7.688    | 0.005671 | 0.0225  | 0.0036    | 1.0094  |
| 1141 | 0.5 | Extremo 1A | -0.439 | -0.325    | 0.005671 | 0.0225  | 0.0008046 | 3.0125  |
| 1141 | 1   | Extremo 2A | -0.439 | 7.039     | 0.005671 | 0.0225  | -0.002    | 1.334   |
| 1142 | 0   | Extremo 2A | -3.543 | -7.506    | 0.033    | 0.0023  | 0.0114    | 1.2385  |
| 1142 | 0.5 | Extremo 2A | -3.543 | -0.142    | 0.033    | 0.0023  | -0.0053   | 3.1506  |
| 1142 | 1   | Extremo 1A | -3.543 | 7.221     | 0.033    | 0.0023  | -0.022    | 1.381   |
| 1142 | 0   | Extremo 1A | -0.466 | -7.529    | 0.006935 | 0.0042  | 0.0042    | 1.3605  |
| 1142 | 0.5 | Extremo 1A | -0.466 | -0.166    | 0.006935 | 0.0042  | 0.0007643 | 3.2844  |
| 1142 | 1   | Extremo 2A | -0.466 | 7.197     | 0.006935 | 0.0042  | -0.0027   | 1.5267  |
| 1143 | 0   | Extremo 2A | -3.676 | -7.34     | 0.035    | -0.0132 | 0.0121    | 1.3535  |
| 1143 | 0.5 | Extremo 2A | -3.676 | 0.023     | 0.035    | -0.0132 | -0.0055   | 3.1829  |
| 1143 | 1   | Extremo 1A | -3.676 | 7.386     | 0.035    | -0.0132 | -0.023    | 1.3307  |
| 1143 | 0   | Extremo 1A | -0.499 | -7.367    | 0.008733 | -0.0122 | 0.0051    | 1.5037  |
| 1143 | 0.5 | Extremo 1A | -0.499 | -0.003325 | 0.008733 | -0.0122 | 0.0007144 | 3.3461  |
| 1143 | 1   | Extremo 2A | -0.499 | 7.36      | 0.008733 | -0.0122 | -0.0037   | 1.507   |
| 1144 | 0   | Extremo 2A | -3.816 | -7.175    | 0.037    | -0.03   | 0.013     | 1.259   |
| 1144 | 0.5 | Extremo 2A | -3.816 | 0.189     | 0.037    | -0.03   | -0.0056   | 3.0055  |
| 1144 | 1   | Extremo 1A | -3.816 | 7.552     | 0.037    | -0.03   | -0.0243   | 1.0704  |
| 1144 | 0   | Extremo 1A | -0.541 | -7.205    | 0.011    | -0.0306 | 0.0062    | 1.4352  |
| 1144 | 0.5 | Extremo 1A | -0.541 | 0.158     | 0.011    | -0.0306 | 0.0006525 | 3.1968  |
| 1144 | 1   | Extremo 2A | -0.541 | 7.522     | 0.011    | -0.0306 | -0.0049   | 1.2768  |
| 1145 | 0   | Extremo 2A | -3.967 | -7.019    | 0.04     | -0.0524 | 0.0142    | 0.9447  |
| 1145 | 0.5 | Extremo 2A | -3.967 | 0.344     | 0.04     | -0.0524 | -0.0058   | 2.6133  |
| 1145 | 1   | Extremo 1A | -3.967 | 7.708     | 0.04     | -0.0524 | -0.0259   | 0.6003  |
| 1145 | 0   | Extremo 1A | -0.594 | -7.056    | 0.014    | -0.0557 | 0.0078    | 1.1432  |
| 1145 | 0.5 | Extremo 1A | -0.594 | 0.307     | 0.014    | -0.0557 | 0.0005757 | 2.8306  |
| 1145 | 1   | Extremo 2A | -0.594 | 7.67      | 0.014    | -0.0557 | -0.0066   | 0.8363  |
| 1146 | 0   | Extremo 2A | -4.131 | -6.898    | 0.044    | -0.0837 | 0.0158    | 0.3913  |
| 1146 | 0.5 | Extremo 2A | -4.131 | 0.465     | 0.044    | -0.0837 | -0.0061   | 1.9996  |
| 1146 | 1   | Extremo 1A | -4.131 | 7.828     | 0.044    | -0.0837 | -0.0279   | 0.0737  |
| 1146 | 0   | Extremo 1A | -0.663 | -6.947    | 0.019    | -0.091  | 0.0098    | 0.6064  |
| 1146 | 0.5 | Extremo 1A | -0.663 | 0.416     | 0.019    | -0.091  | 0.000481  | 2.2392  |
| 1146 | 1   | Extremo 2A | -0.663 | 7.779     | 0.019    | -0.091  | -0.0088   | 0.1903  |
| 1147 | 0   | Extremo 2A | -4.312 | -6.849    | 0.048    | -0.1128 | 0.0179    | -0.4032 |
| 1147 | 0.5 | Extremo 2A | -4.312 | 0.514     | 0.048    | -0.1128 | -0.0063   | 1.1804  |
| 1147 | 1   | Extremo 1A | -4.312 | 7.878     | 0.048    | -0.1128 | -0.0305   | -0.9176 |
| 1147 | 0   | Extremo 1A | -0.75  | -6.915    | 0.024    | -0.1259 | 0.0123    | -0.1796 |
| 1147 | 0.5 | Extremo 1A | -0.75  | 0.449     | 0.024    | -0.1259 | 0.0003655 | 1.4368  |
| 1147 | 1   | Extremo 2A | -0.75  | 7.812     | 0.024    | -0.1259 | -0.0116   | -0.6284 |

|      |     |            |        |        |       |         |           |         |
|------|-----|------------|--------|--------|-------|---------|-----------|---------|
| 1148 | 0   | Extremo 2A | -4.517 | -6.876 | 0.055 | -0.0972 | 0.0209    | -1.3285 |
| 1148 | 0.5 | Extremo 2A | -4.517 | 0.487  | 0.055 | -0.0972 | -0.0066   | 0.2686  |
| 1148 | 1   | Extremo 1A | -4.517 | 7.851  | 0.055 | -0.0972 | -0.034    | -1.8159 |
| 1148 | 0   | Extremo 1A | -0.862 | -6.964 | 0.031 | -0.1174 | 0.0156    | -1.1071 |
| 1148 | 0.5 | Extremo 1A | -0.862 | 0.399  | 0.031 | -0.1174 | 0.0002283 | 0.5341  |
| 1148 | 1   | Extremo 2A | -0.862 | 7.763  | 0.031 | -0.1174 | -0.0151   | -1.5064 |
| 1149 | 0   | Extremo 2A | -4.756 | -6.878 | 0.064 | 0.0063  | 0.0253    | -2.0419 |
| 1149 | 0.5 | Extremo 2A | -4.756 | 0.485  | 0.064 | 0.0063  | -0.0068   | -0.4437 |
| 1149 | 1   | Extremo 1A | -4.756 | 7.848  | 0.064 | 0.0063  | -0.039    | -2.5271 |
| 1149 | 0   | Extremo 1A | -1.003 | -6.991 | 0.039 | -0.0212 | 0.0197    | -1.8331 |
| 1149 | 0.5 | Extremo 1A | -1.003 | 0.372  | 0.039 | -0.0212 | 7.356E-05 | -0.1782 |
| 1149 | 1   | Extremo 2A | -1.003 | 7.735  | 0.039 | -0.0212 | -0.0195   | -2.205  |
| 1150 | 0   | Extremo 2A | -5.043 | -6.803 | 0.078 | 0.1297  | 0.0317    | -2.1851 |
| 1150 | 0.5 | Extremo 2A | -5.043 | 0.56   | 0.078 | 0.1297  | -0.0073   | -0.6245 |
| 1150 | 1   | Extremo 1A | -5.043 | 7.924  | 0.078 | 0.1297  | -0.0462   | -2.7455 |
| 1150 | 0   | Extremo 1A | -1.185 | -6.939 | 0.051 | 0.0965  | 0.0251    | -1.9245 |
| 1150 | 0.5 | Extremo 1A | -1.185 | 0.424  | 0.051 | 0.0965  | -0.000144 | -0.3658 |
| 1150 | 1   | Extremo 2A | -1.185 | 7.788  | 0.051 | 0.0965  | -0.0254   | -2.4188 |
| 1151 | 0   | Extremo 2A | -5.387 | -6.898 | 0.092 | 0.2194  | 0.0384    | -1.9098 |
| 1151 | 0.5 | Extremo 2A | -5.387 | 0.465  | 0.092 | 0.2194  | -0.0078   | -0.3017 |
| 1151 | 1   | Extremo 1A | -5.387 | 7.829  | 0.092 | 0.2194  | -0.054    | -2.3752 |
| 1151 | 0   | Extremo 1A | -1.421 | -7.054 | 0.065 | 0.1829  | 0.0319    | -1.7319 |
| 1151 | 0.5 | Extremo 1A | -1.421 | 0.309  | 0.065 | 0.1829  | -0.000469 | -0.0458 |
| 1151 | 1   | Extremo 2A | -1.421 | 7.673  | 0.065 | 0.1829  | -0.0328   | -2.0413 |
| 1152 | 0   | Extremo 2A | -5.798 | -7.036 | 0.111 | 0.2087  | 0.0468    | -1.4806 |
| 1152 | 0.5 | Extremo 2A | -5.798 | 0.327  | 0.111 | 0.2087  | -0.0084   | 0.1964  |
| 1152 | 1   | Extremo 1A | -5.798 | 7.691  | 0.111 | 0.2087  | -0.0637   | -1.8081 |
| 1152 | 0   | Extremo 1A | -1.723 | -7.209 | 0.082 | 0.1692  | 0.0402    | -1.3081 |
| 1152 | 0.5 | Extremo 1A | -1.723 | 0.154  | 0.082 | 0.1692  | -0.000907 | 0.4556  |
| 1152 | 1   | Extremo 2A | -1.723 | 7.517  | 0.082 | 0.1692  | -0.042    | -1.4623 |
| 1153 | 0   | Extremo 2A | -6.293 | -7.06  | 0.134 | 0.158   | 0.0577    | -1.1087 |
| 1153 | 0.5 | Extremo 2A | -6.293 | 0.304  | 0.134 | 0.158   | -0.0092   | 0.5803  |
| 1153 | 1   | Extremo 1A | -6.293 | 7.667  | 0.134 | 0.158   | -0.076    | -1.4123 |
| 1153 | 0   | Extremo 1A | -2.109 | -7.246 | 0.104 | 0.1153  | 0.0507    | -0.9378 |
| 1153 | 0.5 | Extremo 1A | -2.109 | 0.117  | 0.104 | 0.1153  | -0.0015   | 0.8444  |
| 1153 | 1   | Extremo 2A | -2.109 | 7.48   | 0.104 | 0.1153  | -0.0536   | -1.0549 |
| 1154 | 0   | Extremo 2A | -6.898 | -6.982 | 0.163 | 0.1167  | 0.0715    | -0.9815 |
| 1154 | 0.5 | Extremo 2A | -6.898 | 0.381  | 0.163 | 0.1167  | -0.0101   | 0.7586  |
| 1154 | 1   | Extremo 1A | -6.898 | 7.745  | 0.163 | 0.1167  | -0.0916   | -1.2729 |
| 1154 | 0   | Extremo 1A | -2.601 | -7.177 | 0.133 | 0.0707  | 0.0643    | -0.7231 |
| 1154 | 0.5 | Extremo 1A | -2.601 | 0.187  | 0.133 | 0.0707  | -0.0022   | 1.0244  |
| 1154 | 1   | Extremo 2A | -2.601 | 7.55   | 0.133 | 0.0707  | -0.0687   | -0.9097 |
| 1155 | 0   | Extremo 2A | -7.64  | -6.859 | 0.2   | 0.0912  | 0.0888    | -0.8519 |
| 1155 | 0.5 | Extremo 2A | -7.64  | 0.504  | 0.2   | 0.0912  | -0.0112   | 0.7369  |
| 1155 | 1   | Extremo 1A | -7.64  | 7.867  | 0.2   | 0.0912  | -0.1112   | -1.356  |
| 1155 | 0   | Extremo 1A | -3.23  | -7.058 | 0.17  | 0.0426  | 0.0817    | -0.6904 |
| 1155 | 0.5 | Extremo 1A | -3.23  | 0.306  | 0.17  | 0.0426  | -0.0032   | 0.9976  |
| 1155 | 1   | Extremo 2A | -3.23  | 7.669  | 0.17  | 0.0426  | -0.088    | -0.996  |
| 1156 | 0   | Extremo 2A | -8.549 | -6.741 | 0.245 | 0.0759  | 0.1098    | -0.9884 |
| 1156 | 0.5 | Extremo 2A | -8.549 | 0.622  | 0.245 | 0.0759  | -0.0125   | 0.5412  |
| 1156 | 1   | Extremo 1A | -8.549 | 7.986  | 0.245 | 0.0759  | -0.1348   | -1.6108 |
| 1156 | 0   | Extremo 1A | -4.028 | -6.939 | 0.215 | 0.0264  | 0.1033    | -0.8389 |
| 1156 | 0.5 | Extremo 1A | -4.028 | 0.425  | 0.215 | 0.0264  | -0.0043   | 0.7895  |
| 1156 | 1   | Extremo 2A | -4.028 | 7.788  | 0.215 | 0.0264  | -0.1119   | -1.2636 |
| 1157 | 0   | Extremo 2A | -9.674 | -6.643 | 0.305 | 0.0711  | 0.1386    | -1.2661 |
| 1157 | 0.5 | Extremo 2A | -9.674 | 0.72   | 0.305 | 0.0711  | -0.014    | 0.2148  |
| 1157 | 1   | Extremo 1A | -9.674 | 8.083  | 0.305 | 0.0711  | -0.1666   | -1.986  |
|      |     |            |        |        |       |         |           |         |



|      |     |            |          |        |       |         |         |          |
|------|-----|------------|----------|--------|-------|---------|---------|----------|
| 1160 | 0   | Extremo 2A | -15.12   | -6.398 | 0.61  | 0.0762  | 0.2831  | -2.6258  |
| 1160 | 0.5 | Extremo 2A | -15.12   | 0.965  | 0.61  | 0.0762  | -0.0219 | -1.2676  |
| 1160 | 1   | Extremo 1A | -15.12   | 8.328  | 0.61  | 0.0762  | -0.3268 | -3.591   |
| 1160 | 0   | Extremo 1A | -10.156  | -6.58  | 0.58  | 0.0301  | 0.2767  | -2.5042  |
| 1160 | 0.5 | Extremo 1A | -10.156  | 0.784  | 0.58  | 0.0301  | -0.0132 | -1.0552  |
| 1160 | 1   | Extremo 2A | -10.156  | 8.147  | 0.58  | 0.0301  | -0.3032 | -3.2877  |
| 1161 | 0   | Extremo 2A | -17.931  | -6.333 | 0.762 | 0.0678  | 0.3553  | -3.1865  |
| 1161 | 0.5 | Extremo 2A | -17.931  | 1.03   | 0.762 | 0.0678  | -0.0257 | -1.8607  |
| 1161 | 1   | Extremo 1A | -17.931  | 8.393  | 0.762 | 0.0678  | -0.4067 | -4.2166  |
| 1161 | 0   | Extremo 1A | -12.859  | -6.51  | 0.734 | 0.0223  | 0.3499  | -3.0781  |
| 1161 | 0.5 | Extremo 1A | -12.859  | 0.853  | 0.734 | 0.0223  | -0.0169 | -1.6638  |
| 1161 | 1   | Extremo 2A | -12.859  | 8.216  | 0.734 | 0.0223  | -0.3837 | -3.9312  |
| 1162 | 0   | Extremo 2A | -21.451  | -6.303 | 0.964 | 0.0484  | 0.4518  | -3.8781  |
| 1162 | 0.5 | Extremo 2A | -21.451  | 1.06   | 0.964 | 0.0484  | -0.03   | -2.5674  |
| 1162 | 1   | Extremo 1A | -21.451  | 8.423  | 0.964 | 0.0484  | -0.5119 | -4.9383  |
| 1162 | 0   | Extremo 1A | -16.277  | -6.475 | 0.936 | 0.0049  | 0.4466  | -3.7803  |
| 1162 | 0.5 | Extremo 1A | -16.277  | 0.888  | 0.936 | 0.0049  | -0.0213 | -2.3837  |
| 1162 | 1   | Extremo 2A | -16.277  | 8.252  | 0.936 | 0.0049  | -0.4891 | -4.6688  |
| 1163 | 0   | Extremo 2A | -25.882  | -6.293 | 1.219 | 0.0254  | 0.5739  | -4.702   |
| 1163 | 0.5 | Extremo 2A | -25.882  | 1.071  | 1.219 | 0.0254  | -0.0355 | -3.3965  |
| 1163 | 1   | Extremo 1A | -25.882  | 8.434  | 1.219 | 0.0254  | -0.6449 | -5.7726  |
| 1163 | 0   | Extremo 1A | -20.607  | -6.461 | 1.191 | -0.0161 | 0.5688  | -4.61    |
| 1163 | 0.5 | Extremo 1A | -20.607  | 0.902  | 1.191 | -0.0161 | -0.0267 | -3.2204  |
| 1163 | 1   | Extremo 2A | -20.607  | 8.266  | 1.191 | -0.0161 | -0.6221 | -5.5124  |
| 1164 | 0   | Extremo 2A | -31.432  | -6.282 | 1.535 | 0.0153  | 0.7254  | -5.6165  |
| 1164 | 0.5 | Extremo 2A | -31.432  | 1.082  | 1.535 | 0.0153  | -0.042  | -4.3166  |
| 1164 | 1   | Extremo 1A | -31.432  | 8.445  | 1.535 | 0.0153  | -0.8094 | -6.6983  |
| 1164 | 0   | Extremo 1A | -26.057  | -6.448 | 1.507 | -0.0252 | 0.7204  | -5.5277  |
| 1164 | 0.5 | Extremo 1A | -26.057  | 0.915  | 1.507 | -0.0252 | -0.0331 | -4.1445  |
| 1164 | 1   | Extremo 2A | -26.057  | 8.278  | 1.507 | -0.0252 | -0.7866 | -6.4429  |
| 1165 | 0   | Extremo 2A | -38.325  | -6.259 | 1.922 | 0.0303  | 0.9114  | -6.5359  |
| 1165 | 0.5 | Extremo 2A | -38.325  | 1.104  | 1.922 | 0.0303  | -0.0494 | -5.2471  |
| 1165 | 1   | Extremo 1A | -38.325  | 8.467  | 1.922 | 0.0303  | -1.0102 | -7.64    |
| 1165 | 0   | Extremo 1A | -32.852  | -6.425 | 1.894 | -0.0104 | 0.9068  | -6.4507  |
| 1165 | 0.5 | Extremo 1A | -32.852  | 0.939  | 1.894 | -0.0104 | -0.0404 | -5.0792  |
| 1165 | 1   | Extremo 2A | -32.852  | 8.302  | 1.894 | -0.0104 | -0.9876 | -7.3893  |
| 1166 | 0   | Extremo 2A | -46.767  | -6.22  | 2.381 | 0.0555  | 1.133   | -7.3531  |
| 1166 | 0.5 | Extremo 2A | -46.767  | 1.143  | 2.381 | 0.0555  | -0.0574 | -6.0838  |
| 1166 | 1   | Extremo 1A | -46.767  | 8.506  | 2.381 | 0.0555  | -1.2479 | -8.4961  |
| 1166 | 0   | Extremo 1A | -41.202  | -6.386 | 2.355 | 0.0135  | 1.1293  | -7.2758  |
| 1166 | 0.5 | Extremo 1A | -41.202  | 0.977  | 2.355 | 0.0135  | -0.0483 | -5.9237  |
| 1166 | 1   | Extremo 2A | -41.202  | 8.341  | 2.355 | 0.0135  | -1.226  | -8.2533  |
| 1167 | 0   | Extremo 2A | -56.876  | -6.217 | 2.895 | 0.0353  | 1.3839  | -8.0988  |
| 1167 | 0.5 | Extremo 2A | -56.876  | 1.146  | 2.895 | 0.0353  | -0.0638 | -6.8309  |
| 1167 | 1   | Extremo 1A | -56.876  | 8.509  | 2.895 | 0.0353  | -1.5115 | -9.2446  |
| 1167 | 0   | Extremo 1A | -51.227  | -6.385 | 2.873 | -0.0081 | 1.3816  | -8.0355  |
| 1167 | 0.5 | Extremo 1A | -51.227  | 0.979  | 2.873 | -0.0081 | -0.0547 | -6.684   |
| 1167 | 1   | Extremo 2A | -51.227  | 8.342  | 2.873 | -0.0081 | -1.4911 | -9.0142  |
| 1168 | 0   | Extremo 2A | -68.748  | -6.292 | 3.496 | -0.0376 | 1.6796  | -9.079   |
| 1168 | 0.5 | Extremo 2A | -68.748  | 1.071  | 3.496 | -0.0376 | -0.0682 | -7.7738  |
| 1168 | 1   | Extremo 1A | -68.748  | 8.434  | 3.496 | -0.0376 | -1.816  | -10.1502 |
| 1168 | 0   | Extremo 1A | -63.028  | -6.464 | 3.475 | -0.0823 | 1.6783  | -9.0316  |
| 1168 | 0.5 | Extremo 1A | -63.028  | 0.9    | 3.475 | -0.0823 | -0.0592 | -7.6406  |
| 1168 | 1   | Extremo 2A | -63.028  | 8.263  | 3.475 | -0.0823 | -1.7966 | -9.9313  |
| 1169 | 0   | Extremo 2A | -82.334  | -6.449 | 4.098 | -0.1165 | 1.9752  | -10.3359 |
| 1169 | 0.5 | Extremo 2A | -82.334  | 0.914  | 4.098 | -0.1165 | -0.0739 | -8.9523  |
| 1169 | 1   | Extremo 1A | -82.334  | 8.278  | 4.098 | -0.1165 | -2.1231 | -11.2503 |
| 1169 | 0   | Extremo 1A | -76.549  | -6.623 | 4.08  | -0.1639 | 1.975   | -10.3065 |
| 1169 | 0.5 | Extremo 1A | -76.549  | 0.733  | 4.08  | -0.1639 | -0.0648 | -8.8321  |
| 1169 | 1   | Extremo 2A | -76.549  | 8.096  | 4.08  | -0.1639 | -2.1046 | -11.0394 |
| 1170 | 0   | Extremo 2A | -96.826  | -6.692 | 4.473 | -0.1413 | 2.1537  | -11.7099 |
| 1170 | 0.5 | Extremo 2A | -96.826  | 0.671  | 4.473 | -0.1413 | -0.0827 | -10.2045 |
| 1170 | 1   | Extremo 1A | -96.826  | 8.034  | 4.473 | -0.1413 | -2.319  | -12.3807 |
| 1170 | 0   | Extremo 1A | -90.99   | -6.891 | 4.46  | -0.1939 | 2.1566  | -11.7041 |
| 1170 | 0.5 | Extremo 1A | -90.99   | 0.473  | 4.46  | -0.1939 | -0.0732 | -10.0997 |
| 1170 | 1   | Extremo 2A | -90.99   | 7.836  | 4.46  | -0.1939 | -2.303  | -12.1768 |
| 1171 | 0   | Extremo 2A | -109.918 | -6.225 | 4.175 | -0.0651 | 2.0158  | -12.8154 |
| 1171 | 0.5 | Extremo 2A | -109.918 | 0.438  | 4.175 | -0.0651 | -0.0715 | -11.1938 |
| 1171 | 1   | Extremo 1A | -109.918 | 7.802  | 4.175 | -0.0651 | -2.1588 | -13.2537 |
| 1171 | 0   | Extremo 1A | -104.076 | -7.148 | 4.178 | -0.1253 | 2.0273  | -12.8438 |
| 1171 | 0.5 | Extremo 1A | -104.076 | 0.216  | 4.178 | -0.1253 | -0.0616 | -11.1109 |
| 1171 | 1   | Extremo 2A | -104.076 | 7.579  | 4.178 | -0.1253 | -2.1505 | -13.0596 |

|      |     |            |          |        |       |           |         |          |
|------|-----|------------|----------|--------|-------|-----------|---------|----------|
| 1172 | 0   | Extremo 2A | -119.738 | -7.02  | 3.614 | 0.0682    | 1.8014  | -13.2477 |
| 1172 | 0.5 | Extremo 2A | -119.738 | 0.343  | 3.614 | 0.0682    | -0.0055 | -11.5784 |
| 1172 | 1   | Extremo 1A | -119.738 | 7.706  | 3.614 | 0.0682    | -1.8124 | -13.5906 |
| 1172 | 0   | Extremo 1A | -113.999 | -7.275 | 3.648 | 0.0003642 | 1.8275  | -13.3214 |
| 1172 | 0.5 | Extremo 1A | -113.999 | 0.088  | 3.648 | 0.0003642 | 0.0036  | -11.5245 |
| 1172 | 1   | Extremo 2A | -113.999 | 7.451  | 3.648 | 0.0003642 | -1.8204 | -13.4092 |
| 1173 | 0   | Extremo 2A | -129.644 | -7.094 | 4.256 | 0.2263    | 2.1889  | -13.0393 |
| 1173 | 0.5 | Extremo 2A | -129.644 | 0.269  | 4.256 | 0.2263    | 0.0607  | -11.3329 |
| 1173 | 1   | Extremo 1A | -129.644 | 7.632  | 4.256 | 0.2263    | -2.0674 | -13.3081 |
| 1173 | 0   | Extremo 1A | -124.083 | -7.383 | 4.293 | 0.1521    | 2.2145  | -13.156  |
| 1173 | 0.5 | Extremo 1A | -124.083 | -0.02  | 4.293 | 0.1521    | 0.0682  | -11.3053 |
| 1173 | 1   | Extremo 2A | -124.083 | 7.343  | 4.293 | 0.1521    | -2.0782 | -13.1362 |
| 1174 | 0   | Extremo 2A | -143.127 | -7.345 | 4.68  | 0.3644    | 2.4127  | -12.0518 |
| 1174 | 0.5 | Extremo 2A | -143.127 | 0.018  | 4.68  | 0.3644    | 0.0729  | -10.2202 |
| 1174 | 1   | Extremo 1A | -143.127 | 7.382  | 4.68  | 0.3644    | -2.267  | -12.0701 |
| 1174 | 0   | Extremo 1A | -137.725 | -7.666 | 4.708 | 0.2827    | 2.4333  | -12.2088 |
| 1174 | 0.5 | Extremo 1A | -137.725 | -0.303 | 4.708 | 0.2827    | 0.0794  | -10.2165 |
| 1174 | 1   | Extremo 2A | -137.725 | 7.06   | 4.708 | 0.2827    | -2.2745 | -11.9058 |
| 1175 | 0   | Extremo 2A | -158.37  | -7.664 | 4.384 | 0.3768    | 2.2563  | -10.5917 |
| 1175 | 0.5 | Extremo 2A | -158.37  | -0.301 | 4.384 | 0.3768    | 0.0642  | -8.6004  |
| 1175 | 1   | Extremo 1A | -158.37  | 7.062  | 4.384 | 0.3768    | -2.1279 | -10.2907 |
| 1175 | 0   | Extremo 1A | -153.086 | -8.011 | 4.406 | 0.2869    | 2.2732  | -10.7908 |
| 1175 | 0.5 | Extremo 1A | -153.086 | -0.648 | 4.406 | 0.2869    | 0.0703  | -8.626   |
| 1175 | 1   | Extremo 2A | -153.086 | 6.715  | 4.406 | 0.2869    | -2.1326 | -10.1428 |
| 1176 | 0   | Extremo 2A | -172.909 | -7.891 | 3.835 | 0.312     | 1.9771  | -9.023   |
| 1176 | 0.5 | Extremo 2A | -172.909 | -0.527 | 3.835 | 0.312     | 0.0597  | -6.9186  |
| 1176 | 1   | Extremo 1A | -172.909 | 6.836  | 3.835 | 0.312     | -1.8576 | -8.4957  |
| 1176 | 0   | Extremo 1A | -167.718 | -8.258 | 3.852 | 0.2146    | 1.9915  | -9.2706  |
| 1176 | 0.5 | Extremo 1A | -167.718 | -0.895 | 3.852 | 0.2146    | 0.0656  | -6.9825  |
| 1176 | 1   | Extremo 2A | -167.718 | 6.469  | 3.852 | 0.2146    | -1.8603 | -8.3761  |
| 1177 | 0   | Extremo 2A | -185.83  | -8.002 | 3.267 | 0.2462    | 1.692   | -7.5479  |
| 1177 | 0.5 | Extremo 2A | -185.83  | -0.639 | 3.267 | 0.2462    | 0.0585  | -5.3875  |
| 1177 | 1   | Extremo 1A | -185.83  | 6.724  | 3.267 | 0.2462    | -1.5751 | -6.9088  |
| 1177 | 0   | Extremo 1A | -180.713 | -8.387 | 3.281 | 0.1432    | 1.7045  | -7.8512  |
| 1177 | 0.5 | Extremo 1A | -180.713 | -1.024 | 3.281 | 0.1432    | 0.0641  | -5.4986  |
| 1177 | 1   | Extremo 2A | -180.713 | 6.34   | 3.281 | 0.1432    | -1.5764 | -6.8276  |
| 1178 | 0   | Extremo 2A | -197.133 | -8.022 | 2.815 | 0.2233    | 1.4637  | -6.1672  |
| 1178 | 0.5 | Extremo 2A | -197.133 | -0.659 | 2.815 | 0.2233    | 0.056   | -3.997   |
| 1178 | 1   | Extremo 1A | -197.133 | 6.704  | 2.815 | 0.2233    | -1.3516 | -5.5084  |
| 1178 | 0   | Extremo 1A | -192.077 | -8.42  | 2.826 | 0.1167    | 1.4746  | -6.5278  |
| 1178 | 0.5 | Extremo 1A | -192.077 | -1.057 | 2.826 | 0.1167    | 0.0614  | -4.1586  |
| 1178 | 1   | Extremo 2A | -192.077 | 6.307  | 2.826 | 0.1167    | -1.3518 | -5.471   |
| 1179 | 0   | Extremo 2A | -207.11  | -8.008 | 2.44  | 0.2391    | 1.2701  | -4.6936  |
| 1179 | 0.5 | Extremo 2A | -207.11  | -0.645 | 2.44  | 0.2391    | 0.05    | -2.5304  |
| 1179 | 1   | Extremo 1A | -207.11  | 6.718  | 2.44  | 0.2391    | -1.17   | -4.0488  |
| 1179 | 0   | Extremo 1A | -202.103 | -8.416 | 2.449 | 0.1298    | 1.2798  | -5.1098  |
| 1179 | 0.5 | Extremo 1A | -202.103 | -1.053 | 2.449 | 0.1298    | 0.0552  | -2.7427  |
| 1179 | 1   | Extremo 2A | -202.103 | 6.311  | 2.449 | 0.1298    | -1.1693 | -4.0571  |
| 1180 | 0   | Extremo 2A | -215.876 | -8.017 | 2.111 | 0.2505    | 1.0978  | -3.1491  |
| 1180 | 0.5 | Extremo 2A | -215.876 | -0.654 | 2.111 | 0.2505    | 0.0424  | -0.9814  |
| 1180 | 1   | Extremo 1A | -215.876 | 6.709  | 2.111 | 0.2505    | -1.0129 | -2.4953  |
| 1180 | 0   | Extremo 1A | -210.908 | -8.431 | 2.118 | 0.1382    | 1.1066  | -3.6215  |
| 1180 | 0.5 | Extremo 1A | -210.908 | -1.068 | 2.118 | 0.1382    | 0.0475  | -1.2467  |
| 1180 | 1   | Extremo 2A | -210.908 | 6.295  | 2.118 | 0.1382    | -1.0116 | -2.5535  |
| 1181 | 0   | Extremo 2A | -223.476 | -8.042 | 1.824 | 0.2545    | 0.947   | -1.5852  |
| 1181 | 0.5 | Extremo 2A | -223.476 | -0.678 | 1.824 | 0.2545    |         |          |





|      |     |            |          |         |        |         |           |         |
|------|-----|------------|----------|---------|--------|---------|-----------|---------|
| 1184 | 0   | Extremo 2A | -239.89  | -7.972  | 1.188  | 0.2987  | 0.623     | 3.5538  |
| 1184 | 0.5 | Extremo 2A | -239.89  | -0.609  | 1.188  | 0.2987  | 0.0292    | 5.6989  |
| 1184 | 1   | Extremo 1A | -239.89  | 6.755   | 1.188  | 0.2987  | -0.5645   | 4.1624  |
| 1184 | 0   | Extremo 1A | -235.051 | -8.417  | 1.195  | 0.1693  | 0.6314    | 2.7411  |
| 1184 | 0.5 | Extremo 1A | -235.051 | -1.054  | 1.195  | 0.1693  | 0.0339    | 5.109   |
| 1184 | 1   | Extremo 2A | -235.051 | 6.309   | 1.195  | 0.1693  | -0.5636   | 3.7952  |
| 1185 | 0   | Extremo 2A | -244.03  | -7.926  | 1.096  | 0.2799  | 0.526     | 5.2324  |
| 1185 | 0.5 | Extremo 2A | -244.03  | -0.563  | 1.096  | 0.2799  | 0.0281    | 7.3546  |
| 1185 | 1   | Extremo 1A | -244.03  | 6.8     | 1.096  | 0.2799  | -0.5197   | 5.7951  |
| 1185 | 0   | Extremo 1A | -239.229 | -8.375  | 1.104  | 0.1515  | 0.5847    | 4.3269  |
| 1185 | 0.5 | Extremo 1A | -239.229 | -1.011  | 1.104  | 0.1515  | 0.0327    | 6.6734  |
| 1185 | 1   | Extremo 2A | -239.229 | 6.352   | 1.104  | 0.1515  | -0.5194   | 5.3382  |
| 1186 | 0   | Extremo 2A | -247.819 | -7.873  | 0.984  | 0.2836  | 0.5175    | 6.7979  |
| 1186 | 0.5 | Extremo 2A | -247.819 | -0.509  | 0.984  | 0.2836  | 0.0254    | 8.8933  |
| 1186 | 1   | Extremo 1A | -247.819 | 6.854   | 0.984  | 0.2836  | -0.4667   | 7.3072  |
| 1186 | 0   | Extremo 1A | -243.058 | -8.32   | 0.994  | 0.1549  | 0.5268    | 5.8072  |
| 1186 | 0.5 | Extremo 1A | -243.058 | -0.957  | 0.994  | 0.1549  | 0.0298    | 8.1264  |
| 1186 | 1   | Extremo 2A | -243.058 | 6.406   | 0.994  | 0.1549  | -0.4672   | 6.7639  |
| 1187 | 0   | Extremo 2A | -251.095 | -7.783  | 0.842  | 0.3314  | 0.4444    | 8.4057  |
| 1187 | 0.5 | Extremo 2A | -251.095 | -0.42   | 0.842  | 0.3314  | 0.0235    | 10.4565 |
| 1187 | 1   | Extremo 1A | -251.095 | 6.943   | 0.842  | 0.3314  | -0.3973   | 8.8258  |
| 1187 | 0   | Extremo 1A | -246.382 | -8.226  | 0.854  | 0.2008  | 0.4547    | 7.3231  |
| 1187 | 0.5 | Extremo 1A | -246.382 | -0.863  | 0.854  | 0.2008  | 0.0278    | 9.5954  |
| 1187 | 1   | Extremo 2A | -246.382 | 6.5     | 0.854  | 0.2008  | -0.399    | 8.1862  |
| 1188 | 0   | Extremo 2A | -253.707 | -7.641  | 0.679  | 0.3895  | 0.3646    | 10.215  |
| 1188 | 0.5 | Extremo 2A | -253.707 | -0.278  | 0.679  | 0.3895  | 0.025     | 12.1946 |
| 1188 | 1   | Extremo 1A | -253.707 | 7.086   | 0.679  | 0.3895  | -0.3146   | 10.4926 |
| 1188 | 0   | Extremo 1A | -249.054 | -8.073  | 0.694  | 0.2604  | 0.3764    | 9.0256  |
| 1188 | 0.5 | Extremo 1A | -249.054 | -0.71   | 0.694  | 0.2604  | 0.0292    | 11.2213 |
| 1188 | 1   | Extremo 2A | -249.054 | 6.654   | 0.694  | 0.2604  | -0.318    | 9.7353  |
| 1189 | 0   | Extremo 2A | -255.755 | -7.536  | 0.569  | 0.3736  | 0.313     | 12.101  |
| 1189 | 0.5 | Extremo 2A | -255.755 | -0.173  | 0.569  | 0.3736  | 0.0283    | 14.0283 |
| 1189 | 1   | Extremo 1A | -255.755 | 7.19    | 0.569  | 0.3736  | -0.2565   | 12.2739 |
| 1189 | 0   | Extremo 1A | -251.177 | -7.935  | 0.589  | 0.2572  | 0.3266    | 10.8102 |
| 1189 | 0.5 | Extremo 1A | -251.177 | -0.572  | 0.589  | 0.2572  | 0.0323    | 12.9371 |
| 1189 | 1   | Extremo 2A | -251.177 | 6.791   | 0.589  | 0.2572  | -0.262    | 11.3824 |
| 1190 | 0   | Extremo 2A | -257.519 | -7.486  | 0.491  | 0.2885  | 0.2755    | 13.5897 |
| 1190 | 0.5 | Extremo 2A | -257.519 | -0.122  | 0.491  | 0.2885  | 0.0297    | 15.4916 |
| 1190 | 1   | Extremo 1A | -257.519 | 7.241   | 0.491  | 0.2885  | -0.216    | 13.712  |
| 1190 | 0   | Extremo 1A | -253.032 | -7.822  | 0.515  | 0.1965  | 0.291     | 12.2455 |
| 1190 | 0.5 | Extremo 1A | -253.032 | -0.459  | 0.515  | 0.1965  | 0.0335    | 14.3157 |
| 1190 | 1   | Extremo 2A | -253.032 | 6.904   | 0.515  | 0.1965  | -0.2239   | 12.7044 |
| 1191 | 0   | Extremo 2A | -259.038 | -7.444  | 0.388  | 0.1974  | 0.2235    | 14.633  |
| 1191 | 0.5 | Extremo 2A | -259.038 | -0.081  | 0.388  | 0.1974  | 0.0293    | 16.5143 |
| 1191 | 1   | Extremo 1A | -259.038 | 7.282   | 0.388  | 0.1974  | -0.165    | 14.714  |
| 1191 | 0   | Extremo 1A | -254.663 | -7.686  | 0.418  | 0.1377  | 0.2416    | 13.2913 |
| 1191 | 0.5 | Extremo 1A | -254.663 | -0.323  | 0.418  | 0.1377  | 0.0328    | 15.2934 |
| 1191 | 1   | Extremo 2A | -254.663 | 7.041   | 0.418  | 0.1377  | -0.1759   | 13.6139 |
| 1192 | 0   | Extremo 2A | -260.197 | -7.413  | 0.267  | 0.1247  | 0.1622    | 15.3215 |
| 1192 | 0.5 | Extremo 2A | -260.197 | -0.05   | 0.267  | 0.1247  | 0.0287    | 17.1873 |
| 1192 | 1   | Extremo 1A | -260.197 | 7.313   | 0.267  | 0.1247  | -0.1048   | 15.3715 |
| 1192 | 0   | Extremo 1A | -255.958 | -7.526  | 0.302  | 0.1034  | 0.1832    | 14.0336 |
| 1192 | 0.5 | Extremo 1A | -255.958 | -0.162  | 0.302  | 0.1034  | 0.032     | 15.9556 |
| 1192 | 1   | Extremo 2A | -255.958 | 7.201   | 0.302  | 0.1034  | -0.1193   | 14.196  |
| 1193 | 0   | Extremo 2A | -260.92  | -7.404  | 0.141  | 0.0656  | 0.099     | 15.7356 |
| 1193 | 0.5 | Extremo 2A | -260.92  | -0.04   | 0.141  | 0.0656  | 0.0286    | 17.5966 |
| 1193 | 1   | Extremo 1A | -260.92  | 7.323   | 0.141  | 0.0656  | -0.0417   | 15.776  |
| 1193 | 0   | Extremo 1A | -256.843 | -7.356  | 0.182  | 0.0872  | 0.1226    | 14.5451 |
| 1193 | 0.5 | Extremo 1A | -256.843 | 0.00745 | 0.182  | 0.0872  | 0.0314    | 16.3821 |
| 1193 | 1   | Extremo 2A | -256.843 | 7.371   | 0.182  | 0.0872  | -0.0598   | 14.5376 |
| 1194 | 0   | Extremo 2A | -261.187 | -7.412  | 0.017  | 0.0124  | 0.0377    | 15.9237 |
| 1194 | 0.5 | Extremo 2A | -261.187 | -0.048  | 0.017  | 0.0124  | 0.029     | 17.7887 |
| 1194 | 1   | Extremo 1A | -261.187 | 7.315   | 0.017  | 0.0124  | 0.0204    | 15.972  |
| 1194 | 0   | Extremo 1A | -257.294 | -7.184  | 0.062  | 0.0795  | 0.0623    | 14.8632 |
| 1194 | 0.5 | Extremo 1A | -257.294 | 0.179   | 0.062  | 0.0795  | 0.0311    | 16.6145 |
| 1194 | 1   | Extremo 2A | -257.294 | 7.542   | 0.062  | 0.0795  | 2.384E-05 | 14.6842 |
| 1195 | 0   | Extremo 2A | -261.008 | -7.42   | -0.101 | -0.0386 | -0.021    | 15.9121 |
| 1195 | 0.5 | Extremo 2A | -261.008 | -0.057  | -0.101 | -0.0386 | 0.0297    | 17.7811 |
| 1195 | 1   | Extremo 1A | -261.008 | 7.307   | -0.101 | -0.0386 | 0.0804    | 15.9486 |
| 1195 | 0   | Extremo 1A | -257.303 | -7.013  | -0.057 | 0.0739  | 0.0024    | 15.0025 |
| 1195 | 0.5 | Extremo 1A | -257.303 | 0.351   | -0.057 | 0.0739  | 0.0311    | 16.668  |
| 1195 | 1   | Extremo 2A | -257.303 | 7.714   | -0.057 | 0.0739  | 0.0598    | 14.6519 |

|      |     |            |          |           |        |         |         |         |
|------|-----|------------|----------|-----------|--------|---------|---------|---------|
| 1196 | 0   | Extremo 2A | -260.401 | -7.41     | -0.218 | -0.0889 | -0.0784 | 15.709  |
| 1196 | 0.5 | Extremo 2A | -260.401 | -0.046    | -0.218 | -0.0889 | 0.0304  | 17.573  |
| 1196 | 1   | Extremo 1A | -260.401 | 7.317     | -0.218 | -0.0889 | 0.1392  | 15.7554 |
| 1196 | 0   | Extremo 1A | -256.871 | -6.841    | -0.178 | 0.0657  | -0.0574 | 14.9621 |
| 1196 | 0.5 | Extremo 1A | -256.871 | 0.522     | -0.178 | 0.0657  | 0.0314  | 16.5418 |
| 1196 | 1   | Extremo 2A | -256.871 | 7.885     | -0.178 | 0.0657  | 0.1201  | 14.44   |
| 1197 | 0   | Extremo 2A | -259.377 | -7.37     | -0.333 | -0.1422 | -0.1355 | 15.3021 |
| 1197 | 0.5 | Extremo 2A | -259.377 | -0.007141 | -0.333 | -0.1422 | 0.0313  | 17.1465 |
| 1197 | 1   | Extremo 1A | -259.377 | 7.356     | -0.333 | -0.1422 | 0.198   | 15.3092 |
| 1197 | 0   | Extremo 1A | -256.004 | -6.672    | -0.298 | 0.0482  | -0.117  | 14.7241 |
| 1197 | 0.5 | Extremo 1A | -256.004 | 0.691     | -0.298 | 0.0482  | 0.0319  | 16.2193 |
| 1197 | 1   | Extremo 2A | -256.004 | 8.054     | -0.298 | 0.0482  | 0.1807  | 14.0328 |
| 1198 | 0   | Extremo 2A | -257.962 | -7.306    | -0.445 | -0.2072 | -0.1902 | 14.6451 |
| 1198 | 0.5 | Extremo 2A | -257.962 | 0.057     | -0.445 | -0.2072 | 0.0324  | 16.4575 |
| 1198 | 1   | Extremo 1A | -257.962 | 7.42      | -0.445 | -0.2072 | 0.2549  | 14.5882 |
| 1198 | 0   | Extremo 1A | -254.727 | -6.514    | -0.413 | 0.0108  | -0.1736 | 14.2391 |
| 1198 | 0.5 | Extremo 1A | -254.727 | 0.849     | -0.413 | 0.0108  | 0.0327  | 15.6554 |
| 1198 | 1   | Extremo 2A | -254.727 | 8.212     | -0.413 | 0.0108  | 0.2391  | 13.3901 |
| 1199 | 0   | Extremo 2A | -256.226 | -7.236    | -0.54  | -0.2904 | -0.2367 | 13.6462 |
| 1199 | 0.5 | Extremo 2A | -256.226 | 0.128     | -0.54  | -0.2904 | 0.0332  | 15.4232 |
| 1199 | 1   | Extremo 1A | -256.226 | 7.491     | -0.54  | -0.2904 | 0.3032  | 13.5186 |
| 1199 | 0   | Extremo 1A | -253.115 | -6.384    | -0.51  | -0.0533 | -0.2217 | 13.4132 |
| 1199 | 0.5 | Extremo 1A | -253.115 | 0.979     | -0.51  | -0.0533 | 0.0334  | 14.7646 |
| 1199 | 1   | Extremo 2A | -253.115 | 8.342     | -0.51  | -0.0533 | 0.2885  | 12.4343 |
| 1200 | 0   | Extremo 2A | -254.276 | -7.162    | -0.611 | -0.3686 | -0.2736 | 12.2142 |
| 1200 | 0.5 | Extremo 2A | -254.276 | 0.201     | -0.611 | -0.3686 | 0.0321  | 13.9546 |
| 1200 | 1   | Extremo 1A | -254.276 | 7.564     | -0.611 | -0.3686 | 0.3378  | 12.0134 |
| 1200 | 0   | Extremo 1A | -251.278 | -6.282    | -0.584 | -0.1201 | -0.2599 | 12.1549 |
| 1200 | 0.5 | Extremo 1A | -251.278 | 1.081     | -0.584 | -0.1201 | 0.0321  | 13.4553 |
| 1200 | 1   | Extremo 2A | -251.278 | 8.444     | -0.584 | -0.1201 | 0.3241  | 11.0741 |
| 1201 | 0   | Extremo 2A | -252.068 | -7.042    | -0.716 | -0.3795 | -0.3288 | 10.4416 |
| 1201 | 0.5 | Extremo 2A | -252.068 | 0.321     | -0.716 | -0.3795 | 0.0291  | 12.1219 |
| 1201 | 1   | Extremo 1A | -252.068 | 7.684     | -0.716 | -0.3795 | 0.387   | 10.1206 |
| 1201 | 0   | Extremo 1A | -249.173 | -6.156    | -0.69  | -0.1261 | -0.316  | 10.5585 |
| 1201 | 0.5 | Extremo 1A | -249.173 | 1.207     | -0.69  | -0.1261 | 0.029   | 11.7956 |
| 1201 | 1   | Extremo 2A | -249.173 | 8.571     | -0.69  | -0.1261 | 0.374   | 9.3511  |
| 1202 | 0   | Extremo 2A | -249.314 | -6.891    | -0.875 | -0.3185 | -0.4097 | 8.827   |
| 1202 | 0.5 | Extremo 2A | -249.314 | 0.473     | -0.875 | -0.3185 | 0.0278  | 10.3871 |
| 1202 | 1   | Extremo 1A | -249.314 | 7.836     | -0.875 | -0.3185 | 0.4653  | 8.3099  |
| 1202 | 0   | Extremo 1A | -246.518 | -6.011    | -0.849 | -0.0675 | -0.3971 | 9.0693  |
| 1202 | 0.5 | Extremo 1A | -246.518 | 1.352     | -0.849 | -0.0675 | 0.0276  | 10.2339 |
| 1202 | 1   | Extremo 2A | -246.518 | 8.716     | -0.849 | -0.0675 | 0.4524  | 7.717   |
| 1203 | 0   | Extremo 2A | -245.907 | -6.796    | -1.015 | -0.2691 | -0.4778 | 7.2706  |
| 1203 | 0.5 | Extremo 2A | -245.907 | 0.568     | -1.015 | -0.2691 | 0.0299  | 8.8276  |
| 1203 | 1   | Extremo 1A | -245.907 | 7.931     | -1.015 | -0.2691 | 0.5376  | 6.703   |
| 1203 | 0   | Extremo 1A | -243.21  | -5.925    | -0.99  | -0.0252 | -0.4653 | 7.7103  |
| 1203 | 0.5 | Extremo 1A | -243.21  | 1.438     | -0.99  | -0.0252 | 0.0296  | 8.832   |
| 1203 | 1   | Extremo 2A | -243.21  | 8.801     | -0.99  | -0.0252 | 0.5244  | 6.2722  |
| 1204 | 0   | Extremo 2A | -241.996 | -6.739    | -1.126 | -0.2644 | -0.53   | 5.7644  |
| 1204 | 0.5 | Extremo 2A | -241.996 | 0.624     | -1.126 | -0.2644 | 0.0328  | 7.2931  |
| 1204 | 1   | Extremo 1A | -241.996 | 7.987     | -1.126 | -0.2644 | 0.5956  | 5.1403  |
| 1204 | 0   | Extremo 1A | -239.398 | -5.881    | -1.1   | -0.0297 | -0.5175 | 6.3339  |
| 1204 | 0.5 | Extremo 1A | -239.398 | 1.482     | -1.1   | -0.0297 | 0.0324  | 7.4337  |
| 1204 | 1   | Extremo 2A | -239.398 | 8.845     | -1.1   | -0.0297 | 0.5823  | 4.8518  |
| 1205 | 0   | Extremo 2A | -237.738 | -6.692    | -1.216 |         |         |         |



|      |     |            |          |          |        |         |         |          |
|------|-----|------------|----------|----------|--------|---------|---------|----------|
| 1208 | 0   | Extremo 2A | -220.975 | -6.625   | -1.855 | -0.2392 | -0.8871 | -0.9127  |
| 1208 | 0,5 | Extremo 2A | -220.975 | 0.738    | -1.855 | -0.2392 | 0.0406  | 0.5589   |
| 1208 | 1   | Extremo 1A | -220.975 | 8.102    | -1.855 | -0.2392 | 0.9682  | -1.651   |
| 1208 | 0   | Extremo 1A | -218.787 | -5.854   | -1.825 | -0.0294 | -0.8729 | 0.0448   |
| 1208 | 0,5 | Extremo 1A | -218.787 | 1.51     | -1.825 | -0.0294 | 0.0397  | 1.1307   |
| 1208 | 1   | Extremo 2A | -218.787 | 8.873    | -1.825 | -0.0294 | 0.9524  | -1.4649  |
| 1209 | 0   | Extremo 2A | -213.242 | -6.651   | -2.145 | -0.2357 | -1.0247 | -2.4977  |
| 1209 | 0,5 | Extremo 2A | -213.242 | 0.713    | -2.145 | -0.2357 | 0.048   | -1.0132  |
| 1209 | 1   | Extremo 1A | -213.242 | 8.076    | -2.145 | -0.2357 | 1.1206  | -3.2103  |
| 1209 | 0   | Extremo 1A | -211.177 | -5.9     | -2.113 | -0.0356 | -1.0094 | -1.4494  |
| 1209 | 0,5 | Extremo 1A | -211.177 | 1.463    | -2.113 | -0.0356 | 0.047   | -0.3403  |
| 1209 | 1   | Extremo 2A | -211.177 | 8.827    | -2.113 | -0.0356 | 1.1033  | -2.9128  |
| 1210 | 0   | Extremo 2A | -204.331 | -6.661   | -2.479 | -0.2249 | -1.1836 | -4.0486  |
| 1210 | 0,5 | Extremo 2A | -204.331 | 0.702    | -2.479 | -0.2249 | 0.0558  | -2.5587  |
| 1210 | 1   | Extremo 1A | -204.331 | 8.065    | -2.479 | -0.2249 | 1.2951  | -4.7505  |
| 1210 | 0   | Extremo 1A | -202.4   | -5.938   | -2.443 | -0.0394 | -1.1669 | -2.9346  |
| 1210 | 0,5 | Extremo 1A | -202.4   | 1.425    | -2.443 | -0.0394 | 0.0546  | -1.8062  |
| 1210 | 1   | Extremo 2A | -202.4   | 8.788    | -2.443 | -0.0394 | 1.2761  | -4.3595  |
| 1211 | 0   | Extremo 2A | -194.191 | -6.65    | -2.859 | -0.2098 | -1.3673 | -5.5064  |
| 1211 | 0,5 | Extremo 2A | -194.191 | 0.713    | -2.859 | -0.2098 | 0.062   | -4.0222  |
| 1211 | 1   | Extremo 1A | -194.191 | 8.077    | -2.859 | -0.2098 | 1.4913  | -6.2197  |
| 1211 | 0   | Extremo 1A | -192.405 | -5.97    | -2.819 | -0.0426 | -1.3491 | -4.368   |
| 1211 | 0,5 | Extremo 1A | -192.405 | 1.394    | -2.819 | -0.0426 | 0.0607  | -3.2241  |
| 1211 | 1   | Extremo 2A | -192.405 | 8.757    | -2.819 | -0.0426 | 1.4704  | -5.7617  |
| 1212 | 0   | Extremo 2A | -182.707 | -6.673   | -3.316 | -0.2338 | -1.5933 | -6.9058  |
| 1212 | 0,5 | Extremo 2A | -182.707 | 0.69     | -3.316 | -0.2338 | 0.0646  | -5.4099  |
| 1212 | 1   | Extremo 1A | -182.707 | 8.053    | -3.316 | -0.2338 | 1.7226  | -7.5957  |
| 1212 | 0   | Extremo 1A | -181.077 | -6.049   | -3.273 | -0.0823 | -1.5733 | -5.779   |
| 1212 | 0,5 | Extremo 1A | -181.077 | 1.314    | -3.273 | -0.0823 | 0.0632  | -4.5952  |
| 1212 | 1   | Extremo 2A | -181.077 | 8.677    | -3.273 | -0.0823 | 1.6997  | -7.0931  |
| 1213 | 0   | Extremo 2A | -169.584 | -6.79    | -3.891 | -0.3015 | -1.8793 | -8.4937  |
| 1213 | 0,5 | Extremo 2A | -169.584 | 0.573    | -3.891 | -0.3015 | 0.0661  | -6.9393  |
| 1213 | 1   | Extremo 1A | -169.584 | 7.936    | -3.891 | -0.3015 | 2.0114  | -9.0665  |
| 1213 | 0   | Extremo 1A | -168.122 | -6.236   | -3.843 | -0.1646 | -1.857  | -7.3752  |
| 1213 | 0,5 | Extremo 1A | -168.122 | 1.127    | -3.843 | -0.1646 | 0.0646  | -6.0979  |
| 1213 | 1   | Extremo 2A | -168.122 | 8.49     | -3.843 | -0.1646 | 1.9861  | -8.5021  |
| 1214 | 0   | Extremo 2A | -154.816 | -7.025   | -4.448 | -0.3691 | -2.1534 | -10.2936 |
| 1214 | 0,5 | Extremo 2A | -154.816 | 0.339    | -4.448 | -0.3691 | 0.0708  | -8.6222  |
| 1214 | 1   | Extremo 1A | -154.816 | 7.702    | -4.448 | -0.3691 | 2.2949  | -10.6323 |
| 1214 | 0   | Extremo 1A | -153.531 | -6.555   | -4.396 | -0.2529 | -2.129  | -9.1838  |
| 1214 | 0,5 | Extremo 1A | -153.531 | 0.808    | -4.396 | -0.2529 | 0.0692  | -7.7469  |
| 1214 | 1   | Extremo 2A | -153.531 | 8.171    | -4.396 | -0.2529 | 2.2674  | -9.9917  |
| 1215 | 0   | Extremo 2A | -139.321 | -7.355   | -4.751 | -0.3602 | -2.2956 | -12.0832 |
| 1215 | 0,5 | Extremo 2A | -139.321 | 0.008177 | -4.751 | -0.3602 | 0.0798  | -10.2465 |
| 1215 | 1   | Extremo 1A | -139.321 | 7.371    | -4.751 | -0.3602 | 2.4553  | -12.0914 |
| 1215 | 0   | Extremo 1A | -138.216 | -6.985   | -4.696 | -0.2726 | -2.27   | -11.0014 |
| 1215 | 0,5 | Extremo 1A | -138.216 | 0.379    | -4.696 | -0.2726 | 0.0783  | -9.3499  |
| 1215 | 1   | Extremo 2A | -138.216 | 7.742    | -4.696 | -0.2726 | 2.4265  | -11.38   |
| 1216 | 0   | Extremo 2A | -125.577 | -7.621   | -4.328 | -0.2254 | -2.0959 | -13.336  |
| 1216 | 0,5 | Extremo 2A | -125.577 | -0.258   | -4.328 | -0.2254 | 0.0682  | -11.3664 |
| 1216 | 1   | Extremo 1A | -125.577 | 7.106    | -4.328 | -0.2254 | 2.2324  | -13.0785 |
| 1216 | 0   | Extremo 1A | -124.635 | -7.362   | -4.276 | -0.17   | -2.0713 | -12.3199 |
| 1216 | 0,5 | Extremo 1A | -124.635 | 0.001047 | -4.276 | -0.17   | 0.0669  | -10.4796 |
| 1216 | 1   | Extremo 2A | -124.635 | 7.364    | -4.276 | -0.17   | 2.2051  | -12.321  |
| 1217 | 0   | Extremo 2A | -115.442 | -7.711   | -3.675 | -0.069  | -1.8351 | -13.6314 |
| 1217 | 0,5 | Extremo 2A | -115.442 | -0.348   | -3.675 | -0.069  | 0.0025  | -11.6166 |
| 1217 | 1   | Extremo 1A | -115.442 | 7.015    | -3.675 | -0.069  | 1.8401  | -13.2834 |
| 1217 | 0   | Extremo 1A | -114.635 | -7.563   | -3.628 | -0.0379 | -1.8122 | -12.7062 |
| 1217 | 0,5 | Extremo 1A | -114.635 | -0.2     | -3.628 | -0.0379 | 0.0016  | -10.7655 |
| 1217 | 1   | Extremo 2A | -114.635 | 7.163    | -3.628 | -0.0379 | 1.8154  | -12.5064 |
| 1218 | 0   | Extremo 2A | -105.458 | -7.822   | -4.217 | 0.0637  | -2.1723 | -13.2959 |
| 1218 | 0,5 | Extremo 2A | -105.458 | -0.459   | -4.217 | 0.0637  | -0.0637 | -11.2257 |
| 1218 | 1   | Extremo 1A | -105.458 | 6.904    | -4.217 | 0.0637  | 2.0449  | -12.8371 |
| 1218 | 0   | Extremo 1A | -104.776 | -7.767   | -4.171 | 0.076   | -2.1494 | -12.4332 |
| 1218 | 0,5 | Extremo 1A | -104.776 | -0.404   | -4.171 | 0.076   | -0.0641 | -10.3903 |
| 1218 | 1   | Extremo 2A | -104.776 | 6.959    | -4.171 | 0.076   | 2.0212  | -12.0291 |
| 1219 | 0   | Extremo 2A | -92.25   | -8.071   | -4.507 | 0.1391  | -2.3289 | -12.4113 |
| 1219 | 0,5 | Extremo 2A | -92.25   | -0.708   | -4.507 | 0.1391  | -0.0755 | -10.2166 |
| 1219 | 1   | Extremo 1A | -92.25   | 6.655    | -4.507 | 0.1391  | 2.178   | -11.7035 |
| 1219 | 0   | Extremo 1A | -91.704  | -8.092   | -4.462 | 0.1338  | -2.3068 | -11.5961 |
| 1219 | 0,5 | Extremo 1A | -91.704  | -0.729   | -4.462 | 0.1338  | -0.0756 | -9.3907  |
| 1219 | 1   | Extremo 2A | -91.704  | 6.634    | -4.462 | 0.1338  | 2.1556  | -10.867  |

|      |     |            |         |        |        |         |         |          |
|------|-----|------------|---------|--------|--------|---------|---------|----------|
| 1220 | 0   | Extremo 2A | -77.657 | -8.33  | -4.126 | 0.1123  | -2.13   | -11.2609 |
| 1220 | 0,5 | Extremo 2A | -77.657 | -0.966 | -4.126 | 0.1123  | -0.067  | -8.9369  |
| 1220 | 1   | Extremo 1A | -77.657 | 6.397  | -4.126 | 0.1123  | 1.996   | -10.2945 |
| 1220 | 0   | Extremo 1A | -77.247 | -8.408 | -4.088 | 0.0929  | -2.1108 | -10.487  |
| 1220 | 0,5 | Extremo 1A | -77.247 | -1.045 | -4.088 | 0.0929  | -0.067  | -8.1236  |
| 1220 | 1   | Extremo 2A | -77.247 | 6.318  | -4.088 | 0.0929  | 1.9768  | -9.4418  |
| 1221 | 0   | Extremo 2A | -63.983 | -8.498 | -3.517 | 0.0313  | -1.8198 | -10.1364 |
| 1221 | 0,5 | Extremo 2A | -63.983 | -1.135 | -3.517 | 0.0313  | -0.0614 | -7.7283  |
| 1221 | 1   | Extremo 1A | -63.983 | 6.229  | -3.517 | 0.0313  | 1.6971  | -9.0018  |
| 1221 | 0   | Extremo 1A | -63.697 | -8.617 | -3.486 | 0.0036  | -1.8042 | -9.3933  |
| 1221 | 0,5 | Extremo 1A | -63.697 | -1.254 | -3.486 | 0.0036  | -0.0614 | -6.9255  |
| 1221 | 1   | Extremo 2A | -63.697 | 6.109  | -3.486 | 0.0036  | 1.6815  | -8.1393  |
| 1222 | 0   | Extremo 2A | -52.041 | -8.58  | -2.911 | -0.043  | -1.5122 | -9.2023  |
| 1222 | 0,5 | Extremo 2A | -52.041 | -1.217 | -2.911 | -0.043  | -0.0569 | -6.7529  |
| 1222 | 1   | Extremo 1A | -52.041 | 6.146  | -2.911 | -0.043  | 1.3983  | -7.9851  |
| 1222 | 0   | Extremo 1A | -51.859 | -8.726 | -2.886 | -0.0748 | -1.5001 | -8.4699  |
| 1222 | 0,5 | Extremo 1A | -51.859 | -1.363 | -2.886 | -0.0748 | -0.057  | -5.9475  |
| 1222 | 1   | Extremo 2A | -51.859 | 6      | -2.886 | -0.0748 | 1.3861  | -7.1067  |
| 1223 | 0   | Extremo 2A | -41.882 | -8.583 | -2.39  | -0.0645 | -1.2456 | -8.4213  |
| 1223 | 0,5 | Extremo 2A | -41.882 | -1.22  | -2.39  | -0.0645 | -0.0505 | -5.9705  |
| 1223 | 1   | Extremo 1A | -41.882 | 6.143  | -2.39  | -0.0645 | 1.1446  | -7.2012  |
| 1223 | 0   | Extremo 1A | -41.784 | -8.749 | -2.372 | -0.1027 | -1.2367 | -7.6848  |
| 1223 | 0,5 | Extremo 1A | -41.784 | -1.386 | -2.372 | -0.1027 | -0.0506 | -5.1512  |
| 1223 | 1   | Extremo 2A | -41.784 | 5.978  | -2.372 | -0.1027 | 1.1355  | -6.2993  |
| 1224 | 0   | Extremo 2A | -33.408 | -8.549 | -1.926 | -0.041  | -1.0055 | -7.5334  |
| 1224 | 0,5 | Extremo 2A | -33.408 | -1.186 | -1.926 | -0.041  | -0.0425 | -5.0995  |
| 1224 | 1   | Extremo 1A | -33.408 | 6.177  | -1.926 | -0.041  | 0.9206  | -6.3473  |
| 1224 | 0   | Extremo 1A | -33.374 | -8.729 | -1.914 | -0.0885 | -0.9995 | -6.8135  |
| 1224 | 0,5 | Extremo 1A | -33.374 | -1.366 | -1.914 | -0.0885 | -0.0426 | -4.2898  |
| 1224 | 1   | Extremo 2A | -33.374 | 5.998  | -1.914 | -0.0885 | 0.9142  | -5.4478  |
| 1225 | 0   | Extremo 2A | -26.498 | -8.531 | -1.536 | -0.027  | -0.803  | -6.5611  |
| 1225 | 0,5 | Extremo 2A | -26.498 | -1.168 | -1.536 | -0.027  | -0.035  | -4.1363  |
| 1225 | 1   | Extremo 1A | -26.498 | 6.195  | -1.536 | -0.027  | 0.7329  | -5.3931  |
| 1225 | 0   | Extremo 1A | -26.509 | -8.718 | -1.528 | -0.0814 | -0.7992 | -5.8793  |
| 1225 | 0,5 | Extremo 1A | -26.509 | -1.355 | -1.528 | -0.0814 | -0.0353 | -3.3608  |
| 1225 | 1   | Extremo 2A | -26.509 | 6.008  | -1.528 | -0.0814 | 0.7286  | -4.524   |
| 1226 | 0   | Extremo 2A | -20.942 | -8.524 | -1.217 | -0.0372 | -0.6372 | -5.6038  |
| 1226 | 0,5 | Extremo 2A | -20.942 | -1.161 | -1.217 | -0.0372 | -0.0285 | -3.1824  |
| 1226 | 1   | Extremo 1A | -20.942 | 6.202  | -1.217 | -0.0372 | 0.5802  | -4.4427  |
| 1226 | 0   | Extremo 1A | -20.983 | -8.716 | -1.213 | -0.0937 | -0.6352 | -4.9695  |
| 1226 | 0,5 | Extremo 1A | -20.983 | -1.353 | -1.213 | -0.0937 | -0.0288 | -2.4521  |
| 1226 | 1   | Extremo 2A | -20.983 | 6.01   | -1.213 | -0.0937 | 0.5776  | -3.6164  |
| 1227 | 0   | Extremo 2A | -16.515 | -8.518 | -0.96  | -0.0587 | -0.5032 | -4.7316  |
| 1227 | 0,5 | Extremo 2A | -16.515 | -1.154 | -0.96  | -0.0587 | -0.023  | -2.3136  |
| 1227 | 1   | Extremo 1A | -16.515 | 6.209  | -0.96  | -0.0587 | 0.4572  | -3.5773  |
| 1227 | 0   | Extremo 1A | -16.573 | -8.713 | -0.959 | -0.1138 | -0.5027 | -4.14    |
| 1227 | 0,5 | Extremo 1A | -16.573 | -1.35  | -0.959 | -0.1138 | -0.0234 | -1.6242  |
| 1227 | 1   | Extremo 2A | -16.573 | 6.013  | -0.959 | -0.1138 | 0.456   | -2.7901  |
| 1228 | 0   | Extremo 2A | -13.006 | -8.49  | -0.757 | -0.0759 | -0.3972 | -3.9595  |
| 1228 | 0,5 | Extremo 2A | -13.006 | -1.127 | -0.757 | -0.0759 | -0.0187 | -1.5555  |
| 1228 | 1   | Extremo 1A | -13.006 | 6.237  | -0.757 | -0.0759 | 0.3599  | -2.833   |
| 1228 | 0   | Extremo 1A | -13.071 | -8.689 | -0.758 | -0.1284 | -0.3978 | -3.3945  |
| 1228 | 0,5 | Extremo 1A | -13.071 | -1.325 | -0.758 | -0.1284 | -0.019  | -0.891   |
| 1228 | 1   | Extremo 2A | -13.071 | 6.038  | -0.758 | -0.1284 | 0.3598  | -2.0692  |
| 1229 | 0   | Extremo 2A | -10.213 | -8.427 | -0.603 | -0.0839 | -0.3166 | -3.2721  |
| 1229 | 0,5 | Extremo 2A | -10.213 | -1.064 | -0.603 | -0.0839 | -0.0149 | -0.8     |



|      |         |            |           |        |           |         |           |          |
|------|---------|------------|-----------|--------|-----------|---------|-----------|----------|
| 1232 | 0       | Extremo 2A | -4.83     | -8.175 | -0.3      | -0.0732 | -0.1569   | -1.4854  |
| 1232 | 0.5     | Extremo 2A | -4.83     | -8.111 | -0.3      | -0.0732 | -0.007    | 0.7611   |
| 1232 | 1       | Extremo 1A | -4.83     | 6.552  | -0.3      | -0.0732 | 0.1428    | -0.674   |
| 1232 | 0       | Extremo 1A | -4.862    | -8.383 | -0.304    | -0.1377 | -0.1592   | -1.0787  |
| 1232 | 0.5     | Extremo 1A | -4.862    | -1.02  | -0.304    | -0.1377 | -0.0074   | 1.272    |
| 1232 | 1       | Extremo 2A | -4.862    | 6.344  | -0.304    | -0.1377 | 0.1444    | -0.0591  |
| 1233 | 0       | Extremo 2A | -3.719    | -8.059 | -0.24     | -0.0684 | -0.1257   | -1.0216  |
| 1233 | 0.5     | Extremo 2A | -3.719    | -0.695 | -0.24     | -0.0684 | -0.0055   | 1.1669   |
| 1233 | 1       | Extremo 1A | -3.719    | 6.668  | -0.24     | -0.0684 | 0.1146    | -0.3263  |
| 1233 | 0       | Extremo 1A | -3.74     | -8.262 | -0.244    | -0.1309 | -0.1279   | -0.6703  |
| 1233 | 0.5     | Extremo 1A | -3.74     | -0.898 | -0.244    | -0.1309 | -0.0059   | 1.6197   |
| 1233 | 1       | Extremo 2A | -3.74     | 6.465  | -0.244    | -0.1309 | 0.1161    | 0.2281   |
| 1234 | 0       | Extremo 2A | -2.819    | -7.908 | -0.197    | -0.0701 | -0.1027   | -0.6519  |
| 1234 | 0.5     | Extremo 2A | -2.819    | -0.544 | -0.197    | -0.0701 | -0.0042   | 1.4611   |
| 1234 | 1       | Extremo 1A | -2.819    | 6.819  | -0.197    | -0.0701 | 0.0942    | -0.1076  |
| 1234 | 0       | Extremo 1A | -2.827    | -8.104 | -0.2      | -0.1312 | -0.1048   | -0.3499  |
| 1234 | 0.5     | Extremo 1A | -2.827    | -0.741 | -0.2      | -0.1312 | -0.0046   | 1.8614   |
| 1234 | 1       | Extremo 2A | -2.827    | 6.622  | -0.2      | -0.1312 | 0.0957    | 0.3911   |
| 1235 | 0       | Extremo 2A | -2.075    | -7.719 | -0.163    | -0.069  | -0.0845   | -0.4317  |
| 1235 | 0.5     | Extremo 2A | -2.075    | -0.356 | -0.163    | -0.069  | -0.0031   | 1.5872   |
| 1235 | 1       | Extremo 1A | -2.075    | 7.007  | -0.163    | -0.069  | 0.0784    | -0.0755  |
| 1235 | 0       | Extremo 1A | -2.074    | -7.906 | -0.166    | -0.1296 | -0.0862   | -0.1864  |
| 1235 | 0.5     | Extremo 1A | -2.074    | -0.542 | -0.166    | -0.1296 | -0.0034   | 1.9256   |
| 1235 | 1       | Extremo 2A | -2.074    | 6.821  | -0.166    | -0.1296 | 0.0794    | 0.356    |
| 1236 | 0       | Extremo 2A | -1.451    | -7.494 | -0.137    | -0.0481 | -0.0706   | -0.3642  |
| 1236 | 0.5     | Extremo 2A | -1.451    | -0.131 | -0.137    | -0.0481 | -0.002    | 1.5422   |
| 1236 | 1       | Extremo 1A | -1.451    | 7.232  | -0.137    | -0.0481 | 0.0667    | -0.233   |
| 1236 | 0       | Extremo 1A | -1.442    | -7.662 | -0.139    | -0.1059 | -0.0717   | -0.182   |
| 1236 | 0.5     | Extremo 1A | -1.442    | -0.299 | -0.139    | -0.1059 | -0.0022   | 1.808    |
| 1236 | 1       | Extremo 2A | -1.442    | 7.065  | -0.139    | -0.1059 | 0.0672    | 0.1165   |
| 1237 | 0       | Extremo 2A | -0.914    | -7.189 | -0.118    | 0.0248  | -0.0596   | -0.3788  |
| 1237 | 0.5     | Extremo 2A | -0.914    | 0.175  | -0.118    | 0.0248  | -0.000723 | 1.3746   |
| 1237 | 1       | Extremo 1A | -0.914    | 7.538  | -0.118    | 0.0248  | 0.0582    | -0.5535  |
| 1237 | 0       | Extremo 1A | -0.9      | -7.327 | -0.118    | -0.0257 | -0.0599   | -0.2588  |
| 1237 | 0.5     | Extremo 1A | -0.9      | 0.036  | -0.118    | -0.0257 | -0.000914 | 1.5641   |
| 1237 | 1       | Extremo 2A | -0.9      | 7.399  | -0.118    | -0.0257 | 0.0581    | -0.2946  |
| 1238 | 0       | Extremo 2A | -0.454    | -6.643 | -0.097    | 0.1891  | -0.0477   | -0.2929  |
| 1238 | 0.5     | Extremo 2A | -0.454    | 0.721  | -0.097    | 0.1891  | 0.0009102 | 1.1876   |
| 1238 | 1       | Extremo 1A | -0.454    | 8.084  | -0.097    | 0.1891  | 0.0496    | -1.0136  |
| 1238 | 0       | Extremo 1A | -0.438    | -6.741 | -0.095    | 0.1504  | -0.0468   | -0.2241  |
| 1238 | 0.5     | Extremo 1A | -0.438    | 0.622  | -0.095    | 0.1504  | 0.0008564 | 1.3055   |
| 1238 | 1       | Extremo 2A | -0.438    | 7.986  | -0.095    | 0.1504  | 0.0485    | -0.8465  |
| 1239 | 0       | Extremo 2A | -0.116    | -5.436 | -0.061    | 0.4112  | 0.028     | 0.0557   |
| 1239 | 0.5     | Extremo 2A | -0.116    | 1.928  | -0.061    | 0.4112  | 0.0024    | 0.9328   |
| 1239 | 1       | Extremo 1A | -0.116    | 9.291  | -0.061    | 0.4112  | 0.0328    | -1.8718  |
| 1239 | 0       | Extremo 1A | -0.111    | -5.479 | -0.054    | 0.3866  | -0.0249   | -0.0897  |
| 1239 | 0.5     | Extremo 1A | -0.111    | 1.884  | -0.054    | 0.3866  | 0.0022    | 0.9883   |
| 1239 | 1       | Extremo 2A | -0.111    | 9.248  | -0.054    | 0.3866  | 0.0294    | -1.7947  |
| 1240 | 0       | Extremo 2A | 0.002224  | 9.388  | 0.001941  | 1.9812  | 0.0012    | -0.4373  |
| 1240 | 0.3     | Extremo 2A | 0.002224  | 10.89  | 0.001941  | 1.9812  | 0.0005935 | -3.4789  |
| 1240 | 0.6     | Extremo 1A | 0.002224  | 12.392 | 0.001941  | 1.9812  | 1.128E-05 | -6.9711  |
| 1240 | 0       | Extremo 1A | -0.005971 | 9.388  | -0.000998 | 1.9812  | -0.0033   | -0.4373  |
| 1240 | 0.3     | Extremo 1A | -0.005971 | 10.89  | -0.000998 | 1.9812  | -0.003    | -3.4789  |
| 1240 | 0.6     | Extremo 2A | -0.005971 | 12.392 | -0.000998 | 1.9812  | -0.0027   | -6.9711  |
| 1241 | 0       | Extremo 2A | 0.025     | 23.66  | 0.019     | 4.2764  | 0.0128    | -9.2532  |
| 1241 | 0.5     | Extremo 2A | 0.025     | 26.838 | 0.019     | 4.2764  | 0.0033    | -21.8775 |
| 1241 | 1       | Extremo 1A | 0.025     | 30.016 | 0.019     | 4.2764  | -0.0062   | -36.0909 |
| 1241 | 0       | Extremo 1A | -0.067    | 23.659 | -0.056    | 4.2763  | -0.0415   | -9.2532  |
| 1241 | 0.5     | Extremo 1A | -0.067    | 26.838 | -0.056    | 4.2763  | -0.0137   | -21.8775 |
| 1241 | 1       | Extremo 2A | -0.067    | 30.016 | -0.056    | 4.2763  | 0.0141    | -36.0908 |
| 1242 | 0       | Extremo 2A | -0.011    | -6.276 | 9.937     | -9.4283 | 14.6684   | -9.3469  |
| 1242 | 0.49333 | Extremo 2A | -0.011    | -6.276 | 9.937     | -9.4283 | 9.7664    | -6.2509  |
| 1242 | 0.98667 | Extremo 1A | -0.011    | -6.276 | 9.937     | -9.4283 | 4.8644    | -3.1548  |
| 1242 | 1.48    | Extremo 1A | -0.011    | -6.276 | 9.937     | -9.4283 | -0.0377   | -0.0588  |
| 1242 | 1.97333 | Extremo 1A | -0.011    | -6.276 | 9.937     | -9.4283 | -4.9397   | 3.0372   |
| 1242 | 2.46667 | Extremo 2A | -0.011    | -6.276 | 9.937     | -9.4283 | -9.8417   | 6.1332   |
| 1242 | 2.96    | Extremo 2A | -0.011    | -6.276 | 9.937     | -9.4283 | -14.7437  | 9.2292   |
| 1242 | 0       | Extremo 2A | -0.011    | 0.366  | -0.563    | -1.1736 | -0.8707   | 0.4824   |
| 1242 | 0.49333 | Extremo 1A | -0.011    | 0.366  | -0.563    | -1.1736 | -0.593    | 0.3021   |
| 1242 | 0.98667 | Extremo 1A | -0.011    | 0.366  | -0.563    | -1.1736 | -0.3153   | 0.1217   |
| 1242 | 1.48    | Extremo 1A | -0.011    | 0.366  | -0.563    | -1.1736 | -0.0376   | -0.0587  |
| 1242 | 1.97333 | Extremo 2A | -0.011    | 0.366  | -0.563    | -1.1736 | 0.2401    | -0.2391  |

|      |         |            |           |         |           |         |           |          |
|------|---------|------------|-----------|---------|-----------|---------|-----------|----------|
| 1242 | 2.46667 | Extremo 2A | -0.011    | 0.366   | -0.563    | -1.1736 | 0.5179    | -0.4195  |
| 1242 | 2.96    | Extremo 2A | -0.011    | 0.366   | -0.563    | -1.1736 | 0.7956    | -0.5999  |
| 1243 | 0       | Extremo 1A | 0.027     | -30.325 | -0.025    | -4.74   | -0.0053   | -36.6058 |
| 1243 | 0.5     | Extremo 1A | 0.027     | -27.147 | -0.025    | -4.74   | 0.0071    | -22.2379 |
| 1243 | 1       | Extremo 1A | 0.027     | -23.969 | -0.025    | -4.74   | 0.0196    | -9.459   |
| 1243 | 0       | Extremo 2A | -0.078    | -30.325 | 0.068     | -4.7399 | 0.018     | -36.6057 |
| 1243 | 0.5     | Extremo 2A | -0.078    | -27.147 | 0.068     | -4.7399 | -0.0158   | -22.2378 |
| 1243 | 1       | Extremo 2A | -0.078    | -23.969 | 0.068     | -4.7399 | -0.0496   | -9.459   |
| 1244 | 0       | Extremo 1A | 0.002368  | -12.473 | 0.001355  | -2.0768 | 0.0022    | -7.0378  |
| 1244 | 0.3     | Extremo 1A | 0.002368  | -10.971 | 0.001355  | -2.0768 | 0.0018    | -3.5211  |
| 1244 | 0.6     | Extremo 1A | 0.002368  | -9.469  | 0.001355  | -2.0768 | 0.0014    | -0.455   |
| 1244 | 0       | Extremo 2A | -0.006962 | -12.473 | 0.0007233 | -2.0768 | -0.0035   | -7.0378  |
| 1244 | 0.3     | Extremo 2A | -0.006962 | -10.971 | 0.0007233 | -2.0768 | -0.0037   | -3.5211  |
| 1244 | 0.6     | Extremo 2A | -0.006962 | -9.469  | 0.0007233 | -2.0768 | -0.0039   | -0.455   |
| 1245 | 0       | Extremo 1A | -0.001005 | 13.605  | 0.005336  | 1.2349  | 0.0017    | 0.2017   |
| 1245 | 0.3     | Extremo 1A | -0.001005 | 15.107  | 0.005336  | 1.2349  | 7.835E-05 | -4.1052  |
| 1245 | 0.6     | Extremo 1A | -0.001005 | 16.609  | 0.005336  | 1.2349  | -0.0015   | -8.8626  |
| 1245 | 0       | Extremo 2A | -0.001562 | 13.605  | -0.021    | 1.2349  | -0.0067   | 0.2017   |
| 1245 | 0.3     | Extremo 2A | -0.001562 | 15.107  | -0.021    | 1.2349  | -0.000459 | -4.1052  |
| 1245 | 0.6     | Extremo 2A | -0.001562 | 16.609  | -0.021    | 1.2349  | 0.0058    | -8.8626  |
| 1246 | 0       | Extremo 1A | -0.011    | 29.788  | 0.022     | 2.6969  | 0.0145    | -7.8937  |
| 1246 | 0.5     | Extremo 1A | -0.011    | 32.967  | 0.022     | 2.6969  | 0.0035    | -23.5825 |
| 1246 | 1       | Extremo 1A | -0.011    | 36.145  | 0.022     | 2.6969  | -0.0074   | -40.8603 |
| 1246 | 0       | Extremo 2A | -0.014    | 29.788  | -0.092    | 2.6969  | -0.0591   | -7.8937  |
| 1246 | 0.5     | Extremo 2A | -0.014    | 32.967  | -0.092    | 2.6969  | -0.0132   | -23.5825 |
| 1246 | 1       | Extremo 2A | -0.014    | 36.145  | -0.092    | 2.6969  | 0.0326    | -40.8602 |
| 1247 | 0       | Extremo 1A | 0.0005908 | -6.234  | 9.947     | -9.4477 | 14.6081   | -9.422   |
| 1247 | 0.49333 | Extremo 1A | 0.0005908 | -6.234  | 9.947     | -9.4477 | 9.701     | -6.3464  |
| 1247 | 0.98667 | Extremo 1A | 0.0005908 | -6.234  | 9.947     | -9.4477 | 4.794     | -3.2709  |
| 1247 | 1.48    | Extremo 2A | 0.0005908 | -6.234  | 9.947     | -9.4477 | -0.1131   | -0.1953  |
| 1247 | 1.97333 | Extremo 2A | 0.0005908 | -6.234  | 9.947     | -9.4477 | -5.0201   | 2.8803   |
| 1247 | 2.46667 | Extremo 2A | 0.0005908 | -6.234  | 9.947     | -9.4477 | -9.9272   | 5.9559   |
| 1247 | 2.96    | Extremo 1A | 0.0005908 | -6.234  | 9.947     | -9.4477 | -14.8343  | 9.0314   |
| 1247 | 0       | Extremo 1A | 0.0005793 | 0.384   | -0.552    | -1.1839 | -0.9298   | 0.3728   |
| 1247 | 0.49333 | Extremo 1A | 0.0005793 | 0.384   | -0.552    | -1.1839 | -0.6575   | 0.1836   |
| 1247 | 0.98667 | Extremo 2A | 0.0005793 | 0.384   | -0.552    | -1.1839 | -0.3852   | -0.0056  |
| 1247 | 1.48    | Extremo 2A | 0.0005793 | 0.384   | -0.552    | -1.1839 | -0.1129   | -0.1949  |
| 1247 | 1.97333 | Extremo 2A | 0.0005793 | 0.384   | -0.552    | -1.1839 | 0.1594    | -0.3841  |
| 1247 | 2.46667 | Extremo 1A | 0.0005793 | 0.384   | -0.552    | -1.1839 | 0.4317    | -0.5733  |
| 1247 | 2.96    | Extremo 1A | 0.0005793 | 0.384   | -0.552    | -1.1839 | 0.7041    | -0.7626  |
| 1248 | 0       | Extremo 1A | 0.029     | -36.553 | -0.053    | -3.084  | -0.02     | -41.2587 |
| 1248 | 0.5     | Extremo 2A | 0.029     | -33.375 | -0.053    | -3.084  | 0.0067    | -23.7768 |
| 1248 | 1       | Extremo 2A | 0.029     | -30.197 | -0.053    | -3.084  | 0.0334    | -7.884   |
| 1248 | 0       | Extremo 2A | -0.033    | -36.553 | 0.119     | -3.0839 | 0.044     | -41.2586 |
| 1248 | 0.5     | Extremo 1A | -0.033    | -33.375 | 0.119     | -3.0839 | -0.0155   | -23.7768 |
| 1248 | 1       | Extremo 1A | -0.033    | -30.196 | 0.119     | -3.0839 | -0.0751   | -7.8841  |
| 1249 | 0       | Extremo 1A | 0.00283   | -16.668 | -0.012    | -1.322  | -0.0034   | -8.8939  |
| 1249 | 0.3     | Extremo 2A | 0.00283   | -15.167 | -0.012    | -1.322  | 0.0002066 | -4.1186  |
| 1249 | 0.6     | Extremo 2A | 0.00283   | -13.665 | -0.012    | -1.322  | 0.0038    | 0.206    |
| 1249 | 0       | Extremo 2A | -0.003405 | -16.668 | 0.027     | -1.322  | 0.0079    | -8.8939  |
| 1249 | 0.3     | Extremo 1A | -0.003405 | -15.167 | 0.027     | -1.322  | -0.000353 | -4.1186  |
| 1249 | 0.6     | Extremo 1A | -0.003405 | -13.665 | 0.027     | -1.322  | -0.0086   | 0.206    |
| 1250 | 0       | Extremo 1A | -0.000495 | 14.222  | 0.002718  | 0.5019  | 0.0009976 | 0.146    |
| 1250 | 0.3     | Extremo 2A | -0.000495 | 15.724  | 0.002718  | 0.5019  | 0.0001823 | -4.3459  |



|      |         |            |           |         |          |          |           |          |
|------|---------|------------|-----------|---------|----------|----------|-----------|----------|
| 1252 | 0.49333 | Extremo 2A | 0.414     | 0.444   | -0.515   | -1.2262  | -0.8593   | -0.1991  |
| 1252 | 0.98667 | Extremo 2A | 0.414     | 0.444   | -0.515   | -1.2262  | -0.6052   | -0.4184  |
| 1252 | 1.48    | Extremo 1A | 0.414     | 0.444   | -0.515   | -1.2262  | -0.351    | -0.6376  |
| 1252 | 1.97333 | Extremo 1A | 0.414     | 0.444   | -0.515   | -1.2262  | -0.0969   | -0.8568  |
| 1252 | 2.46667 | Extremo 1A | 0.414     | 0.444   | -0.515   | -1.2262  | 0.1572    | -1.076   |
| 1252 | 2.96    | Extremo 2A | 0.414     | 0.444   | -0.515   | -1.2262  | 0.4114    | -1.2952  |
| 1253 | 0       | Extremo 2A | 0.006572  | -38.541 | -0.077   | -1.0959  | -0.0338   | -43.7572 |
| 1253 | 0.5     | Extremo 2A | 0.006572  | -35.363 | -0.077   | -1.0959  | 0.0049    | -25.2814 |
| 1253 | 1       | Extremo 1A | 0.006572  | -32.185 | -0.077   | -1.0959  | 0.0435    | -8.3946  |
| 1253 | 0       | Extremo 1A | -0.003859 | -38.541 | 0.15     | -1.0959  | 0.0646    | -43.7571 |
| 1253 | 0.5     | Extremo 1A | -0.003859 | -35.363 | 0.15     | -1.0959  | -0.0105   | -25.2813 |
| 1253 | 1       | Extremo 2A | -0.003859 | -32.184 | 0.15     | -1.0959  | -0.0856   | -8.3946  |
| 1254 | 0       | Extremo 2A | 0.0007113 | -17.239 | -0.021   | -0.5657  | -0.0072   | -9.2921  |
| 1254 | 0.3     | Extremo 2A | 0.0007113 | -15.737 | -0.021   | -0.5657  | -0.000852 | -4.3456  |
| 1254 | 0.6     | Extremo 1A | 0.0007113 | -14.236 | -0.021   | -0.5657  | 0.0055    | 0.1504   |
| 1254 | 0       | Extremo 1A | -0.00052  | -17.239 | 0.039    | -0.5657  | 0.013     | -9.2921  |
| 1254 | 0.3     | Extremo 1A | -0.00052  | -15.737 | 0.039    | -0.5657  | 0.0013    | -4.3456  |
| 1254 | 0.6     | Extremo 2A | -0.00052  | -14.236 | 0.039    | -0.5657  | -0.0105   | 0.1504   |
| 1255 | 0       | Extremo 2A | -0.000265 | 14.45   | 0.001905 | 0.1546   | 0.0006065 | 0.0582   |
| 1255 | 0.3     | Extremo 2A | -0.000265 | 15.952  | 0.001905 | 0.1546   | 3.497E-05 | -4.502   |
| 1255 | 0.6     | Extremo 1A | -0.000265 | 17.454  | 0.001905 | 0.1546   | -0.000537 | -9.5129  |
| 1255 | 0       | Extremo 1A | 0.0006349 | 14.45   | -0.028   | 0.1546   | 0.0056    | 0.0582   |
| 1255 | 0.3     | Extremo 1A | 0.0006349 | 15.952  | -0.028   | 0.1546   | 0.0011    | -4.502   |
| 1255 | 0.6     | Extremo 2A | 0.0006349 | 17.454  | -0.028   | 0.1546   | 0.0095    | -9.5129  |
| 1256 | 0       | Extremo 2A | -0.003022 | 32.163  | 0.011    | 0.1241   | 0.0056    | -9.2043  |
| 1256 | 0.5     | Extremo 2A | -0.003022 | 35.342  | 0.011    | 0.1241   | 0.0000511 | -26.0806 |
| 1256 | 1       | Extremo 1A | -0.003022 | 38.52   | 0.011    | 0.1241   | -0.0055   | -44.5459 |
| 1256 | 0       | Extremo 1A | 0.007369  | 32.163  | -0.11    | 0.1242   | -0.0589   | -9.2043  |
| 1256 | 0.5     | Extremo 1A | 0.007369  | 35.341  | -0.11    | 0.1242   | -0.004    | -26.0805 |
| 1256 | 1       | Extremo 2A | 0.007369  | 38.52   | -0.11    | 0.1242   | 0.051     | -44.5458 |
| 1257 | 0       | Extremo 2A | 1.495     | -5.609  | 10.015   | -9.8423  | 13.4247   | -10.1983 |
| 1257 | 0.49333 | Extremo 2A | 1.495     | -5.609  | 10.015   | -9.8423  | 8.4841    | -7.4311  |
| 1257 | 0.98667 | Extremo 1A | 1.495     | -5.609  | 10.015   | -9.8423  | 3.5436    | -4.664   |
| 1257 | 1.48    | Extremo 1A | 1.495     | -5.609  | 10.015   | -9.8423  | -1.397    | -1.8969  |
| 1257 | 1.97333 | Extremo 1A | 1.495     | -5.609  | 10.015   | -9.8423  | -6.3376   | 0.8703   |
| 1257 | 2.46667 | Extremo 2A | 1.495     | -5.609  | 10.015   | -9.8423  | -11.2782  | 3.6374   |
| 1257 | 2.96    | Extremo 2A | 1.495     | -5.609  | 10.015   | -9.8423  | -16.2188  | 6.4045   |
| 1257 | 0       | Extremo 2A | 1.487     | 0.632   | -0.403   | -1.3901  | -1.9904   | -0.9585  |
| 1257 | 0.49333 | Extremo 1A | 1.487     | 0.632   | -0.403   | -1.3901  | -1.7915   | -1.2701  |
| 1257 | 0.98667 | Extremo 1A | 1.487     | 0.632   | -0.403   | -1.3901  | -1.5926   | -1.5817  |
| 1257 | 1.48    | Extremo 1A | 1.487     | 0.632   | -0.403   | -1.3901  | -1.3937   | -1.8933  |
| 1257 | 1.97333 | Extremo 2A | 1.487     | 0.632   | -0.403   | -1.3901  | -1.1948   | -2.2049  |
| 1257 | 2.46667 | Extremo 2A | 1.487     | 0.632   | -0.403   | -1.3901  | -0.9959   | -2.5166  |
| 1257 | 2.96    | Extremo 2A | 1.487     | 0.632   | -0.403   | -1.3901  | -0.7971   | -2.8282  |
| 1258 | 0       | Extremo 1A | -0.002813 | -38.269 | -0.083   | -0.4386  | -0.038    | -44.2578 |
| 1258 | 0.5     | Extremo 1A | -0.002813 | -35.091 | -0.083   | -0.4386  | 0.0037    | -25.9176 |
| 1258 | 1       | Extremo 1A | -0.002813 | -31.913 | -0.083   | -0.4386  | 0.0453    | -9.1665  |
| 1258 | 0       | Extremo 2A | 0.00889   | -38.269 | 0.154    | -0.4386  | 0.0712    | -44.2577 |
| 1258 | 0.5     | Extremo 2A | 0.00889   | -35.091 | 0.154    | -0.4386  | -0.006    | -25.9176 |
| 1258 | 1       | Extremo 2A | 0.00889   | -31.913 | 0.154    | -0.4386  | -0.0832   | -9.1665  |
| 1259 | 0       | Extremo 1A | -0.000244 | -17.412 | -0.023   | -0.2122  | -0.0079   | -9.4857  |
| 1259 | 0.3     | Extremo 1A | -0.000244 | -15.91  | -0.023   | -0.2122  | -0.0011   | -4.4874  |
| 1259 | 0.6     | Extremo 1A | -0.000244 | -14.408 | -0.023   | -0.2122  | 0.0057    | 0.0602   |
| 1259 | 0       | Extremo 2A | 0.0007786 | -17.412 | 0.041    | -0.2122  | 0.014     | -9.4857  |
| 1259 | 0.3     | Extremo 2A | 0.0007786 | -15.91  | 0.041    | -0.2122  | 0.0018    | -4.4874  |
| 1259 | 0.6     | Extremo 2A | 0.0007786 | -14.408 | 0.041    | -0.2122  | -0.0104   | 0.0602   |
| 1260 | 0       | Extremo 1A | -0.000226 | 14.53   | 0.00157  | 0.0688   | 0.0003498 | 0.0039   |
| 1260 | 0.3     | Extremo 1A | -0.000226 | 16.032  | 0.00157  | 0.0688   | -0.000121 | -4.5803  |
| 1260 | 0.6     | Extremo 1A | -0.000226 | 17.534  | 0.00157  | 0.0688   | -0.000592 | -9.6152  |
| 1260 | 0       | Extremo 2A | 0.0008012 | 14.53   | -0.026   | 0.0688   | -0.0066   | 0.0039   |
| 1260 | 0.3     | Extremo 2A | 0.0008012 | 16.032  | -0.026   | 0.0688   | 0.0013    | -4.5803  |
| 1260 | 0.6     | Extremo 2A | 0.0008012 | 17.534  | -0.026   | 0.0688   | 0.0092    | -9.6152  |
| 1261 | 0       | Extremo 1A | -0.002576 | 31.959  | 0.007559 | 0.021    | 0.0027    | -9.6203  |
| 1261 | 0.5     | Extremo 1A | -0.002576 | 35.138  | 0.007559 | 0.021    | -0.0011   | -26.3945 |
| 1261 | 1       | Extremo 1A | -0.002576 | 38.316  | 0.007559 | 0.021    | -0.0049   | -44.7578 |
| 1261 | 0       | Extremo 2A | 0.008741  | 31.959  | -0.102   | 0.021    | -0.0522   | -9.6202  |
| 1261 | 0.5     | Extremo 2A | 0.008741  | 35.138  | -0.102   | 0.021    | -0.0012   | -26.3945 |
| 1261 | 1       | Extremo 2A | 0.008741  | 38.316  | -0.102   | 0.021    | 0.0498    | -44.7578 |
| 1262 | 0       | Extremo 1A | -9.82     | -4.165  | 9.864    | -10.9839 | 8.6433    | -11.3724 |
| 1262 | 0.49333 | Extremo 1A | -9.82     | -4.165  | 9.864    | -10.9839 | 3.777     | -9.3176  |
| 1262 | 0.98667 | Extremo 1A | -9.82     | -4.165  | 9.864    | -10.9839 | -1.0893   | -7.2628  |
| 1262 | 1.48    | Extremo 2A | -9.82     | -4.165  | 9.864    | -10.9839 | -5.9557   | -5.2081  |

|      |         |            |           |         |          |          |           |          |
|------|---------|------------|-----------|---------|----------|----------|-----------|----------|
| 1262 | 1.97333 | Extremo 2A | -9.82     | -4.165  | 9.864    | -10.9839 | -10.822   | -3.1533  |
| 1262 | 2.46667 | Extremo 2A | -9.82     | -4.165  | 9.864    | -10.9839 | -15.6883  | -1.0985  |
| 1262 | 2.96    | Extremo 1A | -9.82     | -4.165  | 9.864    | -10.9839 | -20.5547  | 0.9563   |
| 1262 | 0       | Extremo 1A | -9.768    | 1.128   | -0.116   | -1.9826  | -6.1093   | -3.5326  |
| 1262 | 0.49333 | Extremo 1A | -9.768    | 1.128   | -0.116   | -1.9826  | -6.0521   | -4.0888  |
| 1262 | 0.98667 | Extremo 2A | -9.768    | 1.128   | -0.116   | -1.9826  | -5.9948   | -4.6451  |
| 1262 | 1.48    | Extremo 2A | -9.768    | 1.128   | -0.116   | -1.9826  | -5.9376   | -5.2013  |
| 1262 | 1.97333 | Extremo 2A | -9.768    | 1.128   | -0.116   | -1.9826  | -5.8804   | -5.7575  |
| 1262 | 2.46667 | Extremo 1A | -9.768    | 1.128   | -0.116   | -1.9826  | -5.8231   | -6.3138  |
| 1262 | 2.96    | Extremo 1A | -9.768    | 1.128   | -0.116   | -1.9826  | -5.7659   | -6.87    |
| 1263 | 0       | Extremo 1A | -0.004231 | -37.884 | -0.081   | -0.2169  | -0.0375   | -44.2193 |
| 1263 | 0.5     | Extremo 2A | -0.004231 | -34.706 | -0.081   | -0.2169  | 0.0029    | -26.0716 |
| 1263 | 1       | Extremo 2A | -0.004231 | -31.528 | -0.081   | -0.2169  | 0.0432    | -9.513   |
| 1263 | 0       | Extremo 2A | 0.011     | -37.884 | 0.145    | -0.2169  | 0.0694    | -44.2193 |
| 1263 | 0.5     | Extremo 1A | 0.011     | -34.706 | 0.145    | -0.2169  | -0.0032   | -26.0716 |
| 1263 | 1       | Extremo 1A | 0.011     | -31.528 | 0.145    | -0.2169  | -0.0758   | -9.5129  |
| 1264 | 0       | Extremo 1A | -0.000405 | -17.449 | -0.021   | -0.1024  | -0.0075   | -9.5581  |
| 1264 | 0.3     | Extremo 2A | -0.000405 | -15.947 | -0.021   | -0.1024  | -0.001    | -4.5487  |
| 1264 | 0.6     | Extremo 2A | -0.000405 | -14.445 | -0.021   | -0.1024  | 0.0054    | 0.0102   |
| 1264 | 0       | Extremo 2A | 0.0009837 | -17.449 | 0.038    | -0.1023  | 0.0134    | -9.5581  |
| 1264 | 0.3     | Extremo 1A | 0.0009837 | -15.947 | 0.038    | -0.1023  | 0.0019    | -4.5487  |
| 1264 | 0.6     | Extremo 1A | 0.0009837 | -14.445 | 0.038    | -0.1023  | -0.0096   | 0.0102   |
| 1265 | 0       | Extremo 1A | -0.000154 | 14.576  | 0.001175 | 0.1064   | 0.000156  | -0.0252  |
| 1265 | 0.3     | Extremo 2A | -0.000154 | 16.078  | 0.001175 | 0.1064   | -0.000197 | -4.6234  |
| 1265 | 0.6     | Extremo 2A | -0.000154 | 17.58   | 0.001175 | 0.1064   | -0.000549 | -9.6772  |
| 1265 | 0       | Extremo 2A | 0.000642  | 14.576  | -0.024   | 0.1064   | -0.0059   | -0.0252  |
| 1265 | 0.3     | Extremo 1A | 0.000642  | 16.078  | -0.024   | 0.1064   | 0.0013    | -4.6234  |
| 1265 | 0.6     | Extremo 1A | 0.000642  | 17.58   | -0.024   | 0.1064   | 0.0085    | -9.6772  |
| 1266 | 0       | Extremo 1A | -0.001724 | 31.897  | 0.00462  | 0.0677   | 0.0006795 | -9.8346  |
| 1266 | 0.5     | Extremo 2A | -0.001724 | 35.075  | 0.00462  | 0.0677   | -0.0016   | -26.5775 |
| 1266 | 1       | Extremo 2A | -0.001724 | 38.253  | 0.00462  | 0.0677   | -0.0039   | -44.9095 |
| 1266 | 0       | Extremo 2A | 0.006784  | 31.897  | -0.092   | 0.0676   | -0.046    | -9.8346  |
| 1266 | 0.5     | Extremo 1A | 0.006784  | 35.075  | -0.092   | 0.0676   | 6.294E-05 | -26.5775 |
| 1266 | 1       | Extremo 1A | 0.006784  | 38.253  | -0.092   | 0.0676   | 0.0461    | -44.9095 |
| 1267 | 0       | Extremo 1A | -90.571   | -0.385  | 7.946    | -14.8387 | -3.1308   | -20.1286 |
| 1267 | 0.49333 | Extremo 2A | -90.571   | -0.385  | 7.946    | -14.8387 | -7.0509   | -19.9387 |
| 1267 | 0.98667 | Extremo 2A | -90.571   | -0.385  | 7.946    | -14.8387 | -10.971   | -19.7488 |
| 1267 | 1.48    | Extremo 2A | -90.571   | -0.385  | 7.946    | -14.8387 | -14.8912  | -19.5589 |
| 1267 | 1.97333 | Extremo 1A | -90.571   | -0.385  | 7.946    | -14.8387 | -18.8113  | -19.369  |
| 1267 | 2.46667 | Extremo 1A | -90.571   | -0.385  | 7.946    | -14.8387 | -22.7314  | -19.1791 |
| 1267 | 2.96    | Extremo 1A | -90.571   | -0.385  | 7.946    | -14.8387 | -26.6515  | -18.9892 |
| 1267 | 0       | Extremo 2A | -90.103   | 2.051   | 0.36     | -3.9697  | -14.3239  | -16.4865 |
| 1267 | 0.49333 | Extremo 2A | -90.103   | 2.051   | 0.36     | -3.9697  | -14.5015  | -17.4984 |
| 1267 | 0.98667 | Extremo 2A | -90.103   | 2.051   | 0.36     | -3.9697  | -14.679   | -18.5102 |
| 1267 | 1.48    | Extremo 1A | -90.103   | 2.051   | 0.36     | -3.9697  | -14.8566  | -19.522  |
| 1267 | 1.97333 | Extremo 1A | -90.103   | 2.051   | 0.36     | -3.9697  | -15.0342  | -20.5338 |
| 1267 | 2.46667 | Extremo 1A | -90.103   | 2.051   | 0.36     | -3.9697  | -15.2117  | -21.5457 |
| 1267 | 2.96    | Extremo 2A | -90.103   | 2.051   | 0.36     | -3.9697  | -15.3893  | -22.5575 |
| 1268 | 0       | Extremo 2A | -0.003467 | -37.777 | -0.076   | -0.0333  | -0.0356   | -44.2988 |
| 1268 | 0.5     | Extremo 2A | -0.003467 | -34.599 | -0.076   | -0.0333  | 0.0025    | -26.2048 |
| 1268 | 1       | Extremo 1A | -0.003467 | -31.421 | -0.076   | -0.0333  | 0.0406    | -9.6998  |



|      |         |            |           |         |           |         |           |          |
|------|---------|------------|-----------|---------|-----------|---------|-----------|----------|
| 1272 | 0       | Extremo 2A | -90.917   | 3.118   | -1.245    | 16.1199 | 13.0963   | -15.0019 |
| 1272 | 0.49333 | Extremo 2A | -90.917   | 3.118   | -1.245    | 16.1199 | 13.7102   | -16.5401 |
| 1272 | 0.98667 | Extremo 1A | -90.917   | 3.118   | -1.245    | 16.1199 | 14.3242   | -18.0783 |
| 1272 | 1.48    | Extremo 1A | -90.917   | 3.118   | -1.245    | 16.1199 | 14.9382   | -19.6165 |
| 1272 | 1.97333 | Extremo 1A | -90.917   | 3.118   | -1.245    | 16.1199 | 15.5522   | -21.1547 |
| 1272 | 2.46667 | Extremo 2A | -90.917   | 3.118   | -1.245    | 16.1199 | 16.1662   | -22.6929 |
| 1272 | 2.96    | Extremo 2A | -90.917   | 3.118   | -1.245    | 16.1199 | 16.7802   | -24.2311 |
| 1272 | 0       | Extremo 2A | -96.41    | -1.668  | -3.32     | 23.2512 | 11.4926   | -24.1775 |
| 1272 | 0.49333 | Extremo 1A | -96.41    | -1.668  | -3.32     | 23.2512 | 13.1305   | -23.3547 |
| 1272 | 0.98667 | Extremo 1A | -96.41    | -1.668  | -3.32     | 23.2512 | 14.7684   | -22.5319 |
| 1272 | 1.48    | Extremo 1A | -96.41    | -1.668  | -3.32     | 23.2512 | 16.4063   | -21.709  |
| 1272 | 1.97333 | Extremo 2A | -96.41    | -1.668  | -3.32     | 23.2512 | 18.0442   | -20.8862 |
| 1272 | 2.46667 | Extremo 2A | -96.41    | -1.668  | -3.32     | 23.2512 | 19.6821   | -20.0634 |
| 1272 | 2.96    | Extremo 2A | -96.41    | -1.668  | -3.32     | 23.2512 | 21.32     | -19.2405 |
| 1273 | 0       | Extremo 1A | -0.002436 | -37.915 | -0.072    | -0.0113 | -0.0335   | -44.72   |
| 1273 | 0.5     | Extremo 1A | -0.002436 | -34.737 | -0.072    | -0.0113 | 0.0025    | -26.5569 |
| 1273 | 1       | Extremo 1A | -0.002436 | -31.559 | -0.072    | -0.0113 | 0.0386    | -9.9829  |
| 1273 | 0       | Extremo 2A | 0.004766  | -37.915 | 0.125     | -0.0113 | 0.0604    | -44.72   |
| 1273 | 0.5     | Extremo 2A | 0.004766  | -34.737 | 0.125     | -0.0113 | -0.0019   | -26.5569 |
| 1273 | 1       | Extremo 2A | 0.004766  | -31.559 | 0.125     | -0.0113 | -0.0642   | -9.9829  |
| 1274 | 0       | Extremo 1A | -0.000252 | -17.573 | -0.018    | -0.1747 | -0.0063   | -9.6905  |
| 1274 | 0.3     | Extremo 1A | -0.000252 | -16.071 | -0.018    | -0.1747 | -0.000768 | -4.644   |
| 1274 | 0.6     | Extremo 1A | -0.000252 | -14.569 | -0.018    | -0.1747 | 0.0048    | -0.0481  |
| 1274 | 0       | Extremo 2A | 0.0004821 | -17.573 | 0.032     | -0.1748 | 0.0113    | -9.6905  |
| 1274 | 0.3     | Extremo 2A | 0.0004821 | -16.071 | 0.032     | -0.1748 | 0.0016    | -4.644   |
| 1274 | 0.6     | Extremo 2A | 0.0004821 | -14.569 | 0.032     | -0.1748 | -0.0081   | -0.0481  |
| 1275 | 0       | Extremo 1A | 1.389E-05 | 14.767  | 0.0008628 | 0.4357  | 2.132E-05 | -0.0542  |
| 1275 | 0.3     | Extremo 1A | 1.389E-05 | 16.269  | 0.0008628 | 0.4357  | -0.000238 | -4.7096  |
| 1275 | 0.6     | Extremo 1A | 1.389E-05 | 17.771  | 0.0008628 | 0.4357  | -0.000496 | -9.8155  |
| 1275 | 0       | Extremo 2A | 0.0002475 | 14.767  | -0.02     | 0.4357  | -0.005    | -0.0542  |
| 1275 | 0.3     | Extremo 2A | 0.0002475 | 16.269  | -0.02     | 0.4357  | 0.0009527 | -4.7096  |
| 1275 | 0.6     | Extremo 2A | 0.0002475 | 17.771  | -0.02     | 0.4357  | 0.0069    | -9.8155  |
| 1276 | 0       | Extremo 1A | 0.0001718 | 32.555  | 0.001311  | 0.7889  | -0.000757 | -10.2124 |
| 1276 | 0.5     | Extremo 1A | 0.0001718 | 35.733  | 0.001311  | 0.7889  | -0.0014   | -27.2845 |
| 1276 | 1       | Extremo 1A | 0.0001718 | 38.911  | 0.001311  | 0.7889  | -0.0021   | -45.9457 |
| 1276 | 0       | Extremo 2A | 0.002127  | 32.555  | -0.078    | 0.7889  | -0.0401   | -10.2125 |
| 1276 | 0.5     | Extremo 2A | 0.002127  | 35.733  | -0.078    | 0.7889  | -0.000984 | -27.2846 |
| 1276 | 1       | Extremo 2A | 0.002127  | 38.911  | -0.078    | 0.7889  | 0.0382    | -45.9458 |
| 1277 | 0       | Extremo 1A | -9.857    | 0.951   | -1.381    | 12.6582 | 3.9313    | -3.8153  |
| 1277 | 0.49333 | Extremo 1A | -9.857    | 0.951   | -1.381    | 12.6582 | 4.6126    | -4.2845  |
| 1277 | 0.98667 | Extremo 1A | -9.857    | 0.951   | -1.381    | 12.6582 | 5.2939    | -4.7536  |
| 1277 | 1.48    | Extremo 2A | -9.857    | 0.951   | -1.381    | 12.6582 | 5.9751    | -5.2228  |
| 1277 | 1.97333 | Extremo 2A | -9.857    | 0.951   | -1.381    | 12.6582 | 6.6564    | -5.692   |
| 1277 | 2.46667 | Extremo 2A | -9.857    | 0.951   | -1.381    | 12.6582 | 7.3377    | -6.1611  |
| 1277 | 2.96    | Extremo 1A | -9.857    | 0.951   | -1.381    | 12.6582 | 8.0189    | -6.6303  |
| 1277 | 0       | Extremo 1A | -10.462   | -2.994  | -5.396    | 22.218  | -1.4723   | -10.2485 |
| 1277 | 0.49333 | Extremo 1A | -10.462   | -2.994  | -5.396    | 22.218  | 1.1897    | -8.7717  |
| 1277 | 0.98667 | Extremo 2A | -10.462   | -2.994  | -5.396    | 22.218  | 3.8516    | -7.2948  |
| 1277 | 1.48    | Extremo 2A | -10.462   | -2.994  | -5.396    | 22.218  | 6.5136    | -5.818   |
| 1277 | 1.97333 | Extremo 2A | -10.462   | -2.994  | -5.396    | 22.218  | 9.1756    | -4.3411  |
| 1277 | 2.46667 | Extremo 1A | -10.462   | -2.994  | -5.396    | 22.218  | 11.8375   | -2.8643  |
| 1277 | 2.96    | Extremo 1A | -10.462   | -2.994  | -5.396    | 22.218  | 14.4995   | -1.3874  |
| 1278 | 0       | Extremo 1A | -0.001755 | -38.555 | -0.069    | -0.4767 | -0.0315   | -45.7113 |
| 1278 | 0.5     | Extremo 2A | -0.001755 | -35.377 | -0.069    | -0.4767 | 0.0031    | -27.2282 |
| 1278 | 1       | Extremo 2A | -0.001755 | -32.199 | -0.069    | -0.4767 | 0.0377    | -10.3342 |
| 1278 | 0       | Extremo 2A | 0.002456  | -38.555 | 0.118     | -0.4768 | 0.0558    | -45.7114 |
| 1278 | 0.5     | Extremo 1A | 0.002456  | -35.377 | 0.118     | -0.4768 | -0.0032   | -27.2283 |
| 1278 | 1       | Extremo 1A | 0.002456  | -32.199 | 0.118     | -0.4768 | -0.0622   | -10.3343 |
| 1279 | 0       | Extremo 1A | -0.000202 | -17.753 | -0.017    | -0.4002 | -0.0056   | -9.8232  |
| 1279 | 0.3     | Extremo 2A | -0.000202 | -16.251 | -0.017    | -0.4002 | -0.000545 | -4.7227  |
| 1279 | 0.6     | Extremo 2A | -0.000202 | -14.749 | -0.017    | -0.4002 | 0.0046    | -0.0728  |
| 1279 | 0       | Extremo 2A | 0.0002915 | -17.753 | 0.03      | -0.4002 | 0.0102    | -9.8232  |
| 1279 | 0.3     | Extremo 1A | 0.0002915 | -16.251 | 0.03      | -0.4002 | 0.0013    | -4.7227  |
| 1279 | 0.6     | Extremo 1A | 0.0002915 | -14.749 | 0.03      | -0.4002 | -0.0077   | -0.0728  |
| 1280 | 0       | Extremo 1A | -0.000137 | 14.89   | 0.000548  | 0.6369  | -6.11E-05 | -0.0055  |
| 1280 | 0.3     | Extremo 2A | -0.000137 | 16.392  | 0.000548  | 0.6369  | -0.000226 | -4.6979  |
| 1280 | 0.6     | Extremo 2A | -0.000137 | 17.894  | 0.000548  | 0.6369  | -0.00039  | -9.8408  |
| 1280 | 0       | Extremo 2A | 0.0003932 | 14.89   | -0.017    | 0.637   | -0.0047   | -0.0055  |
| 1280 | 0.3     | Extremo 1A | 0.0003932 | 16.392  | -0.017    | 0.637   | 0.0005104 | -4.6979  |
| 1280 | 0.6     | Extremo 1A | 0.0003932 | 17.894  | -0.017    | 0.637   | 0.0057    | -9.8409  |
| 1281 | 0       | Extremo 1A | -0.001196 | 33.85   | -0.001658 | 1.6253  | -0.0017   | -9.9711  |
| 1281 | 0.5     | Extremo 2A | -0.001196 | 37.028  | -0.001658 | 1.6253  | -0.000824 | -27.6905 |

|      |         |            |           |          |           |         |           |          |
|------|---------|------------|-----------|----------|-----------|---------|-----------|----------|
| 1281 | 1       | Extremo 2A | -0.001196 | 40.206   | -0.001658 | 1.6253  | 5.153E-06 | -46.999  |
| 1281 | 0       | Extremo 2A | 0.003336  | 33.85    | -0.071    | 1.6254  | -0.039    | -9.9711  |
| 1281 | 0.5     | Extremo 1A | 0.003336  | 37.028   | -0.071    | 1.6254  | -0.0033   | -27.6906 |
| 1281 | 1       | Extremo 1A | 0.003336  | 40.206   | -0.071    | 1.6254  | 0.0323    | -46.9992 |
| 1282 | 0       | Extremo 1A | 1.501     | -0.053   | -1.118    | 11.6238 | -0.2527   | -1.9813  |
| 1282 | 0.49333 | Extremo 2A | 1.501     | -0.053   | -1.118    | 11.6238 | 0.2987    | -1.955   |
| 1282 | 0.98667 | Extremo 2A | 1.501     | -0.053   | -1.118    | 11.6238 | 0.85      | -1.9288  |
| 1282 | 1.48    | Extremo 2A | 1.501     | -0.053   | -1.118    | 11.6238 | 1.4013    | -1.9025  |
| 1282 | 1.97333 | Extremo 1A | 1.501     | -0.053   | -1.118    | 11.6238 | 1.9527    | -1.8763  |
| 1282 | 2.46667 | Extremo 1A | 1.501     | -0.053   | -1.118    | 11.6238 | 2.504     | -1.85    |
| 1282 | 2.96    | Extremo 1A | 1.501     | -0.053   | -1.118    | 11.6238 | 3.0554    | -1.8238  |
| 1282 | 0       | Extremo 2A | 1.59      | -3.49    | -5.801    | 21.8842 | -7.0449   | -7.2697  |
| 1282 | 0.49333 | Extremo 2A | 1.59      | -3.49    | -5.801    | 21.8842 | -4.1829   | -5.5478  |
| 1282 | 0.98667 | Extremo 2A | 1.59      | -3.49    | -5.801    | 21.8842 | -1.3209   | -3.8259  |
| 1282 | 1.48    | Extremo 1A | 1.59      | -3.49    | -5.801    | 21.8842 | 1.5411    | -2.104   |
| 1282 | 1.97333 | Extremo 1A | 1.59      | -3.49    | -5.801    | 21.8842 | 4.4031    | -0.3821  |
| 1282 | 2.46667 | Extremo 1A | 1.59      | -3.49    | -5.801    | 21.8842 | 7.2651    | 1.3398   |
| 1282 | 2.96    | Extremo 2A | 1.59      | -3.49    | -5.801    | 21.8842 | 10.1271   | 3.0617   |
| 1283 | 0       | Extremo 2A | -0.001045 | -40.301  | -0.067    | -1.6016 | -0.0294   | -47.392  |
| 1283 | 0.5     | Extremo 2A | -0.001045 | -37.123  | -0.067    | -1.6016 | 0.0043    | -28.0359 |
| 1283 | 1       | Extremo 1A | -0.001045 | -33.945  | -0.067    | -1.6016 | 0.038     | -10.2689 |
| 1283 | 0       | Extremo 1A | 0.002749  | -40.301  | 0.112     | -1.6017 | 0.05      | -47.3922 |
| 1283 | 0.5     | Extremo 1A | 0.002749  | -37.123  | 0.112     | -1.6017 | -0.0059   | -28.036  |
| 1283 | 1       | Extremo 2A | 0.002749  | -33.945  | 0.112     | -1.6017 | -0.0617   | -10.269  |
| 1284 | 0       | Extremo 2A | -0.000135 | -17.982  | -0.015    | -0.7057 | -0.0048   | -9.9231  |
| 1284 | 0.3     | Extremo 2A | -0.000135 | -16.48   | -0.015    | -0.7057 | -0.000194 | -4.7537  |
| 1284 | 0.6     | Extremo 1A | -0.000135 | -14.979  | -0.015    | -0.7057 | 0.0044    | -0.0349  |
| 1284 | 0       | Extremo 1A | 0.0003461 | -17.982  | 0.027     | -0.7058 | 0.0088    | -9.9231  |
| 1284 | 0.3     | Extremo 1A | 0.0003461 | -16.48   | 0.027     | -0.7058 | 0.0007057 | -4.7537  |
| 1284 | 0.6     | Extremo 2A | 0.0003461 | -14.979  | 0.027     | -0.7058 | -0.0074   | -0.0349  |
| 1285 | 0       | Extremo 2A | -0.000994 | 14.864   | -0.00222  | 0.5334  | -0.000642 | 0.1079   |
| 1285 | 0.3     | Extremo 2A | -0.000994 | 16.366   | -0.00222  | 0.5334  | 2.395E-05 | -4.5765  |
| 1285 | 0.6     | Extremo 1A | -0.000994 | 17.868   | -0.00222  | 0.5334  | 0.0006898 | -9.7115  |
| 1285 | 0       | Extremo 1A | 0.0009694 | 14.864   | -0.013    | 0.5334  | -0.0041   | 0.1079   |
| 1285 | 0.3     | Extremo 1A | 0.0009694 | 16.366   | -0.013    | 0.5334  | -0.000219 | -4.5765  |
| 1285 | 0.6     | Extremo 2A | 0.0009694 | 17.868   | -0.013    | 0.5334  | 0.0036    | -9.7115  |
| 1286 | 0       | Extremo 2A | -0.002808 | 35.396   | -0.012    | 1.8723  | -0.006    | -8.9846  |
| 1286 | 0.5     | Extremo 2A | -0.002808 | 38.574   | -0.012    | 1.8723  | 3.261E-05 | -27.4773 |
| 1286 | 1       | Extremo 1A | -0.002808 | 41.752   | -0.012    | 1.8723  | 0.006     | -47.559  |
| 1286 | 0       | Extremo 1A | 0.00942   | 35.397   | -0.058    | 1.8725  | -0.0362   | -8.9846  |
| 1286 | 0.5     | Extremo 1A | 0.00942   | 38.575   | -0.058    | 1.8725  | -0.0071   | -27.4774 |
| 1286 | 1       | Extremo 2A | 0.00942   | 41.753   | -0.058    | 1.8725  | 0.022     | -47.5593 |
| 1287 | 0       | Extremo 2A | 0.418     | -0.415   | -0.98     | 11.3373 | -1.0985   | -1.2551  |
| 1287 | 0.49333 | Extremo 2A | 0.418     | -0.415   | -0.98     | 11.3373 | -0.6148   | -1.0504  |
| 1287 | 0.98667 | Extremo 1A | 0.418     | -0.415   | -0.98     | 11.3373 | -0.131    | -0.8456  |
| 1287 | 1.48    | Extremo 1A | 0.418     | -0.415   | -0.98     | 11.3373 | 0.3527    | -0.6409  |
| 1287 | 1.97333 | Extremo 1A | 0.418     | -0.415   | -0.98     | 11.3373 | 0.8364    | -0.4362  |
| 1287 | 2.46667 | Extremo 2A | 0.418     | -0.415   | -0.98     | 11.3373 | 1.3201    | -0.2314  |
| 1287 | 2.96    | Extremo 2A | 0.418     | -0.415   | -0.98     | 11.3373 | 1.8038    | -0.0267  |
| 1287 | 0       | Extremo 2A | 0.443     | -3.656   | -5.874    | 21.7861 | -8.3026   | -6.1179  |
| 1287 | 0.49333 | Extremo 1A | 0.443     | -3.656</ |           |         |           |          |



|      |         |            |           |         |           |         |           |          |
|------|---------|------------|-----------|---------|-----------|---------|-----------|----------|
| 1290 | 0.3     | Extremo 2A | 0.001021  | 16.211  | -0.007282 | -0.0855 | -0.000927 | -4.4898  |
| 1290 | 0.6     | Extremo 2A | 0.001021  | 17.713  | -0.007282 | -0.0855 | 0.0013    | -9.5785  |
| 1291 | 0       | Extremo 1A | -0.026    | 34.648  | -0.036    | -0.2292 | -0.0167   | -8.4684  |
| 1291 | 0.5     | Extremo 1A | -0.026    | 37.826  | -0.036    | -0.2292 | 0.0014    | -26.5868 |
| 1291 | 1       | Extremo 1A | -0.026    | 41.004  | -0.036    | -0.2292 | 0.0194    | -46.2944 |
| 1291 | 0       | Extremo 2A | 0.011     | 34.648  | -0.04     | -0.2292 | -0.0309   | -8.4683  |
| 1291 | 0.5     | Extremo 2A | 0.011     | 37.826  | -0.04     | -0.2292 | -0.011    | -26.5869 |
| 1291 | 1       | Extremo 2A | 0.011     | 41.004  | -0.04     | -0.2292 | 0.0089    | -46.2945 |
| 1292 | 0       | Extremo 1A | 0.0005881 | -0.53   | -0.93     | 11.2631 | -1.2637   | -0.9801  |
| 1292 | 0.49333 | Extremo 1A | 0.0005881 | -0.53   | -0.93     | 11.2631 | -0.8046   | -0.7187  |
| 1292 | 0.98667 | Extremo 1A | 0.0005881 | -0.53   | -0.93     | 11.2631 | -0.3456   | -0.4573  |
| 1292 | 1.48    | Extremo 2A | 0.0005881 | -0.53   | -0.93     | 11.2631 | 0.1134    | -0.1959  |
| 1292 | 1.97333 | Extremo 2A | 0.0005881 | -0.53   | -0.93     | 11.2631 | 0.5724    | 0.0655   |
| 1292 | 2.46667 | Extremo 2A | 0.0005881 | -0.53   | -0.93     | 11.2631 | 1.0315    | 0.327    |
| 1292 | 2.96    | Extremo 1A | 0.0005881 | -0.53   | -0.93     | 11.2631 | 1.4905    | 0.5884   |
| 1292 | 0       | Extremo 1A | 0.0006671 | -3.708  | -5.885    | 21.7593 | -8.5849   | -5.7035  |
| 1292 | 0.49333 | Extremo 1A | 0.0006671 | -3.708  | -5.885    | 21.7593 | -5.6815   | -3.8743  |
| 1292 | 0.98667 | Extremo 2A | 0.0006671 | -3.708  | -5.885    | 21.7593 | -2.778    | -2.0452  |
| 1292 | 1.48    | Extremo 2A | 0.0006671 | -3.708  | -5.885    | 21.7593 | 0.1255    | -0.216   |
| 1292 | 1.97333 | Extremo 2A | 0.0006671 | -3.708  | -5.885    | 21.7593 | 3.029     | 1.6131   |
| 1292 | 2.46667 | Extremo 1A | 0.0006671 | -3.708  | -5.885    | 21.7593 | 5.9325    | 3.4423   |
| 1292 | 2.96    | Extremo 1A | 0.0006671 | -3.708  | -5.885    | 21.7593 | 8.836     | 5.2714   |
| 1293 | 0       | Extremo 1A | 0.025     | -42.377 | -0.085    | -0.445  | -0.0344   | -47.759  |
| 1293 | 0.5     | Extremo 2A | 0.025     | -39.199 | -0.085    | -0.445  | 0.0081    | -27.3651 |
| 1293 | 1       | Extremo 2A | 0.025     | -36.021 | -0.085    | -0.445  | 0.0506    | -8.5603  |
| 1293 | 0       | Extremo 2A | -0.003972 | -42.377 | 0.025     | -0.445  | 0.0328    | -47.7593 |
| 1293 | 0.5     | Extremo 1A | -0.003972 | -39.199 | 0.025     | -0.445  | -0.0148   | -27.3652 |
| 1293 | 1       | Extremo 1A | -0.003972 | -36.021 | 0.025     | -0.445  | -0.0623   | -8.5602  |
| 1294 | 0       | Extremo 1A | 0.002359  | -17.925 | -0.021    | -0.1303 | -0.0066   | -9.7024  |
| 1294 | 0.3     | Extremo 2A | 0.002359  | -16.423 | -0.021    | -0.1303 | -0.000336 | -4.5503  |
| 1294 | 0.6     | Extremo 2A | 0.002359  | -14.921 | -0.021    | -0.1303 | 0.006     | 0.1513   |
| 1294 | 0       | Extremo 2A | -0.000372 | -17.925 | 0.022     | -0.1303 | 0.006     | -9.7024  |
| 1294 | 0.3     | Extremo 1A | -0.000372 | -16.423 | 0.022     | -0.1303 | -0.000449 | -4.5503  |
| 1294 | 0.6     | Extremo 1A | -0.000372 | -14.921 | 0.022     | -0.1303 | -0.0069   | -0.1513  |
| 1295 | 0       | Extremo 1A | -0.000694 | 14.87   | -0.017    | -0.7012 | -0.0038   | 0.1063   |
| 1295 | 0.3     | Extremo 2A | -0.000694 | 16.371  | -0.017    | -0.7012 | 0.0013    | -4.5799  |
| 1295 | 0.6     | Extremo 2A | -0.000694 | 17.873  | -0.017    | -0.7012 | 0.0065    | -9.7166  |
| 1295 | 0       | Extremo 2A | 0.0001245 | 14.87   | -0.00591  | -0.7012 | -0.0025   | 0.1063   |
| 1295 | 0.3     | Extremo 1A | 0.0001245 | 16.371  | -0.00591  | -0.7012 | -0.000766 | -4.5799  |
| 1295 | 0.6     | Extremo 1A | 0.0001245 | 17.873  | -0.00591  | -0.7012 | 0.001     | -9.7166  |
| 1296 | 0       | Extremo 1A | -0.007067 | 35.41   | -0.055    | -2.3212 | -0.0276   | -9.0002  |
| 1296 | 0.5     | Extremo 2A | -0.007067 | 38.588  | -0.055    | -2.3212 | -0.000108 | -27.4999 |
| 1296 | 1       | Extremo 2A | -0.007067 | 41.766  | -0.055    | -2.3212 | 0.0273    | -47.5886 |
| 1296 | 0       | Extremo 2A | 0.0017    | 35.41   | -0.036    | -2.3213 | -0.0254   | -9.0002  |
| 1296 | 0.5     | Extremo 1A | 0.0017    | 38.589  | -0.036    | -2.3213 | -0.0072   | -27.5    |
| 1296 | 1       | Extremo 1A | 0.0017    | 41.767  | -0.036    | -2.3213 | 0.0111    | -47.5888 |
| 1297 | 0       | Extremo 1A | -0.011    | -0.563  | -0.915    | 11.2451 | -1.3162   | -0.8929  |
| 1297 | 0.49333 | Extremo 2A | -0.011    | -0.563  | -0.915    | 11.2451 | -0.8649   | -0.6149  |
| 1297 | 0.98667 | Extremo 2A | -0.011    | -0.563  | -0.915    | 11.2451 | -0.4136   | -0.337   |
| 1297 | 1.48    | Extremo 2A | -0.011    | -0.563  | -0.915    | 11.2451 | 0.0378    | -0.059   |
| 1297 | 1.97333 | Extremo 1A | -0.011    | -0.563  | -0.915    | 11.2451 | 0.4891    | 0.219    |
| 1297 | 2.46667 | Extremo 1A | -0.011    | -0.563  | -0.915    | 11.2451 | 0.9404    | 0.4969   |
| 1297 | 2.96    | Extremo 1A | -0.011    | -0.563  | -0.915    | 11.2451 | 1.3917    | 0.7749   |
| 1297 | 0       | Extremo 2A | -0.012    | -3.723  | -5.887    | 21.7524 | -8.6708   | -5.5748  |
| 1297 | 0.49333 | Extremo 2A | -0.012    | -3.723  | -5.887    | 21.7524 | -5.7666   | -3.7382  |
| 1297 | 0.98667 | Extremo 2A | -0.012    | -3.723  | -5.887    | 21.7524 | -2.8625   | -1.9017  |
| 1297 | 1.48    | Extremo 1A | -0.012    | -3.723  | -5.887    | 21.7524 | 0.0417    | -0.0651  |
| 1297 | 1.97333 | Extremo 1A | -0.012    | -3.723  | -5.887    | 21.7524 | 2.9458    | 1.7714   |
| 1297 | 2.46667 | Extremo 1A | -0.012    | -3.723  | -5.887    | 21.7524 | 5.85      | 3.6079   |
| 1297 | 2.96    | Extremo 2A | -0.012    | -3.723  | -5.887    | 21.7524 | 8.7542    | 5.4445   |
| 1298 | 0       | Extremo 2A | 0.006863  | -42.788 | -0.106    | 1.51    | -0.046    | -48.8169 |
| 1298 | 0.5     | Extremo 2A | 0.006863  | -39.61  | -0.106    | 1.51    | 0.0068    | -28.2173 |
| 1298 | 1       | Extremo 1A | 0.006863  | -36.432 | -0.106    | 1.51    | 0.0596    | -9.2068  |
| 1298 | 0       | Extremo 1A | -0.001505 | -42.789 | 0.103     | 1.5101  | 0.0409    | -48.8172 |
| 1298 | 0.5     | Extremo 1A | -0.001505 | -39.61  | 0.103     | 1.5101  | -0.0106   | -28.2175 |
| 1298 | 1       | Extremo 2A | -0.001505 | -36.432 | 0.103     | 1.5101  | -0.0621   | -9.2068  |
| 1299 | 0       | Extremo 2A | 0.0007116 | -18.061 | -0.028    | 0.4669  | -0.0096   | -9.839   |
| 1299 | 0.3     | Extremo 2A | 0.0007116 | -16.559 | -0.028    | 0.4669  | -0.0011   | -4.6461  |
| 1299 | 0.6     | Extremo 1A | 0.0007116 | -15.057 | -0.028    | 0.4669  | 0.0074    | 0.0962   |
| 1299 | 0       | Extremo 1A | -0.000208 | -18.061 | 0.024     | 0.4669  | 0.0074    | -9.839   |
| 1299 | 0.3     | Extremo 1A | -0.000208 | -16.559 | 0.024     | 0.4669  | 0.0001018 | -4.6461  |
| 1299 | 0.6     | Extremo 2A | -0.000208 | -15.057 | 0.024     | 0.4669  | -0.0072   | 0.0962   |

|      |         |            |           |         |           |         |           |          |
|------|---------|------------|-----------|---------|-----------|---------|-----------|----------|
| 1300 | 0       | Extremo 2A | -0.000122 | 14.902  | -0.018    | -0.7946 | -0.0043   | -0.0088  |
| 1300 | 0.3     | Extremo 2A | -0.000122 | 16.404  | -0.018    | -0.7946 | 0.0011    | -4.7048  |
| 1300 | 0.6     | Extremo 1A | -0.000122 | 17.906  | -0.018    | -0.7946 | 0.0066    | -9.8513  |
| 1300 | 0       | Extremo 1A | 0.0003445 | 14.902  | -0.006831 | -0.7947 | -0.0023   | -0.0088  |
| 1300 | 0.3     | Extremo 1A | 0.0003445 | 16.404  | -0.006831 | -0.7947 | -0.000211 | -4.7048  |
| 1300 | 0.6     | Extremo 2A | 0.0003445 | 17.906  | -0.006831 | -0.7947 | 0.0018    | -9.8513  |
| 1301 | 0       | Extremo 2A | -0.001578 | 33.881  | -0.061    | -2.0447 | -0.0326   | -10.0027 |
| 1301 | 0.5     | Extremo 2A | -0.001578 | 37.059  | -0.061    | -2.0447 | -0.002    | -27.7376 |
| 1301 | 1       | Extremo 1A | -0.001578 | 40.237  | -0.061    | -2.0447 | 0.0286    | -47.0615 |
| 1301 | 0       | Extremo 1A | 0.004324  | 33.881  | -0.035    | -2.0448 | -0.0206   | -10.0028 |
| 1301 | 0.5     | Extremo 1A | 0.004324  | 37.059  | -0.035    | -2.0448 | -0.0032   | -27.7377 |
| 1301 | 1       | Extremo 2A | 0.004324  | 40.237  | -0.035    | -2.0448 | 0.0142    | -47.0618 |
| 1302 | 0       | Extremo 2A | -0.001143 | -0.573  | -0.91     | 11.2411 | -1.3356   | -0.8656  |
| 1302 | 0.49333 | Extremo 2A | -0.001143 | -0.573  | -0.91     | 11.2411 | -0.8864   | -0.5831  |
| 1302 | 0.98667 | Extremo 1A | -0.001143 | -0.573  | -0.91     | 11.2411 | -0.4373   | -0.3007  |
| 1302 | 1.48    | Extremo 1A | -0.001143 | -0.573  | -0.91     | 11.2411 | 0.0118    | -0.0182  |
| 1302 | 1.97333 | Extremo 1A | -0.001143 | -0.573  | -0.91     | 11.2411 | 0.461     | 0.2643   |
| 1302 | 2.46667 | Extremo 2A | -0.001143 | -0.573  | -0.91     | 11.2411 | 0.9101    | 0.5468   |
| 1302 | 2.96    | Extremo 2A | -0.001143 | -0.573  | -0.91     | 11.2411 | 1.3593    | 0.8292   |
| 1302 | 0       | Extremo 2A | -0.001213 | -3.727  | -5.887    | 21.7508 | -8.6995   | -5.5358  |
| 1302 | 0.49333 | Extremo 1A | -0.001213 | -3.727  | -5.887    | 21.7508 | -5.7953   | -3.6972  |
| 1302 | 0.98667 | Extremo 1A | -0.001213 | -3.727  | -5.887    | 21.7508 | -2.8911   | -1.8587  |
| 1302 | 1.48    | Extremo 1A | -0.001213 | -3.727  | -5.887    | 21.7508 | 0.0131    | -0.0201  |
| 1302 | 1.97333 | Extremo 2A | -0.001213 | -3.727  | -5.887    | 21.7508 | 2.9173    | 1.8185   |
| 1302 | 2.46667 | Extremo 2A | -0.001213 | -3.727  | -5.887    | 21.7508 | 5.8215    | 3.6571   |
| 1302 | 2.96    | Extremo 2A | -0.001213 | -3.727  | -5.887    | 21.7508 | 8.7256    | 5.4957   |
| 1303 | 0       | Extremo 1A | -0.001995 | -40.317 | -0.112    | 0.6985  | -0.0498   | -47.4135 |
| 1303 | 0.5     | Extremo 1A | -0.001995 | -37.139 | -0.112    | 0.6985  | 0.006     | -28.0494 |
| 1303 | 1       | Extremo 1A | -0.001995 | -33.961 | -0.112    | 0.6985  | 0.0617    | -10.2743 |
| 1303 | 0       | Extremo 2A | 0.00553   | -40.318 | 0.104     | 0.6986  | 0.0454    | -47.4137 |
| 1303 | 0.5     | Extremo 2A | 0.00553   | -37.139 | 0.104     | 0.6986  | -0.0066   | -28.0495 |
| 1303 | 1       | Extremo 2A | 0.00553   | -33.961 | 0.104     | 0.6986  | -0.0585   | -10.2743 |
| 1304 | 0       | Extremo 1A | -0.000171 | -17.986 | -0.03     | 0.4422  | -0.0102   | -9.9255  |
| 1304 | 0.3     | Extremo 1A | -0.000171 | -16.484 | -0.03     | 0.4422  | -0.0013   | -4.755   |
| 1304 | 0.6     | Extremo 1A | -0.000171 | -14.982 | -0.03     | 0.4422  | 0.0077    | -0.0352  |
| 1304 | 0       | Extremo 2A | 0.0004581 | -17.986 | 0.026     | 0.4422  | 0.0084    | -9.9255  |
| 1304 | 0.3     | Extremo 2A | 0.0004581 | -16.484 | 0.026     | 0.4422  | 0.0006656 | -4.755   |
| 1304 | 0.6     | Extremo 2A | 0.0004581 | -14.982 | 0.026     | 0.4422  | -0.007    | -0.0352  |
| 1305 | 0       | Extremo 1A | -9.11E-05 | 14.786  | -0.018    | -0.5764 | -0.0044   | -0.0591  |
| 1305 | 0.3     | Extremo 1A | -9.11E-05 | 16.288  | -0.018    | -0.5764 | 0.0008661 | -4.7202  |
| 1305 | 0.6     | Extremo 1A | -9.11E-05 | 17.79   | -0.018    | -0.5764 | 0.0062    | -9.8317  |
| 1305 | 0       | Extremo 2A | 0.0005318 | 14.786  | -0.006518 | -0.5764 | -0.0018   | -0.0591  |
| 1305 | 0.3     | Extremo 2A | 0.0005318 | 16.288  | -0.006518 | -0.5764 | 0.0001478 | -4.7202  |
| 1305 | 0.6     | Extremo 2A | 0.0005318 | 17.79   | -0.006518 | -0.5764 | 0.0021    | -9.8318  |
| 1306 | 0       | Extremo 1A | -0.001266 | 32.608  | -0.064    | -1.1571 | -0.035    | -10.2602 |
| 1306 | 0.5     | Extremo 1A | -0.001266 | 35.786  | -0.064    | -1.1571 | -0.0032   | -27.3588 |
| 1306 | 1       | Extremo 1A | -0.001266 | 38.964  | -0.064    | -1.1571 | 0.0287    | -46.0464 |
| 1306 | 0       | Extremo 2A | 0.006067  | 32.608  | -0.029    | -1.1571 | -0.0152   | -10.2603 |
| 1306 | 0.5     | Extremo 2A | 0.006067  | 35.786  | -0.029    | -1.1571 | -0.000667 | -27.3589 |
| 1306 | 1       | Extremo 2A | 0.006067  | 38.964  | -0.029    | -1.1571 | 0.0139    | -46.0466 |
| 1307 | 0       | Extremo 1A | 0.0001958 | -0.575  | -0.909    | 11.     |           |          |



|      |         |            |           |         |           |         |           |           |
|------|---------|------------|-----------|---------|-----------|---------|-----------|-----------|
| 1309 | 0.6     | Extremo 2A | -0.000338 | -14.752 | -0.029    | 0.1352  | 0.0075    | -0.0721   |
| 1309 | 0       | Extremo 2A | 0.0006881 | -17.756 | 0.025     | 0.1353  | 0.0083    | -9.8247   |
| 1309 | 0.3     | Extremo 1A | 0.0006881 | -16.254 | 0.025     | 0.1353  | 0.0009371 | -4.7231   |
| 1309 | 0.6     | Extremo 1A | 0.0006881 | -14.752 | 0.025     | 0.1353  | -0.0065   | -0.0721   |
| 1310 | 0       | Extremo 1A | -0.000101 | 14.674  | -0.017    | -0.3455 | -0.0045   | -0.0542   |
| 1310 | 0.3     | Extremo 2A | -0.000101 | 16.176  | -0.017    | -0.3455 | 0.0007132 | -4.6816   |
| 1310 | 0.6     | Extremo 2A | -0.000101 | 17.678  | -0.017    | -0.3455 | 0.006     | -9.7596   |
| 1310 | 0       | Extremo 2A | 0.0005202 | 14.674  | -0.005267 | -0.3455 | -0.0013   | -0.0542   |
| 1310 | 0.3     | Extremo 1A | 0.0005202 | 16.176  | -0.005267 | -0.3455 | 0.0003024 | -4.6816   |
| 1310 | 0.6     | Extremo 1A | 0.0005202 | 17.678  | -0.005267 | -0.3455 | 0.0019    | -9.7596   |
| 1311 | 0       | Extremo 1A | -0.00124  | 32.104  | -0.066    | -0.5649 | -0.0366   | -10.1073  |
| 1311 | 0.5     | Extremo 2A | -0.00124  | 35.282  | -0.066    | -0.5649 | -0.0038   | -26.9537  |
| 1311 | 1       | Extremo 2A | -0.00124  | 38.46   | -0.066    | -0.5649 | 0.029     | -45.3892  |
| 1311 | 0       | Extremo 2A | 0.005712  | 32.104  | -0.022    | -0.5648 | -0.01     | -10.1073  |
| 1311 | 0.5     | Extremo 1A | 0.005712  | 35.282  | -0.022    | -0.5648 | 0.000765  | -26.9538  |
| 1311 | 1       | Extremo 1A | 0.005712  | 38.46   | -0.022    | -0.5648 | 0.0116    | -45.3892  |
| 1312 | 0       | Extremo 1A | 5.061E-05 | -0.575  | -0.909    | 11.2401 | -1.3443   | -0.8533   |
| 1312 | 0.49333 | Extremo 2A | 5.061E-05 | -0.575  | -0.909    | 11.2401 | -0.8958   | -0.5695   |
| 1312 | 0.98667 | Extremo 2A | 5.061E-05 | -0.575  | -0.909    | 11.2401 | -0.4474   | -0.2856   |
| 1312 | 1.48    | Extremo 2A | 5.061E-05 | -0.575  | -0.909    | 11.2401 | 0.0011    | -0.0018   |
| 1312 | 1.97333 | Extremo 1A | 5.061E-05 | -0.575  | -0.909    | 11.2401 | 0.4496    | 0.2821    |
| 1312 | 2.46667 | Extremo 1A | 5.061E-05 | -0.575  | -0.909    | 11.2401 | 0.8981    | 0.566     |
| 1312 | 2.96    | Extremo 1A | 5.061E-05 | -0.575  | -0.909    | 11.2401 | 1.3465    | 0.8498    |
| 1312 | 0       | Extremo 2A | 5.369E-05 | -3.728  | -5.887    | 21.7503 | -8.7115   | -5.5194   |
| 1312 | 0.49333 | Extremo 2A | 5.369E-05 | -3.728  | -5.887    | 21.7503 | -5.8072   | -3.6802   |
| 1312 | 0.98667 | Extremo 2A | 5.369E-05 | -3.728  | -5.887    | 21.7503 | -2.903    | -1.8411   |
| 1312 | 1.48    | Extremo 1A | 5.369E-05 | -3.728  | -5.887    | 21.7503 | 0.0012    | -0.0019   |
| 1312 | 1.97333 | Extremo 1A | 5.369E-05 | -3.728  | -5.887    | 21.7503 | 2.9055    | 1.8372    |
| 1312 | 2.46667 | Extremo 1A | 5.369E-05 | -3.728  | -5.887    | 21.7503 | 5.8097    | 3.6764    |
| 1312 | 2.96    | Extremo 2A | 5.369E-05 | -3.728  | -5.887    | 21.7503 | 8.7139    | 5.5155    |
| 1313 | 0       | Extremo 2A | -0.003168 | -37.955 | -0.106    | -0.9086 | -0.048    | -44.7384  |
| 1313 | 0.5     | Extremo 2A | -0.003168 | -34.777 | -0.106    | -0.9086 | 0.0049    | -26.5556  |
| 1313 | 1       | Extremo 1A | -0.003168 | -31.598 | -0.106    | -0.9086 | 0.0578    | -9.9618   |
| 1313 | 0       | Extremo 1A | 0.006933  | -37.955 | 0.088     | -0.9087 | 0.0415    | -44.7385  |
| 1313 | 0.5     | Extremo 1A | 0.006933  | -34.777 | 0.088     | -0.9087 | -0.0025   | -26.5556  |
| 1313 | 1       | Extremo 2A | 0.006933  | -31.599 | 0.088     | -0.9087 | -0.0465   | -9.9619   |
| 1314 | 0       | Extremo 2A | -0.000303 | -17.573 | -0.028    | -0.086  | -0.0095   | -9.6876   |
| 1314 | 0.3     | Extremo 2A | -0.000303 | -16.071 | -0.028    | -0.086  | -0.0012   | -4.641    |
| 1314 | 0.6     | Extremo 1A | -0.000303 | -14.569 | -0.028    | -0.086  | 0.0072    | -0.045    |
| 1314 | 0       | Extremo 1A | 0.0006409 | -17.573 | 0.023     | -0.086  | 0.0079    | -9.6876   |
| 1314 | 0.3     | Extremo 1A | 0.0006409 | -16.071 | 0.023     | -0.086  | 0.001     | -4.641    |
| 1314 | 0.6     | Extremo 2A | 0.0006409 | -14.569 | 0.023     | -0.086  | -0.0058   | -0.045    |
| 1315 | 0       | Extremo 2A | -7.83E-05 | 14.611  | -0.018    | -0.1913 | -0.0046   | -0.0369   |
| 1315 | 0.3     | Extremo 2A | -7.83E-05 | 16.113  | -0.018    | -0.1913 | 0.0006446 | -4.6454   |
| 1315 | 0.6     | Extremo 1A | -7.83E-05 | 17.614  | -0.018    | -0.1913 | 0.0059    | -9.7045   |
| 1315 | 0       | Extremo 1A | 0.0004086 | 14.611  | -0.003866 | -0.1913 | -0.000812 | -0.0369   |
| 1315 | 0.3     | Extremo 1A | 0.0004086 | 16.113  | -0.003866 | -0.1913 | 0.000348  | -4.6454   |
| 1315 | 0.6     | Extremo 2A | 0.0004086 | 17.614  | -0.003866 | -0.1913 | 0.0015    | -9.7045   |
| 1316 | 0       | Extremo 2A | -0.000909 | 31.983  | -0.067    | -0.2816 | -0.0377   | -9.9287   |
| 1316 | 0.5     | Extremo 2A | -0.000909 | 35.161  | -0.067    | -0.2816 | -0.0041   | -26.7146  |
| 1316 | 1       | Extremo 1A | -0.000909 | 38.339  | -0.067    | -0.2816 | 0.0295    | -45.0895  |
| 1316 | 0       | Extremo 1A | 0.004404  | 31.983  | -0.015    | -0.2815 | -0.0058   | -9.9287   |
| 1316 | 0.5     | Extremo 1A | 0.004404  | 35.161  | -0.015    | -0.2815 | 0.0015    | -26.7146  |
| 1316 | 1       | Extremo 2A | 0.004404  | 38.339  | -0.015    | -0.2815 | 0.0088    | -45.0895  |
| 1317 | 0       | Extremo 2A | -3.12E-07 | -0.575  | -0.909    | 11.24   | -1.3454   | -0.8517   |
| 1317 | 0.49333 | Extremo 2A | -3.12E-07 | -0.575  | -0.909    | 11.24   | -0.8968   | -0.568    |
| 1317 | 0.98667 | Extremo 1A | -3.12E-07 | -0.575  | -0.909    | 11.24   | -0.4482   | -0.2843   |
| 1317 | 1.48    | Extremo 1A | -3.12E-07 | -0.575  | -0.909    | 11.24   | 0.0003442 | -0.000546 |
| 1317 | 1.97333 | Extremo 1A | -3.12E-07 | -0.575  | -0.909    | 11.24   | 0.4489    | 0.2832    |
| 1317 | 2.46667 | Extremo 2A | -3.12E-07 | -0.575  | -0.909    | 11.24   | 0.8975    | 0.5669    |
| 1317 | 2.96    | Extremo 2A | -3.12E-07 | -0.575  | -0.909    | 11.24   | 1.3461    | 0.8506    |
| 1317 | 0       | Extremo 2A | -3.26E-07 | -3.727  | -5.887    | 21.7501 | -8.713    | -5.5169   |
| 1317 | 0.49333 | Extremo 1A | -3.26E-07 | -3.727  | -5.887    | 21.7501 | -5.8085   | -3.6781   |
| 1317 | 0.98667 | Extremo 1A | -3.26E-07 | -3.727  | -5.887    | 21.7501 | -2.9041   | -1.8394   |
| 1317 | 1.48    | Extremo 1A | -3.26E-07 | -3.727  | -5.887    | 21.7501 | 0.00038   | -0.000602 |
| 1317 | 1.97333 | Extremo 2A | -3.26E-07 | -3.727  | -5.887    | 21.7501 | 2.9048    | 1.8382    |
| 1317 | 2.46667 | Extremo 2A | -3.26E-07 | -3.727  | -5.887    | 21.7501 | 5.8093    | 3.6769    |
| 1317 | 2.96    | Extremo 2A | -3.26E-07 | -3.727  | -5.887    | 21.7501 | 8.7137    | 5.5157    |
| 1318 | 0       | Extremo 1A | -0.002454 | -37.802 | -0.102    | -0.85   | -0.0463   | -44.2698  |
| 1318 | 0.5     | Extremo 1A | -0.002454 | -34.624 | -0.102    | -0.85   | 0.0047    | -26.1632  |
| 1318 | 1       | Extremo 1A | -0.002454 | -31.446 | -0.102    | -0.85   | 0.0557    | -9.6457   |
| 1318 | 0       | Extremo 2A | 0.005275  | -37.802 | 0.08      | -0.8501 | 0.0381    | -44.2698  |

|      |         |            |           |         |           |         |           |           |
|------|---------|------------|-----------|---------|-----------|---------|-----------|-----------|
| 1318 | 0.5     | Extremo 2A | 0.005275  | -34.624 | 0.08      | -0.8501 | -0.0017   | -26.1633  |
| 1318 | 1       | Extremo 2A | 0.005275  | -31.446 | 0.08      | -0.8501 | -0.0416   | -9.6457   |
| 1319 | 0       | Extremo 1A | -0.000235 | -17.472 | -0.027    | -0.1521 | -0.0091   | -9.594    |
| 1319 | 0.3     | Extremo 1A | -0.000235 | -15.97  | -0.027    | -0.1521 | -0.0011   | -4.5777   |
| 1319 | 0.6     | Extremo 1A | -0.000235 | -14.468 | -0.027    | -0.1521 | 0.0069    | -0.012    |
| 1319 | 0       | Extremo 2A | 0.000494  | -17.472 | 0.021     | -0.1521 | 0.0073    | -9.594    |
| 1319 | 0.3     | Extremo 2A | 0.000494  | -15.97  | 0.021     | -0.1521 | 0.001     | -4.5777   |
| 1319 | 0.6     | Extremo 2A | 0.000494  | -14.468 | 0.021     | -0.1521 | -0.0052   | -0.012    |
| 1320 | 0       | Extremo 1A | -3.46E-05 | 14.583  | -0.018    | -0.0962 | -0.0047   | -0.0251   |
| 1320 | 0.3     | Extremo 1A | -3.46E-05 | 16.085  | -0.018    | -0.0962 | 0.0006134 | -4.6254   |
| 1320 | 0.6     | Extremo 1A | -3.46E-05 | 17.587  | -0.018    | -0.0962 | 0.0059    | -9.6762   |
| 1320 | 0       | Extremo 2A | 0.000262  | 14.583  | -0.002747 | -0.0962 | -0.000476 | -0.0251   |
| 1320 | 0.3     | Extremo 2A | 0.000262  | 16.085  | -0.002747 | -0.0962 | 0.0003482 | -4.6254   |
| 1320 | 0.6     | Extremo 2A | 0.000262  | 17.587  | -0.002747 | -0.0962 | 0.0012    | -9.6762   |
| 1321 | 0       | Extremo 1A | -0.000406 | 31.974  | -0.068    | -0.1467 | -0.0383   | -9.8277   |
| 1321 | 0.5     | Extremo 1A | -0.000406 | 35.152  | -0.068    | -0.1467 | -0.0043   | -26.6091  |
| 1321 | 1       | Extremo 1A | -0.000406 | 38.33   | -0.068    | -0.1467 | 0.0298    | -44.9796  |
| 1321 | 0       | Extremo 2A | 0.002794  | 31.974  | -0.009483 | -0.1466 | -0.0029   | -9.8277   |
| 1321 | 0.5     | Extremo 2A | 0.002794  | 35.152  | -0.009483 | -0.1466 | 0.0019    | -26.6091  |
| 1321 | 1       | Extremo 2A | 0.002794  | 38.33   | -0.009483 | -0.1466 | 0.0066    | -44.9796  |
| 1322 | 0       | Extremo 1A | -1.41E-06 | -0.573  | -0.91     | 11.2394 | -1.3471   | -0.8488   |
| 1322 | 0.49333 | Extremo 1A | -1.41E-06 | -0.573  | -0.91     | 11.2394 | -0.898    | -0.5659   |
| 1322 | 0.98667 | Extremo 1A | -1.41E-06 | -0.573  | -0.91     | 11.2394 | -0.449    | -0.2831   |
| 1322 | 1.48    | Extremo 2A | -1.41E-06 | -0.573  | -0.91     | 11.2394 | 0.0001069 | -0.000169 |
| 1322 | 1.97333 | Extremo 2A | -1.41E-06 | -0.573  | -0.91     | 11.2394 | 0.4492    | 0.2827    |
| 1322 | 2.46667 | Extremo 2A | -1.41E-06 | -0.573  | -0.91     | 11.2394 | 0.8983    | 0.5656    |
| 1322 | 2.96    | Extremo 1A | -1.41E-06 | -0.573  | -0.91     | 11.2394 | 1.3473    | 0.8485    |
| 1322 | 0       | Extremo 1A | -1.5E-06  | -3.724  | -5.889    | 21.7489 | -8.7159   | -5.5115   |
| 1322 | 0.49333 | Extremo 1A | -1.5E-06  | -3.724  | -5.889    | 21.7489 | -5.8106   | -3.6744   |
| 1322 | 0.98667 | Extremo 2A | -1.5E-06  | -3.724  | -5.889    | 21.7489 | -2.9052   | -1.8373   |
| 1322 | 1.48    | Extremo 2A | -1.5E-06  | -3.724  | -5.889    | 21.7489 | 0.0001181 | -0.000186 |
| 1322 | 1.97333 | Extremo 2A | -1.5E-06  | -3.724  | -5.889    | 21.7489 | 2.9055    | 1.8369    |
| 1322 | 2.46667 | Extremo 1A | -1.5E-06  | -3.724  | -5.889    | 21.7489 | 5.8108    | 3.674     |
| 1322 | 2.96    | Extremo 1A | -1.5E-06  | -3.724  | -5.889    | 21.7489 | 8.7161    | 5.5111    |
| 1323 | 0       | Extremo 1A | -0.001725 | -37.777 | -0.099    | -0.5392 | -0.0449   | -44.0756  |
| 1323 | 0.5     | Extremo 2A | -0.001725 | -34.599 | -0.099    | -0.5392 | 0.0046    | -25.9816  |
| 1323 | 1       | Extremo 2A | -0.001725 | -31.421 | -0.099    | -0.5392 | 0.0541    | -9.4766   |
| 1323 | 0       | Extremo 2A | 0.003384  | -37.777 | 0.073     | -0.5394 | 0.0353    | -44.0756  |
| 1323 | 0.5     | Extremo 1A | 0.003384  | -34.599 | 0.073     | -0.5394 | -0.0014   | -25.9816  |
| 1323 | 1       | Extremo 1A | 0.003384  | -31.421 | 0.073     | -0.5394 | -0.0381   | -9.4766   |
| 1324 | 0       | Extremo 1A | -0.000166 | -17.426 | -0.026    | -0.1156 | -0.0088   | -9.5464   |
| 1324 | 0.3     | Extremo 2A | -0.000166 | -15.924 | -0.026    | -0.1156 | -0.0011   | -4.5439   |
| 1324 | 0.6     | Extremo 2A | -0.000166 | -14.422 | -0.026    | -0.1156 | 0.0067    | 0.008     |
| 1324 | 0       | Extremo 2A | 0.0003197 | -17.426 | 0.019     | -0.1156 | 0.0069    | -9.5464   |
| 1324 | 0.3     | Extremo 1A | 0.0003197 | -15.924 | 0.019     | -0.1156 | 0.001     | -4.5439   |
| 1324 | 0.6     | Extremo 1A | 0.0003197 | -14.422 | 0.019     | -0.1156 | -0.0048   | 0.008     |
| 1325 | 0       | Extremo 1A | 1.893E-05 | 14.574  | -0.018    | -0.029  | -0.0047   | -0.0201   |
| 1325 | 0.3     | Extremo 2A | 1.893E-05 | 16.076  | -0.018    | -0.029  | 0.0005937 | -4.6176   |
| 1325 | 0.6     | Extremo 2A | 1.893E-05 | 17.578  | -0.018    | -0.029  | 0.0059    | -9.6656   |
| 1325 | 0       | Extremo 2A | 0.0001063 | 14.574  | -0.002096 |         |           |           |



|      |         |            |           |         |           |         |           |           |
|------|---------|------------|-----------|---------|-----------|---------|-----------|-----------|
| 1328 | 0       | Extremo 2A | -0.001044 | -37.775 | -0.097    | -0.135  | -0.0439   | -44.0096  |
| 1328 | 0.5     | Extremo 2A | -0.001044 | -34.597 | -0.097    | -0.135  | 0.0046    | -25.9166  |
| 1328 | 1       | Extremo 1A | -0.001044 | -31.419 | -0.097    | -0.135  | 0.053     | -9.4126   |
| 1328 | 0       | Extremo 1A | 0.001484  | -37.775 | 0.07      | -0.1352 | 0.0337    | -44.0096  |
| 1328 | 0.5     | Extremo 1A | 0.001484  | -34.597 | 0.07      | -0.1352 | -0.0013   | -25.9166  |
| 1328 | 1       | Extremo 2A | 0.001484  | -31.419 | 0.07      | -0.1352 | -0.0362   | -9.4126   |
| 1329 | 0       | Extremo 2A | -0.000101 | -17.41  | -0.025    | -0.0316 | -0.0086   | -9.5285   |
| 1329 | 0.3     | Extremo 2A | -0.000101 | -15.908 | -0.025    | -0.0316 | -0.001    | -4.531    |
| 1329 | 0.6     | Extremo 1A | -0.000101 | -14.406 | -0.025    | -0.0316 | 0.0066    | 0.0161    |
| 1329 | 0       | Extremo 1A | 0.0001416 | -17.41  | 0.019     | -0.0317 | 0.0066    | -9.5285   |
| 1329 | 0.3     | Extremo 1A | 0.0001416 | -15.908 | 0.019     | -0.0317 | 0.0009909 | -4.531    |
| 1329 | 0.6     | Extremo 2A | 0.0001416 | -14.406 | 0.019     | -0.0317 | -0.0046   | 0.0161    |
| 1330 | 0       | Extremo 2A | 7.799E-05 | 14.574  | -0.017    | 0.0304  | -0.0046   | -0.0202   |
| 1330 | 0.3     | Extremo 2A | 7.799E-05 | 16.076  | -0.017    | 0.0304  | 0.0005736 | -4.6176   |
| 1330 | 0.6     | Extremo 1A | 7.799E-05 | 17.577  | -0.017    | 0.0304  | 0.0058    | -9.6655   |
| 1330 | 0       | Extremo 1A | -4.95E-05 | 14.574  | -0.001977 | 0.0304  | -0.000263 | -0.0202   |
| 1330 | 0.3     | Extremo 1A | -4.95E-05 | 16.076  | -0.001977 | 0.0304  | 0.00033   | -4.6176   |
| 1330 | 0.6     | Extremo 2A | -4.95E-05 | 17.577  | -0.001977 | 0.0304  | 0.0009233 | -9.6655   |
| 1331 | 0       | Extremo 2A | 0.0008011 | 31.977  | -0.067    | 0.0121  | -0.0381   | -9.7887   |
| 1331 | 0.5     | Extremo 2A | 0.0008011 | 35.155  | -0.067    | 0.0121  | -0.0044   | -26.5716  |
| 1331 | 1       | Extremo 1A | 0.0008011 | 38.333  | -0.067    | 0.0121  | 0.0294    | -44.9436  |
| 1331 | 0       | Extremo 1A | -0.000537 | 31.977  | -0.006176 | 0.0122  | -0.0011   | -9.7887   |
| 1331 | 0.5     | Extremo 1A | -0.000537 | 35.155  | -0.006176 | 0.0122  | 0.002     | -26.5716  |
| 1331 | 1       | Extremo 2A | -0.000537 | 38.333  | -0.006176 | 0.0122  | 0.0051    | -44.9436  |
| 1332 | 0       | Extremo 2A | 2.541E-08 | -0.543  | -0.928    | 11.2222 | -1.374    | -0.8038   |
| 1332 | 0.49333 | Extremo 2A | 2.541E-08 | -0.543  | -0.928    | 11.2222 | -0.916    | -0.5359   |
| 1332 | 0.98667 | Extremo 1A | 2.541E-08 | -0.543  | -0.928    | 11.2222 | -0.458    | -0.268    |
| 1332 | 1.48    | Extremo 1A | 2.541E-08 | -0.543  | -0.928    | 11.2222 | 1.026E-05 | -1.62E-05 |
| 1332 | 1.97333 | Extremo 1A | 2.541E-08 | -0.543  | -0.928    | 11.2222 | 0.458     | 0.2679    |
| 1332 | 2.46667 | Extremo 2A | 2.541E-08 | -0.543  | -0.928    | 11.2222 | 0.916     | 0.5359    |
| 1332 | 2.96    | Extremo 2A | 2.541E-08 | -0.543  | -0.928    | 11.2222 | 1.374     | 0.8038    |
| 1332 | 0       | Extremo 2A | 2.693E-08 | -3.663  | -5.921    | 21.7157 | -8.7626   | -5.4212   |
| 1332 | 0.49333 | Extremo 1A | 2.693E-08 | -3.663  | -5.921    | 21.7157 | -5.8417   | -3.6141   |
| 1332 | 0.98667 | Extremo 1A | 2.693E-08 | -3.663  | -5.921    | 21.7157 | -2.9208   | -1.8071   |
| 1332 | 1.48    | Extremo 1A | 2.693E-08 | -3.663  | -5.921    | 21.7157 | 1.133E-05 | -1.79E-05 |
| 1332 | 1.97333 | Extremo 2A | 2.693E-08 | -3.663  | -5.921    | 21.7157 | 2.9209    | 1.807     |
| 1332 | 2.46667 | Extremo 2A | 2.693E-08 | -3.663  | -5.921    | 21.7157 | 5.8417    | 3.6141    |
| 1332 | 2.96    | Extremo 2A | 2.693E-08 | -3.663  | -5.921    | 21.7157 | 8.7626    | 5.4211    |
| 1333 | 0       | Extremo 1A | -0.000422 | -37.775 | -0.096    | 0.2895  | -0.0433   | -44.0159  |
| 1333 | 0.5     | Extremo 1A | -0.000422 | -34.597 | -0.096    | 0.2895  | 0.0046    | -25.9227  |
| 1333 | 1       | Extremo 1A | -0.000422 | -31.419 | -0.096    | 0.2895  | 0.0525    | -9.4186   |
| 1333 | 0       | Extremo 2A | -0.000377 | -37.775 | 0.069     | 0.2893  | 0.0332    | -44.0159  |
| 1333 | 0.5     | Extremo 2A | -0.000377 | -34.597 | 0.069     | 0.2893  | -0.0013   | -25.9227  |
| 1333 | 1       | Extremo 2A | -0.000377 | -31.419 | 0.069     | 0.2893  | -0.0358   | -9.4186   |
| 1334 | 0       | Extremo 1A | -4.31E-05 | -17.411 | -0.025    | 0.0639  | -0.0085   | -9.5303   |
| 1334 | 0.3     | Extremo 1A | -4.31E-05 | -15.909 | -0.025    | 0.0639  | -0.001    | -4.5322   |
| 1334 | 0.6     | Extremo 1A | -4.31E-05 | -14.407 | -0.025    | 0.0639  | 0.0065    | 0.0153    |
| 1334 | 0       | Extremo 2A | -3.34E-05 | -17.411 | 0.018     | 0.0639  | 0.0065    | -9.5303   |
| 1334 | 0.3     | Extremo 2A | -3.34E-05 | -15.909 | 0.018     | 0.0639  | 0.0009741 | -4.5322   |
| 1334 | 0.6     | Extremo 2A | -3.34E-05 | -14.407 | 0.018     | 0.0639  | -0.0045   | 0.0153    |
| 1335 | 0       | Extremo 1A | 0.0001415 | 14.583  | -0.017    | 0.0978  | -0.0045   | -0.0257   |
| 1335 | 0.3     | Extremo 1A | 0.0001415 | 16.085  | -0.017    | 0.0978  | 0.0005479 | -4.6259   |
| 1335 | 0.6     | Extremo 1A | 0.0001415 | 17.587  | -0.017    | 0.0978  | 0.0056    | -9.6767   |
| 1335 | 0       | Extremo 2A | -0.000201 | 14.583  | -0.002385 | 0.0978  | -0.000389 | -0.0257   |
| 1335 | 0.3     | Extremo 2A | -0.000201 | 16.085  | -0.002385 | 0.0978  | 0.0003266 | -4.6259   |
| 1335 | 0.6     | Extremo 2A | -0.000201 | 17.587  | -0.002385 | 0.0978  | 0.001     | -9.6767   |
| 1336 | 0       | Extremo 1A | 0.001469  | 31.965  | -0.066    | 0.0932  | -0.0373   | -9.8306   |
| 1336 | 0.5     | Extremo 1A | 0.001469  | 35.143  | -0.066    | 0.0932  | -0.0044   | -26.6077  |
| 1336 | 1       | Extremo 1A | 0.001469  | 38.321  | -0.066    | 0.0932  | 0.0286    | -44.9739  |
| 1336 | 0       | Extremo 2A | -0.002164 | 31.965  | -0.008124 | 0.0933  | -0.0022   | -9.8306   |
| 1336 | 0.5     | Extremo 2A | -0.002164 | 35.143  | -0.008124 | 0.0933  | 0.0019    | -26.6077  |
| 1336 | 1       | Extremo 2A | -0.002164 | 38.321  | -0.008124 | 0.0933  | 0.0059    | -44.9739  |
| 1337 | 0       | Extremo 1A | 6.117E-09 | -0.464  | -0.975    | 11.1652 | -1.443    | -0.6865   |
| 1337 | 0.49333 | Extremo 1A | 6.117E-09 | -0.464  | -0.975    | 11.1652 | -0.962    | -0.4576   |
| 1337 | 0.98667 | Extremo 1A | 6.117E-09 | -0.464  | -0.975    | 11.1652 | -0.481    | -0.2288   |
| 1337 | 1.48    | Extremo 2A | 6.117E-09 | -0.464  | -0.975    | 11.1652 | 3.176E-06 | -5.02E-06 |
| 1337 | 1.97333 | Extremo 2A | 6.117E-09 | -0.464  | -0.975    | 11.1652 | 0.481     | 0.2288    |
| 1337 | 2.46667 | Extremo 2A | 6.117E-09 | -0.464  | -0.975    | 11.1652 | 0.962     | 0.4576    |
| 1337 | 2.96    | Extremo 1A | 6.117E-09 | -0.464  | -0.975    | 11.1652 | 1.4431    | 0.6864    |
| 1337 | 0       | Extremo 1A | 6.489E-09 | -3.502  | -5.999    | 21.6054 | -8.8791   | -5.1832   |
| 1337 | 0.49333 | Extremo 1A | 6.489E-09 | -3.502  | -5.999    | 21.6054 | -5.9194   | -3.4555   |
| 1337 | 0.98667 | Extremo 2A | 6.489E-09 | -3.502  | -5.999    | 21.6054 | -2.9597   | -1.7277   |

|      |         |            |           |         |           |         |           |           |
|------|---------|------------|-----------|---------|-----------|---------|-----------|-----------|
| 1337 | 1.48    | Extremo 2A | 6.489E-09 | -3.502  | -5.999    | 21.6054 | 3.507E-06 | -5.54E-06 |
| 1337 | 1.97333 | Extremo 2A | 6.489E-09 | -3.502  | -5.999    | 21.6054 | 2.9597    | 1.7277    |
| 1337 | 2.46667 | Extremo 1A | 6.489E-09 | -3.502  | -5.999    | 21.6054 | 5.9194    | 3.4555    |
| 1337 | 2.96    | Extremo 1A | 6.489E-09 | -3.502  | -5.999    | 21.6054 | 8.8791    | 5.1832    |
| 1338 | 0       | Extremo 1A | 0.0001358 | -37.779 | -0.096    | 0.6845  | -0.0431   | -44.0998  |
| 1338 | 0.5     | Extremo 2A | 0.0001358 | -34.601 | -0.096    | 0.6845  | 0.0047    | -26.0049  |
| 1338 | 1       | Extremo 2A | 0.0001358 | -31.422 | -0.096    | 0.6845  | 0.0525    | -9.4992   |
| 1338 | 0       | Extremo 2A | -0.002189 | -37.779 | 0.071     | 0.6844  | 0.034     | -44.0998  |
| 1338 | 0.5     | Extremo 1A | -0.002189 | -34.601 | 0.071     | 0.6844  | -0.0014   | -26.0049  |
| 1338 | 1       | Extremo 1A | -0.002189 | -31.423 | 0.071     | 0.6844  | -0.0369   | -9.4991   |
| 1339 | 0       | Extremo 1A | 7.802E-06 | -17.432 | -0.025    | 0.1422  | -0.0084   | -9.5529   |
| 1339 | 0.3     | Extremo 2A | 7.802E-06 | -15.93  | -0.025    | 0.1422  | -0.000984 | -4.5486   |
| 1339 | 0.6     | Extremo 2A | 7.802E-06 | -14.428 | -0.025    | 0.1422  | 0.0065    | 0.0051    |
| 1339 | 0       | Extremo 2A | -0.000203 | -17.432 | 0.019     | 0.1422  | 0.0066    | -9.5529   |
| 1339 | 0.3     | Extremo 1A | -0.000203 | -15.93  | 0.019     | 0.1422  | 0.000964  | -4.5486   |
| 1339 | 0.6     | Extremo 1A | -0.000203 | -14.428 | 0.019     | 0.1422  | 0.0047    | 0.0051    |
| 1340 | 0       | Extremo 1A | 0.0002083 | 14.613  | -0.016    | 0.196   | -0.0044   | -0.039    |
| 1340 | 0.3     | Extremo 2A | 0.0002083 | 16.115  | -0.016    | 0.196   | 0.000513  | -4.6483   |
| 1340 | 0.6     | Extremo 2A | 0.0002083 | 17.617  | -0.016    | 0.196   | 0.0054    | -9.7082   |
| 1340 | 0       | Extremo 2A | -0.00034  | 14.613  | -0.003245 | 0.196   | -0.000661 | -0.039    |
| 1340 | 0.3     | Extremo 1A | -0.00034  | 16.115  | -0.003245 | 0.196   | 0.000313  | -4.6483   |
| 1340 | 0.6     | Extremo 1A | -0.00034  | 17.617  | -0.003245 | 0.196   | 0.0013    | -9.7081   |
| 1341 | 0       | Extremo 1A | 0.002166  | 31.972  | -0.063    | 0.2256  | -0.0359   | -9.9436   |
| 1341 | 0.5     | Extremo 2A | 0.002166  | 35.15   | -0.063    | 0.2256  | -0.0043   | -26.724   |
| 1341 | 1       | Extremo 2A | 0.002166  | 38.328  | -0.063    | 0.2256  | 0.0273    | -45.0935  |
| 1341 | 0       | Extremo 2A | -0.003686 | 31.972  | -0.012    | 0.2256  | -0.0046   | -9.9435   |
| 1341 | 0.5     | Extremo 1A | -0.003686 | 35.15   | -0.012    | 0.2256  | 0.0015    | -26.7239  |
| 1341 | 1       | Extremo 1A | -0.003686 | 38.328  | -0.012    | 0.2256  | 0.0076    | -45.0934  |
| 1342 | 0       | Extremo 1A | -8.51E-11 | -0.224  | -1.112    | 10.9475 | -1.6464   | -0.3316   |
| 1342 | 0.49333 | Extremo 2A | -8.51E-11 | -0.224  | -1.112    | 10.9475 | -1.0976   | -0.2211   |
| 1342 | 0.98667 | Extremo 2A | -8.51E-11 | -0.224  | -1.112    | 10.9475 | -0.5488   | -0.1105   |
| 1342 | 1.48    | Extremo 2A | -8.51E-11 | -0.224  | -1.112    | 10.9475 | 9.833E-07 | -1.55E-06 |
| 1342 | 1.97333 | Extremo 1A | -8.51E-11 | -0.224  | -1.112    | 10.9475 | 0.5488    | 0.1105    |
| 1342 | 2.46667 | Extremo 1A | -8.51E-11 | -0.224  | -1.112    | 10.9475 | 1.0976    | 0.2211    |
| 1342 | 2.96    | Extremo 1A | -8.51E-11 | -0.224  | -1.112    | 10.9475 | 1.6464    | 0.3316    |
| 1342 | 0       | Extremo 2A | -8.97E-11 | -3.009  | -6.218    | 21.1842 | -9.2032   | -4.4527   |
| 1342 | 0.49333 | Extremo 2A | -8.97E-11 | -3.009  | -6.218    | 21.1842 | -6.1355   | -2.9685   |
| 1342 | 0.98667 | Extremo 2A | -8.97E-11 | -3.009  | -6.218    | 21.1842 | -3.0677   | -1.4842   |
| 1342 | 1.48    | Extremo 1A | -8.97E-11 | -3.009  | -6.218    | 21.1842 | 1.085E-06 | -1.71E-06 |
| 1342 | 1.97333 | Extremo 1A | -8.97E-11 | -3.009  | -6.218    | 21.1842 | 3.0677    | 1.4842    |
| 1342 | 2.46667 | Extremo 1A | -8.97E-11 | -3.009  | -6.218    | 21.1842 | 6.1355    | 2.9685    |
| 1342 | 2.96    | Extremo 2A | -8.97E-11 | -3.009  | -6.218    | 21.1842 | 9.2032    | 4.4527    |
| 1343 | 0       | Extremo 2A | 0.0005941 | -37.809 | -0.096    | 0.9671  | -0.0432   | -44.3309  |
| 1343 | 0.5     | Extremo 2A | 0.0005941 | -34.631 | -0.096    | 0.9671  | 0.0049    | -26.2207  |
| 1343 | 1       | Extremo 1A | 0.0005941 | -31.453 | -0.096    | 0.9671  | 0.0529    | -9.6996   |
| 1343 | 0       | Extremo 1A | -0.003893 | -37.809 | 0.075     | 0.967   | 0.0358    | -44.3308  |
| 1343 | 0.5     | Extremo 1A | -0.003893 | -34.631 | 0.075     | 0.967   | -0.0018   | -26.2207  |
| 1343 | 1       | Extremo 2A | -0.003893 | -31.453 | 0.075     | 0.967   | -0.0394   | -9.6996   |
| 1344 | 0       | Extremo 2A | 4.627E-05 | -17.486 | -0.025    | 0.1634  | -0.0084   | -9.60     |





|      |         |            |           |         |           |         |           |           |
|------|---------|------------|-----------|---------|-----------|---------|-----------|-----------|
| 1347 | 2.96    | Extremo 2A | -1.75E-10 | 0.389   | -1.442    | 10.1701 | 2.1345    | -0.5759   |
| 1347 | 0       | Extremo 2A | -1.86E-10 | -1.702  | -6.667    | 19.6798 | -9.8672   | -2.5189   |
| 1347 | 0.49333 | Extremo 1A | -1.86E-10 | -1.702  | -6.667    | 19.6798 | -6.5781   | -1.6793   |
| 1347 | 0.98667 | Extremo 1A | -1.86E-10 | -1.702  | -6.667    | 19.6798 | -3.2891   | -0.8396   |
| 1347 | 1.48    | Extremo 1A | -1.86E-10 | -1.702  | -6.667    | 19.6798 | 3.335E-07 | -5.27E-07 |
| 1347 | 1.97333 | Extremo 2A | -1.86E-10 | -1.702  | -6.667    | 19.6798 | 3.2891    | 0.8396    |
| 1347 | 2.46667 | Extremo 2A | -1.86E-10 | -1.702  | -6.667    | 19.6798 | 6.5781    | 1.6793    |
| 1347 | 2.96    | Extremo 2A | -1.86E-10 | -1.702  | -6.667    | 19.6798 | 9.8672    | 2.5189    |
| 1348 | 0       | Extremo 1A | 0.0008434 | -37.989 | -0.097    | 0.953   | -0.0433   | -44.8815  |
| 1348 | 0.5     | Extremo 1A | 0.0008434 | -34.811 | -0.097    | 0.953   | 0.0052    | -26.6815  |
| 1348 | 1       | Extremo 1A | 0.0008434 | -31.633 | -0.097    | 0.953   | 0.0538    | -10.0705  |
| 1348 | 0       | Extremo 2A | -0.005246 | -37.989 | 0.081     | 0.9529  | 0.038     | -44.8814  |
| 1348 | 0.5     | Extremo 2A | -0.005246 | -34.811 | 0.081     | 0.9529  | -0.0026   | -26.6813  |
| 1348 | 1       | Extremo 2A | -0.005246 | -31.633 | 0.081     | 0.9529  | -0.0433   | -10.0704  |
| 1349 | 0       | Extremo 1A | 5.917E-05 | -17.605 | -0.025    | 0.0638  | -0.0082   | -9.7192   |
| 1349 | 0.3     | Extremo 1A | 5.917E-05 | -16.103 | -0.025    | 0.0638  | -0.000846 | -4.663    |
| 1349 | 0.6     | Extremo 1A | 5.917E-05 | -14.601 | -0.025    | 0.0638  | 0.0066    | -0.0573   |
| 1349 | 0       | Extremo 2A | -0.000473 | -17.605 | 0.021     | 0.0638  | 0.0071    | -9.7192   |
| 1349 | 0.3     | Extremo 2A | -0.000473 | -16.103 | 0.021     | 0.0638  | 0.0008731 | -4.663    |
| 1349 | 0.6     | Extremo 2A | -0.000473 | -14.601 | 0.021     | 0.0638  | -0.0054   | -0.0573   |
| 1350 | 0       | Extremo 1A | 0.0002911 | 14.814  | -0.014    | 0.6131  | -0.0039   | -0.0642   |
| 1350 | 0.3     | Extremo 1A | 0.0002911 | 16.315  | -0.014    | 0.6131  | 0.0003754 | -4.7335   |
| 1350 | 0.6     | Extremo 1A | 0.0002911 | 17.817  | -0.014    | 0.6131  | 0.0046    | -9.8535   |
| 1350 | 0       | Extremo 2A | -0.000428 | 14.814  | -0.005329 | 0.613   | -0.0015   | -0.0641   |
| 1350 | 0.3     | Extremo 2A | -0.000428 | 16.315  | -0.005329 | 0.613   | 0.0001124 | -4.7335   |
| 1350 | 0.6     | Extremo 2A | -0.000428 | 17.817  | -0.005329 | 0.613   | 0.0017    | -9.8534   |
| 1351 | 0       | Extremo 1A | 0.003024  | 32.688  | -0.057    | 1.1756  | -0.0321   | -10.3213  |
| 1351 | 0.5     | Extremo 1A | 0.003024  | 35.866  | -0.057    | 1.1756  | -0.0037   | -27.4598  |
| 1351 | 1       | Extremo 1A | 0.003024  | 39.044  | -0.057    | 1.1756  | 0.0247    | -46.1873  |
| 1351 | 0       | Extremo 2A | -0.00495  | 32.688  | -0.024    | 1.1754  | -0.0125   | -10.3211  |
| 1351 | 0.5     | Extremo 2A | -0.00495  | 35.866  | -0.024    | 1.1754  | -0.000675 | -27.4595  |
| 1351 | 1       | Extremo 2A | -0.00495  | 39.044  | -0.024    | 1.1754  | 0.0112    | -46.1869  |
| 1352 | 0       | Extremo 1A | -1.53E-11 | 1.414   | -1.854    | 7.6036  | -2.7446   | 2.0926    |
| 1352 | 0.49333 | Extremo 1A | -1.53E-11 | 1.414   | -1.854    | 7.6036  | -1.8297   | 1.3951    |
| 1352 | 0.98667 | Extremo 1A | -1.53E-11 | 1.414   | -1.854    | 7.6036  | -0.9149   | 0.6975    |
| 1352 | 1.48    | Extremo 2A | -1.53E-11 | 1.414   | -1.854    | 7.6036  | 8.538E-08 | -1.35E-07 |
| 1352 | 1.97333 | Extremo 2A | -1.53E-11 | 1.414   | -1.854    | 7.6036  | 0.9149    | -0.6975   |
| 1352 | 2.46667 | Extremo 2A | -1.53E-11 | 1.414   | -1.854    | 7.6036  | 1.8298    | -1.3951   |
| 1352 | 2.96    | Extremo 1A | -1.53E-11 | 1.414   | -1.854    | 7.6036  | 2.7446    | -2.0926   |
| 1352 | 0       | Extremo 1A | -1.63E-11 | 0.767   | -6.697    | 14.7135 | -9.9115   | -1.1358   |
| 1352 | 0.49333 | Extremo 1A | -1.63E-11 | 0.767   | -6.697    | 14.7135 | -6.6077   | 0.7572    |
| 1352 | 0.98667 | Extremo 2A | -1.63E-11 | 0.767   | -6.697    | 14.7135 | -3.3038   | 0.3786    |
| 1352 | 1.48    | Extremo 2A | -1.63E-11 | 0.767   | -6.697    | 14.7135 | 9.426E-08 | -1.49E-07 |
| 1352 | 1.97333 | Extremo 2A | -1.63E-11 | 0.767   | -6.697    | 14.7135 | 3.3038    | -0.3786   |
| 1352 | 2.46667 | Extremo 1A | -1.63E-11 | 0.767   | -6.697    | 14.7135 | 6.6077    | -0.7572   |
| 1352 | 2.96    | Extremo 1A | -1.63E-11 | 0.767   | -6.697    | 14.7135 | 9.9115    | -1.1358   |
| 1353 | 0       | Extremo 1A | 0.0007352 | -38.723 | -0.098    | 0.3205  | -0.0433   | -46.0514  |
| 1353 | 0.5     | Extremo 2A | 0.0007352 | -35.545 | -0.098    | 0.3205  | 0.0059    | -27.4844  |
| 1353 | 1       | Extremo 2A | 0.0007352 | -32.367 | -0.098    | 0.3205  | 0.0551    | -10.5064  |
| 1353 | 0       | Extremo 1A | -0.005544 | -38.723 | 0.088     | 0.3206  | 0.0398    | -46.0511  |
| 1353 | 0.5     | Extremo 1A | -0.005544 | -35.545 | 0.088     | 0.3206  | -0.0042   | -27.4841  |
| 1353 | 1       | Extremo 1A | -0.005544 | -32.367 | 0.088     | 0.3206  | -0.0482   | -10.5062  |
| 1354 | 0       | Extremo 1A | 3.305E-05 | -17.819 | -0.024    | -0.2177 | -0.0079   | -9.8797   |
| 1354 | 0.3     | Extremo 2A | 3.305E-05 | -16.317 | -0.024    | -0.2177 | -0.000643 | -4.7592   |
| 1354 | 0.6     | Extremo 2A | 3.305E-05 | -14.816 | -0.024    | -0.2177 | 0.0066    | -0.0892   |
| 1354 | 0       | Extremo 2A | -0.000478 | -17.819 | 0.022     | -0.2177 | 0.0072    | -9.8797   |
| 1354 | 0.3     | Extremo 1A | -0.000478 | -16.317 | 0.022     | -0.2177 | 0.0006882 | -4.7592   |
| 1354 | 0.6     | Extremo 1A | -0.000478 | -14.816 | 0.022     | -0.2177 | -0.0058   | -0.0892   |
| 1355 | 0       | Extremo 1A | 5.232E-05 | 14.948  | -0.013    | 0.8502  | -0.0037   | -0.006    |
| 1355 | 0.3     | Extremo 2A | 5.232E-05 | 16.45   | -0.013    | 0.8502  | 0.0002921 | -4.7157   |
| 1355 | 0.6     | Extremo 2A | 5.232E-05 | 17.952  | -0.013    | 0.8502  | 0.0043    | -9.8759   |
| 1355 | 0       | Extremo 2A | -0.000149 | 14.948  | -0.005176 | 0.85    | -0.0018   | -0.006    |
| 1355 | 0.3     | Extremo 1A | -0.000149 | 16.45   | -0.005176 | 0.85    | -0.000227 | -4.7156   |
| 1355 | 0.6     | Extremo 1A | -0.000149 | 17.952  | -0.005176 | 0.85    | 0.0013    | -9.8758   |
| 1356 | 0       | Extremo 1A | 0.0007516 | 34.156  | -0.057    | 2.1653  | -0.0315   | -10.0237  |
| 1356 | 0.5     | Extremo 2A | 0.0007516 | 37.334  | -0.057    | 2.1653  | -0.0032   | -27.8961  |
| 1356 | 1       | Extremo 2A | 0.0007516 | 40.512  | -0.057    | 2.1653  | 0.0252    | -47.3575  |
| 1356 | 0       | Extremo 2A | -0.002294 | 34.156  | -0.026    | 2.1649  | -0.0163   | -10.0235  |
| 1356 | 0.5     | Extremo 1A | -0.002294 | 37.333  | -0.026    | 2.1649  | -0.0031   | -27.8957  |
| 1356 | 1       | Extremo 1A | -0.002294 | 40.511  | -0.026    | 2.1649  | 0.0101    | -47.3568  |
| 1358 | 0       | Extremo 1A | 0.001118  | -40.744 | -0.101    | -1.0941 | -0.0431   | -48.0065  |
| 1358 | 0.5     | Extremo 2A | 0.001118  | -37.565 | -0.101    | -1.0941 | 0.0072    | -28.4292  |

|      |     |            |           |         |           |         |           |          |
|------|-----|------------|-----------|---------|-----------|---------|-----------|----------|
| 1358 | 1   | Extremo 2A | 0.001118  | -34.387 | -0.101    | -1.0941 | 0.0576    | -10.4411 |
| 1358 | 0   | Extremo 2A | -0.003366 | -40.743 | 0.092     | -1.0937 | 0.039     | -48.0058 |
| 1358 | 0.5 | Extremo 1A | -0.003366 | -37.565 | 0.092     | -1.0937 | -0.007    | -28.4288 |
| 1358 | 1   | Extremo 1A | -0.003366 | -34.387 | 0.092     | -1.0937 | -0.053    | -10.4409 |
| 1359 | 0   | Extremo 1A | 7.242E-05 | -18.088 | -0.023    | -0.6005 | -0.0073   | -9.9982  |
| 1359 | 0.3 | Extremo 2A | 7.242E-05 | -16.586 | -0.023    | -0.6005 | -0.000287 | -4.7971  |
| 1359 | 0.6 | Extremo 2A | 7.242E-05 | -15.084 | -0.023    | -0.6005 | 0.0067    | -0.0467  |
| 1359 | 0   | Extremo 2A | -0.000244 | -18.088 | 0.022     | -0.6003 | 0.0068    | -9.9981  |
| 1359 | 0.3 | Extremo 1A | -0.000244 | -16.586 | 0.022     | -0.6003 | 0.0002847 | -4.7971  |
| 1359 | 0.6 | Extremo 1A | -0.000244 | -15.084 | 0.022     | -0.6003 | -0.0062   | -0.0467  |
| 1360 | 0   | Extremo 1A | -0.001098 | 14.911  | -0.016    | 0.7276  | -0.0043   | 0.1266   |
| 1360 | 0.3 | Extremo 2A | -0.001098 | 16.413  | -0.016    | 0.7276  | 0.0004989 | -4.572   |
| 1360 | 0.6 | Extremo 2A | -0.001098 | 17.915  | -0.016    | 0.7276  | 0.0053    | -9.7211  |
| 1360 | 0   | Extremo 2A | 0.00046   | 14.911  | -0.002708 | 0.7274  | -0.0017   | 0.1265   |
| 1360 | 0.3 | Extremo 1A | 0.00046   | 16.413  | -0.002708 | 0.7274  | -0.000843 | -4.572   |
| 1360 | 0.6 | Extremo 1A | 0.00046   | 17.914  | -0.002708 | 0.7274  | -3.06E-05 | -9.721   |
| 1361 | 0   | Extremo 1A | -0.011    | 35.923  | -0.067    | 2.449   | -0.0358   | -8.8684  |
| 1361 | 0.5 | Extremo 2A | -0.011    | 39.101  | -0.067    | 2.449   | -0.0025   | -27.6243 |
| 1361 | 1   | Extremo 2A | -0.011    | 42.279  | -0.067    | 2.449   | 0.0308    | -47.9692 |
| 1361 | 0   | Extremo 2A | 0.004193  | 35.922  | -0.022    | 2.4484  | -0.0177   | -8.8685  |
| 1361 | 0.5 | Extremo 1A | 0.004193  | 39.1    | -0.022    | 2.4484  | -0.0069   | -27.6239 |
| 1361 | 1   | Extremo 1A | 0.004193  | 42.278  | -0.022    | 2.4484  | 0.0039    | -47.9684 |
| 1363 | 0   | Extremo 1A | 0.008712  | -43.62  | -0.108    | -2.1352 | -0.0445   | -49.6462 |
| 1363 | 0.5 | Extremo 2A | 0.008712  | -40.442 | -0.108    | -2.1352 | 0.0095    | -28.6306 |
| 1363 | 1   | Extremo 2A | 0.008712  | -37.264 | -0.108    | -2.1352 | 0.0636    | -9.2039  |
| 1363 | 0   | Extremo 2A | 0.001083  | -43.619 | 0.09      | -2.1346 | 0.0338    | -49.6452 |
| 1363 | 0.5 | Extremo 1A | 0.001083  | -40.441 | 0.09      | -2.1346 | -0.0113   | -28.6301 |
| 1363 | 1   | Extremo 1A | 0.001083  | -37.263 | 0.09      | -2.1346 | -0.0564   | -9.204   |
| 1364 | 0   | Extremo 1A | 0.0008618 | -18.176 | -0.024    | -0.6568 | -0.0073   | -9.8989  |
| 1364 | 0.3 | Extremo 2A | 0.0008618 | -16.674 | -0.024    | -0.6568 | -2.56E-05 | -4.6714  |
| 1364 | 0.6 | Extremo 2A | 0.0008618 | -15.172 | -0.024    | -0.6568 | 0.0072    | 0.1056   |
| 1364 | 0   | Extremo 2A | 0.000156  | -18.176 | 0.02      | -0.6567 | 0.0056    | -9.8989  |
| 1364 | 0.3 | Extremo 1A | 0.000156  | -16.674 | 0.02      | -0.6567 | -0.000363 | -4.6714  |
| 1364 | 0.6 | Extremo 1A | 0.000156  | -15.172 | 0.02      | -0.6567 | -0.0063   | 0.1056   |
| 1365 | 0   | Extremo 1A | -0.003224 | 14.728  | -0.026    | 0.0038  | -0.0063   | 0.1743   |
| 1365 | 0.3 | Extremo 2A | -0.003224 | 16.23   | -0.026    | 0.0038  | 0.0015    | -4.4694  |
| 1365 | 0.6 | Extremo 2A | -0.003224 | 17.732  | -0.026    | 0.0038  | 0.0093    | -9.5636  |
| 1365 | 0   | Extremo 2A | 0.0004    | 14.728  | 0.0003705 | 0.0038  | -0.0013   | 0.1743   |
| 1365 | 0.3 | Extremo 1A | 0.0004    | 16.23   | 0.0003705 | 0.0038  | -0.0014   | -4.4694  |
| 1365 | 0.6 | Extremo 1A | 0.0004    | 17.732  | 0.0003705 | 0.0038  | -0.0015   | -9.5636  |
| 1366 | 0   | Extremo 1A | -0.034    | 35.047  | -0.095    | 0.0014  | -0.049    | -8.2606  |
| 1366 | 0.5 | Extremo 2A | -0.034    | 38.225  | -0.095    | 0.0014  | -0.0012   | -26.5786 |
| 1366 | 1   | Extremo 2A | -0.034    | 41.403  | -0.095    | 0.0014  | 0.0465    | -46.4857 |
| 1366 | 0   | Extremo 2A | 0.004193  | 35.046  | -0.011    | 0.0013  | -0.0165   | -8.2609  |
| 1366 | 0.5 | Extremo 1A | 0.004193  | 38.224  | -0.011    | 0.0013  | -0.0108   | -26.5785 |
| 1366 | 1   | Extremo 1A | 0.004193  | 41.402  | -0.011    | 0.0013  | -0.0051   | -46.4852 |
| 1368 | 0   | Extremo 1A | 0.035     | -43.147 | -0.132    | 0.0337  | -0.0549   | -48.4242 |
| 1368 | 0.5 | Extremo 2A | 0.035     | -39.969 | -0.132    | 0.0337  | 0.0113    | -27.6453 |
| 1368 | 1   | Extremo 2A | 0.035     | -36.791 | -0.132    | 0.0337  | 0.0775    | -8.4555  |
| 1368 | 0   | Extremo 2A | -0.004227 | -43.146 | 0.086     | 0.0339  | 0.0276    | -48.4234 |
| 1368 | 0.5 | Extremo    |           |         |           |         |           |          |



|      |     |            |           |         |           |         |           |          |
|------|-----|------------|-----------|---------|-----------|---------|-----------|----------|
| 1373 | 1   | Extremo 2A | 0.01      | -37.264 | -0.161    | 2.2027  | 0.0908    | -9.2039  |
| 1373 | 0   | Extremo 2A | -0.003283 | -43.619 | 0.097     | 2.2024  | 0.0369    | -49.6452 |
| 1373 | 0.5 | Extremo 1A | -0.003283 | -40.441 | 0.097     | 2.2024  | -0.0114   | -28.6301 |
| 1373 | 1   | Extremo 1A | -0.003283 | -37.263 | 0.097     | 2.2024  | -0.0596   | -9.204   |
| 1374 | 0   | Extremo 1A | 0.00105   | -18.176 | -0.043    | 0.6732  | -0.0148   | -9.8989  |
| 1374 | 0.3 | Extremo 2A | 0.00105   | -16.674 | -0.043    | 0.6732  | -0.0017   | -4.6714  |
| 1374 | 0.6 | Extremo 2A | 0.00105   | -15.172 | -0.043    | 0.6732  | 0.0113    | 0.1056   |
| 1374 | 0   | Extremo 2A | -0.000378 | -18.176 | 0.022     | 0.6731  | 0.0065    | -9.8989  |
| 1374 | 0.3 | Extremo 1A | -0.000378 | -16.674 | 0.022     | 0.6731  | -0.000156 | -4.6713  |
| 1374 | 0.6 | Extremo 1A | -0.000378 | -15.172 | 0.022     | 0.6731  | -0.0068   | 0.1056   |
| 1375 | 0   | Extremo 1A | -5.83E-05 | 14.948  | -0.036    | -0.8427 | -0.0088   | -0.006   |
| 1375 | 0.3 | Extremo 2A | -5.83E-05 | 16.45   | -0.036    | -0.8427 | 0.002     | -4.7156  |
| 1375 | 0.6 | Extremo 2A | -5.83E-05 | 17.951  | -0.036    | -0.8427 | 0.0127    | -9.8757  |
| 1375 | 0   | Extremo 2A | 0.0001615 | 14.948  | -0.002339 | -0.8425 | -0.0011   | -0.006   |
| 1375 | 0.3 | Extremo 1A | 0.0001615 | 16.449  | -0.002339 | -0.8425 | -0.000437 | -4.7155  |
| 1375 | 0.6 | Extremo 1A | 0.0001615 | 17.951  | -0.002339 | -0.8425 | 0.0002649 | -9.8756  |
| 1376 | 0   | Extremo 1A | -0.00094  | 34.155  | -0.127    | -2.163  | -0.0683   | -10.0231 |
| 1376 | 0.5 | Extremo 2A | -0.00094  | 37.334  | -0.127    | -2.163  | -0.0049   | -27.8953 |
| 1376 | 1   | Extremo 2A | -0.00094  | 40.512  | -0.127    | -2.163  | 0.0585    | -47.3566 |
| 1376 | 0   | Extremo 2A | 0.002442  | 34.155  | -0.017    | -2.1627 | -0.0117   | -10.023  |
| 1376 | 0.5 | Extremo 1A | 0.002442  | 37.333  | -0.017    | -2.1627 | -0.0029   | -27.8949 |
| 1376 | 1   | Extremo 1A | 0.002442  | 40.511  | -0.017    | -2.1627 | 0.0058    | -47.3559 |
| 1378 | 0   | Extremo 1A | -0.001297 | -40.743 | -0.171    | 1.1616  | -0.076    | -48.0064 |
| 1378 | 0.5 | Extremo 2A | -0.001297 | -37.565 | -0.171    | 1.1616  | 0.0094    | -28.4292 |
| 1378 | 1   | Extremo 2A | -0.001297 | -34.387 | -0.171    | 1.1616  | 0.0948    | -10.441  |
| 1378 | 0   | Extremo 2A | 0.00352   | -40.743 | 0.1       | 1.1615  | 0.0429    | -48.0057 |
| 1378 | 0.5 | Extremo 1A | 0.00352   | -37.565 | 0.1       | 1.1615  | -0.0072   | -28.4287 |
| 1378 | 1   | Extremo 1A | 0.00352   | -34.387 | 0.1       | 1.1615  | -0.0573   | -10.4409 |
| 1379 | 0   | Extremo 1A | -0.000105 | -18.088 | -0.046    | 0.6168  | -0.0157   | -9.9982  |
| 1379 | 0.3 | Extremo 2A | -0.000105 | -16.586 | -0.046    | 0.6168  | -0.0019   | -4.7971  |
| 1379 | 0.6 | Extremo 2A | -0.000105 | -15.084 | -0.046    | 0.6168  | 0.0118    | -0.0467  |
| 1379 | 0   | Extremo 2A | 0.0002612 | -18.088 | 0.024     | 0.6167  | 0.0078    | -9.9981  |
| 1379 | 0.3 | Extremo 1A | 0.0002612 | -16.586 | 0.024     | 0.6167  | 0.0004795 | -4.7971  |
| 1379 | 0.6 | Extremo 1A | 0.0002612 | -15.084 | 0.024     | 0.6167  | 0.0068    | -0.0467  |
| 1380 | 0   | Extremo 1A | -5.7E-06  | 14.813  | -0.035    | -0.6059 | -0.0088   | -0.0641  |
| 1380 | 0.3 | Extremo 2A | -5.7E-06  | 16.315  | -0.035    | -0.6059 | 0.0016    | -4.7333  |
| 1380 | 0.6 | Extremo 2A | -5.7E-06  | 17.817  | -0.035    | -0.6059 | 0.0121    | -9.8532  |
| 1380 | 0   | Extremo 2A | 0.0004075 | 14.813  | -0.002641 | -0.6058 | -0.000841 | -0.064   |
| 1380 | 0.3 | Extremo 1A | 0.0004075 | 16.315  | -0.002641 | -0.6058 | -4.87E-05 | -4.7333  |
| 1380 | 0.6 | Extremo 1A | 0.0004075 | 17.817  | -0.002641 | -0.6058 | 0.0007436 | -9.8531  |
| 1381 | 0   | Extremo 1A | -0.000433 | 32.687  | -0.129    | -1.174  | -0.0705   | -10.3203 |
| 1381 | 0.5 | Extremo 2A | -0.000433 | 35.865  | -0.129    | -1.174  | -0.0062   | -27.4585 |
| 1381 | 1   | Extremo 2A | -0.000433 | 39.044  | -0.129    | -1.174  | 0.0581    | -46.1857 |
| 1381 | 0   | Extremo 2A | 0.004778  | 32.687  | -0.014    | -1.174  | -0.0076   | -10.3201 |
| 1381 | 0.5 | Extremo 1A | 0.004778  | 35.865  | -0.014    | -1.174  | -0.000375 | -27.4582 |
| 1381 | 1   | Extremo 1A | 0.004778  | 39.043  | -0.014    | -1.174  | 0.0068    | -46.1853 |
| 1383 | 0   | Extremo 1A | -0.003335 | -38.723 | -0.17     | -0.2529 | -0.0762   | -46.0513 |
| 1383 | 0.5 | Extremo 2A | -0.003335 | -35.545 | -0.17     | -0.2529 | 0.0088    | -27.4843 |
| 1383 | 1   | Extremo 2A | -0.003335 | -32.367 | -0.17     | -0.2529 | 0.0939    | -10.5064 |
| 1383 | 0   | Extremo 2A | 0.006015  | -38.723 | 0.096     | -0.2527 | 0.0435    | -46.051  |
| 1383 | 0.5 | Extremo 1A | 0.006015  | -35.545 | 0.096     | -0.2527 | -0.0046   | -27.4841 |
| 1383 | 1   | Extremo 1A | 0.006015  | -32.367 | 0.096     | -0.2527 | -0.0526   | -10.5062 |
| 1384 | 0   | Extremo 1A | -0.000321 | -17.819 | -0.045    | 0.2341  | -0.0153   | -9.8797  |
| 1384 | 0.3 | Extremo 2A | -0.000321 | -16.317 | -0.045    | 0.2341  | -0.0018   | -4.7592  |
| 1384 | 0.6 | Extremo 2A | -0.000321 | -14.816 | -0.045    | 0.2341  | 0.0116    | -0.0893  |
| 1384 | 0   | Extremo 2A | 0.0005278 | -17.819 | 0.024     | 0.2341  | 0.0081    | -9.8797  |
| 1384 | 0.3 | Extremo 1A | 0.0005278 | -16.317 | 0.024     | 0.2341  | 0.0008243 | -4.7592  |
| 1384 | 0.6 | Extremo 1A | 0.0005278 | -14.816 | 0.024     | 0.2341  | -0.0064   | -0.0892  |
| 1385 | 0   | Extremo 1A | -3.36E-05 | 14.685  | -0.034    | -0.3542 | -0.0089   | -0.0584  |
| 1385 | 0.3 | Extremo 2A | -3.36E-05 | 16.187  | -0.034    | -0.3542 | 0.0014    | -4.6891  |
| 1385 | 0.6 | Extremo 2A | -3.36E-05 | 17.688  | -0.034    | -0.3542 | 0.0117    | -9.7704  |
| 1385 | 0   | Extremo 2A | 0.0004277 | 14.685  | -0.001831 | -0.3542 | -0.00042  | -0.0584  |
| 1385 | 0.3 | Extremo 1A | 0.0004277 | 16.187  | -0.001831 | -0.3542 | 0.0001297 | -4.6891  |
| 1385 | 0.6 | Extremo 1A | 0.0004277 | 17.688  | -0.001831 | -0.3542 | 0.000679  | -9.7703  |
| 1386 | 0   | Extremo 1A | -0.000573 | 32.107  | -0.13     | -0.5241 | -0.0716   | -10.1451 |
| 1386 | 0.5 | Extremo 2A | -0.000573 | 35.285  | -0.13     | -0.5241 | -0.0068   | -26.9933 |
| 1386 | 1   | Extremo 2A | -0.000573 | 38.463  | -0.13     | -0.5241 | 0.058     | -45.4305 |
| 1386 | 0   | Extremo 2A | 0.004755  | 32.107  | -0.008641 | -0.5243 | -0.0032   | -10.145  |
| 1386 | 0.5 | Extremo 1A | 0.004755  | 35.285  | -0.008641 | -0.5243 | 0.0011    | -26.9931 |
| 1386 | 1   | Extremo 1A | 0.004755  | 38.463  | -0.008641 | -0.5243 | 0.0054    | -45.4303 |
| 1388 | 0   | Extremo 1A | -0.003034 | -37.989 | -0.167    | -0.8854 | -0.0749   | -44.8815 |
| 1388 | 0.5 | Extremo 2A | -0.003034 | -34.811 | -0.167    | -0.8854 | 0.0084    | -26.6816 |

|      |     |            |           |         |           |         |           |          |
|------|-----|------------|-----------|---------|-----------|---------|-----------|----------|
| 1388 | 1   | Extremo 2A | -0.003034 | -31.633 | -0.167    | -0.8854 | 0.0918    | -10.0707 |
| 1388 | 0   | Extremo 2A | 0.005698  | -37.989 | 0.089     | -0.885  | 0.0415    | -44.8814 |
| 1388 | 0.5 | Extremo 1A | 0.005698  | -34.811 | 0.089     | -0.885  | -0.003    | -26.6814 |
| 1388 | 1   | Extremo 1A | 0.005698  | -31.633 | 0.089     | -0.885  | -0.0475   | -10.0706 |
| 1389 | 0   | Extremo 1A | -0.000293 | -17.605 | -0.044    | -0.0475 | -0.0148   | -9.7192  |
| 1389 | 0.3 | Extremo 2A | -0.000293 | -16.103 | -0.044    | -0.0475 | -0.0017   | -4.663   |
| 1389 | 0.6 | Extremo 2A | -0.000293 | -14.601 | -0.044    | -0.0475 | 0.0113    | -0.0574  |
| 1389 | 0   | Extremo 2A | 0.0005194 | -17.605 | 0.023     | -0.0475 | 0.0078    | -9.7192  |
| 1389 | 0.3 | Extremo 1A | 0.0005194 | -16.103 | 0.023     | -0.0475 | 0.0009693 | -4.663   |
| 1389 | 0.6 | Extremo 1A | 0.0005194 | -14.601 | 0.023     | -0.0475 | -0.0059   | -0.0574  |
| 1390 | 0   | Extremo 1A | -2.67E-05 | 14.613  | -0.034    | -0.1902 | -0.0089   | -0.0387  |
| 1390 | 0.3 | Extremo 2A | -2.67E-05 | 16.114  | -0.034    | -0.1902 | 0.0013    | -4.6478  |
| 1390 | 0.6 | Extremo 2A | -2.67E-05 | 17.616  | -0.034    | -0.1902 | 0.0115    | -9.7074  |
| 1390 | 0   | Extremo 2A | 0.0003389 | 14.613  | -0.000769 | -0.1902 | -3.45E-05 | -0.0387  |
| 1390 | 0.3 | Extremo 1A | 0.0003389 | 16.114  | -0.000769 | -0.1902 | 0.0001961 | -4.6477  |
| 1390 | 0.6 | Extremo 1A | 0.0003389 | 17.616  | -0.000769 | -0.1902 | 0.0004267 | -9.7074  |
| 1391 | 0   | Extremo 1A | -0.000392 | 31.97   | -0.13     | -0.2277 | -0.0723   | -9.9411  |
| 1391 | 0.5 | Extremo 2A | -0.000392 | 35.148  | -0.13     | -0.2277 | -0.0072   | -26.7206 |
| 1391 | 1   | Extremo 2A | -0.000392 | 38.326  | -0.13     | -0.2277 | 0.058     | -45.0892 |
| 1391 | 0   | Extremo 2A | 0.003686  | 31.97   | -0.002963 | -0.228  | 0.0003678 | -9.941   |
| 1391 | 0.5 | Extremo 1A | 0.003686  | 35.148  | -0.002963 | -0.228  | 0.0018    | -26.7205 |
| 1391 | 1   | Extremo 1A | 0.003686  | 38.326  | -0.002963 | -0.228  | 0.0033    | -45.0891 |
| 1393 | 0   | Extremo 1A | -0.002362 | -37.809 | -0.163    | -0.8997 | -0.0733   | -44.3313 |
| 1393 | 0.5 | Extremo 2A | -0.002362 | -34.631 | -0.163    | -0.8997 | 0.0082    | -26.2212 |
| 1393 | 1   | Extremo 2A | -0.002362 | -31.453 | -0.163    | -0.8997 | 0.0898    | -9.7002  |
| 1393 | 0   | Extremo 2A | 0.004338  | -37.809 | 0.082     | -0.8992 | 0.0389    | -44.3313 |
| 1393 | 0.5 | Extremo 1A | 0.004338  | -34.631 | 0.082     | -0.8992 | -0.0022   | -26.2212 |
| 1393 | 1   | Extremo 1A | 0.004338  | -31.453 | 0.082     | -0.8992 | -0.0433   | -9.7001  |
| 1394 | 0   | Extremo 1A | -0.000227 | -17.487 | -0.043    | -0.1472 | -0.0145   | -9.6095  |
| 1394 | 0.3 | Extremo 2A | -0.000227 | -15.985 | -0.043    | -0.1472 | -0.0017   | -4.5888  |
| 1394 | 0.6 | Extremo 2A | -0.000227 | -14.483 | -0.043    | -0.1472 | 0.0111    | -0.0186  |
| 1394 | 0   | Extremo 2A | 0.0004022 | -17.487 | 0.021     | -0.1472 | 0.0075    | -9.6095  |
| 1394 | 0.3 | Extremo 1A | 0.0004022 | -15.985 | 0.021     | -0.1472 | 0.001     | -4.5888  |
| 1394 | 0.6 | Extremo 1A | 0.0004022 | -14.483 | 0.021     | -0.1472 | -0.0054   | -0.0186  |
| 1395 | 0   | Extremo 1A | 6.127E-06 | 14.582  | -0.034    | -0.0933 | -0.0089   | -0.0253  |
| 1395 | 0.3 | Extremo 2A | 6.127E-06 | 16.084  | -0.034    | -0.0933 | 0.0013    | -4.6252  |
| 1395 | 0.6 | Extremo 2A | 6.127E-06 | 17.586  | -0.034    | -0.0933 | 0.0114    | -9.6756  |
| 1395 | 0   | Extremo 2A | 0.0002099 | 14.582  | 9.279E-05 | -0.0934 | 0.0002411 | -0.0253  |
| 1395 | 0.3 | Extremo 1A | 0.0002099 | 16.084  | 9.279E-05 | -0.0934 | 0.0002132 | -4.6251  |
| 1395 | 0.6 | Extremo 1A | 0.0002099 | 17.586  | 9.279E-05 | -0.0934 | 0.0001854 | -9.6755  |
| 1396 | 0   | Extremo 1A | 6.297E-06 | 31.962  | -0.131    | -0.0989 | -0.0726   | -9.8269  |
| 1396 | 0.5 | Extremo 2A | 6.297E-06 | 35.14   | -0.131    | -0.0989 | -0.0073   | -26.6026 |
| 1396 | 1   | Extremo 2A | 6.297E-06 | 38.318  | -0.131    | -0.0989 | 0.0579    | -44.9673 |
| 1396 | 0   | Extremo 2A | 0.002259  | 31.962  | 0.001245  | -0.0993 | 0.0028    | -9.8269  |
| 1396 | 0.5 | Extremo 1A | 0.002259  | 35.14   | 0.001245  | -0.0993 | 0.0022    | -26.6025 |
| 1396 | 1   | Extremo 1A | 0.002259  | 38.318  | 0.001245  | -0.0993 | 0.0016    | -44.9672 |
| 1398 | 0   | Extremo 1A | -0.001673 | -37.779 | -0.16     | -0.6176 | -0.072    | -44.1013 |
| 1398 | 0.5 | Extremo 2A | -0.001673 | -34.601 | -0.16     | -0.6176 | 0.0081    | -26.0065 |
| 1398 | 1   | Extremo 2A | -0.001673 | -31.422 | -0.16     | -0.6176 | 0.0882    | -9.5007  |
| 1398 | 0   | Extremo 2A | 0.002667  | -37.779 | 0.077     | -0.6172 | 0.0368    | -44.1013 |
| 1398 | 0.5 | Extremo 1A | 0         |         |           |         |           |          |



|      |     |            |           |         |           |         |           |          |
|------|-----|------------|-----------|---------|-----------|---------|-----------|----------|
| 1403 | 1   | Extremo 2A | -0.001032 | -31.419 | -0.158    | -0.2242 | 0.0872    | -9.4225  |
| 1403 | 0   | Extremo 2A | 0.0009264 | -37.776 | 0.075     | -0.2237 | 0.0356    | -44.02   |
| 1403 | 0.5 | Extremo 1A | 0.0009264 | -34.598 | 0.075     | -0.2237 | -0.0017   | -25.9267 |
| 1403 | 1   | Extremo 1A | 0.0009264 | -31.419 | 0.075     | -0.2237 | -0.039    | -9.4225  |
| 1404 | 0   | Extremo 1A | -0.000101 | -17.412 | -0.041    | -0.0492 | -0.014    | -9.5314  |
| 1404 | 0.3 | Extremo 2A | -0.000101 | -15.91  | -0.041    | -0.0492 | -0.0016   | -4.533   |
| 1404 | 0.6 | Extremo 2A | -0.000101 | -14.408 | -0.041    | -0.0492 | 0.0108    | 0.0148   |
| 1404 | 0   | Extremo 2A | 8.719E-05 | -17.412 | 0.02      | -0.0491 | 0.007     | -9.5314  |
| 1404 | 0.3 | Extremo 1A | 8.719E-05 | -15.91  | 0.02      | -0.0491 | 0.001     | -4.533   |
| 1404 | 0.6 | Extremo 1A | 8.719E-05 | -14.408 | 0.02      | -0.0491 | -0.0049   | 0.0148   |
| 1405 | 0   | Extremo 1A | 0.0001078 | 14.572  | -0.033    | 0.0292  | -0.0088   | -0.0196  |
| 1405 | 0.3 | Extremo 2A | 0.0001078 | 16.074  | -0.033    | 0.0292  | 0.0012    | -4.6164  |
| 1405 | 0.6 | Extremo 2A | 0.0001078 | 17.575  | -0.033    | 0.0292  | 0.0112    | -9.6638  |
| 1405 | 0   | Extremo 2A | -7.7E-05  | 14.572  | 0.0005306 | 0.0292  | 0.0003761 | -0.0196  |
| 1405 | 0.3 | Extremo 1A | -7.7E-05  | 16.074  | 0.0005306 | 0.0292  | 0.0002169 | -4.6164  |
| 1405 | 0.6 | Extremo 1A | -7.7E-05  | 17.575  | 0.0005306 | 0.0292  | 5.772E-05 | -9.6638  |
| 1406 | 0   | Extremo 1A | 0.001104  | 31.972  | -0.129    | 0.0416  | -0.0719   | -9.7831  |
| 1406 | 0.5 | Extremo 2A | 0.001104  | 35.151  | -0.129    | 0.0416  | -0.0075   | -26.5638 |
| 1406 | 1   | Extremo 2A | 0.001104  | 38.329  | -0.129    | 0.0416  | 0.057     | -44.9336 |
| 1406 | 0   | Extremo 2A | -0.000821 | 31.972  | 0.003341  | 0.0413  | 0.004     | -9.7831  |
| 1406 | 0.5 | Extremo 1A | -0.000821 | 35.15   | 0.003341  | 0.0413  | 0.0024    | -26.5638 |
| 1406 | 1   | Extremo 1A | -0.000821 | 38.329  | 0.003341  | 0.0413  | 0.0006909 | -44.9336 |
| 1408 | 0   | Extremo 1A | -0.00045  | -37.776 | -0.157    | 0.1963  | -0.0704   | -44.0196 |
| 1408 | 0.5 | Extremo 2A | -0.00045  | -34.598 | -0.157    | 0.1963  | 0.0082    | -25.9267 |
| 1408 | 1   | Extremo 2A | -0.00045  | -31.42  | -0.157    | 0.1963  | 0.0867    | -9.4218  |
| 1408 | 0   | Extremo 2A | -0.000818 | -37.776 | 0.075     | 0.1968  | 0.0356    | -44.0196 |
| 1408 | 0.5 | Extremo 1A | -0.000818 | -34.598 | 0.075     | 0.1968  | -0.0017   | -25.9267 |
| 1408 | 1   | Extremo 1A | -0.000818 | -31.42  | 0.075     | 0.1968  | -0.039    | -9.4219  |
| 1409 | 0   | Extremo 1A | -4.61E-05 | -17.412 | -0.041    | 0.0437  | -0.0139   | -9.5312  |
| 1409 | 0.3 | Extremo 2A | -4.61E-05 | -15.91  | -0.041    | 0.0437  | -0.0016   | -4.5329  |
| 1409 | 0.6 | Extremo 2A | -4.61E-05 | -14.408 | -0.041    | 0.0437  | 0.0107    | 0.0149   |
| 1409 | 0   | Extremo 2A | -7.65E-05 | -17.412 | 0.02      | 0.0438  | 0.007     | -9.5312  |
| 1409 | 0.3 | Extremo 1A | -7.65E-05 | -15.91  | 0.02      | 0.0438  | 0.001     | -4.5329  |
| 1409 | 0.6 | Extremo 1A | -7.65E-05 | -14.408 | 0.02      | 0.0438  | -0.0049   | 0.0148   |
| 1410 | 0   | Extremo 1A | 0.0001699 | 14.581  | -0.033    | 0.0942  | -0.0087   | -0.025   |
| 1410 | 0.3 | Extremo 2A | 0.0001699 | 16.083  | -0.033    | 0.0942  | 0.0012    | -4.6246  |
| 1410 | 0.6 | Extremo 2A | 0.0001699 | 17.585  | -0.033    | 0.0942  | 0.011     | -9.6749  |
| 1410 | 0   | Extremo 2A | -0.00022  | 14.581  | 2.687E-05 | 0.0941  | 0.0002273 | -0.025   |
| 1410 | 0.3 | Extremo 1A | -0.00022  | 16.083  | 2.687E-05 | 0.0941  | 0.0002192 | -4.6247  |
| 1410 | 0.6 | Extremo 1A | -0.00022  | 17.585  | 2.687E-05 | 0.0941  | 0.0002111 | -9.6749  |
| 1411 | 0   | Extremo 1A | 0.001757  | 31.963  | -0.127    | 0.1165  | -0.0709   | -9.8245  |
| 1411 | 0.5 | Extremo 2A | 0.001757  | 35.141  | -0.127    | 0.1165  | -0.0075   | -26.6004 |
| 1411 | 1   | Extremo 2A | 0.001757  | 38.319  | -0.127    | 0.1165  | 0.0559    | -44.9655 |
| 1411 | 0   | Extremo 2A | -0.002358 | 31.963  | 0.001033  | 0.1161  | 0.0027    | -9.8245  |
| 1411 | 0.5 | Extremo 1A | -0.002358 | 35.141  | 0.001033  | 0.1161  | 0.0022    | -26.6005 |
| 1411 | 1   | Extremo 1A | -0.002358 | 38.319  | 0.001033  | 0.1161  | 0.0017    | -44.9655 |
| 1413 | 0   | Extremo 1A | 6.402E-05 | -37.779 | -0.157    | 0.5902  | -0.0701   | -44.0993 |
| 1413 | 0.5 | Extremo 2A | 6.402E-05 | -34.601 | -0.157    | 0.5902  | 0.0082    | -26.0042 |
| 1413 | 1   | Extremo 2A | 6.402E-05 | -31.423 | -0.157    | 0.5902  | 0.0866    | -9.4981  |
| 1413 | 0   | Extremo 2A | -0.002549 | -37.779 | 0.077     | 0.5907  | 0.0366    | -44.0994 |
| 1413 | 0.5 | Extremo 1A | -0.002549 | -34.601 | 0.077     | 0.5907  | -0.0019   | -26.0042 |
| 1413 | 1   | Extremo 1A | -0.002549 | -31.423 | 0.077     | 0.5907  | -0.0404   | -9.4981  |
| 1414 | 0   | Extremo 1A | 3.447E-07 | -17.432 | -0.041    | 0.1216  | -0.0138   | -9.5526  |
| 1414 | 0.3 | Extremo 2A | 3.447E-07 | -15.93  | -0.041    | 0.1216  | -0.0016   | -4.5484  |
| 1414 | 0.6 | Extremo 2A | 3.447E-07 | -14.428 | -0.041    | 0.1216  | 0.0107    | 0.0053   |
| 1414 | 0   | Extremo 2A | -0.000238 | -17.432 | 0.02      | 0.1217  | 0.0071    | -9.5526  |
| 1414 | 0.3 | Extremo 1A | -0.000238 | -15.93  | 0.02      | 0.1217  | 0.001     | -4.5484  |
| 1414 | 0.6 | Extremo 1A | -0.000238 | -14.428 | 0.02      | 0.1217  | -0.0051   | 0.0053   |
| 1415 | 0   | Extremo 1A | 0.0002383 | 14.611  | -0.032    | 0.1893  | -0.0085   | -0.0379  |
| 1415 | 0.3 | Extremo 2A | 0.0002383 | 16.113  | -0.032    | 0.1893  | 0.0011    | -4.6464  |
| 1415 | 0.6 | Extremo 2A | 0.0002383 | 17.615  | -0.032    | 0.1893  | 0.0107    | -9.7055  |
| 1415 | 0   | Extremo 2A | -0.000351 | 14.611  | -0.00089  | 0.1893  | -5.91E-05 | -0.0379  |
| 1415 | 0.3 | Extremo 1A | -0.000351 | 16.113  | -0.00089  | 0.1893  | 0.0002079 | -4.6465  |
| 1415 | 0.6 | Extremo 1A | -0.000351 | 17.615  | -0.00089  | 0.1893  | 0.000475  | -9.7056  |
| 1416 | 0   | Extremo 1A | 0.002463  | 31.97   | -0.124    | 0.2427  | -0.0693   | -9.9345  |
| 1416 | 0.5 | Extremo 2A | 0.002463  | 35.148  | -0.124    | 0.2427  | -0.0074   | -26.7141 |
| 1416 | 1   | Extremo 2A | 0.002463  | 38.326  | -0.124    | 0.2427  | 0.0545    | -45.0826 |
| 1416 | 0   | Extremo 2A | -0.003803 | 31.97   | -0.00333  | 0.2424  | 0.0002    | -9.9348  |
| 1416 | 0.5 | Extremo 1A | -0.003803 | 35.148  | -0.00333  | 0.2424  | 0.0019    | -26.7143 |
| 1416 | 1   | Extremo 1A | -0.003803 | 38.326  | -0.00333  | 0.2424  | 0.0035    | -45.0829 |
| 1418 | 0   | Extremo 1A | 0.0004694 | -37.81  | -0.157    | 0.8749  | -0.0701   | -44.3247 |
| 1418 | 0.5 | Extremo 2A | 0.0004694 | -34.632 | -0.157    | 0.8749  | 0.0084    | -26.2143 |

|      |     |            |           |         |           |        |           |          |
|------|-----|------------|-----------|---------|-----------|--------|-----------|----------|
| 1418 | 1   | Extremo 2A | 0.0004694 | -31.454 | -0.157    | 0.8749 | 0.087     | -9.6929  |
| 1418 | 0   | Extremo 2A | -0.004201 | -37.81  | 0.082     | 0.8754 | 0.0387    | -44.3248 |
| 1418 | 0.5 | Extremo 1A | -0.004201 | -34.632 | 0.082     | 0.8754 | -0.0022   | -26.2145 |
| 1418 | 1   | Extremo 1A | -0.004201 | -31.454 | 0.082     | 0.8754 | -0.0431   | -9.6931  |
| 1419 | 0   | Extremo 1A | 3.305E-05 | -17.485 | -0.041    | 0.1443 | -0.0137   | -9.6075  |
| 1419 | 0.3 | Extremo 2A | 3.305E-05 | -15.983 | -0.041    | 0.1443 | -0.0015   | -4.5873  |
| 1419 | 0.6 | Extremo 2A | 3.305E-05 | -14.481 | -0.041    | 0.1443 | 0.0107    | -0.0177  |
| 1419 | 0   | Extremo 2A | -0.000388 | -17.485 | 0.021     | 0.1443 | 0.0074    | -9.6076  |
| 1419 | 0.3 | Extremo 1A | -0.000388 | -15.983 | 0.021     | 0.1443 | 0.001     | -4.5874  |
| 1419 | 0.6 | Extremo 1A | -0.000388 | -14.481 | 0.021     | 0.1443 | -0.0054   | -0.0177  |
| 1420 | 0   | Extremo 1A | 0.000307  | 14.681  | -0.031    | 0.3492 | -0.0082   | -0.0569  |
| 1420 | 0.3 | Extremo 2A | 0.000307  | 16.182  | -0.031    | 0.3492 | 0.001     | -4.6864  |
| 1420 | 0.6 | Extremo 2A | 0.000307  | 17.684  | -0.031    | 0.3492 | 0.0103    | -9.7664  |
| 1420 | 0   | Extremo 2A | -0.000443 | 14.681  | -0.002032 | 0.3494 | -0.000458 | -0.057   |
| 1420 | 0.3 | Extremo 1A | -0.000443 | 16.183  | -0.002032 | 0.3494 | 0.000152  | -4.6864  |
| 1420 | 0.6 | Extremo 1A | -0.000443 | 17.684  | -0.002032 | 0.3494 | 0.0007617 | -9.7665  |
| 1421 | 0   | Extremo 1A | 0.003152  | 32.102  | -0.12     | 0.5306 | -0.0673   | -10.1315 |
| 1421 | 0.5 | Extremo 2A | 0.003152  | 35.28   | -0.12     | 0.5306 | -0.0072   | -26.9772 |
| 1421 | 1   | Extremo 2A | 0.003152  | 38.458  | -0.12     | 0.5306 | 0.0528    | -45.4119 |
| 1421 | 0   | Extremo 2A | -0.004902 | 32.102  | -0.009172 | 0.5306 | -0.0035   | -10.132  |
| 1421 | 0.5 | Extremo 1A | -0.004902 | 35.28   | -0.009172 | 0.5306 | 0.0011    | -26.9777 |
| 1421 | 1   | Extremo 1A | -0.004902 | 38.459  | -0.009172 | 0.5306 | 0.0057    | -45.4125 |
| 1423 | 0   | Extremo 1A | 0.0006487 | -37.986 | -0.158    | 0.8698 | -0.0702   | -44.8624 |
| 1423 | 0.5 | Extremo 2A | 0.0006487 | -34.808 | -0.158    | 0.8698 | 0.0088    | -26.664  |
| 1423 | 1   | Extremo 2A | 0.0006487 | -31.63  | -0.158    | 0.8698 | 0.0878    | -10.0546 |
| 1423 | 0   | Extremo 2A | -0.005526 | -37.986 | 0.088     | 0.87   | 0.0411    | -44.8629 |
| 1423 | 0.5 | Extremo 1A | -0.005526 | -34.808 | 0.088     | 0.87   | -0.0031   | -26.6644 |
| 1423 | 1   | Extremo 1A | -0.005526 | -31.63  | 0.088     | 0.87   | -0.0472   | -10.055  |
| 1424 | 0   | Extremo 1A | 3.771E-05 | -17.6   | -0.04     | 0.0492 | -0.0135   | -9.7147  |
| 1424 | 0.3 | Extremo 2A | 3.771E-05 | -16.099 | -0.04     | 0.0492 | -0.0014   | -4.6598  |
| 1424 | 0.6 | Extremo 2A | 3.771E-05 | -14.597 | -0.04     | 0.0492 | 0.0107    | -0.0555  |
| 1424 | 0   | Extremo 2A | -0.000501 | -17.601 | 0.023     | 0.0492 | 0.0077    | -9.7148  |
| 1424 | 0.3 | Extremo 1A | -0.000501 | -16.099 | 0.023     | 0.0492 | 0.0009455 | -4.6599  |
| 1424 | 0.6 | Extremo 1A | -0.000501 | -14.597 | 0.023     | 0.0492 | -0.0058   | -0.0556  |
| 1425 | 0   | Extremo 1A | 0.0003302 | 14.805  | -0.029    | 0.5937 | -0.0079   | -0.0623  |
| 1425 | 0.3 | Extremo 2A | 0.0003302 | 16.307  | -0.029    | 0.5937 | 0.000922  | -4.729   |
| 1425 | 0.6 | Extremo 2A | 0.0003302 | 17.809  | -0.029    | 0.5937 | 0.0097    | -9.8463  |
| 1425 | 0   | Extremo 2A | -0.000426 | 14.805  | -0.00296  | 0.5941 | -0.000894 | -0.0623  |
| 1425 | 0.3 | Extremo 1A | -0.000426 | 16.307  | -0.00296  | 0.5941 | -6.09E-06 | -4.7291  |
| 1425 | 0.6 | Extremo 1A | -0.000426 | 17.809  | -0.00296  | 0.5941 | 0.000882  | -9.8465  |
| 1426 | 0   | Extremo 1A | 0.003385  | 32.663  | -0.117    | 1.1598 | -0.0652   | -10.3003 |
| 1426 | 0.5 | Extremo 2A | 0.003385  | 35.842  | -0.117    | 1.1598 | -0.0069   | -27.4266 |
| 1426 | 1   | Extremo 2A | 0.003385  | 39.02   | -0.117    | 1.1598 | 0.0514    | -46.1419 |
| 1426 | 0   | Extremo 2A | -0.004943 | 32.664  | -0.015    | 1.1605 | -0.0079   | -10.301  |
| 1426 | 0.5 | Extremo 1A | -0.004943 | 35.842  | -0.015    | 1.1605 | -0.000329 | -27.4276 |
| 1426 | 1   | Extremo 1A | -0.004943 | 39.02   | -0.015    | 1.1605 | 0.0072    | -46.1433 |
| 1428 | 0   | Extremo 1A | 0.0004762 | -38.702 | -0.159    | 0.2611 | -0.0701   | -46.0037 |
| 1428 | 0.5 | Extremo 2A | 0.0004762 | -35.524 | -0.159    | 0.2611 | 0.0095    | -27.4473 |
| 1428 | 1   | Extremo 2A | 0.0004762 | -32.346 | -0.159    | 0.2611 | 0.0891    | -10.4799 |
| 1428 | 0   | Extremo 2A | -0.005807 | -38.702 | 0.095     | 0.2607 | 0.043     | -46.005  |
| 1428 | 0.5 | Extremo 1A | -0.00580  |         |           |        |           |          |



|      |     |            |           |         |           |           |           |          |
|------|-----|------------|-----------|---------|-----------|-----------|-----------|----------|
| 1433 | 1   | Extremo 2A | 0.00114   | -34.314 | -0.162    | -1.1107   | 0.0918    | -10.4175 |
| 1433 | 0   | Extremo 2A | -0.003477 | -40.672 | 0.099     | -1.1123   | 0.0424    | -47.9121 |
| 1433 | 0.5 | Extremo 1A | -0.003477 | -37.494 | 0.099     | -1.1123   | -0.0073   | -28.3706 |
| 1433 | 1   | Extremo 1A | -0.003477 | -34.316 | 0.099     | -1.1123   | -0.0571   | -10.4181 |
| 1434 | 0   | Extremo 1A | 7.264E-05 | -18.071 | -0.039    | -0.5948   | -0.0123   | -9.9869  |
| 1434 | 0.3 | Extremo 2A | 7.264E-05 | -16.569 | -0.039    | -0.5948   | -0.000752 | -4.7909  |
| 1434 | 0.6 | Extremo 2A | 7.264E-05 | -15.067 | -0.039    | -0.5948   | 0.0108    | -0.0453  |
| 1434 | 0   | Extremo 2A | -0.000256 | -18.072 | 0.024     | -0.5954   | 0.0075    | -9.9872  |
| 1434 | 0.3 | Extremo 1A | -0.000256 | -16.57  | 0.024     | -0.5954   | 0.0004004 | -4.791   |
| 1434 | 0.6 | Extremo 1A | -0.000256 | -15.068 | 0.024     | -0.5954   | -0.0067   | -0.0454  |
| 1435 | 0   | Extremo 1A | -0.001332 | 14.898  | -0.031    | 0.7034    | -0.0084   | 0.1229   |
| 1435 | 0.3 | Extremo 2A | -0.001332 | 16.4    | -0.031    | 0.7034    | 0.0009885 | -4.5719  |
| 1435 | 0.6 | Extremo 2A | -0.001332 | 17.902  | -0.031    | 0.7034    | 0.0104    | -9.7173  |
| 1435 | 0   | Extremo 2A | 0.0003555 | 14.899  | -0.000504 | 0.704     | -0.0011   | 0.123    |
| 1435 | 0.3 | Extremo 1A | 0.0003555 | 16.401  | -0.000504 | 0.704     | -0.00098  | -4.5719  |
| 1435 | 0.6 | Extremo 1A | 0.0003555 | 17.903  | -0.000504 | 0.704     | -0.000829 | -9.7174  |
| 1436 | 0   | Extremo 1A | -0.013    | 35.799  | -0.129    | 2.3857    | -0.0702   | -8.8893  |
| 1436 | 0.5 | Extremo 2A | -0.013    | 38.977  | -0.129    | 2.3857    | -0.006    | -27.5834 |
| 1436 | 1   | Extremo 2A | -0.013    | 42.155  | -0.129    | 2.3857    | 0.0583    | -0.47666 |
| 1436 | 0   | Extremo 2A | 0.003152  | 35.803  | -0.014    | 2.388     | -0.0138   | -8.8888  |
| 1436 | 0.5 | Extremo 1A | 0.003152  | 38.981  | -0.014    | 2.388     | -0.0067   | -27.5847 |
| 1436 | 1   | Extremo 1A | 0.003152  | 42.159  | -0.014    | 2.388     | 0.0004058 | -47.8698 |
| 1438 | 0   | Extremo 1A | 0.011     | -43.472 | -0.171    | -2.1209   | -0.0721   | -49.5077 |
| 1438 | 0.5 | Extremo 2A | 0.011     | -40.293 | -0.171    | -2.1209   | 0.0135    | -28.5664 |
| 1438 | 1   | Extremo 2A | 0.011     | -37.115 | -0.171    | -2.1209   | 0.099     | -9.2142  |
| 1438 | 0   | Extremo 2A | 0.001954  | -43.476 | 0.097     | -2.1232   | 0.0369    | -49.5115 |
| 1438 | 0.5 | Extremo 1A | 0.001954  | -40.298 | 0.097     | -2.1232   | -0.0116   | -28.5682 |
| 1438 | 1   | Extremo 1A | 0.001954  | -37.12  | 0.097     | -2.1232   | -0.0601   | -9.2139  |
| 1439 | 0   | Extremo 1A | 0.001096  | -18.158 | -0.04     | -0.6491   | -0.0125   | -9.8907  |
| 1439 | 0.3 | Extremo 2A | 0.001096  | -16.656 | -0.04     | -0.6491   | -0.000482 | -4.6686  |
| 1439 | 0.6 | Extremo 2A | 0.001096  | -15.154 | -0.04     | -0.6491   | 0.0115    | 0.1028   |
| 1439 | 0   | Extremo 2A | 0.0002441 | -18.158 | 0.022     | -0.6497   | 0.0063    | -9.8909  |
| 1439 | 0.3 | Extremo 1A | 0.0002441 | -16.656 | 0.022     | -0.6497   | -0.000242 | -4.6687  |
| 1439 | 0.6 | Extremo 1A | 0.0002441 | -15.154 | 0.022     | -0.6497   | 0.0068    | 0.1029   |
| 1440 | 0   | Extremo 1A | -0.004003 | 14.721  | -0.044    | 0.0001187 | -0.011    | 0.1692   |
| 1440 | 0.3 | Extremo 2A | -0.004003 | 16.223  | -0.044    | 0.0001187 | 0.0022    | -4.4723  |
| 1440 | 0.6 | Extremo 2A | -0.004003 | 17.725  | -0.044    | 0.0001187 | 0.0153    | -9.5645  |
| 1440 | 0   | Extremo 2A | 7.262E-05 | 14.721  | 0.001603  | 0.0001333 | -0.000944 | 0.1694   |
| 1440 | 0.3 | Extremo 1A | 7.262E-05 | 16.223  | 0.001603  | 0.0001333 | -0.0014   | -4.4723  |
| 1440 | 0.6 | Extremo 1A | 7.262E-05 | 17.725  | 0.001603  | 0.0001333 | -0.0019   | -9.5645  |
| 1441 | 0   | Extremo 1A | -0.042    | 34.949  | -0.164    | 0.0045    | -0.0866   | -8.2996  |
| 1441 | 0.5 | Extremo 2A | -0.042    | 38.127  | -0.164    | 0.0045    | -0.0047   | -26.5685 |
| 1441 | 1   | Extremo 2A | -0.042    | 41.305  | -0.164    | 0.0045    | 0.0772    | -46.4265 |
| 1441 | 0   | Extremo 2A | 0.0007614 | 34.952  | -0.006781 | 0.0049    | -0.014    | -8.2985  |
| 1441 | 0.5 | Extremo 1A | 0.0007614 | 38.13   | -0.006781 | 0.0049    | -0.0106   | -26.5689 |
| 1441 | 1   | Extremo 1A | 0.0007614 | 41.308  | -0.006781 | 0.0049    | -0.0072   | -46.4284 |
| 1443 | 0   | Extremo 1A | 0.044     | -43.011 | -0.202    | -0.0079   | -0.0857   | -48.3193 |
| 1443 | 0.5 | Extremo 2A | 0.044     | -39.833 | -0.202    | -0.0079   | 0.0153    | -27.6082 |
| 1443 | 1   | Extremo 2A | 0.044     | -36.655 | -0.202    | -0.0079   | 0.1163    | -8.4861  |
| 1443 | 0   | Extremo 2A | -0.000791 | -43.015 | 0.091     | -0.0085   | 0.0294    | -48.3221 |
| 1443 | 0.5 | Extremo 1A | -0.000791 | -39.837 | 0.091     | -0.0085   | -0.0159   | -27.6091 |
| 1443 | 1   | Extremo 1A | -0.000791 | -36.659 | 0.091     | -0.0085   | -0.0613   | -8.4852  |
| 1444 | 0   | Extremo 1A | 0.004146  | -18.006 | -0.051    | -0.0015   | -0.0168   | -9.7373  |
| 1444 | 0.3 | Extremo 2A | 0.004146  | -16.504 | -0.051    | -0.0015   | -0.0014   | -4.5609  |
| 1444 | 0.6 | Extremo 2A | 0.004146  | -15.002 | -0.051    | -0.0015   | 0.014     | 0.1649   |
| 1444 | 0   | Extremo 2A | -7.54E-05 | -18.006 | 0.02      | -0.0017   | 0.0054    | -9.7374  |
| 1444 | 0.3 | Extremo 1A | -7.54E-05 | -16.504 | 0.02      | -0.0017   | -0.000676 | -4.5609  |
| 1444 | 0.6 | Extremo 1A | -7.54E-05 | -15.002 | 0.02      | -0.0017   | -0.0067   | 0.1651   |
| 1445 | 0   | Extremo 1A | -0.001095 | 14.898  | -0.055    | -0.7031   | -0.0134   | 0.1229   |
| 1445 | 0.3 | Extremo 2A | -0.001095 | 16.4    | -0.055    | -0.7031   | 0.0031    | -4.5719  |
| 1445 | 0.6 | Extremo 2A | -0.001095 | 17.902  | -0.055    | -0.7031   | 0.0196    | -9.7173  |
| 1445 | 0   | Extremo 2A | -0.000312 | 14.899  | -7.68E-05 | -0.7037   | -0.001    | 0.123    |
| 1445 | 0.3 | Extremo 1A | -0.000312 | 16.401  | -7.68E-05 | -0.7037   | -0.001    | -4.572   |
| 1445 | 0.6 | Extremo 1A | -0.000312 | 17.903  | -7.68E-05 | -0.7037   | -0.000995 | -9.7175  |
| 1446 | 0   | Extremo 1A | -0.011    | 35.799  | -0.194    | -2.3767   | -0.1033   | -8.8894  |
| 1446 | 0.5 | Extremo 2A | -0.011    | 38.977  | -0.194    | -2.3767   | -0.0063   | -27.5835 |
| 1446 | 1   | Extremo 2A | -0.011    | 42.155  | -0.194    | -2.3767   | 0.0908    | -47.8667 |
| 1446 | 0   | Extremo 2A | -0.002714 | 35.803  | -0.013    | -2.3782   | -0.0132   | -8.8888  |
| 1446 | 0.5 | Extremo 1A | -0.002714 | 38.981  | -0.013    | -2.3782   | -0.0067   | -27.5848 |
| 1446 | 1   | Extremo 1A | -0.002714 | 42.159  | -0.013    | -2.3782   | -0.000183 | -47.8699 |
| 1448 | 0   | Extremo 1A | 0.013     | -43.472 | -0.238    | 2.105     | -0.1047   | -49.5078 |
| 1448 | 0.5 | Extremo 2A | 0.013     | -40.293 | -0.238    | 2.105     | 0.0141    | -28.5665 |

|      |     |            |           |         |           |         |           |          |
|------|-----|------------|-----------|---------|-----------|---------|-----------|----------|
| 1448 | 1   | Extremo 2A | 0.013     | -37.115 | -0.238    | 2.105   | 0.1329    | -9.2143  |
| 1448 | 0   | Extremo 2A | -0.002385 | -43.476 | 0.098     | 2.1061  | 0.0375    | -49.5116 |
| 1448 | 0.5 | Extremo 1A | -0.002385 | -40.298 | 0.098     | 2.1061  | -0.0116   | -28.5682 |
| 1448 | 1   | Extremo 1A | -0.002385 | -37.12  | 0.098     | 2.1061  | -0.0607   | -9.2139  |
| 1449 | 0   | Extremo 1A | 0.001283  | -18.158 | -0.064    | 0.646   | -0.0218   | -9.8907  |
| 1449 | 0.3 | Extremo 2A | 0.001283  | -16.656 | -0.064    | 0.646   | -0.0026   | -4.6686  |
| 1449 | 0.6 | Extremo 2A | 0.001283  | -15.154 | -0.064    | 0.646   | 0.0166    | 0.1028   |
| 1449 | 0   | Extremo 2A | -0.000288 | -18.158 | 0.022     | 0.6464  | 0.0065    | -9.8909  |
| 1449 | 0.3 | Extremo 1A | -0.000288 | -16.656 | 0.022     | 0.6464  | -0.000203 | -4.6687  |
| 1449 | 0.6 | Extremo 1A | -0.000288 | -15.154 | 0.022     | 0.6464  | -0.0069   | 0.1029   |
| 1450 | 0   | Extremo 1A | -5.78E-05 | 14.935  | -0.056    | -0.8229 | -0.014    | -0.0058  |
| 1450 | 0.3 | Extremo 2A | -5.78E-05 | 16.437  | -0.056    | -0.8229 | 0.0029    | -4.7115  |
| 1450 | 0.6 | Extremo 2A | -5.78E-05 | 17.938  | -0.056    | -0.8229 | 0.0197    | -9.8678  |
| 1450 | 0   | Extremo 2A | 0.000158  | 14.935  | -0.002263 | -0.8235 | -0.0011   | -0.0058  |
| 1450 | 0.3 | Extremo 1A | 0.000158  | 16.437  | -0.002263 | -0.8235 | -0.000402 | -4.7117  |
| 1450 | 0.6 | Extremo 1A | 0.000158  | 17.939  | -0.002263 | -0.8235 | 0.0002773 | -9.868   |
| 1451 | 0   | Extremo 1A | -0.000949 | 34.086  | -0.203    | -2.1069 | -0.1103   | -10.0109 |
| 1451 | 0.5 | Extremo 2A | -0.000949 | 37.264  | -0.203    | -2.1069 | -0.0086   | -27.8485 |
| 1451 | 1   | Extremo 2A | -0.000949 | 40.442  | -0.203    | -2.1069 | 0.0932    | -47.2752 |
| 1451 | 0   | Extremo 2A | 0.0024    | 34.088  | -0.016    | -2.1079 | -0.011    | -10.0114 |
| 1451 | 0.5 | Extremo 1A | 0.0024    | 37.266  | -0.016    | -2.1079 | -0.0028   | -27.85   |
| 1451 | 1   | Extremo 1A | 0.0024    | 40.445  | -0.016    | -2.1079 | 0.0054    | -47.2778 |
| 1453 | 0   | Extremo 1A | -0.001304 | -40.67  | -0.249    | 1.0948  | -0.1109   | -47.9096 |
| 1453 | 0.5 | Extremo 2A | -0.001304 | -37.492 | -0.249    | 1.0948  | 0.0136    | -28.369  |
| 1453 | 1   | Extremo 2A | -0.001304 | -34.314 | -0.249    | 1.0948  | 0.1381    | -10.4175 |
| 1453 | 0   | Extremo 2A | 0.003476  | -40.672 | 0.101     | 1.0951  | 0.0432    | -47.9122 |
| 1453 | 0.5 | Extremo 1A | 0.003476  | -37.494 | 0.101     | 1.0951  | -0.0074   | -28.3707 |
| 1453 | 1   | Extremo 1A | 0.003476  | -34.316 | 0.101     | 1.0951  | -0.0579   | -10.4182 |
| 1454 | 0   | Extremo 1A | -0.000108 | -18.071 | -0.067    | 0.5916  | -0.0228   | -9.987   |
| 1454 | 0.3 | Extremo 2A | -0.000108 | -16.569 | -0.067    | 0.5916  | -0.0028   | -4.7909  |
| 1454 | 0.6 | Extremo 2A | -0.000108 | -15.068 | -0.067    | 0.5916  | 0.0172    | -0.0453  |
| 1454 | 0   | Extremo 2A | 0.0002562 | -18.072 | 0.024     | 0.592   | 0.0077    | -9.9873  |
| 1454 | 0.3 | Extremo 1A | 0.0002562 | -16.57  | 0.024     | 0.592   | 0.0004377 | -4.791   |
| 1454 | 0.6 | Extremo 1A | 0.0002562 | -15.068 | 0.024     | 0.592   | -0.0069   | -0.0454  |
| 1455 | 0   | Extremo 1A | 2.978E-05 | 14.805  | -0.055    | -0.5933 | -0.0141   | -0.0623  |
| 1455 | 0.3 | Extremo 2A | 2.978E-05 | 16.307  | -0.055    | -0.5933 | 0.0025    | -4.729   |
| 1455 | 0.6 | Extremo 2A | 2.978E-05 | 17.809  | -0.055    | -0.5933 | 0.019     | -9.8463  |
| 1455 | 0   | Extremo 2A | 0.0004194 | 14.805  | -0.002494 | -0.5937 | -0.000782 | -0.0624  |
| 1455 | 0.3 | Extremo 1A | 0.0004194 | 16.307  | -0.002494 | -0.5937 | -3.4E-05  | -4.7292  |
| 1455 | 0.6 | Extremo 1A | 0.0004194 | 17.809  | -0.002494 | -0.5937 | 0.0007143 | -9.8466  |
| 1456 | 0   | Extremo 1A | -0.00011  | 32.664  | -0.206    | -1.1505 | -0.1127   | -10.3005 |
| 1456 | 0.5 | Extremo 2A | -0.00011  | 35.842  | -0.206    | -1.1505 | -0.0099   | -27.4268 |
| 1456 | 1   | Extremo 2A | -0.00011  | 39.02   | -0.206    | -1.1505 | 0.0928    | -46.1422 |
| 1456 | 0   | Extremo 2A | 0.004883  | 32.664  | -0.013    | -1.1504 | -0.007    | -10.3012 |
| 1456 | 0.5 | Extremo 1A | 0.004883  | 35.842  | -0.013    | -1.1504 | -0.000274 | -27.4279 |
| 1456 | 1   | Extremo 1A | 0.004883  | 39.021  | -0.013    | -1.1504 | 0.0064    | -46.1437 |
| 1458 | 0   | Extremo 1A | -0.003639 | -38.702 | -0.248    | -0.2772 | -0.1111   | -46.004  |
| 1458 | 0.5 | Extremo 2A | -0.003639 | -35.524 | -0.248    | -0.2772 | 0.0132    | -27.4475 |
| 1458 | 1   | Extremo 2A | -0.003639 | -32.346 | -0.248    | -0.2772 | 0.1374    | -10.4801 |
| 1458 | 0   | Extremo 2A | 0.00586   | -38.703 | 0.097     | -0.278  | 0.0438    | -46.0052 |
| 1458 | 0.5 | Extremo 1A | 0.00586   | -35.524 | 0.097     | -0.278  | -0.0047   | -27.4485 |



|      |     |            |           |         |           |         |           |          |
|------|-----|------------|-----------|---------|-----------|---------|-----------|----------|
| 1463 | 1   | Extremo 2A | -0.003289 | -31.63  | -0.245    | -0.886  | 0.1352    | -10.0548 |
| 1463 | 0   | Extremo 2A | 0.005568  | -37.986 | 0.09      | -0.8875 | 0.0419    | -44.8633 |
| 1463 | 0.5 | Extremo 1A | 0.005568  | -34.808 | 0.09      | -0.8875 | -0.0031   | -26.6647 |
| 1463 | 1   | Extremo 1A | 0.005568  | -31.63  | 0.09      | -0.8875 | -0.0481   | -10.0552 |
| 1464 | 0   | Extremo 1A | -0.00032  | -17.601 | -0.064    | -0.0525 | -0.0217   | -9.7147  |
| 1464 | 0.3 | Extremo 2A | -0.00032  | -16.099 | -0.064    | -0.0525 | -0.0025   | -4.6598  |
| 1464 | 0.6 | Extremo 2A | -0.00032  | -14.597 | -0.064    | -0.0525 | 0.0167    | -0.0555  |
| 1464 | 0   | Extremo 2A | 0.0005057 | -17.601 | 0.023     | -0.0526 | 0.0079    | -9.7148  |
| 1464 | 0.3 | Extremo 1A | 0.0005057 | -16.099 | 0.023     | -0.0526 | 0.0009663 | -4.6599  |
| 1464 | 0.6 | Extremo 1A | 0.0005057 | -14.597 | 0.023     | -0.0526 | -0.006    | -0.0556  |
| 1465 | 0   | Extremo 1A | -4.41E-06 | 14.611  | -0.054    | -0.1887 | -0.0141   | -0.0379  |
| 1465 | 0.3 | Extremo 2A | -4.41E-06 | 16.113  | -0.054    | -0.1887 | 0.0021    | -4.6465  |
| 1465 | 0.6 | Extremo 2A | -4.41E-06 | 17.615  | -0.054    | -0.1887 | 0.0183    | -9.7057  |
| 1465 | 0   | Extremo 2A | 0.0003467 | 14.611  | -0.000492 | -0.1887 | 4.259E-05 | -0.038   |
| 1465 | 0.3 | Extremo 1A | 0.0003467 | 16.113  | -0.000492 | -0.1887 | 0.00019   | -4.6466  |
| 1465 | 0.6 | Extremo 1A | 0.0003467 | 17.615  | -0.000492 | -0.1887 | 0.0003375 | -9.7057  |
| 1466 | 0   | Extremo 1A | -0.000173 | 31.97   | -0.207    | -0.2327 | -0.1143   | -9.9349  |
| 1466 | 0.5 | Extremo 2A | -0.000173 | 35.148  | -0.207    | -0.2327 | -0.011    | -26.7147 |
| 1466 | 1   | Extremo 2A | -0.000173 | 38.327  | -0.207    | -0.2327 | 0.0923    | -45.0834 |
| 1466 | 0   | Extremo 2A | 0.003761  | 31.97   | -0.001831 | -0.2316 | 0.001     | -9.9352  |
| 1466 | 0.5 | Extremo 1A | 0.003761  | 35.149  | -0.001831 | -0.2316 | 0.0019    | -26.7149 |
| 1466 | 1   | Extremo 1A | 0.003761  | 38.327  | -0.001831 | -0.2316 | 0.0028    | -45.0837 |
| 1468 | 0   | Extremo 1A | -0.002564 | -37.81  | -0.241    | -0.8914 | -0.1079   | -44.3252 |
| 1468 | 0.5 | Extremo 2A | -0.002564 | -34.632 | -0.241    | -0.8914 | 0.0126    | -26.2147 |
| 1468 | 1   | Extremo 2A | -0.002564 | -31.454 | -0.241    | -0.8914 | 0.133     | -9.6932  |
| 1468 | 0   | Extremo 2A | 0.004232  | -37.81  | 0.083     | -0.8931 | 0.0394    | -44.3254 |
| 1468 | 0.5 | Extremo 1A | 0.004232  | -34.632 | 0.083     | -0.8931 | -0.0023   | -26.2149 |
| 1468 | 1   | Extremo 1A | 0.004232  | -31.454 | 0.083     | -0.8931 | -0.044    | -9.6934  |
| 1469 | 0   | Extremo 1A | -0.000248 | -17.485 | -0.063    | -0.1476 | -0.0213   | -9.6076  |
| 1469 | 0.3 | Extremo 2A | -0.000248 | -15.983 | -0.063    | -0.1476 | -0.0024   | -4.5874  |
| 1469 | 0.6 | Extremo 2A | -0.000248 | -14.481 | -0.063    | -0.1476 | 0.0164    | -0.0177  |
| 1469 | 0   | Extremo 2A | 0.0003914 | -17.485 | 0.022     | -0.1479 | 0.0075    | -9.6076  |
| 1469 | 0.3 | Extremo 1A | 0.0003914 | -15.983 | 0.022     | -0.1479 | 0.001     | -4.5874  |
| 1469 | 0.6 | Extremo 1A | 0.0003914 | -14.481 | 0.022     | -0.1479 | -0.0055   | -0.0178  |
| 1470 | 0   | Extremo 1A | 2.402E-05 | 14.581  | -0.054    | -0.0934 | -0.0141   | -0.025   |
| 1470 | 0.3 | Extremo 2A | 2.402E-05 | 16.083  | -0.054    | -0.0934 | 0.002     | -4.6247  |
| 1470 | 0.6 | Extremo 2A | 2.402E-05 | 17.585  | -0.054    | -0.0934 | 0.0182    | -9.675   |
| 1470 | 0   | Extremo 2A | 0.0002163 | 14.582  | 0.000406  | -0.0933 | 0.000325  | -0.025   |
| 1470 | 0.3 | Extremo 1A | 0.0002163 | 16.083  | 0.000406  | -0.0933 | 0.0002032 | -4.6248  |
| 1470 | 0.6 | Extremo 1A | 0.0002163 | 17.585  | 0.000406  | -0.0933 | 8.145E-05 | -9.6751  |
| 1471 | 0   | Extremo 1A | 0.0001853 | 31.963  | -0.207    | -0.1058 | -0.1145   | -9.8249  |
| 1471 | 0.5 | Extremo 2A | 0.0001853 | 35.142  | -0.207    | -0.1058 | -0.0112   | -26.6012 |
| 1471 | 1   | Extremo 2A | 0.0001853 | 38.32   | -0.207    | -0.1058 | 0.0921    | -44.9665 |
| 1471 | 0   | Extremo 2A | 0.002322  | 31.964  | 0.002476  | -0.1046 | 0.0035    | -9.825   |
| 1471 | 0.5 | Extremo 1A | 0.002322  | 35.142  | 0.002476  | -0.1046 | 0.0023    | -26.6013 |
| 1471 | 1   | Extremo 1A | 0.002322  | 38.32   | 0.002476  | -0.1046 | 0.0011    | -44.9667 |
| 1473 | 0   | Extremo 1A | -0.001845 | -37.78  | -0.238    | -0.6071 | -0.1064   | -44.1    |
| 1473 | 0.5 | Extremo 2A | -0.001845 | -34.602 | -0.238    | -0.6071 | 0.0125    | -26.0047 |
| 1473 | 1   | Extremo 2A | -0.001845 | -31.424 | -0.238    | -0.6071 | 0.1314    | -9.4984  |
| 1473 | 0   | Extremo 2A | 0.002573  | -37.78  | 0.079     | -0.609  | 0.0373    | -44.1001 |
| 1473 | 0.5 | Extremo 1A | 0.002573  | -34.602 | 0.079     | -0.609  | -0.0019   | -26.0048 |
| 1473 | 1   | Extremo 1A | 0.002573  | -31.424 | 0.079     | -0.609  | -0.0412   | -9.4984  |
| 1474 | 0   | Extremo 1A | -0.000178 | -17.432 | -0.062    | -0.125  | -0.021    | -9.5527  |
| 1474 | 0.3 | Extremo 2A | -0.000178 | -15.93  | -0.062    | -0.125  | -0.0024   | -4.5484  |
| 1474 | 0.6 | Extremo 2A | -0.000178 | -14.428 | -0.062    | -0.125  | 0.0162    | 0.0053   |
| 1474 | 0   | Extremo 2A | 0.0002402 | -17.432 | 0.021     | -0.1253 | 0.0072    | -9.5527  |
| 1474 | 0.3 | Extremo 1A | 0.0002402 | -15.93  | 0.021     | -0.1253 | 0.001     | -4.5484  |
| 1474 | 0.6 | Extremo 1A | 0.0002402 | -14.428 | 0.021     | -0.1253 | -0.0052   | 0.0053   |
| 1475 | 0   | Extremo 1A | 6.822E-05 | 14.572  | -0.053    | -0.0283 | -0.014    | -0.0196  |
| 1475 | 0.3 | Extremo 2A | 6.822E-05 | 16.074  | -0.053    | -0.0283 | 0.002     | -4.6165  |
| 1475 | 0.6 | Extremo 2A | 6.822E-05 | 17.576  | -0.053    | -0.0283 | 0.018     | -9.6639  |
| 1475 | 0   | Extremo 2A | 7.374E-05 | 14.572  | 0.0008938 | -0.0282 | 0.0004704 | -0.0196  |
| 1475 | 0.3 | Extremo 1A | 7.374E-05 | 16.074  | 0.0008938 | -0.0282 | 0.0002023 | -4.6165  |
| 1475 | 0.6 | Extremo 1A | 7.374E-05 | 17.576  | 0.0008938 | -0.0282 | -6.59E-05 | -9.6639  |
| 1476 | 0   | Extremo 1A | 0.0006742 | 31.973  | -0.206    | -0.0301 | -0.1142   | -9.7833  |
| 1476 | 0.5 | Extremo 2A | 0.0006742 | 35.151  | -0.206    | -0.0301 | -0.0113   | -26.5645 |
| 1476 | 1   | Extremo 2A | 0.0006742 | 38.33   | -0.206    | -0.0301 | 0.0917    | -44.9347 |
| 1476 | 0   | Extremo 2A | 0.0007874 | 31.973  | 0.004731  | -0.0288 | 0.0048    | -9.7834  |
| 1476 | 0.5 | Extremo 1A | 0.0007874 | 35.151  | 0.004731  | -0.0288 | 0.0024    | -26.5646 |
| 1476 | 1   | Extremo 1A | 0.0007874 | 38.33   | 0.004731  | -0.0288 | 6.412E-05 | -44.9348 |
| 1478 | 0   | Extremo 1A | -0.00119  | -37.777 | -0.236    | -0.2137 | -0.1052   | -44.0204 |
| 1478 | 0.5 | Extremo 2A | -0.00119  | -34.598 | -0.236    | -0.2137 | 0.0125    | -25.9266 |

|      |     |            |           |         |           |         |           |          |
|------|-----|------------|-----------|---------|-----------|---------|-----------|----------|
| 1478 | 1   | Extremo 2A | -0.00119  | -31.42  | -0.236    | -0.2137 | 0.1303    | -9.422   |
| 1478 | 0   | Extremo 2A | 0.0008369 | -37.777 | 0.076     | -0.2156 | 0.0362    | -44.0204 |
| 1478 | 0.5 | Extremo 1A | 0.0008369 | -34.598 | 0.076     | -0.2156 | -0.0018   | -25.9267 |
| 1478 | 1   | Extremo 1A | 0.0008369 | -31.42  | 0.076     | -0.2156 | -0.0398   | -9.422   |
| 1479 | 0   | Extremo 1A | -0.000116 | -17.412 | -0.061    | -0.0472 | -0.0208   | -9.5313  |
| 1479 | 0.3 | Extremo 2A | -0.000116 | -15.91  | -0.061    | -0.0472 | -0.0024   | -4.5329  |
| 1479 | 0.6 | Extremo 2A | -0.000116 | -14.408 | -0.061    | -0.0472 | 0.016     | 0.0149   |
| 1479 | 0   | Extremo 2A | 7.838E-05 | -17.412 | 0.02      | -0.0476 | 0.0071    | -9.5313  |
| 1479 | 0.3 | Extremo 1A | 7.838E-05 | -15.91  | 0.02      | -0.0476 | 0.001     | -4.5329  |
| 1479 | 0.6 | Extremo 1A | 7.838E-05 | -14.408 | 0.02      | -0.0476 | -0.005    | 0.0149   |
| 1480 | 0   | Extremo 1A | 0.0001225 | 14.572  | -0.053    | 0.0288  | -0.0139   | -0.0196  |
| 1480 | 0.3 | Extremo 2A | 0.0001225 | 16.074  | -0.053    | 0.0288  | 0.002     | -4.6164  |
| 1480 | 0.6 | Extremo 2A | 0.0001225 | 17.576  | -0.053    | 0.0288  | 0.0179    | -9.6638  |
| 1480 | 0   | Extremo 2A | -7.13E-05 | 14.572  | 0.0009001 | 0.0289  | 0.0004717 | -0.0196  |
| 1480 | 0.3 | Extremo 1A | -7.13E-05 | 16.074  | 0.0009001 | 0.0289  | 0.0002016 | -4.6164  |
| 1480 | 0.6 | Extremo 1A | -7.13E-05 | 17.576  | 0.0009001 | 0.0289  | -6.84E-05 | -9.6638  |
| 1481 | 0   | Extremo 1A | 0.001253  | 31.973  | -0.204    | 0.036   | -0.1136   | -9.7831  |
| 1481 | 0.5 | Extremo 2A | 0.001253  | 35.151  | -0.204    | 0.036   | -0.0113   | -26.5643 |
| 1481 | 1   | Extremo 2A | 0.001253  | 38.33   | -0.204    | 0.036   | 0.0909    | -44.9345 |
| 1481 | 0   | Extremo 2A | -0.000763 | 31.973  | 0.00475   | 0.0374  | 0.0048    | -9.783   |
| 1481 | 0.5 | Extremo 1A | -0.000763 | 35.152  | 0.00475   | 0.0374  | 0.0024    | -26.5643 |
| 1481 | 1   | Extremo 1A | -0.000763 | 38.33   | 0.00475   | 0.0374  | 5.334E-05 | -44.9345 |
| 1483 | 0   | Extremo 1A | -0.000607 | -37.777 | -0.234    | 0.2061  | -0.1045   | -44.0204 |
| 1483 | 0.5 | Extremo 2A | -0.000607 | -34.599 | -0.234    | 0.2061  | 0.0125    | -25.9266 |
| 1483 | 1   | Extremo 2A | -0.000607 | -31.42  | -0.234    | 0.2061  | 0.1296    | -9.4219  |
| 1483 | 0   | Extremo 2A | -0.000911 | -37.777 | 0.076     | 0.2042  | 0.0363    | -44.0204 |
| 1483 | 0.5 | Extremo 1A | -0.000911 | -34.599 | 0.076     | 0.2042  | -0.0018   | -25.9266 |
| 1483 | 1   | Extremo 1A | -0.000911 | -31.42  | 0.076     | 0.2042  | -0.0398   | -9.4218  |
| 1484 | 0   | Extremo 1A | -6.16E-05 | -17.412 | -0.061    | 0.0458  | -0.0206   | -9.5312  |
| 1484 | 0.3 | Extremo 2A | -6.16E-05 | -15.91  | -0.061    | 0.0458  | -0.0023   | -4.5329  |
| 1484 | 0.6 | Extremo 2A | -6.16E-05 | -14.408 | -0.061    | 0.0458  | 0.0159    | 0.0149   |
| 1484 | 0   | Extremo 2A | -8.56E-05 | -17.412 | 0.02      | 0.0454  | 0.0071    | -9.5312  |
| 1484 | 0.3 | Extremo 1A | -8.56E-05 | -15.91  | 0.02      | 0.0454  | 0.001     | -4.5329  |
| 1484 | 0.6 | Extremo 1A | -8.56E-05 | -14.408 | 0.02      | 0.0454  | -0.005    | 0.0149   |
| 1485 | 0   | Extremo 1A | 0.0001854 | 14.581  | -0.052    | 0.0937  | -0.0138   | -0.0249  |
| 1485 | 0.3 | Extremo 2A | 0.0001854 | 16.083  | -0.052    | 0.0937  | 0.0019    | -4.6245  |
| 1485 | 0.6 | Extremo 2A | 0.0001854 | 17.585  | -0.052    | 0.0937  | 0.0176    | -9.6748  |
| 1485 | 0   | Extremo 2A | -0.000214 | 14.581  | 0.0004259 | 0.0937  | 0.0003288 | -0.0249  |
| 1485 | 0.3 | Extremo 1A | -0.000214 | 16.083  | 0.0004259 | 0.0937  | 0.000201  | -4.6245  |
| 1485 | 0.6 | Extremo 1A | -0.000214 | 17.585  | 0.0004259 | 0.0937  | 7.328E-05 | -9.6747  |
| 1486 | 0   | Extremo 1A | 0.001911  | 31.964  | -0.202    | 0.1114  | -0.1124   | -9.8239  |
| 1486 | 0.5 | Extremo 2A | 0.001911  | 35.142  | -0.202    | 0.1114  | -0.0113   | -26.6003 |
| 1486 | 1   | Extremo 2A | 0.001911  | 38.32   | -0.202    | 0.1114  | 0.0897    | -44.9656 |
| 1486 | 0   | Extremo 2A | -0.002295 | 31.964  | 0.002533  | 0.1128  | 0.0036    | -9.8237  |
| 1486 | 0.5 | Extremo 1A | -0.002295 | 35.142  | 0.002533  | 0.1128  | 0.0023    | -26.6    |
| 1486 | 1   | Extremo 1A | -0.002295 | 38.32   | 0.002533  | 0.1128  | 0.001     | -44.9654 |
| 1488 | 0   | Extremo 1A | -0.000105 | -37.78  | -0.234    | 0.5995  | -0.1042   | -44.0998 |
| 1488 | 0.5 | Extremo 2A | -0.000105 | -34.602 | -0.234    | 0.5995  | 0.0126    | -26.0043 |
| 1488 | 1   | Extremo 2A | -0.000105 | -31.424 | -0.234    | 0.5995  | 0.1294    | -9.4978  |
| 1488 | 0   | Extremo 2A | -0.002653 | -37.78  | 0.079     | 0.5976  | 0.0374    | -44.0997 |
| 1488 | 0.5 | Ext        |           |         |           |         |           |          |



|      |     |            |           |         |           |         |           |          |
|------|-----|------------|-----------|---------|-----------|---------|-----------|----------|
| 1493 | 1   | Extremo 2A | 0.0002713 | -31.454 | -0.234    | 0.8842  | 0.1297    | -9.6914  |
| 1493 | 0   | Extremo 2A | -0.004323 | -37.811 | 0.084     | 0.8825  | 0.0395    | -44.3233 |
| 1493 | 0.5 | Extremo 1A | -0.004323 | -34.633 | 0.084     | 0.8825  | -0.0023   | -26.2125 |
| 1493 | 1   | Extremo 1A | -0.004323 | -31.454 | 0.084     | 0.8825  | -0.0441   | -9.6907  |
| 1494 | 0   | Extremo 1A | 1.285E-05 | -17.485 | -0.06     | 0.1467  | -0.0204   | -9.6071  |
| 1494 | 0.3 | Extremo 2A | 1.285E-05 | -15.983 | -0.06     | 0.1467  | -0.0022   | -4.587   |
| 1494 | 0.6 | Extremo 2A | 1.285E-05 | -14.481 | -0.06     | 0.1467  | 0.0159    | -0.0175  |
| 1494 | 0   | Extremo 2A | -0.000401 | -17.484 | 0.022     | 0.1465  | 0.0076    | -9.6069  |
| 1494 | 0.3 | Extremo 1A | -0.000401 | -15.982 | 0.022     | 0.1465  | 0.001     | -4.5869  |
| 1494 | 0.6 | Extremo 1A | -0.000401 | -14.481 | 0.022     | 0.1465  | -0.0055   | -0.0174  |
| 1495 | 0   | Extremo 1A | 0.0003299 | 14.679  | -0.05     | 0.3469  | -0.0133   | -0.0564  |
| 1495 | 0.3 | Extremo 2A | 0.0003299 | 16.181  | -0.05     | 0.3469  | 0.0018    | -4.6855  |
| 1495 | 0.6 | Extremo 2A | 0.0003299 | 17.683  | -0.05     | 0.3469  | 0.0168    | -9.765   |
| 1495 | 0   | Extremo 2A | -0.000433 | 14.679  | -0.00154  | 0.3463  | -0.00034  | -0.0563  |
| 1495 | 0.3 | Extremo 1A | -0.000433 | 16.181  | -0.00154  | 0.3463  | 0.0001216 | -4.6851  |
| 1495 | 0.6 | Extremo 1A | -0.000433 | 17.682  | -0.00154  | 0.3463  | 0.0005835 | -9.7646  |
| 1496 | 0   | Extremo 1A | 0.003365  | 32.1    | -0.195    | 0.5224  | -0.1086   | -10.1271 |
| 1496 | 0.5 | Extremo 2A | 0.003365  | 35.279  | -0.195    | 0.5224  | -0.0111   | -26.9719 |
| 1496 | 1   | Extremo 2A | 0.003365  | 38.457  | -0.195    | 0.5224  | 0.0864    | -45.4057 |
| 1496 | 0   | Extremo 2A | -0.004805 | 32.1    | -0.007468 | 0.5224  | -0.0026   | -10.1255 |
| 1496 | 0.5 | Extremo 1A | -0.004805 | 35.278  | -0.007468 | 0.5224  | 0.0012    | -26.97   |
| 1496 | 1   | Extremo 1A | -0.004805 | 38.456  | -0.007468 | 0.5224  | 0.0049    | -45.4035 |
| 1498 | 0   | Extremo 1A | 0.0004005 | -37.986 | -0.234    | 0.8809  | -0.1039   | -44.8581 |
| 1498 | 0.5 | Extremo 2A | 0.0004005 | -34.808 | -0.234    | 0.8809  | 0.0132    | -26.6599 |
| 1498 | 1   | Extremo 2A | 0.0004005 | -31.629 | -0.234    | 0.8809  | 0.1304    | -10.0506 |
| 1498 | 0   | Extremo 2A | -0.005679 | -37.985 | 0.09      | 0.8801  | 0.0421    | -44.8562 |
| 1498 | 0.5 | Extremo 1A | -0.005679 | -34.807 | 0.09      | 0.8801  | -0.0031   | -26.6581 |
| 1498 | 1   | Extremo 1A | -0.005679 | -31.629 | 0.09      | 0.8801  | -0.0483   | -10.049  |
| 1499 | 0   | Extremo 1A | 0.0000114 | -17.599 | -0.06     | 0.0527  | -0.0201   | -9.7136  |
| 1499 | 0.3 | Extremo 2A | 0.0000114 | -16.098 | -0.06     | 0.0527  | -0.0021   | -4.659   |
| 1499 | 0.6 | Extremo 2A | 0.0000114 | -14.596 | -0.06     | 0.0527  | 0.0159    | -0.0551  |
| 1499 | 0   | Extremo 2A | -0.000517 | -17.599 | 0.023     | 0.0531  | 0.0079    | -9.7131  |
| 1499 | 0.3 | Extremo 1A | -0.000517 | -16.097 | 0.023     | 0.0531  | 0.000979  | -4.6587  |
| 1499 | 0.6 | Extremo 1A | -0.000517 | -14.595 | 0.023     | 0.0531  | -0.006    | -0.0549  |
| 1500 | 0   | Extremo 1A | 0.000357  | 14.802  | -0.049    | 0.589   | -0.013    | -0.0617  |
| 1500 | 0.3 | Extremo 2A | 0.000357  | 16.304  | -0.049    | 0.589   | 0.0016    | -4.7275  |
| 1500 | 0.6 | Extremo 2A | 0.000357  | 17.806  | -0.049    | 0.589   | 0.0162    | -9.844   |
| 1500 | 0   | Extremo 2A | -0.000413 | 14.801  | -0.002382 | 0.5875  | -0.000767 | -0.0615  |
| 1500 | 0.3 | Extremo 1A | -0.000413 | 16.303  | -0.002382 | 0.5875  | -5.2E-05  | -4.727   |
| 1500 | 0.6 | Extremo 1A | -0.000413 | 17.805  | -0.002382 | 0.5875  | 0.0006625 | -9.8432  |
| 1501 | 0   | Extremo 1A | 0.003624  | 32.656  | -0.191    | 1.1447  | -0.1065   | -10.2936 |
| 1501 | 0.5 | Extremo 2A | 0.003624  | 35.834  | -0.191    | 1.1447  | -0.0108   | -27.416  |
| 1501 | 1   | Extremo 2A | 0.003624  | 39.012  | -0.191    | 1.1447  | 0.0849    | -46.1273 |
| 1501 | 0   | Extremo 2A | -0.004833 | 32.653  | -0.013    | 1.1422  | -0.0069   | -10.2913 |
| 1501 | 0.5 | Extremo 1A | -0.004833 | 35.831  | -0.013    | 1.1422  | -0.000299 | -27.4122 |
| 1501 | 1   | Extremo 1A | -0.004833 | 39.009  | -0.013    | 1.1422  | 0.0063    | -46.1222 |
| 1503 | 0   | Extremo 1A | 0.0001767 | -38.697 | -0.235    | 0.2782  | -0.1037   | -45.9915 |
| 1503 | 0.5 | Extremo 2A | 0.0001767 | -35.518 | -0.235    | 0.2782  | 0.014     | -27.4378 |
| 1503 | 1   | Extremo 2A | 0.0001767 | -32.34  | -0.235    | 0.2782  | 0.1316    | -10.4731 |
| 1503 | 0   | Extremo 2A | -0.005991 | -38.694 | 0.097     | 0.2798  | 0.0441    | -45.9865 |
| 1503 | 0.5 | Extremo 1A | -0.005991 | -35.516 | 0.097     | 0.2798  | -0.0047   | -27.4339 |
| 1503 | 1   | Extremo 1A | -0.005991 | -32.338 | 0.097     | 0.2798  | -0.0534   | -10.4703 |
| 1504 | 0   | Extremo 1A | -2.93E-05 | -17.807 | -0.059    | -0.2175 | -0.0196   | -9.8691  |
| 1504 | 0.3 | Extremo 2A | -2.93E-05 | -16.305 | -0.059    | -0.2175 | -0.0018   | -4.7523  |
| 1504 | 0.6 | Extremo 2A | -2.93E-05 | -14.803 | -0.059    | -0.2175 | 0.0159    | -0.086   |
| 1504 | 0   | Extremo 2A | -0.000525 | -17.806 | 0.024     | -0.2162 | 0.0082    | -9.8682  |
| 1504 | 0.3 | Extremo 1A | -0.000525 | -16.304 | 0.024     | -0.2162 | 0.000829  | -4.7517  |
| 1504 | 0.6 | Extremo 1A | -0.000525 | -14.802 | 0.024     | -0.2162 | -0.0065   | -0.0857  |
| 1505 | 0   | Extremo 1A | 5.036E-05 | 14.93   | -0.047    | 0.816   | -0.0128   | -0.0057  |
| 1505 | 0.3 | Extremo 2A | 5.036E-05 | 16.432  | -0.047    | 0.816   | 0.0014    | -4.7101  |
| 1505 | 0.6 | Extremo 2A | 5.036E-05 | 17.934  | -0.047    | 0.816   | 0.0157    | -9.865   |
| 1505 | 0   | Extremo 2A | -0.000162 | 14.929  | -0.002109 | 0.8136  | -0.0011   | -0.0056  |
| 1505 | 0.3 | Extremo 1A | -0.000162 | 16.431  | -0.002109 | 0.8136  | -0.000433 | -4.7096  |
| 1505 | 0.6 | Extremo 1A | -0.000162 | 17.933  | -0.002109 | 0.8136  | 0.0001994 | -9.8641  |
| 1506 | 0   | Extremo 1A | 0.0007023 | 34.064  | -0.192    | 2.0898  | -0.1062   | -10.0062 |
| 1506 | 0.5 | Extremo 2A | 0.0007023 | 37.242  | -0.192    | 2.0898  | -0.0105   | -27.8327 |
| 1506 | 1   | Extremo 2A | 0.0007023 | 40.42   | -0.192    | 2.0898  | 0.0853    | -47.2483 |
| 1506 | 0   | Extremo 2A | -0.002447 | 34.056  | -0.016    | 2.0835  | -0.011    | -10.0047 |
| 1506 | 0.5 | Extremo 1A | -0.002447 | 37.234  | -0.016    | 2.0835  | -0.0028   | -27.8272 |
| 1506 | 1   | Extremo 1A | -0.002447 | 40.412  | -0.016    | 2.0835  | 0.0053    | -47.2388 |
| 1508 | 0   | Extremo 1A | 0.001079  | -40.65  | -0.238    | -1.0826 | -0.1034   | -47.8833 |
| 1508 | 0.5 | Extremo 2A | 0.001079  | -37.472 | -0.238    | -1.0826 | 0.0155    | -28.3529 |

|      |     |            |           |         |           |           |           |          |
|------|-----|------------|-----------|---------|-----------|-----------|-----------|----------|
| 1508 | 1   | Extremo 2A | 0.001079  | -34.294 | -0.238    | -1.0826   | 0.1344    | -10.4116 |
| 1508 | 0   | Extremo 2A | -0.003531 | -40.642 | 0.102     | -1.0765   | 0.0435    | -47.873  |
| 1508 | 0.5 | Extremo 1A | -0.003531 | -37.464 | 0.102     | -1.0765   | -0.0073   | -28.3466 |
| 1508 | 1   | Extremo 1A | -0.003531 | -34.286 | 0.102     | -1.0765   | -0.0582   | -10.4092 |
| 1509 | 0   | Extremo 1A | 6.514E-05 | -18.067 | -0.058    | -0.5861   | -0.0188   | -9.984   |
| 1509 | 0.3 | Extremo 2A | 6.514E-05 | -16.565 | -0.058    | -0.5861   | -0.0014   | -4.7892  |
| 1509 | 0.6 | Extremo 2A | 6.514E-05 | -15.063 | -0.058    | -0.5861   | 0.016     | -0.045   |
| 1509 | 0   | Extremo 2A | -0.000262 | -18.065 | 0.025     | -0.5836   | 0.0079    | -9.9828  |
| 1509 | 0.3 | Extremo 1A | -0.000262 | -16.563 | 0.025     | -0.5836   | 0.0004761 | -4.7886  |
| 1509 | 0.6 | Extremo 1A | -0.000262 | -15.061 | 0.025     | -0.5836   | -0.0069   | -0.0449  |
| 1510 | 0   | Extremo 1A | -0.001542 | 14.894  | -0.051    | 0.6967    | -0.0136   | 0.1219   |
| 1510 | 0.3 | Extremo 2A | -0.001542 | 16.396  | -0.051    | 0.6967    | 0.0016    | -4.5717  |
| 1510 | 0.6 | Extremo 2A | -0.001542 | 17.898  | -0.051    | 0.6967    | 0.0169    | -9.7159  |
| 1510 | 0   | Extremo 2A | 0.0002418 | 14.893  | -5.34E-05 | 0.6946    | -0.0011   | 0.1215   |
| 1510 | 0.3 | Extremo 1A | 0.0002418 | 16.395  | -5.34E-05 | 0.6946    | -0.0011   | -4.5717  |
| 1510 | 0.6 | Extremo 1A | 0.0002418 | 17.897  | -5.34E-05 | 0.6946    | -0.001    | -9.7154  |
| 1511 | 0   | Extremo 1A | -0.015    | 35.76   | -0.205    | 2.354     | -0.1128   | -8.8948  |
| 1511 | 0.5 | Extremo 2A | -0.015    | 38.938  | -0.205    | 2.354     | -0.0101   | -27.5694 |
| 1511 | 1   | Extremo 2A | -0.015    | 42.116  | -0.205    | 2.354     | 0.0925    | -47.8331 |
| 1511 | 0   | Extremo 2A | 0.002019  | 35.746  | -0.014    | 2.346     | -0.0136   | -8.897   |
| 1511 | 0.5 | Extremo 1A | 0.002019  | 38.924  | -0.014    | 2.346     | -0.0068   | -27.5646 |
| 1511 | 1   | Extremo 1A | 0.002019  | 42.102  | -0.014    | 2.346     | 3.302E-06 | -47.8213 |
| 1513 | 0   | Extremo 1A | 0.013     | -43.43  | -0.249    | -2.0853   | -0.1063   | -49.4698 |
| 1513 | 0.5 | Extremo 2A | 0.013     | -40.252 | -0.249    | -2.0853   | 0.0182    | -28.5495 |
| 1513 | 1   | Extremo 2A | 0.013     | -37.073 | -0.249    | -2.0853   | 0.1426    | -9.2183  |
| 1513 | 0   | Extremo 2A | 0.002963  | -43.414 | 0.098     | -2.076    | 0.0376    | -49.455  |
| 1513 | 0.5 | Extremo 1A | 0.002963  | -40.235 | 0.098     | -2.076    | -0.0115   | -28.5428 |
| 1513 | 1   | Extremo 1A | 0.002963  | -37.057 | 0.098     | -2.076    | -0.0607   | -9.2196  |
| 1514 | 0   | Extremo 1A | 0.00129   | -18.153 | -0.06     | -0.6403   | -0.019    | -9.8886  |
| 1514 | 0.3 | Extremo 2A | 0.00129   | -16.651 | -0.06     | -0.6403   | -0.0011   | -4.6681  |
| 1514 | 0.6 | Extremo 2A | 0.00129   | -15.149 | -0.06     | -0.6403   | 0.0168    | 0.1019   |
| 1514 | 0   | Extremo 2A | 0.0003461 | -18.151 | 0.022     | -0.6377   | 0.0066    | -9.8878  |
| 1514 | 0.3 | Extremo 1A | 0.0003461 | -16.649 | 0.022     | -0.6377   | -0.000162 | -4.6678  |
| 1514 | 0.6 | Extremo 1A | 0.0003461 | -15.147 | 0.022     | -0.6377   | -0.0069   | 0.1016   |
| 1515 | 0   | Extremo 1A | -0.004683 | 14.718  | -0.065    | -0.000756 | -0.0165   | 0.1678   |
| 1515 | 0.3 | Extremo 2A | -0.004683 | 16.22   | -0.065    | -0.000756 | 0.003     | -4.473   |
| 1515 | 0.6 | Extremo 2A | -0.004683 | 17.722  | -0.065    | -0.000756 | 0.0226    | -9.5644  |
| 1515 | 0   | Extremo 2A | -0.000293 | 14.718  | 0.0009746 | -0.000629 | -0.0011   | 0.1672   |
| 1515 | 0.3 | Extremo 1A | -0.000293 | 16.219  | 0.0009746 | -0.000629 | -0.0014   | -4.4733  |
| 1515 | 0.6 | Extremo 1A | -0.000293 | 17.721  | 0.0009746 | -0.000629 | -0.0017   | -9.5644  |
| 1516 | 0   | Extremo 1A | -0.049    | 34.918  | -0.246    | -0.0085   | -0.132    | -8.3104  |
| 1516 | 0.5 | Extremo 2A | -0.049    | 38.096  | -0.246    | -0.0085   | -0.0089   | -26.5637 |
| 1516 | 1   | Extremo 2A | -0.049    | 41.274  | -0.246    | -0.0085   | 0.1141    | -46.406  |
| 1516 | 0   | Extremo 2A | -0.003074 | 34.906  | -0.009196 | -0.0093   | -0.0153   | -8.3145  |
| 1516 | 0.5 | Extremo 1A | -0.003074 | 38.084  | -0.009196 | -0.0093   | -0.0107   | -26.5622 |
| 1516 | 1   | Extremo 1A | -0.003074 | 41.263  | -0.009196 | -0.0093   | -0.0061   | -46.399  |
| 1518 | 0   | Extremo 1A | 0.051     | -42.973 | -0.285    | 0.0098    | -0.1225   | -48.2912 |
| 1518 | 0.5 | Extremo 2A | 0.051     | -39.795 | -0.285    | 0.0098    | 0.0201    | -27.5991 |
| 1518 | 1   | Extremo 2A | 0.051     | -36.617 | -0.285    | 0.0098    | 0.1627    | -8.4961  |
| 1518 | 0   | Extremo 2A | 0.003053  | -42.959 | 0.089     | 0.0127    | 0.0287    | -48.28   |
| 1518 | 0.5 | Extremo 1A | 0.003053  | -39.78  | 0.089     | 0.0127    | -0.0158   | -27      |



|      |     |            |           |         |           |         |           |          |
|------|-----|------------|-----------|---------|-----------|---------|-----------|----------|
| 1523 | 1   | Extremo 2A | 0.014     | -37.073 | -0.326    | 2.105   | 0.1821    | -9.2182  |
| 1523 | 0   | Extremo 2A | -0.001412 | -43.413 | 0.094     | 2.1015  | 0.0354    | -49.4549 |
| 1523 | 0.5 | Extremo 1A | -0.001412 | -40.235 | 0.094     | 2.1015  | -0.0115   | -28.5427 |
| 1523 | 1   | Extremo 1A | -0.001412 | -37.057 | 0.094     | 2.1015  | -0.0583   | -9.2195  |
| 1524 | 0   | Extremo 1A | 0.001473  | -18.153 | -0.088    | 0.6437  | -0.0298   | -9.8886  |
| 1524 | 0.3 | Extremo 2A | 0.001473  | -16.651 | -0.088    | 0.6437  | -0.0036   | -4.6681  |
| 1524 | 0.6 | Extremo 2A | 0.001473  | -15.149 | -0.088    | 0.6437  | 0.0227    | 0.1019   |
| 1524 | 0   | Extremo 2A | -0.000189 | -18.151 | 0.021     | 0.6423  | 0.0059    | -9.8877  |
| 1524 | 0.3 | Extremo 1A | -0.000189 | -16.649 | 0.021     | 0.6423  | -0.000311 | -4.6678  |
| 1524 | 0.6 | Extremo 1A | -0.000189 | -15.147 | 0.021     | 0.6423  | 0.0065    | 0.1016   |
| 1525 | 0   | Extremo 1A | -6.97E-05 | 14.93   | -0.08     | -0.8176 | -0.0202   | -0.0057  |
| 1525 | 0.3 | Extremo 2A | -6.97E-05 | 16.432  | -0.08     | -0.8176 | 0.0039    | -4.71    |
| 1525 | 0.6 | Extremo 2A | -6.97E-05 | 17.934  | -0.08     | -0.8176 | 0.0279    | -9.865   |
| 1525 | 0   | Extremo 2A | 0.0001482 | 14.929  | -0.004208 | -0.815  | -0.0015   | -0.0056  |
| 1525 | 0.3 | Extremo 1A | 0.0001482 | 16.431  | -0.004208 | -0.815  | -0.000279 | -4.7095  |
| 1525 | 0.6 | Extremo 1A | 0.0001482 | 17.933  | -0.004208 | -0.815  | 0.0009835 | -9.864   |
| 1526 | 0   | Extremo 1A | -0.001086 | 34.064  | -0.293    | -2.1069 | -0.1597   | -10.0061 |
| 1526 | 0.5 | Extremo 2A | -0.001086 | 37.242  | -0.293    | -2.1069 | -0.013    | -27.8325 |
| 1526 | 1   | Extremo 2A | -0.001086 | 40.42   | -0.293    | -2.1069 | 0.1338    | -47.248  |
| 1526 | 0   | Extremo 2A | 0.002292  | 34.056  | -0.023    | -2.1023 | -0.0145   | -10.0045 |
| 1526 | 0.5 | Extremo 1A | 0.002292  | 37.234  | -0.023    | -2.1023 | -0.003    | -27.827  |
| 1526 | 1   | Extremo 1A | 0.002292  | 40.412  | -0.023    | -2.1023 | 0.0085    | -47.2385 |
| 1528 | 0   | Extremo 1A | -0.001458 | -40.65  | -0.339    | 1.1024  | -0.151    | -47.8831 |
| 1528 | 0.5 | Extremo 2A | -0.001458 | -37.472 | -0.339    | 1.1024  | 0.0186    | -28.3528 |
| 1528 | 1   | Extremo 2A | -0.001458 | -34.293 | -0.339    | 1.1024  | 0.1882    | -10.4115 |
| 1528 | 0   | Extremo 2A | 0.003365  | -40.642 | 0.096     | 1.1021  | 0.0408    | -47.8727 |
| 1528 | 0.5 | Extremo 1A | 0.003365  | -37.464 | 0.096     | 1.1021  | -0.0072   | -28.3464 |
| 1528 | 1   | Extremo 1A | 0.003365  | -34.286 | 0.096     | 1.1021  | -0.0551   | -10.4091 |
| 1529 | 0   | Extremo 1A | -0.000124 | -18.067 | -0.09     | 0.5896  | -0.0309   | -9.984   |
| 1529 | 0.3 | Extremo 2A | -0.000124 | -16.565 | -0.09     | 0.5896  | -0.0038   | -4.7892  |
| 1529 | 0.6 | Extremo 2A | -0.000124 | -15.063 | -0.09     | 0.5896  | 0.0234    | -0.045   |
| 1529 | 0   | Extremo 2A | 0.0002445 | -18.065 | 0.023     | 0.5883  | 0.0072    | -9.9828  |
| 1529 | 0.3 | Extremo 1A | 0.0002445 | -16.563 | 0.023     | 0.5883  | 0.0003362 | -4.7886  |
| 1529 | 0.6 | Extremo 1A | 0.0002445 | -15.061 | 0.023     | 0.5883  | 0.0065    | -0.0449  |
| 1530 | 0   | Extremo 1A | 4.504E-05 | 14.802  | -0.079    | -0.5907 | -0.0202   | -0.0616  |
| 1530 | 0.3 | Extremo 2A | 4.504E-05 | 16.304  | -0.079    | -0.5907 | 0.0034    | -4.7275  |
| 1530 | 0.6 | Extremo 2A | 4.504E-05 | 17.806  | -0.079    | -0.5907 | 0.0271    | -9.8439  |
| 1530 | 0   | Extremo 2A | 0.0004235 | 14.801  | -0.004391 | -0.589  | -0.0012   | -0.0614  |
| 1530 | 0.3 | Extremo 1A | 0.0004235 | 16.303  | -0.004391 | -0.589  | 6.761E-05 | -4.727   |
| 1530 | 0.6 | Extremo 1A | 0.0004235 | 17.805  | -0.004391 | -0.589  | 0.0014    | -9.8431  |
| 1531 | 0   | Extremo 1A | 1.028E-05 | 32.655  | -0.296    | -1.1619 | -0.1623   | -10.2934 |
| 1531 | 0.5 | Extremo 2A | 1.028E-05 | 35.834  | -0.296    | -1.1619 | -0.0144   | -27.4156 |
| 1531 | 1   | Extremo 2A | 1.028E-05 | 39.012  | -0.296    | -1.1619 | 0.1336    | -46.1269 |
| 1531 | 0   | Extremo 2A | 0.004905  | 32.653  | -0.02     | -1.1613 | -0.0107   | -10.291  |
| 1531 | 0.5 | Extremo 1A | 0.004905  | 35.831  | -0.02     | -1.1613 | -0.000522 | -27.4118 |
| 1531 | 1   | Extremo 1A | 0.004905  | 39.009  | -0.02     | -1.1613 | 0.0096    | -46.1217 |
| 1533 | 0   | Extremo 1A | -0.004083 | -38.696 | -0.339    | -0.2582 | -0.1511   | -45.9911 |
| 1533 | 0.5 | Extremo 2A | -0.004083 | -35.518 | -0.339    | -0.2582 | 0.0182    | -27.4375 |
| 1533 | 1   | Extremo 2A | -0.004083 | -32.34  | -0.339    | -0.2582 | 0.1875    | -10.4729 |
| 1533 | 0   | Extremo 2A | 0.005588  | -38.694 | 0.092     | -0.254  | 0.0415    | -45.9861 |
| 1533 | 0.5 | Extremo 1A | 0.005588  | -35.516 | 0.092     | -0.254  | -0.0044   | -27.4335 |
| 1533 | 1   | Extremo 1A | 0.005588  | -32.338 | 0.092     | -0.254  | -0.0503   | -10.4701 |
| 1534 | 0   | Extremo 1A | -0.000402 | -17.807 | -0.089    | 0.221   | -0.0303   | -9.869   |
| 1534 | 0.3 | Extremo 2A | -0.000402 | -16.305 | -0.089    | 0.221   | -0.0036   | -4.7522  |
| 1534 | 0.6 | Extremo 2A | -0.000402 | -14.803 | -0.089    | 0.221   | 0.0232    | -0.086   |
| 1534 | 0   | Extremo 2A | 0.0004824 | -17.806 | 0.023     | 0.221   | 0.0076    | -9.8681  |
| 1534 | 0.3 | Extremo 1A | 0.0004824 | -16.304 | 0.023     | 0.221   | 0.0007328 | -4.7516  |
| 1534 | 0.6 | Extremo 1A | 0.0004824 | -14.802 | 0.023     | 0.221   | -0.0061   | -0.0857  |
| 1535 | 0   | Extremo 1A | 2.134E-06 | 14.679  | -0.078    | -0.3487 | -0.0202   | -0.0564  |
| 1535 | 0.3 | Extremo 2A | 2.134E-06 | 16.181  | -0.078    | -0.3487 | 0.0032    | -4.6854  |
| 1535 | 0.6 | Extremo 2A | 2.134E-06 | 17.683  | -0.078    | -0.3487 | 0.0266    | -9.7649  |
| 1535 | 0   | Extremo 2A | 0.000436  | 14.678  | -0.003461 | -0.3479 | -0.000819 | -0.0562  |
| 1535 | 0.3 | Extremo 1A | 0.000436  | 16.18   | -0.003461 | -0.3479 | 0.0002195 | -4.685   |
| 1535 | 0.6 | Extremo 1A | 0.000436  | 17.682  | -0.003461 | -0.3479 | 0.0013    | -9.7644  |
| 1536 | 0   | Extremo 1A | -0.000254 | 32.1    | -0.297    | -0.54   | -0.1634   | -10.1268 |
| 1536 | 0.5 | Extremo 2A | -0.000254 | 35.278  | -0.297    | -0.54   | -0.0151   | -26.9714 |
| 1536 | 1   | Extremo 2A | -0.000254 | 38.456  | -0.297    | -0.54   | 0.1332    | -45.4051 |
| 1536 | 0   | Extremo 2A | 0.004818  | 32.099  | -0.015    | -0.5419 | -0.0064   | -10.1251 |
| 1536 | 0.5 | Extremo 1A | 0.004818  | 35.278  | -0.015    | -0.5419 | 0.0009038 | -26.9693 |
| 1536 | 1   | Extremo 1A | 0.004818  | 38.456  | -0.015    | -0.5419 | 0.0082    | -45.4026 |
| 1538 | 0   | Extremo 1A | -0.003736 | -37.985 | -0.334    | -0.8606 | -0.1493   | -44.8575 |
| 1538 | 0.5 | Extremo 2A | -0.003736 | -34.807 | -0.334    | -0.8606 | 0.0179    | -26.6593 |

|      |     |            |           |         |           |         |           |          |
|------|-----|------------|-----------|---------|-----------|---------|-----------|----------|
| 1538 | 1   | Extremo 2A | -0.003736 | -31.629 | -0.334    | -0.8606 | 0.1851    | -10.0503 |
| 1538 | 0   | Extremo 2A | 0.005281  | -37.985 | 0.085     | -0.8539 | 0.0397    | -44.8555 |
| 1538 | 0.5 | Extremo 1A | 0.005281  | -34.807 | 0.085     | -0.8539 | -0.0028   | -26.6575 |
| 1538 | 1   | Extremo 1A | 0.005281  | -31.629 | 0.085     | -0.8539 | -0.0454   | -10.0486 |
| 1539 | 0   | Extremo 1A | -0.000366 | -17.599 | -0.087    | -0.0491 | -0.0296   | -9.7134  |
| 1539 | 0.3 | Extremo 2A | -0.000366 | -16.097 | -0.087    | -0.0491 | -0.0034   | -4.6589  |
| 1539 | 0.6 | Extremo 2A | -0.000366 | -14.596 | -0.087    | -0.0491 | 0.0228    | -0.055   |
| 1539 | 0   | Extremo 2A | 0.0004768 | -17.599 | 0.022     | -0.0482 | 0.0074    | -9.713   |
| 1539 | 0.3 | Extremo 1A | 0.0004768 | -16.097 | 0.022     | -0.0482 | 0.0009129 | -4.6586  |
| 1539 | 0.6 | Extremo 1A | 0.0004768 | -14.595 | 0.022     | -0.0482 | -0.0056   | -0.0548  |
| 1540 | 0   | Extremo 1A | -9.45E-06 | 14.61   | -0.078    | -0.1902 | -0.0202   | -0.0376  |
| 1540 | 0.3 | Extremo 2A | -9.45E-06 | 16.112  | -0.078    | -0.1902 | 0.003     | -4.646   |
| 1540 | 0.6 | Extremo 2A | -9.45E-06 | 17.614  | -0.078    | -0.1902 | 0.0263    | -9.7049  |
| 1540 | 0   | Extremo 2A | 0.0003374 | 14.61   | -0.002352 | -0.19   | -0.000431 | -0.0375  |
| 1540 | 0.3 | Extremo 1A | 0.0003374 | 16.112  | -0.002352 | -0.19   | 0.0002746 | -4.6458  |
| 1540 | 0.6 | Extremo 1A | 0.0003374 | 17.614  | -0.002352 | -0.19   | 0.0009803 | -9.7046  |
| 1541 | 0   | Extremo 1A | -0.000237 | 31.97   | -0.297    | -0.2553 | -0.164    | -9.9322  |
| 1541 | 0.5 | Extremo 2A | -0.000237 | 35.148  | -0.297    | -0.2553 | -0.0155   | -26.7115 |
| 1541 | 1   | Extremo 2A | -0.000237 | 38.326  | -0.297    | -0.2553 | 0.133     | -45.08   |
| 1541 | 0   | Extremo 2A | 0.003659  | 31.969  | -0.008866 | -0.2585 | -0.0028   | -9.9312  |
| 1541 | 0.5 | Extremo 1A | 0.003659  | 35.148  | -0.008866 | -0.2585 | 0.0017    | -26.7105 |
| 1541 | 1   | Extremo 1A | 0.003659  | 38.326  | -0.008866 | -0.2585 | 0.0061    | -45.0788 |
| 1543 | 0   | Extremo 1A | -0.003023 | -37.81  | -0.33     | -0.8634 | -0.1473   | -44.3228 |
| 1543 | 0.5 | Extremo 2A | -0.003023 | -34.632 | -0.33     | -0.8634 | 0.0177    | -26.2123 |
| 1543 | 1   | Extremo 2A | -0.003023 | -31.454 | -0.33     | -0.8634 | 0.1827    | -9.6909  |
| 1543 | 0   | Extremo 2A | 0.003921  | -37.81  | 0.079     | -0.8557 | 0.0374    | -44.3222 |
| 1543 | 0.5 | Extremo 1A | 0.003921  | -34.632 | 0.079     | -0.8557 | -0.002    | -26.2116 |
| 1543 | 1   | Extremo 1A | 0.003921  | -31.454 | 0.079     | -0.8557 | -0.0415   | -9.6901  |
| 1544 | 0   | Extremo 1A | -0.000293 | -17.484 | -0.086    | -0.1428 | -0.0291   | -9.6069  |
| 1544 | 0.3 | Extremo 2A | -0.000293 | -15.982 | -0.086    | -0.1428 | -0.0033   | -4.5869  |
| 1544 | 0.6 | Extremo 2A | -0.000293 | -14.481 | -0.086    | -0.1428 | 0.0225    | -0.0175  |
| 1544 | 0   | Extremo 2A | 0.0003608 | -17.484 | 0.021     | -0.1414 | 0.0072    | -9.6067  |
| 1544 | 0.3 | Extremo 1A | 0.0003608 | -15.982 | 0.021     | -0.1414 | 0.0009795 | -4.5868  |
| 1544 | 0.6 | Extremo 1A | 0.0003608 | -14.48  | 0.021     | -0.1414 | -0.0052   | -0.0174  |
| 1545 | 0   | Extremo 1A | 8.716E-06 | 14.581  | -0.077    | -0.0957 | -0.0202   | -0.0249  |
| 1545 | 0.3 | Extremo 2A | 8.716E-06 | 16.083  | -0.077    | -0.0957 | 0.003     | -4.6245  |
| 1545 | 0.6 | Extremo 2A | 8.716E-06 | 17.585  | -0.077    | -0.0957 | 0.0262    | -9.6747  |
| 1545 | 0   | Extremo 2A | 0.0001997 | 14.581  | -0.0015   | -0.0958 | -0.000162 | -0.0248  |
| 1545 | 0.3 | Extremo 1A | 0.0001997 | 16.083  | -0.0015   | -0.0958 | 0.0002883 | -4.6244  |
| 1545 | 0.6 | Extremo 1A | 0.0001997 | 17.585  | -0.0015   | -0.0958 | 0.0007382 | -9.6745  |
| 1546 | 0   | Extremo 1A | 2.135E-05 | 31.963  | -0.297    | -0.1302 | -0.1643   | -9.8237  |
| 1546 | 0.5 | Extremo 2A | 2.135E-05 | 35.141  | -0.297    | -0.1302 | -0.0157   | -26.5996 |
| 1546 | 1   | Extremo 2A | 2.135E-05 | 38.319  | -0.297    | -0.1302 | 0.1329    | -44.9647 |
| 1546 | 0   | Extremo 2A | 0.002148  | 31.963  | -0.004767 | -0.1339 | -0.000375 | -9.8231  |
| 1546 | 0.5 | Extremo 1A | 0.002148  | 35.141  | -0.004767 | -0.1339 | 0.002     | -26.599  |
| 1546 | 1   | Extremo 1A | 0.002148  | 38.319  | -0.004767 | -0.1339 | 0.0044    | -44.964  |
| 1548 | 0   | Extremo 1A | -0.002352 | -37.779 | -0.326    | -0.5778 | -0.1455   | -44.0983 |
| 1548 | 0.5 | Extremo 2A | -0.002352 | -34.601 | -0.326    | -0.5778 | 0.0176    | -26.0031 |
| 1548 | 1   | Extremo 2A | -0.002352 | -31.423 | -0.326    | -0.5778 | 0.1807    | -9.497   |
| 1548 | 0   | Extremo 2A | 0.002213  | -37.779 | 0.075     | -0.5699 | 0.0357    | -44.0981 |
| 1548 | 0.5 | Extremo 1A | 0.002213  | -34.601 |           |         |           |          |



|      |     |            |           |         |           |         |           |          |
|------|-----|------------|-----------|---------|-----------|---------|-----------|----------|
| 1553 | 1   | Extremo 2A | -0.001779 | -31.419 | -0.323    | -0.1831 | 0.1791    | -9.4211  |
| 1553 | 0   | Extremo 2A | 0.0004035 | -37.775 | 0.073     | -0.1752 | 0.0349    | -44.0184 |
| 1553 | 0.5 | Extremo 1A | 0.0004035 | -34.597 | 0.073     | -0.1752 | -0.0015   | -25.9252 |
| 1553 | 1   | Extremo 1A | 0.0004035 | -31.419 | 0.073     | -0.1752 | -0.0379   | -9.4211  |
| 1554 | 0   | Extremo 1A | -0.000173 | -17.412 | -0.084    | -0.0413 | -0.0284   | -9.531   |
| 1554 | 0.3 | Extremo 2A | -0.000173 | -15.91  | -0.084    | -0.0413 | -0.0032   | -4.5327  |
| 1554 | 0.6 | Extremo 2A | -0.000173 | -14.408 | -0.084    | -0.0413 | 0.022     | 0.0149   |
| 1554 | 0   | Extremo 2A | 3.634E-05 | -17.412 | 0.019     | -0.0397 | 0.0068    | -9.531   |
| 1554 | 0.3 | Extremo 1A | 3.634E-05 | -15.91  | 0.019     | -0.0397 | 0.001     | -4.5328  |
| 1554 | 0.6 | Extremo 1A | 3.634E-05 | -14.408 | 0.019     | -0.0397 | -0.0048   | 0.0149   |
| 1555 | 0   | Extremo 1A | 8.576E-05 | 14.572  | -0.077    | 0.0265  | -0.0201   | -0.0199  |
| 1555 | 0.3 | Extremo 2A | 8.576E-05 | 16.074  | -0.077    | 0.0265  | 0.0029    | -4.6169  |
| 1555 | 0.6 | Extremo 2A | 8.576E-05 | 17.576  | -0.077    | 0.0265  | 0.026     | -9.6644  |
| 1555 | 0   | Extremo 2A | -0.000105 | 14.572  | -0.001199 | 0.0262  | -6.42E-05 | -0.0199  |
| 1555 | 0.3 | Extremo 1A | -0.000105 | 16.074  | -0.001199 | 0.0262  | 0.0002957 | -4.6168  |
| 1555 | 0.6 | Extremo 1A | -0.000105 | 17.576  | -0.001199 | 0.0262  | 0.0006555 | -9.6643  |
| 1556 | 0   | Extremo 1A | 0.0008688 | 31.972  | -0.296    | 0.0102  | -0.1638   | -9.7853  |
| 1556 | 0.5 | Extremo 2A | 0.0008688 | 35.15   | -0.296    | 0.0102  | -0.0159   | -26.5659 |
| 1556 | 1   | Extremo 2A | 0.0008688 | 38.328  | -0.296    | 0.0102  | 0.132     | -44.9356 |
| 1556 | 0   | Extremo 2A | -0.001111 | 31.972  | -0.003251 | 0.0056  | 0.0005049 | -9.7852  |
| 1556 | 0.5 | Extremo 1A | -0.001111 | 35.15   | -0.003251 | 0.0056  | 0.0021    | -26.5655 |
| 1556 | 1   | Extremo 1A | -0.001111 | 38.328  | -0.003251 | 0.0056  | 0.0038    | -44.935  |
| 1558 | 0   | Extremo 1A | -0.001318 | -37.775 | -0.321    | 0.2384  | -0.1427   | -44.0183 |
| 1558 | 0.5 | Extremo 2A | -0.001318 | -34.596 | -0.321    | 0.2384  | 0.0176    | -25.9255 |
| 1558 | 1   | Extremo 2A | -0.001318 | -31.418 | -0.321    | 0.2384  | 0.178     | -9.4218  |
| 1558 | 0   | Extremo 2A | -0.001445 | -37.774 | 0.073     | 0.2463  | 0.0352    | -44.0186 |
| 1558 | 0.5 | Extremo 1A | -0.001445 | -34.596 | 0.073     | 0.2463  | -0.0015   | -25.9259 |
| 1558 | 1   | Extremo 1A | -0.001445 | -31.418 | 0.073     | 0.2463  | -0.0382   | -9.4223  |
| 1559 | 0   | Extremo 1A | -0.000131 | -17.412 | -0.083    | 0.052   | -0.0282   | -9.5312  |
| 1559 | 0.3 | Extremo 2A | -0.000131 | -15.91  | -0.083    | 0.052   | -0.0031   | -4.5329  |
| 1559 | 0.6 | Extremo 2A | -0.000131 | -14.408 | -0.083    | 0.052   | 0.0219    | 0.0148   |
| 1559 | 0   | Extremo 2A | -0.000137 | -17.412 | 0.02      | 0.0535  | 0.0069    | -9.5313  |
| 1559 | 0.3 | Extremo 1A | -0.000137 | -15.91  | 0.02      | 0.0535  | 0.001     | -4.533   |
| 1559 | 0.6 | Extremo 1A | -0.000137 | -14.408 | 0.02      | 0.0535  | -0.0048   | 0.0147   |
| 1560 | 0   | Extremo 1A | 0.0001358 | 14.583  | -0.076    | 0.0932  | -0.02     | -0.0259  |
| 1560 | 0.3 | Extremo 2A | 0.0001358 | 16.085  | -0.076    | 0.0932  | 0.0029    | -4.626   |
| 1560 | 0.6 | Extremo 2A | 0.0001358 | 17.587  | -0.076    | 0.0932  | 0.0258    | -9.6768  |
| 1560 | 0   | Extremo 2A | -0.000258 | 14.583  | -0.001827 | 0.0929  | -0.000246 | -0.0259  |
| 1560 | 0.3 | Extremo 1A | -0.000258 | 16.085  | -0.001827 | 0.0929  | 0.0003027 | -4.6261  |
| 1560 | 0.6 | Extremo 1A | -0.000258 | 17.587  | -0.001827 | 0.0929  | 0.0008509 | -9.6769  |
| 1561 | 0   | Extremo 1A | 0.001393  | 31.963  | -0.294    | 0.0874  | -0.163    | -9.8312  |
| 1561 | 0.5 | Extremo 2A | 0.001393  | 35.141  | -0.294    | 0.0874  | -0.0159   | -26.6071 |
| 1561 | 1   | Extremo 2A | 0.001393  | 38.319  | -0.294    | 0.0874  | 0.1312    | -44.972  |
| 1561 | 0   | Extremo 2A | -0.002754 | 31.962  | -0.006063 | 0.0824  | -0.0011   | -9.8317  |
| 1561 | 0.5 | Extremo 1A | -0.002754 | 35.14   | -0.006063 | 0.0824  | 0.002     | -26.6072 |
| 1561 | 1   | Extremo 1A | -0.002754 | 38.318  | -0.006063 | 0.0824  | 0.005     | -44.9718 |
| 1563 | 0   | Extremo 1A | -0.000984 | -37.777 | -0.319    | 0.6334  | -0.1418   | -44.0995 |
| 1563 | 0.5 | Extremo 2A | -0.000984 | -34.599 | -0.319    | 0.6334  | 0.0177    | -26.0057 |
| 1563 | 1   | Extremo 2A | -0.000984 | -31.421 | -0.319    | 0.6334  | 0.1773    | -9.5009  |
| 1563 | 0   | Extremo 2A | -0.003321 | -37.777 | 0.077     | 0.6408  | 0.0368    | -44.1008 |
| 1563 | 0.5 | Extremo 1A | -0.003321 | -34.598 | 0.077     | 0.6408  | -0.0016   | -26.007  |
| 1563 | 1   | Extremo 1A | -0.003321 | -31.42  | 0.077     | 0.6408  | -0.0401   | -9.5024  |
| 1564 | 0   | Extremo 1A | -0.000102 | -17.432 | -0.083    | 0.1294  | -0.0279   | -9.5533  |
| 1564 | 0.3 | Extremo 2A | -0.000102 | -15.93  | -0.083    | 0.1294  | -0.0031   | -4.5489  |
| 1564 | 0.6 | Extremo 2A | -0.000102 | -14.428 | -0.083    | 0.1294  | 0.0218    | 0.0049   |
| 1564 | 0   | Extremo 2A | -0.000313 | -17.432 | 0.02      | 0.1305  | 0.0071    | -9.5537  |
| 1564 | 0.3 | Extremo 1A | -0.000313 | -15.931 | 0.02      | 0.1305  | 0.001     | -4.5492  |
| 1564 | 0.6 | Extremo 1A | -0.000313 | -14.429 | 0.02      | 0.1305  | -0.0051   | 0.0047   |
| 1565 | 0   | Extremo 1A | 0.0001919 | 14.615  | -0.076    | 0.1929  | -0.0199   | -0.0399  |
| 1565 | 0.3 | Extremo 2A | 0.0001919 | 16.117  | -0.076    | 0.1929  | 0.0028    | -4.6497  |
| 1565 | 0.6 | Extremo 2A | 0.0001919 | 17.619  | -0.076    | 0.1929  | 0.0255    | -9.7102  |
| 1565 | 0   | Extremo 2A | -0.0004   | 14.616  | -0.002905 | 0.193   | -0.000575 | -0.0401  |
| 1565 | 0.3 | Extremo 1A | -0.0004   | 16.118  | -0.002905 | 0.193   | 0.0002962 | -4.6501  |
| 1565 | 0.6 | Extremo 1A | -0.0004   | 17.619  | -0.002905 | 0.193   | 0.0012    | -9.7107  |
| 1566 | 0   | Extremo 1A | 0.001962  | 31.972  | -0.292    | 0.2214  | -0.1618   | -9.9506  |
| 1566 | 0.5 | Extremo 2A | 0.001962  | 35.15   | -0.292    | 0.2214  | -0.0159   | -26.7312 |
| 1566 | 1   | Extremo 2A | 0.001962  | 38.328  | -0.292    | 0.2214  | 0.13      | -45.1009 |
| 1566 | 0   | Extremo 2A | -0.004321 | 31.972  | -0.011    | 0.2166  | -0.004    | -9.9526  |
| 1566 | 0.5 | Extremo 1A | -0.004321 | 35.15   | -0.011    | 0.2166  | 0.0016    | -26.7328 |
| 1566 | 1   | Extremo 1A | -0.004321 | 38.328  | -0.011    | 0.2166  | 0.0072    | -45.1022 |
| 1568 | 0   | Extremo 1A | -0.000832 | -37.807 | -0.318    | 0.9163  | -0.1409   | -44.3315 |
| 1568 | 0.5 | Extremo 2A | -0.000832 | -34.628 | -0.318    | 0.9163  | 0.0179    | -26.2228 |

|      |     |            |           |         |           |        |           |          |
|------|-----|------------|-----------|---------|-----------|--------|-----------|----------|
| 1568 | 1   | Extremo 2A | -0.000832 | -31.45  | -0.318    | 0.9163 | 0.1768    | -9.7031  |
| 1568 | 0   | Extremo 2A | -0.005169 | -37.807 | 0.083     | 0.9222 | 0.0395    | -44.3352 |
| 1568 | 0.5 | Extremo 1A | -0.005169 | -34.628 | 0.083     | 0.9222 | -0.002    | -26.2264 |
| 1568 | 1   | Extremo 1A | -0.005169 | -31.45  | 0.083     | 0.9222 | -0.0435   | -9.7068  |
| 1569 | 0   | Extremo 1A | -9.46E-05 | -17.487 | -0.082    | 0.1496 | -0.0277   | -9.6102  |
| 1569 | 0.3 | Extremo 2A | -9.46E-05 | -15.985 | -0.082    | 0.1496 | -0.003    | -4.5894  |
| 1569 | 0.6 | Extremo 2A | -9.46E-05 | -14.483 | -0.082    | 0.1496 | 0.0217    | -0.0191  |
| 1569 | 0   | Extremo 2A | -0.000483 | -17.488 | 0.022     | 0.1498 | 0.0076    | -9.6112  |
| 1569 | 0.3 | Extremo 1A | -0.000483 | -15.986 | 0.022     | 0.1498 | 0.0011    | -4.5901  |
| 1569 | 0.6 | Extremo 1A | -0.000483 | -14.484 | 0.022     | 0.1498 | -0.0055   | -0.0195  |
| 1570 | 0   | Extremo 1A | 0.0002479 | 14.69   | -0.075    | 0.3626 | -0.0197   | -0.0604  |
| 1570 | 0.3 | Extremo 2A | 0.0002479 | 16.192  | -0.075    | 0.3626 | 0.0027    | -4.6928  |
| 1570 | 0.6 | Extremo 2A | 0.0002479 | 17.694  | -0.075    | 0.3626 | 0.0252    | -9.7758  |
| 1570 | 0   | Extremo 2A | -0.000505 | 14.692  | -0.004235 | 0.364  | -0.001    | -0.0609  |
| 1570 | 0.3 | Extremo 1A | -0.000505 | 16.194  | -0.004235 | 0.364  | 0.0002412 | -4.6937  |
| 1570 | 0.6 | Extremo 1A | -0.000505 | 17.696  | -0.004235 | 0.364  | 0.0015    | -9.7771  |
| 1571 | 0   | Extremo 1A | 0.002498  | 32.116  | -0.289    | 0.531  | -0.1602   | -10.1631 |
| 1571 | 0.5 | Extremo 2A | 0.002498  | 35.294  | -0.289    | 0.531  | -0.0157   | -27.0156 |
| 1571 | 1   | Extremo 2A | 0.002498  | 38.472  | -0.289    | 0.531  | 0.1288    | -45.4572 |
| 1571 | 0   | Extremo 2A | -0.005565 | 32.117  | -0.018    | 0.5286 | -0.0081   | -10.1676 |
| 1571 | 0.5 | Extremo 1A | -0.005565 | 35.295  | -0.018    | 0.5286 | 0.0008192 | -27.0208 |
| 1571 | 1   | Extremo 1A | -0.005565 | 38.473  | -0.018    | 0.5286 | 0.0098    | -45.4629 |
| 1573 | 0   | Extremo 1A | -0.001002 | -37.988 | -0.316    | 0.8992 | -0.1399   | -44.8894 |
| 1573 | 0.5 | Extremo 2A | -0.001002 | -34.81  | -0.316    | 0.8992 | 0.0183    | -26.6899 |
| 1573 | 1   | Extremo 2A | -0.001002 | -31.632 | -0.316    | 0.8992 | 0.1765    | -10.0795 |
| 1573 | 0   | Extremo 2A | -0.006756 | -37.99  | 0.091     | 0.9003 | 0.0427    | -44.8991 |
| 1573 | 0.5 | Extremo 1A | -0.006756 | -34.812 | 0.091     | 0.9003 | -0.0028   | -26.6987 |
| 1573 | 1   | Extremo 1A | -0.006756 | -31.634 | 0.091     | 0.9003 | -0.0484   | -10.0873 |
| 1574 | 0   | Extremo 1A | -0.000126 | -17.607 | -0.081    | 0.0476 | -0.0272   | -9.7216  |
| 1574 | 0.3 | Extremo 2A | -0.000126 | -16.105 | -0.081    | 0.0476 | -0.0028   | -4.6648  |
| 1574 | 0.6 | Extremo 2A | -0.000126 | -14.603 | -0.081    | 0.0476 | 0.0216    | -0.0584  |
| 1574 | 0   | Extremo 2A | -0.000623 | -17.609 | 0.024     | 0.0454 | 0.0081    | -9.7239  |
| 1574 | 0.3 | Extremo 1A | -0.000623 | -16.108 | 0.024     | 0.0454 | 0.001     | -4.6663  |
| 1574 | 0.6 | Extremo 1A | -0.000623 | -14.606 | 0.024     | 0.0454 | -0.006    | -0.0593  |
| 1575 | 0   | Extremo 1A | 0.0002511 | 14.824  | -0.073    | 0.6237 | -0.0194   | -0.0665  |
| 1575 | 0.3 | Extremo 2A | 0.0002511 | 16.326  | -0.073    | 0.6237 | 0.0026    | -4.7389  |
| 1575 | 0.6 | Extremo 2A | 0.0002511 | 17.828  | -0.073    | 0.6237 | 0.0246    | -9.8619  |
| 1575 | 0   | Extremo 2A | -0.000507 | 14.827  | -0.005373 | 0.6276 | -0.0015   | -0.067   |
| 1575 | 0.3 | Extremo 1A | -0.000507 | 16.329  | -0.005373 | 0.6276 | 0.0000726 | -4.7404  |
| 1575 | 0.6 | Extremo 1A | -0.000507 | 17.831  | -0.005373 | 0.6276 | 0.0017    | -9.8643  |
| 1576 | 0   | Extremo 1A | 0.0025    | 32.716  | -0.287    | 1.2084 | -0.159    | -10.3462 |
| 1576 | 0.5 | Extremo 2A | 0.0025    | 35.895  | -0.287    | 1.2084 | -0.0155   | -27.499  |
| 1576 | 1   | Extremo 2A | 0.0025    | 39.073  | -0.287    | 1.2084 | 0.1281    | -46.2408 |
| 1576 | 0   | Extremo 2A | -0.00582  | 32.725  | -0.025    | 1.2129 | -0.0132   | -10.353  |
| 1576 | 0.5 | Extremo 1A | -0.00582  | 35.903  | -0.025    | 1.2129 | -0.000663 | -27.5101 |
| 1576 | 1   | Extremo 1A | -0.00582  | 39.081  | -0.025    | 1.2129 | 0.0119    | -46.2561 |
| 1578 | 0   | Extremo 1A | -0.001601 | -38.735 | -0.315    | 0.2539 | -0.1385   | -46.0796 |
| 1578 | 0.5 | Extremo 2A | -0.001601 | -35.557 | -0.315    | 0.2539 | 0.0191    | -27.5064 |
| 1578 | 1   | Extremo 2A | -0.001601 | -32.379 | -0.315    | 0.2539 | 0.1767    | -10.5223 |
| 1578 | 0   | Extremo 2A | -0.007351 | -38.746 | 0.1       | 0.2434 | 0.0456    | -46.1023 |
| 1578 | 0.5 | Extremo 1A | -0.007351 | -35.567 | 0.1       | 0.2434 | -0.0044   |          |





|      |     |            |           |         |           |         |           |          |
|------|-----|------------|-----------|---------|-----------|---------|-----------|----------|
| 1583 | 1   | Extremo 2A | -0.00097  | -34.441 | -0.315    | -1.1866 | 0.1782    | -10.453  |
| 1583 | 0   | Extremo 2A | -0.005059 | -40.831 | 0.106     | -1.2174 | 0.046     | -48.1171 |
| 1583 | 0.5 | Extremo 1A | -0.005059 | -37.652 | 0.106     | -1.2174 | -0.007    | -28.4963 |
| 1583 | 1   | Extremo 1A | -0.005059 | -34.474 | 0.106     | -1.2174 | -0.06     | -10.4646 |
| 1584 | 0   | Extremo 1A | -0.000134 | -18.099 | -0.078    | -0.6282 | -0.0253   | -10.0051 |
| 1584 | 0.3 | Extremo 2A | -0.000134 | -16.597 | -0.078    | -0.6282 | -0.002    | -4.8007  |
| 1584 | 0.6 | Extremo 2A | -0.000134 | -15.095 | -0.078    | -0.6282 | 0.0213    | -0.047   |
| 1584 | 0   | Extremo 2A | -0.00041  | -18.106 | 0.026     | -0.6402 | 0.0085    | -10.0104 |
| 1584 | 0.3 | Extremo 1A | -0.00041  | -16.604 | 0.026     | -0.6402 | 0.0006313 | -4.8038  |
| 1584 | 0.6 | Extremo 1A | -0.00041  | -15.103 | 0.026     | -0.6402 | -0.0072   | -0.0477  |
| 1585 | 0   | Extremo 1A | -0.001888 | 14.926  | -0.077    | 0.7488  | -0.0205   | 0.1293   |
| 1585 | 0.3 | Extremo 2A | -0.001888 | 16.428  | -0.077    | 0.7488  | 0.0027    | -4.5738  |
| 1585 | 0.6 | Extremo 2A | -0.001888 | 17.93   | -0.077    | 0.7488  | 0.0258    | -9.7275  |
| 1585 | 0   | Extremo 2A | -6.6E-05  | 14.931  | -0.004346 | 0.753   | -0.0022   | 0.131    |
| 1585 | 0.3 | Extremo 1A | -6.6E-05  | 16.432  | -0.004346 | 0.753   | -0.000886 | -4.5734  |
| 1585 | 0.6 | Extremo 1A | -6.6E-05  | 17.934  | -0.004346 | 0.753   | 0.0004177 | -9.7284  |
| 1586 | 0   | Extremo 1A | -0.019    | 36.053  | -0.307    | 2.548   | -0.1687   | -8.8562  |
| 1586 | 0.5 | Extremo 2A | -0.019    | 39.232  | -0.307    | 2.548   | -0.015    | -27.6774 |
| 1586 | 1   | Extremo 2A | -0.019    | 42.41   | -0.307    | 2.548   | 0.1387    | -48.0877 |
| 1586 | 0   | Extremo 2A | -0.001113 | 36.102  | -0.031    | 2.567   | -0.0228   | -8.8457  |
| 1586 | 0.5 | Extremo 1A | -0.001113 | 39.28   | -0.031    | 2.567   | -0.0073   | -27.6911 |
| 1586 | 1   | Extremo 1A | -0.001113 | 42.458  | -0.031    | 2.567   | 0.0082    | -48.1256 |
| 1588 | 0   | Extremo 1A | 0.012     | -43.736 | -0.324    | -2.2412 | -0.1386   | -49.7438 |
| 1588 | 0.5 | Extremo 2A | 0.012     | -40.558 | -0.324    | -2.2412 | 0.0234    | -28.6705 |
| 1588 | 1   | Extremo 2A | 0.012     | -37.379 | -0.324    | -2.2412 | 0.1854    | -9.1863  |
| 1588 | 0   | Extremo 2A | 0.002262  | -43.802 | 0.104     | -2.2876 | 0.0409    | -49.8072 |
| 1588 | 0.5 | Extremo 1A | 0.002262  | -40.624 | 0.104     | -2.2876 | -0.0112   | -28.7007 |
| 1588 | 1   | Extremo 1A | 0.002262  | -37.446 | 0.104     | -2.2876 | -0.0632   | -9.1834  |
| 1589 | 0   | Extremo 1A | 0.001176  | -18.188 | -0.079    | -0.6826 | -0.0252   | -9.9029  |
| 1589 | 0.3 | Extremo 2A | 0.001176  | -16.686 | -0.079    | -0.6826 | -0.0016   | -4.6717  |
| 1589 | 0.6 | Extremo 2A | 0.001176  | -15.185 | -0.079    | -0.6826 | 0.0219    | 0.1089   |
| 1589 | 0   | Extremo 2A | 0.0002837 | -18.197 | 0.024     | -0.6961 | 0.0074    | -9.907   |
| 1589 | 0.3 | Extremo 1A | 0.0002837 | -16.695 | 0.024     | -0.6961 | 3.605E-05 | -4.6733  |
| 1589 | 0.6 | Extremo 1A | 0.0002837 | -15.193 | 0.024     | -0.6961 | -0.0073   | 0.11     |
| 1590 | 0   | Extremo 1A | -0.00541  | 14.738  | -0.094    | 0.0088  | -0.0239   | 0.1784   |
| 1590 | 0.3 | Extremo 2A | -0.00541  | 16.24   | -0.094    | 0.0088  | 0.0042    | -4.4684  |
| 1590 | 0.6 | Extremo 2A | -0.00541  | 17.742  | -0.094    | 0.0088  | 0.0324    | -9.5658  |
| 1590 | 0   | Extremo 2A | -0.000942 | 14.741  | -0.005394 | 0.0038  | -0.0027   | 0.1807   |
| 1590 | 0.3 | Extremo 1A | -0.000942 | 16.242  | -0.005394 | 0.0038  | -0.0011   | -4.4668  |
| 1590 | 0.6 | Extremo 1A | -0.000942 | 17.744  | -0.005394 | 0.0038  | 0.0005416 | -9.5648  |
| 1591 | 0   | Extremo 1A | -0.057    | 35.154  | -0.356    | 0.0486  | -0.1916   | -8.2315  |
| 1591 | 0.5 | Extremo 2A | -0.057    | 38.332  | -0.356    | 0.0486  | -0.0138   | -26.6028 |
| 1591 | 1   | Extremo 2A | -0.057    | 41.51   | -0.356    | 0.0486  | 0.1639    | -46.5632 |
| 1591 | 0   | Extremo 2A | -0.009842 | 35.191  | -0.033    | 0.0376  | -0.0279   | -8.2137  |
| 1591 | 0.5 | Extremo 1A | -0.009842 | 38.37   | -0.033    | 0.0376  | -0.0113   | -26.604  |
| 1591 | 1   | Extremo 1A | -0.009842 | 41.548  | -0.033    | 0.0376  | 0.0053    | -46.5833 |
| 1593 | 0   | Extremo 1A | 0.052     | -43.25  | -0.36     | -0.0114 | -0.1546   | -48.4924 |
| 1593 | 0.5 | Extremo 2A | 0.052     | -40.072 | -0.36     | -0.0114 | 0.0253    | -27.6619 |
| 1593 | 1   | Extremo 2A | 0.052     | -36.894 | -0.36     | -0.0114 | 0.2052    | -8.4205  |
| 1593 | 0   | Extremo 2A | 0.005116  | -43.311 | 0.095     | -0.0359 | 0.0318    | -48.5413 |
| 1593 | 0.5 | Extremo 1A | 0.005116  | -40.133 | 0.095     | -0.0359 | -0.0155   | -27.6805 |
| 1593 | 1   | Extremo 1A | 0.005116  | -36.955 | 0.095     | -0.0359 | -0.0628   | -8.4087  |
| 1594 | 0   | Extremo 1A | 0.004997  | -18.028 | -0.092    | 0.0012  | -0.0304   | -9.7415  |
| 1594 | 0.3 | Extremo 2A | 0.004997  | -16.526 | -0.092    | 0.0012  | -0.0028   | -4.5583  |
| 1594 | 0.6 | Extremo 2A | 0.004997  | -15.024 | -0.092    | 0.0012  | 0.0248    | 0.1742   |
| 1594 | 0   | Extremo 2A | 0.0004841 | -18.035 | 0.021     | -0.0054 | 0.0058    | -9.7437  |
| 1594 | 0.3 | Extremo 1A | 0.0004841 | -16.533 | 0.021     | -0.0054 | -0.000555 | -4.5585  |
| 1594 | 0.6 | Extremo 1A | 0.0004841 | -15.031 | 0.021     | -0.0054 | -0.0069   | 0.176    |
| 1595 | 0   | Extremo 1A | -0.001779 | 14.926  | -0.109    | -0.7312 | -0.0274   | 0.1294   |
| 1595 | 0.3 | Extremo 2A | -0.001779 | 16.428  | -0.109    | -0.7312 | 0.0055    | -4.5738  |
| 1595 | 0.6 | Extremo 2A | -0.001779 | 17.93   | -0.109    | -0.7312 | 0.0383    | -9.7274  |
| 1595 | 0   | Extremo 2A | -0.000852 | 14.93   | -0.01     | -0.7454 | -0.0035   | 0.1311   |
| 1595 | 0.3 | Extremo 1A | -0.000852 | 16.432  | -0.01     | -0.7454 | -0.000399 | -4.5734  |
| 1595 | 0.6 | Extremo 1A | -0.000852 | 17.934  | -0.01     | -0.7454 | 0.0027    | -9.7283  |
| 1596 | 0   | Extremo 1A | -0.018    | 36.053  | -0.4      | -2.451  | -0.2154   | -8.8559  |
| 1596 | 0.5 | Extremo 2A | -0.018    | 39.231  | -0.4      | -2.451  | -0.0155   | -27.6771 |
| 1596 | 1   | Extremo 2A | -0.018    | 42.41   | -0.4      | -2.451  | 0.1844    | -48.0873 |
| 1596 | 0   | Extremo 2A | -0.008212 | 36.102  | -0.05     | -2.4918 | -0.0324   | -8.8455  |
| 1596 | 0.5 | Extremo 1A | -0.008212 | 39.28   | -0.05     | -2.4918 | -0.0074   | -27.6908 |
| 1596 | 1   | Extremo 1A | -0.008212 | 42.458  | -0.05     | -2.4918 | 0.0176    | -48.1253 |
| 1598 | 0   | Extremo 1A | 0.012     | -43.736 | -0.399    | 2.2185  | -0.1754   | -49.7438 |
| 1598 | 0.5 | Extremo 2A | 0.012     | -40.557 | -0.399    | 2.2185  | 0.0242    | -28.6705 |

|      |     |            |           |         |        |         |           |          |
|------|-----|------------|-----------|---------|--------|---------|-----------|----------|
| 1598 | 1   | Extremo 2A | 0.012     | -37.379 | -0.399 | 2.2185  | 0.2237    | -9.1863  |
| 1598 | 0   | Extremo 2A | -0.003329 | -43.802 | 0.1    | 2.216   | 0.0388    | -49.8068 |
| 1598 | 0.5 | Extremo 1A | -0.003329 | -40.624 | 0.1    | 2.216   | -0.0111   | -28.7005 |
| 1598 | 1   | Extremo 1A | -0.003329 | -37.446 | 0.1    | 2.216   | -0.0611   | -9.1832  |
| 1599 | 0   | Extremo 1A | 0.001199  | -18.188 | -0.107 | 0.685   | -0.0362   | -9.9029  |
| 1599 | 0.3 | Extremo 2A | 0.001199  | -16.686 | -0.107 | 0.685   | -0.0042   | -4.6717  |
| 1599 | 0.6 | Extremo 2A | 0.001199  | -15.185 | -0.107 | 0.685   | 0.0278    | 0.1089   |
| 1599 | 0   | Extremo 2A | -0.000369 | -18.197 | 0.022  | 0.6853  | 0.0064    | -9.907   |
| 1599 | 0.3 | Extremo 1A | -0.000369 | -16.695 | 0.022  | 0.6853  | -0.000222 | -4.6732  |
| 1599 | 0.6 | Extremo 1A | -0.000369 | -15.193 | 0.022  | 0.6853  | -0.0069   | 0.11     |
| 1600 | 0   | Extremo 1A | -0.000488 | 14.963  | -0.113 | -0.8533 | -0.0286   | -0.0069  |
| 1600 | 0.3 | Extremo 2A | -0.000488 | 16.465  | -0.113 | -0.8533 | 0.0053    | -4.7211  |
| 1600 | 0.6 | Extremo 2A | -0.000488 | 17.967  | -0.113 | -0.8533 | 0.0392    | -9.8859  |
| 1600 | 0   | Extremo 2A | -0.000232 | 14.968  | -0.015 | -0.8695 | -0.0041   | -0.0068  |
| 1600 | 0.3 | Extremo 1A | -0.000232 | 16.47   | -0.015 | -0.8695 | 0.0003003 | -4.7224  |
| 1600 | 0.6 | Extremo 1A | -0.000232 | 17.972  | -0.015 | -0.8695 | 0.0047    | -9.8886  |
| 1601 | 0   | Extremo 1A | -0.005425 | 34.231  | -0.418 | -2.1427 | -0.2272   | -10.0424 |
| 1601 | 0.5 | Extremo 2A | -0.005425 | 37.409  | -0.418 | -2.1427 | -0.0181   | -27.9524 |
| 1601 | 1   | Extremo 2A | -0.005425 | 40.587  | -0.418 | -2.1427 | 0.191     | -47.4515 |
| 1601 | 0   | Extremo 2A | -0.001647 | 34.258  | -0.061 | -2.1803 | -0.0341   | -10.0459 |
| 1601 | 0.5 | Extremo 1A | -0.001647 | 37.436  | -0.061 | -2.1803 | -0.0037   | -27.9693 |
| 1601 | 1   | Extremo 1A | -0.001647 | 40.614  | -0.061 | -2.1803 | 0.0267    | -47.4817 |
| 1603 | 0   | Extremo 1A | -0.00693  | -40.797 | -0.406 | 1.1638  | -0.1792   | -48.0723 |
| 1603 | 0.5 | Extremo 2A | -0.00693  | -37.619 | -0.406 | 1.1638  | 0.0239    | -28.4681 |
| 1603 | 1   | Extremo 2A | -0.00693  | -34.441 | -0.406 | 1.1638  | 0.227     | -10.453  |
| 1603 | 0   | Extremo 2A | -0.00065  | -40.83  | 0.106  | 1.1461  | 0.0464    | -48.1163 |
| 1603 | 0.5 | Extremo 1A | -0.00065  | -37.652 | 0.106  | 1.1461  | -0.0067   | -28.4957 |
| 1603 | 1   | Extremo 1A | -0.00065  | -34.474 | 0.106  | 1.1461  | -0.0598   | -10.4642 |
| 1604 | 0   | Extremo 1A | -0.000654 | -18.099 | -0.108 | 0.6306  | -0.0366   | -10.0051 |
| 1604 | 0.3 | Extremo 2A | -0.000654 | -16.597 | -0.108 | 0.6306  | -0.0043   | -4.8007  |
| 1604 | 0.6 | Extremo 2A | -0.000654 | -15.095 | -0.108 | 0.6306  | 0.0281    | -0.047   |
| 1604 | 0   | Extremo 2A | -0.000145 | -18.106 | 0.025  | 0.6296  | 0.0081    | -10.0102 |
| 1604 | 0.3 | Extremo 1A | -0.000145 | -16.604 | 0.025  | 0.6296  | 0.0005121 | -4.8037  |
| 1604 | 0.6 | Extremo 1A | -0.000145 | -15.102 | 0.025  | 0.6296  | -0.0071   | -0.0477  |
| 1605 | 0   | Extremo 1A | -0.000465 | 14.823  | -0.114 | -0.6067 | -0.0291   | -0.0663  |
| 1605 | 0.3 | Extremo 2A | -0.000465 | 16.325  | -0.114 | -0.6067 | 0.005     | -4.7386  |
| 1605 | 0.6 | Extremo 2A | -0.000465 | 17.827  | -0.114 | -0.6067 | 0.039     | -9.8615  |
| 1605 | 0   | Extremo 2A | -4.45E-05 | 14.827  | -0.016 | -0.6204 | -0.0042   | -0.0669  |
| 1605 | 0.3 | Extremo 1A | -4.45E-05 | 16.328  | -0.016 | -0.6204 | 0.0007265 | -4.7402  |
| 1605 | 0.6 | Extremo 1A | -4.45E-05 | 17.83   | -0.016 | -0.6204 | 0.0056    | -9.864   |
| 1606 | 0   | Extremo 1A | -0.005299 | 32.716  | -0.428 | -1.1126 | -0.2336   | -10.345  |
| 1606 | 0.5 | Extremo 2A | -0.005299 | 35.894  | -0.428 | -1.1126 | -0.0197   | -27.4974 |
| 1606 | 1   | Extremo 2A | -0.005299 | 39.072  | -0.428 | -1.1126 | 0.1943    | -46.2389 |
| 1606 | 0   | Extremo 2A | 4.786E-05 | 32.724  | -0.065 | -1.1388 | -0.0337   | -10.352  |
| 1606 | 0.5 | Extremo 1A | 4.786E-05 | 35.902  | -0.065 | -1.1388 | -0.0013   | -27.5087 |
| 1606 | 1   | Extremo 1A | 4.786E-05 | 39.081  | -0.065 | -1.1388 | 0.0311    | -46.2545 |
| 1608 | 0   | Extremo 1A | -0.011    | -38.735 | -0.397 | -0.2768 | -0.1748   | -46.0797 |
| 1608 | 0.5 | Extremo 2A | -0.011    | -35.557 | -0.397 | -0.2768 | 0.0235    | -27.5065 |
| 1608 | 1   | Extremo 2A | -0.011    | -32.379 | -0.397 | -0.2768 | 0.2218    | -10.5225 |
| 1608 | 0   | Extremo 2A | 0.000306  | -38.745 | 0.109  | -0.3141 | 0.0504    | -46.101  |
| 1608 | 0.5 | Extremo 1A | 0.000306  | -35.567 | 0.109  | -0.3141 | -0.004    | -27.523  |
| 1608 | 1   | Extremo 1A | 0.000306  | -32.389 | 0.109  | -0.3141 | -0.0584   | -10.5342 |
| 1609 | 0   | Extremo    |           |         |        |         |           |          |



|      |     |            |           |         |        |         |           |          |
|------|-----|------------|-----------|---------|--------|---------|-----------|----------|
| 1613 | 1   | Extremo 2A | -0.013    | -31.632 | -0.38  | -0.9223 | 0.2133    | -10.0798 |
| 1613 | 0   | Extremo 2A | -0.001403 | -37.989 | 0.111  | -0.97   | 0.053     | -44.8969 |
| 1613 | 0.5 | Extremo 1A | -0.001403 | -34.811 | 0.111  | -0.97   | -0.0025   | -26.6969 |
| 1613 | 1   | Extremo 1A | -0.001403 | -31.633 | 0.111  | -0.97   | -0.0579   | -10.086  |
| 1614 | 0   | Extremo 1A | -0.001244 | -17.607 | -0.099 | -0.0453 | -0.0332   | -9.7217  |
| 1614 | 0.3 | Extremo 2A | -0.001244 | -16.105 | -0.099 | -0.0453 | -0.0035   | -4.6648  |
| 1614 | 0.6 | Extremo 2A | -0.001244 | -14.604 | -0.099 | -0.0453 | 0.0261    | -0.0585  |
| 1614 | 0   | Extremo 2A | -0.000171 | -17.609 | 0.029  | -0.0554 | 0.01      | -9.7235  |
| 1614 | 0.3 | Extremo 1A | -0.000171 | -16.107 | 0.029  | -0.0554 | 0.0014    | -4.666   |
| 1614 | 0.6 | Extremo 1A | -0.000171 | -14.605 | 0.029  | -0.0554 | -0.0073   | -0.0592  |
| 1615 | 0   | Extremo 1A | -0.000857 | 14.614  | -0.118 | -0.178  | -0.0304   | -0.0393  |
| 1615 | 0.3 | Extremo 2A | -0.000857 | 16.116  | -0.118 | -0.178  | 0.0049    | -4.6487  |
| 1615 | 0.6 | Extremo 2A | -0.000857 | 17.618  | -0.118 | -0.178  | 0.0402    | -9.7087  |
| 1615 | 0   | Extremo 2A | -0.000451 | 14.615  | -0.019 | -0.1875 | -0.0046   | -0.0397  |
| 1615 | 0.3 | Extremo 1A | -0.000451 | 16.116  | -0.019 | -0.1875 | 0.0012    | -4.6494  |
| 1615 | 0.6 | Extremo 1A | -0.000451 | 17.618  | -0.019 | -0.1875 | 0.007     | -9.7096  |
| 1616 | 0   | Extremo 1A | -0.009014 | 31.97   | -0.45  | -0.1302 | -0.2459   | -9.9461  |
| 1616 | 0.5 | Extremo 2A | -0.009014 | 35.148  | -0.45  | -0.1302 | -0.021    | -26.7255 |
| 1616 | 1   | Extremo 2A | -0.009014 | 38.326  | -0.45  | -0.1302 | 0.2039    | -45.0941 |
| 1616 | 0   | Extremo 2A | -0.004485 | 31.97   | -0.073 | -0.146  | -0.0355   | -9.9491  |
| 1616 | 0.5 | Extremo 1A | -0.004485 | 35.148  | -0.073 | -0.146  | 0.0008009 | -26.7284 |
| 1616 | 1   | Extremo 1A | -0.004485 | 38.326  | -0.073 | -0.146  | 0.0371    | -45.0968 |
| 1618 | 0   | Extremo 1A | -0.015    | -37.807 | -0.361 | -0.9399 | -0.1576   | -44.332  |
| 1618 | 0.5 | Extremo 2A | -0.015    | -34.628 | -0.361 | -0.9399 | 0.0228    | -26.2232 |
| 1618 | 1   | Extremo 2A | -0.015    | -31.45  | -0.361 | -0.9399 | 0.2032    | -9.7035  |
| 1618 | 0   | Extremo 2A | -0.004576 | -37.805 | 0.116  | -0.9903 | 0.0562    | -44.3314 |
| 1618 | 0.5 | Extremo 1A | -0.004576 | -34.627 | 0.116  | -0.9903 | -0.0017   | -26.2234 |
| 1618 | 1   | Extremo 1A | -0.004576 | -31.449 | 0.116  | -0.9903 | -0.0596   | -9.7045  |
| 1619 | 0   | Extremo 1A | -0.001405 | -17.487 | -0.093 | -0.1475 | -0.0312   | -9.6103  |
| 1619 | 0.3 | Extremo 2A | -0.001405 | -15.985 | -0.093 | -0.1475 | -0.0032   | -4.5894  |
| 1619 | 0.6 | Extremo 2A | -0.001405 | -14.483 | -0.093 | -0.1475 | 0.0248    | -0.0191  |
| 1619 | 0   | Extremo 2A | -0.000462 | -17.487 | 0.031  | -0.1591 | 0.0108    | -9.6105  |
| 1619 | 0.3 | Extremo 1A | -0.000462 | -15.985 | 0.031  | -0.1591 | 0.0016    | -4.5896  |
| 1619 | 0.6 | Extremo 1A | -0.000462 | -14.483 | 0.031  | -0.1591 | -0.0076   | -0.0193  |
| 1620 | 0   | Extremo 1A | -0.001078 | 14.58   | -0.121 | -0.081  | -0.0314   | -0.0248  |
| 1620 | 0.3 | Extremo 2A | -0.001078 | 16.082  | -0.121 | -0.081  | 0.005     | -4.6241  |
| 1620 | 0.6 | Extremo 2A | -0.001078 | 17.584  | -0.121 | -0.081  | 0.0414    | -9.6741  |
| 1620 | 0   | Extremo 2A | -0.000818 | 14.581  | -0.022 | -0.0893 | -0.0052   | -0.0252  |
| 1620 | 0.3 | Extremo 1A | -0.000818 | 16.083  | -0.022 | -0.0893 | 0.0015    | -4.6247  |
| 1620 | 0.6 | Extremo 1A | -0.000818 | 17.585  | -0.022 | -0.0893 | 0.0082    | -9.6748  |
| 1621 | 0   | Extremo 1A | -0.011    | 31.959  | -0.465 | -0.0018 | -0.2537   | -9.8224  |
| 1621 | 0.5 | Extremo 2A | -0.011    | 35.137  | -0.465 | -0.0018 | -0.0213   | -26.5962 |
| 1621 | 1   | Extremo 2A | -0.011    | 38.315  | -0.465 | -0.0018 | 0.211     | -44.9591 |
| 1621 | 0   | Extremo 2A | -0.008361 | 31.959  | -0.082 | -0.0159 | -0.04     | -9.8252  |
| 1621 | 0.5 | Extremo 1A | -0.008361 | 35.137  | -0.082 | -0.0159 | 0.0011    | -26.599  |
| 1621 | 1   | Extremo 1A | -0.008361 | 38.315  | -0.082 | -0.0159 | 0.0423    | -44.9618 |
| 1623 | 0   | Extremo 1A | -0.017    | -37.777 | -0.338 | -0.6579 | -0.1463   | -44.1001 |
| 1623 | 0.5 | Extremo 2A | -0.017    | -34.599 | -0.338 | -0.6579 | 0.0226    | -26.0061 |
| 1623 | 1   | Extremo 2A | -0.017    | -31.421 | -0.338 | -0.6579 | 0.1914    | -9.5013  |
| 1623 | 0   | Extremo 2A | -0.008638 | -37.774 | 0.126  | -0.7062 | 0.0615    | -44.0942 |
| 1623 | 0.5 | Extremo 1A | -0.008638 | -34.596 | 0.126  | -0.7062 | -0.0014   | -26.0017 |
| 1623 | 1   | Extremo 1A | -0.008638 | -31.418 | 0.126  | -0.7062 | -0.0643   | -9.4983  |
| 1624 | 0   | Extremo 1A | -0.00164  | -17.432 | -0.087 | -0.1275 | -0.029    | -9.5534  |
| 1624 | 0.3 | Extremo 2A | -0.00164  | -15.93  | -0.087 | -0.1275 | -0.0028   | -4.549   |
| 1624 | 0.6 | Extremo 2A | -0.00164  | -14.428 | -0.087 | -0.1275 | 0.0233    | 0.0048   |
| 1624 | 0   | Extremo 2A | -0.000845 | -17.431 | 0.034  | -0.1386 | 0.012     | -9.5524  |
| 1624 | 0.3 | Extremo 1A | -0.000845 | -15.929 | 0.034  | -0.1386 | 0.0019    | -4.5483  |
| 1624 | 0.6 | Extremo 1A | -0.000845 | -14.427 | 0.034  | -0.1386 | -0.0082   | 0.0051   |
| 1625 | 0   | Extremo 1A | -0.00135  | 14.567  | -0.126 | -0.0196 | -0.0326   | -0.0178  |
| 1625 | 0.3 | Extremo 2A | -0.00135  | 16.069  | -0.126 | -0.0196 | 0.0053    | -4.6132  |
| 1625 | 0.6 | Extremo 2A | -0.00135  | 17.571  | -0.126 | -0.0196 | 0.0432    | -9.6591  |
| 1625 | 0   | Extremo 2A | -0.001264 | 14.568  | -0.027 | -0.0265 | -0.0063   | -0.0183  |
| 1625 | 0.3 | Extremo 1A | -0.001264 | 16.07   | -0.027 | -0.0265 | 0.0018    | -4.614   |
| 1625 | 0.6 | Extremo 1A | -0.001264 | 17.572  | -0.027 | -0.0265 | 0.0098    | -9.6603  |
| 1626 | 0   | Extremo 1A | -0.014    | 31.965  | -0.483 | 0.0646  | -0.2632   | -9.768   |
| 1626 | 0.5 | Extremo 2A | -0.014    | 35.143  | -0.483 | 0.0646  | -0.0216   | -26.5449 |
| 1626 | 1   | Extremo 2A | -0.014    | 38.321  | -0.483 | 0.0646  | 0.22      | -44.9108 |
| 1626 | 0   | Extremo 2A | -0.013    | 31.966  | -0.098 | 0.0531  | -0.0479   | -9.7723  |
| 1626 | 0.5 | Extremo 1A | -0.013    | 35.144  | -0.098 | 0.0531  | 0.0012    | -26.5497 |
| 1626 | 1   | Extremo 1A | -0.013    | 38.322  | -0.098 | 0.0531  | 0.0504    | -44.9161 |
| 1628 | 0   | Extremo 1A | -0.02     | -37.775 | -0.31  | -0.2646 | -0.1327   | -44.0182 |
| 1628 | 0.5 | Extremo 2A | -0.02     | -34.597 | -0.31  | -0.2646 | 0.0224    | -25.9252 |

|      |     |            |           |         |        |         |         |          |
|------|-----|------------|-----------|---------|--------|---------|---------|----------|
| 1628 | 1   | Extremo 2A | -0.02     | -31.419 | -0.31  | -0.2646 | 0.1775  | -9.4212  |
| 1628 | 0   | Extremo 2A | -0.014    | -37.771 | 0.142  | -0.3072 | 0.0698  | -44.0066 |
| 1628 | 0.5 | Extremo 1A | -0.014    | -34.592 | 0.142  | -0.3072 | -0.0013 | -25.9159 |
| 1628 | 1   | Extremo 1A | -0.014    | -31.414 | 0.142  | -0.3072 | -0.0724 | -9.4142  |
| 1629 | 0   | Extremo 1A | -0.001969 | -17.412 | -0.08  | -0.0501 | -0.0263 | -9.5309  |
| 1629 | 0.3 | Extremo 2A | -0.001969 | -15.91  | -0.08  | -0.0501 | -0.0024 | -4.5327  |
| 1629 | 0.6 | Extremo 2A | -0.001969 | -14.408 | -0.08  | -0.0501 | 0.0215  | 0.015    |
| 1629 | 0   | Extremo 2A | -0.001311 | -17.409 | 0.038  | -0.0591 | 0.0137  | -9.5287  |
| 1629 | 0.3 | Extremo 1A | -0.001311 | -15.907 | 0.038  | -0.0591 | 0.0022  | -4.5312  |
| 1629 | 0.6 | Extremo 1A | -0.001311 | -14.406 | 0.038  | -0.0591 | -0.0093 | 0.0157   |
| 1630 | 0   | Extremo 1A | -0.001701 | 14.561  | -0.133 | 0.0275  | -0.0341 | -0.0155  |
| 1630 | 0.3 | Extremo 2A | -0.001701 | 16.063  | -0.133 | 0.0275  | 0.0056  | -4.6092  |
| 1630 | 0.6 | Extremo 2A | -0.001701 | 17.565  | -0.133 | 0.0275  | 0.0454  | -9.6534  |
| 1630 | 0   | Extremo 2A | -0.001798 | 14.564  | -0.033 | 0.0231  | -0.0078 | -0.0164  |
| 1630 | 0.3 | Extremo 1A | -0.001798 | 16.065  | -0.033 | 0.0231  | 0.0022  | -4.6108  |
| 1630 | 0.6 | Extremo 1A | -0.001798 | 17.567  | -0.033 | 0.0231  | 0.0121  | -9.6557  |
| 1631 | 0   | Extremo 1A | -0.018    | 31.959  | -0.507 | 0.1091  | -0.2751 | -9.7491  |
| 1631 | 0.5 | Extremo 2A | -0.018    | 35.137  | -0.507 | 0.1091  | -0.0218 | -26.523  |
| 1631 | 1   | Extremo 2A | -0.018    | 38.315  | -0.507 | 0.1091  | 0.2315  | -44.886  |
| 1631 | 0   | Extremo 2A | -0.019    | 31.962  | -0.122 | 0.1032  | -0.0596 | -9.7568  |
| 1631 | 0.5 | Extremo 1A | -0.019    | 35.14   | -0.122 | 0.1032  | 0.0013  | -26.5322 |
| 1631 | 1   | Extremo 1A | -0.019    | 38.318  | -0.122 | 0.1032  | 0.0621  | -44.8967 |
| 1633 | 0   | Extremo 1A | -0.025    | -37.777 | -0.277 | 0.1552  | -0.1162 | -44.0149 |
| 1633 | 0.5 | Extremo 2A | -0.025    | -34.599 | -0.277 | 0.1552  | 0.0221  | -25.9209 |
| 1633 | 1   | Extremo 2A | -0.025    | -31.421 | -0.277 | 0.1552  | 0.1605  | -9.416   |
| 1633 | 0   | Extremo 2A | -0.019    | -37.769 | 0.167  | 0.123   | 0.0818  | -43.9949 |
| 1633 | 0.5 | Extremo 1A | -0.019    | -34.591 | 0.167  | 0.123   | -0.0014 | -25.9048 |
| 1633 | 1   | Extremo 1A | -0.019    | -31.413 | 0.167  | 0.123   | -0.0847 | -9.4037  |
| 1634 | 0   | Extremo 1A | -0.002411 | -17.41  | -0.071 | 0.044   | -0.0231 | -9.5294  |
| 1634 | 0.3 | Extremo 2A | -0.002411 | -15.909 | -0.071 | 0.044   | -0.0019 | -4.5316  |
| 1634 | 0.6 | Extremo 2A | -0.002411 | -14.407 | -0.071 | 0.044   | 0.0193  | 0.0157   |
| 1634 | 0   | Extremo 2A | -0.001871 | -17.406 | 0.045  | 0.039   | 0.016   | -9.5256  |
| 1634 | 0.3 | Extremo 1A | -0.001871 | -15.905 | 0.045  | 0.039   | 0.0026  | -4.529   |
| 1634 | 0.6 | Extremo 1A | -0.001871 | -14.403 | 0.045  | 0.039   | -0.0109 | 0.0171   |
| 1635 | 0   | Extremo 1A | -0.002162 | 14.561  | -0.14  | 0.0717  | -0.036  | -0.0168  |
| 1635 | 0.3 | Extremo 2A | -0.002162 | 16.062  | -0.14  | 0.0717  | 0.0061  | -4.6102  |
| 1635 | 0.6 | Extremo 2A | -0.002162 | 17.564  | -0.14  | 0.0717  | 0.0482  | -9.6543  |
| 1635 | 0   | Extremo 2A | -0.002446 | 14.565  | -0.042 | 0.0718  | -0.0099 | -0.0184  |
| 1635 | 0.3 | Extremo 1A | -0.002446 | 16.067  | -0.042 | 0.0718  | 0.0027  | -4.6131  |
| 1635 | 0.6 | Extremo 1A | -0.002446 | 17.569  | -0.042 | 0.0718  | 0.0152  | -9.6584  |
| 1636 | 0   | Extremo 1A | -0.022    | 31.937  | -0.536 | 0.1407  | -0.29   | -9.7558  |
| 1636 | 0.5 | Extremo 2A | -0.022    | 35.116  | -0.536 | 0.1407  | -0.022  | -26.5191 |
| 1636 | 1   | Extremo 2A | -0.022    | 38.294  | -0.536 | 0.1407  | 0.2461  | -44.8714 |
| 1636 | 0   | Extremo 2A | -0.025    | 31.944  | -0.154 | 0.1457  | -0.076  | -9.7696  |
| 1636 | 0.5 | Extremo 1A | -0.025    | 35.122  | -0.154 | 0.1457  | 0.0012  | -26.536  |
| 1636 | 1   | Extremo 1A | -0.025    | 38.3    | -0.154 | 0.1457  | 0.0784  | -44.8914 |
| 1638 | 0   | Extremo 1A | -0.031    | -37.783 | -0.236 | 0.5513  | -0.096  | -44.0827 |
| 1638 | 0.5 | Extremo 2A | -0.031    | -34.605 | -0.236 | 0.5513  | 0.0218  | -25.9858 |
| 1638 | 1   | Extremo 2A | -0.031    | -31.427 | -0.236 | 0.5513  | 0.1396  | -9.4779  |
| 1638 | 0   | Extremo 2A | -0.026    | -37.77  | 0.2    | 0.5366  | 0.0986  | -44.0497 |
| 1638 | 0.5 | Extremo 1A | -0.026    | -34.592 | 0.2    | 0.5366  | -0.0016 | -25.9592 |
| 1638 | 1   | Extremo 1A | -0.026    | -31.414 | 0.2    | 0.5366  | -0.1018 | -9.4577  |
| 1639 | 0   | Extremo 1A | -0.002993 | -17.427 | -0.06  | 0.1265  | -0.0191 | -9.5468  |
| 1639 | 0.3 | Extremo 2A | -0.002993 | -15.925 | -0.06  | 0.12    |         |          |



|      |     |            |           |         |           |         |           |          |
|------|-----|------------|-----------|---------|-----------|---------|-----------|----------|
| 1643 | 1   | Extremo 2A | -0.039    | -31.458 | -0.184    | 0.8537  | 0.1135    | -9.6353  |
| 1643 | 0   | Extremo 2A | -0.035    | -37.793 | 0.246     | 0.8682  | 0.121     | -44.218  |
| 1643 | 0.5 | Extremo 1A | -0.035    | -34.615 | 0.246     | 0.8682  | -0.0019   | -26.1161 |
| 1643 | 1   | Extremo 1A | -0.035    | -31.437 | 0.246     | 0.8682  | -0.1248   | -9.6032  |
| 1644 | 0   | Extremo 1A | -0.00375  | -17.471 | -0.046    | 0.164   | -0.0141   | -9.5915  |
| 1644 | 0.3 | Extremo 2A | -0.00375  | -15.969 | -0.046    | 0.164   | -0.000417 | -4.5756  |
| 1644 | 0.6 | Extremo 2A | -0.00375  | -14.467 | -0.046    | 0.164   | 0.0133    | -0.0102  |
| 1644 | 0   | Extremo 2A | -0.003387 | -17.46  | 0.066     | 0.1769  | 0.0236    | -9.5815  |
| 1644 | 0.3 | Extremo 1A | -0.003387 | -15.958 | 0.066     | 0.1769  | 0.0038    | -4.5688  |
| 1644 | 0.6 | Extremo 1A | -0.003387 | -14.456 | 0.066     | 0.1769  | -0.016    | -0.0067  |
| 1645 | 0   | Extremo 1A | -0.003595 | 14.606  | -0.164    | 0.2091  | -0.0417   | -0.0313  |
| 1645 | 0.3 | Extremo 2A | -0.003595 | 16.108  | -0.164    | 0.2091  | 0.0075    | -4.6383  |
| 1645 | 0.6 | Extremo 2A | -0.003595 | 17.61   | -0.164    | 0.2091  | 0.0567    | -9.6959  |
| 1645 | 0   | Extremo 2A | -0.004195 | 14.617  | -0.068    | 0.2299  | -0.0164   | -0.0353  |
| 1645 | 0.3 | Extremo 1A | -0.004195 | 16.119  | -0.068    | 0.2299  | 0.0041    | -4.6458  |
| 1645 | 0.6 | Extremo 1A | -0.004195 | 17.621  | -0.068    | 0.2299  | 0.0247    | -9.7068  |
| 1646 | 0   | Extremo 1A | -0.037    | 31.979  | -0.623    | 0.2766  | -0.3335   | -9.8978  |
| 1646 | 0.5 | Extremo 2A | -0.037    | 35.157  | -0.623    | 0.2766  | -0.0219   | -26.6818 |
| 1646 | 1   | Extremo 2A | -0.037    | 38.335  | -0.623    | 0.2766  | 0.2897    | -45.0548 |
| 1646 | 0   | Extremo 2A | -0.044    | 31.999  | -0.255    | 0.3365  | -0.1273   | -9.9343  |
| 1646 | 0.5 | Extremo 1A | -0.044    | 35.177  | -0.255    | 0.3365  | 0.0003571 | -26.7285 |
| 1646 | 1   | Extremo 1A | -0.044    | 38.356  | -0.255    | 0.3365  | 0.128     | -45.1117 |
| 1648 | 0   | Extremo 1A | -0.049    | -37.973 | -0.12     | 0.9193  | -0.0392   | -44.7138 |
| 1648 | 0.5 | Extremo 2A | -0.049    | -34.795 | -0.12     | 0.9193  | 0.0208    | -26.5217 |
| 1648 | 1   | Extremo 2A | -0.049    | -31.617 | -0.12     | 0.9193  | 0.0808    | -9.9188  |
| 1648 | 0   | Extremo 2A | -0.046    | -37.934 | 0.305     | 0.9813  | 0.1501    | -44.6267 |
| 1648 | 0.5 | Extremo 1A | -0.046    | -34.755 | 0.305     | 0.9813  | -0.0026   | -26.4544 |
| 1648 | 1   | Extremo 1A | -0.046    | -31.577 | 0.305     | 0.9813  | -0.1552   | -9.8713  |
| 1649 | 0   | Extremo 1A | -0.004733 | -17.564 | -0.028    | 0.1079  | -0.0078   | -9.6769  |
| 1649 | 0.3 | Extremo 2A | -0.004733 | -16.062 | -0.028    | 0.1079  | 0.00062   | -4.6329  |
| 1649 | 0.6 | Extremo 2A | -0.004733 | -14.561 | -0.028    | 0.1079  | 0.0091    | -0.0394  |
| 1649 | 0   | Extremo 2A | -0.004416 | -17.547 | 0.082     | 0.1377  | 0.0293    | -9.6617  |
| 1649 | 0.3 | Extremo 1A | -0.004416 | -16.045 | 0.082     | 0.1377  | 0.0047    | -4.6228  |
| 1649 | 0.6 | Extremo 1A | -0.004416 | -14.544 | 0.082     | 0.1377  | -0.0199   | -0.0344  |
| 1650 | 0   | Extremo 1A | -0.004735 | 14.677  | -0.181    | 0.3295  | -0.0458   | -0.0291  |
| 1650 | 0.3 | Extremo 2A | -0.004735 | 16.179  | -0.181    | 0.3295  | 0.0086    | -4.6575  |
| 1650 | 0.6 | Extremo 2A | -0.004735 | 17.681  | -0.181    | 0.3295  | 0.063     | -9.7365  |
| 1650 | 0   | Extremo 2A | -0.005355 | 14.694  | -0.088    | 0.3699  | -0.0212   | -0.0349  |
| 1650 | 0.3 | Extremo 1A | -0.005355 | 16.196  | -0.088    | 0.3699  | 0.0051    | -4.6683  |
| 1650 | 0.6 | Extremo 1A | -0.005355 | 17.698  | -0.088    | 0.3699  | 0.0314    | -9.7524  |
| 1651 | 0   | Extremo 1A | -0.049    | 32.343  | -0.688    | 0.5441  | -0.3656   | -9.9602  |
| 1651 | 0.5 | Extremo 2A | -0.049    | 35.521  | -0.688    | 0.5441  | -0.0214   | -26.926  |
| 1651 | 1   | Extremo 2A | -0.049    | 38.699  | -0.688    | 0.5441  | 0.3228    | -45.4809 |
| 1651 | 0   | Extremo 2A | -0.056    | 32.376  | -0.328    | 0.661   | -0.165    | -10.0134 |
| 1651 | 0.5 | Extremo 1A | -0.056    | 35.554  | -0.328    | 0.661   | -0.000742 | -26.9959 |
| 1651 | 1   | Extremo 1A | -0.056    | 38.732  | -0.328    | 0.661   | 0.1635    | -45.5675 |
| 1653 | 0   | Extremo 1A | -0.062    | -38.577 | -0.039    | 0.5147  | 0.0003853 | -45.6329 |
| 1653 | 0.5 | Extremo 2A | -0.062    | -35.399 | -0.039    | 0.5147  | 0.0201    | -27.139  |
| 1653 | 1   | Extremo 2A | -0.062    | -32.221 | -0.039    | 0.5147  | 0.0398    | -10.2342 |
| 1653 | 0   | Extremo 2A | -0.059    | -38.5   | 0.382     | 0.6487  | 0.1871    | -45.496  |
| 1653 | 0.5 | Extremo 1A | -0.059    | -35.322 | 0.382     | 0.6487  | -0.0037   | -27.0405 |
| 1653 | 1   | Extremo 1A | -0.059    | -32.144 | 0.382     | 0.6487  | -0.1945   | -10.1741 |
| 1654 | 0   | Extremo 1A | -0.005999 | -17.731 | -0.005892 | -0.0834 | 0.0002235 | -9.7985  |
| 1654 | 0.3 | Extremo 2A | -0.005999 | -16.229 | -0.005892 | -0.0834 | 0.002     | -4.7047  |
| 1654 | 0.6 | Extremo 2A | -0.005999 | -14.727 | -0.005892 | -0.0834 | 0.0038    | -0.0613  |
| 1654 | 0   | Extremo 2A | -0.005662 | -17.705 | 0.102     | -0.0302 | 0.0365    | -9.7776  |
| 1654 | 0.3 | Extremo 1A | -0.005662 | -16.203 | 0.102     | -0.0302 | 0.0058    | -4.6913  |
| 1654 | 0.6 | Extremo 1A | -0.005662 | -14.701 | 0.102     | -0.0302 | -0.0249   | -0.0556  |
| 1655 | 0   | Extremo 1A | -0.00647  | 14.754  | -0.205    | 0.4109  | -0.0514   | 0.0157   |
| 1655 | 0.3 | Extremo 2A | -0.00647  | 16.255  | -0.205    | 0.4109  | 0.0101    | -4.6357  |
| 1655 | 0.6 | Extremo 2A | -0.00647  | 17.757  | -0.205    | 0.4109  | 0.0715    | -9.7376  |
| 1655 | 0   | Extremo 2A | -0.006737 | 14.776  | -0.111    | 0.4787  | -0.0272   | 0.0085   |
| 1655 | 0.3 | Extremo 1A | -0.006737 | 16.278  | -0.111    | 0.4787  | 0.0063    | -4.6495  |
| 1655 | 0.6 | Extremo 1A | -0.006737 | 17.78   | -0.111    | 0.4787  | 0.0397    | -9.7581  |
| 1656 | 0   | Extremo 1A | -0.067    | 33.314  | -0.777    | 0.9323  | -0.409    | -9.6997  |
| 1656 | 0.5 | Extremo 2A | -0.067    | 36.492  | -0.777    | 0.9323  | -0.0205   | -27.1513 |
| 1656 | 1   | Extremo 2A | -0.067    | 39.67   | -0.777    | 0.9323  | 0.368     | -46.192  |
| 1656 | 0   | Extremo 2A | -0.07     | 33.365  | -0.421    | 1.1359  | -0.2131   | -9.7682  |
| 1656 | 0.5 | Extremo 1A | -0.07     | 36.544  | -0.421    | 1.1359  | -0.0028   | -27.2454 |
| 1656 | 1   | Extremo 1A | -0.07     | 39.722  | -0.421    | 1.1359  | 0.2076    | -46.3117 |
| 1658 | 0   | Extremo 1A | -0.077    | -40.161 | 0.061     | -0.434  | 0.0498    | -47.1336 |
| 1658 | 0.5 | Extremo 2A | -0.077    | -36.982 | 0.061     | -0.434  | 0.0195    | -27.8479 |

|      |     |            |           |         |        |         |         |          |
|------|-----|------------|-----------|---------|--------|---------|---------|----------|
| 1658 | 1   | Extremo 2A | -0.077    | -33.804 | 0.061  | -0.434  | -0.0109 | -10.1512 |
| 1658 | 0   | Extremo 2A | -0.073    | -40.016 | 0.477  | -0.2097 | 0.2328  | -46.935  |
| 1658 | 0.5 | Extremo 1A | -0.073    | -36.838 | 0.477  | -0.2097 | -0.0056 | -27.7214 |
| 1658 | 1   | Extremo 1A | -0.073    | -33.66  | 0.477  | -0.2097 | -0.244  | -10.0969 |
| 1659 | 0   | Extremo 1A | -0.007476 | -17.935 | 0.022  | -0.337  | 0.0105  | -9.8858  |
| 1659 | 0.3 | Extremo 2A | -0.007476 | -16.433 | 0.022  | -0.337  | 0.0038  | -4.7306  |
| 1659 | 0.6 | Extremo 2A | -0.007476 | -14.931 | 0.022  | -0.337  | -0.0029 | -0.026   |
| 1659 | 0   | Extremo 2A | -0.007034 | -17.901 | 0.128  | -0.2592 | 0.0456  | -9.8615  |
| 1659 | 0.3 | Extremo 1A | -0.007034 | -16.399 | 0.128  | -0.2592 | 0.0072  | -4.7164  |
| 1659 | 0.6 | Extremo 1A | -0.007034 | -14.898 | 0.128  | -0.2592 | -0.0312 | -0.0218  |
| 1660 | 0   | Extremo 1A | -0.009433 | 14.729  | -0.238 | 0.226   | -0.0593 | 0.1034   |
| 1660 | 0.3 | Extremo 2A | -0.009433 | 16.231  | -0.238 | 0.226   | 0.0122  | -4.5405  |
| 1660 | 0.6 | Extremo 2A | -0.009433 | 17.732  | -0.238 | 0.226   | 0.0837  | -9.6349  |
| 1660 | 0   | Extremo 2A | -0.008508 | 14.754  | -0.142 | 0.3267  | -0.0348 | 0.0962   |
| 1660 | 0.3 | Extremo 1A | -0.008508 | 16.256  | -0.142 | 0.3267  | 0.0077  | -4.5553  |
| 1660 | 0.6 | Extremo 1A | -0.008508 | 17.758  | -0.142 | 0.3267  | 0.0502  | -9.6573  |
| 1661 | 0   | Extremo 1A | -0.097    | 34.467  | -0.902 | 0.7007  | -0.4701 | -8.9224  |
| 1661 | 0.5 | Extremo 2A | -0.097    | 37.645  | -0.902 | 0.7007  | -0.0193 | -26.9502 |
| 1661 | 1   | Extremo 2A | -0.097    | 40.823  | -0.902 | 0.7007  | 0.4316  | -46.5671 |
| 1661 | 0   | Extremo 2A | -0.088    | 34.536  | -0.536 | 1.0195  | -0.274  | -8.9942  |
| 1661 | 0.5 | Extremo 1A | -0.088    | 37.714  | -0.536 | 1.0195  | -0.006  | -27.0568 |
| 1661 | 1   | Extremo 1A | -0.088    | 40.892  | -0.536 | 1.0195  | 0.2619  | -46.7084 |
| 1663 | 0   | Extremo 1A | -0.087    | -42.287 | 0.18   | -0.9734 | 0.109   | -48.3614 |
| 1663 | 0.5 | Extremo 2A | -0.087    | -39.109 | 0.18   | -0.9734 | 0.0192  | -28.0126 |
| 1663 | 1   | Extremo 2A | -0.087    | -35.931 | 0.18   | -0.9734 | -0.0706 | -9.2528  |
| 1663 | 0   | Extremo 2A | -0.085    | -42.078 | 0.591  | -0.6853 | 0.2868  | -48.1259 |
| 1663 | 0.5 | Extremo 1A | -0.085    | -38.899 | 0.591  | -0.6853 | -0.0086 | -27.8817 |
| 1663 | 1   | Extremo 1A | -0.085    | -35.721 | 0.591  | -0.6853 | -0.3039 | -9.2265  |
| 1664 | 0   | Extremo 1A | -0.008388 | -18.008 | 0.055  | -0.3303 | 0.0225  | -9.8212  |
| 1664 | 0.3 | Extremo 2A | -0.008388 | -16.506 | 0.055  | -0.3303 | 0.0059  | -4.6439  |
| 1664 | 0.6 | Extremo 2A | -0.008388 | -15.005 | 0.055  | -0.3303 | -0.0107 | 0.0827   |
| 1664 | 0   | Extremo 2A | -0.008198 | -17.973 | 0.158  | -0.2384 | 0.0562  | -9.7987  |
| 1664 | 0.3 | Extremo 1A | -0.008198 | -16.471 | 0.158  | -0.2384 | 0.0087  | -4.6322  |
| 1664 | 0.6 | Extremo 1A | -0.008198 | -14.969 | 0.158  | -0.2384 | -0.0388 | 0.0838   |
| 1665 | 0   | Extremo 1A | -0.014    | 14.651  | -0.287 | -0.342  | -0.0707 | 0.1234   |
| 1665 | 0.3 | Extremo 2A | -0.014    | 16.153  | -0.287 | -0.342  | 0.0154  | -4.4972  |
| 1665 | 0.6 | Extremo 2A | -0.014    | 17.655  | -0.287 | -0.342  | 0.1015  | -9.5685  |
| 1665 | 0   | Extremo 2A | -0.011    | 14.674  | -0.182 | -0.2105 | -0.0447 | 0.1177   |
| 1665 | 0.3 | Extremo 1A | -0.011    | 16.176  | -0.182 | -0.2105 | 0.0099  | -4.5098  |
| 1665 | 0.6 | Extremo 1A | -0.011    | 17.678  | -0.182 | -0.2105 | 0.0645  | -9.588   |
| 1666 | 0   | Extremo 1A | -0.14     | 33.932  | -1.076 | -1.3709 | -0.5557 | -8.661   |
| 1666 | 0.5 | Extremo 2A | -0.14     | 37.111  | -1.076 | -1.3709 | -0.0179 | -26.4218 |
| 1666 | 1   | Extremo 2A | -0.14     | 40.289  | -1.076 | -1.3709 | 0.5199  | -45.7716 |
| 1666 | 0   | Extremo 2A | -0.118    | 34.002  | -0.684 | -0.9393 | -0.3514 | -8.7182  |
| 1666 | 0.5 | Extremo 1A | -0.118    | 37.18   | -0.684 | -0.9393 | -0.0095 | -26.5138 |
| 1666 | 1   | Extremo 1A | -0.118    | 40.358  | -0.684 | -0.9393 | 0.3324  | -45.8985 |
| 1668 | 0   | Extremo 1A | -0.081    | -41.871 | 0.311  | 0.8627  | 0.1738  | -47.6169 |
| 1668 | 0.5 | Extremo 2A | -0.081    | -38.693 | 0.311  | 0.8627  | 0.0182  | -27.4757 |
| 1668 | 1   | Extremo 2A | -0.081    | -35.515 | 0.311  | 0.8627  | -0.1375 | -8.9236  |
| 1668 | 0   | Extremo 2A | -0.098    | -41.704 | 0.726  | 1.1415  | 0.3505  | -47.4127 |
| 1668 | 0.5 | Extremo 1A | -0.098    | -38.526 | 0.726  | 1.1415  | -0.0123 | -27.3552 |
| 1668 | 1   | Extremo 1A | -0.098    | -35.348 | 0.726  | 1.1415  | -0.3752 | -8.8867  |
| 1669 | 0   | Extremo 1A | -0.007903 | -17.941 | 0.088  | 0.1734  | 0.0337  | -9.754   |
| 1669 | 0.3 | Extremo 2A | -0.007903 | -16.439 | 0.088  | 0.1734  | 0.0074  |          |



|      |     |            |        |         |        |         |         |          |
|------|-----|------------|--------|---------|--------|---------|---------|----------|
| 1673 | 1   | Extremo 2A | -0.151 | -36.388 | 0.491  | 1.9625  | -0.2276 | -9.4951  |
| 1673 | 0   | Extremo 2A | -0.146 | -42.585 | 0.912  | 2.3394  | 0.4449  | -48.8337 |
| 1673 | 0.5 | Extremo 1A | -0.146 | -39.407 | 0.912  | 2.3394  | -0.011  | -28.3357 |
| 1673 | 1   | Extremo 1A | -0.146 | -36.229 | 0.912  | 2.3394  | -0.4669 | -9.4267  |
| 1674 | 0   | Extremo 1A | -0.015 | -18.095 | 0.133  | 0.5608  | 0.0497  | -9.8949  |
| 1674 | 0.3 | Extremo 2A | -0.015 | -16.593 | 0.133  | 0.5608  | 0.0098  | -4.6918  |
| 1674 | 0.6 | Extremo 2A | -0.015 | -15.091 | 0.133  | 0.5608  | -0.0302 | -0.0609  |
| 1674 | 0   | Extremo 2A | -0.014 | -18.059 | 0.242  | 0.6774  | 0.086   | -9.8674  |
| 1674 | 0.3 | Extremo 1A | -0.014 | -16.557 | 0.242  | 0.6774  | 0.0133  | -4.6751  |
| 1674 | 0.6 | Extremo 1A | -0.014 | -15.055 | 0.242  | 0.6774  | -0.0594 | 0.0667   |
| 1675 | 0   | Extremo 1A | -0.018 | 14.864  | -0.411 | -0.8946 | -0.1009 | -0.0107  |
| 1675 | 0.3 | Extremo 2A | -0.018 | 16.366  | -0.411 | -0.8946 | 0.0224  | -4.6953  |
| 1675 | 0.6 | Extremo 2A | -0.018 | 17.868  | -0.411 | -0.8946 | 0.1456  | -9.8305  |
| 1675 | 0   | Extremo 2A | -0.017 | 14.882  | -0.302 | -0.7332 | -0.073  | -0.0137  |
| 1675 | 0.3 | Extremo 1A | -0.017 | 16.384  | -0.302 | -0.7332 | 0.0177  | -4.7035  |
| 1675 | 0.6 | Extremo 1A | -0.017 | 17.885  | -0.302 | -0.7332 | 0.1085  | -9.8438  |
| 1676 | 0   | Extremo 1A | -0.188 | 33.655  | -1.532 | -2.559  | -0.7919 | -9.9928  |
| 1676 | 0.5 | Extremo 2A | -0.188 | 36.834  | -1.532 | -2.559  | -0.0261 | -27.6151 |
| 1676 | 1   | Extremo 2A | -0.188 | 40.012  | -1.532 | -2.559  | 0.7396  | -46.8264 |
| 1676 | 0   | Extremo 2A | -0.179 | 33.726  | -1.125 | -2.038  | -0.5678 | -10.025  |
| 1676 | 0.5 | Extremo 1A | -0.179 | 36.904  | -1.125 | -2.038  | -0.0051 | -27.6823 |
| 1676 | 1   | Extremo 1A | -0.179 | 40.082  | -1.125 | -2.038  | 0.7396  | -46.9286 |
| 1678 | 0   | Extremo 1A | -0.203 | -40.385 | 0.75   | 0.6904  | 0.3925  | -47.6935 |
| 1678 | 0.5 | Extremo 2A | -0.203 | -37.207 | 0.75   | 0.6904  | 0.0176  | -28.2953 |
| 1678 | 1   | Extremo 2A | -0.203 | -34.029 | 0.75   | 0.6904  | -0.3573 | -10.4862 |
| 1678 | 0   | Extremo 2A | -0.189 | -40.303 | 1.161  | 1.2118  | 0.572   | -47.5296 |
| 1678 | 0.5 | Extremo 1A | -0.189 | -37.125 | 1.161  | 1.2118  | -0.0088 | -28.1726 |
| 1678 | 1   | Extremo 1A | -0.189 | -33.947 | 1.161  | 1.2118  | -0.5895 | -10.4047 |
| 1679 | 0   | Extremo 1A | -0.02  | -18.039 | 0.204  | 0.4088  | 0.0754  | -9.9811  |
| 1679 | 0.3 | Extremo 2A | -0.02  | -16.537 | 0.204  | 0.4088  | 0.0142  | -4.7946  |
| 1679 | 0.6 | Extremo 2A | -0.02  | -15.036 | 0.204  | 0.4088  | -0.0471 | -0.0587  |
| 1679 | 0   | Extremo 2A | -0.018 | -18.009 | 0.311  | 0.5612  | 0.1111  | -9.9552  |
| 1679 | 0.3 | Extremo 1A | -0.018 | -16.507 | 0.311  | 0.5612  | 0.0178  | -4.7777  |
| 1679 | 0.6 | Extremo 1A | -0.018 | -15.005 | 0.311  | 0.5612  | -0.0755 | -0.0508  |
| 1680 | 0   | Extremo 1A | -0.023 | 14.75   | -0.495 | -0.6994 | -0.1214 | -0.0507  |
| 1680 | 0.3 | Extremo 2A | -0.023 | 16.252  | -0.495 | -0.6994 | 0.0272  | -4.7011  |
| 1680 | 0.6 | Extremo 2A | -0.023 | 17.754  | -0.495 | -0.6994 | 0.1759  | -9.802   |
| 1680 | 0   | Extremo 2A | -0.022 | 14.764  | -0.386 | -0.5244 | -0.0927 | -0.0539  |
| 1680 | 0.3 | Extremo 1A | -0.022 | 16.265  | -0.386 | -0.5244 | 0.0231  | -4.7083  |
| 1680 | 0.6 | Extremo 1A | -0.022 | 17.767  | -0.386 | -0.5244 | 0.1388  | -9.8132  |
| 1681 | 0   | Extremo 1A | -0.239 | 32.502  | -1.848 | -1.7772 | -0.9523 | -10.1685 |
| 1681 | 0.5 | Extremo 2A | -0.239 | 35.68   | -1.848 | -1.7772 | -0.0281 | -27.214  |
| 1681 | 1   | Extremo 2A | -0.239 | 38.858  | -1.848 | -1.7772 | 0.8961  | -45.8486 |
| 1681 | 0   | Extremo 2A | -0.229 | 32.541  | -1.431 | -1.2101 | -0.7191 | -10.2013 |
| 1681 | 0.5 | Extremo 1A | -0.229 | 35.719  | -1.431 | -1.2101 | -0.0034 | -27.2664 |
| 1681 | 1   | Extremo 1A | -0.229 | 38.897  | -1.431 | -1.2101 | 0.7123  | -45.9206 |
| 1683 | 0   | Extremo 1A | -0.258 | -38.726 | 1.088  | -0.6487 | 0.5603  | -46.0067 |
| 1683 | 0.5 | Extremo 2A | -0.258 | -35.548 | 1.088  | -0.6487 | 0.0161  | -27.4381 |
| 1683 | 1   | Extremo 2A | -0.258 | -32.37  | 1.088  | -0.6487 | -0.5281 | -10.4585 |
| 1683 | 0   | Extremo 2A | -0.242 | -38.688 | 1.482  | -0.0226 | 0.7331  | -45.9117 |
| 1683 | 0.5 | Extremo 1A | -0.242 | -35.51  | 1.482  | -0.0226 | -0.0078 | -27.362  |
| 1683 | 1   | Extremo 1A | -0.242 | -32.332 | 1.482  | -0.0226 | -0.7488 | -10.4014 |
| 1684 | 0   | Extremo 1A | -0.025 | -17.807 | 0.297  | 0.0306  | 0.1088  | -9.8685  |
| 1684 | 0.3 | Extremo 2A | -0.025 | -16.305 | 0.297  | 0.0306  | 0.0198  | -4.7518  |
| 1684 | 0.6 | Extremo 2A | -0.025 | -14.803 | 0.297  | 0.0306  | -0.0692 | -0.0856  |
| 1684 | 0   | Extremo 2A | -0.024 | -17.788 | 0.399  | 0.2145  | 0.1432  | -9.8512  |
| 1684 | 0.3 | Extremo 1A | -0.024 | -16.286 | 0.399  | 0.2145  | 0.0235  | -4.7401  |
| 1684 | 0.6 | Extremo 1A | -0.024 | -14.784 | 0.399  | 0.2145  | -0.0963 | -0.0796  |
| 1685 | 0   | Extremo 1A | -0.029 | 14.649  | -0.604 | -0.5208 | -0.1475 | -0.0413  |
| 1685 | 0.3 | Extremo 2A | -0.029 | 16.151  | -0.604 | -0.5208 | 0.0338  | -4.6612  |
| 1685 | 0.6 | Extremo 2A | -0.029 | 17.652  | -0.604 | -0.5208 | 0.2151  | -9.7316  |
| 1685 | 0   | Extremo 2A | -0.029 | 14.657  | -0.492 | -0.3318 | -0.118  | -0.0446  |
| 1685 | 0.3 | Extremo 1A | -0.029 | 16.159  | -0.492 | -0.3318 | 0.0297  | -4.667   |
| 1685 | 0.6 | Extremo 1A | -0.029 | 17.661  | -0.492 | -0.3318 | 0.1775  | -9.7399  |
| 1686 | 0   | Extremo 1A | -0.305 | 32.105  | -2.252 | -1.3734 | -1.1545 | -9.9893  |
| 1686 | 0.5 | Extremo 2A | -0.305 | 35.283  | -2.252 | -1.3734 | -0.0287 | -26.8362 |
| 1686 | 1   | Extremo 2A | -0.305 | 38.461  | -2.252 | -1.3734 | 1.0971  | -45.2723 |
| 1686 | 0   | Extremo 2A | -0.296 | 32.116  | -1.823 | -0.7628 | -0.9137 | -10.0192 |
| 1686 | 0.5 | Extremo 1A | -0.296 | 35.294  | -1.823 | -0.7628 | -0.0023 | -26.8717 |
| 1686 | 1   | Extremo 1A | -0.296 | 38.472  | -1.823 | -0.7628 | 0.909   | -45.3131 |
| 1688 | 0   | Extremo 1A | -0.329 | -38.178 | 1.522  | -1.1917 | 0.7743  | -45.0455 |
| 1688 | 0.5 | Extremo 2A | -0.329 | -35     | 1.522  | -1.1917 | 0.0135  | -26.7512 |

|      |     |            |        |         |        |         |         |          |
|------|-----|------------|--------|---------|--------|---------|---------|----------|
| 1688 | 1   | Extremo 2A | -0.329 | -31.821 | 1.522  | -1.1917 | -0.7473 | -10.046  |
| 1688 | 0   | Extremo 2A | -0.314 | -38.153 | 1.894  | -0.5192 | 0.9393  | -44.9986 |
| 1688 | 0.5 | Extremo 1A | -0.314 | -34.975 | 1.894  | -0.5192 | -0.0078 | -26.7167 |
| 1688 | 1   | Extremo 1A | -0.314 | -31.797 | 1.894  | -0.5192 | -0.9548 | -10.0239 |
| 1689 | 0   | Extremo 1A | -0.032 | -17.627 | 0.414  | -0.2261 | 0.1508  | -9.7281  |
| 1689 | 0.3 | Extremo 2A | -0.032 | -16.125 | 0.414  | -0.2261 | 0.0267  | -4.6654  |
| 1689 | 0.6 | Extremo 2A | -0.032 | -14.623 | 0.414  | -0.2261 | -0.0974 | -0.0531  |
| 1689 | 0   | Extremo 2A | -0.03  | -17.618 | 0.512  | -0.0255 | 0.1841  | -9.7202  |
| 1689 | 0.3 | Extremo 1A | -0.03  | -16.116 | 0.512  | -0.0255 | 0.0305  | -4.6602  |
| 1689 | 0.6 | Extremo 1A | -0.03  | -14.614 | 0.512  | -0.0255 | -0.1231 | -0.0507  |
| 1690 | 0   | Extremo 1A | -0.037 | 14.604  | -0.742 | -0.421  | -0.1804 | -0.0255  |
| 1690 | 0.3 | Extremo 2A | -0.037 | 16.106  | -0.742 | -0.421  | 0.0422  | -4.6319  |
| 1690 | 0.6 | Extremo 2A | -0.037 | 17.608  | -0.742 | -0.421  | 0.2647  | -9.6889  |
| 1690 | 0   | Extremo 2A | -0.037 | 14.608  | -0.629 | -0.2193 | -0.1504 | -0.0281  |
| 1690 | 0.3 | Extremo 1A | -0.037 | 16.109  | -0.629 | -0.2193 | 0.0382  | -4.6357  |
| 1690 | 0.6 | Extremo 1A | -0.037 | 17.611  | -0.629 | -0.2193 | 0.2267  | -9.6938  |
| 1691 | 0   | Extremo 1A | -0.381 | 32.054  | -2.761 | -1.275  | -1.4088 | -9.8358  |
| 1691 | 0.5 | Extremo 2A | -0.381 | 35.233  | -2.761 | -1.275  | -0.0283 | -26.6576 |
| 1691 | 1   | Extremo 2A | -0.381 | 38.411  | -2.761 | -1.275  | 1.3522  | -45.0684 |
| 1691 | 0   | Extremo 2A | -0.379 | 32.046  | -2.325 | -0.6236 | -1.1638 | -9.8586  |
| 1691 | 0.5 | Extremo 1A | -0.379 | 35.224  | -2.325 | -0.6236 | -0.0015 | -26.6762 |
| 1691 | 1   | Extremo 1A | -0.379 | 38.402  | -2.325 | -0.6236 | 1.1608  | -45.0828 |
| 1693 | 0   | Extremo 1A | -0.421 | -38.068 | 2.075  | -1.1879 | 1.0472  | -44.6442 |
| 1693 | 0.5 | Extremo 2A | -0.421 | -34.89  | 2.075  | -1.1879 | 0.0097  | -26.4046 |
| 1693 | 1   | Extremo 2A | -0.421 | -31.712 | 2.075  | -1.1879 | -1.0277 | -9.7541  |
| 1693 | 0   | Extremo 2A | -0.402 | -38.058 | 2.424  | -0.5209 | 1.2038  | -44.6355 |
| 1693 | 0.5 | Extremo 1A | -0.402 | -34.88  | 2.424  | -0.5209 | -0.0081 | -26.4011 |
| 1693 | 1   | Extremo 1A | -0.402 | -31.702 | 2.424  | -0.5209 | -1.2201 | -9.7558  |
| 1694 | 0   | Extremo 1A | -0.041 | -17.541 | 0.563  | -0.3216 | 0.2043  | -9.645   |
| 1694 | 0.3 | Extremo 2A | -0.041 | -16.039 | 0.563  | -0.3216 | 0.0354  | -4.6081  |
| 1694 | 0.6 | Extremo 2A | -0.041 | -14.537 | 0.563  | -0.3216 | -0.1335 | -0.0218  |
| 1694 | 0   | Extremo 2A | -0.039 | -17.539 | 0.656  | -0.1188 | 0.2362  | -9.6439  |
| 1694 | 0.3 | Extremo 1A | -0.039 | -16.037 | 0.656  | -0.1188 | 0.0394  | -4.6075  |
| 1694 | 0.6 | Extremo 1A | -0.039 | -14.535 | 0.656  | -0.1188 | -0.1574 | -0.0216  |
| 1695 | 0   | Extremo 1A | -0.045 | 14.608  | -0.909 | -0.3675 | -0.221  | -0.0153  |
| 1695 | 0.3 | Extremo 2A | -0.045 | 16.11   | -0.909 | -0.3675 | 0.0518  | -4.6231  |
| 1695 | 0.6 | Extremo 2A | -0.045 | 17.612  | -0.909 | -0.3675 | 0.3246  | -9.6814  |
| 1695 | 0   | Extremo 2A | -0.045 | 14.607  | -0.798 | -0.1571 | -0.1913 | -0.0161  |
| 1695 | 0.3 | Extremo 1A | -0.045 | 16.109  | -0.798 | -0.1571 | 0.0482  | -4.6236  |
| 1695 | 0.6 | Extremo 1A | -0.045 | 17.611  | -0.798 | -0.1571 | 0.2877  | -9.6817  |
| 1696 | 0   | Extremo 1A | -0.461 | 32.171  | -3.395 | -1.2789 | -1.7266 | -9.7762  |
| 1696 | 0.5 | Extremo 2A | -0.461 | 35.349  | -3.395 | -1.2789 | -0.0292 | -26.6563 |
| 1696 | 1   | Extremo 2A | -0.461 | 38.527  | -3.395 | -1.2789 | 1.6681  | -45.1255 |
| 1696 | 0   | Extremo 2A | -0.47  | 32.154  | -2.96  | -0.5961 | -1.4822 | -9.7819  |
| 1696 | 0.5 | Extremo 1A | -0.47  | 35.332  | -2.96  | -0.5961 | -0.0021 | -26.6534 |
| 1696 | 1   | Extremo 1A | -0.47  | 38.51   | -2.96  | -0.5961 | 1.4779  | -45.1139 |
| 1698 | 0   | Extremo 1A | -0.531 | -38.164 | 2.779  | -0.9886 | 1.3942  | -44.6234 |
| 1698 | 0.5 | Extremo 2A | -0.531 | -34.985 | 2.779  | -0.9886 | 0.0046  | -26.3361 |
| 1698 | 1   | Extremo 2A | -0.531 | -31.807 | 2.779  | -0.9886 | -1.3849 | -9.6379  |
| 1698 | 0   | Extremo 2A | -0.499 | -38.186 | 3.096  | -0.3505 | 1.5377  | -44.6423 |
| 1698 | 0.5 | Extremo 1A | -0.499 | -35.008 | 3.096  | -0.3505 | -0.0103 | -26.3436 |
| 1698 | 1   | Extremo 1A | -0.499 | -31.83  | 3.096  | -0.3505 | -1.5583 | -9.634   |
| 1699 | 0   | Extremo 1A | -0.051 | -17.53  | 0.752  | -0.3309 | 0.272   | -9.6209  |
| 1699 | 0.3 | Extremo 2A | -0.051 | -16.028 | 0.752  | -0.3309 | 0.0464  | -4.5872  |
| 1699 | 0.6 | Extremo 2A | -0.051 | -14.526 | 0.752  | -0.3309 | -0.1793 | -0.0041  |
| 1699 | 0   | Extremo 2A | -0.048 | -17.532 | 0.836  | -0.1    |         |          |



|      |     |            |        |         |        |         |         |           |
|------|-----|------------|--------|---------|--------|---------|---------|-----------|
| 1703 | 1   | Extremo 2A | -0.693 | -32.218 | 3.686  | -0.7396 | -1.8428 | -9.5285   |
| 1703 | 0   | Extremo 2A | -0.665 | -38.612 | 3.958  | -0.071  | 1.9622  | -44.9535  |
| 1703 | 0.5 | Extremo 1A | -0.665 | -35.433 | 3.958  | -0.071  | -0.0169 | -26.4422  |
| 1703 | 1   | Extremo 1A | -0.665 | -32.255 | 3.958  | -0.071  | -1.996  | -9.52     |
| 1704 | 0   | Extremo 1A | -0.067 | -17.548 | 0.996  | -0.2891 | 0.3596  | -9.6164   |
| 1704 | 0.3 | Extremo 2A | -0.067 | -16.047 | 0.996  | -0.2891 | 0.0607  | -4.5772   |
| 1704 | 0.6 | Extremo 2A | -0.067 | -14.545 | 0.996  | -0.2891 | -0.2381 | 0.0115    |
| 1704 | 0   | Extremo 2A | -0.064 | -17.552 | 1.067  | -0.0824 | 0.3834  | -9.6173   |
| 1704 | 0.3 | Extremo 1A | -0.064 | -16.05  | 1.067  | -0.0824 | 0.0632  | -4.577    |
| 1704 | 0.6 | Extremo 1A | -0.064 | -14.548 | 1.067  | -0.0824 | -0.2569 | 0.0128    |
| 1705 | 0   | Extremo 1A | -0.079 | 14.649  | -1.413 | -0.3333 | -0.3427 | -0.0024   |
| 1705 | 0.3 | Extremo 2A | -0.079 | 16.151  | -1.413 | -0.3333 | 0.0813  | -4.6223   |
| 1705 | 0.6 | Extremo 2A | -0.079 | 17.653  | -1.413 | -0.3333 | 0.5053  | -9.6929   |
| 1705 | 0   | Extremo 2A | -0.078 | 14.645  | -1.303 | -0.1343 | -0.3129 | -0.000777 |
| 1705 | 0.3 | Extremo 1A | -0.078 | 16.147  | -1.303 | -0.1343 | 0.078   | -4.6195   |
| 1705 | 0.6 | Extremo 1A | -0.078 | 17.648  | -1.303 | -0.1343 | 0.469   | -9.6887   |
| 1706 | 0   | Extremo 1A | -0.815 | 32.606  | -5.273 | -1.264  | -2.6735 | -9.7163   |
| 1706 | 0.5 | Extremo 2A | -0.815 | 35.784  | -5.273 | -1.264  | -0.0369 | -26.8135  |
| 1706 | 1   | Extremo 2A | -0.815 | 38.962  | -5.273 | -1.264  | 2.5997  | -45.4999  |
| 1706 | 0   | Extremo 2A | -0.809 | 32.601  | -4.839 | -0.6364 | -2.428  | -9.7004   |
| 1706 | 0.5 | Extremo 1A | -0.809 | 35.779  | -4.839 | -0.6364 | -0.0083 | -26.7956  |
| 1706 | 1   | Extremo 1A | -0.809 | 38.958  | -4.839 | -0.6364 | 2.4113  | -45.4798  |
| 1708 | 0   | Extremo 1A | -0.881 | -38.73  | 4.852  | -0.5258 | 2.4224  | -45.0922  |
| 1708 | 0.5 | Extremo 2A | -0.881 | -35.551 | 4.852  | -0.5258 | -0.0037 | -26.522   |
| 1708 | 1   | Extremo 2A | -0.881 | -32.373 | 4.852  | -0.5258 | -2.4298 | -9.5408   |
| 1708 | 0   | Extremo 2A | -0.859 | -38.749 | 5.085  | 0.1516  | 2.52    | -45.1168  |
| 1708 | 0.5 | Extremo 1A | -0.859 | -35.571 | 5.085  | 0.1516  | -0.0224 | -26.5367  |
| 1708 | 1   | Extremo 1A | -0.859 | -32.393 | 5.085  | 0.1516  | -2.5649 | -9.5456   |
| 1709 | 0   | Extremo 1A | -0.085 | -17.578 | 1.311  | -0.2255 | 0.4727  | -9.6309   |
| 1709 | 0.3 | Extremo 2A | -0.085 | -16.077 | 1.311  | -0.2255 | 0.0795  | -4.5827   |
| 1709 | 0.6 | Extremo 2A | -0.085 | -14.575 | 1.311  | -0.2255 | -0.3138 | 0.015     |
| 1709 | 0   | Extremo 2A | -0.083 | -17.583 | 1.371  | -0.0163 | 0.4926  | -9.6337   |
| 1709 | 0.3 | Extremo 1A | -0.083 | -16.081 | 1.371  | -0.0163 | 0.0812  | -4.5842   |
| 1709 | 0.6 | Extremo 1A | -0.083 | -14.579 | 1.371  | -0.0163 | -0.3301 | 0.0147    |
| 1710 | 0   | Extremo 1A | -0.1   | 14.646  | -1.784 | -0.3329 | -0.4316 | 0.0026    |
| 1710 | 0.3 | Extremo 2A | -0.1   | 16.148  | -1.784 | -0.3329 | 0.1036  | -4.6167   |
| 1710 | 0.6 | Extremo 2A | -0.1   | 17.65   | -1.784 | -0.3329 | 0.6389  | -9.6865   |
| 1710 | 0   | Extremo 2A | -0.1   | 14.643  | -1.672 | -0.139  | -0.4015 | 0.0032    |
| 1710 | 0.3 | Extremo 1A | -0.1   | 16.145  | -1.672 | -0.139  | 0.1     | -4.6149   |
| 1710 | 0.6 | Extremo 1A | -0.1   | 17.646  | -1.672 | -0.139  | 0.6016  | -9.6836   |
| 1711 | 0   | Extremo 1A | -1.038 | 32.638  | -6.646 | -1.2639 | -3.3625 | -9.6691   |
| 1711 | 0.5 | Extremo 2A | -1.038 | 35.816  | -6.646 | -1.2639 | -0.0396 | -26.7826  |
| 1711 | 1   | Extremo 2A | -1.038 | 38.994  | -6.646 | -1.2639 | 3.2833  | -45.4852  |
| 1711 | 0   | Extremo 2A | -1.035 | 32.624  | -6.207 | -0.6524 | -3.1147 | -9.6623   |
| 1711 | 0.5 | Extremo 1A | -1.035 | 35.802  | -6.207 | -0.6524 | -0.0113 | -26.769   |
| 1711 | 1   | Extremo 1A | -1.035 | 38.981  | -6.207 | -0.6524 | 3.0921  | -45.4647  |
| 1713 | 0   | Extremo 1A | -1.124 | -38.819 | 6.336  | -0.3157 | 3.1572  | -45.1437  |
| 1713 | 0.5 | Extremo 2A | -1.124 | -35.641 | 6.336  | -0.3157 | -0.0106 | -26.5289  |
| 1713 | 1   | Extremo 2A | -1.124 | -32.463 | 6.336  | -0.3157 | -3.1785 | -9.503    |
| 1713 | 0   | Extremo 2A | -1.101 | -38.819 | 6.533  | 0.3454  | 3.2376  | -45.1635  |
| 1713 | 0.5 | Extremo 1A | -1.101 | -35.641 | 6.533  | 0.3454  | -0.029  | -26.5486  |
| 1713 | 1   | Extremo 1A | -1.101 | -32.463 | 6.533  | 0.3454  | -3.2956 | -9.5229   |
| 1714 | 0   | Extremo 1A | -0.109 | -17.587 | 1.71   | -0.1552 | 0.6161  | -9.6309   |
| 1714 | 0.3 | Extremo 2A | -0.109 | -16.085 | 1.71   | -0.1552 | 0.103   | -4.5802   |
| 1714 | 0.6 | Extremo 2A | -0.109 | -14.583 | 1.71   | -0.1552 | -0.4101 | 0.02      |
| 1714 | 0   | Extremo 2A | -0.106 | -17.591 | 1.762  | 0.0486  | 0.633   | -9.6358   |
| 1714 | 0.3 | Extremo 1A | -0.106 | -16.089 | 1.762  | 0.0486  | 0.1044  | -4.5837   |
| 1714 | 0.6 | Extremo 1A | -0.106 | -14.587 | 1.762  | 0.0486  | -0.4243 | 0.0178    |
| 1715 | 0   | Extremo 1A | -0.126 | 14.639  | -2.249 | -0.3689 | -0.5438 | 0.005     |
| 1715 | 0.3 | Extremo 2A | -0.126 | 16.141  | -2.249 | -0.3689 | 0.1308  | -4.612    |
| 1715 | 0.6 | Extremo 2A | -0.126 | 17.643  | -2.249 | -0.3689 | 0.8054  | -9.6795   |
| 1715 | 0   | Extremo 2A | -0.126 | 14.635  | -2.136 | -0.1753 | -0.5137 | 0.0049    |
| 1715 | 0.3 | Extremo 1A | -0.126 | 16.137  | -2.136 | -0.1753 | 0.1271  | -4.6109   |
| 1715 | 0.6 | Extremo 1A | -0.126 | 17.639  | -2.136 | -0.1753 | 0.768   | -9.6772   |
| 1716 | 0   | Extremo 1A | -1.302 | 32.618  | -8.381 | -1.4655 | -4.2347 | -9.6258   |
| 1716 | 0.5 | Extremo 2A | -1.302 | 35.796  | -8.381 | -1.4655 | -0.044  | -26.7292  |
| 1716 | 1   | Extremo 2A | -1.302 | 38.974  | -8.381 | -1.4655 | 4.1467  | -45.4217  |
| 1716 | 0   | Extremo 2A | -1.306 | 32.594  | -7.943 | -0.8506 | -3.9878 | -9.6256   |
| 1716 | 0.5 | Extremo 1A | -1.306 | 35.772  | -7.943 | -0.8506 | -0.0163 | -26.7171  |
| 1716 | 1   | Extremo 1A | -1.306 | 38.95   | -7.943 | -0.8506 | 3.9552  | -45.3977  |
| 1718 | 0   | Extremo 1A | -1.424 | -38.848 | 8.218  | 0.1026  | 4.0872  | -45.124   |
| 1718 | 0.5 | Extremo 2A | -1.424 | -35.67  | 8.218  | 0.1026  | -0.0219 | -26.4945  |

|      |     |            |        |         |         |         |         |           |
|------|-----|------------|--------|---------|---------|---------|---------|-----------|
| 1718 | 1   | Extremo 2A | -1.424 | -32.492 | 8.218   | 0.1026  | -4.1309 | -9.454    |
| 1718 | 0   | Extremo 2A | -1.393 | -38.848 | 8.376   | 0.7231  | 4.1499  | -45.151   |
| 1718 | 0.5 | Extremo 1A | -1.393 | -35.67  | 8.376   | 0.7231  | -0.038  | -26.5214  |
| 1718 | 1   | Extremo 1A | -1.393 | -32.492 | 8.376   | 0.7231  | -4.226  | -9.4809   |
| 1719 | 0   | Extremo 1A | -0.137 | -17.584 | 2.214   | -0.0464 | 0.7963  | -9.6265   |
| 1719 | 0.3 | Extremo 2A | -0.137 | -16.082 | 2.214   | -0.0464 | 0.132   | -4.5766   |
| 1719 | 0.6 | Extremo 2A | -0.137 | -14.58  | 2.214   | -0.0464 | -0.5323 | 0.0229    |
| 1719 | 0   | Extremo 2A | -0.134 | -17.59  | 2.256   | 0.1454  | 0.8099  | -9.633    |
| 1719 | 0.3 | Extremo 1A | -0.134 | -16.088 | 2.256   | 0.1454  | 0.133   | -4.5812   |
| 1719 | 0.6 | Extremo 1A | -0.134 | -14.587 | 2.256   | 0.1454  | -0.5438 | 0.0201    |
| 1720 | 0   | Extremo 1A | -0.152 | 14.662  | -2.811  | -0.4045 | -0.6822 | -0.0084   |
| 1720 | 0.3 | Extremo 2A | -0.152 | 16.163  | -2.811  | -0.4045 | 0.161   | -4.6322   |
| 1720 | 0.6 | Extremo 2A | -0.152 | 17.665  | -2.811  | -0.4045 | 1.0043  | -9.7065   |
| 1720 | 0   | Extremo 2A | -0.154 | 14.657  | -2.703  | -0.2097 | -0.6531 | -0.0078   |
| 1720 | 0.3 | Extremo 1A | -0.154 | 16.159  | -2.703  | -0.2097 | 0.1579  | -4.6302   |
| 1720 | 0.6 | Extremo 1A | -0.154 | 17.661  | -2.703  | -0.2097 | 0.9688  | -9.7031   |
| 1721 | 0   | Extremo 1A | -1.577 | 32.544  | -10.538 | -1.7869 | -5.3273 | -9.7597   |
| 1721 | 0.5 | Extremo 2A | -1.577 | 35.722  | -10.538 | -1.7869 | -0.0584 | -26.8262  |
| 1721 | 1   | Extremo 2A | -1.577 | 38.9    | -10.538 | -1.7869 | 5.2106  | -45.4818  |
| 1721 | 0   | Extremo 2A | -1.593 | 32.52   | -10.111 | -1.1606 | -5.0861 | -9.753    |
| 1721 | 0.5 | Extremo 1A | -1.593 | 35.698  | -10.111 | -1.1606 | -0.0307 | -26.8077  |
| 1721 | 1   | Extremo 1A | -1.593 | 38.876  | -10.111 | -1.1606 | 5.0247  | -45.4514  |
| 1723 | 0   | Extremo 1A | -1.757 | -38.704 | 10.582  | 0.6861  | 5.2477  | -45.1535  |
| 1723 | 0.5 | Extremo 2A | -1.757 | -35.526 | 10.582  | 0.6861  | -0.0434 | -26.596   |
| 1723 | 1   | Extremo 2A | -1.757 | -32.348 | 10.582  | 0.6861  | -5.3346 | -9.6276   |
| 1723 | 0   | Extremo 2A | -1.705 | -38.735 | 10.684  | 1.2579  | 5.2849  | -45.1942  |
| 1723 | 0.5 | Extremo 1A | -1.705 | -35.557 | 10.684  | 1.2579  | -0.0572 | -26.6212  |
| 1723 | 1   | Extremo 1A | -1.705 | -32.379 | 10.684  | 1.2579  | -5.3994 | -9.6373   |
| 1724 | 0   | Extremo 1A | -0.17  | -17.608 | 2.836   | 0.0622  | 1.0167  | -9.6588   |
| 1724 | 0.3 | Extremo 2A | -0.17  | -16.106 | 2.836   | 0.0622  | 0.1658  | -4.6018   |
| 1724 | 0.6 | Extremo 2A | -0.17  | -14.604 | 2.836   | 0.0622  | -0.6851 | 0.0047    |
| 1724 | 0   | Extremo 2A | -0.165 | -17.614 | 2.862   | 0.243   | 1.0244  | -9.6635   |
| 1724 | 0.3 | Extremo 1A | -0.165 | -16.112 | 2.862   | 0.243   | 0.1659  | -4.6045   |
| 1724 | 0.6 | Extremo 1A | -0.165 | -14.61  | 2.862   | 0.243   | -0.6927 | 0.0039    |
| 1725 | 0   | Extremo 1A | -0.202 | 14.696  | -3.52   | -0.3385 | -0.8585 | -0.0194   |
| 1725 | 0.3 | Extremo 2A | -0.202 | 16.198  | -3.52   | -0.3385 | 0.1974  | -4.6536   |
| 1725 | 0.6 | Extremo 2A | -0.202 | 17.7    | -3.52   | -0.3385 | 1.2533  | -9.7384   |
| 1725 | 0   | Extremo 2A | -0.202 | 14.691  | -3.418  | -0.1509 | -0.8303 | -0.0174   |
| 1725 | 0.3 | Extremo 1A | -0.202 | 16.193  | -3.418  | -0.1509 | 0.1949  | -4.65     |
| 1725 | 0.6 | Extremo 1A | -0.202 | 17.695  | -3.418  | -0.1509 | 1.2202  | -9.7332   |
| 1726 | 0   | Extremo 1A | -2.098 | 32.73   | -13.266 | -1.5601 | -6.7272 | -9.8742   |
| 1726 | 0.5 | Extremo 2A | -2.098 | 35.908  | -13.266 | -1.5601 | -0.0941 | -27.0335  |
| 1726 | 1   | Extremo 2A | -2.098 | 39.086  | -13.266 | -1.5601 | 6.539   | -45.7819  |
| 1726 | 0   | Extremo 2A | -2.102 | 32.723  | -12.854 | -0.9647 | -6.4913 | -9.8542   |
| 1726 | 0.5 | Extremo 1A | -2.102 | 35.901  | -12.854 | -0.9647 | -0.0643 | -27.0102  |
| 1726 | 1   | Extremo 1A | -2.102 | 39.079  | -12.854 | -0.9647 | 6.3627  | -45.7553  |
| 1728 | 0   | Extremo 1A | -2.31  | -38.847 | 13.594  | 0.5715  | 6.7169  | -45.443   |
| 1728 | 0.5 | Extremo 2A | -2.31  | -35.669 | 13.594  | 0.5715  | -0.0799 | -26.8139  |
| 1728 | 1   | Extremo 2A | -2.31  | -32.491 | 13.594  | 0.5715  | -6.8767 | -9.774    |
| 1728 | 0   | Extremo 2A | -2.255 | -38.892 | 13.614  | 1.1631  | 6.7094  | -45.4854  |
| 1728 | 0.5 | Extremo 1A | -2.255 | -35.714 | 13.614  | 1.1631  | -0.0976 | -26.8338  |
| 1728 | 1   | Extremo 1A | -2.255 | -32.536 | 13.614  | 1.1631  | -6.9045 | -9.7713   |
| 1729 | 0   | Extremo 1A | -0.222 | -17.642 | 3.625   | 0.0374  | 1.2949  | -9.695    |
| 1729 | 0.3 | Extremo 2A | -0.222 | -16.14  | 3.625   | 0.0374  | 0.2073  | -4.6276   |
| 1729 | 0.6 | Extremo 2A | -0.222 | -14.639 | 3.625   | 0.0374  | -0.8802 | -0.0108   |
| 1729 | 0   | Extremo 2A | -0.217 | -17.648 | 3.627   | 0.221   | 1.2938  | -9.6981</ |



|      |     |            |        |         |         |         |          |          |
|------|-----|------------|--------|---------|---------|---------|----------|----------|
| 1733 | 1   | Extremo 2A | -2.913 | -32.539 | 17.446  | 0.3257  | -8.8546  | -9.8426  |
| 1733 | 0   | Extremo 2A | -2.854 | -38.923 | 17.377  | 0.922   | 8.536    | -45.5897 |
| 1733 | 0.5 | Extremo 1A | -2.854 | -35.744 | 17.377  | 0.922   | -0.1522  | -26.923  |
| 1733 | 1   | Extremo 1A | -2.854 | -32.566 | 17.377  | 0.922   | -8.8405  | -9.8453  |
| 1734 | 0   | Extremo 1A | -0.28  | -17.673 | 4.63    | -0.0299 | 1.6478   | -9.7191  |
| 1734 | 0.3 | Extremo 2A | -0.28  | -16.171 | 4.63    | -0.0299 | 0.2589   | -4.6425  |
| 1734 | 0.6 | Extremo 2A | -0.28  | -14.669 | 4.63    | -0.0299 | -1.1299  | -0.0165  |
| 1734 | 0   | Extremo 2A | -0.274 | -17.678 | 4.608   | 0.1554  | 1.6377   | -9.722   |
| 1734 | 0.3 | Extremo 1A | -0.274 | -16.176 | 4.608   | 0.1554  | 0.2554   | -4.644   |
| 1734 | 0.6 | Extremo 1A | -0.274 | -14.674 | 4.608   | 0.1554  | -1.1268  | -0.0165  |
| 1735 | 0   | Extremo 1A | -0.316 | 14.715  | -5.551  | -0.1561 | -1.3703  | -0.0101  |
| 1735 | 0.3 | Extremo 2A | -0.316 | 16.217  | -5.551  | -0.1561 | 0.2949   | -4.65    |
| 1735 | 0.6 | Extremo 2A | -0.316 | 17.719  | -5.551  | -0.1561 | 1.9602   | -9.7404  |
| 1735 | 0   | Extremo 2A | -0.316 | 14.714  | -5.451  | 0.0153  | -1.3425  | -0.0091  |
| 1735 | 0.3 | Extremo 1A | -0.316 | 16.215  | -5.451  | 0.0153  | 0.2927   | -4.6485  |
| 1735 | 0.6 | Extremo 1A | -0.316 | 17.717  | -5.451  | 0.0153  | 1.928    | -9.7384  |
| 1736 | 0   | Extremo 1A | -3.303 | 32.866  | -21.17  | -0.9233 | -10.8137 | -9.8188  |
| 1736 | 0.5 | Extremo 2A | -3.303 | 36.044  | -21.17  | -0.9233 | -0.2286  | -27.0465 |
| 1736 | 1   | Extremo 2A | -3.303 | 39.223  | -21.17  | -0.9233 | 10.3564  | -45.8632 |
| 1736 | 0   | Extremo 2A | -3.305 | 32.867  | -20.767 | -0.3809 | -10.5802 | -9.8107  |
| 1736 | 0.5 | Extremo 1A | -3.305 | 36.045  | -20.767 | -0.3809 | -0.1965  | -27.0386 |
| 1736 | 1   | Extremo 1A | -3.305 | 39.223  | -20.767 | -0.3809 | 10.1871  | -45.8556 |
| 1738 | 0   | Extremo 1A | -3.635 | -39.107 | 22.264  | 0.1485  | 10.905   | -45.7028 |
| 1738 | 0.5 | Extremo 2A | -3.635 | -35.929 | 22.264  | 0.1485  | -0.2269  | -26.9437 |
| 1738 | 1   | Extremo 2A | -3.635 | -32.751 | 22.264  | 0.1485  | -11.3587 | -9.7737  |
| 1738 | 0   | Extremo 2A | -3.561 | -39.115 | 22.092  | 0.7377  | 10.7983  | -45.7178 |
| 1738 | 0.5 | Extremo 1A | -3.561 | -35.937 | 22.092  | 0.7377  | -0.2478  | -26.9548 |
| 1738 | 1   | Extremo 1A | -3.561 | -32.759 | 22.092  | 0.7377  | -11.294  | -9.7808  |
| 1739 | 0   | Extremo 1A | -0.348 | -17.693 | 5.864   | -0.0857 | 2.0758   | -9.7206  |
| 1739 | 0.3 | Extremo 2A | -0.348 | -16.191 | 5.864   | -0.0857 | 0.3166   | -4.638   |
| 1739 | 0.6 | Extremo 2A | -0.348 | -14.689 | 5.864   | -0.0857 | -1.4426  | -0.0059  |
| 1739 | 0   | Extremo 2A | -0.341 | -17.696 | 5.816   | 0.0977  | 2.0563   | -9.723   |
| 1739 | 0.3 | Extremo 1A | -0.341 | -16.194 | 5.816   | 0.0977  | 0.3116   | -4.6395  |
| 1739 | 0.6 | Extremo 1A | -0.341 | -14.692 | 5.816   | 0.0977  | -1.433   | -0.0066  |
| 1740 | 0   | Extremo 1A | -0.387 | 14.704  | -6.893  | -0.1624 | -1.7208  | 0.0151   |
| 1740 | 0.3 | Extremo 2A | -0.387 | 16.206  | -6.893  | -0.1624 | 0.347    | -4.6215  |
| 1740 | 0.6 | Extremo 2A | -0.387 | 17.708  | -6.893  | -0.1624 | 2.4148   | -9.7085  |
| 1740 | 0   | Extremo 2A | -0.387 | 14.703  | -6.795  | 0.0078  | -1.6934  | 0.0148   |
| 1740 | 0.3 | Extremo 1A | -0.387 | 16.205  | -6.795  | 0.0078  | 0.345    | -4.6214  |
| 1740 | 0.6 | Extremo 1A | -0.387 | 17.707  | -6.795  | 0.0078  | 2.3834   | -9.7082  |
| 1741 | 0   | Extremo 1A | -4.068 | 33.113  | -26.565 | -0.9344 | -13.6693 | -9.5997  |
| 1741 | 0.5 | Extremo 2A | -4.068 | 36.291  | -26.565 | -0.9344 | -0.3869  | -26.9505 |
| 1741 | 1   | Extremo 2A | -4.068 | 39.469  | -26.565 | -0.9344 | 12.8955  | -45.8903 |
| 1741 | 0   | Extremo 2A | -4.075 | 33.104  | -26.171 | -0.395  | -13.4393 | -9.6013  |
| 1741 | 0.5 | Extremo 1A | -4.075 | 36.282  | -26.171 | -0.395  | -0.3539  | -26.9478 |
| 1741 | 1   | Extremo 1A | -4.075 | 39.46   | -26.171 | -0.395  | 12.7315  | -45.8833 |
| 1743 | 0   | Extremo 1A | -4.506 | -39.506 | 28.214  | 0.188   | 13.7068  | -45.8945 |
| 1743 | 0.5 | Extremo 2A | -4.506 | -36.328 | 28.214  | 0.188   | -0.4004  | -26.9358 |
| 1743 | 1   | Extremo 2A | -4.506 | -33.15  | 28.214  | 0.188   | -14.5075 | -9.5661  |
| 1743 | 0   | Extremo 2A | -4.411 | -39.5   | 27.918  | 0.7658  | 13.5402  | -45.8975 |
| 1743 | 0.5 | Extremo 1A | -4.411 | -36.322 | 27.918  | 0.7658  | -0.4187  | -26.9421 |
| 1743 | 1   | Extremo 1A | -4.411 | -33.143 | 27.918  | 0.7658  | -14.3775 | -9.5759  |
| 1744 | 0   | Extremo 1A | -0.429 | -17.706 | 7.352   | -0.0654 | 2.5815   | -9.7026  |
| 1744 | 0.3 | Extremo 2A | -0.429 | -16.205 | 7.352   | -0.0654 | 0.3758   | -4.616   |
| 1744 | 0.6 | Extremo 2A | -0.429 | -14.703 | 7.352   | -0.0654 | -1.8298  | 0.0201   |
| 1744 | 0   | Extremo 2A | -0.42  | -17.708 | 7.273   | 0.1141  | 2.5514   | -9.7045  |
| 1744 | 0.3 | Extremo 1A | -0.42  | -16.206 | 7.273   | 0.1141  | 0.3696   | -4.6175  |
| 1744 | 0.6 | Extremo 1A | -0.42  | -14.704 | 7.273   | 0.1141  | -1.8122  | 0.019    |
| 1745 | 0   | Extremo 1A | -0.459 | 14.688  | -8.442  | -0.2869 | -2.1432  | 0.0251   |
| 1745 | 0.3 | Extremo 2A | -0.459 | 16.19   | -8.442  | -0.2869 | 0.3895   | -4.6064  |
| 1745 | 0.6 | Extremo 2A | -0.459 | 17.691  | -8.442  | -0.2869 | 2.9221   | -9.6886  |
| 1745 | 0   | Extremo 2A | -0.461 | 14.688  | -8.349  | -0.1134 | -2.117   | 0.0239   |
| 1745 | 0.3 | Extremo 1A | -0.461 | 16.19   | -8.349  | -0.1134 | 0.3879   | -4.6076  |
| 1745 | 0.6 | Extremo 1A | -0.461 | 17.691  | -8.349  | -0.1134 | 2.8927   | -9.6898  |
| 1746 | 0   | Extremo 1A | -4.875 | 33.169  | -33.033 | -1.4603 | -17.1892 | -9.4647  |
| 1746 | 0.5 | Extremo 2A | -4.875 | 36.347  | -33.033 | -1.4603 | -0.6729  | -26.8439 |
| 1746 | 1   | Extremo 2A | -4.875 | 39.525  | -33.033 | -1.4603 | 15.8434  | -45.8121 |
| 1746 | 0   | Extremo 2A | -4.891 | 33.155  | -32.657 | -0.9107 | -16.9676 | -9.4742  |
| 1746 | 0.5 | Extremo 1A | -4.891 | 36.333  | -32.657 | -0.9107 | -0.6392  | -26.8463 |
| 1746 | 1   | Extremo 1A | -4.891 | 39.511  | -32.657 | -0.9107 | 15.6892  | -45.8075 |
| 1748 | 0   | Extremo 1A | -5.453 | -39.709 | 35.411  | 0.7735  | 16.9931  | -45.9327 |
| 1748 | 0.5 | Extremo 2A | -5.453 | -36.531 | 35.411  | 0.7735  | -0.7125  | -26.8727 |

|      |     |            |        |         |         |         |          |          |
|------|-----|------------|--------|---------|---------|---------|----------|----------|
| 1748 | 1   | Extremo 2A | -5.453 | -33.353 | 35.411  | 0.7735  | -18.4182 | -9.4018  |
| 1748 | 0   | Extremo 2A | -5.334 | -39.701 | 34.96   | 1.3324  | 16.7562  | -45.9315 |
| 1748 | 0.5 | Extremo 1A | -5.334 | -36.522 | 34.96   | 1.3324  | -0.7238  | -26.8758 |
| 1748 | 1   | Extremo 1A | -5.334 | -33.344 | 34.96   | 1.3324  | -18.2038 | -9.4091  |
| 1749 | 0   | Extremo 1A | -0.515 | -17.702 | 9.09    | 0.0846  | 3.1534   | -9.6869  |
| 1749 | 0.3 | Extremo 2A | -0.515 | -16.2   | 9.09    | 0.0846  | 0.4264   | -4.6016  |
| 1749 | 0.6 | Extremo 2A | -0.515 | -14.698 | 9.09    | 0.0846  | -2.3007  | 0.0331   |
| 1749 | 0   | Extremo 2A | -0.503 | -17.702 | 8.973   | 0.2591  | 3.111    | -9.6878  |
| 1749 | 0.3 | Extremo 1A | -0.503 | -16.2   | 8.973   | 0.2591  | 0.419    | -4.6024  |
| 1749 | 0.6 | Extremo 1A | -0.503 | -14.698 | 8.973   | 0.2591  | -2.273   | 0.0324   |
| 1750 | 0   | Extremo 1A | -0.514 | 14.724  | -10.108 | -0.3973 | -2.6317  | -0.0202  |
| 1750 | 0.3 | Extremo 2A | -0.514 | 16.226  | -10.108 | -0.3973 | 0.4008   | -4.6626  |
| 1750 | 0.6 | Extremo 2A | -0.514 | 17.727  | -10.108 | -0.3973 | 3.4333   | -9.7555  |
| 1750 | 0   | Extremo 2A | -0.517 | 14.725  | -10.026 | -0.2178 | -2.6076  | -0.0216  |
| 1750 | 0.3 | Extremo 1A | -0.517 | 16.227  | -10.026 | -0.2178 | 0.4001   | -4.6644  |
| 1750 | 0.6 | Extremo 1A | -0.517 | 17.729  | -10.026 | -0.2178 | 3.4078   | -9.7579  |
| 1751 | 0   | Extremo 1A | -5.509 | 32.775  | -40.438 | -2.2352 | -21.4159 | -9.8689  |
| 1751 | 0.5 | Extremo 2A | -5.509 | 35.954  | -40.438 | -2.2352 | -1.197   | -27.0511 |
| 1751 | 1   | Extremo 2A | -5.509 | 39.132  | -40.438 | -2.2352 | 19.022   | -45.8224 |
| 1751 | 0   | Extremo 2A | -5.538 | 32.766  | -40.094 | -1.6648 | -21.209  | -9.88    |
| 1751 | 0.5 | Extremo 1A | -5.538 | 35.944  | -40.094 | -1.6648 | -1.1621  | -27.0577 |
| 1751 | 1   | Extremo 1A | -5.538 | 39.123  | -40.094 | -1.6648 | 18.8848  | -45.8244 |
| 1753 | 0   | Extremo 1A | -6.258 | -39.111 | 43.761  | 1.7445  | 20.6001  | -45.8401 |
| 1753 | 0.5 | Extremo 2A | -6.258 | -35.933 | 43.761  | 1.7445  | -1.2803  | -27.0791 |
| 1753 | 1   | Extremo 2A | -6.258 | -32.755 | 43.761  | 1.7445  | -23.1608 | -9.9071  |
| 1753 | 0   | Extremo 2A | -6.107 | -39.122 | 43.12   | 2.2871  | 20.2807  | -45.8366 |
| 1753 | 0.5 | Extremo 1A | -6.107 | -35.944 | 43.12   | 2.2871  | -1.2792  | -27.0701 |
| 1753 | 1   | Extremo 1A | -6.107 | -32.766 | 43.12   | 2.2871  | -22.8391 | -9.8927  |
| 1754 | 0   | Extremo 1A | -0.586 | -17.735 | 10.994  | 0.2263  | 3.7442   | -9.7652  |
| 1754 | 0.3 | Extremo 2A | -0.586 | -16.233 | 10.994  | 0.2263  | 0.446    | -4.6701  |
| 1754 | 0.6 | Extremo 2A | -0.586 | -14.731 | 10.994  | 0.2263  | -2.8521  | -0.0255  |
| 1754 | 0   | Extremo 2A | -0.571 | -17.733 | 10.832  | 0.3999  | 3.6873   | -9.7621  |
| 1754 | 0.3 | Extremo 1A | -0.571 | -16.231 | 10.832  | 0.3999  | 0.4378   | -4.6676  |
| 1754 | 0.6 | Extremo 1A | -0.571 | -14.729 | 10.832  | 0.3999  | -2.8117  | -0.0236  |
| 1755 | 0   | Extremo 1A | -0.6   | 14.801  | -11.872 | -0.1656 | -3.191   | -0.0729  |
| 1755 | 0.3 | Extremo 2A | -0.6   | 16.303  | -11.872 | -0.1656 | 0.3705   | -4.7385  |
| 1755 | 0.6 | Extremo 2A | -0.6   | 17.805  | -11.872 | -0.1656 | 3.9321   | -9.8547  |
| 1755 | 0   | Extremo 2A | -0.602 | 14.806  | -11.8   | 0.0175  | -3.1693  | -0.0742  |
| 1755 | 0.3 | Extremo 1A | -0.602 | 16.307  | -11.8   | 0.0175  | 0.3707   | -4.7412  |
| 1755 | 0.6 | Extremo 1A | -0.602 | 17.809  | -11.8   | 0.0175  | 3.9107   | -9.8587  |
| 1756 | 0   | Extremo 1A | -6.506 | 32.631  | -48.579 | -1.4013 | -26.4075 | -10.3645 |
| 1756 | 0.5 | Extremo 2A | -6.506 | 35.809  | -48.579 | -1.4013 | -2.1178  | -27.4744 |
| 1756 | 1   | Extremo 2A | -6.506 | 38.987  | -48.579 | -1.4013 | 22.1719  | -46.1733 |
| 1756 | 0   | Extremo 2A | -6.527 | 32.643  | -48.277 | -0.8292 | -26.2179 | -10.3751 |
| 1756 | 0.5 | Extremo 1A | -6.527 | 35.821  | -48.277 | -0.8292 | -2.0795  | -27.4911 |
| 1756 | 1   | Extremo 1A | -6.527 | 38.999  | -48.277 | -0.8292 | 22.0588  | -46.1962 |
| 1758 | 0   | Extremo 1A | -7.431 | -38.761 | 53.089  | 0.6788  | 24.2737  | -46.1222 |
| 1758 | 0.5 | Extremo 2A | -7.431 | -35.583 | 53.089  | 0.6788  | -2.2706  | -27.536  |
| 1758 | 1   | Extremo 2A | -7.431 | -32.405 | 53.089  | 0.6788  | -28.815  | -10.5389 |
| 1758 | 0   | Extremo 2A | -7.262 | -38.773 | 52.222  | 1.2655  | 23.857   | -46.0973 |
| 1758 | 0.5 | Extremo 1A | -7.262 | -35.595 | 52.222  | 1.2655  | -2.2539  | -27.5055 |
| 1758 | 1   | Extremo 1A | -7.262 | -32.416 | 52.222  | 1.2655  | -28.3647 | -10.5028 |
| 1759 | 0   | Extremo 1A | -0.687 | -17.815 | 13.043  | -0.0721 | 4.3351   | -9.8839  |
| 1759 | 0.3 | Extremo 2A | -0.687 | -16.314 | 13.043  | -0.0721 | 0.4223   | -4.7646  |
| 1759 | 0.6 | Extremo 2A | -0.687 | -14.812 | 13.043  | -0.0    |          |          |



|      |     |            |        |         |         |         |          |          |
|------|-----|------------|--------|---------|---------|---------|----------|----------|
| 1763 | 1   | Extremo 2A | -7.769 | -32.884 | 62.616  | -0.684  | -35.14   | -10.7315 |
| 1763 | 0   | Extremo 2A | -7.595 | -32.218 | 61.519  | -0.0434 | 26.9737  | -46.721  |
| 1763 | 0.5 | Extremo 1A | -7.595 | -36.039 | 61.519  | -0.0434 | -3.7858  | -27.9068 |
| 1763 | 1   | Extremo 1A | -7.595 | -32.861 | 61.519  | -0.0434 | -34.5453 | -10.6816 |
| 1764 | 0   | Extremo 1A | -0.704 | -17.938 | 15.077  | -0.5238 | 4.8611   | -9.9732  |
| 1764 | 0.3 | Extremo 2A | -0.704 | -16.436 | 15.077  | -0.5238 | 0.338    | -4.817   |
| 1764 | 0.6 | Extremo 2A | -0.704 | -14.935 | 15.077  | -0.5238 | -4.185   | -0.1113  |
| 1764 | 0   | Extremo 2A | -0.689 | -17.923 | 14.817  | -0.317  | 4.7762   | -9.9588  |
| 1764 | 0.3 | Extremo 1A | -0.689 | -16.422 | 14.817  | -0.317  | 0.3312   | -4.807   |
| 1764 | 0.6 | Extremo 1A | -0.689 | -14.92  | 14.817  | -0.317  | -4.1139  | -0.1058  |
| 1765 | 0   | Extremo 1A | -0.374 | 14.97   | -14.492 | 0.4596  | -4.2767  | -0.0248  |
| 1765 | 0.3 | Extremo 2A | -0.374 | 16.472  | -14.492 | 0.4596  | 0.0709   | -4.7411  |
| 1765 | 0.6 | Extremo 2A | -0.374 | 17.974  | -14.492 | 0.4596  | 4.4186   | -9.908   |
| 1765 | 0   | Extremo 2A | -0.38  | 14.987  | -14.441 | 0.6648  | -4.2612  | -0.03    |
| 1765 | 0.3 | Extremo 1A | -0.38  | 16.489  | -14.441 | 0.6648  | 0.071    | -4.7513  |
| 1765 | 0.6 | Extremo 1A | -0.38  | 17.99   | -14.441 | 0.6648  | 4.4032   | -9.9231  |
| 1766 | 0   | Extremo 1A | -4.537 | 34.124  | -62.314 | 0.7302  | -36.8602 | -10.1339 |
| 1766 | 0.5 | Extremo 2A | -4.537 | 37.302  | -62.314 | 0.7302  | -5.703   | -27.9904 |
| 1766 | 1   | Extremo 2A | -4.537 | 40.48   | -62.314 | 0.7302  | 25.4543  | -47.4359 |
| 1766 | 0   | Extremo 2A | -4.592 | 34.162  | -62.13  | 1.3612  | -36.7285 | -10.1826 |
| 1766 | 0.5 | Extremo 1A | -4.592 | 37.34   | -62.13  | 1.3612  | -5.6637  | -28.058  |
| 1766 | 1   | Extremo 1A | -4.592 | 40.518  | -62.13  | 1.3612  | 25.401   | -47.5224 |
| 1768 | 0   | Extremo 1A | -5.782 | -40.755 | 69.688  | -2.068  | 28.644   | -48.1103 |
| 1768 | 0.5 | Extremo 2A | -5.782 | -37.577 | 69.688  | -2.068  | -6.198   | -28.5271 |
| 1768 | 1   | Extremo 2A | -5.782 | -34.399 | 69.688  | -2.068  | -41.042  | -10.5329 |
| 1768 | 0   | Extremo 2A | -5.623 | -40.679 | 68.39   | -1.3513 | 28.093   | -47.9705 |
| 1768 | 0.5 | Extremo 1A | -5.623 | -37.501 | 68.39   | -1.3513 | -6.102   | -28.4256 |
| 1768 | 1   | Extremo 1A | -5.623 | -34.323 | 68.39   | -1.3513 | -40.297  | -10.4698 |
| 1769 | 0   | Extremo 1A | -0.489 | -18.109 | 16.326  | -0.9431 | 5.017    | -10.031  |
| 1769 | 0.3 | Extremo 2A | -0.489 | -16.607 | 16.326  | -0.9431 | 0.1191   | -4.8237  |
| 1769 | 0.6 | Extremo 2A | -0.489 | -15.105 | 16.326  | -0.9431 | -4.7788  | -0.067   |
| 1769 | 0   | Extremo 2A | -0.475 | -18.083 | 16.032  | -0.7116 | 4.9268   | -10.0094 |
| 1769 | 0.3 | Extremo 1A | -0.475 | -16.581 | 16.032  | -0.7116 | 0.1171   | -4.8098  |
| 1769 | 0.6 | Extremo 1A | -0.475 | -15.079 | 16.032  | -0.7116 | -4.6926  | -0.0607  |
| 1770 | 0   | Extremo 1A | 0.298  | 14.959  | -13.091 | 0.4347  | -4.3348  | 0.0762   |
| 1770 | 0.3 | Extremo 2A | 0.298  | 16.461  | -13.091 | 0.4347  | -0.4074  | -4.6368  |
| 1770 | 0.6 | Extremo 2A | 0.298  | 17.963  | -13.091 | 0.4347  | 3.52     | -9.8003  |
| 1770 | 0   | Extremo 2A | 0.282  | 14.983  | -13.086 | 0.667   | -4.3302  | 0.0686   |
| 1770 | 0.3 | Extremo 1A | 0.282  | 16.485  | -13.086 | 0.667   | -0.4044  | -4.6517  |
| 1770 | 0.6 | Extremo 1A | 0.282  | 17.987  | -13.086 | 0.667   | 3.5215   | -9.8226  |
| 1771 | 0   | Extremo 1A | 2.477  | 35.526  | -60.978 | 1.0809  | -39.2503 | -9.3032  |
| 1771 | 0.5 | Extremo 2A | 2.477  | 38.704  | -60.978 | 1.0809  | -8.7612  | -27.8607 |
| 1771 | 1   | Extremo 2A | 2.477  | 41.882  | -60.978 | 1.0809  | 21.728   | -48.0073 |
| 1771 | 0   | Extremo 2A | 2.312  | 35.579  | -60.957 | 1.796   | -39.204  | -9.3762  |
| 1771 | 0.5 | Extremo 1A | 2.312  | 38.758  | -60.957 | 1.796   | -8.7256  | -27.9604 |
| 1771 | 1   | Extremo 1A | 2.312  | 41.936  | -60.957 | 1.796   | 21.7527  | -48.1337 |
| 1773 | 0   | Extremo 1A | 1.365  | -42.727 | 69.682  | -3.0564 | 25.2733  | -49.3302 |
| 1773 | 0.5 | Extremo 2A | 1.365  | -39.549 | 69.682  | -3.0564 | -9.5677  | -28.7612 |
| 1773 | 1   | Extremo 2A | 1.365  | -36.371 | 69.682  | -3.0564 | -44.4087 | -9.7813  |
| 1773 | 0   | Extremo 2A | 1.475  | -42.582 | 68.254  | -2.2411 | 24.7301  | -49.1189 |
| 1773 | 0.5 | Extremo 1A | 1.475  | -39.404 | 68.254  | -2.2411 | -9.3966  | -28.6225 |
| 1773 | 1   | Extremo 1A | 1.475  | -36.226 | 68.254  | -2.2411 | -43.5234 | -9.7152  |
| 1774 | 0   | Extremo 1A | 0.196  | -18.191 | 15.247  | -1.1104 | 4.2032   | -9.9824  |
| 1774 | 0.3 | Extremo 2A | 0.196  | -16.69  | 15.247  | -1.1104 | -0.371   | -4.7502  |
| 1774 | 0.6 | Extremo 2A | 0.196  | -15.188 | 15.247  | -1.1104 | -4.9451  | 0.0314   |
| 1774 | 0   | Extremo 2A | 0.205  | -18.156 | 14.938  | -0.8511 | 4.1166   | -9.9552  |
| 1774 | 0.3 | Extremo 1A | 0.205  | -16.654 | 14.938  | -0.8511 | -0.365   | -4.7337  |
| 1774 | 0.6 | Extremo 1A | 0.205  | -15.152 | 14.938  | -0.8511 | -4.8465  | 0.0372   |
| 1775 | 0   | Extremo 1A | 0.561  | 14.822  | -9.82   | -0.006  | -3.9602  | 0.1333   |
| 1775 | 0.3 | Extremo 2A | 0.561  | 16.324  | -9.82   | -0.006  | -1.0142  | -4.5385  |
| 1775 | 0.6 | Extremo 2A | 0.561  | 17.826  | -9.82   | -0.006  | 1.9319   | -9.6609  |
| 1775 | 0   | Extremo 2A | 0.53   | 14.854  | -9.923  | 0.2618  | -3.978   | 0.1256   |
| 1775 | 0.3 | Extremo 1A | 0.53   | 16.356  | -9.923  | 0.2618  | -1.0012  | -4.556   |
| 1775 | 0.6 | Extremo 1A | 0.53   | 17.858  | -9.923  | 0.2618  | 1.9757   | -9.6881  |
| 1776 | 0   | Extremo    | 5.73   | 35.267  | -52.755 | -0.1231 | -38.6575 | -8.7421  |
| 1776 | 0.5 | Extremo    | 5.73   | 38.445  | -52.755 | -0.1231 | -12.2802 | -27.1699 |
| 1776 | 1   | Extremo    | 5.73   | 41.623  | -52.755 | -0.1231 | 14.0971  | -47.1867 |
| 1776 | 0   | Extremo    | 5.406  | 35.367  | -53.029 | 0.7151  | -38.7585 | -8.8221  |
| 1776 | 0.5 | Extremo    | 5.406  | 38.545  | -53.029 | 0.7151  | -12.2438 | -27.3002 |
| 1776 | 1   | Extremo    | 5.406  | 41.723  | -53.029 | 0.7151  | 14.2709  | -47.3673 |
| 1778 | 0   | Extremo    | 5.018  | -42.814 | 62.248  | -2.518  | 17.6898  | -48.9344 |
| 1778 | 0.5 | Extremo    | 5.018  | -39.636 | 62.248  | -2.518  | -13.4344 | -28.3218 |

|      |     |         |        |         |         |         |          |          |
|------|-----|---------|--------|---------|---------|---------|----------|----------|
| 1778 | 1   | Extremo | 5.018  | -36.458 | 62.248  | -2.518  | -44.5586 | -9.2983  |
| 1778 | 0   | Extremo | 5.223  | -42.617 | 60.711  | -1.6059 | 17.1726  | -48.676  |
| 1778 | 0.5 | Extremo | 5.223  | -39.439 | 60.711  | -1.6059 | -13.183  | -28.1621 |
| 1778 | 1   | Extremo | 5.223  | -36.261 | 60.711  | -1.6059 | -43.5385 | -9.2373  |
| 1779 | 0   | Extremo | 0.494  | -18.121 | 12.225  | -0.8708 | 2.681    | -9.8858  |
| 1779 | 0.3 | Extremo | 0.494  | -16.619 | 12.225  | -0.8708 | -0.9865  | -4.6749  |
| 1779 | 0.6 | Extremo | 0.494  | -15.117 | 12.225  | -0.8708 | -4.654   | 0.0854   |
| 1779 | 0   | Extremo | 0.513  | -18.078 | 11.879  | -0.5862 | 2.5865   | -9.8558  |
| 1779 | 0.3 | Extremo | 0.513  | -16.576 | 11.879  | -0.5862 | -0.9772  | -4.6576  |
| 1779 | 0.6 | Extremo | 0.513  | -15.074 | 11.879  | -0.5862 | -4.541   | 0.09     |
| 1780 | 0   | Extremo | -0.642 | 14.801  | -9.906  | -0.5513 | -4.0013  | 0.1581   |
| 1780 | 0.3 | Extremo | -0.642 | 16.303  | -9.906  | -0.5513 | -1.0296  | -4.5074  |
| 1780 | 0.6 | Extremo | -0.642 | 17.804  | -9.906  | -0.5513 | 1.9422   | -9.6235  |
| 1780 | 0   | Extremo | -0.645 | 14.834  | -10.083 | -0.2532 | -4.035   | 0.1518   |
| 1780 | 0.3 | Extremo | -0.645 | 16.336  | -10.083 | -0.2532 | -1.01    | -4.5238  |
| 1780 | 0.6 | Extremo | -0.645 | 17.838  | -10.083 | -0.2532 | 2.015    | -9.6499  |
| 1781 | 0   | Extremo | -6.629 | 35.283  | -52.956 | -1.3957 | -39.0677 | -8.5131  |
| 1781 | 0.5 | Extremo | -6.629 | 38.461  | -52.956 | -1.3957 | -12.5896 | -26.9491 |
| 1781 | 1   | Extremo | -6.629 | 41.639  | -52.956 | -1.3957 | 13.8884  | -46.9742 |
| 1781 | 0   | Extremo | -6.649 | 35.432  | -53.444 | -0.4509 | -39.275  | -8.5781  |
| 1781 | 0.5 | Extremo | -6.649 | 38.61   | -53.444 | -0.4509 | -12.5532 | -27.0886 |
| 1781 | 1   | Extremo | -6.649 | 41.788  | -53.444 | -0.4509 | 14.1686  | -47.1881 |
| 1783 | 0   | Extremo | -6.8   | -43.186 | 62.953  | -2.3028 | 17.6977  | -48.9948 |
| 1783 | 0.5 | Extremo | -6.8   | -40.008 | 62.953  | -2.3028 | -13.7786 | -28.1963 |
| 1783 | 1   | Extremo | -6.8   | -36.83  | 62.953  | -2.3028 | -45.2548 | -8.9868  |
| 1783 | 0   | Extremo | -6.645 | -42.94  | 61.195  | -1.3061 | 17.071   | -48.7025 |
| 1783 | 0.5 | Extremo | -6.645 | -39.762 | 61.195  | -1.3061 | -13.5265 | -28.0271 |
| 1783 | 1   | Extremo | -6.645 | -36.584 | 61.195  | -1.3061 | -44.1239 | -8.9408  |
| 1784 | 0   | Extremo | -0.66  | -18.122 | 12.491  | -0.5642 | 2.7587   | -9.8527  |
| 1784 | 0.3 | Extremo | -0.66  | -16.62  | 12.491  | -0.5642 | -0.9885  | -4.6413  |
| 1784 | 0.6 | Extremo | -0.66  | -15.119 | 12.491  | -0.5642 | -4.7356  | 0.1195   |
| 1784 | 0   | Extremo | -0.645 | -18.079 | 12.067  | -0.2606 | 2.6341   | -9.8233  |
| 1784 | 0.3 | Extremo | -0.645 | -16.577 | 12.067  | -0.2606 | -0.986   | -4.625   |
| 1784 | 0.6 | Extremo | -0.645 | -15.075 | 12.067  | -0.2606 | -4.6061  | 0.1228   |
| 1785 | 0   | Extremo | -0.423 | 14.977  | -13.484 | -1.2563 | -4.4801  | 0.1381   |
| 1785 | 0.3 | Extremo | -0.423 | 16.479  | -13.484 | -1.2563 | -0.435   | -4.5803  |
| 1785 | 0.6 | Extremo | -0.423 | 17.981  | -13.484 | -1.2563 | 3.6101   | -9.7492  |
| 1785 | 0   | Extremo | -0.415 | 15.01   | -13.642 | -0.9273 | -4.5115  | 0.1305   |
| 1785 | 0.3 | Extremo | -0.415 | 16.512  | -13.642 | -0.9273 | -0.4189  | -4.5977  |
| 1785 | 0.6 | Extremo | -0.415 | 18.013  | -13.642 | -0.9273 | 3.6737   | -9.7764  |
| 1786 | 0   | Extremo | -3.831 | 36.48   | -62.801 | -3.7493 | -40.6193 | -8.7941  |
| 1786 | 0.5 | Extremo | -3.831 | 39.658  | -62.801 | -3.7493 | -9.2189  | -27.8287 |
| 1786 | 1   | Extremo | -3.831 | 42.836  | -62.801 | -3.7493 | 22.1815  | -48.4522 |
| 1786 | 0   | Extremo | -3.746 | 36.587  | -63.267 | -2.6915 | -40.8257 | -8.8723  |
| 1786 | 0.5 | Extremo | -3.746 | 39.765  | -63.267 | -2.6915 | -9.1924  | -27.9601 |
| 1786 | 1   | Extremo | -3.746 | 42.943  | -63.267 | -2.6915 | 22.4409  | -48.637  |
| 1788 | 0   | Extremo | -3.027 | -44.262 | 72.803  | -0.4509 | 26.3077  | -50.3859 |
| 1788 | 0.5 | Extremo | -3.027 | -41.084 | 72.803  | -0.4509 | -10.0236 | -29.0495 |
| 1788 | 1   | Extremo | -3.027 | -37.906 | 72.803  | -0.4509 | -46.4949 | -9.3021  |
| 1788 | 0   | Extremo | -3.062 | -44.046 | 70.875  | 0.6337  | 25.5259  | -50.0944 |
| 1788 | 0.5 | Extremo | -3.062 | -40.868 | 70.875  | 0.6337  | -9.9113  | -28.866  |
| 1788 | 1   | Extremo | -3.062 | -37.69  | 70.875  | 0.6337  | -45.3486 | -9.2267  |
| 1789 | 0   | Extremo | -0.351 | -18.295 | 16.052  | -0.0146 | 4.444    | -9.9796  |
| 1789 | 0.3 | Extremo | -0.351 | -16.793 | 16.052  | -0.0146 | -0.3716  | -4.7165  |
| 1789 | 0.6 | Extremo | -0.351 | -15.291 | 16.052  | -0.0146 | -5.1873  | 0.0961   |
| 1789 | 0   | Extremo | -0.353 | -18.247 | 15.575  | 0.31    | 4.2935   | -9.9452  |
| 1789 | 0.3 | Extremo | -0.353 | -16.746 |         |         |          |          |



|      |     |         |       |         |         |         |          |          |
|------|-----|---------|-------|---------|---------|---------|----------|----------|
| 1793 | 1   | Extremo | 4.844 | -35.557 | 74.775  | -1.2103 | -44.1803 | -10.5372 |
| 1793 | 0   | Extremo | 4.673 | -41.789 | 72.907  | 0.016   | 29.7786  | -49.0511 |
| 1793 | 0.5 | Extremo | 4.673 | -38.611 | 72.907  | 0.016   | -6.675   | -28.951  |
| 1793 | 1   | Extremo | 4.673 | -35.433 | 72.907  | 0.016   | -43.1286 | -10.44   |
| 1794 | 0   | Extremo | 0.402 | -18.281 | 17.55   | -0.0381 | 5.3869   | -10.1162 |
| 1794 | 0.3 | Extremo | 0.402 | -16.779 | 17.55   | -0.0381 | 0.1221   | -4.8573  |
| 1794 | 0.6 | Extremo | 0.402 | -15.277 | 17.55   | -0.0381 | -5.1428  | -0.049   |
| 1794 | 0   | Extremo | 0.386 | -18.24  | 17.082  | 0.3241  | 5.2336   | -10.0825 |
| 1794 | 0.3 | Extremo | 0.386 | -16.738 | 17.082  | 0.3241  | 0.1089   | -4.8358  |
| 1794 | 0.6 | Extremo | 0.386 | -15.236 | 17.082  | 0.3241  | -5.0158  | -0.0398  |
| 1795 | 0   | Extremo | 0.55  | 14.953  | -14.54  | -1.2677 | -4.105   | -0.0649  |
| 1795 | 0.3 | Extremo | 0.55  | 16.455  | -14.54  | -1.2677 | 0.2569   | -4.776   |
| 1795 | 0.6 | Extremo | 0.55  | 17.957  | -14.54  | -1.2677 | 4.6189   | -9.9377  |
| 1795 | 0   | Extremo | 0.554 | 14.973  | -14.632 | -0.8722 | -4.124   | -0.0723  |
| 1795 | 0.3 | Extremo | 0.554 | 16.475  | -14.632 | -0.8722 | 0.2656   | -4.7895  |
| 1795 | 0.6 | Extremo | 0.554 | 17.977  | -14.632 | -0.8722 | 4.6552   | -9.9572  |
| 1796 | 0   | Extremo | 6.095 | 33.482  | -61.224 | -2.9007 | -34.7555 | -10.4282 |
| 1796 | 0.5 | Extremo | 6.095 | 36.66   | -61.224 | -2.9007 | -4.1433  | -27.9638 |
| 1796 | 1   | Extremo | 6.095 | 39.838  | -61.224 | -2.9007 | 26.4689  | -47.0884 |
| 1796 | 0   | Extremo | 6.139 | 33.511  | -61.524 | -1.636  | -34.8877 | -10.4959 |
| 1796 | 0.5 | Extremo | 6.139 | 36.689  | -61.524 | -1.636  | -4.1255  | -28.0461 |
| 1796 | 1   | Extremo | 6.139 | 39.867  | -61.524 | -1.636  | 26.6367  | -47.1852 |
| 1798 | 0   | Extremo | 7.107 | -39.96  | 68.936  | -2.9449 | 29.941   | -47.7304 |
| 1798 | 0.5 | Extremo | 7.107 | -36.782 | 68.936  | -2.9449 | -4.5269  | -28.5451 |
| 1798 | 1   | Extremo | 7.107 | -33.603 | 68.936  | -2.9449 | -38.9947 | -10.9489 |
| 1798 | 0   | Extremo | 6.912 | -39.877 | 67.272  | -1.5899 | 29.1805  | -47.5613 |
| 1798 | 0.5 | Extremo | 6.912 | -36.699 | 67.272  | -1.5899 | -4.4555  | -28.4175 |
| 1798 | 1   | Extremo | 6.912 | -33.52  | 67.272  | -1.5899 | -38.0915 | -10.8628 |
| 1799 | 0   | Extremo | 0.644 | -18.1   | 16.518  | -0.5027 | 5.2859   | -10.0823 |
| 1799 | 0.3 | Extremo | 0.644 | -16.598 | 16.518  | -0.5027 | 0.3305   | -4.8775  |
| 1799 | 0.6 | Extremo | 0.644 | -15.097 | 16.518  | -0.5027 | -4.6248  | -0.1233  |
| 1799 | 0   | Extremo | 0.626 | -18.068 | 16.099  | -0.1004 | 5.1451   | -10.0539 |
| 1799 | 0.3 | Extremo | 0.626 | -16.566 | 16.099  | -0.1004 | 0.3154   | -4.859   |
| 1799 | 0.6 | Extremo | 0.626 | -15.064 | 16.099  | -0.1004 | -4.5144  | -0.1145  |
| 1800 | 0   | Extremo | 0.568 | 14.838  | -12.92  | -0.9478 | -3.5496  | -0.0657  |
| 1800 | 0.3 | Extremo | 0.568 | 16.34   | -12.92  | -0.9478 | 0.3265   | -4.7425  |
| 1800 | 0.6 | Extremo | 0.568 | 17.842  | -12.92  | -0.9478 | 4.2026   | -9.8698  |
| 1800 | 0   | Extremo | 0.571 | 14.856  | -12.995 | -0.5249 | -3.5649  | -0.0714  |
| 1800 | 0.3 | Extremo | 0.571 | 16.357  | -12.995 | -0.5249 | 0.3336   | -4.7534  |
| 1800 | 0.6 | Extremo | 0.571 | 17.859  | -12.995 | -0.5249 | 4.232    | -9.8859  |
| 1801 | 0   | Extremo | 6.15  | 32.915  | -53.703 | -1.8213 | -29.7136 | -10.3262 |
| 1801 | 0.5 | Extremo | 6.15  | 36.093  | -53.703 | -1.8213 | -2.8622  | -27.5781 |
| 1801 | 1   | Extremo | 6.15  | 39.271  | -53.703 | -1.8213 | 23.9891  | -46.4191 |
| 1801 | 0   | Extremo | 6.183 | 32.949  | -53.945 | -0.4747 | -29.8185 | -10.3797 |
| 1801 | 0.5 | Extremo | 6.183 | 36.127  | -53.945 | -0.4747 | -2.8461  | -27.6487 |
| 1801 | 1   | Extremo | 6.183 | 39.305  | -53.945 | -0.4747 | 24.1263  | -46.5067 |
| 1803 | 0   | Extremo | 6.997 | -39.379 | 60.15   | -4.5712 | 26.9425  | -46.8997 |
| 1803 | 0.5 | Extremo | 6.997 | -36.201 | 60.15   | -4.5712 | -3.1324  | -28.0047 |
| 1803 | 1   | Extremo | 6.997 | -33.023 | 60.15   | -4.5712 | -33.2074 | -10.6987 |
| 1803 | 0   | Extremo | 6.818 | -39.286 | 58.728  | -3.1242 | 26.2731  | -46.7478 |
| 1803 | 0.5 | Extremo | 6.818 | -36.107 | 58.728  | -3.1242 | -3.0909  | -27.8996 |
| 1803 | 1   | Extremo | 6.818 | -32.929 | 58.728  | -3.1242 | -32.455  | -10.6404 |
| 1804 | 0   | Extremo | 0.648 | -17.947 | 14.596  | -1.0228 | 4.7753   | -9.9747  |
| 1804 | 0.3 | Extremo | 0.648 | -16.445 | 14.596  | -1.0228 | 0.3966   | -4.816   |
| 1804 | 0.6 | Extremo | 0.648 | -14.943 | 14.596  | -1.0228 | -3.9822  | -0.1078  |
| 1804 | 0   | Extremo | 0.631 | -17.919 | 14.234  | -0.5901 | 4.6514   | -9.9524  |
| 1804 | 0.3 | Extremo | 0.631 | -16.417 | 14.234  | -0.5901 | 0.3812   | -4.8019  |
| 1804 | 0.6 | Extremo | 0.631 | -14.916 | 14.234  | -0.5901 | -3.889   | -0.102   |
| 1805 | 0   | Extremo | 0.452 | 14.746  | -11.303 | -0.7417 | -3.0387  | -0.0229  |
| 1805 | 0.3 | Extremo | 0.452 | 16.248  | -11.303 | -0.7417 | 0.3522   | -4.6721  |
| 1805 | 0.6 | Extremo | 0.452 | 17.75   | -11.303 | -0.7417 | 3.7432   | -9.7718  |
| 1805 | 0   | Extremo | 0.454 | 14.76   | -11.364 | -0.2999 | -3.051   | -0.0265  |
| 1805 | 0.3 | Extremo | 0.454 | 16.262  | -11.364 | -0.2999 | 0.3582   | -4.6797  |
| 1805 | 0.6 | Extremo | 0.454 | 17.763  | -11.364 | -0.2999 | 3.7674   | -9.7834  |
| 1806 | 0   | Extremo | 4.856 | 32.84   | -46.145 | -1.1511 | -25.1653 | -9.9012  |
| 1806 | 0.5 | Extremo | 4.856 | 36.018  | -46.145 | -1.1511 | -2.0927  | -27.1155 |
| 1806 | 1   | Extremo | 4.856 | 39.196  | -46.145 | -1.1511 | 20.9799  | -45.919  |
| 1806 | 0   | Extremo | 4.883 | 32.885  | -46.342 | 0.2542  | -25.249  | -9.9344  |
| 1806 | 0.5 | Extremo | 4.883 | 36.064  | -46.342 | 0.2542  | -2.0778  | -27.1716 |
| 1806 | 1   | Extremo | 4.883 | 39.242  | -46.342 | 0.2542  | 21.0933  | -45.9979 |
| 1808 | 0   | Extremo | 5.532 | -39.525 | 51.492  | -5.6206 | 23.437   | -46.4533 |
| 1808 | 0.5 | Extremo | 5.532 | -36.346 | 51.492  | -5.6206 | -2.309   | -27.4856 |

|      |     |         |       |         |         |         |          |           |
|------|-----|---------|-------|---------|---------|---------|----------|-----------|
| 1808 | 1   | Extremo | 5.532 | -33.168 | 51.492  | -5.6206 | -28.0551 | -10.107   |
| 1808 | 0   | Extremo | 5.387 | -39.436 | 50.296  | -4.1354 | 22.8623  | -46.3206  |
| 1808 | 0.5 | Extremo | 5.387 | -36.258 | 50.296  | -4.1354 | -2.2856  | -27.3969  |
| 1808 | 1   | Extremo | 5.387 | -33.08  | 50.296  | -4.1354 | -27.4335 | -10.0623  |
| 1809 | 0   | Extremo | 0.516 | -17.843 | 12.717  | -1.3571 | 4.2311   | -9.8498   |
| 1809 | 0.3 | Extremo | 0.516 | -16.341 | 12.717  | -1.3571 | 0.4159   | -4.7221   |
| 1809 | 0.6 | Extremo | 0.516 | -14.84  | 12.717  | -1.3571 | -3.3992  | -0.0449   |
| 1809 | 0   | Extremo | 0.502 | -17.821 | 12.408  | -0.907  | 4.1234   | -9.8316   |
| 1809 | 0.3 | Extremo | 0.502 | -16.319 | 12.408  | -0.907  | 0.401    | -4.7107   |
| 1809 | 0.6 | Extremo | 0.502 | -14.817 | 12.408  | -0.907  | -3.3213  | -0.0404   |
| 1810 | 0   | Extremo | 0.375 | 14.713  | -9.977  | -0.8148 | -2.6217  | 0.0158    |
| 1810 | 0.3 | Extremo | 0.375 | 16.214  | -9.977  | -0.8148 | 0.3715   | -4.6232   |
| 1810 | 0.6 | Extremo | 0.375 | 17.716  | -9.977  | -0.8148 | 3.3646   | -9.7128   |
| 1810 | 0   | Extremo | 0.377 | 14.722  | -10.026 | -0.3612 | -2.6316  | 0.013     |
| 1810 | 0.3 | Extremo | 0.377 | 16.224  | -10.026 | -0.3612 | 0.3762   | -4.629    |
| 1810 | 0.6 | Extremo | 0.377 | 17.726  | -10.026 | -0.3612 | 3.3841   | -9.7216   |
| 1811 | 0   | Extremo | 4.013 | 33.19   | -39.983 | -1.7756 | -21.4347 | -9.5584   |
| 1811 | 0.5 | Extremo | 4.013 | 36.368  | -39.983 | -1.7756 | -1.4433  | -26.948   |
| 1811 | 1   | Extremo | 4.013 | 39.546  | -39.983 | -1.7756 | 18.5481  | -45.9267  |
| 1811 | 0   | Extremo | 4.035 | 33.216  | -40.14  | -0.3371 | -21.5023 | -9.5844   |
| 1811 | 0.5 | Extremo | 4.035 | 36.394  | -40.14  | -0.3371 | -1.4323  | -26.9868  |
| 1811 | 1   | Extremo | 4.035 | 39.572  | -40.14  | -0.3371 | 18.6377  | -45.9782  |
| 1813 | 0   | Extremo | 4.561 | -39.9   | 44.478  | -5.0932 | 20.6349  | -46.4463  |
| 1813 | 0.5 | Extremo | 4.561 | -36.721 | 44.478  | -5.0932 | -1.6041  | -27.2911  |
| 1813 | 1   | Extremo | 4.561 | -33.543 | 44.478  | -5.0932 | -23.8431 | -9.7249   |
| 1813 | 0   | Extremo | 4.44  | -39.849 | 43.475  | -3.5378 | 20.1471  | -46.3414  |
| 1813 | 0.5 | Extremo | 4.44  | -36.671 | 43.475  | -3.5378 | -1.5902  | -27.2114  |
| 1813 | 1   | Extremo | 4.44  | -33.493 | 43.475  | -3.5378 | -23.3275 | -9.6704   |
| 1814 | 0   | Extremo | 0.427 | -17.806 | 11.177  | -1.3406 | 3.7823   | -9.7828   |
| 1814 | 0.3 | Extremo | 0.427 | -16.304 | 11.177  | -1.3406 | 0.429    | -4.6663   |
| 1814 | 0.6 | Extremo | 0.427 | -14.802 | 11.177  | -1.3406 | -2.9242  | -0.000354 |
| 1814 | 0   | Extremo | 0.416 | -17.786 | 10.914  | -0.8691 | 3.6893   | -9.7651   |
| 1814 | 0.3 | Extremo | 0.416 | -16.284 | 10.914  | -0.8691 | 0.4152   | -4.6546   |
| 1814 | 0.6 | Extremo | 0.416 | -14.782 | 10.914  | -0.8691 | -2.8589  | 0.0052    |
| 1815 | 0   | Extremo | 0.329 | 14.735  | -8.765  | -0.8996 | -2.2678  | 0.0113    |
| 1815 | 0.3 | Extremo | 0.329 | 16.237  | -8.765  | -0.8996 | 0.3618   | -4.6346   |
| 1815 | 0.6 | Extremo | 0.329 | 17.739  | -8.765  | -0.8996 | 2.9913   | -9.7311   |
| 1815 | 0   | Extremo | 0.331 | 14.742  | -8.805  | -0.4356 | -2.2759  | 0.0084    |
| 1815 | 0.3 | Extremo | 0.331 | 16.244  | -8.805  | -0.4356 | 0.3656   | -4.6394   |
| 1815 | 0.6 | Extremo | 0.331 | 17.746  | -8.805  | -0.4356 | 3.007    | -9.7378   |
| 1816 | 0   | Extremo | 3.486 | 33.23   | -34.624 | -2.1447 | -18.3737 | -9.6575   |
| 1816 | 0.5 | Extremo | 3.486 | 36.408  | -34.624 | -2.1447 | -1.0619  | -27.0668  |
| 1816 | 1   | Extremo | 3.486 | 39.586  | -34.624 | -2.1447 | 16.25    | -46.0651  |
| 1816 | 0   | Extremo | 3.501 | 33.234  | -34.751 | -0.6802 | -18.4298 | -9.6818   |
| 1816 | 0.5 | Extremo | 3.501 | 36.412  | -34.751 | -0.6802 | -1.0542  | -27.0932  |
| 1816 | 1   | Extremo | 3.501 | 39.59   | -34.751 | -0.6802 | 16.3214  | -46.0936  |
| 1818 | 0   | Extremo | 3.9   | -39.74  | 38.445  | -4.9646 | 18.0331  | -46.4366  |
| 1818 | 0.5 | Extremo | 3.9   | -36.562 | 38.445  | -4.9646 | -1.1897  | -27.3612  |
| 1818 | 1   | Extremo | 3.9   | -33.383 | 38.445  | -4.9646 | -20.4124 | -9.875    |
| 1818 | 0   | Extremo | 3.803 | -39.701 | 37.602  | -3.3377 | 17.6206  | -46.3452  |
| 1818 | 0.5 | Extremo | 3.803 | -36.523 | 37.602  | -3.3377 | -1.1802  | -27.2892  |
| 1818 | 1   | Extremo | 3.803 | -33.345 | 37.602  | -3.3377 | -19.981  | -9.8222   |
| 1819 | 0   | Extremo | 0.369 | -17.814 | 9.791   | -1.3356 | 3.3497   | -9.7991   |
| 1819 | 0.3 | Extremo | 0.369 | -16.312 | 9.791   | -1.3356 | 0.4125   | -4.6801   |
| 1819 | 0.6 | Extremo | 0.369 | -14.811 | 9.791   | -1.3356 | -2.5247  | -0.0116   |
| 1819 | 0   | Extremo | 0.36  | -17.796 | 9.566   | -0.8404 | 3.27     | -9.7826   |
| 1819 | 0.3 | Extremo | 0.36  | -16.294 | 9.566   | -0.8404 | 0.4002   | -4.669    |
| 1819 | 0.6 | Extremo | 0.36  | -14.792 | 9.566   | -0.8404 | -2.4697  | -0.0061   |
| 1820 | 0   | Extremo | 0.287 | 14.751  |         |         |          |           |





|      |     |         |       |         |         |         |          |          |
|------|-----|---------|-------|---------|---------|---------|----------|----------|
| 1823 | 1   | Extremo | 3.277 | -33.278 | 33.196  | -5.2897 | -17.6195 | -9.9842  |
| 1823 | 0   | Extremo | 3.202 | -39.576 | 32.478  | -3.601  | 15.2249  | -46.3366 |
| 1823 | 0.5 | Extremo | 3.202 | -36.398 | 32.478  | -3.601  | -1.0142  | -27.3432 |
| 1823 | 1   | Extremo | 3.202 | -33.22  | 32.478  | -3.601  | -17.2533 | -9.9388  |
| 1824 | 0   | Extremo | 0.315 | -17.823 | 8.492   | -1.4266 | 2.9117   | -9.8146  |
| 1824 | 0.3 | Extremo | 0.315 | -16.321 | 8.492   | -1.4266 | 0.3641   | -4.6931  |
| 1824 | 0.6 | Extremo | 0.315 | -14.819 | 8.492   | -1.4266 | -2.1834  | -0.0221  |
| 1824 | 0   | Extremo | 0.308 | -17.803 | 8.3     | -0.9105 | 2.8433   | -9.7984  |
| 1824 | 0.3 | Extremo | 0.308 | -16.301 | 8.3     | -0.9105 | 0.3534   | -4.6828  |
| 1824 | 0.6 | Extremo | 0.308 | -14.799 | 8.3     | -0.9105 | -2.1366  | -0.0176  |
| 1825 | 0   | Extremo | 0.259 | 14.739  | -6.471  | -0.9266 | -1.6885  | 0.0173   |
| 1825 | 0.3 | Extremo | 0.259 | 16.241  | -6.471  | -0.9266 | 0.2529   | -4.6299  |
| 1825 | 0.6 | Extremo | 0.259 | 17.743  | -6.471  | -0.9266 | 2.1943   | -9.7275  |
| 1825 | 0   | Extremo | 0.26  | 14.747  | -6.502  | -0.4311 | -1.6948  | 0.0113   |
| 1825 | 0.3 | Extremo | 0.26  | 16.248  | -6.502  | -0.4311 | 0.2558   | -4.638   |
| 1825 | 0.6 | Extremo | 0.26  | 17.75   | -6.502  | -0.4311 | 2.2063   | -9.7378  |
| 1826 | 0   | Extremo | 2.668 | 33.347  | -25.616 | -2.055  | -13.7399 | -9.6233  |
| 1826 | 0.5 | Extremo | 2.668 | 36.525  | -25.616 | -2.055  | -0.9317  | -27.0911 |
| 1826 | 1   | Extremo | 2.668 | 39.703  | -25.616 | -2.055  | 11.8765  | -46.148  |
| 1826 | 0   | Extremo | 2.671 | 33.316  | -25.715 | -0.5139 | -13.7839 | -9.6737  |
| 1826 | 0.5 | Extremo | 2.671 | 36.494  | -25.715 | -0.5139 | -0.9263  | -27.1262 |
| 1826 | 1   | Extremo | 2.671 | 39.672  | -25.715 | -0.5139 | 11.9313  | -46.1678 |
| 1828 | 0   | Extremo | 2.855 | -39.898 | 28.581  | -5.6475 | 13.2432  | -46.5564 |
| 1828 | 0.5 | Extremo | 2.855 | -36.72  | 28.581  | -5.6475 | -1.0475  | -27.4017 |
| 1828 | 1   | Extremo | 2.855 | -33.542 | 28.581  | -5.6475 | -15.3382 | -9.836   |
| 1828 | 0   | Extremo | 2.8   | -39.793 | 27.96   | -3.9078 | 12.9393  | -46.4213 |
| 1828 | 0.5 | Extremo | 2.8   | -36.615 | 27.96   | -3.9078 | -1.0407  | -27.3191 |
| 1828 | 1   | Extremo | 2.8   | -33.437 | 27.96   | -3.9078 | -15.0207 | -9.806   |
| 1829 | 0   | Extremo | 0.278 | -17.824 | 7.265   | -1.512  | 2.4699   | -9.7967  |
| 1829 | 0.3 | Extremo | 0.278 | -16.322 | 7.265   | -1.512  | 0.2905   | -4.6749  |
| 1829 | 0.6 | Extremo | 0.278 | -14.82  | 7.265   | -1.512  | 1.889    | -0.0037  |
| 1829 | 0   | Extremo | 0.273 | -17.8   | 7.098   | -0.9806 | 2.4105   | -9.7807  |
| 1829 | 0.3 | Extremo | 0.273 | -16.299 | 7.098   | -0.9806 | 0.2811   | -4.6659  |
| 1829 | 0.6 | Extremo | 0.273 | -14.797 | 7.098   | -0.9806 | -1.8484  | -0.0016  |
| 1830 | 0   | Extremo | 0.235 | 14.693  | -5.381  | -1.0358 | -1.4453  | 0.0282   |
| 1830 | 0.3 | Extremo | 0.235 | 16.194  | -5.381  | -1.0358 | 0.1691   | -4.6048  |
| 1830 | 0.6 | Extremo | 0.235 | 17.696  | -5.381  | -1.0358 | 1.7836   | -9.6884  |
| 1830 | 0   | Extremo | 0.235 | 14.704  | -5.413  | -0.5128 | -1.4517  | 0.0226   |
| 1830 | 0.3 | Extremo | 0.235 | 16.205  | -5.413  | -0.5128 | 0.1721   | -4.6137  |
| 1830 | 0.6 | Extremo | 0.235 | 17.707  | -5.413  | -0.5128 | 1.7959   | -9.7006  |
| 1831 | 0   | Extremo | 2.42  | 33.285  | -21.73  | -2.4093 | -11.9599 | -9.4631  |
| 1831 | 0.5 | Extremo | 2.42  | 36.464  | -21.73  | -2.4093 | -1.0925  | -26.9003 |
| 1831 | 1   | Extremo | 2.42  | 39.642  | -21.73  | -2.4093 | 9.7698   | -45.9266 |
| 1831 | 0   | Extremo | 2.416 | 33.283  | -21.83  | -0.7744 | -12.0039 | -9.5164  |
| 1831 | 0.5 | Extremo | 2.416 | 36.461  | -21.83  | -0.7744 | -1.0888  | -26.9523 |
| 1831 | 1   | Extremo | 2.416 | 39.639  | -21.83  | -0.7744 | 9.8263   | -45.9774 |
| 1833 | 0   | Extremo | 2.559 | -40.124 | 24.432  | -5.5376 | 10.9896  | -46.5082 |
| 1833 | 0.5 | Extremo | 2.559 | -36.946 | 24.432  | -5.5376 | -1.2266  | -27.2405 |
| 1833 | 1   | Extremo | 2.559 | -33.768 | 24.432  | -5.5376 | -13.4428 | -9.562   |
| 1833 | 0   | Extremo | 2.524 | -39.966 | 23.877  | -3.785  | 10.7184  | -46.3422 |
| 1833 | 0.5 | Extremo | 2.524 | -36.787 | 23.877  | -3.785  | -1.2201  | -27.154  |
| 1833 | 1   | Extremo | 2.524 | -33.609 | 23.877  | -3.785  | -13.1586 | -9.5547  |
| 1834 | 0   | Extremo | 0.249 | -17.786 | 6.101   | -1.4687 | 2.031    | -9.7492  |
| 1834 | 0.3 | Extremo | 0.249 | -16.284 | 6.101   | -1.4687 | 0.2005   | -4.6387  |
| 1834 | 0.6 | Extremo | 0.249 | -14.782 | 6.101   | -1.4687 | -1.6299  | 0.0213   |
| 1834 | 0   | Extremo | 0.245 | -17.761 | 5.952   | -0.9341 | 1.9778   | -9.7345  |
| 1834 | 0.3 | Extremo | 0.245 | -16.259 | 5.952   | -0.9341 | 0.1921   | -4.6316  |
| 1834 | 0.6 | Extremo | 0.245 | -14.757 | 5.952   | -0.9341 | -1.5936  | 0.0208   |
| 1835 | 0   | Extremo | 0.142 | 14.678  | -4.561  | -1.1495 | -1.2591  | -0.0013  |
| 1835 | 0.3 | Extremo | 0.142 | 16.18   | -4.561  | -1.1495 | 0.1092   | -4.6299  |
| 1835 | 0.6 | Extremo | 0.142 | 17.681  | -4.561  | -1.1495 | 1.4775   | -9.709   |
| 1835 | 0   | Extremo | 0.141 | 14.686  | -4.595  | -0.6069 | -1.266   | -0.0027  |
| 1835 | 0.3 | Extremo | 0.141 | 16.188  | -4.595  | -0.6069 | 0.1124   | -4.6337  |
| 1835 | 0.6 | Extremo | 0.141 | 17.69   | -4.595  | -0.6069 | 1.4909   | -9.7153  |
| 1836 | 0   | Extremo | 1.462 | 32.666  | -18.634 | -3.0155 | -10.5708 | -9.7229  |
| 1836 | 0.5 | Extremo | 1.462 | 35.844  | -18.634 | -3.0155 | -1.2538  | -26.8502 |
| 1836 | 1   | Extremo | 1.462 | 39.022  | -18.634 | -3.0155 | 8.0631   | -45.5666 |
| 1836 | 0   | Extremo | 1.453 | 32.708  | -18.745 | -1.296  | -10.6188 | -9.7374  |
| 1836 | 0.5 | Extremo | 1.453 | 35.886  | -18.745 | -1.296  | -1.2462  | -26.8859 |
| 1836 | 1   | Extremo | 1.453 | 39.064  | -18.745 | -1.296  | 8.1265   | -45.6234 |
| 1838 | 0   | Extremo | 1.566 | -39.368 | 21.125  | -4.8763 | 9.1577   | -46.0123 |
| 1838 | 0.5 | Extremo | 1.566 | -36.19  | 21.125  | -4.8763 | -1.4048  | -27.123  |

|      |     |         |       |         |         |         |          |          |
|------|-----|---------|-------|---------|---------|---------|----------|----------|
| 1838 | 1   | Extremo | 1.566 | -33.012 | 21.125  | -4.8763 | -11.9672 | -9.8227  |
| 1838 | 0   | Extremo | 1.556 | -39.245 | 20.603  | -3.1684 | 8.9021   | -45.856  |
| 1838 | 0.5 | Extremo | 1.556 | -36.067 | 20.603  | -3.1684 | -1.3992  | -27.028  |
| 1838 | 1   | Extremo | 1.556 | -32.889 | 20.603  | -3.1684 | -11.7005 | -9.789   |
| 1839 | 0   | Extremo | 0.152 | -17.752 | 5.226   | -1.3628 | 1.704    | -9.7599  |
| 1839 | 0.3 | Extremo | 0.152 | -16.25  | 5.226   | -1.3628 | 0.1361   | -4.6597  |
| 1839 | 0.6 | Extremo | 0.152 | -14.748 | 5.226   | -1.3628 | -1.4318  | -0.01    |
| 1839 | 0   | Extremo | 0.151 | -17.727 | 5.085   | -0.8325 | 1.6535   | -9.7422  |
| 1839 | 0.3 | Extremo | 0.151 | -16.225 | 5.085   | -0.8325 | 0.1279   | -4.6495  |
| 1839 | 0.6 | Extremo | 0.151 | -14.723 | 5.085   | -0.8325 | -1.3976  | -0.0074  |
| 1840 | 0   | Extremo | 0.092 | 14.681  | -4.141  | -1.07   | -1.1406  | -0.0188  |
| 1840 | 0.3 | Extremo | 0.092 | 16.183  | -4.141  | -1.07   | 0.1016   | -4.6483  |
| 1840 | 0.6 | Extremo | 0.092 | 17.684  | -4.141  | -1.07   | 1.3438   | -9.7283  |
| 1840 | 0   | Extremo | 0.091 | 14.684  | -4.178  | -0.5317 | -1.1484  | -0.0178  |
| 1840 | 0.3 | Extremo | 0.091 | 16.186  | -4.178  | -0.5317 | 0.1049   | -4.6482  |
| 1840 | 0.6 | Extremo | 0.091 | 17.688  | -4.178  | -0.5317 | 1.3581   | -9.7292  |
| 1841 | 0   | Extremo | 0.966 | 32.542  | -16.95  | -2.6737 | -9.5502  | -9.8869  |
| 1841 | 0.5 | Extremo | 0.966 | 35.72   | -16.95  | -2.6737 | -1.075   | -26.9524 |
| 1841 | 1   | Extremo | 0.966 | 38.898  | -16.95  | -2.6737 | 7.4002   | -45.6069 |
| 1841 | 0   | Extremo | 0.956 | 32.573  | -17.072 | -0.9853 | -9.6054  | -9.8782  |
| 1841 | 0.5 | Extremo | 0.956 | 35.751  | -17.072 | -0.9853 | -1.0695  | -26.9594 |
| 1841 | 1   | Extremo | 0.956 | 38.929  | -17.072 | -0.9853 | 7.4665   | -45.6296 |
| 1843 | 0   | Extremo | 1.063 | -38.866 | 19.332  | -5.522  | 8.4661   | -45.7726 |
| 1843 | 0.5 | Extremo | 1.063 | -35.687 | 19.332  | -5.522  | -1.1997  | -27.1343 |
| 1843 | 1   | Extremo | 1.063 | -32.509 | 19.332  | -5.522  | -10.8655 | -10.0851 |
| 1843 | 0   | Extremo | 1.069 | -38.824 | 18.813  | -3.6799 | 8.211    | -45.654  |
| 1843 | 0.5 | Extremo | 1.069 | -35.646 | 18.813  | -3.6799 | -1.1956  | -27.0364 |
| 1843 | 1   | Extremo | 1.069 | -32.468 | 18.813  | -3.6799 | -10.6021 | -10.0079 |
| 1844 | 0   | Extremo | 0.101 | -17.729 | 4.773   | -1.5202 | 1.5599   | -9.7763  |
| 1844 | 0.3 | Extremo | 0.101 | -16.227 | 4.773   | -1.5202 | 0.1281   | -4.6829  |
| 1844 | 0.6 | Extremo | 0.101 | -14.725 | 4.773   | -1.5202 | -1.3038  | -0.0401  |
| 1844 | 0   | Extremo | 0.101 | -17.705 | 4.631   | -0.9592 | 1.509    | -9.7547  |
| 1844 | 0.3 | Extremo | 0.101 | -16.203 | 4.631   | -0.9592 | 0.1196   | -4.6684  |
| 1844 | 0.6 | Extremo | 0.101 | -14.702 | 4.631   | -0.9592 | -1.2698  | -0.0326  |
| 1845 | 0   | Extremo | 0.112 | 14.673  | -3.788  | -1.0027 | -1.0372  | 0.0036   |
| 1845 | 0.3 | Extremo | 0.112 | 16.175  | -3.788  | -1.0027 | 0.0993   | -4.6236  |
| 1845 | 0.6 | Extremo | 0.112 | 17.677  | -3.788  | -1.0027 | 1.2359   | -9.7013  |
| 1845 | 0   | Extremo | 0.11  | 14.672  | -3.829  | -0.469  | -1.0462  | 0.0034   |
| 1845 | 0.3 | Extremo | 0.11  | 16.174  | -3.829  | -0.469  | 0.1026   | -4.6235  |
| 1845 | 0.6 | Extremo | 0.11  | 17.676  | -3.829  | -0.469  | 1.2514   | -9.7009  |
| 1846 | 0   | Extremo | 1.171 | 32.774  | -15.417 | -2.3615 | -8.6425  | -9.704   |
| 1846 | 0.5 | Extremo | 1.171 | 35.952  | -15.417 | -2.3615 | -0.9338  | -26.8853 |
| 1846 | 1   | Extremo | 1.171 | 39.13   | -15.417 | -2.3615 | 6.7749   | -45.6558 |
| 1846 | 0   | Extremo | 1.156 | 32.765  | -15.556 | -0.6977 | -8.7079  | -9.7043  |
| 1846 | 0.5 | Extremo | 1.156 | 35.943  | -15.556 | -0.6977 | -0.9299  | -26.8815 |
| 1846 | 1   | Extremo | 1.156 | 39.121  | -15.556 | -0.6977 | 6.848    | -45.6477 |
| 1848 | 0   | Extremo | 1.24  | -39.083 | 17.707  | -6.0946 | 7.8156   | -45.7563 |
| 1848 | 0.5 | Extremo | 1.24  | -35.905 | 17.707  | -6.0946 | -1.0377  | -27.0092 |
| 1848 | 1   | Extremo | 1.24  | -32.727 | 17.707  | -6.0946 | -9.891   | -9.8512  |
| 1848 | 0   | Extremo | 1.262 | -39.04  | 17.167  | -4.1348 | 7.5479   | -45.6619 |
| 1848 | 0.5 | Extremo | 1.262 | -35.862 | 17.167  | -4.1348 | -1.0356  | -26.9364 |
| 1848 | 1   | Extremo | 1.262 | -32.684 | 17.167  | -4.1348 | -9.619   | -9.8     |
| 1849 | 0   | Extremo | 0.118 | -17.707 | 4.395   | -1.6733 | 1.4446   | -9.7353  |
| 1849 | 0.3 | Extremo | 0.118 | -16.205 | 4.395   | -1.6733 | 0.1259   | -4.6485  |
| 1849 | 0.6 | Extremo | 0.118 | -14.703 | 4.395   | -1.6733 | -1.1927  | -0.0123  |
| 1849 | 0   | Extremo | 0.12  | -17.689 | 4.247   | -1.0802 | 1.3907   | -9.7194  |
| 1849 | 0.3 | Extremo | 0.12  | -16.187 | 4.247   | -1.0802 | 0.1167   | -4.6382  |
| 1849 | 0.6 | Extremo | 0.12  | -14.685 | 4.247   | -1.0802 | -1.1573  | -0.0074  |
| 1850 | 0   | Extremo | 0.142 | 14.637  | -3.276  | -1.0985 | -0.9111  | 0.0478   |
| 1850 | 0.3 | Extremo | 0.142 | 16.139  |         |         |          |          |



|      |     |         |       |         |         |         |         |          |
|------|-----|---------|-------|---------|---------|---------|---------|----------|
| 1853 | 1   | Extremo | 1.496 | -33.378 | 15.72   | -6.013  | -8.8619 | -9.2911  |
| 1853 | 0   | Extremo | 1.537 | -39.628 | 15.131  | -4.0156 | 6.5624  | -45.7517 |
| 1853 | 0.5 | Extremo | 1.537 | -36.45  | 15.131  | -4.0156 | -1.003  | -26.7323 |
| 1853 | 1   | Extremo | 1.537 | -33.272 | 15.131  | -4.0156 | -8.5684 | -9.3019  |
| 1854 | 0   | Extremo | 0.145 | -17.673 | 3.868   | -1.6135 | 1.2586  | -9.6484  |
| 1854 | 0.3 | Extremo | 0.145 | -16.171 | 3.868   | -1.6135 | 0.0983  | -4.5718  |
| 1854 | 0.6 | Extremo | 0.145 | -14.669 | 3.868   | -1.6135 | -1.0621 | 0.0542   |
| 1854 | 0   | Extremo | 0.149 | -17.659 | 3.705   | -1.0121 | 1.199   | -9.6429  |
| 1854 | 0.3 | Extremo | 0.149 | -16.157 | 3.705   | -1.0121 | 0.0877  | -4.5704  |
| 1854 | 0.6 | Extremo | 0.149 | -14.656 | 3.705   | -1.0121 | -1.0237 | 0.0515   |
| 1855 | 0   | Extremo | 0.163 | 14.584  | -2.612  | -1.3893 | -0.7619 | 0.0582   |
| 1855 | 0.3 | Extremo | 0.163 | 16.086  | -2.612  | -1.3893 | 0.0218  | -4.5423  |
| 1855 | 0.6 | Extremo | 0.163 | 17.588  | -2.612  | -1.3893 | 0.8055  | -9.5934  |
| 1855 | 0   | Extremo | 0.159 | 14.573  | -2.672  | -0.8394 | -0.7754 | 0.0596   |
| 1855 | 0.3 | Extremo | 0.159 | 16.075  | -2.672  | -0.8394 | 0.0262  | -4.5376  |
| 1855 | 0.6 | Extremo | 0.159 | 17.577  | -2.672  | -0.8394 | 0.8279  | -9.5854  |
| 1856 | 0   | Extremo | 1.687 | 33      | -11.157 | -3.7149 | -6.5634 | -9.1213  |
| 1856 | 0.5 | Extremo | 1.687 | 36.178  | -11.157 | -3.7149 | -0.985  | -26.4158 |
| 1856 | 1   | Extremo | 1.687 | 39.356  | -11.157 | -3.7149 | 4.5935  | -45.2993 |
| 1856 | 0   | Extremo | 1.654 | 32.95   | -11.366 | -1.9659 | -6.6638 | -9.1147  |
| 1856 | 0.5 | Extremo | 1.654 | 36.128  | -11.366 | -1.9659 | -0.9806 | -26.3842 |
| 1856 | 1   | Extremo | 1.654 | 39.306  | -11.366 | -1.9659 | 4.7027  | -45.2428 |
| 1858 | 0   | Extremo | 1.691 | -39.856 | 13.359  | -4.7687 | 5.5967  | -45.5068 |
| 1858 | 0.5 | Extremo | 1.691 | -36.678 | 13.359  | -4.7687 | -1.0826 | -26.3731 |
| 1858 | 1   | Extremo | 1.691 | -33.5   | 13.359  | -4.7687 | -7.762  | -8.8285  |
| 1858 | 0   | Extremo | 1.759 | -39.706 | 12.683  | -2.8478 | 5.2533  | -45.4344 |
| 1858 | 0.5 | Extremo | 1.759 | -36.528 | 12.683  | -2.8478 | -1.0884 | -26.3759 |
| 1858 | 1   | Extremo | 1.759 | -33.35  | 12.683  | -2.8478 | -7.4301 | -8.9064  |
| 1859 | 0   | Extremo | 0.163 | -17.586 | 3.199   | -1.2475 | 1.0076  | -9.554   |
| 1859 | 0.3 | Extremo | 0.163 | -16.084 | 3.199   | -1.2475 | 0.0481  | -4.5035  |
| 1859 | 0.6 | Extremo | 0.163 | -14.582 | 3.199   | -1.2475 | -0.9115 | 0.0264   |
| 1859 | 0   | Extremo | 0.17  | -17.581 | 3.01    | -0.6729 | 0.9385  | -9.5615  |
| 1859 | 0.3 | Extremo | 0.17  | -16.08  | 3.01    | -0.6729 | 0.0354  | -4.5124  |
| 1859 | 0.6 | Extremo | 0.17  | -14.578 | 3.01    | -0.6729 | -0.8678 | 0.0862   |
| 1860 | 0   | Extremo | 0.11  | 14.622  | -2.048  | -1.6084 | -0.6276 | -0.0159  |
| 1860 | 0.3 | Extremo | 0.11  | 16.124  | -2.048  | -1.6084 | -0.0132 | -4.6277  |
| 1860 | 0.6 | Extremo | 0.11  | 17.626  | -2.048  | -1.6084 | 0.6011  | -9.6901  |
| 1860 | 0   | Extremo | 0.106 | 14.589  | -2.123  | -1.0748 | -0.6446 | -0.0032  |
| 1860 | 0.3 | Extremo | 0.106 | 16.091  | -2.123  | -1.0748 | -0.0078 | -4.6052  |
| 1860 | 0.6 | Extremo | 0.106 | 17.593  | -2.123  | -1.0748 | 0.6289  | -9.6577  |
| 1861 | 0   | Extremo | 1.153 | 32.208  | -8.968  | -4.9507 | -5.5357 | -9.7925  |
| 1861 | 0.5 | Extremo | 1.153 | 35.386  | -8.968  | -4.9507 | -1.0518 | -26.691  |
| 1861 | 1   | Extremo | 1.153 | 38.564  | -8.968  | -4.9507 | 3.4322  | -45.1785 |
| 1861 | 0   | Extremo | 1.113 | 32.171  | -9.233  | -3.1938 | -5.6627 | -9.6807  |
| 1861 | 0.5 | Extremo | 1.113 | 35.349  | -9.233  | -3.1938 | -1.0462 | -26.5606 |
| 1861 | 1   | Extremo | 1.113 | 38.527  | -9.233  | -3.1938 | 3.5702  | -45.0296 |
| 1863 | 0   | Extremo | 1.134 | -38.507 | 11.167  | -2.8312 | 4.4293  | -44.7433 |
| 1863 | 0.5 | Extremo | 1.134 | -35.328 | 11.167  | -2.8312 | -1.154  | -26.2846 |
| 1863 | 1   | Extremo | 1.134 | -32.15  | 11.167  | -2.8312 | -6.7374 | -9.4149  |
| 1863 | 0   | Extremo | 1.239 | -38.439 | 10.356  | -1.0964 | 4.011   | -44.7567 |
| 1863 | 0.5 | Extremo | 1.239 | -35.261 | 10.356  | -1.0964 | -1.1667 | -26.3318 |
| 1863 | 1   | Extremo | 1.239 | -32.083 | 10.356  | -1.0964 | -6.3445 | -9.496   |
| 1864 | 0   | Extremo | 0.108 | -17.526 | 2.64    | -0.8293 | 0.8059  | -9.5868  |
| 1864 | 0.3 | Extremo | 0.108 | -16.024 | 2.64    | -0.8293 | 0.014   | -4.5543  |
| 1864 | 0.6 | Extremo | 0.108 | -14.522 | 2.64    | -0.8293 | -0.778  | 0.0276   |
| 1864 | 0   | Extremo | 0.118 | -17.536 | 2.413   | -0.3061 | 0.722   | -9.6038  |
| 1864 | 0.3 | Extremo | 0.118 | -16.034 | 2.413   | -0.3061 | -0.0019 | -4.5682  |
| 1864 | 0.6 | Extremo | 0.118 | -14.533 | 2.413   | -0.3061 | -0.7259 | 0.0169   |
| 1865 | 0   | Extremo | 0.078 | 14.676  | -1.764  | -1.3158 | -0.5319 | -0.0851  |
| 1865 | 0.3 | Extremo | 0.078 | 16.178  | -1.764  | -1.3158 | -0.0027 | -4.7132  |
| 1865 | 0.6 | Extremo | 0.078 | 17.68   | -1.764  | -1.3158 | 0.5266  | -9.7918  |
| 1865 | 0   | Extremo | 0.074 | 14.613  | -1.855  | -0.8631 | -0.553  | -0.0607  |
| 1865 | 0.3 | Extremo | 0.074 | 16.115  | -1.855  | -0.8631 | 0.0036  | -4.6699  |
| 1865 | 0.6 | Extremo | 0.074 | 17.617  | -1.855  | -0.8631 | 0.5602  | -9.7297  |
| 1866 | 0   | Extremo | 0.848 | 31.805  | -7.705  | -3.7445 | -4.6498 | -10.4075 |
| 1866 | 0.5 | Extremo | 0.848 | 34.983  | -7.705  | -3.7445 | -0.7975 | -27.1047 |
| 1866 | 1   | Extremo | 0.848 | 38.162  | -7.705  | -3.7445 | 3.0548  | -45.391  |
| 1866 | 0   | Extremo | 0.803 | 31.717  | -8.03   | -2.2488 | -4.8093 | -10.185  |
| 1866 | 0.5 | Extremo | 0.803 | 34.895  | -8.03   | -2.2488 | -0.7944 | -26.8379 |
| 1866 | 1   | Extremo | 0.803 | 38.073  | -8.03   | -2.2488 | 3.2204  | -45.0799 |
| 1868 | 0   | Extremo | 0.812 | -37.319 | 9.998   | -3.8413 | 4.1375  | -44.0889 |
| 1868 | 0.5 | Extremo | 0.812 | -34.141 | 9.998   | -3.8413 | -0.8616 | -26.2237 |

|      |     |         |       |         |        |         |         |          |
|------|-----|---------|-------|---------|--------|---------|---------|----------|
| 1868 | 1   | Extremo | 0.812 | -30.963 | 9.998  | -3.8413 | -5.8607 | -9.9475  |
| 1868 | 0   | Extremo | 0.957 | -37.39  | 8.99   | -2.0825 | 3.6126  | -44.2657 |
| 1868 | 0.5 | Extremo | 0.957 | -34.212 | 8.99   | -2.0825 | -0.8825 | -26.3654 |
| 1868 | 1   | Extremo | 0.957 | -31.034 | 8.99   | -2.0825 | -5.3776 | -10.0541 |
| 1869 | 0   | Extremo | 0.074 | -17.453 | 2.381  | -0.9863 | 0.7435  | -9.6081  |
| 1869 | 0.3 | Extremo | 0.074 | -15.952 | 2.381  | -0.9863 | 0.0291  | -4.5974  |
| 1869 | 0.6 | Extremo | 0.074 | -14.45  | 2.381  | -0.9863 | -0.6853 | -0.0372  |
| 1869 | 0   | Extremo | 0.088 | -17.491 | 2.101  | -0.4896 | 0.6396  | -9.6449  |
| 1869 | 0.3 | Extremo | 0.088 | -15.989 | 2.101  | -0.4896 | 0.0092  | -4.6228  |
| 1869 | 0.6 | Extremo | 0.088 | -14.487 | 2.101  | -0.4896 | -0.6211 | -0.0513  |
| 1870 | 0   | Extremo | 0.103 | 14.685  | -1.52  | -0.921  | -0.4395 | -0.0912  |
| 1870 | 0.3 | Extremo | 0.103 | 16.187  | -1.52  | -0.921  | 0.0164  | -4.722   |
| 1870 | 0.6 | Extremo | 0.103 | 17.689  | -1.52  | -0.921  | 0.4723  | -9.8034  |
| 1870 | 0   | Extremo | 0.097 | 14.59   | -1.631 | -0.5869 | -0.4655 | -0.0588  |
| 1870 | 0.3 | Extremo | 0.097 | 16.092  | -1.631 | -0.5869 | 0.0237  | -4.6612  |
| 1870 | 0.6 | Extremo | 0.097 | 17.594  | -1.631 | -0.5869 | 0.5128  | -9.7141  |
| 1871 | 0   | Extremo | 1.117 | 31.816  | -6.431 | -2.463  | -3.7594 | -10.4128 |
| 1871 | 0.5 | Extremo | 1.117 | 34.994  | -6.431 | -2.463  | -0.5437 | -27.1155 |
| 1871 | 1   | Extremo | 1.117 | 38.173  | -6.431 | -2.463  | 2.672   | -45.4073 |
| 1871 | 0   | Extremo | 1.06  | 31.628  | -6.829 | -1.3314 | -3.9579 | -10.1137 |
| 1871 | 0.5 | Extremo | 1.06  | 34.806  | -6.829 | -1.3314 | -0.5435 | -26.7221 |
| 1871 | 1   | Extremo | 1.06  | 37.984  | -6.829 | -1.3314 | 2.8709  | -44.9195 |
| 1873 | 0   | Extremo | 1.038 | -37.137 | 8.863  | -4.3675 | 3.8579  | -43.495  |
| 1873 | 0.5 | Extremo | 1.038 | -33.959 | 8.863  | -4.3675 | -0.5737 | -25.7209 |
| 1873 | 1   | Extremo | 1.038 | -30.781 | 8.863  | -4.3675 | -5.0054 | -9.5359  |
| 1873 | 0   | Extremo | 1.231 | -37.279 | 7.589  | -2.7369 | 3.193   | -43.9302 |
| 1873 | 0.5 | Extremo | 1.231 | -34.101 | 7.589  | -2.7369 | -0.6013 | -26.0852 |
| 1873 | 1   | Extremo | 1.231 | -30.923 | 7.589  | -2.7369 | -4.3956 | -9.8292  |
| 1874 | 0   | Extremo | 0.095 | -17.334 | 2.172  | -1.1161 | 0.7042  | -9.5007  |
| 1874 | 0.3 | Extremo | 0.095 | -15.832 | 2.172  | -1.1161 | 0.0527  | -4.5258  |
| 1874 | 0.6 | Extremo | 0.095 | -14.33  | 2.172  | -1.1161 | -0.5988 | -0.0014  |
| 1874 | 0   | Extremo | 0.113 | -17.427 | 1.825  | -0.6944 | 0.5767  | -9.5905  |
| 1874 | 0.3 | Extremo | 0.113 | -15.925 | 1.825  | -0.6944 | 0.0291  | -4.5877  |
| 1874 | 0.6 | Extremo | 0.113 | -14.423 | 1.825  | -0.6944 | -0.5184 | -0.0355  |
| 1875 | 0   | Extremo | 0.122 | 14.695  | -1.159 | -0.6076 | -0.3272 | -0.0727  |
| 1875 | 0.3 | Extremo | 0.122 | 16.197  | -1.159 | -0.6076 | 0.0205  | -4.7066  |
| 1875 | 0.6 | Extremo | 0.122 | 17.699  | -1.159 | -0.6076 | 0.3681  | -9.7911  |
| 1875 | 0   | Extremo | 0.115 | 14.566  | -1.295 | -0.4198 | -0.3591 | -0.0344  |
| 1875 | 0.3 | Extremo | 0.115 | 16.068  | -1.295 | -0.4198 | 0.0293  | -4.6295  |
| 1875 | 0.6 | Extremo | 0.115 | 17.57   | -1.295 | -0.4198 | 0.4177  | -9.6752  |
| 1876 | 0   | Extremo | 1.298 | 32.116  | -4.834 | -1.6349 | -2.7678 | -10.2531 |
| 1876 | 0.5 | Extremo | 1.298 | 35.294  | -4.834 | -1.6349 | -0.3509 | -27.1056 |
| 1876 | 1   | Extremo | 1.298 | 38.472  | -4.834 | -1.6349 | 2.0661  | -45.5472 |
| 1876 | 0   | Extremo | 1.231 | 31.789  | -5.316 | -0.952  | -3.011  | -9.888   |
| 1876 | 0.5 | Extremo | 1.231 | 34.968  | -5.316 | -0.952  | -0.353  | -26.5772 |
| 1876 | 1   | Extremo | 1.231 | 38.146  | -5.316 | -0.952  | 2.3049  | -44.8555 |
| 1878 | 0   | Extremo | 1.16  | -37.267 | 7.466  | -3.7751 | 3.3688  | -43.0145 |
| 1878 | 0.5 | Extremo | 1.16  | -34.089 | 7.466  | -3.7751 | -0.3642 | -25.1753 |
| 1878 | 1   | Extremo | 1.16  | -30.911 | 7.466  | -3.7751 | -4.0971 | -8.9252  |
| 1878 | 0   | Extremo | 1.396 | -37.577 | 5.857  | -2.62   | 2.5403  | -43.9002 |
| 1878 | 0.5 | Extremo | 1.396 | -34.399 | 5.857  | -2.62   | -0.3882 | -25.9062 |
| 1878 | 1   | Extremo | 1.396 | -31.221 | 5.857  | -2.62   | -3.3168 | -9.5013  |
| 1879 | 0   | Extremo | 0.109 | -17.208 | 1.849  | -0.9578 | 0.613   | -9.3615  |
| 1879 | 0.3 | Extremo | 0.109 | -15.706 | 1.849  | -0.9578 | 0.0582  | -4.4243  |
| 1879 | 0.6 | Extremo | 0.109 | -14.205 | 1.849  | -0.9578 | -0.4966 | 0.0623   |
| 1879 | 0   | Extremo | 0.131 | -17.397 | 1.434  | -0.7209 | 0.464   | -9.5351  |
| 1879 | 0.3 | Extremo | 0.131 | -15.895 | 1.434  | -0.7209 | 0.0338  | -4.5412  |
| 1879 | 0.6 | Extremo | 0.131 | -14.394 | 1.434  | -0.7209 | -0.3963 | 0.0022   |
| 1880 | 0   | Extremo | 0.126 | 14.717  | -0.723 | -0.3641 | -0.2038 | -0.0591  |
| 1880 | 0.3 | Extremo | 0.126 | 16.219  | -0.723 | -0.3641 | 0.013   | -4.6995  |



|      |     |         |       |         |           |         |           |          |
|------|-----|---------|-------|---------|-----------|---------|-----------|----------|
| 1883 | 1   | Extremo | 1.21  | -30.325 | 5.881     | -2.3636 | -3.1858   | -8.6574  |
| 1883 | 0   | Extremo | 1.427 | -37.801 | 3.933     | -2.1548 | 1.7374    | -43.9589 |
| 1883 | 0.5 | Extremo | 1.427 | -34.623 | 3.933     | -2.1548 | -0.229    | -25.8529 |
| 1883 | 1   | Extremo | 1.427 | -31.445 | 3.933     | -2.1548 | -2.1953   | -9.3358  |
| 1884 | 0   | Extremo | 0.117 | -17.064 | 1.425     | -0.5772 | 0.4707    | -9.2559  |
| 1884 | 0.3 | Extremo | 0.117 | -15.562 | 1.425     | -0.5772 | 0.043     | -4.362   |
| 1884 | 0.6 | Extremo | 0.117 | -14.06  | 1.425     | -0.5772 | -0.3846   | 0.0814   |
| 1884 | 0   | Extremo | 0.135 | -17.394 | 0.97      | -0.6232 | 0.3178    | -9.5103  |
| 1884 | 0.3 | Extremo | 0.135 | -15.892 | 0.97      | -0.6232 | 0.0268    | -4.5174  |
| 1884 | 0.6 | Extremo | 0.135 | -14.39  | 0.97      | -0.6232 | -0.2641   | 0.0249   |
| 1885 | 0   | Extremo | 0.123 | 14.734  | -0.267    | -0.1477 | -0.0794   | -0.0533  |
| 1885 | 0.3 | Extremo | 0.123 | 16.236  | -0.267    | -0.1477 | 0.000735  | -4.6988  |
| 1885 | 0.6 | Extremo | 0.123 | 17.738  | -0.267    | -0.1477 | 0.0808    | -9.795   |
| 1885 | 0   | Extremo | 0.12  | 14.555  | -0.45     | -0.3256 | -0.122    | -0.0077  |
| 1885 | 0.3 | Extremo | 0.12  | 16.057  | -0.45     | -0.3256 | 0.0131    | -4.5995  |
| 1885 | 0.6 | Extremo | 0.12  | 17.559  | -0.45     | -0.3256 | 0.1483    | -9.6418  |
| 1886 | 0   | Extremo | 1.302 | 32.569  | -1.197    | -0.4014 | -0.6917   | -10.1401 |
| 1886 | 0.5 | Extremo | 1.302 | 35.747  | -1.197    | -0.4014 | -0.0932   | -27.2191 |
| 1886 | 1   | Extremo | 1.302 | 38.925  | -1.197    | -0.4014 | 0.5052    | -45.8871 |
| 1886 | 0   | Extremo | 1.268 | 32.013  | -1.828    | -0.9184 | -1.0124   | -9.6859  |
| 1886 | 0.5 | Extremo | 1.268 | 35.191  | -1.828    | -0.9184 | -0.0983   | -26.487  |
| 1886 | 1   | Extremo | 1.268 | 38.369  | -1.828    | -0.9184 | 0.8159    | -44.8772 |
| 1888 | 0   | Extremo | 1.328 | -35.565 | 4.043     | -0.9611 | 1.76      | -41.3717 |
| 1888 | 0.5 | Extremo | 1.328 | -32.387 | 4.043     | -0.9611 | -0.2616   | -24.3836 |
| 1888 | 1   | Extremo | 1.328 | -29.209 | 4.043     | -0.9611 | -2.2832   | -8.9846  |
| 1888 | 0   | Extremo | 1.413 | -37.902 | 1.947     | -1.5964 | 0.8685    | -44.005  |
| 1888 | 0.5 | Extremo | 1.413 | -34.724 | 1.947     | -1.5964 | -0.1048   | -25.8483 |
| 1888 | 1   | Extremo | 1.413 | -31.546 | 1.947     | -1.5964 | -1.0781   | -9.2807  |
| 1889 | 0   | Extremo | 0.127 | -17.022 | 0.909     | -0.2395 | 0.2809    | -9.2655  |
| 1889 | 0.3 | Extremo | 0.127 | -15.52  | 0.909     | -0.2395 | 0.0083    | -4.3841  |
| 1889 | 0.6 | Extremo | 0.127 | -14.018 | 0.909     | -0.2395 | -0.2644   | 0.0467   |
| 1889 | 0   | Extremo | 0.134 | -17.397 | 0.481     | -0.4754 | 0.1586    | -9.5032  |
| 1889 | 0.3 | Extremo | 0.134 | -15.895 | 0.481     | -0.4754 | 0.0142    | -4.5095  |
| 1889 | 0.6 | Extremo | 0.134 | -14.393 | 0.481     | -0.4754 | -0.1301   | 0.0337   |
| 1890 | 0   | Extremo | 0.119 | 14.735  | 0.178     | 0.0599  | 0.0414    | -0.051   |
| 1890 | 0.3 | Extremo | 0.119 | 16.237  | 0.178     | 0.0599  | -0.0121   | -4.6967  |
| 1890 | 0.6 | Extremo | 0.119 | 17.738  | 0.178     | 0.0599  | -0.0657   | -9.7929  |
| 1890 | 0   | Extremo | 0.12  | 14.555  | -0.009196 | -0.3182 | -0.0024   | -0.0056  |
| 1890 | 0.3 | Extremo | 0.12  | 16.057  | -0.009196 | -0.3182 | 0.0003741 | -4.5974  |
| 1890 | 0.6 | Extremo | 0.12  | 17.559  | -0.009196 | -0.3182 | 0.0031    | -9.6397  |
| 1891 | 0   | Extremo | 1.251 | 32.594  | 0.613     | 0.2136  | 0.3108    | -10.1255 |
| 1891 | 0.5 | Extremo | 1.251 | 35.772  | 0.613     | 0.2136  | 0.0042    | -27.2171 |
| 1891 | 1   | Extremo | 1.251 | 38.95   | 0.613     | 0.2136  | -0.3025   | -45.8978 |
| 1891 | 0   | Extremo | 1.261 | 32.034  | -0.035    | -0.9843 | -0.0193   | -9.6722  |
| 1891 | 0.5 | Extremo | 1.261 | 35.212  | -0.035    | -0.9843 | -0.0017   | -26.4837 |
| 1891 | 1   | Extremo | 1.261 | 38.39   | -0.035    | -0.9843 | 0.0158    | -44.8843 |
| 1893 | 0   | Extremo | 1.51  | -35.596 | 2.034     | 0.094   | 0.8629    | -41.3906 |
| 1893 | 0.5 | Extremo | 1.51  | -32.418 | 2.034     | 0.094   | -0.154    | -24.3872 |
| 1893 | 1   | Extremo | 1.51  | -29.24  | 2.034     | 0.094   | -1.171    | -8.9728  |
| 1893 | 0   | Extremo | 1.404 | -37.926 | -0.049    | -1.0212 | -0.0222   | -44.0149 |
| 1893 | 0.5 | Extremo | 1.404 | -34.748 | -0.049    | -1.0212 | 0.0021    | -25.8462 |
| 1893 | 1   | Extremo | 1.404 | -31.57  | -0.049    | -1.0212 | 0.0264    | -9.2665  |
| 1894 | 0   | Extremo | 0.142 | -17.024 | 0.412     | -0.0129 | 0.1168    | -9.2645  |
| 1894 | 0.3 | Extremo | 0.142 | -15.522 | 0.412     | -0.0129 | -0.0067   | -4.3825  |
| 1894 | 0.6 | Extremo | 0.142 | -14.02  | 0.412     | -0.0129 | -0.1301   | 0.0489   |
| 1894 | 0   | Extremo | 0.133 | -17.397 | -0.013    | -0.3127 | -0.0044   | -9.5011  |
| 1894 | 0.3 | Extremo | 0.133 | -15.895 | -0.013    | -0.3127 | -0.000555 | -4.5073  |
| 1894 | 0.6 | Extremo | 0.133 | -14.393 | -0.013    | -0.3127 | 0.0033    | 0.036    |
| 1895 | 0   | Extremo | 0.116 | 14.716  | 0.608     | 0.2596  | 0.1587    | -0.0503  |
| 1895 | 0.3 | Extremo | 0.116 | 16.218  | 0.608     | 0.2596  | -0.0235   | -4.6905  |
| 1895 | 0.6 | Extremo | 0.116 | 17.72   | 0.608     | 0.2596  | -0.2058   | -9.7812  |
| 1895 | 0   | Extremo | 0.12  | 14.555  | 0.432     | -0.3102 | 0.1173    | -0.0082  |
| 1895 | 0.3 | Extremo | 0.12  | 16.057  | 0.432     | -0.3102 | -0.0124   | -4.6     |
| 1895 | 0.6 | Extremo | 0.12  | 17.559  | 0.432     | -0.3102 | -0.142    | -9.6423  |
| 1896 | 0   | Extremo | 1.228 | 32.488  | 2.377     | 0.7931  | 1.29      | -10.1054 |
| 1896 | 0.5 | Extremo | 1.228 | 35.667  | 2.377     | 0.7931  | 0.1015    | -27.1441 |
| 1896 | 1   | Extremo | 1.228 | 38.845  | 2.377     | 0.7931  | -1.0871   | -45.7719 |
| 1896 | 0   | Extremo | 1.268 | 32.009  | 1.758     | -1.0495 | 0.9739    | -9.6888  |
| 1896 | 0.5 | Extremo | 1.268 | 35.187  | 1.758     | -1.0495 | 0.0948    | -26.4878 |
| 1896 | 1   | Extremo | 1.268 | 38.365  | 1.758     | -1.0495 | -0.7842   | -44.8758 |
| 1898 | 0   | Extremo | 1.651 | -36.794 | -0.138    | 1.5123  | 0.0256    | -42.2134 |
| 1898 | 0.5 | Extremo | 1.651 | -33.616 | -0.138    | 1.5123  | 0.0948    | -24.6107 |

|      |     |         |       |         |        |         |           |          |
|------|-----|---------|-------|---------|--------|---------|-----------|----------|
| 1898 | 1   | Extremo | 1.651 | -30.438 | -0.138 | 1.5123  | 0.1639    | -8.5971  |
| 1898 | 0   | Extremo | 1.414 | -37.891 | -2.045 | -0.4397 | -0.9133   | -43.9842 |
| 1898 | 0.5 | Extremo | 1.414 | -34.713 | -2.045 | -0.4397 | 0.1089    | -25.8332 |
| 1898 | 1   | Extremo | 1.414 | -31.535 | -2.045 | -0.4397 | 1.1312    | -9.2712  |
| 1899 | 0   | Extremo | 0.154 | -17.068 | -0.062 | 0.3403  | -0.0181   | -9.2484  |
| 1899 | 0.3 | Extremo | 0.154 | -15.566 | -0.062 | 0.3403  | 0.0004334 | -4.3534  |
| 1899 | 0.6 | Extremo | 0.154 | -14.064 | -0.062 | 0.3403  | 0.0189    | 0.091    |
| 1899 | 0   | Extremo | 0.134 | -17.393 | -0.507 | -0.1481 | -0.1674   | -9.4999  |
| 1899 | 0.3 | Extremo | 0.134 | -15.891 | -0.507 | -0.1481 | -0.0154   | -4.5074  |
| 1899 | 0.6 | Extremo | 0.134 | -14.389 | -0.507 | -0.1481 | 0.1367    | 0.0346   |
| 1900 | 0   | Extremo | 0.116 | 14.687  | 1.024  | 0.4533  | 0.2747    | -0.0533  |
| 1900 | 0.3 | Extremo | 0.116 | 16.189  | 1.024  | 0.4533  | -0.0324   | -4.6848  |
| 1900 | 0.6 | Extremo | 0.116 | 17.691  | 1.024  | 0.4533  | -0.3395   | -9.7668  |
| 1900 | 0   | Extremo | 0.12  | 14.557  | 0.867  | -0.2841 | 0.2371    | -0.0174  |
| 1900 | 0.3 | Extremo | 0.12  | 16.059  | 0.867  | -0.2841 | -0.0231   | -4.6099  |
| 1900 | 0.6 | Extremo | 0.12  | 17.561  | 0.867  | -0.2841 | -0.2833   | -9.653   |
| 1901 | 0   | Extremo | 1.23  | 32.283  | 4.103  | 1.3053  | 2.2656    | -10.1022 |
| 1901 | 0.5 | Extremo | 1.23  | 35.461  | 4.103  | 1.3053  | 0.2141    | -27.0383 |
| 1901 | 1   | Extremo | 1.23  | 38.639  | 4.103  | 1.3053  | -1.8375   | -45.5635 |
| 1901 | 0   | Extremo | 1.274 | 31.927  | 3.537  | -1.0835 | 1.9753    | -9.754   |
| 1901 | 0.5 | Extremo | 1.274 | 35.105  | 3.537  | -1.0835 | 0.2068    | -26.5119 |
| 1901 | 1   | Extremo | 1.274 | 38.283  | 3.537  | -1.0835 | -1.5618   | -44.8588 |
| 1903 | 0   | Extremo | 1.685 | -37.512 | -2.494 | 3.0277  | -0.9861   | -43.0746 |
| 1903 | 0.5 | Extremo | 1.685 | -34.334 | -2.494 | 3.0277  | 0.261     | -25.1129 |
| 1903 | 1   | Extremo | 1.685 | -31.156 | -2.494 | 3.0277  | 1.5081    | -8.7404  |
| 1903 | 0   | Extremo | 1.429 | -37.775 | -4.033 | 0.1372  | -1.7833   | -43.9149 |
| 1903 | 0.5 | Extremo | 1.429 | -34.597 | -4.033 | 0.1372  | 0.2331    | -25.8221 |
| 1903 | 1   | Extremo | 1.429 | -31.418 | -4.033 | 0.1372  | 2.2494    | -9.3184  |
| 1904 | 0   | Extremo | 0.158 | -17.203 | -0.598 | 0.7765  | -0.1837   | -9.3334  |
| 1904 | 0.3 | Extremo | 0.158 | -15.702 | -0.598 | 0.7765  | -0.0042   | -4.3976  |
| 1904 | 0.6 | Extremo | 0.158 | -14.2   | -0.598 | 0.7765  | 0.1752    | 0.0876   |
| 1904 | 0   | Extremo | 0.135 | -17.386 | -0.996 | 0.0055  | -0.3268   | -9.5038  |
| 1904 | 0.3 | Extremo | 0.135 | -15.884 | -0.996 | 0.0055  | -0.028    | -4.5134  |
| 1904 | 0.6 | Extremo | 0.135 | -14.382 | -0.996 | 0.0055  | 0.2708    | 0.0265   |
| 1905 | 0   | Extremo | 0.112 | 14.662  | 1.415  | 0.6641  | 0.3882    | -0.065   |
| 1905 | 0.3 | Extremo | 0.112 | 16.164  | 1.415  | 0.6641  | -0.0363   | -4.6891  |
| 1905 | 0.6 | Extremo | 0.112 | 17.666  | 1.415  | 0.6641  | -0.4607   | -9.7636  |
| 1905 | 0   | Extremo | 0.115 | 14.569  | 1.276  | -0.2062 | 0.3544    | -0.0374  |
| 1905 | 0.3 | Extremo | 0.115 | 16.071  | 1.276  | -0.2062 | -0.0285   | -4.6333  |
| 1905 | 0.6 | Extremo | 0.115 | 17.572  | 1.276  | -0.2062 | -0.4114   | -9.6798  |
| 1906 | 0   | Extremo | 1.197 | 32.005  | 5.758  | 1.8057  | 3.2371    | -10.1734 |
| 1906 | 0.5 | Extremo | 1.197 | 35.183  | 5.758  | 1.8057  | 0.358     | -26.9702 |
| 1906 | 1   | Extremo | 1.197 | 38.361  | 5.758  | 1.8057  | -2.5211   | -45.3561 |
| 1906 | 0   | Extremo | 1.232 | 31.771  | 5.246  | -0.9974 | 2.9728    | -9.9111  |
| 1906 | 0.5 | Extremo | 1.232 | 34.949  | 5.246  | -0.9974 | 0.3498    | -26.5909 |
| 1906 | 1   | Extremo | 1.232 | 38.127  | 5.246  | -0.9974 | -2.2733   | -44.8598 |
| 1908 | 0   | Extremo | 1.612 | -37.458 | -4.784 | 4.0096  | -1.9662   | -43.4494 |
| 1908 | 0.5 | Extremo | 1.612 | -34.28  | -4.784 | 4.0096  | 0.4258    | -25.5151 |
| 1908 | 1   | Extremo | 1.612 | -31.101 | -4.784 | 4.0096  | 2.8179    | -9.1699  |
| 1908 | 0   | Extremo | 1.399 | -37.526 | -5.961 | 0.6304  | -2.5881   | -43.8288 |
| 1908 | 0.5 | Extremo | 1.399 | -34.348 | -5.961 | 0.6304  | 0.3923    | -25.8603 |
| 1908 | 1   | Extremo | 1.399 | -31.17  | -5.961 | 0.6304  | 3.3727    | -9.4807  |
| 1909 | 0   | Extremo | 0.151 | -17.299 | -1.139 | 1.0734  | -0.354    | -9.438   |
| 1909 | 0.3 | Extremo | 0.151 | -15.797 | -1.139 | 1.0734  | -0.0122   | -4.4735  |
| 1909 | 0.6 | Extremo | 0.151 | -14.295 | -1.139 | 1.0734  | 0.3295    | 0.0404   |
| 1909 | 0   | Extremo | 0.131 | -17.385 | -1.461 | 0.1112  | -0.4734   | -9.526   |
| 1909 | 0.3 | Extremo | 0.131 | -15.883 | -1.461 | 0.1112  | -0.0351   | -4.5358  |
| 1909 | 0.6 | Extremo | 0.131 | -14.381 | -1.461 | 0.1112  | 0.4033    | 0.0038   |
| 1910 | 0   | Extremo | 0.095 | 14.656  | 1.736  | 0.942   | 0.4916    | -0.0832  |
| 1910 | 0.3 | Extremo | 0.095 | 16.158  | 1.736  | 0.942   | -0.0293   | -        |



|      |     |         |       |         |         |         |           |          |
|------|-----|---------|-------|---------|---------|---------|-----------|----------|
| 1913 | 1   | Extremo | 1.328 | -30.824 | -6.813  | 4.3418  | 4.0415    | -9.6964  |
| 1913 | 0   | Extremo | 1.235 | -37.191 | -7.698  | 0.7729  | -3.2436   | -43.8281 |
| 1913 | 0.5 | Extremo | 1.235 | -34.013 | -7.698  | 0.7729  | 0.6053    | -26.0271 |
| 1913 | 1   | Extremo | 1.235 | -30.835 | -7.698  | 0.7729  | 4.4541    | -9.8151  |
| 1914 | 0   | Extremo | 0.13  | -17.38  | -1.604  | 1.1419  | -0.4925   | -9.5462  |
| 1914 | 0.3 | Extremo | 0.13  | -15.878 | -1.604  | 1.1419  | -0.0113   | -4.5576  |
| 1914 | 0.6 | Extremo | 0.13  | -14.376 | -1.604  | 1.1419  | 0.4699    | -0.0195  |
| 1914 | 0   | Extremo | 0.114 | -17.41  | -1.854  | 0.0909  | -0.5868   | -9.5799  |
| 1914 | 0.3 | Extremo | 0.114 | -15.908 | -1.854  | 0.0909  | -0.0305   | -4.5821  |
| 1914 | 0.6 | Extremo | 0.114 | -14.406 | -1.854  | 0.0909  | 0.5257    | -0.0349  |
| 1915 | 0   | Extremo | 0.071 | 14.653  | 1.95    | 1.3044  | 0.5768    | -0.0782  |
| 1915 | 0.3 | Extremo | 0.071 | 16.155  | 1.95    | 1.3044  | -0.0081   | -4.6994  |
| 1915 | 0.6 | Extremo | 0.071 | 17.657  | 1.95    | 1.3044  | -0.593    | -9.7713  |
| 1915 | 0   | Extremo | 0.074 | 14.624  | 1.837   | 0.2794  | 0.5484    | -0.0667  |
| 1915 | 0.3 | Extremo | 0.074 | 16.126  | 1.837   | 0.2794  | -0.0027   | -4.6793  |
| 1915 | 0.6 | Extremo | 0.074 | 17.628  | 1.837   | 0.2794  | -0.5539   | -9.7425  |
| 1916 | 0   | Extremo | 0.781 | 31.752  | 8.389   | 3.6846  | 4.9984    | -10.3414 |
| 1916 | 0.5 | Extremo | 0.781 | 34.93   | 8.389   | 3.6846  | 0.804     | -27.0117 |
| 1916 | 1   | Extremo | 0.781 | 38.108  | 8.389   | 3.6846  | -3.3904   | -45.2711 |
| 1916 | 0   | Extremo | 0.804 | 31.712  | 7.961   | 0.4292  | 4.7723    | -10.2416 |
| 1916 | 0.5 | Extremo | 0.804 | 34.89   | 7.961   | 0.4292  | 0.7916    | -26.8921 |
| 1916 | 1   | Extremo | 0.804 | 38.068  | 7.961   | 0.4292  | -3.1892   | -45.1317 |
| 1918 | 0   | Extremo | 1.084 | -37.338 | -8.442  | 3.7022  | -3.31     | -44.1884 |
| 1918 | 0.5 | Extremo | 1.084 | -34.16  | -8.442  | 3.7022  | 0.9112    | -26.3137 |
| 1918 | 1   | Extremo | 1.084 | -30.982 | -8.442  | 3.7022  | 5.1324    | -10.0281 |
| 1918 | 0   | Extremo | 0.963 | -37.267 | -9.106  | 0.1158  | -3.6668   | -44.137  |
| 1918 | 0.5 | Extremo | 0.963 | -34.089 | -9.106  | 0.1158  | 0.8863    | -26.2982 |
| 1918 | 1   | Extremo | 0.963 | -30.91  | -9.106  | 0.1158  | 5.4395    | -10.0485 |
| 1919 | 0   | Extremo | 0.1   | -17.476 | -1.94   | 0.962   | -0.5773   | -9.6313  |
| 1919 | 0.3 | Extremo | 0.1   | -15.974 | -1.94   | 0.962   | 0.0047    | -4.6139  |
| 1919 | 0.6 | Extremo | 0.1   | -14.472 | -1.94   | 0.962   | 0.5868    | -0.0471  |
| 1919 | 0   | Extremo | 0.089 | -17.471 | -2.132  | -0.1144 | -0.6504   | -9.6332  |
| 1919 | 0.3 | Extremo | 0.089 | -15.969 | -2.132  | -0.1144 | -0.0107   | -4.6172  |
| 1919 | 0.6 | Extremo | 0.089 | -14.467 | -2.132  | -0.1144 | 0.6289    | -0.0518  |
| 1920 | 0   | Extremo | 0.105 | 14.606  | 2.208   | 1.5718  | 0.6666    | -0.0109  |
| 1920 | 0.3 | Extremo | 0.105 | 16.108  | 2.208   | 1.5718  | 0.0042    | -4.6181  |
| 1920 | 0.6 | Extremo | 0.105 | 17.61   | 2.208   | 1.5718  | -0.6583   | -9.6759  |
| 1920 | 0   | Extremo | 0.106 | 14.6    | 2.105   | 0.5156  | 0.6401    | -0.0061  |
| 1920 | 0.3 | Extremo | 0.106 | 16.102  | 2.105   | 0.5156  | 0.0086    | -4.6113  |
| 1920 | 0.6 | Extremo | 0.106 | 17.604  | 2.105   | 0.5156  | -0.6228   | -9.6672  |
| 1921 | 0   | Extremo | 1.1   | 32.176  | 9.564   | 4.812   | 5.8409    | -9.7465  |
| 1921 | 0.5 | Extremo | 1.1   | 35.354  | 9.564   | 4.812   | 1.059     | -26.6289 |
| 1921 | 1   | Extremo | 1.1   | 38.532  | 9.564   | 4.812   | -3.7228   | -45.1005 |
| 1921 | 0   | Extremo | 1.115 | 32.211  | 9.167   | 1.4773  | 5.6269    | -9.7081  |
| 1921 | 0.5 | Extremo | 1.115 | 35.389  | 9.167   | 1.4773  | 1.0436    | -26.6081 |
| 1921 | 1   | Extremo | 1.115 | 38.567  | 9.167   | 1.4773  | -3.5397   | -45.0971 |
| 1923 | 0   | Extremo | 1.342 | -38.507 | -9.983  | 2.6451  | -3.7994   | -44.7875 |
| 1923 | 0.5 | Extremo | 1.342 | -35.329 | -9.983  | 2.6451  | 1.1919    | -26.3285 |
| 1923 | 1   | Extremo | 1.342 | -32.151 | -9.983  | 2.6451  | 6.1831    | -9.4587  |
| 1923 | 0   | Extremo | 1.244 | -38.319 | -10.48  | -0.8991 | -4.0696   | -44.6071 |
| 1923 | 0.5 | Extremo | 1.244 | -35.141 | -10.48  | -0.8991 | 1.1705    | -26.2422 |
| 1923 | 1   | Extremo | 1.244 | -31.963 | -10.48  | -0.8991 | 6.4105    | -9.4664  |
| 1924 | 0   | Extremo | 0.128 | -17.537 | -2.301  | 0.7803  | -0.6777   | -9.5986  |
| 1924 | 0.3 | Extremo | 0.128 | -16.035 | -2.301  | 0.7803  | 0.0125    | -4.5629  |
| 1924 | 0.6 | Extremo | 0.128 | -14.533 | -2.301  | 0.7803  | 0.7026    | 0.0222   |
| 1924 | 0   | Extremo | 0.118 | -17.512 | -2.446  | -0.3001 | -0.7335   | -9.5872  |
| 1924 | 0.3 | Extremo | 0.118 | -16.01  | -2.446  | -0.3001 | 0.0003192 | -4.5588  |
| 1924 | 0.6 | Extremo | 0.118 | -14.509 | -2.446  | -0.3001 | 0.7342    | 0.0191   |
| 1925 | 0   | Extremo | 0.159 | 14.575  | 2.754   | 1.3379  | 0.7967    | 0.061    |
| 1925 | 0.3 | Extremo | 0.159 | 16.077  | 2.754   | 1.3379  | -0.0296   | -4.5367  |
| 1925 | 0.6 | Extremo | 0.159 | 17.578  | 2.754   | 1.3379  | -0.8559   | -9.5849  |
| 1925 | 0   | Extremo | 0.159 | 14.582  | 2.655   | 0.2818  | 0.7711    | 0.0586   |
| 1925 | 0.3 | Extremo | 0.159 | 16.083  | 2.655   | 0.2818  | -0.0255   | -4.5412  |
| 1925 | 0.6 | Extremo | 0.159 | 17.585  | 2.655   | 0.2818  | -0.822    | -9.5915  |
| 1926 | 0   | Extremo | 1.652 | 32.978  | 11.687  | 3.5378  | 6.8369    | -9.0957  |
| 1926 | 0.5 | Extremo | 1.652 | 36.156  | 11.687  | 3.5378  | 0.9934    | -26.3791 |
| 1926 | 1   | Extremo | 1.652 | 39.334  | 11.687  | 3.5378  | -4.8501   | -45.2516 |
| 1926 | 0   | Extremo | 1.655 | 32.991  | 11.303  | 0.2303  | 6.6294    | -9.1233  |
| 1926 | 0.5 | Extremo | 1.655 | 36.169  | 11.303  | 0.2303  | 0.9781    | -26.4131 |
| 1926 | 1   | Extremo | 1.655 | 39.347  | 11.303  | 0.2303  | -4.6732   | -45.292  |
| 1928 | 0   | Extremo | 1.846 | -39.846 | -12.458 | 4.5404  | -5.1215   | -45.5219 |
| 1928 | 0.5 | Extremo | 1.846 | -36.668 | -12.458 | 4.5404  | 1.1073    | -26.3934 |

|      |     |         |       |         |         |         |         |          |
|------|-----|---------|-------|---------|---------|---------|---------|----------|
| 1928 | 1   | Extremo | 1.846 | -33.49  | -12.458 | 4.5404  | 7.3362  | -8.8538  |
| 1928 | 0   | Extremo | 1.768 | -39.63  | -12.819 | 0.9529  | -5.3173 | -45.2846 |
| 1928 | 0.5 | Extremo | 1.768 | -36.451 | -12.819 | 0.9529  | 1.0922  | -26.2644 |
| 1928 | 1   | Extremo | 1.768 | -33.273 | -12.819 | 0.9529  | 7.5017  | -8.8332  |
| 1929 | 0   | Extremo | 0.178 | -17.59  | -2.94   | 1.1823  | -0.91   | -9.5599  |
| 1929 | 0.3 | Extremo | 0.178 | -16.089 | -2.94   | 1.1823  | -0.0281 | -4.508   |
| 1929 | 0.6 | Extremo | 0.178 | -14.587 | -2.94   | 1.1823  | 0.8538  | 0.0932   |
| 1929 | 0   | Extremo | 0.17  | -17.554 | -3.046  | 0.0913  | -0.951  | -9.5382  |
| 1929 | 0.3 | Extremo | 0.17  | -16.052 | -3.046  | 0.0913  | -0.0371 | -4.4973  |
| 1929 | 0.6 | Extremo | 0.17  | -14.55  | -3.046  | 0.0913  | 0.8768  | 0.0931   |
| 1930 | 0   | Extremo | 0.14  | 14.632  | 3.406   | 1.0393  | 0.9432  | 0.0494   |
| 1930 | 0.3 | Extremo | 0.14  | 16.133  | 3.406   | 1.0393  | -0.0787 | -4.5653  |
| 1930 | 0.6 | Extremo | 0.14  | 17.635  | 3.406   | 1.0393  | -1.1006 | -9.6307  |
| 1930 | 0   | Extremo | 0.14  | 14.641  | 3.307   | 0.0068  | 0.9177  | 0.0423   |
| 1930 | 0.3 | Extremo | 0.14  | 16.143  | 3.307   | 0.0068  | -0.0746 | -4.5752  |
| 1930 | 0.6 | Extremo | 0.14  | 17.644  | 3.307   | 0.0068  | -1.0668 | -9.6432  |
| 1931 | 0   | Extremo | 1.448 | 33.128  | 13.976  | 2.4022  | 7.9042  | -9.2878  |
| 1931 | 0.5 | Extremo | 1.448 | 36.306  | 13.976  | 2.4022  | 0.916   | -26.6462 |
| 1931 | 1   | Extremo | 1.448 | 39.484  | 13.976  | 2.4022  | -6.0721 | -45.5937 |
| 1931 | 0   | Extremo | 1.447 | 33.096  | 13.594  | -0.821  | 7.6984  | -9.3482  |
| 1931 | 0.5 | Extremo | 1.447 | 36.274  | 13.594  | -0.821  | 0.9013  | -26.6905 |
| 1931 | 1   | Extremo | 1.447 | 39.452  | 13.594  | -0.821  | -5.8957 | -45.6218 |
| 1933 | 0   | Extremo | 1.607 | -39.727 | -15.026 | 5.766   | -6.4957 | -45.8494 |
| 1933 | 0.5 | Extremo | 1.607 | -36.549 | -15.026 | 5.766   | 1.0172  | -26.7805 |
| 1933 | 1   | Extremo | 1.607 | -33.371 | -15.026 | 5.766   | 8.53    | -9.3007  |
| 1933 | 0   | Extremo | 1.55  | -39.568 | -15.283 | 2.2494  | -6.6347 | -45.6225 |
| 1933 | 0.5 | Extremo | 1.55  | -36.39  | -15.283 | 2.2494  | 1.0068  | -26.6332 |
| 1933 | 1   | Extremo | 1.55  | -33.211 | -15.283 | 2.2494  | 8.6482  | -9.233   |
| 1934 | 0   | Extremo | 0.156 | -17.674 | -3.669  | 1.5403  | -1.1838 | -9.6504  |
| 1934 | 0.3 | Extremo | 0.156 | -16.172 | -3.669  | 1.5403  | -0.0833 | -4.5735  |
| 1934 | 0.6 | Extremo | 0.156 | -14.67  | -3.669  | 1.5403  | 1.0173  | 0.0529   |
| 1934 | 0   | Extremo | 0.15  | -17.634 | -3.745  | 0.4653  | -1.2132 | -9.6211  |
| 1934 | 0.3 | Extremo | 0.15  | -16.132 | -3.745  | 0.4653  | -0.0897 | -4.5562  |
| 1934 | 0.6 | Extremo | 0.15  | -14.63  | -3.745  | 0.4653  | 1.0338  | 0.0582   |
| 1935 | 0   | Extremo | 0.11  | 14.67   | 3.911   | 0.9386  | 1.0675  | 0.0047   |
| 1935 | 0.3 | Extremo | 0.11  | 16.172  | 3.911   | 0.9386  | -0.1058 | -4.6216  |
| 1935 | 0.6 | Extremo | 0.11  | 17.674  | 3.911   | 0.9386  | -1.2792 | -9.6984  |
| 1935 | 0   | Extremo | 0.11  | 14.683  | 3.812   | -0.0617 | 1.042   | -0.0044  |
| 1935 | 0.3 | Extremo | 0.11  | 16.184  | 3.812   | -0.0617 | -0.1017 | -4.6345  |
| 1935 | 0.6 | Extremo | 0.11  | 17.686  | 3.812   | -0.0617 | -1.2453 | -9.7151  |
| 1936 | 0   | Extremo | 1.157 | 32.768  | 15.875  | 2.1536  | 8.8812  | -9.6945  |
| 1936 | 0.5 | Extremo | 1.157 | 35.946  | 15.875  | 2.1536  | 0.9436  | -26.8731 |
| 1936 | 1   | Extremo | 1.157 | 39.124  | 15.875  | 2.1536  | -6.9941 | -45.6408 |
| 1936 | 0   | Extremo | 1.156 | 32.734  | 15.493  | -0.9825 | 8.6749  | -9.7708  |
| 1936 | 0.5 | Extremo | 1.156 | 35.912  | 15.493  | -0.9825 | 0.9284  | -26.9324 |
| 1936 | 1   | Extremo | 1.156 | 39.09   | 15.493  | -0.9825 | -6.8181 | -45.683  |
| 1938 | 0   | Extremo | 1.319 | -39.08  | -17.159 | 5.846   | -7.5319 | -45.7524 |
| 1938 | 0.5 | Extremo | 1.319 | -35.902 | -17.159 | 5.846   | 1.0474  | -27.0067 |
| 1938 | 1   | Extremo | 1.319 | -32.724 | -17.159 | 5.846   | 9.6267  | -9.8501  |
| 1938 | 0   | Extremo | 1.279 | -38.928 | -17.341 | 2.4361  | -7.6314 | -45.5231 |
| 1938 | 0.5 | Extremo | 1.279 | -35.749 | -17.341 | 2.4361  | 1.0393  | -26.8538 |
| 1938 | 1   | Extremo | 1.279 | -32.571 | -17.341 | 2.4361  | 9.7099  | -9.7737  |
| 1939 | 0   | Extremo | 0.126 | -17.706 | -4.238  | 1.5984  | -1.3857 | -9.735   |
| 1939 | 0.3 | Extremo | 0.126 | -16.204 | -4.238  | 1.5984  | -0.1143 | -4.6483  |
| 1939 | 0.6 | Extremo | 0.126 | -14.703 | -4.238  | 1.5984  | 1.1572  | -0.0123  |
| 1939 | 0   | Extremo | 0.122 | -17.665 | -4.293  | 0.5534  | -1.4071 | -9.7037  |
| 1939 | 0.3 | Extremo | 0.122 | -16.163 | -4.293  | 0.5534  | -0.1191 | -4.6294  |
| 1939 | 0.6 | Extremo | 0.122 | -14.661 | -4.293  | 0.5534  | 1.1689  | -0.0057  |
| 1940 | 0   | Extremo | 0.091 | 14.68   | 4.258   | 1.0024  | 1.1697  | -0.0181  |
| 1940 | 0.3 | Extremo | 0.091 | 16.181  | 4.258   | 1.0024  | -0.1077 | -4.6472  |



|      |     |         |       |         |         |         |          |          |
|------|-----|---------|-------|---------|---------|---------|----------|----------|
| 1943 | 1   | Extremo | 1.119 | -32.505 | -18.886 | 5.283   | 10.6503  | -10.079  |
| 1943 | 0   | Extremo | 1.09  | -38.667 | -19.016 | 1.9579  | -8.3085  | -45.5077 |
| 1943 | 0.5 | Extremo | 1.09  | -35.488 | -19.016 | 1.9579  | 1.1993   | -26.9689 |
| 1943 | 1   | Extremo | 1.09  | -32.31  | -19.016 | 1.9579  | 10.7071  | -10.0192 |
| 1944 | 0   | Extremo | 0.106 | -17.727 | -4.645  | 1.4474  | -1.5121  | -9.7746  |
| 1944 | 0.3 | Extremo | 0.106 | -16.225 | -4.645  | 1.4474  | -0.1186  | -4.6818  |
| 1944 | 0.6 | Extremo | 0.106 | -14.723 | -4.645  | 1.4474  | 1.2748   | -0.0396  |
| 1944 | 0   | Extremo | 0.103 | -17.684 | -4.685  | 0.428   | -1.5281  | -9.744   |
| 1944 | 0.3 | Extremo | 0.103 | -16.182 | -4.685  | 0.428   | -0.1225  | -4.6641  |
| 1944 | 0.6 | Extremo | 0.103 | -14.68  | -4.685  | 0.428   | 1.2831   | -0.0349  |
| 1945 | 0   | Extremo | 0.141 | 14.678  | 4.675   | 1.0798  | 1.2875   | -0.0011  |
| 1945 | 0.3 | Extremo | 0.141 | 16.18   | 4.675   | 1.0798  | -0.1149  | -4.6297  |
| 1945 | 0.6 | Extremo | 0.141 | 17.682  | 4.675   | 1.0798  | -1.5173  | -9.709   |
| 1945 | 0   | Extremo | 0.141 | 14.701  | 4.577   | 0.1542  | 1.2618   | -0.0065  |
| 1945 | 0.3 | Extremo | 0.141 | 16.203  | 4.577   | 0.1542  | -0.1112  | -4.6421  |
| 1945 | 0.6 | Extremo | 0.141 | 17.705  | 4.577   | 0.1542  | -1.4842  | -9.7284  |
| 1946 | 0   | Extremo | 1.456 | 32.671  | 19.064  | 2.791   | 10.7968  | -9.7216  |
| 1946 | 0.5 | Extremo | 1.456 | 35.849  | 19.064  | 2.791   | 1.2648   | -26.8516 |
| 1946 | 1   | Extremo | 1.456 | 39.027  | 19.064  | 2.791   | -8.2673  | -45.5707 |
| 1946 | 0   | Extremo | 1.453 | 32.762  | 18.681  | -0.0888 | 10.5866  | -9.7746  |
| 1946 | 0.5 | Extremo | 1.453 | 35.94   | 18.681  | -0.0888 | 1.2462   | -26.9502 |
| 1946 | 1   | Extremo | 1.453 | 39.118  | 18.681  | -0.0888 | -8.0942  | -45.7149 |
| 1948 | 0   | Extremo | 1.612 | -39.354 | -20.755 | 4.6502  | -8.9656  | -45.9956 |
| 1948 | 0.5 | Extremo | 1.612 | -36.176 | -20.755 | 4.6502  | 1.4117   | -27.1132 |
| 1948 | 1   | Extremo | 1.612 | -32.998 | -20.755 | 4.6502  | 11.7889  | -9.8198  |
| 1948 | 0   | Extremo | 1.58  | -39.137 | -20.839 | 1.36    | -9.0161  | -45.7223 |
| 1948 | 0.5 | Extremo | 1.58  | -35.959 | -20.839 | 1.36    | 1.4034   | -26.9483 |
| 1948 | 1   | Extremo | 1.58  | -32.781 | -20.839 | 1.36    | 11.823   | -9.7635  |
| 1949 | 0   | Extremo | 0.156 | -17.749 | -5.121  | 1.2927  | -1.6645  | -9.7582  |
| 1949 | 0.3 | Extremo | 0.156 | -16.247 | -5.121  | 1.2927  | -0.1283  | -4.6587  |
| 1949 | 0.6 | Extremo | 0.156 | -14.745 | -5.121  | 1.2927  | 1.4079   | -0.0098  |
| 1949 | 0   | Extremo | 0.153 | -17.706 | -5.148  | 0.2883  | -1.6755  | -9.7275  |
| 1949 | 0.3 | Extremo | 0.153 | -16.204 | -5.148  | 0.2883  | -0.1312  | -4.6411  |
| 1949 | 0.6 | Extremo | 0.153 | -14.702 | -5.148  | 0.2883  | 1.4131   | -0.0052  |
| 1950 | 0   | Extremo | 0.236 | 14.694  | 5.496   | 0.9672  | 1.4741   | 0.0278   |
| 1950 | 0.3 | Extremo | 0.236 | 16.196  | 5.496   | 0.9672  | -0.1747  | -4.6056  |
| 1950 | 0.6 | Extremo | 0.236 | 17.697  | 5.496   | 0.9672  | -1.8235  | -9.6896  |
| 1950 | 0   | Extremo | 0.234 | 14.717  | 5.393   | 0.056   | 1.4473   | 0.0236   |
| 1950 | 0.3 | Extremo | 0.234 | 16.219  | 5.393   | 0.056   | -0.1707  | -4.6166  |
| 1950 | 0.6 | Extremo | 0.234 | 17.72   | 5.393   | 0.056   | -1.7887  | -9.7075  |
| 1951 | 0   | Extremo | 2.432 | 33.287  | 22.165  | 2.1912  | 12.1893  | -9.4676  |
| 1951 | 0.5 | Extremo | 2.432 | 36.465  | 22.165  | 2.1912  | 1.1066   | -26.9056 |
| 1951 | 1   | Extremo | 2.432 | 39.643  | 22.165  | 2.1912  | -9.976   | -45.9327 |
| 1951 | 0   | Extremo | 2.414 | 33.376  | 21.764  | -0.6616 | 11.9715  | -9.5099  |
| 1951 | 0.5 | Extremo | 2.414 | 36.554  | 21.764  | -0.6616 | 1.0897   | -26.9922 |
| 1951 | 1   | Extremo | 2.414 | 39.732  | 21.764  | -0.6616 | -9.7921  | -46.0636 |
| 1953 | 0   | Extremo | 2.592 | -40.107 | -24.124 | 5.3074  | -10.8328 | -46.49   |
| 1953 | 0.5 | Extremo | 2.592 | -36.929 | -24.124 | 5.3074  | 1.2293   | -27.2308 |
| 1953 | 1   | Extremo | 2.592 | -33.751 | -24.124 | 5.3074  | 13.2914  | -9.5607  |
| 1953 | 0   | Extremo | 2.557 | -39.963 | -24.155 | 2.1229  | -10.8518 | -46.2464 |
| 1953 | 0.5 | Extremo | 2.557 | -36.785 | -24.155 | 2.1229  | 1.2256   | -27.0594 |
| 1953 | 1   | Extremo | 2.557 | -33.607 | -24.155 | 2.1229  | 13.3031  | -9.4615  |
| 1954 | 0   | Extremo | 0.252 | -17.783 | -6.014  | 1.3981  | -1.9987  | -9.7476  |
| 1954 | 0.3 | Extremo | 0.252 | -16.281 | -6.014  | 1.3981  | -0.1944  | -4.6378  |
| 1954 | 0.6 | Extremo | 0.252 | -14.78  | -6.014  | 1.3981  | 1.6098   | 0.0213   |
| 1954 | 0   | Extremo | 0.248 | -17.74  | -6.025  | 0.4241  | -2.0033  | -9.7121  |
| 1954 | 0.3 | Extremo | 0.248 | -16.238 | -6.025  | 0.4241  | -0.1957  | -4.6155  |
| 1954 | 0.6 | Extremo | 0.248 | -14.736 | -6.025  | 0.4241  | 1.6118   | 0.0306   |
| 1955 | 0   | Extremo | 0.262 | 14.741  | 6.593   | 0.8607  | 1.7189   | 0.0166   |
| 1955 | 0.3 | Extremo | 0.262 | 16.242  | 6.593   | 0.8607  | -0.2589  | -4.6308  |
| 1955 | 0.6 | Extremo | 0.262 | 17.744  | 6.593   | 0.8607  | -2.2367  | -9.7288  |
| 1955 | 0   | Extremo | 0.259 | 14.761  | 6.481   | -0.0309 | 1.6902   | 0.0103   |
| 1955 | 0.3 | Extremo | 0.259 | 16.263  | 6.481   | -0.0309 | -0.2541  | -4.6432  |
| 1955 | 0.6 | Extremo | 0.259 | 17.764  | 6.481   | -0.0309 | -2.1984  | -9.7472  |
| 1956 | 0   | Extremo | 2.691 | 33.345  | 26.077  | 1.8467  | 13.9817  | -9.6291  |
| 1956 | 0.5 | Extremo | 2.691 | 36.523  | 26.077  | 1.8467  | 0.9432   | -27.0961 |
| 1956 | 1   | Extremo | 2.691 | 39.701  | 26.077  | 1.8467  | -12.0952 | -46.1521 |
| 1956 | 0   | Extremo | 2.667 | 33.388  | 25.644  | -0.9536 | 13.7503  | -9.6862  |
| 1956 | 0.5 | Extremo | 2.667 | 36.566  | 25.644  | -0.9536 | 0.9284   | -27.1745 |
| 1956 | 1   | Extremo | 2.667 | 39.744  | 25.644  | -0.9536 | -11.8934 | -46.2519 |
| 1958 | 0   | Extremo | 2.873 | -39.888 | -28.313 | 5.42    | -13.1094 | -46.5416 |
| 1958 | 0.5 | Extremo | 2.873 | -36.71  | -28.313 | 5.42    | 1.0472   | -27.3922 |

|      |     |         |       |         |         |         |          |          |
|------|-----|---------|-------|---------|---------|---------|----------|----------|
| 1958 | 1   | Extremo | 2.873 | -33.532 | -28.313 | 5.42    | 15.2038  | -9.8319  |
| 1958 | 0   | Extremo | 2.84  | -39.821 | -28.29  | 2.4027  | -13.0968 | -46.3635 |
| 1958 | 0.5 | Extremo | 2.84  | -36.643 | -28.29  | 2.4027  | 1.0484   | -27.2474 |
| 1958 | 1   | Extremo | 2.84  | -33.465 | -28.29  | 2.4027  | 15.1936  | -9.7203  |
| 1959 | 0   | Extremo | 0.28  | -17.821 | -7.189  | 1.4421  | -2.4423  | -9.7948  |
| 1959 | 0.3 | Extremo | 0.28  | -16.319 | -7.189  | 1.4421  | -0.2855  | -4.6738  |
| 1959 | 0.6 | Extremo | 0.28  | -14.817 | -7.189  | 1.4421  | 1.8714   | -0.0033  |
| 1959 | 0   | Extremo | 0.276 | -17.785 | -7.184  | 0.517   | -2.4402  | -9.7613  |
| 1959 | 0.3 | Extremo | 0.276 | -16.283 | -7.184  | 0.517   | -0.2851  | -4.6512  |
| 1959 | 0.6 | Extremo | 0.276 | -14.781 | -7.184  | 0.517   | 1.87     | 0.0083   |
| 1960 | 0   | Extremo | 0.29  | 14.752  | 7.733   | 0.8466  | 1.9929   | 0.0035   |
| 1960 | 0.3 | Extremo | 0.29  | 16.254  | 7.733   | 0.8466  | -0.3269  | -4.6475  |
| 1960 | 0.6 | Extremo | 0.29  | 17.756  | 7.733   | 0.8466  | -2.6467  | -9.749   |
| 1960 | 0   | Extremo | 0.287 | 14.773  | 7.61    | -0.0155 | 1.9618   | -0.0062  |
| 1960 | 0.3 | Extremo | 0.287 | 16.275  | 7.61    | -0.0155 | -0.3213  | -4.6633  |
| 1960 | 0.6 | Extremo | 0.287 | 17.776  | 7.61    | -0.0155 | -2.6044  | -9.7709  |
| 1961 | 0   | Extremo | 3.022 | 33.211  | 30.376  | 1.9065  | 16.1074  | -9.751   |
| 1961 | 0.5 | Extremo | 3.022 | 36.389  | 30.376  | 1.9065  | 0.9195   | -27.151  |
| 1961 | 1   | Extremo | 3.022 | 39.567  | 30.376  | 1.9065  | -14.2684 | -46.14   |
| 1961 | 0   | Extremo | 2.994 | 33.221  | 29.904  | -0.8202 | 15.8577  | -9.8322  |
| 1961 | 0.5 | Extremo | 2.994 | 36.399  | 29.904  | -0.8202 | 0.9056   | -27.2373 |
| 1961 | 1   | Extremo | 2.994 | 39.577  | 29.904  | -0.8202 | -14.0465 | -46.2316 |
| 1963 | 0   | Extremo | 3.284 | -39.628 | -32.948 | 5.0687  | -15.4537 | -46.4281 |
| 1963 | 0.5 | Extremo | 3.284 | -36.45  | -32.948 | 5.0687  | 1.0202   | -27.4086 |
| 1963 | 1   | Extremo | 3.284 | -33.272 | -32.948 | 5.0687  | 17.4942  | -9.9781  |
| 1963 | 0   | Extremo | 3.249 | -39.548 | -32.87  | 2.1809  | -15.4093 | -46.258  |
| 1963 | 0.5 | Extremo | 3.249 | -36.37  | -32.87  | 2.1809  | 1.0259   | -27.2787 |
| 1963 | 1   | Extremo | 3.249 | -33.191 | -32.87  | 2.1809  | 17.4611  | -9.8885  |
| 1964 | 0   | Extremo | 0.315 | -17.82  | -8.422  | 1.3589  | -2.8862  | -9.8126  |
| 1964 | 0.3 | Extremo | 0.315 | -16.318 | -8.422  | 1.3589  | -0.3596  | -4.6917  |
| 1964 | 0.6 | Extremo | 0.315 | -14.817 | -8.422  | 1.3589  | 2.167    | -0.0215  |
| 1964 | 0   | Extremo | 0.312 | -17.787 | -8.399  | 0.4779  | -2.8774  | -9.7832  |
| 1964 | 0.3 | Extremo | 0.312 | -16.285 | -8.399  | 0.4779  | -0.3575  | -4.6723  |
| 1964 | 0.6 | Extremo | 0.312 | -14.783 | -8.399  | 0.4779  | 2.1623   | -0.0121  |
| 1965 | 0   | Extremo | 0.333 | 14.737  | 8.911   | 0.8383  | 2.3043   | 0.0107   |
| 1965 | 0.3 | Extremo | 0.333 | 16.239  | 8.911   | 0.8383  | -0.3691  | -4.6357  |
| 1965 | 0.6 | Extremo | 0.333 | 17.741  | 8.911   | 0.8383  | -3.0425  | -9.7326  |
| 1965 | 0   | Extremo | 0.33  | 14.765  | 8.778   | 0.0218  | 2.2702   | -0.0039  |
| 1965 | 0.3 | Extremo | 0.33  | 16.267  | 8.778   | 0.0218  | -0.363   | -4.6586  |
| 1965 | 0.6 | Extremo | 0.33  | 17.769  | 8.778   | 0.0218  | -2.9963  | -9.764   |
| 1966 | 0   | Extremo | 3.526 | 33.232  | 35.177  | 1.9481  | 18.6627  | -9.6625  |
| 1966 | 0.5 | Extremo | 3.526 | 36.411  | 35.177  | 1.9481  | 1.0741   | -27.0733 |
| 1966 | 1   | Extremo | 3.526 | 39.589  | 35.177  | 1.9481  | -16.5146 | -46.0731 |
| 1966 | 0   | Extremo | 3.494 | 33.226  | 34.661  | -0.661  | 18.3901  | -9.7874  |
| 1966 | 0.5 | Extremo | 3.494 | 36.404  | 34.661  | -0.661  | 1.0593   | -27.1951 |
| 1966 | 1   | Extremo | 3.494 | 39.583  | 34.661  | -0.661  | -16.2714 | -46.1919 |
| 1968 | 0   | Extremo | 3.9   | -39.736 | -38.204 | 4.752   | -17.9135 | -46.4246 |
| 1968 | 0.5 | Extremo | 3.9   | -36.557 | -38.204 | 4.752   | 1.1886   | -27.3513 |
| 1968 | 1   | Extremo | 3.9   | -33.379 | -38.204 | 4.752   | 20.2908  | -9.8671  |
| 1968 | 0   | Extremo | 3.855 | -39.593 | -38.061 | 1.9546  | -17.8317 | -46.2205 |
| 1968 | 0.5 | Extremo | 3.855 | -36.415 | -38.061 | 1.9546  | 1.199    | -27.2184 |
| 1968 | 1   | Extremo | 3.855 | -33.237 | -38.061 | 1.9546  | 20.2297  | -9.8054  |
| 1969 | 0   | Extremo | 0.369 | -17.812 | -9.722  | 1.2708  | -3.3247  | -9.7967  |
| 1969 | 0.3 | Extremo | 0.369 | -16.31  | -9.722  | 1.2708  | -0.408   | -4.6785  |
| 1969 | 0.6 | Extremo | 0.369 | -14.808 | -9.722  | 1.2708  | 2.5087   | -0.0108  |
| 1969 | 0   | Extremo | 0.365 | -17.776 | -9.68   | 0.4206  | -3.3081  | -9.7693  |
| 1969 | 0.3 | Extremo | 0.365 | -16.274 | -9.68   | 0.4206  | -0.404   | -4.6619  |
| 1969 | 0.6 | Extremo | 0.365 | -14.772 | -9.68   | 0.4206  | 2.5      | -0.0051  |
| 1970 | 0   | Extremo | 0.38  | 14.715  | 10.14   | 0.7558  | 2.6624   | 0.0151   |
| 1970 | 0.3 | Extremo | 0.38  |         |         |         |          |          |



|      |     |         |       |         |         |         |          |           |
|------|-----|---------|-------|---------|---------|---------|----------|-----------|
| 1973 | 1   | Extremo | 4.556 | -33.537 | -44.232 | 4.8917  | 23.7212  | -9.7152   |
| 1973 | 0   | Extremo | 4.492 | -39.694 | -44.001 | 2.1279  | -20.3791 | -46.1851  |
| 1973 | 0.5 | Extremo | 4.492 | -36.516 | -44.001 | 2.1279  | 1.6212   | -27.1324  |
| 1973 | 1   | Extremo | 4.492 | -33.338 | -44.001 | 2.1279  | 23.6216  | -9.6688   |
| 1974 | 0   | Extremo | 0.427 | -17.803 | -11.107 | 1.2797  | -3.7563  | -9.7798   |
| 1974 | 0.3 | Extremo | 0.427 | -16.301 | -11.107 | 1.2797  | -0.4241  | -4.6643   |
| 1974 | 0.6 | Extremo | 0.427 | -14.799 | -11.107 | 1.2797  | 2.908    | 0.0006826 |
| 1974 | 0   | Extremo | 0.42  | -17.762 | -11.039 | 0.4453  | -3.7297  | -9.7509   |
| 1974 | 0.3 | Extremo | 0.42  | -16.26  | -11.039 | 0.4453  | -0.4179  | -4.6477   |
| 1974 | 0.6 | Extremo | 0.42  | -14.758 | -11.039 | 0.4453  | 2.8939   | 0.005     |
| 1975 | 0   | Extremo | 0.457 | 14.75   | 11.484  | 0.686   | 3.0845   | -0.0241   |
| 1975 | 0.3 | Extremo | 0.457 | 16.252  | 11.484  | 0.686   | -0.3606  | -4.6743   |
| 1975 | 0.6 | Extremo | 0.457 | 17.754  | 11.484  | 0.686   | -3.8058  | -9.7751   |
| 1975 | 0   | Extremo | 0.453 | 14.806  | 11.328  | 0.0173  | 3.0436   | -0.0397   |
| 1975 | 0.3 | Extremo | 0.453 | 16.308  | 11.328  | 0.0173  | -0.3547  | -4.7068   |
| 1975 | 0.6 | Extremo | 0.453 | 17.81   | 11.328  | 0.0173  | -3.7531  | -9.8245   |
| 1976 | 0   | Extremo | 4.914 | 32.85   | 46.844  | 0.9691  | 25.5323  | -9.9113   |
| 1976 | 0.5 | Extremo | 4.914 | 36.028  | 46.844  | 0.9691  | 2.1103   | -27.1306  |
| 1976 | 1   | Extremo | 4.914 | 39.206  | 46.844  | 0.9691  | -21.3117 | -45.939   |
| 1976 | 0   | Extremo | 4.873 | 33.009  | 46.224  | -1.1544 | 25.1984  | -10.0604  |
| 1976 | 0.5 | Extremo | 4.873 | 36.187  | 46.224  | -1.1544 | 2.0864   | -27.3594  |
| 1976 | 1   | Extremo | 4.873 | 39.365  | 46.224  | -1.1544 | -21.0256 | -46.2475  |
| 1978 | 0   | Extremo | 5.526 | -39.512 | -51.233 | 5.4326  | -23.3037 | -46.4303  |
| 1978 | 0.5 | Extremo | 5.526 | -36.334 | -51.233 | 5.4326  | 2.3128   | -27.4689  |
| 1978 | 1   | Extremo | 5.526 | -33.155 | -51.233 | 5.4326  | 27.9294  | -10.0967  |
| 1978 | 0   | Extremo | 5.427 | -39.359 | -50.872 | 2.661   | -23.0989 | -46.1578  |
| 1978 | 0.5 | Extremo | 5.427 | -36.18  | -50.872 | 2.661   | 2.3369   | -27.2731  |
| 1978 | 1   | Extremo | 5.427 | -33.002 | -50.872 | 2.661   | 27.7727  | -9.9774   |
| 1979 | 0   | Extremo | 0.515 | -17.839 | -12.643 | 1.3006  | -4.2037  | -9.8462   |
| 1979 | 0.3 | Extremo | 0.515 | -16.337 | -12.643 | 1.3006  | -0.4106  | -4.7197   |
| 1979 | 0.6 | Extremo | 0.515 | -14.835 | -12.643 | 1.3006  | 3.3824   | -0.0438   |
| 1979 | 0   | Extremo | 0.506 | -17.789 | -12.539 | 0.4849  | -4.163   | -9.8028   |
| 1979 | 0.3 | Extremo | 0.506 | -16.288 | -12.539 | 0.4849  | -0.4013  | -4.6913   |
| 1979 | 0.6 | Extremo | 0.506 | -14.786 | -12.539 | 0.4849  | 3.3604   | -0.0303   |
| 1980 | 0   | Extremo | 0.575 | 14.844  | 13.123  | 0.898   | 3.6018   | -0.0676   |
| 1980 | 0.3 | Extremo | 0.575 | 16.346  | 13.123  | 0.898   | -0.3351  | -4.746    |
| 1980 | 0.6 | Extremo | 0.575 | 17.847  | 13.123  | 0.898   | -4.272   | -9.875    |
| 1980 | 0   | Extremo | 0.57  | 14.914  | 12.955  | 0.2822  | 3.5567   | -0.0823   |
| 1980 | 0.3 | Extremo | 0.57  | 16.416  | 12.955  | 0.2822  | -0.3299  | -4.7817   |
| 1980 | 0.6 | Extremo | 0.57  | 17.917  | 12.955  | 0.2822  | -4.2164  | -9.9317   |
| 1981 | 0   | Extremo | 6.227 | 32.925  | 54.496  | 1.6555  | 30.1354  | -10.3433  |
| 1981 | 0.5 | Extremo | 6.227 | 36.103  | 54.496  | 1.6555  | 2.8874   | -27.6002  |
| 1981 | 1   | Extremo | 6.227 | 39.281  | 54.496  | 1.6555  | -24.3607 | -46.4462  |
| 1981 | 0   | Extremo | 6.175 | 33.177  | 53.811  | -0.3413 | 29.7614  | -10.4886  |
| 1981 | 0.5 | Extremo | 6.175 | 36.355  | 53.811  | -0.3413 | 2.8559   | -27.8718  |
| 1981 | 1   | Extremo | 6.175 | 39.534  | 53.811  | -0.3413 | -24.0496 | -46.8441  |
| 1983 | 0   | Extremo | 6.983 | -39.362 | -59.876 | 4.3948  | -26.8026 | -46.8686  |
| 1983 | 0.5 | Extremo | 6.983 | -36.184 | -59.876 | 4.3948  | 3.1354   | -27.982   |
| 1983 | 1   | Extremo | 6.983 | -33.006 | -59.876 | 4.3948  | 33.0735  | -10.6844  |
| 1983 | 0   | Extremo | 6.842 | -39.333 | -59.316 | 1.8835  | -26.4849 | -46.5593  |
| 1983 | 0.5 | Extremo | 6.842 | -36.155 | -59.316 | 1.8835  | 3.173    | -27.6874  |
| 1983 | 1   | Extremo | 6.842 | -32.977 | -59.316 | 1.8835  | 32.8309  | -10.4046  |
| 1984 | 0   | Extremo | 0.646 | -17.941 | -14.518 | 0.971   | -4.7464  | -9.9697   |
| 1984 | 0.3 | Extremo | 0.646 | -16.439 | -14.518 | 0.971   | -0.391   | -4.8127   |
| 1984 | 0.6 | Extremo | 0.646 | -14.937 | -14.518 | 0.971   | 3.9643   | -0.1063   |
| 1984 | 0   | Extremo | 0.633 | -17.87  | -14.363 | 0.2458  | -4.6869  | -9.8949   |
| 1984 | 0.3 | Extremo | 0.633 | -16.368 | -14.363 | 0.2458  | -0.378   | -4.7593   |
| 1984 | 0.6 | Extremo | 0.633 | -14.866 | -14.363 | 0.2458  | 3.9308   | -0.0742   |
| 1985 | 0   | Extremo | 0.558 | 14.961  | 14.768  | 1.2271  | 4.1648   | -0.0676   |
| 1985 | 0.3 | Extremo | 0.558 | 16.462  | 14.768  | 1.2271  | -0.2657  | -4.7811   |
| 1985 | 0.6 | Extremo | 0.558 | 17.964  | 14.768  | 1.2271  | -4.6962  | -9.9451   |
| 1985 | 0   | Extremo | 0.553 | 15.045  | 14.59   | 0.6817  | 4.1151   | -0.0883   |
| 1985 | 0.3 | Extremo | 0.553 | 16.547  | 14.59   | 0.6817  | -0.262   | -4.8273   |
| 1985 | 0.6 | Extremo | 0.553 | 18.049  | 14.59   | 0.6817  | -4.6392  | -10.0167  |
| 1986 | 0   | Extremo | 6.182 | 33.495  | 62.124  | 2.7609  | 35.2422  | -10.4534  |
| 1986 | 0.5 | Extremo | 6.182 | 36.673  | 62.124  | 2.7609  | 4.1804   | -27.9953  |
| 1986 | 1   | Extremo | 6.182 | 39.851  | 62.124  | 2.7609  | -26.8813 | -47.1261  |
| 1986 | 0   | Extremo | 6.132 | 33.764  | 61.376  | 0.9768  | 34.8232  | -10.6572  |
| 1986 | 0.5 | Extremo | 6.132 | 36.942  | 61.376  | 0.9768  | 4.1351   | -28.3336  |
| 1986 | 1   | Extremo | 6.132 | 40.12   | 61.376  | 0.9768  | -26.5531 | -47.5991  |
| 1988 | 0   | Extremo | 7.082 | -39.938 | -68.634 | 2.7909  | -29.7876 | -47.6885  |
| 1988 | 0.5 | Extremo | 7.082 | -36.76  | -68.634 | 2.7909  | 4.5294   | -28.5143  |

|      |     |         |        |         |         |         |          |          |
|------|-----|---------|--------|---------|---------|---------|----------|----------|
| 1988 | 1   | Extremo | 7.082  | -33.581 | -68.634 | 2.7909  | 38.8464  | -10.929  |
| 1988 | 0   | Extremo | 6.905  | -39.873 | -67.812 | 0.7048  | -29.3311 | -47.1946 |
| 1988 | 0.5 | Extremo | 6.905  | -36.695 | -67.812 | 0.7048  | 4.575    | -28.0527 |
| 1988 | 1   | Extremo | 6.905  | -33.517 | -67.812 | 0.7048  | 38.4811  | -10.4998 |
| 1989 | 0   | Extremo | 0.642  | -18.092 | -16.431 | 0.4583  | -5.2538  | -10.0756 |
| 1989 | 0.3 | Extremo | 0.642  | -16.59  | -16.431 | 0.4583  | -0.3244  | -4.8732  |
| 1989 | 0.6 | Extremo | 0.642  | -15.089 | -16.431 | 0.4583  | 4.605    | -0.1213  |
| 1989 | 0   | Extremo | 0.626  | -17.975 | -16.222 | -0.1077 | -5.1765  | -9.9587  |
| 1989 | 0.3 | Extremo | 0.626  | -16.473 | -16.222 | -0.1077 | -0.3098  | -4.7915  |
| 1989 | 0.6 | Extremo | 0.626  | -14.971 | -16.222 | -0.1077 | 4.5568   | -0.0749  |
| 1990 | 0   | Extremo | 0.303  | 15.057  | 15.495  | 1.4509  | 4.5905   | 0.0089   |
| 1990 | 0.3 | Extremo | 0.303  | 16.559  | 15.495  | 1.4509  | -0.0579  | -4.7335  |
| 1990 | 0.6 | Extremo | 0.303  | 18.061  | 15.495  | 1.4509  | -4.7063  | -9.9264  |
| 1990 | 0   | Extremo | 0.3    | 15.156  | 15.315  | 1.0097  | 4.5374   | -0.0197  |
| 1990 | 0.3 | Extremo | 0.3    | 16.658  | 15.315  | 1.0097  | -0.0573  | -4.7917  |
| 1990 | 0.6 | Extremo | 0.3    | 18.159  | 15.315  | 1.0097  | -4.6519  | -10.0142 |
| 1991 | 0   | Extremo | 3.773  | 35.006  | 66.737  | 3.783   | 39.6321  | -9.9534  |
| 1991 | 0.5 | Extremo | 3.773  | 38.184  | 66.737  | 3.783   | 6.2636   | -28.251  |
| 1991 | 1   | Extremo | 3.773  | 41.362  | 66.737  | 3.783   | -27.105  | -48.1377 |
| 1991 | 0   | Extremo | 3.74   | 35.263  | 65.955  | 2.3318  | 39.1718  | -10.2297 |
| 1991 | 0.5 | Extremo | 3.74   | 38.441  | 65.955  | 2.3318  | 6.1943   | -28.6557 |
| 1991 | 1   | Extremo | 3.74   | 41.619  | 65.955  | 2.3318  | -26.7833 | -48.6708 |
| 1993 | 0   | Extremo | 4.804  | -41.876 | -74.43  | 1.0864  | -30.4195 | -49.2143 |
| 1993 | 0.5 | Extremo | 4.804  | -38.698 | -74.43  | 1.0864  | 6.7957   | -29.0709 |
| 1993 | 1   | Extremo | 4.804  | -35.52  | -74.43  | 1.0864  | 44.0109  | -10.5165 |
| 1993 | 0   | Extremo | 4.648  | -41.193 | -73.338 | -0.353  | -29.8503 | -48.1099 |
| 1993 | 0.5 | Extremo | 4.648  | -38.015 | -73.338 | -0.353  | 6.8187   | -28.308  |
| 1993 | 1   | Extremo | 4.648  | -34.837 | -73.338 | -0.353  | 43.4876  | -10.0952 |
| 1994 | 0   | Extremo | 0.398  | -18.27  | -17.447 | 0.0025  | -5.3485  | -10.1082 |
| 1994 | 0.3 | Extremo | 0.398  | -16.768 | -17.447 | 0.0025  | -0.1144  | -4.8524  |
| 1994 | 0.6 | Extremo | 0.398  | -15.267 | -17.447 | 0.0025  | 5.1198   | -0.0472  |
| 1994 | 0   | Extremo | 0.385  | -18.065 | -17.213 | -0.3674 | -5.2709  | -9.9511  |
| 1994 | 0.3 | Extremo | 0.385  | -16.563 | -17.213 | -0.3674 | -0.107   | -4.7569  |
| 1994 | 0.6 | Extremo | 0.385  | -15.061 | -17.213 | -0.3674 | 5.0568   | -0.0134  |
| 1995 | 0   | Extremo | -0.423 | 14.992  | 13.744  | 1.2446  | 4.5511   | 0.1348   |
| 1995 | 0.3 | Extremo | -0.423 | 16.494  | 13.744  | 1.2446  | 0.4281   | -4.5882  |
| 1995 | 0.6 | Extremo | -0.423 | 17.996  | 13.744  | 1.2446  | -3.695   | -9.7617  |
| 1995 | 0   | Extremo | -0.42  | 15.104  | 13.581  | 0.9399  | 4.4978   | 0.1027   |
| 1995 | 0.3 | Extremo | -0.42  | 16.606  | 13.581  | 0.9399  | 0.4236   | -4.6539  |
| 1995 | 0.6 | Extremo | -0.42  | 18.108  | 13.581  | 0.9399  | -3.6507  | -9.8609  |
| 1996 | 0   | Extremo | -3.818 | 36.531  | 63.812  | 3.7026  | 41.2064  | -8.8301  |
| 1996 | 0.5 | Extremo | -3.818 | 39.709  | 63.812  | 3.7026  | 9.3003   | -27.8899 |
| 1996 | 1   | Extremo | -3.818 | 42.887  | 63.812  | 3.7026  | -22.6058 | -48.5387 |
| 1996 | 0   | Extremo | -3.796 | 36.813  | 63.059  | 2.7115  | 40.725   | -9.1503  |
| 1996 | 0.5 | Extremo | -3.796 | 39.992  | 63.059  | 2.7115  | 9.1953   | -28.3515 |
| 1996 | 1   | Extremo | -3.796 | 43.17   | 63.059  | 2.7115  | -22.3343 | -49.1419 |
| 1998 | 0   | Extremo | -3.079 | -44.207 | -72.409 | 0.355   | -26.105  | -50.3145 |
| 1998 | 0.5 | Extremo | -3.079 | -41.029 | -72.409 | 0.355   | 10.0994  | -29.0055 |
| 1998 | 1   | Extremo | -3.079 | -37.851 | -72.409 | 0.355   | 46.3038  | -9.2856  |
| 1998 | 0   | Extremo | -3.094 | -42.6   | -71.222 | -0.6491 | -25.6065 | -48.6741 |
| 1998 | 0.5 | Extremo | -3.094 | -39.422 | -71.222 | -0.6491 | 10.0044  | -28.1687 |
| 1998 | 1   | Extremo | -3.094 | -36.244 | -71.222 | -0.6491 | 45.6152  | -9.2524  |
| 1999 | 0   | Extremo | -0.356 | -18.283 | -15.926 | -0.0136 | -4.3956  | -9.9714  |
| 1999 | 0.3 | Extremo | -0.356 | -16.781 | -15.926 | -0.0136 | 0.3823   | -4.7117  |
| 1999 | 0.6 | Extremo | -0.356 | -15.28  | -15.926 | -0.0136 | 5.1602   | -0.0975  |
| 1999 | 0   | Extremo | -0.356 | -18.073 | -15.739 | -0.302  | -4.3544  | -9.8522  |
| 1999 | 0.3 | Extremo | -0.356 | -16.571 | -15.739 | -0.302  | 0.3675   | -4.6556  |
| 1999 | 0.6 | Extremo | -0.356 | -15.069 | -15.739 | -0.302  | 5.0893   | 0.0904   |
| 2000 | 0   |         |        |         |         |         |          |          |



|      |     |         |        |         |         |         |          |          |
|------|-----|---------|--------|---------|---------|---------|----------|----------|
| 2003 | 1   | Extremo | -6.757 | -36.785 | -62.571 | 2.2231  | 45.0747  | -8.9649  |
| 2003 | 0   | Extremo | -6.642 | -41.786 | -61.414 | 1.3006  | -17.0045 | -47.4482 |
| 2003 | 0.5 | Extremo | -6.642 | -38.608 | -61.414 | 1.3006  | 13.7026  | -27.3499 |
| 2003 | 1   | Extremo | -6.642 | -35.43  | -61.414 | 1.3006  | 44.4097  | -8.8406  |
| 2004 | 0   | Extremo | -0.656 | -18.111 | -12.361 | 0.5421  | -2.7077  | -9.8438  |
| 2004 | 0.3 | Extremo | -0.656 | -16.609 | -12.361 | 0.5421  | 1.0005   | -4.6358  |
| 2004 | 0.6 | Extremo | -0.656 | -15.107 | -12.361 | 0.5421  | 4.7087   | 0.1216   |
| 2004 | 0   | Extremo | -0.647 | -17.912 | -12.193 | 0.2327  | -2.6737  | -9.721   |
| 2004 | 0.3 | Extremo | -0.647 | -16.41  | -12.193 | 0.2327  | 0.9841   | -4.5726  |
| 2004 | 0.6 | Extremo | -0.647 | -14.909 | -12.193 | 0.2327  | 4.6419   | 0.1253   |
| 2005 | 0   | Extremo | 0.542  | 14.837  | 9.984   | 0.0125  | 4.0124   | 0.1327   |
| 2005 | 0.3 | Extremo | 0.542  | 16.339  | 9.984   | 0.0125  | 1.017    | -4.5437  |
| 2005 | 0.6 | Extremo | 0.542  | 17.841  | 9.984   | 0.0125  | -1.9783  | -9.6708  |
| 2005 | 0   | Extremo | 0.543  | 14.931  | 9.858   | -0.0733 | 3.9648   | 0.1139   |
| 2005 | 0.3 | Extremo | 0.543  | 16.433  | 9.858   | -0.0733 | 1.0072   | -4.5906  |
| 2005 | 0.6 | Extremo | 0.543  | 17.935  | 9.858   | -0.0733 | -1.9503  | -9.7457  |
| 2006 | 0   | Extremo | 5.533  | 35.353  | 53.474  | 0.154   | 39.1233  | -8.7541  |
| 2006 | 0.5 | Extremo | 5.533  | 38.531  | 53.474  | 0.154   | 12.3863  | -27.2251 |
| 2006 | 1   | Extremo | 5.533  | 41.709  | 53.474  | 0.154   | -14.3507 | -47.2851 |
| 2006 | 0   | Extremo | 5.545  | 35.692  | 52.845  | -0.0877 | 38.67    | -8.9473  |
| 2006 | 0.5 | Extremo | 5.545  | 38.871  | 52.845  | -0.0877 | 12.2476  | -27.588  |
| 2006 | 1   | Extremo | 5.545  | 42.049  | 52.845  | -0.0877 | -14.1749 | -47.8178 |
| 2008 | 0   | Extremo | 5.275  | -42.782 | -62.054 | 2.4849  | -17.5836 | -48.8688 |
| 2008 | 0.5 | Extremo | 5.275  | -39.604 | -62.054 | 2.4849  | 13.4432  | -28.2722 |
| 2008 | 1   | Extremo | 5.275  | -36.426 | -62.054 | 2.4849  | 44.4701  | -9.2646  |
| 2008 | 0   | Extremo | 5.279  | -42.459 | -60.953 | 2.2997  | -16.9918 | -48.0521 |
| 2008 | 0.5 | Extremo | 5.279  | -39.281 | -60.953 | 2.2997  | 13.4848  | -27.6171 |
| 2008 | 1   | Extremo | 5.279  | -36.103 | -60.953 | 2.2997  | 43.9613  | -8.7712  |
| 2009 | 0   | Extremo | 0.518  | -18.109 | -12.161 | 0.8613  | -2.6557  | -9.8757  |
| 2009 | 0.3 | Extremo | 0.518  | -16.608 | -12.161 | 0.8613  | 0.9926   | -4.6682  |
| 2009 | 0.6 | Extremo | 0.518  | -15.106 | -12.161 | 0.8613  | 4.6409   | 0.0888   |
| 2009 | 0   | Extremo | 0.517  | -17.938 | -11.929 | 0.7059  | -2.578   | -9.7284  |
| 2009 | 0.3 | Extremo | 0.517  | -16.436 | -11.929 | 0.7059  | 1.0008   | -4.5722  |
| 2009 | 0.6 | Extremo | 0.517  | -14.934 | -11.929 | 0.7059  | 4.5795   | 0.1333   |
| 2010 | 0   | Extremo | 0.29   | 14.975  | 13.207  | -0.4258 | 4.3738   | 0.0754   |
| 2010 | 0.3 | Extremo | 0.29   | 16.477  | 13.207  | -0.4258 | 0.4116   | -4.6425  |
| 2010 | 0.6 | Extremo | 0.29   | 17.979  | 13.207  | -0.4258 | -3.5506  | -9.811   |
| 2010 | 0   | Extremo | 0.292  | 15.052  | 13.072  | -0.433  | 4.328    | 0.0578   |
| 2010 | 0.3 | Extremo | 0.292  | 16.553  | 13.072  | -0.433  | 0.4063   | -4.6829  |
| 2010 | 0.6 | Extremo | 0.292  | 18.055  | 13.072  | -0.433  | -3.5154  | -9.8743  |
| 2011 | 0   | Extremo | 2.387  | 35.618  | 61.557  | -1.0405 | 39.6103  | -9.3187  |
| 2011 | 0.5 | Extremo | 2.387  | 38.796  | 61.557  | -1.0405 | 8.8319   | -27.9222 |
| 2011 | 1   | Extremo | 2.387  | 41.974  | 61.557  | -1.0405 | -21.9465 | -48.1148 |
| 2011 | 0   | Extremo | 2.416  | 35.859  | 60.907  | -1.0235 | 39.1899  | -9.4977  |
| 2011 | 0.5 | Extremo | 2.416  | 39.038  | 60.907  | -1.0235 | 8.7365   | -28.2219 |
| 2011 | 1   | Extremo | 2.416  | 42.216  | 60.907  | -1.0235 | -21.7169 | -48.5352 |
| 2013 | 0   | Extremo | 1.473  | -42.736 | -69.703 | 3.0932  | -25.2722 | -49.3026 |
| 2013 | 0.5 | Extremo | 1.473  | -39.557 | -69.703 | 3.0932  | 9.5795   | -28.7294 |
| 2013 | 1   | Extremo | 1.473  | -36.379 | -69.703 | 3.0932  | 44.4311  | -9.7452  |
| 2013 | 0   | Extremo | 1.612  | -42.871 | -68.784 | 3.5001  | -24.7523 | -49.0984 |
| 2013 | 0.5 | Extremo | 1.612  | -39.693 | -68.784 | 3.5001  | 9.6399   | -28.4573 |
| 2013 | 1   | Extremo | 1.612  | -36.515 | -68.784 | 3.5001  | 44.0322  | -9.4053  |
| 2014 | 0   | Extremo | 0.206  | -18.184 | -15.263 | 1.1194  | -4.2088  | -9.9741  |
| 2014 | 0.3 | Extremo | 0.206  | -16.683 | -15.263 | 1.1194  | 0.37     | -4.7441  |
| 2014 | 0.6 | Extremo | 0.206  | -15.181 | -15.263 | 1.1194  | 4.9487   | 0.0354   |
| 2014 | 0   | Extremo | 0.219  | -18.117 | -15.013 | 1.16    | -4.1139  | -9.8933  |
| 2014 | 0.3 | Extremo | 0.219  | -16.615 | -15.013 | 1.16    | 0.3899   | -4.6836  |
| 2014 | 0.6 | Extremo | 0.219  | -15.113 | -15.013 | 1.16    | 4.8938   | 0.0756   |
| 2015 | 0   | Extremo | -0.381 | 14.985  | 14.593  | -0.4425 | 4.308    | -0.0268  |
| 2015 | 0.3 | Extremo | -0.381 | 16.487  | 14.593  | -0.4425 | -0.0699  | -4.7477  |
| 2015 | 0.6 | Extremo | -0.381 | 17.989  | 14.593  | -0.4425 | -4.4477  | -9.919   |
| 2015 | 0   | Extremo | -0.375 | 15.043  | 14.456  | -0.38   | 4.2664   | -0.041   |
| 2015 | 0.3 | Extremo | -0.375 | 16.544  | 14.456  | -0.38   | -0.0705  | -4.779   |
| 2015 | 0.6 | Extremo | -0.375 | 18.046  | 14.456  | -0.38   | -4.4074  | -9.9676  |
| 2016 | 0   | Extremo | -4.61  | 34.186  | 62.798  | -0.6532 | 37.1385  | -10.1599 |
| 2016 | 0.5 | Extremo | -4.61  | 37.364  | 62.798  | -0.6532 | 5.7395   | -28.0472 |
| 2016 | 1   | Extremo | -4.61  | 40.542  | 62.798  | -0.6532 | -25.6595 | -47.5235 |
| 2016 | 0   | Extremo | -4.539 | 34.353  | 62.181  | -0.4078 | 36.7739  | -10.3012 |
| 2016 | 0.5 | Extremo | -4.539 | 37.531  | 62.181  | -0.4078 | 5.6834   | -28.2724 |
| 2016 | 1   | Extremo | -4.539 | 40.709  | 62.181  | -0.4078 | -25.4071 | -47.8325 |
| 2018 | 0   | Extremo | -5.756 | -40.769 | -69.81  | 2.1421  | -28.6896 | -48.1033 |
| 2018 | 0.5 | Extremo | -5.756 | -37.591 | -69.81  | 2.1421  | 6.2156   | -28.5131 |

|      |     |         |        |         |         |         |          |          |
|------|-----|---------|--------|---------|---------|---------|----------|----------|
| 2018 | 1   | Extremo | -5.756 | -34.413 | -69.81  | 2.1421  | 41.1207  | -10.512  |
| 2018 | 0   | Extremo | -5.614 | -40.869 | -69.129 | 2.7209  | -28.3048 | -48.0638 |
| 2018 | 0.5 | Extremo | -5.614 | -37.691 | -69.129 | 2.7209  | 6.2597   | -28.4237 |
| 2018 | 1   | Extremo | -5.614 | -34.513 | -69.129 | 2.7209  | 40.8241  | -10.3726 |
| 2019 | 0   | Extremo | -0.487 | -18.106 | -16.368 | 0.9657  | -5.0317  | -10.0267 |
| 2019 | 0.3 | Extremo | -0.487 | -16.604 | -16.368 | 0.9657  | -0.1212  | -4.8202  |
| 2019 | 0.6 | Extremo | -0.487 | -15.102 | -16.368 | 0.9657  | 4.7892   | -0.0643  |
| 2019 | 0   | Extremo | -0.473 | -18.087 | -16.167 | 1.1058  | -4.9531  | -9.9954  |
| 2019 | 0.3 | Extremo | -0.473 | -16.585 | -16.167 | 1.1058  | -0.1031  | -4.7947  |
| 2019 | 0.6 | Extremo | -0.473 | -15.083 | -16.167 | 1.1058  | 4.7469   | -0.0445  |
| 2020 | 0   | Extremo | -0.609 | 14.895  | 13.674  | -0.1582 | 3.8158   | -0.081   |
| 2020 | 0.3 | Extremo | -0.609 | 16.397  | 13.674  | -0.1582 | -0.2864  | -4.7747  |
| 2020 | 0.6 | Extremo | -0.609 | 17.898  | 13.674  | -0.1582 | -4.3887  | -9.919   |
| 2020 | 0   | Extremo | -0.602 | 14.935  | 13.55   | -0.0485 | 3.781    | -0.0892  |
| 2020 | 0.3 | Extremo | -0.602 | 16.437  | 13.55   | -0.0485 | -0.2842  | -4.7951  |
| 2020 | 0.6 | Extremo | -0.602 | 17.939  | 13.55   | -0.0485 | -4.3493  | -9.9515  |
| 2021 | 0   | Extremo | -6.749 | 33.003  | 57.119  | 0.3807  | 32.1248  | -10.4935 |
| 2021 | 0.5 | Extremo | -6.749 | 36.182  | 57.119  | 0.3807  | 3.5653   | -27.7897 |
| 2021 | 1   | Extremo | -6.749 | 39.36   | 57.119  | 0.3807  | -24.9941 | -46.675  |
| 2021 | 0   | Extremo | -6.67  | 33.145  | 56.585  | 0.7719  | 31.829   | -10.5768 |
| 2021 | 0.5 | Extremo | -6.67  | 36.324  | 56.585  | 0.7719  | 3.5367   | -27.9441 |
| 2021 | 1   | Extremo | -6.67  | 39.502  | 56.585  | 0.7719  | -24.7557 | -46.9004 |
| 2023 | 0   | Extremo | -7.763 | -39.254 | -62.775 | 0.7743  | -27.5363 | -46.7952 |
| 2023 | 0.5 | Extremo | -7.763 | -36.076 | -62.775 | 0.7743  | 3.8513   | -27.9626 |
| 2023 | 1   | Extremo | -7.763 | -32.898 | -62.775 | 0.7743  | 35.2389  | -10.719  |
| 2023 | 0   | Extremo | -7.664 | -39.333 | -62.288 | 1.4134  | -27.2665 | -46.7961 |
| 2023 | 0.5 | Extremo | -7.664 | -36.154 | -62.288 | 1.4134  | 3.8777   | -27.9244 |
| 2023 | 1   | Extremo | -7.664 | -32.976 | -62.288 | 1.4134  | 35.0218  | -10.6417 |
| 2024 | 0   | Extremo | -0.704 | -17.938 | -15.122 | 0.5538  | -4.8759  | -9.9711  |
| 2024 | 0.3 | Extremo | -0.704 | -16.436 | -15.122 | 0.5538  | -0.3394  | -4.8151  |
| 2024 | 0.6 | Extremo | -0.704 | -14.934 | -15.122 | 0.5538  | 4.1971   | -0.1096  |
| 2024 | 0   | Extremo | -0.694 | -17.931 | -14.976 | 0.7383  | -4.8191  | -9.9561  |
| 2024 | 0.3 | Extremo | -0.694 | -16.429 | -14.976 | 0.7383  | -0.3263  | -4.8021  |
| 2024 | 0.6 | Extremo | -0.694 | -14.927 | -14.976 | 0.7383  | 4.1664   | -0.0986  |
| 2025 | 0   | Extremo | -0.606 | 14.809  | 11.942  | 0.2005  | 3.2093   | -0.0743  |
| 2025 | 0.3 | Extremo | -0.606 | 16.311  | 11.942  | 0.2005  | -0.3734  | -4.7423  |
| 2025 | 0.6 | Extremo | -0.606 | 17.813  | 11.942  | 0.2005  | -3.9562  | -9.8608  |
| 2025 | 0   | Extremo | -0.599 | 14.836  | 11.838  | 0.3307  | 3.1815   | -0.0784  |
| 2025 | 0.3 | Extremo | -0.599 | 16.338  | 11.838  | 0.3307  | -0.3697  | -4.7544  |
| 2025 | 0.6 | Extremo | -0.599 | 17.839  | 11.838  | 0.3307  | -3.921   | -9.881   |
| 2026 | 0   | Extremo | -6.574 | 32.66   | 48.873  | 1.5384  | 26.556   | -10.3788 |
| 2026 | 0.5 | Extremo | -6.574 | 35.839  | 48.873  | 1.5384  | 2.1193   | -27.5035 |
| 2026 | 1   | Extremo | -6.574 | 39.017  | 48.873  | 1.5384  | -22.3174 | -46.2174 |
| 2026 | 0   | Extremo | -6.498 | 32.775  | 48.44   | 1.9756  | 26.3279  | -10.4183 |
| 2026 | 0.5 | Extremo | -6.498 | 35.953  | 48.44   | 1.9756  | 2.108    | -27.6002 |
| 2026 | 1   | Extremo | -6.498 | 39.131  | 48.44   | 1.9756  | -22.1118 | -46.3712 |
| 2028 | 0   | Extremo | -7.425 | -38.776 | -53.266 | -0.573  | -24.3443 | -46.1269 |
| 2028 | 0.5 | Extremo | -7.425 | -35.598 | -53.266 | -0.573  | 2.2888   | -27.5332 |
| 2028 | 1   | Extremo | -7.425 | -32.42  | -53.266 | -0.573  | 28.9219  | -10.5285 |
| 2028 | 0   | Extremo | -7.364 | -38.832 | -52.91  | 0.1647  | -24.1527 | -46.1143 |
| 2028 | 0.5 | Extremo | -7.364 | -35.654 | -52.91  | 0.1647  | 2.3022   | -27.493  |
| 2028 | 1   | Extremo | -7.364 | -32.475 | -52.91  | 0.1647  | 28.7571  | -10.4607 |
| 2029 | 0   | Extremo | -0.687 | -17.815 | -13.088 | 0.1079  | -4.3497  | -9.8826  |
| 2029 | 0.3 | Extremo | -0.687 | -16.313 | -13.088 | 0.1079  | -0.4233  | -4.7632  |
| 2029 | 0.6 | Extremo | -0.687 | -14.812 | -13.088 | 0.1079  | 3.5031   | -0.0945  |
| 2029 | 0   | Extremo | -0.68  | -17.808 | -12.983 | 0.3289  | -4.3092  | -9.8701  |
| 2029 | 0.3 | Extremo | -0.68  | -16.306 | -12.983 | 0.3289  | -0.4145  | -4.753   |
| 2029 | 0.6 | Extremo | -0.68  | -14.804 | -12.983 | 0.3289  | 3.4803   | -0.0865  |
| 2030 | 0   |         |        |         |         |         |          |          |



|      |     |         |        |         |         |         |          |          |
|------|-----|---------|--------|---------|---------|---------|----------|----------|
| 2033 | 1   | Extremo | -6.246 | -32.76  | -43.957 | -1.6203 | 23.2743  | -9.9055  |
| 2033 | 0   | Extremo | -6.212 | -39.073 | -43.679 | -0.7687 | -20.5386 | -45.7926 |
| 2033 | 0.5 | Extremo | -6.212 | -35.895 | -43.679 | -0.7687 | 1.301    | -27.0506 |
| 2033 | 1   | Extremo | -6.212 | -32.717 | -43.679 | -0.7687 | 23.1407  | -9.8977  |
| 2034 | 0   | Extremo | -0.584 | -17.735 | -11.043 | -0.1861 | -3.7603  | -9.7653  |
| 2034 | 0.3 | Extremo | -0.584 | -16.233 | -11.043 | -0.1861 | -0.4473  | -4.67    |
| 2034 | 0.6 | Extremo | -0.584 | -14.732 | -11.043 | -0.1861 | 2.8658   | -0.0252  |
| 2034 | 0   | Extremo | -0.581 | -17.727 | -10.963 | 0.0609  | -3.73    | -9.7599  |
| 2034 | 0.3 | Extremo | -0.581 | -16.226 | -10.963 | 0.0609  | -0.4411  | -4.6669  |
| 2034 | 0.6 | Extremo | -0.581 | -14.724 | -10.963 | 0.0609  | 2.8477   | -0.0245  |
| 2035 | 0   | Extremo | -0.464 | 14.693  | 8.474   | 0.3321  | 2.1501   | 0.0236   |
| 2035 | 0.3 | Extremo | -0.464 | 16.194  | 8.474   | 0.3321  | -0.3921  | -4.6095  |
| 2035 | 0.6 | Extremo | -0.464 | 17.696  | 8.474   | 0.3321  | -2.9343  | -9.6931  |
| 2035 | 0   | Extremo | -0.459 | 14.707  | 8.411   | 0.5142  | 2.135    | 0.0142   |
| 2035 | 0.3 | Extremo | -0.459 | 16.208  | 8.411   | 0.5142  | -0.3882  | -4.6231  |
| 2035 | 0.6 | Extremo | -0.459 | 17.71   | 8.411   | 0.5142  | -2.9115  | -9.7109  |
| 2036 | 0   | Extremo | -4.924 | 33.179  | 33.154  | 1.6241  | 17.2395  | -9.4797  |
| 2036 | 0.5 | Extremo | -4.924 | 36.357  | 33.154  | 1.6241  | 0.6626   | -26.8637 |
| 2036 | 1   | Extremo | -4.924 | 39.535  | 33.154  | 1.6241  | -15.9144 | -45.8367 |
| 2036 | 0   | Extremo | -4.867 | 33.147  | 32.911  | 2.2086  | 17.1225  | -9.5633  |
| 2036 | 0.5 | Extremo | -4.867 | 36.325  | 32.911  | 2.2086  | 0.667    | -26.9313 |
| 2036 | 1   | Extremo | -4.867 | 39.503  | 32.911  | 2.2086  | -15.7885 | -45.8883 |
| 2038 | 0   | Extremo | -5.448 | -39.709 | -35.618 | -0.66   | -17.0803 | -45.9389 |
| 2038 | 0.5 | Extremo | -5.448 | -36.53  | -35.618 | -0.66   | 0.7287   | -26.8792 |
| 2038 | 1   | Extremo | -5.448 | -33.352 | -35.618 | -0.66   | 18.5377  | -9.4085  |
| 2038 | 0   | Extremo | -5.425 | -39.595 | -35.389 | 0.0914  | -16.9663 | -45.8598 |
| 2038 | 0.5 | Extremo | -5.425 | -36.417 | -35.389 | 0.0914  | 0.7283   | -26.857  |
| 2038 | 1   | Extremo | -5.425 | -33.238 | -35.389 | 0.0914  | 18.4228  | -9.4433  |
| 2039 | 0   | Extremo | -0.514 | -17.703 | -9.143  | -0.0465 | -3.1707  | -9.6885  |
| 2039 | 0.3 | Extremo | -0.514 | -16.201 | -9.143  | -0.0465 | -0.4278  | -4.6028  |
| 2039 | 0.6 | Extremo | -0.514 | -14.7   | -9.143  | -0.0465 | 2.3151   | 0.0324   |
| 2039 | 0   | Extremo | -0.512 | -17.694 | -9.078  | 0.1814  | -3.1468  | -9.6875  |
| 2039 | 0.3 | Extremo | -0.512 | -16.192 | -9.078  | 0.1814  | -0.4234  | -4.6045  |
| 2039 | 0.6 | Extremo | -0.512 | -14.69  | -9.078  | 0.1814  | 2.2999   | 0.0279   |
| 2040 | 0   | Extremo | -0.39  | 14.708  | 6.909   | 0.2138  | 1.7235   | 0.0139   |
| 2040 | 0.3 | Extremo | -0.39  | 16.21   | 6.909   | 0.2138  | -0.3493  | -4.6239  |
| 2040 | 0.6 | Extremo | -0.39  | 17.712  | 6.909   | 0.2138  | -2.4221  | -9.7123  |
| 2040 | 0   | Extremo | -0.386 | 14.716  | 6.864   | 0.4314  | 1.7134   | 0.0072   |
| 2040 | 0.3 | Extremo | -0.386 | 16.218  | 6.864   | 0.4314  | -0.346   | -4.6329  |
| 2040 | 0.6 | Extremo | -0.386 | 17.72   | 6.864   | 0.4314  | -2.4053  | -9.7236  |
| 2041 | 0   | Extremo | -4.105 | 33.123  | 26.624  | 1.1182  | 13.6854  | -9.6113  |
| 2041 | 0.5 | Extremo | -4.105 | 36.301  | 26.624  | 1.1182  | 0.3736   | -26.9674 |
| 2041 | 1   | Extremo | -4.105 | 39.479  | 26.624  | 1.1182  | -12.9382 | -45.9125 |
| 2041 | 0   | Extremo | -4.058 | 33.089  | 26.457  | 1.8144  | 13.6092  | -9.6668  |
| 2041 | 0.5 | Extremo | -4.058 | 36.267  | 26.457  | 1.8144  | 0.3808   | -27.0057 |
| 2041 | 1   | Extremo | -4.058 | 39.445  | 26.457  | 1.8144  | -12.8477 | -45.9337 |
| 2043 | 0   | Extremo | -4.503 | -39.513 | -28.426 | -0.0873 | -13.796  | -45.9078 |
| 2043 | 0.5 | Extremo | -4.503 | -36.335 | -28.426 | -0.0873 | 0.4172   | -26.9459 |
| 2043 | 1   | Extremo | -4.503 | -33.157 | -28.426 | -0.0873 | 14.6305  | -9.5731  |
| 2043 | 0   | Extremo | -4.488 | -39.431 | -28.229 | 0.6113  | -13.7012 | -45.8351 |
| 2043 | 0.5 | Extremo | -4.488 | -36.253 | -28.229 | 0.6113  | 0.4133   | -26.9141 |
| 2043 | 1   | Extremo | -4.488 | -33.075 | -28.229 | 0.6113  | 14.5278  | -9.5822  |
| 2044 | 0   | Extremo | -0.428 | -17.709 | -7.406  | 0.1     | -2.5992  | -9.7048  |
| 2044 | 0.3 | Extremo | -0.428 | -16.207 | -7.406  | 0.1     | -0.3773  | -4.6174  |
| 2044 | 0.6 | Extremo | -0.428 | -14.705 | -7.406  | 0.1     | 1.8446   | 0.0195   |
| 2044 | 0   | Extremo | -0.427 | -17.699 | -7.352  | 0.312   | -2.5796  | -9.7005  |
| 2044 | 0.3 | Extremo | -0.427 | -16.197 | -7.352  | 0.312   | -0.3741  | -4.6162  |
| 2044 | 0.6 | Extremo | -0.427 | -14.695 | -7.352  | 0.312   | 1.8314   | 0.0176   |
| 2045 | 0   | Extremo | -0.318 | 14.72   | 5.556   | 0.2107  | 1.3701   | -0.0101  |
| 2045 | 0.3 | Extremo | -0.318 | 16.221  | 5.556   | 0.2107  | -0.2968  | -4.6513  |
| 2045 | 0.6 | Extremo | -0.318 | 17.723  | 5.556   | 0.2107  | -1.9637  | -9.743   |
| 2045 | 0   | Extremo | -0.315 | 14.724  | 5.526   | 0.4454  | 1.3639   | -0.0124  |
| 2045 | 0.3 | Extremo | -0.315 | 16.226  | 5.526   | 0.4454  | -0.2941  | -4.6549  |
| 2045 | 0.6 | Extremo | -0.315 | 17.728  | 5.526   | 0.4454  | -1.952   | -9.7481  |
| 2046 | 0   | Extremo | -3.33  | 32.888  | 21.182  | 1.1188  | 10.8049  | -9.8223  |
| 2046 | 0.5 | Extremo | -3.33  | 36.066  | 21.182  | 1.1188  | 0.2142   | -27.0609 |
| 2046 | 1   | Extremo | -3.33  | 39.244  | 21.182  | 1.1188  | -10.3766 | -45.8885 |
| 2046 | 0   | Extremo | -3.293 | 32.891  | 21.076  | 1.8589  | 10.7608  | -9.8406  |
| 2046 | 0.5 | Extremo | -3.293 | 36.069  | 21.076  | 1.8589  | 0.2226   | -27.0807 |
| 2046 | 1   | Extremo | -3.293 | 39.247  | 21.076  | 1.8589  | -10.3156 | -45.9098 |
| 2048 | 0   | Extremo | -3.633 | -39.13  | -22.48  | -0.0567 | -10.9965 | -45.7277 |
| 2048 | 0.5 | Extremo | -3.633 | -35.952 | -22.48  | -0.0567 | 0.2435   | -26.957  |

|      |     |         |        |         |         |         |          |          |
|------|-----|---------|--------|---------|---------|---------|----------|----------|
| 2048 | 1   | Extremo | -3.633 | -32.774 | -22.48  | -0.0567 | 11.4835  | -9.7753  |
| 2048 | 0   | Extremo | -3.623 | -39.112 | -22.302 | 0.6519  | -10.9133 | -45.6843 |
| 2048 | 0.5 | Extremo | -3.623 | -35.934 | -22.302 | 0.6519  | 0.2378   | -26.9228 |
| 2048 | 1   | Extremo | -3.623 | -32.756 | -22.302 | 0.6519  | 11.3889  | -9.7504  |
| 2049 | 0   | Extremo | -0.348 | -17.697 | -5.919  | 0.1185  | -2.0938  | -9.7227  |
| 2049 | 0.3 | Extremo | -0.348 | -16.195 | -5.919  | 0.1185  | -0.3181  | -4.6389  |
| 2049 | 0.6 | Extremo | -0.348 | -14.693 | -5.919  | 0.1185  | 1.4576   | -0.0057  |
| 2049 | 0   | Extremo | -0.347 | -17.688 | -5.871  | 0.3325  | -2.077   | -9.7149  |
| 2049 | 0.3 | Extremo | -0.347 | -16.186 | -5.871  | 0.3325  | -0.3157  | -4.6337  |
| 2049 | 0.6 | Extremo | -0.347 | -14.685 | -5.871  | 0.3325  | 1.4456   | -0.003   |
| 2050 | 0   | Extremo | -0.257 | 14.72   | 4.427   | 0.2889  | 1.0834   | -0.0216  |
| 2050 | 0.3 | Extremo | -0.257 | 16.222  | 4.427   | 0.2889  | -0.2448  | -4.6627  |
| 2050 | 0.6 | Extremo | -0.257 | 17.723  | 4.427   | 0.2889  | -1.573   | -9.7545  |
| 2050 | 0   | Extremo | -0.254 | 14.723  | 4.41    | 0.5236  | 1.0803   | -0.02    |
| 2050 | 0.3 | Extremo | -0.254 | 16.225  | 4.41    | 0.5236  | -0.2427  | -4.6623  |
| 2050 | 0.6 | Extremo | -0.254 | 17.727  | 4.41    | 0.5236  | -1.5657  | -9.7552  |
| 2051 | 0   | Extremo | -2.677 | 32.776  | 16.755  | 1.3831  | 8.5049   | -9.9127  |
| 2051 | 0.5 | Extremo | -2.677 | 35.954  | 16.755  | 1.3831  | 0.1276   | -27.0951 |
| 2051 | 1   | Extremo | -2.677 | 39.132  | 16.755  | 1.3831  | -8.2496  | -45.8666 |
| 2051 | 0   | Extremo | -2.649 | 32.817  | 16.698  | 2.1197  | 8.4857   | -9.901   |
| 2051 | 0.5 | Extremo | -2.649 | 35.995  | 16.698  | 2.1197  | 0.1366   | -27.104  |
| 2051 | 1   | Extremo | -2.649 | 39.173  | 16.698  | 2.1197  | -8.2125  | -45.8962 |
| 2053 | 0   | Extremo | -2.911 | -38.941 | -17.667 | -0.2315 | -8.6863  | -45.5943 |
| 2053 | 0.5 | Extremo | -2.911 | -35.763 | -17.667 | -0.2315 | 0.1473   | -26.9183 |
| 2053 | 1   | Extremo | -2.911 | -32.585 | -17.667 | -0.2315 | 8.981    | -9.8315  |
| 2053 | 0   | Extremo | -2.906 | -38.971 | -17.501 | 0.5301  | -8.6095  | -45.5675 |
| 2053 | 0.5 | Extremo | -2.906 | -35.792 | -17.501 | 0.5301  | 0.1408   | -26.8768 |
| 2053 | 1   | Extremo | -2.906 | -32.614 | -17.501 | 0.5301  | 8.891    | -9.7752  |
| 2054 | 0   | Extremo | -0.28  | -17.677 | -4.686  | 0.0654  | -1.6663  | -9.7199  |
| 2054 | 0.3 | Extremo | -0.28  | -16.175 | -4.686  | 0.0654  | -0.2606  | -4.642   |
| 2054 | 0.6 | Extremo | -0.28  | -14.673 | -4.686  | 0.0654  | 1.1452   | -0.0147  |
| 2054 | 0   | Extremo | -0.279 | -17.668 | -4.642  | 0.2984  | -1.6511  | -9.7081  |
| 2054 | 0.3 | Extremo | -0.279 | -16.167 | -4.642  | 0.2984  | -0.2586  | -4.6328  |
| 2054 | 0.6 | Extremo | -0.279 | -14.665 | -4.642  | 0.2984  | 1.134    | -0.0081  |
| 2055 | 0   | Extremo | -0.203 | 14.699  | 3.509   | 0.3822  | 0.8544   | -0.0172  |
| 2055 | 0.3 | Extremo | -0.203 | 16.201  | 3.509   | 0.3822  | -0.1983  | -4.6521  |
| 2055 | 0.6 | Extremo | -0.203 | 17.703  | 3.509   | 0.3822  | -1.2511  | -9.7376  |
| 2055 | 0   | Extremo | -0.201 | 14.702  | 3.502   | 0.6044  | 0.8538   | -0.0146  |
| 2055 | 0.3 | Extremo | -0.201 | 16.204  | 3.502   | 0.6044  | -0.1968  | -4.6505  |
| 2055 | 0.6 | Extremo | -0.201 | 17.706  | 3.502   | 0.6044  | -1.2474  | -9.7369  |
| 2056 | 0   | Extremo | -2.114 | 32.771  | 13.214  | 1.7232  | 6.688    | -9.8564  |
| 2056 | 0.5 | Extremo | -2.114 | 35.949  | 13.214  | 1.7232  | 0.0807   | -27.0363 |
| 2056 | 1   | Extremo | -2.114 | 39.127  | 13.214  | 1.7232  | -6.5265  | -45.8052 |
| 2056 | 0   | Extremo | -2.091 | 32.822  | 13.197  | 2.4087  | 6.6883   | -9.8339  |
| 2056 | 0.5 | Extremo | -2.091 | 36      | 13.197  | 2.4087  | 0.0899   | -27.0393 |
| 2056 | 1   | Extremo | -2.091 | 39.178  | 13.197  | 2.4087  | -6.5086  | -45.8338 |
| 2058 | 0   | Extremo | -2.301 | -38.898 | -13.826 | -0.4436 | -6.8196  | -45.4724 |
| 2058 | 0.5 | Extremo | -2.301 | -35.72  | -13.826 | -0.4436 | 0.0935   | -26.8179 |
| 2058 | 1   | Extremo | -2.301 | -32.542 | -13.826 | -0.4436 | 7.0067   | -9.7524  |
| 2058 | 0   | Extremo | -2.301 | -38.913 | -13.663 | 0.4297  | -6.7447  | -45.4213 |
| 2058 | 0.5 | Extremo | -2.301 | -35.734 | -13.663 | 0.4297  | 0.0869   | -26.7596 |
| 2058 | 1   | Extremo | -2.301 | -32.556 | -13.663 | 0.4297  | 6.9185   | -9.6869  |
| 2059 | 0   | Extremo | -0.221 | -17.645 | -3.685  | 0.0086  | -1.3148  | -9.694   |
| 2059 | 0.3 | Extremo | -0.221 | -16.143 | -3.685  | 0.0086  | -0.2094  | -4.6258  |
| 2059 | 0.6 | Extremo | -0.221 | -14.641 | -3.685  | 0.0086  | 0.896    | -0.0081  |
| 2059 | 0   | Extremo | -0.221 | -17.633 | -3.642  | 0.2742  | -1.3     | -9.6796  |
| 2059 | 0.3 | Extremo | -0.221 | -16.131 | -3.642  | 0.2742  | -0.2075  | -4.6151  |
| 2059 | 0.6 | Extremo | -0.221 | -14.629 | -3.642  | 0.2742  | 0.8851   | -0.0011  |
| 2060 | 0   | Extremo | -0.154 | 14.664  | 2.793   | 0.4391  | 0.6765   | -0.008   |
| 2060 | 0.3 |         |        |         |         |         |          |          |





|      |     |         |        |         |         |         |         |           |
|------|-----|---------|--------|---------|---------|---------|---------|-----------|
| 2063 | 1   | Extremo | -1.74  | -32.361 | -10.835 | -0.5071 | 5.4723  | -9.6278   |
| 2063 | 0   | Extremo | -1.745 | -38.649 | -10.669 | 0.4772  | -5.2859 | -45.0864  |
| 2063 | 0.5 | Extremo | -1.745 | -35.471 | -10.669 | 0.4772  | 0.0485  | -26.5562  |
| 2063 | 1   | Extremo | -1.745 | -32.293 | -10.669 | 0.4772  | 5.3829  | -9.6152   |
| 2064 | 0   | Extremo | -0.168 | -17.61  | -2.902  | -0.0056 | -1.0392 | -9.6599   |
| 2064 | 0.3 | Extremo | -0.168 | -16.108 | -2.902  | -0.0056 | -0.1685 | -4.6022   |
| 2064 | 0.6 | Extremo | -0.168 | -14.606 | -2.902  | -0.0056 | 0.7022  | 0.005     |
| 2064 | 0   | Extremo | -0.168 | -17.597 | -2.858  | 0.2847  | -1.0239 | -9.6515   |
| 2064 | 0.3 | Extremo | -0.168 | -16.096 | -2.858  | 0.2847  | -0.1665 | -4.5975   |
| 2064 | 0.6 | Extremo | -0.168 | -14.594 | -2.858  | 0.2847  | 0.691   | 0.0059    |
| 2065 | 0   | Extremo | -0.126 | 14.641  | 2.226   | 0.4096  | 0.5372  | 0.004     |
| 2065 | 0.3 | Extremo | -0.126 | 16.143  | 2.226   | 0.4096  | -0.1307 | -4.6136   |
| 2065 | 0.6 | Extremo | -0.126 | 17.645  | 2.226   | 0.4096  | -0.7987 | -9.6818   |
| 2065 | 0   | Extremo | -0.125 | 14.647  | 2.234   | 0.6471  | 0.5401  | -0.0019   |
| 2065 | 0.3 | Extremo | -0.125 | 16.149  | 2.234   | 0.6471  | -0.1302 | -4.6212   |
| 2065 | 0.6 | Extremo | -0.125 | 17.651  | 2.234   | 0.6471  | -0.8005 | -9.6912   |
| 2066 | 0   | Extremo | -1.306 | 32.618  | 8.292   | 1.6253  | 4.1776  | -9.6383   |
| 2066 | 0.5 | Extremo | -1.306 | 35.796  | 8.292   | 1.6253  | 0.0315  | -26.7416  |
| 2066 | 1   | Extremo | -1.306 | 38.974  | 8.292   | 1.6253  | -4.1145 | -45.4339  |
| 2066 | 0   | Extremo | -1.295 | 32.58   | 8.328   | 2.3656  | 4.2045  | -9.692    |
| 2066 | 0.5 | Extremo | -1.295 | 35.758  | 8.328   | 2.3656  | 0.0404  | -26.7766  |
| 2066 | 1   | Extremo | -1.295 | 38.936  | 8.328   | 2.3656  | -4.1238 | -45.4503  |
| 2068 | 0   | Extremo | -1.413 | -38.832 | -8.488  | 0.0271  | -4.2092 | -45.1257  |
| 2068 | 0.5 | Extremo | -1.413 | -35.654 | -8.488  | 0.0271  | 0.0346  | -26.5041  |
| 2068 | 1   | Extremo | -1.413 | -32.476 | -8.488  | 0.0271  | 4.2784  | -9.4716   |
| 2068 | 0   | Extremo | -1.415 | -38.713 | -8.317  | 0.9261  | -4.13   | -45.0278  |
| 2068 | 0.5 | Extremo | -1.415 | -35.535 | -8.317  | 0.9261  | 0.0283  | -26.4659  |
| 2068 | 1   | Extremo | -1.415 | -32.357 | -8.317  | 0.9261  | 4.1865  | -9.4931   |
| 2069 | 0   | Extremo | -0.136 | -17.586 | -2.286  | 0.0942  | -0.8208 | -9.6291   |
| 2069 | 0.3 | Extremo | -0.136 | -16.084 | -2.286  | 0.0942  | -0.135  | -4.5787   |
| 2069 | 0.6 | Extremo | -0.136 | -14.582 | -2.286  | 0.0942  | 0.5507  | 0.0212    |
| 2069 | 0   | Extremo | -0.137 | -17.572 | -2.24   | 0.3695  | -0.8049 | -9.6242   |
| 2069 | 0.3 | Extremo | -0.137 | -16.07  | -2.24   | 0.3695  | -0.1329 | -4.5778   |
| 2069 | 0.6 | Extremo | -0.137 | -14.568 | -2.24   | 0.3695  | 0.5391  | 0.018     |
| 2070 | 0   | Extremo | -0.1   | 14.645  | 1.762   | 0.3773  | 0.4249  | 0.0037    |
| 2070 | 0.3 | Extremo | -0.1   | 16.147  | 1.762   | 0.3773  | -0.1037 | -4.6151   |
| 2070 | 0.6 | Extremo | -0.1   | 17.649  | 1.762   | 0.3773  | -0.6324 | -9.6844   |
| 2070 | 0   | Extremo | -0.1   | 14.646  | 1.773   | 0.6394  | 0.4286  | -0.000503 |
| 2070 | 0.3 | Extremo | -0.1   | 16.148  | 1.773   | 0.6394  | -0.1034 | -4.6196   |
| 2070 | 0.6 | Extremo | -0.1   | 17.65   | 1.773   | 0.6394  | -0.6353 | -9.6892   |
| 2071 | 0   | Extremo | -1.034 | 32.64   | 6.556   | 1.45    | 3.3044  | -9.6626   |
| 2071 | 0.5 | Extremo | -1.034 | 35.818  | 6.556   | 1.45    | 0.0263  | -26.7769  |
| 2071 | 1   | Extremo | -1.034 | 38.996  | 6.556   | 1.45    | -3.2519 | -45.4802  |
| 2071 | 0   | Extremo | -1.029 | 32.597  | 6.605   | 2.2766  | 3.3375  | -9.6959   |
| 2071 | 0.5 | Extremo | -1.029 | 35.775  | 6.605   | 2.2766  | 0.0351  | -26.7887  |
| 2071 | 1   | Extremo | -1.029 | 38.953  | 6.605   | 2.2766  | -3.2673 | -45.4705  |
| 2073 | 0   | Extremo | -1.112 | -38.817 | -6.621  | 0.4148  | -3.2854 | -45.1391  |
| 2073 | 0.5 | Extremo | -1.112 | -35.639 | -6.621  | 0.4148  | 0.025   | -26.5251  |
| 2073 | 1   | Extremo | -1.112 | -32.461 | -6.621  | 0.4148  | 3.3354  | -9.5001   |
| 2073 | 0   | Extremo | -1.116 | -38.727 | -6.445  | 1.2787  | -3.2038 | -45.0425  |
| 2073 | 0.5 | Extremo | -1.116 | -35.549 | -6.445  | 1.2787  | 0.0184  | -26.4733  |
| 2073 | 1   | Extremo | -1.116 | -32.371 | -6.445  | 1.2787  | 3.2407  | -9.4933   |
| 2074 | 0   | Extremo | -0.108 | -17.586 | -1.786  | 0.197   | -0.6418 | -9.6296   |
| 2074 | 0.3 | Extremo | -0.108 | -16.084 | -1.786  | 0.197   | -0.1061 | -4.5792   |
| 2074 | 0.6 | Extremo | -0.108 | -14.582 | -1.786  | 0.197   | 0.4296  | 0.0206    |
| 2074 | 0   | Extremo | -0.108 | -17.57  | -1.739  | 0.4628  | -0.6256 | -9.6207   |
| 2074 | 0.3 | Extremo | -0.108 | -16.068 | -1.739  | 0.4628  | -0.1039 | -4.5749   |
| 2074 | 0.6 | Extremo | -0.108 | -14.566 | -1.739  | 0.4628  | 0.4177  | 0.0203    |
| 2075 | 0   | Extremo | -0.078 | 14.641  | 1.394   | 0.3666  | 0.3366  | 0.003     |
| 2075 | 0.3 | Extremo | -0.078 | 16.142  | 1.394   | 0.3666  | -0.0817 | -4.6144   |
| 2075 | 0.6 | Extremo | -0.078 | 17.644  | 1.394   | 0.3666  | -0.5    | -9.6825   |
| 2075 | 0   | Extremo | -0.078 | 14.638  | 1.407   | 0.6368  | 0.3405  | 0.0027    |
| 2075 | 0.3 | Extremo | -0.078 | 16.14   | 1.407   | 0.6368  | -0.0814 | -4.6139   |
| 2075 | 0.6 | Extremo | -0.078 | 17.641  | 1.407   | 0.6368  | -0.5034 | -9.6811   |
| 2076 | 0   | Extremo | -0.805 | 32.62   | 5.192   | 1.4264  | 2.6196  | -9.6718   |
| 2076 | 0.5 | Extremo | -0.805 | 35.798  | 5.192   | 1.4264  | 0.0235  | -26.7763  |
| 2076 | 1   | Extremo | -0.805 | 38.976  | 5.192   | 1.4264  | -2.5727 | -45.4699  |
| 2076 | 0   | Extremo | -0.804 | 32.601  | 5.245   | 2.2714  | 2.655   | -9.671    |
| 2076 | 0.5 | Extremo | -0.804 | 35.779  | 5.245   | 2.2714  | 0.0323  | -26.766   |
| 2076 | 1   | Extremo | -0.804 | 38.957  | 5.245   | 2.2714  | -2.5904 | -45.4501  |
| 2078 | 0   | Extremo | -0.866 | -38.759 | -5.158  | 0.6457  | -2.5605 | -45.0799  |
| 2078 | 0.5 | Extremo | -0.866 | -35.581 | -5.158  | 0.6457  | 0.0186  | -26.495   |

|      |     |         |        |         |        |        |         |           |
|------|-----|---------|--------|---------|--------|--------|---------|-----------|
| 2078 | 1   | Extremo | -0.866 | -32.403 | -5.158 | 0.6457 | 2.5976  | -9.4992   |
| 2078 | 0   | Extremo | -0.873 | -38.712 | -4.973 | 1.5472 | -2.4744 | -44.9955  |
| 2078 | 0.5 | Extremo | -0.873 | -35.534 | -4.973 | 1.5472 | 0.012   | -26.4341  |
| 2078 | 1   | Extremo | -0.873 | -32.356 | -4.973 | 1.5472 | 2.4985  | -9.4618   |
| 2079 | 0   | Extremo | -0.084 | -17.573 | -1.391 | 0.2771 | -0.5001 | -9.6225   |
| 2079 | 0.3 | Extremo | -0.084 | -16.071 | -1.391 | 0.2771 | -0.0828 | -4.5759   |
| 2079 | 0.6 | Extremo | -0.084 | -14.569 | -1.391 | 0.2771 | 0.3346  | 0.0202    |
| 2079 | 0   | Extremo | -0.084 | -17.557 | -1.342 | 0.552  | -0.4832 | -9.6098   |
| 2079 | 0.3 | Extremo | -0.084 | -16.055 | -1.342 | 0.552  | -0.0805 | -4.5679   |
| 2079 | 0.6 | Extremo | -0.084 | -14.554 | -1.342 | 0.552  | 0.3222  | 0.0234    |
| 2080 | 0   | Extremo | -0.059 | 14.61   | 1.111  | 0.3476 | 0.2684  | 0.0048    |
| 2080 | 0.3 | Extremo | -0.059 | 16.112  | 1.111  | 0.3476 | -0.0648 | -4.6036   |
| 2080 | 0.6 | Extremo | -0.059 | 17.614  | 1.111  | 0.3476 | -0.398  | -9.6626   |
| 2080 | 0   | Extremo | -0.06  | 14.605  | 1.123  | 0.6112 | 0.2723  | 0.0068    |
| 2080 | 0.3 | Extremo | -0.06  | 16.107  | 1.123  | 0.6112 | -0.0645 | -4.6001   |
| 2080 | 0.6 | Extremo | -0.06  | 17.609  | 1.123  | 0.6112 | -0.4014 | -9.6575   |
| 2081 | 0   | Extremo | -0.614 | 32.514  | 4.138  | 1.3707 | 2.0907  | -9.6258   |
| 2081 | 0.5 | Extremo | -0.614 | 35.692  | 4.138  | 1.3707 | 0.0214  | -26.6774  |
| 2081 | 1   | Extremo | -0.614 | 38.87   | 4.138  | 1.3707 | -2.0478 | -45.318   |
| 2081 | 0   | Extremo | -0.616 | 32.509  | 4.191  | 2.1842 | 2.1255  | -9.6049   |
| 2081 | 0.5 | Extremo | -0.616 | 35.687  | 4.191  | 2.1842 | 0.0303  | -26.6541  |
| 2081 | 1   | Extremo | -0.616 | 38.866  | 4.191  | 2.1842 | -2.065  | -45.2923  |
| 2083 | 0   | Extremo | -0.668 | -38.6   | -4.024 | 0.9493 | -1.9981 | -44.8743  |
| 2083 | 0.5 | Extremo | -0.668 | -35.422 | -4.024 | 0.9493 | 0.0139  | -26.369   |
| 2083 | 1   | Extremo | -0.668 | -32.243 | -4.024 | 0.9493 | 2.0259  | -9.4528   |
| 2083 | 0   | Extremo | -0.68  | -38.55  | -3.824 | 1.931  | -1.9044 | -44.7901  |
| 2083 | 0.5 | Extremo | -0.68  | -35.372 | -3.824 | 1.931  | 0.0075  | -26.3095  |
| 2083 | 1   | Extremo | -0.68  | -32.194 | -3.824 | 1.931  | 1.9193  | -9.418    |
| 2084 | 0   | Extremo | -0.065 | -17.535 | -1.085 | 0.3704 | -0.3902 | -9.5993   |
| 2084 | 0.3 | Extremo | -0.065 | -16.033 | -1.085 | 0.3704 | -0.0646 | -4.5642   |
| 2084 | 0.6 | Extremo | -0.065 | -14.531 | -1.085 | 0.3704 | 0.2609  | 0.0204    |
| 2084 | 0   | Extremo | -0.066 | -17.52  | -1.032 | 0.6642 | -0.3719 | -9.5878   |
| 2084 | 0.3 | Extremo | -0.066 | -16.018 | -1.032 | 0.6642 | -0.0621 | -4.5571   |
| 2084 | 0.6 | Extremo | -0.066 | -14.516 | -1.032 | 0.6642 | 0.2476  | 0.0231    |
| 2085 | 0   | Extremo | -0.043 | 14.576  | 0.901  | 0.3257 | 0.2173  | -0.0017   |
| 2085 | 0.3 | Extremo | -0.043 | 16.077  | 0.901  | 0.3257 | -0.0529 | -4.5997   |
| 2085 | 0.6 | Extremo | -0.043 | 17.579  | 0.901  | 0.3257 | -0.323  | -9.6482   |
| 2085 | 0   | Extremo | -0.044 | 14.569  | 0.912  | 0.578  | 0.221   | -0.000264 |
| 2085 | 0.3 | Extremo | -0.044 | 16.071  | 0.912  | 0.578  | -0.0527 | -4.5963   |
| 2085 | 0.6 | Extremo | -0.044 | 17.573  | 0.912  | 0.578  | -0.3264 | -9.6429   |
| 2086 | 0   | Extremo | -0.447 | 32.134  | 3.346  | 1.2269 | 1.6903  | -9.668    |
| 2086 | 0.5 | Extremo | -0.447 | 35.312  | 3.346  | 1.2269 | 0.0171  | -26.5293  |
| 2086 | 1   | Extremo | -0.447 | 38.49   | 3.346  | 1.2269 | -1.6561 | -44.9796  |
| 2086 | 0   | Extremo | -0.45  | 32.118  | 3.394  | 1.9911 | 1.7225  | -9.6536   |
| 2086 | 0.5 | Extremo | -0.45  | 35.296  | 3.394  | 1.9911 | 0.0254  | -26.5072  |
| 2086 | 1   | Extremo | -0.45  | 38.474  | 3.394  | 1.9911 | -1.6717 | -44.9498  |
| 2088 | 0   | Extremo | -0.494 | -38.127 | -3.162 | 1.3252 | -1.5731 | -44.5071  |
| 2088 | 0.5 | Extremo | -0.494 | -34.948 | -3.162 | 1.3252 | 0.0081  | -26.2384  |
| 2088 | 1   | Extremo | -0.494 | -31.77  | -3.162 | 1.3252 | 1.5894  | -9.5587   |
| 2088 | 0   | Extremo | -0.512 | -38.052 | -2.94  | 2.3604 | -1.4683 | -44.4462  |
| 2088 | 0.5 | Extremo | -0.512 | -34.874 | -2.94  | 2.3604 | 0.0018  | -26.2148  |
| 2088 | 1   | Extremo | -0.512 | -31.696 | -2.94  | 2.3604 | 1.472   | -9.5724   |
| 2089 | 0   | Extremo | -0.048 | -17.505 | -0.855 | 0.4521 | -0.3078 | -9.5957   |
| 2089 | 0.3 | Extremo | -0.048 | -16.003 | -0.855 | 0.4521 | -0.0514 | -4.5696   |
| 2089 | 0.6 | Extremo | -0.048 | -14.501 | -0.855 | 0.4521 | 0.205   | 0.006     |
| 2089 | 0   | Extremo | -0.05  | -17.498 | -0.796 | 0.7532 | -0.2873 | -9.5941   |
| 2089 | 0.3 | Extremo | -0.05  | -15.996 | -0.796 | 0.7532 | -0.0485 | -4.5701   |
| 2089 | 0.6 | Extremo | -0.05  | -14.494 | -0.796 | 0.7532 | 0.1903  | 0.0034    |
| 2090 | 0   | Extremo | -0.034 | 14.538  | 0.743  | 0.3241 | 0.1788  | 0.0011    |
| 2090 | 0.3 | Extremo | -0.034 | 16.04   | 0.743  | 0.3241 | -0.0443 | -4.5857   |
| 2090 | 0.6 | Extremo |        |         |        |        |         |           |



|      |     |         |        |         |        |         |           |          |
|------|-----|---------|--------|---------|--------|---------|-----------|----------|
| 2093 | 1   | Extremo | -0.385 | -31.632 | -2.507 | 1.5242  | 1.2576    | -9.6076  |
| 2093 | 0   | Extremo | -0.402 | -37.917 | -2.261 | 2.487   | -1.1338   | -44.4125 |
| 2093 | 0.5 | Extremo | -0.402 | -34.739 | -2.261 | 2.487   | -0.0034   | -26.2484 |
| 2093 | 1   | Extremo | -0.402 | -31.561 | -2.261 | 2.487   | 1.1271    | -9.6733  |
| 2094 | 0   | Extremo | -0.037 | -17.49  | -0.681 | 0.4773  | -0.2461   | -9.5947  |
| 2094 | 0.3 | Extremo | -0.037 | -15.988 | -0.681 | 0.4773  | -0.0417   | -4.5729  |
| 2094 | 0.6 | Extremo | -0.037 | -14.487 | -0.681 | 0.4773  | 0.1627    | -0.0017  |
| 2094 | 0   | Extremo | -0.039 | -17.495 | -0.616 | 0.7548  | -0.2232   | -9.6062  |
| 2094 | 0.3 | Extremo | -0.039 | -15.994 | -0.616 | 0.7548  | -0.0384   | -4.5829  |
| 2094 | 0.6 | Extremo | -0.039 | -14.492 | -0.616 | 0.7548  | 0.1463    | -0.0101  |
| 2095 | 0   | Extremo | -0.026 | 14.502  | 0.624  | 0.2887  | 0.1491    | 0.0209   |
| 2095 | 0.3 | Extremo | -0.026 | 16.003  | 0.624  | 0.2887  | -0.0381   | -4.5548  |
| 2095 | 0.6 | Extremo | -0.026 | 17.505  | 0.624  | 0.2887  | -0.2252   | -9.5811  |
| 2095 | 0   | Extremo | -0.027 | 14.483  | 0.632  | 0.538   | 0.1511    | 0.0237   |
| 2095 | 0.3 | Extremo | -0.027 | 15.985  | 0.632  | 0.538   | -0.0384   | -4.5464  |
| 2095 | 0.6 | Extremo | -0.027 | 17.486  | 0.632  | 0.538   | -0.2279   | -9.567   |
| 2096 | 0   | Extremo | -0.266 | 31.979  | 2.277  | 1.0584  | 1.1509    | -9.4852  |
| 2096 | 0.5 | Extremo | -0.266 | 35.157  | 2.277  | 1.0584  | 0.0124    | -26.2694 |
| 2096 | 1   | Extremo | -0.266 | 38.335  | 2.277  | 1.0584  | -1.1262   | -44.6426 |
| 2096 | 0   | Extremo | -0.28  | 31.898  | 2.299  | 1.8443  | 1.1668    | -9.4552  |
| 2096 | 0.5 | Extremo | -0.28  | 35.076  | 2.299  | 1.8443  | 0.0171    | -26.1987 |
| 2096 | 1   | Extremo | -0.28  | 38.254  | 2.299  | 1.8443  | -1.1325   | -44.5312 |
| 2098 | 0   | Extremo | -0.288 | -38.147 | -2.007 | 1.6459  | -1.0032   | -44.5784 |
| 2098 | 0.5 | Extremo | -0.288 | -34.969 | -2.007 | 1.6459  | 0.0004192 | -26.2995 |
| 2098 | 1   | Extremo | -0.288 | -31.791 | -2.007 | 1.6459  | 1.004     | -9.6095  |
| 2098 | 0   | Extremo | -0.307 | -38.146 | -1.738 | 2.5064  | -0.8781   | -44.6815 |
| 2098 | 0.5 | Extremo | -0.307 | -34.968 | -1.738 | 2.5064  | -0.0092   | -26.4031 |
| 2098 | 1   | Extremo | -0.307 | -31.79  | -1.738 | 2.5064  | 0.8597    | -9.7138  |
| 2099 | 0   | Extremo | -0.028 | -17.511 | -0.55  | 0.4884  | -0.1925   | -9.6017  |
| 2099 | 0.3 | Extremo | -0.028 | -16.009 | -0.55  | 0.4884  | -0.0345   | -4.5737  |
| 2099 | 0.6 | Extremo | -0.028 | -14.507 | -0.55  | 0.4884  | 0.1305    | -0.0038  |
| 2099 | 0   | Extremo | -0.03  | -17.536 | -0.478 | 0.7261  | -0.1743   | -9.6288  |
| 2099 | 0.3 | Extremo | -0.03  | -16.034 | -0.478 | 0.7261  | -0.031    | -4.5932  |
| 2099 | 0.6 | Extremo | -0.03  | -14.532 | -0.478 | 0.7261  | 0.1123    | -0.0081  |
| 2100 | 0   | Extremo | -0.02  | 14.421  | 0.537  | 0.1458  | 0.1264    | 0.0729   |
| 2100 | 0.3 | Extremo | -0.02  | 15.922  | 0.537  | 0.1458  | -0.0347   | -4.4785  |
| 2100 | 0.6 | Extremo | -0.02  | 17.424  | 0.537  | 0.1458  | -0.1958   | -9.4805  |
| 2100 | 0   | Extremo | -0.021 | 14.392  | 0.542  | 0.3753  | 0.1271    | 0.0801   |
| 2100 | 0.3 | Extremo | -0.021 | 15.894  | 0.542  | 0.3753  | -0.0356   | -4.4628  |
| 2100 | 0.6 | Extremo | -0.021 | 17.396  | 0.542  | 0.3753  | -0.1983   | -9.4563  |
| 2101 | 0   | Extremo | -0.204 | 32.145  | 1.914  | 0.8093  | 0.9637    | -9.0849  |
| 2101 | 0.5 | Extremo | -0.204 | 35.324  | 1.914  | 0.8093  | 0.0067    | -25.9522 |
| 2101 | 1   | Extremo | -0.204 | 38.502  | 1.914  | 0.8093  | -0.9503   | -44.4085 |
| 2101 | 0   | Extremo | -0.218 | 32.061  | 1.918  | 1.5357  | 0.9661    | -9.0153  |
| 2101 | 0.5 | Extremo | -0.218 | 35.239  | 1.918  | 1.5357  | 0.0071    | -25.8403 |
| 2101 | 1   | Extremo | -0.218 | 38.417  | 1.918  | 1.5357  | -0.9518   | -44.2543 |
| 2103 | 0   | Extremo | -0.211 | -38.696 | -1.633 | 1.6459  | -0.8216   | -44.8895 |
| 2103 | 0.5 | Extremo | -0.211 | -35.518 | -1.633 | 1.6459  | -0.005    | -26.336  |
| 2103 | 1   | Extremo | -0.211 | -32.34  | -1.633 | 1.6459  | 0.8117    | -9.3716  |
| 2103 | 0   | Extremo | -0.225 | -38.858 | -1.349 | 2.3519  | -0.6923   | -45.1804 |
| 2103 | 0.5 | Extremo | -0.225 | -35.68  | -1.349 | 2.3519  | -0.018    | -26.5458 |
| 2103 | 1   | Extremo | -0.225 | -32.502 | -1.349 | 2.3519  | 0.6564    | -9.5002  |
| 2104 | 0   | Extremo | -0.02  | -17.524 | -0.456 | 0.5372  | -0.1668   | -9.5692  |
| 2104 | 0.3 | Extremo | -0.02  | -16.022 | -0.456 | 0.5372  | -0.0301   | -4.5373  |
| 2104 | 0.6 | Extremo | -0.02  | -14.52  | -0.456 | 0.5372  | 0.1066    | -0.0441  |
| 2104 | 0   | Extremo | -0.021 | -17.579 | -0.378 | 0.7231  | -0.1398   | -9.6141  |
| 2104 | 0.3 | Extremo | -0.021 | -16.077 | -0.378 | 0.7231  | -0.0264   | -4.5658  |
| 2104 | 0.6 | Extremo | -0.021 | -14.575 | -0.378 | 0.7231  | 0.087     | -0.032   |
| 2105 | 0   | Extremo | -0.021 | 14.181  | 0.461  | -0.2606 | 0.1059    | 0.1643   |
| 2105 | 0.3 | Extremo | -0.021 | 15.682  | 0.461  | -0.2606 | -0.0323   | -4.3152  |
| 2105 | 0.6 | Extremo | -0.021 | 17.184  | 0.461  | -0.2606 | -0.1706   | -9.2452  |
| 2105 | 0   | Extremo | -0.023 | 14.14   | 0.462  | -0.0705 | 0.1049    | 0.1762   |
| 2105 | 0.3 | Extremo | -0.023 | 15.642  | 0.462  | -0.0705 | -0.0337   | -4.2911  |
| 2105 | 0.6 | Extremo | -0.023 | 17.144  | 0.462  | -0.0705 | -0.1723   | -9.2089  |
| 2106 | 0   | Extremo | -0.21  | 32.038  | 1.591  | 0.0079  | 0.7906    | -8.265   |
| 2106 | 0.5 | Extremo | -0.21  | 35.216  | 1.591  | 0.0079  | -0.0048   | -25.0787 |
| 2106 | 1   | Extremo | -0.21  | 38.394  | 1.591  | 0.0079  | -0.8002   | -43.4814 |
| 2106 | 0   | Extremo | -0.233 | 31.945  | 1.573  | 0.6168  | 0.7751    | -8.1501  |
| 2106 | 0.5 | Extremo | -0.233 | 35.123  | 1.573  | 0.6168  | -0.0116   | -24.9172 |
| 2106 | 1   | Extremo | -0.233 | 38.301  | 1.573  | 0.6168  | -0.7982   | -43.2733 |
| 2108 | 0   | Extremo | -0.157 | -39.312 | -1.35  | 1.9536  | -0.6893   | -44.7068 |
| 2108 | 0.5 | Extremo | -0.157 | -36.134 | -1.35  | 1.9536  | -0.0143   | -25.8455 |

|      |     |         |           |         |        |         |         |          |
|------|-----|---------|-----------|---------|--------|---------|---------|----------|
| 2108 | 1   | Extremo | -0.157    | -32.956 | -1.35  | 1.9536  | 0.6608  | -8.5732  |
| 2108 | 0   | Extremo | -0.138    | -39.729 | -1.081 | 2.473   | -0.5726 | -45.2195 |
| 2108 | 0.5 | Extremo | -0.138    | -36.551 | -1.081 | 2.473   | -0.0319 | -26.1497 |
| 2108 | 1   | Extremo | -0.138    | -33.373 | -1.081 | 2.473   | 0.5087  | -8.6689  |
| 2109 | 0   | Extremo | -0.015    | -17.387 | -0.39  | 0.8108  | -0.145  | -9.3914  |
| 2109 | 0.3 | Extremo | -0.015    | -15.886 | -0.39  | 0.8108  | -0.0281 | -4.4004  |
| 2109 | 0.6 | Extremo | -0.015    | -14.384 | -0.39  | 0.8108  | 0.0887  | 0.1399   |
| 2109 | 0   | Extremo | -0.013    | -17.469 | -0.316 | 0.9493  | -0.1201 | -9.4467  |
| 2109 | 0.3 | Extremo | -0.013    | -15.967 | -0.316 | 0.9493  | -0.0252 | -4.4312  |
| 2109 | 0.6 | Extremo | -0.013    | -14.465 | -0.316 | 0.9493  | 0.0697  | 0.1337   |
| 2110 | 0   | Extremo | -0.036    | 13.52   | 0.338  | -1.0693 | 0.0776  | 0.2221   |
| 2110 | 0.3 | Extremo | -0.036    | 15.021  | 0.338  | -1.0693 | -0.0237 | -4.059   |
| 2110 | 0.6 | Extremo | -0.036    | 16.523  | 0.338  | -1.0693 | -0.125  | -8.7908  |
| 2110 | 0   | Extremo | -0.041    | 13.465  | 0.326  | -0.9362 | 0.0734  | 0.2362   |
| 2110 | 0.3 | Extremo | -0.041    | 14.966  | 0.326  | -0.9362 | -0.0245 | -4.0284  |
| 2110 | 0.6 | Extremo | -0.041    | 16.468  | 0.326  | -0.9362 | -0.1224 | -8.7436  |
| 2111 | 0   | Extremo | -0.368    | 29.628  | 1.198  | -2.0745 | 0.577   | -7.6845  |
| 2111 | 0.5 | Extremo | -0.368    | 32.806  | 1.198  | -2.0745 | -0.0222 | -23.293  |
| 2111 | 1   | Extremo | -0.368    | 35.984  | 1.198  | -2.0745 | -0.6214 | -40.4905 |
| 2111 | 0   | Extremo | -0.418    | 29.469  | 1.148  | -1.652  | 0.5392  | -7.547   |
| 2111 | 0.5 | Extremo | -0.418    | 32.647  | 1.148  | -1.652  | -0.035  | -23.0759 |
| 2111 | 1   | Extremo | -0.418    | 35.825  | 1.148  | -1.652  | -0.6092 | -40.1938 |
| 2113 | 0   | Extremo | -0.179    | -37.387 | -1.098 | 3.71    | -0.5831 | -42.1905 |
| 2113 | 0.5 | Extremo | -0.179    | -34.209 | -1.098 | 3.71    | -0.0342 | -24.2915 |
| 2113 | 1   | Extremo | -0.179    | -31.031 | -1.098 | 3.71    | 0.5147  | -7.9816  |
| 2113 | 0   | Extremo | -0.077    | -37.918 | -0.911 | 4.1674  | -0.5138 | -42.7922 |
| 2113 | 0.5 | Extremo | -0.077    | -34.74  | -0.911 | 4.1674  | -0.0584 | -24.6278 |
| 2113 | 1   | Extremo | -0.077    | -31.562 | -0.911 | 4.1674  | 0.3969  | -8.0525  |
| 2114 | 0   | Extremo | -0.019    | -16.799 | -0.321 | 1.525   | -0.1215 | -8.9795  |
| 2114 | 0.3 | Extremo | -0.019    | -15.298 | -0.321 | 1.525   | -0.0251 | -4.1649  |
| 2114 | 0.6 | Extremo | -0.019    | -13.796 | -0.321 | 1.525   | 0.0713  | 0.1991   |
| 2114 | 0   | Extremo | -0.008537 | -16.896 | -0.28  | 1.6456  | -0.1098 | -9.0415  |
| 2114 | 0.3 | Extremo | -0.008537 | -15.394 | -0.28  | 1.6456  | -0.0259 | -4.1979  |
| 2114 | 0.6 | Extremo | -0.008537 | -13.892 | -0.28  | 1.6456  | 0.058   | 0.1951   |
| 2115 | 0   | Extremo | -0.061    | 9.291   | 0.116  | -1.8718 | 0.0328  | -0.4112  |
| 2115 | 0.3 | Extremo | -0.061    | 10.793  | 0.116  | -1.8718 | -0.0019 | -3.4237  |
| 2115 | 0.6 | Extremo | -0.061    | 12.295  | 0.116  | -1.8718 | -0.0367 | -6.8868  |
| 2115 | 0   | Extremo | -0.054    | 9.248   | 0.111  | -1.7947 | 0.0294  | -0.3866  |
| 2115 | 0.3 | Extremo | -0.054    | 10.749  | 0.111  | -1.7947 | -0.004  | -3.3862  |
| 2115 | 0.6 | Extremo | -0.054    | 12.251  | 0.111  | -1.7947 | -0.0374 | -6.8363  |
| 2116 | 0   | Extremo | -0.635    | 23.25   | 0.717  | -3.7635 | 0.3123  | -8.9924  |
| 2116 | 0.5 | Extremo | -0.635    | 26.428  | 0.717  | -3.7635 | -0.046  | -21.4121 |
| 2116 | 1   | Extremo | -0.635    | 29.607  | 0.717  | -3.7635 | -0.4042 | -35.4209 |
| 2116 | 0   | Extremo | -0.562    | 23.254  | 0.664  | -3.486  | 0.2742  | -8.7771  |
| 2116 | 0.5 | Extremo | -0.562    | 26.432  | 0.664  | -3.486  | -0.058  | -21.1984 |
| 2116 | 1   | Extremo | -0.562    | 29.61   | 0.664  | -3.486  | -0.3903 | -35.2088 |
| 2118 | 0   | Extremo | -0.664    | -30.346 | -0.721 | 5.2185  | -0.4228 | -37.0449 |
| 2118 | 0.5 | Extremo | -0.664    | -27.168 | -0.721 | 5.2185  | -0.0621 | -22.6663 |
| 2118 | 1   | Extremo | -0.664    | -23.99  | -0.721 | 5.2185  | 0.2986  | -9.8767  |
| 2118 | 0   | Extremo | -0.57     | -30.715 | -0.633 | 5.6719  | -0.4035 | -37.6682 |
| 2118 | 0.5 | Extremo | -0.57     | -27.536 | -0.633 | 5.6719  | -0.087  | -23.1054 |
| 2118 | 1   | Extremo | -0.57     | -24.358 | -0.633 | 5.6719  | 0.2295  | -10.1317 |
| 2119 | 0   | Extremo | -0.064    | -12.579 | -0.137 | 2.2194  | -0.0487 | -7.1451  |
| 2119 | 0.3 | Extremo | -0.064    | -11.077 | -0.137 | 2.2194  | -0.0075 | -3.5969  |
| 2119 | 0.6 | Extremo | -0.064    | -9.575  | -0.137 | 2.2194  | 0.0337  | -0.4992  |
| 2119 | 0   | Extremo | -0.055    | -12.682 | -0.142 | 2.3216  | -0.0565 | -7.2309  |
| 2119 | 0.3 | Extremo | -0.055    | -11.181 | -0.142 | 2.3216  | -0.0139 | -3.6514  |
| 2119 | 0.6 | Extremo | -0.055    | -9.679  | -0.142 | 2.3216  | 0.0288  | -0.5225  |
| 2120 | 0   | Extremo | 0.227     | -3.826  | 0.178  | 25.4758 | 0.1122  | -18.2518 |
| 2120 | 0.5 | Extremo | 0.227     | 11.512  | 0.178  | 25.4758 | 0.0234  | -20.1734 |
| 2120 | 1   |         |           |         |        |         |         |          |



|      |     |         |        |          |        |          |         |           |
|------|-----|---------|--------|----------|--------|----------|---------|-----------|
| 2122 | 1   | Extremo | 0.957  | -73.534  | 0.258  | 3.1251   | -0.1044 | 164.1868  |
| 2122 | 0   | Extremo | -2.474 | -104.195 | -0.44  | 3.1251   | -0.284  | 75.3025   |
| 2122 | 0.5 | Extremo | -2.474 | -88.858  | -0.44  | 3.1251   | -0.0641 | 123.5658  |
| 2122 | 1   | Extremo | -2.474 | -73.52   | -0.44  | 3.1251   | 0.1557  | 164.1601  |
| 2123 | 0   | Extremo | 1.082  | -47.37   | 0.216  | 5.4479   | 0.1153  | 155.7967  |
| 2123 | 0.5 | Extremo | 1.082  | -32.032  | 0.216  | 5.4479   | 0.0075  | 175.6473  |
| 2123 | 1   | Extremo | 1.082  | -16.694  | 0.216  | 5.4479   | -0.1003 | 187.829   |
| 2123 | 0   | Extremo | -2.659 | -47.356  | -0.324 | 5.4475   | -0.1906 | 155.7707  |
| 2123 | 0.5 | Extremo | -2.659 | -32.018  | -0.324 | 5.4475   | -0.0284 | 175.6142  |
| 2123 | 1   | Extremo | -2.659 | -16.68   | -0.324 | 5.4475   | 0.1338  | 187.7888  |
| 2124 | 0   | Extremo | 1.163  | 9.312    | 0.192  | 2.1981   | 0.0948  | 182.7978  |
| 2124 | 0.5 | Extremo | 1.163  | 24.65    | 0.192  | 2.1981   | -0.0011 | 174.3073  |
| 2124 | 1   | Extremo | 1.163  | 39.988   | 0.192  | 2.1981   | -0.0969 | 158.1478  |
| 2124 | 0   | Extremo | -2.721 | 9.326    | -0.26  | 2.1975   | -0.1399 | 182.7586  |
| 2124 | 0.5 | Extremo | -2.721 | 24.664   | -0.26  | 2.1975   | -0.0101 | 174.261   |
| 2124 | 1   | Extremo | -2.721 | 40.002   | -0.26  | 2.1975   | 0.1196  | 158.0945  |
| 2125 | 0   | Extremo | 1.231  | 64.584   | 0.18   | -2.8597  | 0.0836  | 160.1144  |
| 2125 | 0.5 | Extremo | 1.231  | 79.922   | 0.18   | -2.8597  | -0.0066 | 123.9881  |
| 2125 | 1   | Extremo | 1.231  | 95.259   | 0.18   | -2.8597  | -0.0968 | 80.1928   |
| 2125 | 0   | Extremo | -2.742 | 64.598   | -0.23  | -2.8603  | -0.1139 | 160.062   |
| 2125 | 0.5 | Extremo | -2.742 | 79.936   | -0.23  | -2.8603  | 0.0012  | 123.9287  |
| 2125 | 1   | Extremo | -2.742 | 95.273   | -0.23  | -2.8603  | 0.1163  | 80.1264   |
| 2126 | 0   | Extremo | 1.298  | 121.443  | 0.179  | -6.6113  | 0.078   | 89.9243   |
| 2126 | 0.5 | Extremo | 1.298  | 136.781  | 0.179  | -6.6113  | -0.0114 | 25.3685   |
| 2126 | 1   | Extremo | 1.298  | 152.118  | 0.179  | -6.6113  | -0.1009 | -46.8563  |
| 2126 | 0   | Extremo | -2.764 | 121.457  | -0.23  | -6.6119  | -0.1036 | 89.859    |
| 2126 | 0.5 | Extremo | -2.764 | 136.795  | -0.23  | -6.6119  | 0.0113  | 25.2961   |
| 2126 | 1   | Extremo | -2.764 | 152.133  | -0.23  | -6.6119  | 0.1262  | -46.9358  |
| 2127 | 0   | Extremo | 1.379  | 183.997  | 0.188  | -3.414   | 0.0772  | -30.7737  |
| 2127 | 0.5 | Extremo | 1.379  | 199.335  | 0.188  | -3.414   | -0.0167 | -126.6068 |
| 2127 | 1   | Extremo | 1.379  | 214.673  | 0.188  | -3.414   | -0.1107 | -230.1089 |
| 2127 | 0   | Extremo | -2.826 | 184.012  | -0.261 | -3.4143  | -0.1056 | -30.852   |
| 2127 | 0.5 | Extremo | -2.826 | 199.35   | -0.261 | -3.4143  | 0.0247  | -126.6926 |
| 2127 | 1   | Extremo | -2.826 | 214.688  | -0.261 | -3.4143  | 0.1551  | -230.2022 |
| 2128 | 0   | Extremo | 1.499  | 246.316  | 0.209  | 17.5728  | 0.0832  | -218.0523 |
| 2128 | 0.5 | Extremo | 1.499  | 261.654  | 0.209  | 17.5728  | -0.0215 | -345.0446 |
| 2128 | 1   | Extremo | 1.499  | 276.991  | 0.209  | 17.5728  | -0.1262 | -479.7059 |
| 2128 | 0   | Extremo | -3.001 | 246.331  | -0.333 | 17.574   | -0.1196 | -218.1448 |
| 2128 | 0.5 | Extremo | -3.001 | 261.669  | -0.333 | 17.574   | 0.0469  | -345.1449 |
| 2128 | 1   | Extremo | -3.001 | 277.007  | -0.333 | 17.574   | 0.2134  | -479.814  |
| 2129 | 0   | Extremo | 1.718  | 215.392  | 0.248  | 50.9219  | 0.1118  | -501.4743 |
| 2129 | 0.5 | Extremo | 1.718  | 230.73   | 0.248  | 50.9219  | -0.0121 | -613.0046 |
| 2129 | 1   | Extremo | 1.718  | 246.067  | 0.248  | 50.9219  | -0.136  | -732.2039 |
| 2129 | 0   | Extremo | -3.459 | 215.401  | -0.445 | 50.9253  | -0.1535 | -501.5841 |
| 2129 | 0.5 | Extremo | -3.459 | 230.739  | -0.445 | 50.9253  | 0.0689  | -613.1193 |
| 2129 | 1   | Extremo | -3.459 | 246.077  | -0.445 | 50.9253  | 0.2914  | -732.3234 |
| 2130 | 0   | Extremo | 2.229  | -307.987 | 0.418  | -40.3529 | 0.2422  | -737.7679 |
| 2130 | 0.5 | Extremo | 2.229  | -292.649 | 0.418  | -40.3529 | 0.0331  | -587.609  |
| 2130 | 1   | Extremo | 2.229  | -277.311 | 0.418  | -40.3529 | -0.176  | -445.1189 |
| 2130 | 0   | Extremo | -4.64  | -308.018 | -0.488 | -40.3561 | -0.3119 | -737.8878 |
| 2130 | 0.5 | Extremo | -4.64  | -292.68  | -0.488 | -40.3561 | -0.0678 | -587.7133 |
| 2130 | 1   | Extremo | -4.64  | -277.342 | -0.488 | -40.3561 | 0.1762  | -445.2077 |
| 2131 | 0   | Extremo | 2.536  | -338.995 | 0.373  | -6.9042  | 0.1853  | -434.5188 |
| 2131 | 0.5 | Extremo | 2.536  | -323.657 | 0.373  | -6.9042  | -0.0012 | -268.8557 |
| 2131 | 1   | Extremo | 2.536  | -308.319 | 0.373  | -6.9042  | -0.1877 | -110.8615 |
| 2131 | 0   | Extremo | -5.128 | -339.032 | -0.361 | -6.9052  | -0.214  | -434.6067 |
| 2131 | 0.5 | Extremo | -5.128 | -323.694 | -0.361 | -6.9052  | -0.0335 | -268.9251 |
| 2131 | 1   | Extremo | -5.128 | -308.356 | -0.361 | -6.9052  | 0.147   | -110.9124 |
| 2132 | 0   | Extremo | 2.745  | -276.866 | 0.337  | 14.3004  | 0.1504  | -134.2194 |
| 2132 | 0.5 | Extremo | 2.745  | -261.528 | 0.337  | 14.3004  | -0.0182 | 0.3793    |
| 2132 | 1   | Extremo | 2.745  | -246.191 | 0.337  | 14.3004  | -0.1867 | 127.309   |
| 2132 | 0   | Extremo | -5.337 | -276.903 | -0.269 | 14.3009  | -0.1432 | -134.2719 |
| 2132 | 0.5 | Extremo | -5.337 | -261.565 | -0.269 | 14.3009  | -0.0087 | 0.3449    |
| 2132 | 1   | Extremo | -5.337 | -246.227 | -0.269 | 14.3009  | 0.1257  | 127.2928  |
| 2133 | 0   | Extremo | 2.916  | -214.674 | 0.316  | 17.8563  | 0.1307  | 99.6562   |
| 2133 | 0.5 | Extremo | 2.916  | -199.336 | 0.316  | 17.8563  | -0.0274 | 203.1586  |
| 2133 | 1   | Extremo | 2.916  | -183.998 | 0.316  | 17.8563  | -0.1855 | 298.992   |
| 2133 | 0   | Extremo | -5.437 | -214.709 | -0.215 | 17.8571  | -0.1031 | 99.638    |
| 2133 | 0.5 | Extremo | -5.437 | -199.371 | -0.215 | 17.8571  | 0.0041  | 203.1582  |
| 2133 | 1   | Extremo | -5.437 | -184.034 | -0.215 | 17.8571  | 0.1114  | 299.0094  |
| 2134 | 0   | Extremo | 3.072  | -158.562 | 0.304  | 14.5501  | 0.118   | 277.207   |
| 2134 | 0.5 | Extremo | 3.072  | -143.224 | 0.304  | 14.5501  | -0.034  | 352.6535  |

|      |     |         |        |          |        |          |         |           |
|------|-----|---------|--------|----------|--------|----------|---------|-----------|
| 2134 | 1   | Extremo | 3.072  | -127.886 | 0.304  | 14.5501  | -0.1859 | 420.431   |
| 2134 | 0   | Extremo | -5.497 | -158.597 | -0.183 | 14.5509  | -0.08   | 277.2226  |
| 2134 | 0.5 | Extremo | -5.497 | -143.259 | -0.183 | 14.5509  | 0.0114  | 352.6868  |
| 2134 | 1   | Extremo | -5.497 | -127.921 | -0.183 | 14.5509  | 0.1028  | 420.482   |
| 2135 | 0   | Extremo | 3.224  | -105.048 | 0.297  | 9.5851   | 0.1088  | 405.6783  |
| 2135 | 0.5 | Extremo | 3.224  | -89.71   | 0.297  | 9.5851   | -0.0395 | 454.368   |
| 2135 | 1   | Extremo | 3.224  | -74.373  | 0.297  | 9.5851   | -0.1878 | 495.3887  |
| 2135 | 0   | Extremo | -5.543 | -105.084 | -0.165 | 9.5858   | -0.0661 | 405.7276  |
| 2135 | 0.5 | Extremo | -5.543 | -89.746  | -0.165 | 9.5858   | 0.0161  | 454.435   |
| 2135 | 1   | Extremo | -5.543 | -74.408  | -0.165 | 9.5858   | 0.0984  | 495.4734  |
| 2136 | 0   | Extremo | 3.376  | -52.321  | 0.292  | 4.4393   | 0.1017  | 487.1946  |
| 2136 | 0.5 | Extremo | 3.376  | -36.983  | 0.292  | 4.4393   | -0.0445 | 509.5207  |
| 2136 | 1   | Extremo | 3.376  | -21.645  | 0.292  | 4.4393   | -0.1906 | 524.1779  |
| 2136 | 0   | Extremo | -5.587 | -52.356  | -0.155 | 4.44     | -0.0576 | 487.2777  |
| 2136 | 0.5 | Extremo | -5.587 | -37.019  | -0.155 | 4.44     | 0.0197  | 509.6214  |
| 2136 | 1   | Extremo | -5.587 | -21.681  | -0.155 | 4.44     | 0.097   | 524.2962  |
| 2137 | 0   | Extremo | 3.527  | 0.211    | 0.29   | -0.6548  | 0.0958  | 522.1743  |
| 2137 | 0.5 | Extremo | 3.527  | 15.549   | 0.29   | -0.6548  | -0.0493 | 518.2342  |
| 2137 | 1   | Extremo | 3.527  | 30.887   | 0.29   | -0.6548  | -0.1943 | 506.6252  |
| 2137 | 0   | Extremo | -5.63  | 0.176    | -0.151 | -0.6541  | -0.0526 | 522.291   |
| 2137 | 0.5 | Extremo | -5.63  | 15.514   | -0.151 | -0.6541  | 0.0228  | 518.3686  |
| 2137 | 1   | Extremo | -5.63  | 30.852   | -0.151 | -0.6541  | 0.0982  | 506.7772  |
| 2138 | 0   | Extremo | 3.68   | 52.764   | 0.29   | -5.754   | 0.0909  | 510.7074  |
| 2138 | 0.5 | Extremo | 3.68   | 68.102   | 0.29   | -5.754   | -0.054  | 480.4907  |
| 2138 | 1   | Extremo | 3.68   | 83.44    | 0.29   | -5.754   | -0.1989 | 442.6051  |
| 2138 | 0   | Extremo | -5.673 | 52.729   | -0.152 | -5.7532  | -0.0502 | 510.8578  |
| 2138 | 0.5 | Extremo | -5.673 | 68.067   | -0.152 | -5.7532  | 0.0259  | 480.6588  |
| 2138 | 1   | Extremo | -5.673 | 83.405   | -0.152 | -5.7532  | 0.102   | 442.7909  |
| 2139 | 0   | Extremo | 3.832  | 105.571  | 0.291  | -10.9072 | 0.0868  | 452.9086  |
| 2139 | 0.5 | Extremo | 3.832  | 120.909  | 0.291  | -10.9072 | -0.0588 | 396.2887  |
| 2139 | 1   | Extremo | 3.832  | 136.247  | 0.291  | -10.9072 | -0.2045 | 331.9999  |
| 2139 | 0   | Extremo | -5.717 | 105.535  | -0.16  | -10.9061 | -0.0504 | 453.0926  |
| 2139 | 0.5 | Extremo | -5.717 | 120.873  | -0.16  | -10.9061 | 0.0294  | 396.4904  |
| 2139 | 1   | Extremo | -5.717 | 136.211  | -0.16  | -10.9061 | 0.1092  | 332.2193  |
| 2140 | 0   | Extremo | 3.987  | 159.309  | 0.295  | -15.8241 | 0.0838  | 348.9431  |
| 2140 | 0.5 | Extremo | 3.987  | 174.647  | 0.295  | -15.8241 | -0.0639 | 265.454   |
| 2140 | 1   | Extremo | 3.987  | 189.985  | 0.295  | -15.8241 | -0.2116 | 174.2959  |
| 2140 | 0   | Extremo | -5.764 | 159.274  | -0.175 | -15.8227 | -0.0535 | 349.1604  |
| 2140 | 0.5 | Extremo | -5.764 | 174.611  | -0.175 | -15.8227 | 0.034   | 265.6891  |
| 2140 | 1   | Extremo | -5.764 | 189.949  | -0.175 | -15.8227 | 0.1214  | 174.549   |
| 2141 | 0   | Extremo | 4.146  | 216.078  | 0.304  | -18.7629 | 0.0823  | 198.3993  |
| 2141 | 0.5 | Extremo | 4.146  | 231.416  | 0.304  | -18.7629 | -0.0696 | 86.5259   |
| 2141 | 1   | Extremo | 4.146  | 246.754  | 0.304  | -18.7629 | -0.2214 | -33.0164  |
| 2141 | 0   | Extremo | -5.825 | 216.041  | -0.203 | -18.7613 | -0.0607 | 198.6495  |
| 2141 | 0.5 | Extremo | -5.825 | 231.379  | -0.203 | -18.7613 | 0.0409  | 86.7944   |
| 2141 | 1   | Extremo | -5.825 | 246.717  | -0.203 | -18.7613 | 0.1425  | -32.7296  |
| 2142 | 0   | Extremo | 4.32   | 279.911  | 0.319  | -13.6484 | 0.0833  | -3.1627   |
| 2142 | 0.5 | Extremo | 4.32   | 295.249  | 0.319  | -13.6484 | -0.0761 | -146.9529 |
| 2142 | 1   | Extremo | 4.32   | 310.587  | 0.319  | -13.6484 | -0.2355 | -298.412  |
| 2142 | 0   | Extremo | -5.926 | 279.873  | -0.253 | -13.6479 | -0.0737 | -2.8793   |
| 2142 | 0.5 | Extremo | -5.926 | 295.21   | -0.253 | -13.6479 | 0.0531  | -146.65   |
| 2142 | 1   | Extremo | -5.926 | 310.548  | -0.253 | -13.6479 | 0.1798  | -298.0897 |
| 2143 | 0   | Extremo | 4.531  | 343.647  | 0.344  | 12.0776  | 0.0908  | -274.7046 |
| 2143 | 0.5 | Extremo | 4.531  | 358.984  | 0.344  | 12.0776  | -0.081  | -450.3624 |
| 2143 | 1   | Extremo | 4.531  | 374.322  | 0.344  | 12.0776  | -0.2528 | -633.6891 |
| 2143 | 0   | Extremo | -6.137 | 343.605  | -0.339 | 12.0732  | -0.0944 | -274.3843 |
| 2143 | 0.5 | Extremo | -6.137 | 358.943  | -0.339 | 12.0732  | 0.0752  | -450.0214 |
| 2143 | 1   |         |        |          |        |          |         |           |



|      |     |         |        |          |        |          |         |           |
|------|-----|---------|--------|----------|--------|----------|---------|-----------|
| 2146 | 1   | Extremo | 5.879  | -331.652 | 0.574  | -12.6383 | -0.3552 | -297.4221 |
| 2146 | 0   | Extremo | -8.341 | -362.194 | -0.367 | -12.6352 | -0.189  | -644.1376 |
| 2146 | 0.5 | Extremo | -8.341 | -346.856 | -0.367 | -12.6352 | -0.0055 | -466.8753 |
| 2146 | 1   | Extremo | -8.341 | -331.518 | -0.367 | -12.6352 | 0.178   | -297.2819 |
| 2147 | 0   | Extremo | 6.206  | -298.59  | 0.538  | 13.0865  | 0.1788  | -320.2814 |
| 2147 | 0.5 | Extremo | 6.206  | -283.253 | 0.538  | 13.0865  | -0.0901 | -174.8207 |
| 2147 | 1   | Extremo | 6.206  | -267.915 | 0.538  | 13.0865  | -0.359  | -37.0289  |
| 2147 | 0   | Extremo | -8.566 | -298.459 | -0.279 | 13.0848  | -0.121  | -320.1354 |
| 2147 | 0.5 | Extremo | -8.566 | -283.121 | -0.279 | 13.0848  | 0.0187  | -174.7406 |
| 2147 | 1   | Extremo | -8.566 | -267.783 | -0.279 | 13.0848  | 0.1584  | -37.0147  |
| 2148 | 0   | Extremo | 6.493  | -234.753 | 0.517  | 18.1993  | 0.1559  | -66.0331  |
| 2148 | 0.5 | Extremo | 6.493  | -219.415 | 0.517  | 18.1993  | -0.1028 | 47.5089   |
| 2148 | 1   | Extremo | 6.493  | -204.077 | 0.517  | 18.1993  | -0.3615 | 153.382   |
| 2148 | 0   | Extremo | -8.681 | -234.623 | -0.228 | 18.1964  | -0.0825 | -66.0117  |
| 2148 | 0.5 | Extremo | -8.681 | -219.286 | -0.228 | 18.1964  | 0.0316  | 47.4655   |
| 2148 | 1   | Extremo | -8.681 | -203.948 | -0.228 | 18.1964  | 0.1457  | 153.2738  |
| 2149 | 0   | Extremo | 6.766  | -177.978 | 0.505  | 15.2584  | 0.1401  | 130.1301  |
| 2149 | 0.5 | Extremo | 6.766  | -162.64  | 0.505  | 15.2584  | -0.1126 | 215.2846  |
| 2149 | 1   | Extremo | 6.766  | -147.302 | 0.505  | 15.2584  | -0.3654 | 292.7702  |
| 2149 | 0   | Extremo | -8.755 | -177.849 | -0.199 | 15.2557  | -0.0605 | 130.0286  |
| 2149 | 0.5 | Extremo | -8.755 | -162.511 | -0.199 | 15.2557  | 0.039   | 215.1187  |
| 2149 | 1   | Extremo | -8.755 | -147.173 | -0.199 | 15.2557  | 0.1385  | 292.5399  |
| 2150 | 0   | Extremo | 7.034  | -124.229 | 0.498  | 10.3392  | 0.1279  | 276.681   |
| 2150 | 0.5 | Extremo | 7.034  | -108.891 | 0.498  | 10.3392  | -0.1213 | 334.961   |
| 2150 | 1   | Extremo | 7.034  | -93.553  | 0.498  | 10.3392  | -0.3705 | 385.572   |
| 2150 | 0   | Extremo | -8.816 | -124.1   | -0.183 | 10.3367  | -0.0473 | 276.4568  |
| 2150 | 0.5 | Extremo | -8.816 | -108.763 | -0.183 | 10.3367  | 0.044   | 334.6725  |
| 2150 | 1   | Extremo | -8.816 | -93.425  | -0.183 | 10.3367  | 0.1353  | 385.2193  |
| 2151 | 0   | Extremo | 7.302  | -71.406  | 0.494  | 5.1839   | 0.1176  | 376.1257  |
| 2151 | 0.5 | Extremo | 7.302  | -56.068  | 0.494  | 5.1839   | -0.1295 | 407.994   |
| 2151 | 1   | Extremo | 7.302  | -40.73   | 0.494  | 5.1839   | -0.3767 | 432.1933  |
| 2151 | 0   | Extremo | -8.874 | -71.277  | -0.174 | 5.1815   | -0.0393 | 375.7788  |
| 2151 | 0.5 | Extremo | -8.874 | -55.939  | -0.174 | 5.1815   | 0.0478  | 407.5828  |
| 2151 | 1   | Extremo | -8.874 | -40.601  | -0.174 | 5.1815   | 0.135   | 431.7179  |
| 2152 | 0   | Extremo | 7.57   | -18.825  | 0.492  | 0.083    | 0.1087  | 428.9726  |
| 2152 | 0.5 | Extremo | 7.57   | -3.487   | 0.492  | 0.083    | -0.1375 | 434.5507  |
| 2152 | 1   | Extremo | 7.57   | 11.851   | 0.492  | 0.083    | -0.3836 | 432.4598  |
| 2152 | 0   | Extremo | -8.931 | -18.697  | -0.172 | 0.0805   | -0.0346 | 428.503   |
| 2152 | 0.5 | Extremo | -8.931 | -3.359   | -0.172 | 0.0805   | 0.0513  | 434.0168  |
| 2152 | 1   | Extremo | -8.931 | 11.929   | -0.172 | 0.0805   | 0.1371  | 431.8617  |
| 2153 | 0   | Extremo | 7.839  | 33.752   | 0.492  | -5.0109  | 0.1006  | 435.3331  |
| 2153 | 0.5 | Extremo | 7.839  | 49.09    | 0.492  | -5.0109  | -0.1454 | 414.6225  |
| 2153 | 1   | Extremo | 7.839  | 64.428   | 0.492  | -5.0109  | -0.3914 | 386.2429  |
| 2153 | 0   | Extremo | -8.988 | 33.881   | -0.174 | -5.0139  | -0.0324 | 434.741   |
| 2153 | 0.5 | Extremo | -8.988 | 49.219   | -0.174 | -5.0139  | 0.0547  | 413.966   |
| 2153 | 1   | Extremo | -8.988 | 64.557   | -0.174 | -5.0139  | 0.1417  | 385.522   |
| 2154 | 0   | Extremo | 8.108  | 86.564   | 0.494  | -10.1446 | 0.0934  | 395.3266  |
| 2154 | 0.5 | Extremo | 8.108  | 101.902  | 0.494  | -10.1446 | -0.1533 | 348.2101  |
| 2154 | 1   | Extremo | 8.108  | 117.24   | 0.494  | -10.1446 | -0.4001 | 293.4246  |
| 2154 | 0   | Extremo | -9.045 | 86.693   | -0.182 | -10.1485 | -0.0326 | 394.6124  |
| 2154 | 0.5 | Extremo | -9.045 | 102.031  | -0.182 | -10.1485 | 0.0585  | 347.4313  |
| 2154 | 1   | Extremo | -9.045 | 117.369  | -0.182 | -10.1485 | 0.1496  | 292.5813  |
| 2155 | 0   | Extremo | 8.38   | 140.277  | 0.498  | -15.0318 | 0.0872  | 309.1133  |
| 2155 | 0.5 | Extremo | 8.38   | 155.615  | 0.498  | -15.0318 | -0.1615 | 235.1404  |
| 2155 | 1   | Extremo | 8.38   | 170.953  | 0.498  | -15.0318 | -0.4103 | 153.4985  |
| 2155 | 0   | Extremo | -9.106 | 140.407  | -0.198 | -15.037  | -0.0357 | 308.2781  |
| 2155 | 0.5 | Extremo | -9.106 | 155.745  | -0.198 | -15.037  | 0.0634  | 234.24    |
| 2155 | 1   | Extremo | -9.106 | 171.083  | -0.198 | -15.037  | 0.1626  | 152.5331  |
| 2156 | 0   | Extremo | 8.656  | 196.936  | 0.506  | -17.9691 | 0.0825  | 176.2815  |
| 2156 | 0.5 | Extremo | 8.656  | 212.274  | 0.506  | -17.9691 | -0.1702 | 73.979    |
| 2156 | 1   | Extremo | 8.656  | 227.612  | 0.506  | -17.9691 | -0.423  | -35.9225  |
| 2156 | 0   | Extremo | -9.181 | 197.07   | -0.227 | -17.9751 | -0.0428 | 175.3265  |
| 2156 | 0.5 | Extremo | -9.181 | 212.407  | -0.227 | -17.9751 | 0.0708  | 72.9573   |
| 2156 | 1   | Extremo | -9.181 | 227.745  | -0.227 | -17.9751 | 0.1844  | -77.0809  |
| 2157 | 0   | Extremo | 8.947  | 260.469  | 0.52   | -13.0337 | 0.0805  | -7.514    |
| 2157 | 0.5 | Extremo | 8.947  | 275.807  | 0.52   | -13.0337 | -0.1795 | -141.5828 |
| 2157 | 1   | Extremo | 8.947  | 291.144  | 0.52   | -13.0337 | -0.4396 | -283.3205 |
| 2157 | 0   | Extremo | -9.296 | 260.611  | -0.278 | -13.0355 | -0.0555 | -8.5898   |
| 2157 | 0.5 | Extremo | -9.296 | 275.949  | -0.278 | -13.0355 | 0.0835  | -142.7296 |
| 2157 | 1   | Extremo | -9.296 | 291.286  | -0.278 | -13.0355 | 0.2225  | -284.5384 |
| 2158 | 0   | Extremo | 9.275  | 323.897  | 0.544  | 12.0039  | 0.0859  | -260.7632 |
| 2158 | 0.5 | Extremo | 9.275  | 339.235  | 0.544  | 12.0039  | -0.186  | -426.5461 |

|      |     |         |         |          |        |          |         |           |
|------|-----|---------|---------|----------|--------|----------|---------|-----------|
| 2158 | 1   | Extremo | 9.275   | 354.573  | 0.544  | 12.0039  | -0.4578 | -599.998  |
| 2158 | 0   | Extremo | -9.522  | 324.048  | -0.365 | 12.0204  | -0.0757 | -261.9739 |
| 2158 | 0.5 | Extremo | -9.522  | 339.386  | -0.365 | 12.0204  | 0.1067  | -427.8322 |
| 2158 | 1   | Extremo | -9.522  | 354.723  | -0.365 | 12.0204  | 0.2892  | -601.3595 |
| 2159 | 0   | Extremo | 9.7     | 281.909  | 0.585  | 51.0242  | 0.1246  | -617.0581 |
| 2159 | 0.5 | Extremo | 9.7     | 297.247  | 0.585  | 51.0242  | -0.168  | -761.8471 |
| 2159 | 1   | Extremo | 9.7     | 312.585  | 0.585  | 51.0242  | -0.4605 | -914.305  |
| 2159 | 0   | Extremo | -10.028 | 281.986  | -0.487 | 51.0687  | -0.1089 | -618.4427 |
| 2159 | 0.5 | Extremo | -10.028 | 297.324  | -0.487 | 51.0687  | 0.1344  | -763.2703 |
| 2159 | 1   | Extremo | -10.028 | 312.662  | -0.487 | 51.0687  | 0.3777  | -915.7668 |
| 2160 | 0   | Extremo | 10.446  | -317.087 | 0.874  | -50.9517 | 0.3082  | -914.4027 |
| 2160 | 0.5 | Extremo | 10.446  | -301.749 | 0.874  | -50.9517 | -0.1287 | -759.6936 |
| 2160 | 1   | Extremo | 10.446  | -286.411 | 0.874  | -50.9517 | -0.5656 | -612.6535 |
| 2160 | 0   | Extremo | -11.243 | -317.522 | -0.492 | -50.9909 | -0.2483 | -915.8721 |
| 2160 | 0.5 | Extremo | -11.243 | -302.184 | -0.492 | -50.9909 | -0.0024 | -760.9456 |
| 2160 | 1   | Extremo | -11.243 | -286.846 | -0.492 | -50.9909 | 0.2435  | -613.6881 |
| 2161 | 0   | Extremo | 11.017  | -359.075 | 0.83   | -11.931  | 0.231   | -595.7889 |
| 2161 | 0.5 | Extremo | 11.017  | -343.737 | 0.83   | -11.931  | -0.184  | -420.0858 |
| 2161 | 1   | Extremo | 11.017  | -328.4   | 0.83   | -11.931  | -0.5989 | -252.0515 |
| 2161 | 0   | Extremo | -11.752 | -359.584 | -0.37  | -11.9422 | -0.1585 | -596.8156 |
| 2161 | 0.5 | Extremo | -11.752 | -344.246 | -0.37  | -11.9422 | 0.0266  | -420.8583 |
| 2161 | 1   | Extremo | -11.752 | -328.908 | -0.37  | -11.9422 | 0.2116  | -252.5699 |
| 2162 | 0   | Extremo | 11.488  | -295.648 | 0.793  | 13.1075  | 0.1849  | -274.8049 |
| 2162 | 0.5 | Extremo | 11.488  | -280.31  | 0.793  | 13.1075  | -0.2114 | -130.8155 |
| 2162 | 1   | Extremo | 11.488  | -264.972 | 0.793  | 13.1075  | -0.6076 | 5.5049    |
| 2162 | 0   | Extremo | -11.979 | -296.147 | -0.283 | 13.1147  | -0.0913 | -275.3456 |
| 2162 | 0.5 | Extremo | -11.979 | -280.809 | -0.283 | 13.1147  | 0.0502  | -131.1064 |
| 2162 | 1   | Extremo | -11.979 | -265.472 | -0.283 | 13.1147  | 0.1917  | 5.4638    |
| 2163 | 0   | Extremo | 11.92   | -232.116 | 0.771  | 18.0444  | 0.1573  | -23.1706  |
| 2163 | 0.5 | Extremo | 11.92   | -216.778 | 0.771  | 18.0444  | -0.2284 | 89.0531   |
| 2163 | 1   | Extremo | 11.92   | -201.441 | 0.771  | 18.0444  | -0.6142 | 193.6079  |
| 2163 | 0   | Extremo | -12.097 | -232.607 | -0.232 | 18.0559  | -0.053  | -23.2396  |
| 2163 | 0.5 | Extremo | -12.097 | -217.269 | -0.232 | 18.0559  | 0.063   | 89.2296   |
| 2163 | 1   | Extremo | -12.097 | -201.932 | -0.232 | 18.0559  | 0.1791  | 194.0299  |
| 2164 | 0   | Extremo | 12.337  | -175.459 | 0.759  | 15.1096  | 0.1372  | 170.6263  |
| 2164 | 0.5 | Extremo | 12.337  | -160.121 | 0.759  | 15.1096  | -0.2423 | 254.5213  |
| 2164 | 1   | Extremo | 12.337  | -144.783 | 0.759  | 15.1096  | -0.6219 | 330.7474  |
| 2164 | 0   | Extremo | -12.174 | -175.947 | -0.203 | 15.1206  | -0.0311 | 171.0226  |
| 2164 | 0.5 | Extremo | -12.174 | -160.609 | -0.203 | 15.1206  | 0.0705  | 255.1616  |
| 2164 | 1   | Extremo | -12.174 | -145.271 | -0.203 | 15.1206  | 0.172   | 331.6316  |
| 2165 | 0   | Extremo | 12.751  | -121.749 | 0.752  | 10.2266  | 0.1208  | 314.8575  |
| 2165 | 0.5 | Extremo | 12.751  | -106.411 | 0.752  | 10.2266  | -0.255  | 371.8976  |
| 2165 | 1   | Extremo | 12.751  | -91.073  | 0.752  | 10.2266  | -0.6309 | 421.2687  |
| 2165 | 0   | Extremo | -12.238 | -122.236 | -0.187 | 10.2366  | -0.018  | 315.7182  |
| 2165 | 0.5 | Extremo | -12.238 | -106.898 | -0.187 | 10.2366  | 0.0755  | 373.0018  |
| 2165 | 1   | Extremo | -12.238 | -91.56   | -0.187 | 10.2366  | 0.169   | 422.6164  |
| 2166 | 0   | Extremo | 13.163  | -68.941  | 0.747  | 5.1      | 0.1065  | 411.9797  |
| 2166 | 0.5 | Extremo | 13.163  | -53.604  | 0.747  | 5.1      | -0.2672 | 442.616   |
| 2166 | 1   | Extremo | 13.163  | -38.266  | 0.747  | 5.1      | -0.6409 | 465.5833  |
| 2166 | 0   | Extremo | -12.298 | -69.429  | -0.179 | 5.1097   | -0.01   | 413.3049  |
| 2166 | 0.5 | Extremo | -12.298 | -54.091  | -0.179 | 5.1097   | 0.0794  | 444.1847  |
| 2166 | 1   | Extremo | -12.298 | -38.753  | -0.179 | 5.1097   | 0.1688  | 467.3956  |
| 2167 | 0   | Extremo | 13.576  | -16.371  | 0.745  | 0.0187   | 0.0934  | 462.4974  |
| 2167 | 0.5 | Extremo | 13.576  | -1.033   | 0.745  | 0.0187   | -0.2791 | 466.8482  |
| 2167 | 1   | Extremo | 13.576  | 14.305   | 0.745  | 0.0187   | -0.6517 | 463.5301  |
| 2167 | 0   | Extremo | -12.358 | -16.858  | -0.176 | 0.0289   | -0.0053 | 464.2871  |
| 2167 |     |         |         |          |        |          |         |           |



|      |     |         |         |          |        |          |         |           |
|------|-----|---------|---------|----------|--------|----------|---------|-----------|
| 2170 | 1   | Extremo | 14.821  | 173.381  | 0.749  | -15.0471 | -0.6897 | 177.5723  |
| 2170 | 0   | Extremo | -12.541 | 142.211  | -0.204 | -15.0275 | -0.0065 | 338.7899  |
| 2170 | 0.5 | Extremo | -12.541 | 157.549  | -0.204 | -15.0275 | 0.0953  | 263.8498  |
| 2170 | 1   | Extremo | -12.541 | 172.887  | -0.204 | -15.0275 | 0.1972  | 181.2407  |
| 2171 | 0   | Extremo | 15.242  | 199.33   | 0.757  | -17.9725 | 0.051   | 200.4183  |
| 2171 | 0.5 | Extremo | 15.242  | 214.668  | 0.757  | -17.9725 | -0.3275 | 96.9187   |
| 2171 | 1   | Extremo | 15.242  | 230.006  | 0.757  | -17.9725 | -0.706  | -14.2498  |
| 2171 | 0   | Extremo | -12.618 | 198.824  | -0.233 | -17.9509 | -0.0136 | 204.0477  |
| 2171 | 0.5 | Extremo | -12.618 | 214.162  | -0.233 | -17.9509 | 0.1028  | 100.8012  |
| 2171 | 1   | Extremo | -12.618 | 229.5    | -0.233 | -17.9509 | 0.2193  | -10.1142  |
| 2172 | 0   | Extremo | 15.678  | 262.775  | 0.771  | -13.0731 | 0.0451  | 14.2646   |
| 2172 | 0.5 | Extremo | 15.678  | 278.113  | 0.771  | -13.0731 | -0.3404 | -120.9573 |
| 2172 | 1   | Extremo | 15.678  | 293.451  | 0.771  | -13.0731 | -0.726  | -263.8481 |
| 2172 | 0   | Extremo | -12.736 | 262.236  | -0.284 | -13.0686 | -0.0263 | 18.3533   |
| 2172 | 0.5 | Extremo | -12.736 | 277.573  | -0.284 | -13.0686 | 0.1158  | -116.5989 |
| 2172 | 1   | Extremo | -12.736 | 292.911  | -0.284 | -13.0686 | 0.2578  | -259.2201 |
| 2173 | 0   | Extremo | 16.151  | 326.114  | 0.793  | 11.7867  | 0.0473  | -241.2061 |
| 2173 | 0.5 | Extremo | 16.151  | 341.451  | 0.793  | 11.7867  | -0.3494 | -408.0973 |
| 2173 | 1   | Extremo | 16.151  | 356.789  | 0.793  | 11.7867  | -0.7461 | -582.6574 |
| 2173 | 0   | Extremo | -12.964 | 325.54   | -0.372 | 11.7192  | -0.046  | -236.6028 |
| 2173 | 0.5 | Extremo | -12.964 | 340.878  | -0.372 | 11.7192  | 0.1399  | -403.2075 |
| 2173 | 1   | Extremo | -12.964 | 356.216  | -0.372 | 11.7192  | 0.3258  | -577.481  |
| 2174 | 0   | Extremo | 16.722  | 284.868  | 0.834  | 50.5338  | 0.0877  | -599.3348 |
| 2174 | 0.5 | Extremo | 16.722  | 300.206  | 0.834  | 50.5338  | -0.3296 | -745.6035 |
| 2174 | 1   | Extremo | 16.722  | 315.544  | 0.834  | 50.5338  | -0.7468 | -899.5411 |
| 2174 | 0   | Extremo | -13.474 | 284.577  | -0.494 | 50.357   | -0.0762 | -594.0655 |
| 2174 | 0.5 | Extremo | -13.474 | 299.915  | -0.494 | 50.357   | 0.1708  | -740.1884 |
| 2174 | 1   | Extremo | -13.474 | 315.253  | -0.494 | 50.357   | 0.4177  | -893.9802 |
| 2175 | 0   | Extremo | 17.626  | -308.959 | 1.171  | -50.5884 | 0.2913  | -899.421  |
| 2175 | 0.5 | Extremo | 17.626  | -293.621 | 1.171  | -50.5884 | -0.2945 | -748.7761 |
| 2175 | 1   | Extremo | 17.626  | -278.283 | 1.171  | -50.5884 | -0.8802 | -605.8001 |
| 2175 | 0   | Extremo | -14.687 | -307.294 | -0.473 | -50.4482 | -0.2029 | -893.8239 |
| 2175 | 0.5 | Extremo | -14.687 | -291.956 | -0.473 | -50.4482 | 0.0338  | -744.0114 |
| 2175 | 1   | Extremo | -14.687 | -276.618 | -0.473 | -50.4482 | 0.2704  | -601.8679 |
| 2176 | 0   | Extremo | 18.366  | -350.203 | 1.127  | -11.8421 | 0.2033  | -588.8823 |
| 2176 | 0.5 | Extremo | 18.366  | -334.866 | 1.127  | -11.8421 | -0.3601 | -417.6151 |
| 2176 | 1   | Extremo | 18.366  | -319.528 | 1.127  | -11.8421 | -0.9236 | -254.0168 |
| 2176 | 0   | Extremo | -15.186 | -348.257 | -0.352 | -11.8112 | -0.1166 | -584.9706 |
| 2176 | 0.5 | Extremo | -15.186 | -332.919 | -0.352 | -11.8112 | 0.0594  | -414.6766 |
| 2176 | 1   | Extremo | -15.186 | -317.581 | -0.352 | -11.8112 | 0.2353  | -252.0516 |
| 2177 | 0   | Extremo | 19.007  | -286.864 | 1.088  | 13.0163  | 0.1503  | -276.4176 |
| 2177 | 0.5 | Extremo | 19.007  | -271.526 | 1.088  | 13.0163  | -0.3936 | -136.8201 |
| 2177 | 1   | Extremo | 19.007  | -256.188 | 1.088  | 13.0163  | -0.9375 | -4.8915   |
| 2177 | 0   | Extremo | -15.404 | -284.951 | -0.266 | 12.975   | -0.0508 | -274.355  |
| 2177 | 0.5 | Extremo | -15.404 | -269.613 | -0.266 | 12.975   | 0.082   | -135.714  |
| 2177 | 1   | Extremo | -15.404 | -254.275 | -0.266 | 12.975   | 0.2148  | -4.742    |
| 2178 | 0   | Extremo | 19.607  | -223.418 | 1.066  | 17.9131  | 0.1173  | -33.1632  |
| 2178 | 0.5 | Extremo | 19.607  | -208.08  | 1.066  | 17.9131  | -0.4156 | 74.7112   |
| 2178 | 1   | Extremo | 19.607  | -192.742 | 1.066  | 17.9131  | -0.9484 | 174.9166  |
| 2178 | 0   | Extremo | -15.512 | -221.538 | -0.215 | 17.8543  | -0.0133 | -32.894   |
| 2178 | 0.5 | Extremo | -15.512 | -206.2   | -0.215 | 17.8543  | 0.0944  | 74.0404   |
| 2178 | 1   | Extremo | -15.512 | -190.862 | -0.215 | 17.8543  | 0.2021  | 173.3058  |
| 2179 | 0   | Extremo | 20.193  | -166.79  | 1.052  | 14.9834  | 0.092   | 152.3159  |
| 2179 | 0.5 | Extremo | 20.193  | -151.452 | 1.052  | 14.9834  | -0.4341 | 231.8764  |
| 2179 | 1   | Extremo | 20.193  | -136.114 | 1.052  | 14.9834  | -0.9603 | 303.7679  |
| 2179 | 0   | Extremo | -15.579 | -164.922 | -0.187 | 14.9259  | 0.008   | 150.8173  |
| 2179 | 0.5 | Extremo | -15.579 | -149.584 | -0.187 | 14.9259  | 0.1016  | 229.4437  |
| 2179 | 1   | Extremo | -15.579 | -134.246 | -0.187 | 14.9259  | 0.1951  | 300.4012  |
| 2180 | 0   | Extremo | 20.774  | -113.086 | 1.044  | 10.1068  | 0.0705  | 288.2385  |
| 2180 | 0.5 | Extremo | 20.774  | -97.748  | 1.044  | 10.1068  | -0.4514 | 340.9469  |
| 2180 | 1   | Extremo | 20.774  | -82.41   | 1.044  | 10.1068  | -0.9734 | 385.9863  |
| 2180 | 0   | Extremo | -15.633 | -111.221 | -0.172 | 10.0529  | 0.0205  | 284.9762  |
| 2180 | 0.5 | Extremo | -15.633 | -95.883  | -0.172 | 10.0529  | 0.1063  | 336.7519  |
| 2180 | 1   | Extremo | -15.633 | -80.545  | -0.172 | 10.0529  | 0.1922  | 380.8588  |
| 2181 | 0   | Extremo | 21.355  | -60.275  | 1.038  | 4.9757   | 0.0509  | 377.0517  |
| 2181 | 0.5 | Extremo | 21.355  | -44.938  | 1.038  | 4.9757   | -0.4682 | 403.3549  |
| 2181 | 1   | Extremo | 21.355  | -29.6    | 1.038  | 4.9757   | -0.9873 | 421.9892  |
| 2181 | 0   | Extremo | -15.684 | -58.41   | -0.164 | 4.9235   | 0.0278  | 372.0247  |
| 2181 | 0.5 | Extremo | -15.684 | -43.072  | -0.164 | 4.9235   | 0.11    | 397.3953  |
| 2181 | 1   | Extremo | -15.684 | -27.734  | -0.164 | 4.9235   | 0.1922  | 415.0969  |
| 2182 | 0   | Extremo | 21.936  | -7.697   | 1.034  | -0.1263  | 0.0326  | 419.2655  |
| 2182 | 0.5 | Extremo | 21.936  | 7.641    | 1.034  | -0.1263  | -0.4846 | 419.2795  |

|      |     |         |         |          |        |          |         |           |
|------|-----|---------|---------|----------|--------|----------|---------|-----------|
| 2182 | 1   | Extremo | 21.936  | 22.979   | 1.034  | -0.1263  | -1.0018 | 411.6246  |
| 2182 | 0   | Extremo | -15.734 | -5.83    | -0.163 | -0.1793  | 0.0317  | 412.4731  |
| 2182 | 0.5 | Extremo | -15.734 | 9.508    | -0.163 | -0.1793  | 0.1133  | 411.5536  |
| 2182 | 1   | Extremo | -15.734 | 24.846   | -0.163 | -0.1793  | 0.1949  | 402.9652  |
| 2183 | 0   | Extremo | 22.517  | 44.886   | 1.032  | -5.2496  | 0.015   | 415.0061  |
| 2183 | 0.5 | Extremo | 22.517  | 60.224   | 1.032  | -5.2496  | -0.501  | 388.7285  |
| 2183 | 1   | Extremo | 22.517  | 75.562   | 1.032  | -5.2496  | -1.0169 | 354.7821  |
| 2183 | 0   | Extremo | -15.785 | 46.757   | -0.167 | -5.3062  | 0.033   | 406.4487  |
| 2183 | 0.5 | Extremo | -15.785 | 62.095   | -0.167 | -5.3062  | 0.1166  | 379.2359  |
| 2183 | 1   | Extremo | -15.785 | 77.432   | -0.167 | -5.3062  | 0.2002  | 344.3541  |
| 2184 | 0   | Extremo | 23.099  | 97.716   | 1.031  | -10.4484 | -0.0019 | 364.4165  |
| 2184 | 0.5 | Extremo | 23.099  | 113.054  | 1.031  | -10.4484 | -0.5173 | 311.7239  |
| 2184 | 1   | Extremo | 23.099  | 128.392  | 1.031  | -10.4484 | -1.0327 | 251.3624  |
| 2184 | 0   | Extremo | -15.836 | 99.594   | -0.177 | -10.5119 | 0.0317  | 354.0967  |
| 2184 | 0.5 | Extremo | -15.836 | 114.932  | -0.177 | -10.5119 | 0.1204  | 300.4652  |
| 2184 | 1   | Extremo | -15.836 | 130.27   | -0.177 | -10.5119 | 0.2091  | 239.1649  |
| 2185 | 0   | Extremo | 23.682  | 151.488  | 1.032  | -15.4376 | -0.018  | 267.6961  |
| 2185 | 0.5 | Extremo | 23.682  | 166.826  | 1.032  | -15.4376 | -0.5338 | 188.1175  |
| 2185 | 1   | Extremo | 23.682  | 182.164  | 1.032  | -15.4376 | -1.0495 | 100.87    |
| 2185 | 0   | Extremo | -15.892 | 153.384  | -0.196 | -15.5084 | 0.0273  | 255.6199  |
| 2185 | 0.5 | Extremo | -15.892 | 168.722  | -0.196 | -15.5084 | 0.1253  | 175.0933  |
| 2185 | 1   | Extremo | -15.892 | 184.06   | -0.196 | -15.5084 | 0.2234  | 86.8978   |
| 2186 | 0   | Extremo | 24.27   | 208.349  | 1.035  | -18.4549 | -0.033  | 124.468   |
| 2186 | 0.5 | Extremo | 24.27   | 223.687  | 1.035  | -18.4549 | -0.5506 | 16.4591   |
| 2186 | 1   | Extremo | 24.27   | 239.025  | 1.035  | -18.4549 | -1.0683 | -99.2188  |
| 2186 | 0   | Extremo | -15.961 | 210.298  | -0.228 | -18.5145 | 0.0186  | 110.6395  |
| 2186 | 0.5 | Extremo | -15.961 | 225.636  | -0.228 | -18.5145 | 0.1328  | 1.656     |
| 2186 | 1   | Extremo | -15.961 | 240.974  | -0.228 | -18.5145 | 0.247   | -114.9265 |
| 2187 | 0   | Extremo | 24.871  | 272.43   | 1.045  | -13.3117 | -0.0454 | -69.7424  |
| 2187 | 0.5 | Extremo | 24.871  | 287.768  | 1.045  | -13.3117 | -0.5676 | -209.7919 |
| 2187 | 1   | Extremo | 24.871  | 303.106  | 1.045  | -13.3117 | -1.0899 | -357.5105 |
| 2187 | 0   | Extremo | -16.072 | 274.515  | -0.283 | -13.2732 | 0.0042  | -85.3656  |
| 2187 | 0.5 | Extremo | -16.072 | 289.853  | -0.283 | -13.2732 | 0.1459  | -226.4575 |
| 2187 | 1   | Extremo | -16.072 | 305.191  | -0.283 | -13.2732 | 0.2877  | -375.2184 |
| 2188 | 0   | Extremo | 25.508  | 336.423  | 1.06   | 12.8172  | -0.0496 | -334.239  |
| 2188 | 0.5 | Extremo | 25.508  | 351.761  | 1.06   | 12.8172  | -0.5798 | -506.2852 |
| 2188 | 1   | Extremo | 25.508  | 367.099  | 1.06   | 12.8172  | -1.11   | -686.0002 |
| 2188 | 0   | Extremo | -16.295 | 338.644  | -0.376 | 13.1855  | -0.0172 | -351.9127 |
| 2188 | 0.5 | Extremo | -16.295 | 353.982  | -0.376 | 13.1855  | 0.171   | -525.0691 |
| 2188 | 1   | Extremo | -16.295 | 369.32   | -0.376 | 13.1855  | 0.3592  | -705.8944 |
| 2189 | 0   | Extremo | 26.242  | 289.717  | 1.094  | 53.5211  | -0.0129 | -704.197  |
| 2189 | 0.5 | Extremo | 26.242  | 305.055  | 1.094  | 53.5211  | -0.56   | -852.89   |
| 2189 | 1   | Extremo | 26.242  | 320.393  | 1.094  | 53.5211  | -1.1071 | -1009.252 |
| 2189 | 0   | Extremo | -16.801 | 290.819  | -0.504 | 54.3786  | -0.0466 | -724.5706 |
| 2189 | 0.5 | Extremo | -16.801 | 306.157  | -0.504 | 54.3786  | 0.2057  | -873.8148 |
| 2189 | 1   | Extremo | -16.801 | 321.495  | -0.504 | 54.3786  | 0.4579  | -1030.728 |
| 2190 | 0   | Extremo | 27.317  | -342.123 | 1.455  | -53.943  | 0.1989  | -1009.382 |
| 2190 | 0.5 | Extremo | 27.317  | -326.785 | 1.455  | -53.943  | -0.5288 | -842.1546 |
| 2190 | 1   | Extremo | 27.317  | -311.447 | 1.455  | -53.943  | -1.2565 | -682.5967 |
| 2190 | 0   | Extremo | -18.005 | -348.777 | -0.461 | -54.2804 | -0.1621 | -1031.17  |
| 2190 | 0.5 | Extremo | -18.005 | -333.439 | -0.461 | -54.2804 | 0.0685  | -860.6159 |
| 2190 | 1   | Extremo | -18.005 | -318.102 | -0.461 | -54.2804 | 0.2991  | -697.7306 |
| 2191 | 0   | Extremo | 28.233  | -388.828 | 1.398  | -13.2393 | 0.0965  | -664.6587 |
| 2191 | 0.5 | Extremo | 28.233  | -373.49  | 1.398  | -13.2393 | -0.6027 | -474.0791 |
| 2191 | 1   | Extremo | 28.233  | -358.152 | 1.398  | -13.2393 | -1.301  |           |



|      |     |         |         |          |        |          |           |           |
|------|-----|---------|---------|----------|--------|----------|-----------|-----------|
| 2194 | 1   | Extremo | 30.564  | -173.208 | 1.262  | 15.019   | -1.3196   | 375.1639  |
| 2194 | 0   | Extremo | -18.853 | -211.329 | -0.23  | 15.5823  | 0.0178    | 192.0625  |
| 2194 | 0.5 | Extremo | -18.853 | -195.991 | -0.23  | 15.5823  | 0.1329    | 293.8924  |
| 2194 | 1   | Extremo | -18.853 | -180.653 | -0.23  | 15.5823  | 0.2479    | 388.0533  |
| 2195 | 0   | Extremo | 31.302  | -150.103 | 1.221  | 10.0386  | -0.0978   | 358.5691  |
| 2195 | 0.5 | Extremo | 31.302  | -134.765 | 1.221  | 10.0386  | -0.7085   | 429.7861  |
| 2195 | 1   | Extremo | 31.302  | -119.427 | 1.221  | 10.0386  | -1.3191   | 493.3341  |
| 2195 | 0   | Extremo | -18.906 | -157.528 | -0.239 | 10.5703  | 0.0193    | 370.7396  |
| 2195 | 0.5 | Extremo | -18.906 | -142.19  | -0.239 | 10.5703  | 0.1386    | 445.669   |
| 2195 | 1   | Extremo | -18.906 | -126.852 | -0.239 | 10.5703  | 0.2579    | 512.9294  |
| 2196 | 0   | Extremo | 32.032  | -97.257  | 1.174  | 4.8622   | -0.1398   | 483.4296  |
| 2196 | 0.5 | Extremo | 32.032  | -81.919  | 1.174  | 4.8622   | -0.727    | 528.2236  |
| 2196 | 1   | Extremo | 32.032  | -66.581  | 1.174  | 4.8622   | -1.3142   | 565.3487  |
| 2196 | 0   | Extremo | -18.962 | -104.673 | -0.262 | 5.3447   | 0.0129    | 502.3426  |
| 2196 | 0.5 | Extremo | -18.962 | -89.335  | -0.262 | 5.3447   | 0.1438    | 550.8445  |
| 2196 | 1   | Extremo | -18.962 | -73.997  | -0.262 | 5.3447   | 0.2747    | 591.6774  |
| 2197 | 0   | Extremo | 32.753  | -44.646  | 1.118  | -0.2098  | -0.1854   | 561.6728  |
| 2197 | 0.5 | Extremo | 32.753  | -29.308  | 1.118  | -0.2098  | -0.7443   | 580.1613  |
| 2197 | 1   | Extremo | 32.753  | -13.97   | 1.118  | -0.2098  | -1.3032   | 590.9808  |
| 2197 | 0   | Extremo | -19.024 | -52.056  | -0.299 | 0.1957   | -0.000318 | 587.3661  |
| 2197 | 0.5 | Extremo | -19.024 | -36.719  | -0.299 | 0.1957   | 0.1492    | 609.5598  |
| 2197 | 1   | Extremo | -19.024 | -21.381  | -0.299 | 0.1957   | 0.2986    | 624.0846  |
| 2198 | 0   | Extremo | 33.46   | 7.979    | 1.048  | -5.2042  | -0.2363   | 593.3495  |
| 2198 | 0.5 | Extremo | 33.46   | 23.317   | 1.048  | -5.2042  | -0.7601   | 585.5255  |
| 2198 | 1   | Extremo | 33.46   | 38.655   | 1.048  | -5.2042  | -1.284    | 570.0326  |
| 2198 | 0   | Extremo | -19.095 | 0.571    | -0.352 | -4.926   | -0.0206   | 625.8911  |
| 2198 | 0.5 | Extremo | -19.095 | 15.908   | -0.352 | -4.926   | 0.1553    | 621.7713  |
| 2198 | 1   | Extremo | -19.095 | 31.246   | -0.352 | -4.926   | 0.3311    | 609.9826  |
| 2199 | 0   | Extremo | 34.15   | 60.846   | 0.959  | -10.1362 | -0.2946   | 578.4707  |
| 2199 | 0.5 | Extremo | 34.15   | 76.184   | 0.959  | -10.1362 | -0.7743   | 544.2132  |
| 2199 | 1   | Extremo | 34.15   | 91.522   | 0.959  | -10.1362 | -1.254    | 502.2867  |
| 2199 | 0   | Extremo | -19.176 | 53.436   | -0.423 | -10.0732 | -0.049    | 617.9811  |
| 2199 | 0.5 | Extremo | -19.176 | 68.773   | -0.423 | -10.0732 | 0.1626    | 587.4288  |
| 2199 | 1   | Extremo | -19.176 | 84.111   | -0.423 | -10.0732 | 0.3743    | 549.2076  |
| 2200 | 0   | Extremo | 34.815  | 114.522  | 0.848  | -14.7338 | -0.3624   | 517.0126  |
| 2200 | 0.5 | Extremo | 34.815  | 129.86   | 0.848  | -14.7338 | -0.7863   | 455.9173  |
| 2200 | 1   | Extremo | 34.815  | 145.198  | 0.848  | -14.7338 | -1.2102   | 387.153   |
| 2200 | 0   | Extremo | -19.27  | 107.101  | -0.519 | -15.0357 | -0.0876   | 563.7015  |
| 2200 | 0.5 | Extremo | -19.27  | 122.439  | -0.519 | -15.0357 | 0.1721    | 506.3164  |
| 2200 | 1   | Extremo | -19.27  | 137.777  | -0.519 | -15.0357 | 0.4318    | 441.2624  |
| 2201 | 0   | Extremo | 35.448  | 170.59   | 0.706  | -17.6086 | -0.4427   | 408.3879  |
| 2201 | 0.5 | Extremo | 35.448  | 185.928  | 0.706  | -17.6086 | -0.7957   | 319.2585  |
| 2201 | 1   | Extremo | 35.448  | 201.266  | 0.706  | -17.6086 | -1.1487   | 222.4601  |
| 2201 | 0   | Extremo | -19.387 | 163.152  | -0.649 | -18.5284 | -0.1395   | 462.6198  |
| 2201 | 0.5 | Extremo | -19.387 | 178.49   | -0.649 | -18.5284 | 0.185     | 377.2094  |
| 2201 | 1   | Extremo | -19.387 | 193.828  | -0.649 | -18.5284 | 0.5095    | 284.13    |
| 2202 | 0   | Extremo | 36.038  | 231.601  | 0.525  | -14.2485 | -0.5388   | 248.8272  |
| 2202 | 0.5 | Extremo | 36.038  | 246.939  | 0.525  | -14.2485 | -0.8013   | 129.192   |
| 2202 | 1   | Extremo | 36.038  | 262.277  | 0.525  | -14.2485 | -1.0638   | 1.8879    |
| 2202 | 0   | Extremo | -19.547 | 224.231  | -0.826 | -16.194  | -0.2092   | 311.2407  |
| 2202 | 0.5 | Extremo | -19.547 | 239.569  | -0.826 | -16.194  | 0.204     | 195.2908  |
| 2202 | 1   | Extremo | -19.547 | 254.907  | -0.826 | -16.194  | 0.6173    | 71.672    |
| 2203 | 0   | Extremo | 36.568  | 289.286  | 0.29   | 3.7152   | -0.653    | 24.2929   |
| 2203 | 0.5 | Extremo | 36.568  | 304.624  | 0.29   | 3.7152   | -0.7978   | -124.1847 |
| 2203 | 1   | Extremo | 36.568  | 319.962  | 0.29   | 3.7152   | -0.9427   | -280.3311 |
| 2203 | 0   | Extremo | -19.803 | 282.833  | -1.075 | 0.2622   | -0.3012   | 95.9142   |
| 2203 | 0.5 | Extremo | -19.803 | 298.171  | -1.075 | 0.2622   | 0.2364    | -49.3366  |
| 2203 | 1   | Extremo | -19.803 | 313.508  | -1.075 | 0.2622   | 0.7741    | -202.2564 |
| 2204 | 0   | Extremo | 37.02   | 254.259  | -0.011 | 27.2467  | -0.7686   | -283.5515 |
| 2204 | 0.5 | Extremo | 37.02   | 269.597  | -0.011 | 27.2467  | -0.7631   | -414.5157 |
| 2204 | 1   | Extremo | 37.02   | 284.935  | -0.011 | 27.2467  | -0.7576   | -553.1489 |
| 2204 | 0   | Extremo | -20.285 | 253.132  | -1.41  | 22.6059  | -0.4145   | -202.4076 |
| 2204 | 0.5 | Extremo | -20.285 | 268.47   | -1.41  | 22.6059  | 0.2906    | -332.808  |
| 2204 | 1   | Extremo | -20.285 | 283.808  | -1.41  | 22.6059  | 0.9957    | -470.8774 |
| 2205 | 0   | Extremo | 37.437  | -198.203 | -0.046 | -59.7347 | -0.8009   | -502.7936 |
| 2205 | 0.5 | Extremo | 37.437  | -182.865 | -0.046 | -59.7347 | -0.7779   | -407.5264 |
| 2205 | 1   | Extremo | 37.437  | -167.527 | -0.046 | -59.7347 | -0.7549   | -319.9282 |
| 2205 | 0   | Extremo | -21.285 | -184.362 | -1.615 | -63.1945 | -0.5752   | -422.8544 |
| 2205 | 0.5 | Extremo | -21.285 | -169.024 | -1.615 | -63.1945 | 0.2322    | -334.5077 |
| 2205 | 1   | Extremo | -21.285 | -153.687 | -1.615 | -63.1945 | 1.0396    | -253.8299 |
| 2206 | 0   | Extremo | 37.888  | -220.164 | -0.496 | -3.019   | -1.0449   | -308.3903 |
| 2206 | 0.5 | Extremo | 37.888  | -204.826 | -0.496 | -3.019   | -0.797    | -202.143  |

|      |     |         |         |          |         |          |         |           |
|------|-----|---------|---------|----------|---------|----------|---------|-----------|
| 2206 | 1   | Extremo | 37.888  | -189.488 | -0.496  | -3.019   | -0.5492 | -103.5646 |
| 2206 | 0   | Extremo | -21.974 | -206.321 | -1.955  | -10.1638 | -0.7229 | -235.8655 |
| 2206 | 0.5 | Extremo | -21.974 | -190.983 | -1.955  | -10.1638 | 0.2547  | -136.5396 |
| 2206 | 1   | Extremo | -21.974 | -175.645 | -1.955  | -10.1638 | 1.2323  | -44.8826  |
| 2207 | 0   | Extremo | 38.241  | -160.901 | -1.047  | 21.0936  | -1.302  | -138.4578 |
| 2207 | 0.5 | Extremo | 38.241  | -145.563 | -1.047  | 21.0936  | -0.7784 | -61.8419  |
| 2207 | 1   | Extremo | 38.241  | -130.225 | -1.047  | 21.0936  | -0.2548 | 7.105     |
| 2207 | 0   | Extremo | -22.524 | -148.061 | -2.417  | 12.0789  | -0.9042 | -69.7419  |
| 2207 | 0.5 | Extremo | -22.524 | -132.723 | -2.417  | 12.0789  | 0.3044  | 0.4542    |
| 2207 | 1   | Extremo | -22.524 | -117.385 | -2.417  | 12.0789  | 1.513   | 62.9814   |
| 2208 | 0   | Extremo | 38.463  | -104.9   | -1.748  | 24.8598  | -1.6187 | -32.7152  |
| 2208 | 0.5 | Extremo | 38.463  | -89.562  | -1.748  | 24.8598  | -0.7445 | 15.9004   |
| 2208 | 1   | Extremo | 38.463  | -74.224  | -1.748  | 24.8598  | 0.1297  | 56.8471   |
| 2208 | 0   | Extremo | -23.098 | -92.38   | -3.04   | 15.1103  | -1.1624 | 34.3677   |
| 2208 | 0.5 | Extremo | -23.098 | -77.042  | -3.04   | 15.1103  | 0.3577  | 76.7233   |
| 2208 | 1   | Extremo | -23.098 | -61.704  | -3.04   | 15.1103  | 1.8779  | 111.4099  |
| 2209 | 0   | Extremo | 38.499  | -55.426  | -2.661  | 21.823   | -2.0261 | 24.7032   |
| 2209 | 0.5 | Extremo | 38.499  | -40.088  | -2.661  | 21.823   | -0.6956 | 48.5818   |
| 2209 | 1   | Extremo | 38.499  | -24.75   | -2.661  | 21.823   | 0.6349  | 64.7914   |
| 2209 | 0   | Extremo | -23.763 | -42.47   | -3.86   | 11.9783  | -1.5101 | 90.7833   |
| 2209 | 0.5 | Extremo | -23.763 | -27.132  | -3.86   | 11.9783  | 0.4196  | 108.1837  |
| 2209 | 1   | Extremo | -23.763 | -11.794  | -3.86   | 11.9783  | 2.3494  | 117.9151  |
| 2210 | 0   | Extremo | 38.249  | -8.703   | -3.858  | 16.7072  | -2.5496 | 42.2728   |
| 2210 | 0.5 | Extremo | 38.249  | 6.634    | -3.858  | 16.7072  | -0.6204 | 42.79     |
| 2210 | 1   | Extremo | 38.249  | 21.972   | -3.858  | 16.7072  | 1.3088  | 35.6384   |
| 2210 | 0   | Extremo | -24.535 | 5.871    | -4.933  | 7.453    | -1.9544 | 106.3336  |
| 2210 | 0.5 | Extremo | -24.535 | 21.209   | -4.933  | 7.453    | 0.5123  | 99.5636   |
| 2210 | 1   | Extremo | -24.535 | 36.547   | -4.933  | 7.453    | 2.9789  | 85.1246   |
| 2211 | 0   | Extremo | 37.506  | 36.338   | -5.256  | 7.8387   | -3.1952 | 23.0939   |
| 2211 | 0.5 | Extremo | 37.506  | 51.676   | -5.256  | 7.8387   | -0.5673 | 1.0904    |
| 2211 | 1   | Extremo | 37.506  | 67.014   | -5.256  | 7.8387   | 2.0605  | -28.5821  |
| 2211 | 0   | Extremo | -25.357 | 50.483   | -6.206  | -1.0982  | -2.4277 | 79.3002   |
| 2211 | 0.5 | Extremo | -25.357 | 65.821   | -6.206  | -1.0982  | 0.6755  | 50.2241   |
| 2211 | 1   | Extremo | -25.357 | 81.159   | -6.206  | -1.0982  | 3.7786  | 13.4791   |
| 2212 | 0   | Extremo | 36.381  | 67.607   | -7.113  | 10.271   | -4.0241 | -31.578   |
| 2212 | 0.5 | Extremo | 36.381  | 82.945   | -7.113  | 10.271   | -0.4675 | -69.216   |
| 2212 | 1   | Extremo | 36.381  | 98.283   | -7.113  | 10.271   | 3.0891  | -114.523  |
| 2212 | 0   | Extremo | -26.98  | 80.42    | -8.076  | 1.0259   | -3.282  | 22.4733   |
| 2212 | 0.5 | Extremo | -26.98  | 95.758   | -8.076  | 1.0259   | 0.7563  | -21.5713  |
| 2212 | 1   | Extremo | -26.98  | 111.096  | -8.076  | 1.0259   | 4.7945  | -73.2849  |
| 2213 | 0   | Extremo | 34.968  | 100.995  | -9.431  | 10.2623  | -5.0117 | -111.2833 |
| 2213 | 0.5 | Extremo | 34.968  | 116.333  | -9.431  | 10.2623  | -0.296  | -165.6154 |
| 2213 | 1   | Extremo | 34.968  | 131.671  | -9.431  | 10.2623  | 4.4197  | -227.6165 |
| 2213 | 0   | Extremo | -29.021 | 113.492  | -10.373 | 1.0629   | -4.2679 | -57.651   |
| 2213 | 0.5 | Extremo | -29.021 | 128.83   | -10.373 | 1.0629   | 0.9187  | -118.2313 |
| 2213 | 1   | Extremo | -29.021 | 144.167  | -10.373 | 1.0629   | 6.1054  | -186.4805 |
| 2214 | 0   | Extremo | 33.06   | 131.126  | -12.434 | 8.25     | -6.2918 | -217.9086 |
| 2214 | 0.5 | Extremo | 33.06   | 146.464  | -12.434 | 8.25     | -0.0748 | -287.3062 |
| 2214 | 1   | Extremo | 33.06   | 161.802  | -12.434 | 8.25     | 6.1423  | -364.3729 |
| 2214 | 0   | Extremo | -31.546 | 144.033  | -13.294 | -0.6829  | -5.5114 | -164.55   |
| 2214 | 0.5 | Extremo | -31.546 | 159.371  | -13.294 | -0.6829  | 1.1354  | -240.4009 |
| 2214 | 1   | Extremo | -31.546 | 174.709  | -13.294 | -0.6829  | 7.7822  | -323.9207 |
| 2215 | 0   | Extremo | 30.423  | 147.715  | -16.378 | 0.0802   | -7.9326 | -340.603  |
| 2215 | 0.5 | Extremo | 30.423  | 163.053  | -16.378 | 0.0802   | 0.2566  | -418.2951 |
| 2215 | 1   | Extremo | 30.423  | 178.391  | -16.378 | 0.0802   | 8.4458  | -503.6561 |
| 2215 | 0   | Extremo | -34.62  | 162.123  | -17.087 | -8.1583  | -7.0729 | -288.     |



|      |     |         |           |          |          |          |           |           |
|------|-----|---------|-----------|----------|----------|----------|-----------|-----------|
| 2218 | 1   | Extremo | 13.095    | 274.355  | -35.621  | 5.1603   | 19.4781   | -979.6991 |
| 2218 | 0   | Extremo | -52.887   | 255.897  | -36.076  | -2.737   | -15.0928  | -678.3119 |
| 2218 | 0.5 | Extremo | -52.887   | 271.235  | -36.076  | -2.737   | 2.9454    | -810.0951 |
| 2218 | 1   | Extremo | -52.887   | 286.573  | -36.076  | -2.737   | 20.9836   | -949.5473 |
| 2219 | 0   | Extremo | 2.964     | 271.572  | -46.34   | 7.0292   | -20.5965  | -921.7004 |
| 2219 | 0.5 | Extremo | 2.964     | 286.91   | -46.34   | 7.0292   | 2.5737    | -1061.321 |
| 2219 | 1   | Extremo | 2.964     | 302.248  | -46.34   | 7.0292   | 25.7439   | -1208.611 |
| 2219 | 0   | Extremo | -63.691   | 283.729  | -46.623  | -0.7739  | -19.4801  | -879.226  |
| 2219 | 0.5 | Extremo | -63.691   | 299.067  | -46.623  | -0.7739  | 3.8314    | -1024.925 |
| 2219 | 1   | Extremo | -63.691   | 314.405  | -46.623  | -0.7739  | 27.1428   | -1178.293 |
| 2220 | 0   | Extremo | -11.271   | 287.782  | -60.7    | 5.8693   | -26.5278  | -1144.446 |
| 2220 | 0.5 | Extremo | -11.271   | 303.12   | -60.7    | 5.8693   | 3.8221    | -1292.172 |
| 2220 | 1   | Extremo | -11.271   | 318.458  | -60.7    | 5.8693   | 34.1719   | -1447.567 |
| 2220 | 0   | Extremo | -78.524   | 300.222  | -60.689  | -1.8161  | -25.2921  | -1101.938 |
| 2220 | 0.5 | Extremo | -78.524   | 315.56   | -60.689  | -1.8161  | 5.0523    | -1255.883 |
| 2220 | 1   | Extremo | -78.524   | 330.897  | -60.689  | -1.8161  | 35.3968   | -1417.498 |
| 2221 | 0   | Extremo | -32.441   | 270.444  | -80.418  | -6.7176  | -34.4231  | -1359.338 |
| 2221 | 0.5 | Extremo | -32.441   | 285.782  | -80.418  | -6.7176  | 5.7857    | -1498.394 |
| 2221 | 1   | Extremo | -32.441   | 301.12   | -80.418  | -6.7176  | 45.9945   | -1645.119 |
| 2221 | 0   | Extremo | -100.03   | 283.863  | -79.957  | -14.1046 | -33       | -1317.545 |
| 2221 | 0.5 | Extremo | -100.03   | 299.201  | -79.957  | -14.1046 | 6.9786    | -1463.311 |
| 2221 | 1   | Extremo | -100.03   | 314.539  | -79.957  | -14.1046 | 46.9573   | -1616.746 |
| 2222 | 0   | Extremo | -65.895   | 282.022  | -105.871 | -13.645  | -44.1428  | -1409.788 |
| 2222 | 0.5 | Extremo | -65.895   | 297.359  | -105.871 | -13.645  | 8.7924    | -1554.634 |
| 2222 | 1   | Extremo | -65.895   | 312.697  | -105.871 | -13.645  | 61.7277   | -1707.148 |
| 2222 | 0   | Extremo | -133.127  | 295.067  | -104.834 | -20.8687 | -42.3924  | -1372.75  |
| 2222 | 0.5 | Extremo | -133.127  | 310.405  | -104.834 | -20.8687 | 10.0248   | -1524.118 |
| 2222 | 1   | Extremo | -133.127  | 325.743  | -104.834 | -20.8687 | 62.4419   | -1683.155 |
| 2223 | 0   | Extremo | -129.991  | 345.576  | -145.43  | 5.279    | -60.0829  | -1579.782 |
| 2223 | 0.5 | Extremo | -129.991  | 360.914  | -145.43  | 5.279    | 12.6319   | -1756.405 |
| 2223 | 1   | Extremo | -129.991  | 376.251  | -145.43  | 5.279    | 85.3467   | -1940.696 |
| 2223 | 0   | Extremo | -196.768  | 358.021  | -143.696 | -2.372   | -58.0987  | -1543.084 |
| 2223 | 0.5 | Extremo | -196.768  | 373.359  | -143.696 | -2.372   | 13.7493   | -1725.929 |
| 2223 | 1   | Extremo | -196.768  | 388.697  | -143.696 | -2.372   | 85.5973   | -1916.443 |
| 2224 | 0   | Extremo | -243.221  | 382.006  | -202.938 | 16.3397  | -80.7882  | -1833.611 |
| 2224 | 0.5 | Extremo | -243.221  | 397.344  | -202.938 | 16.3397  | 20.6808   | -2028.449 |
| 2224 | 1   | Extremo | -243.221  | 412.682  | -202.938 | 16.3397  | 122.1499  | -2230.956 |
| 2224 | 0   | Extremo | -308.754  | 394.519  | -200.099 | 8.0832   | -78.4271  | -1795.82  |
| 2224 | 0.5 | Extremo | -308.754  | 409.857  | -200.099 | 8.0832   | 21.6226   | -1996.914 |
| 2224 | 1   | Extremo | -308.754  | 425.194  | -200.099 | 8.0832   | 121.6722  | -2205.676 |
| 2225 | 0   | Extremo | -457.315  | 393.079  | -289.928 | 33.801   | -107.5622 | -2136.115 |
| 2225 | 0.5 | Extremo | -457.315  | 408.417  | -289.928 | 33.801   | 37.4018   | -2336.489 |
| 2225 | 1   | Extremo | -457.315  | 423.755  | -289.928 | 33.801   | 182.3659  | -2544.532 |
| 2225 | 0   | Extremo | -519.597  | 406.415  | -285.273 | 24.421   | -104.6001 | -2096.058 |
| 2225 | 0.5 | Extremo | -519.597  | 421.753  | -285.273 | 24.421   | 38.0366   | -2303.1   |
| 2225 | 1   | Extremo | -519.597  | 437.091  | -285.273 | 24.421   | 180.6733  | -2517.811 |
| 2226 | 0   | Extremo | -867.426  | 318.052  | -394.698 | 60.5877  | -133.0916 | -2479.089 |
| 2226 | 0.5 | Extremo | -867.426  | 333.39   | -394.698 | 60.5877  | 64.2575   | -2641.95  |
| 2226 | 1   | Extremo | -867.426  | 348.728  | -394.698 | 60.5877  | 261.6066  | -2812.479 |
| 2226 | 0   | Extremo | -922.235  | 334.24   | -387.562 | 49.4139  | -129.2918 | -2435.289 |
| 2226 | 0.5 | Extremo | -922.235  | 349.578  | -387.562 | 49.4139  | 64.4891   | -2606.243 |
| 2226 | 1   | Extremo | -922.235  | 364.916  | -387.562 | 49.4139  | 258.27    | -2784.867 |
| 2227 | 0   | Extremo | -1542.464 | -28.395  | -429.906 | 35.5442  | -208.2473 | -2713.871 |
| 2227 | 0.5 | Extremo | -1542.464 | -13.057  | -429.906 | 35.5442  | 6.7057    | -2703.508 |
| 2227 | 1   | Extremo | -1542.464 | 2.28     | -429.906 | 35.5442  | 221.6588  | -2700.814 |
| 2227 | 0   | Extremo | -1583.35  | -3.453   | -420.238 | 23.6354  | -201.9201 | -2666.531 |
| 2227 | 0.5 | Extremo | -1583.35  | 11.885   | -420.238 | 23.6354  | 8.1988    | -2668.639 |
| 2227 | 1   | Extremo | -1583.35  | 27.223   | -420.238 | 23.6354  | 218.3177  | -2678.416 |
| 2228 | 0   | Extremo | -2238.029 | -507.586 | -416.012 | -23.7563 | -273.9263 | -3003.496 |
| 2228 | 0.5 | Extremo | -2238.029 | -492.248 | -416.012 | -23.7563 | -65.9201  | -2753.537 |
| 2228 | 1   | Extremo | -2238.029 | -476.91  | -416.012 | -23.7563 | 142.0862  | -2511.248 |
| 2228 | 0   | Extremo | -2264.499 | -465.606 | -407.102 | -37.3726 | -267.1397 | -2953.159 |
| 2228 | 0.5 | Extremo | -2264.499 | -450.268 | -407.102 | -37.3726 | -63.5889  | -2724.19  |
| 2228 | 1   | Extremo | -2264.499 | -434.93  | -407.102 | -37.3726 | 139.962   | -2502.891 |
| 2229 | 0   | Extremo | -2679.884 | -639.195 | -312.623 | 4.3549   | -193.3521 | -2691.489 |
| 2229 | 0.5 | Extremo | -2679.884 | -623.858 | -312.623 | 4.3549   | -37.0407  | -2375.725 |
| 2229 | 1   | Extremo | -2679.884 | -608.52  | -312.623 | 4.3549   | 119.2707  | -2067.631 |
| 2229 | 0   | Extremo | -2697.845 | -593.613 | -306.139 | -11.6793 | -188.4402 | -2651.723 |
| 2229 | 0.5 | Extremo | -2697.845 | -578.276 | -306.139 | -11.6793 | -35.3707  | -2358.751 |
| 2229 | 1   | Extremo | -2697.845 | -562.938 | -306.139 | -11.6793 | 117.6988  | -2073.448 |
| 2230 | 0   | Extremo | -2917.603 | -641.496 | -226.387 | 27.7433  | -131.944  | -2282.062 |
| 2230 | 0.5 | Extremo | -2917.603 | -626.158 | -226.387 | 27.7433  | -18.7505  | -1965.149 |

|      |     |         |           |          |          |         |           |           |
|------|-----|---------|-----------|----------|----------|---------|-----------|-----------|
| 2230 | 1   | Extremo | -2917.603 | -610.82  | -226.387 | 27.7433 | 94.443    | -1655.904 |
| 2230 | 0   | Extremo | -2931.207 | -595.068 | -221.772 | 10.0851 | -128.3489 | -2253.161 |
| 2230 | 0.5 | Extremo | -2931.207 | -579.73  | -221.772 | 10.0851 | -17.4628  | -1959.462 |
| 2230 | 1   | Extremo | -2931.207 | -564.393 | -221.772 | 10.0851 | 93.4233   | -1673.431 |
| 2231 | 0   | Extremo | -3054.869 | -611.282 | -173.249 | 42.5239 | -96.1307  | -1890.827 |
| 2231 | 0.5 | Extremo | -3054.869 | -595.944 | -173.249 | 42.5239 | -9.5064   | -1589.021 |
| 2231 | 1   | Extremo | -3054.869 | -580.606 | -173.249 | 42.5239 | 77.1179   | -1294.883 |
| 2231 | 0   | Extremo | -3066.189 | -564.451 | -169.83  | 23.825  | -93.3328  | -1871.72  |
| 2231 | 0.5 | Extremo | -3066.189 | -549.114 | -169.83  | 23.825  | -8.4177   | -1593.329 |
| 2231 | 1   | Extremo | -3066.189 | -533.776 | -169.83  | 23.825  | 76.4974   | -1322.606 |
| 2232 | 0   | Extremo | -3153.631 | -560.817 | -139.577 | 62.1262 | -74.8082  | -1552.155 |
| 2232 | 0.5 | Extremo | -3153.631 | -545.479 | -139.577 | 62.1262 | -5.0195   | -1275.581 |
| 2232 | 1   | Extremo | -3153.631 | -530.141 | -139.577 | 62.1262 | 64.7691   | -1006.676 |
| 2232 | 0   | Extremo | -3163.634 | -513.545 | -136.974 | 42.633  | -72.5231  | -1541.9   |
| 2232 | 0.5 | Extremo | -3163.634 | -498.207 | -136.974 | 42.633  | -4.036    | -1288.961 |
| 2232 | 1   | Extremo | -3163.634 | -482.87  | -136.974 | 42.633  | 64.4511   | -1043.692 |
| 2233 | 0   | Extremo | -3245.221 | -563.188 | -116.555 | 56.9336 | -65.837   | -1330.815 |
| 2233 | 0.5 | Extremo | -3245.221 | -547.85  | -116.555 | 56.9336 | -7.5597   | -1053.056 |
| 2233 | 1   | Extremo | -3245.221 | -532.512 | -116.555 | 56.9336 | 50.7177   | -782.9654 |
| 2233 | 0   | Extremo | -3254.536 | -513.596 | -114.452 | 36.4485 | -63.879   | -1334.259 |
| 2233 | 0.5 | Extremo | -3254.536 | -498.258 | -114.452 | 36.4485 | -6.6529   | -1081.296 |
| 2233 | 1   | Extremo | -3254.536 | -482.92  | -114.452 | 36.4485 | 50.5731   | -836.0011 |
| 2234 | 0   | Extremo | -3300.221 | -575.455 | -95.024  | 49.7925 | -51.9609  | -992.7691 |
| 2234 | 0.5 | Extremo | -3300.221 | -560.117 | -95.024  | 49.7925 | -4.449    | -708.8761 |
| 2234 | 1   | Extremo | -3300.221 | -544.779 | -95.024  | 49.7925 | 43.0629   | -432.6521 |
| 2234 | 0   | Extremo | -3309.013 | -526.049 | -93.287  | 28.5288 | -50.2445  | -1009.24  |
| 2234 | 0.5 | Extremo | -3309.013 | -510.711 | -93.287  | 28.5288 | -3.6009   | -750.0496 |
| 2234 | 1   | Extremo | -3309.013 | -495.373 | -93.287  | 28.5288 | 43.0427   | -498.5284 |
| 2235 | 0   | Extremo | -3339.815 | -560.407 | -80.468  | 52.4496 | -42.053   | -627.03   |
| 2235 | 0.5 | Extremo | -3339.815 | -545.069 | -80.468  | 52.4496 | -1.8189   | -350.6611 |
| 2235 | 1   | Extremo | -3339.815 | -529.731 | -80.468  | 52.4496 | 38.4153   | -81.9611  |
| 2235 | 0   | Extremo | -3348.166 | -510.83  | -78.992  | 30.5748 | -40.5101  | -655.2301 |
| 2235 | 0.5 | Extremo | -3348.166 | -495.492 | -78.992  | 30.5748 | -1.0142   | -403.6496 |
| 2235 | 1   | Extremo | -3348.166 | -480.154 | -78.992  | 30.5748 | 38.4817   | -159.7381 |
| 2236 | 0   | Extremo | -3374.591 | -539.596 | -72.089  | 57.7391 | -35.601   | -275.7445 |
| 2236 | 0.5 | Extremo | -3374.591 | -524.258 | -72.089  | 57.7391 | 0.4433    | -9.7809   |
| 2236 | 1   | Extremo | -3374.591 | -508.921 | -72.089  | 57.7391 | 36.4876   | 248.5139  |
| 2236 | 0   | Extremo | -3382.539 | -489.43  | -70.796  | 35.2906 | -34.1841  | -315.024  |
| 2236 | 0.5 | Extremo | -3382.539 | -474.092 | -70.796  | 35.2906 | 1.2141    | -74.1435  |
| 2236 | 1   | Extremo | -3382.539 | -458.754 | -70.796  | 35.2906 | 36.6122   | 159.068   |
| 2237 | 0   | Extremo | -3412.798 | -527.22  | -68.699  | 62.7408 | -31.6379  | 53.7563   |
| 2237 | 0.5 | Extremo | -3412.798 | -511.882 | -68.699  | 62.7408 | 2.7119    | 313.5317  |
| 2237 | 1   | Extremo | -3412.798 | -496.544 | -68.699  | 62.7408 | 37.0616   | 565.6381  |
| 2237 | 0   | Extremo | -3420.356 | -475.612 | -67.539  | 39.8418 | -30.3126  | 3.5736    |
| 2237 | 0.5 | Extremo | -3420.356 | -460.274 | -67.539  | 39.8418 | 3.4567    | 237.5451  |
| 2237 | 1   | Extremo | -3420.356 | -444.936 | -67.539  | 39.8418 | 37.226    | 463.8478  |
| 2238 | 0   | Extremo | -3465.317 | -544.967 | -67.853  | 63.985  | -30.2324  | 380.4745  |
| 2238 | 0.5 | Extremo | -3465.317 | -529.629 | -67.853  | 63.985  | 3.6943    | 649.1238  |
| 2238 | 1   | Extremo | -3465.317 | -514.292 | -67.853  | 63.985  | 37.6209   | 910.104   |
| 2238 | 0   | Extremo | -3472.484 | -489.52  | -66.793  | 41.2249 | -28.9655  | 317.6724  |



|      |     |         |           |          |         |          |           |           |
|------|-----|---------|-----------|----------|---------|----------|-----------|-----------|
| 2242 | 1   | Extremo | -3660.633 | -414.827 | -47.939 | 69.751   | 26.7997   | 2268.8378 |
| 2242 | 0   | Extremo | -3666.731 | -388.16  | -46.881 | 42.9682  | -19.2511  | 1688.968  |
| 2242 | 0.5 | Extremo | -3666.731 | -372.822 | -46.881 | 42.9682  | 3.4892    | 1879.2136 |
| 2242 | 1   | Extremo | -3666.731 | -357.484 | -46.881 | 42.9682  | 26.9296   | 2061.7903 |
| 2243 | 0   | Extremo | -3704.098 | -502.476 | -46.769 | 46.9039  | -19.7939  | 2159.1171 |
| 2243 | 0.5 | Extremo | -3704.098 | -487.138 | -46.769 | 46.9039  | 3.5904    | 2406.5206 |
| 2243 | 1   | Extremo | -3704.098 | -471.8   | -46.769 | 46.9039  | 26.9747   | 2646.2551 |
| 2243 | 0   | Extremo | -3710.113 | -438.022 | -45.672 | 21.9966  | -18.5969  | 1989.0077 |
| 2243 | 0.5 | Extremo | -3710.113 | -422.684 | -45.672 | 21.9966  | 4.2388    | 2204.1844 |
| 2243 | 1   | Extremo | -3710.113 | -407.347 | -45.672 | 21.9966  | 27.0746   | 2411.6921 |
| 2244 | 0   | Extremo | -3769.226 | -472.663 | -42.277 | 36.606   | -23.9525  | 2759.0441 |
| 2244 | 0.5 | Extremo | -3769.226 | -457.325 | -42.277 | 36.606   | -2.8141   | 2991.5412 |
| 2244 | 1   | Extremo | -3769.226 | -441.987 | -42.277 | 36.606   | 18.3243   | 3216.3693 |
| 2244 | 0   | Extremo | -3775.445 | -405.18  | -41.094 | 11.6972  | -22.7264  | 2539.8118 |
| 2244 | 0.5 | Extremo | -3775.445 | -389.842 | -41.094 | 11.6972  | -2.1796   | 2738.5672 |
| 2244 | 1   | Extremo | -3775.445 | -374.504 | -41.094 | 11.6972  | 18.3673   | 2929.6537 |
| 2245 | 0   | Extremo | -3803.235 | -352.07  | -32.473 | 58.2216  | -17.9779  | 3146.8585 |
| 2245 | 0.5 | Extremo | -3803.235 | -336.732 | -32.473 | 58.2216  | -1.7416   | 3319.059  |
| 2245 | 1   | Extremo | -3803.235 | -321.394 | -32.473 | 58.2216  | 14.4946   | 3483.5907 |
| 2245 | 0   | Extremo | -3810.062 | -290.125 | -31.213 | 31.9473  | -16.7301  | 2891.7386 |
| 2245 | 0.5 | Extremo | -3810.062 | -274.787 | -31.213 | 31.9473  | -1.1236   | 3032.9667 |
| 2245 | 1   | Extremo | -3810.062 | -259.449 | -31.213 | 31.9473  | 14.4828   | 3166.5259 |
| 2246 | 0   | Extremo | -3821.715 | -279.671 | -23.523 | 58.2709  | -12.3616  | 3394.1418 |
| 2246 | 0.5 | Extremo | -3821.715 | -264.333 | -23.523 | 58.2709  | -0.5999   | 3530.143  |
| 2246 | 1   | Extremo | -3821.715 | -248.996 | -23.523 | 58.2709  | 11.1618   | 3658.4753 |
| 2246 | 0   | Extremo | -3829.992 | -218.134 | -22.224 | 33.6843  | -11.0959  | 3110.0137 |
| 2246 | 0.5 | Extremo | -3829.992 | -202.796 | -22.224 | 33.6843  | 0.0163    | 3215.2461 |
| 2246 | 1   | Extremo | -3829.992 | -187.458 | -22.224 | 33.6843  | 11.1284   | 3312.8095 |
| 2247 | 0   | Extremo | -3830.161 | -230.682 | -15.943 | 49.3717  | -7.9354   | 3578.4643 |
| 2247 | 0.5 | Extremo | -3830.161 | -215.345 | -15.943 | 49.3717  | 0.0358    | 3689.971  |
| 2247 | 1   | Extremo | -3830.161 | -200.007 | -15.943 | 49.3717  | 8.0071    | 3793.8088 |
| 2247 | 0   | Extremo | -3841.691 | -163.806 | -14.721 | 29.0244  | -6.6708   | 3263.7351 |
| 2247 | 0.5 | Extremo | -3841.691 | -148.468 | -14.721 | 29.0244  | 0.6895    | 3341.8035 |
| 2247 | 1   | Extremo | -3841.691 | -133.13  | -14.721 | 29.0244  | 8.0498    | 3412.203  |
| 2248 | 0   | Extremo | -3829.408 | -206.977 | -9.229  | 34.5233  | -4.313    | 3728.0473 |
| 2248 | 0.5 | Extremo | -3829.408 | -191.639 | -9.229  | 34.5233  | 0.3015    | 3827.7014 |
| 2248 | 1   | Extremo | -3829.408 | -176.301 | -9.229  | 34.5233  | 4.9161    | 3919.6866 |
| 2248 | 0   | Extremo | -3848.248 | -114.843 | -8.34   | 23.026   | -3.1261   | 3373.8086 |
| 2248 | 0.5 | Extremo | -3848.248 | -99.506  | -8.34   | 23.026   | 1.044     | 3427.3959 |
| 2248 | 1   | Extremo | -3848.248 | -84.168  | -8.34   | 23.026   | 5.2142    | 3473.3142 |
| 2249 | 0   | Extremo | -3870.206 | -41.814  | -3.235  | 5.0614   | -0.763    | 3886.821  |
| 2249 | 0.5 | Extremo | -3870.206 | -26.476  | -3.235  | 5.0614   | 0.8545    | 3903.8936 |
| 2249 | 1   | Extremo | -3870.206 | -11.138  | -3.235  | 5.0614   | 2.472     | 3913.2973 |
| 2249 | 0   | Extremo | -3851.176 | -67.634  | -2.616  | 16.9081  | -0.1121   | 3445.6466 |
| 2249 | 0.5 | Extremo | -3851.176 | -52.296  | -2.616  | 16.9081  | 1.1958    | 3475.6292 |
| 2249 | 1   | Extremo | -3851.176 | -36.958  | -2.616  | 16.9081  | 2.5037    | 3497.9429 |
| 2250 | 0   | Extremo | -3907.981 | 122.841  | 2.086   | -24.3538 | 2.2955    | 3930.8324 |
| 2250 | 0.5 | Extremo | -3907.981 | 138.178  | 2.086   | -24.3538 | 1.2526    | 3865.5776 |
| 2250 | 1   | Extremo | -3907.981 | 153.516  | 2.086   | -24.3538 | 0.2096    | 3792.6539 |
| 2250 | 0   | Extremo | -3851.102 | -20.847  | 2.896   | 10.7791  | 2.6415    | 3480.8364 |
| 2250 | 0.5 | Extremo | -3851.102 | -5.509   | 2.896   | 10.7791  | 1.1935    | 3487.4256 |
| 2250 | 1   | Extremo | -3851.102 | 9.828    | 2.896   | 10.7791  | -0.2546   | 3486.3459 |
| 2251 | 0   | Extremo | -3897.53  | 144.584  | 7.563   | -39.3217 | 4.7861    | 3842.864  |
| 2251 | 0.5 | Extremo | -3897.53  | 159.922  | 7.563   | -39.3217 | 1.0046    | 3766.7373 |
| 2251 | 1   | Extremo | -3897.53  | 175.26   | 7.563   | -39.3217 | -2.7768   | 3682.9417 |
| 2251 | 0   | Extremo | -3848.026 | 26.467   | 8.623   | 4.5104   | 5.3483    | 3479.8817 |
| 2251 | 0.5 | Extremo | -3848.026 | 41.804   | 8.623   | 4.5104   | 1.037     | 3462.8139 |
| 2251 | 1   | Extremo | -3848.026 | 57.142   | 8.623   | 4.5104   | -3.2743   | 3438.0772 |
| 2252 | 0   | Extremo | -3887.453 | 187.638  | 13.963  | -49.7263 | 7.584     | 3747.4598 |
| 2252 | 0.5 | Extremo | -3887.453 | 202.976  | 13.963  | -49.7263 | 0.6024    | 3649.8063 |
| 2252 | 1   | Extremo | -3887.453 | 218.314  | 13.963  | -49.7263 | -6.3792   | 3544.4838 |
| 2252 | 0   | Extremo | -3841.322 | 75.688   | 15.007  | -1.7847  | 8.1812    | 3442.5873 |
| 2252 | 0.5 | Extremo | -3841.322 | 91.026   | 15.007  | -1.7847  | 0.6777    | 3400.9087 |
| 2252 | 1   | Extremo | -3841.322 | 106.364  | 15.007  | -1.7847  | -6.8258   | 3351.5611 |
| 2253 | 0   | Extremo | -3873.967 | 240.581  | 21.619  | -56.7938 | 10.7256   | 3622.0528 |
| 2253 | 0.5 | Extremo | -3873.967 | 255.918  | 21.619  | -56.7938 | -0.0837   | 3497.928  |
| 2253 | 1   | Extremo | -3873.967 | 271.256  | 21.619  | -56.7938 | -10.893   | 3366.1343 |
| 2253 | 0   | Extremo | -3829.477 | 130.621  | 22.517  | -6.8351  | 11.258    | 3367.1621 |
| 2253 | 0.5 | Extremo | -3829.477 | 145.959  | 22.517  | -6.8351  | -0.000479 | 3298.017  |
| 2253 | 1   | Extremo | -3829.477 | 161.297  | 22.517  | -6.8351  | -11.259   | 3221.203  |
| 2254 | 0   | Extremo | -3852.99  | 313.86   | 30.809  | -55.7301 | 14.1776   | 3452.4418 |
| 2254 | 0.5 | Extremo | -3852.99  | 329.198  | 30.809  | -55.7301 | -1.227    | 3291.6773 |

|      |     |         |           |         |        |          |          |           |
|------|-----|---------|-----------|---------|--------|----------|----------|-----------|
| 2254 | 1   | Extremo | -3852.99  | 344.536 | 30.809 | -55.7301 | -16.6316 | 3123.2439 |
| 2254 | 0   | Extremo | -3809.401 | 204.278 | 31.515 | -5.3161  | 14.6116  | 3244.6729 |
| 2254 | 0.5 | Extremo | -3809.401 | 219.616 | 31.515 | -5.3161  | -1.1458  | 3138.6995 |
| 2254 | 1   | Extremo | -3809.401 | 234.954 | 31.515 | -5.3161  | -16.9031 | 3025.0571 |
| 2255 | 0   | Extremo | -3817.575 | 434.342 | 40.902 | -33.7324 | 18.1706  | 3189.2224 |
| 2255 | 0.5 | Extremo | -3817.575 | 449.68  | 40.902 | -33.7324 | -2.2803  | 2968.2168 |
| 2255 | 1   | Extremo | -3817.575 | 465.018 | 40.902 | -33.7324 | -22.7312 | 2739.5423 |
| 2255 | 0   | Extremo | -3774.642 | 323.881 | 41.408 | 15.625   | 18.495   | 3029.1868 |
| 2255 | 0.5 | Extremo | -3774.642 | 339.219 | 41.408 | 15.625   | -2.2088  | 2863.4118 |
| 2255 | 1   | Extremo | -3774.642 | 354.557 | 41.408 | 15.625   | -22.9127 | 2689.9679 |
| 2256 | 0   | Extremo | -3751.318 | 464.685 | 45.629 | -43.7889 | 27.0414  | 2624.386  |
| 2256 | 0.5 | Extremo | -3751.318 | 480.023 | 45.629 | -43.7889 | 4.2268   | 2388.2089 |
| 2256 | 1   | Extremo | -3751.318 | 495.361 | 45.629 | -43.7889 | -18.5877 | 2144.3628 |
| 2256 | 0   | Extremo | -3709.177 | 360.229 | 45.99  | 4.4771   | 27.1954  | 2519.3555 |
| 2256 | 0.5 | Extremo | -3709.177 | 375.567 | 45.99  | 4.4771   | 4.2003   | 2335.4067 |
| 2256 | 1   | Extremo | -3709.177 | 390.905 | 45.99  | 4.4771   | -18.7948 | 2143.7889 |
| 2257 | 0   | Extremo | -3707.412 | 408.425 | 46.935 | -66.3434 | 26.9451  | 2249.4549 |
| 2257 | 0.5 | Extremo | -3707.412 | 423.763 | 46.935 | -66.3434 | 3.4777   | 2041.4079 |
| 2257 | 1   | Extremo | -3707.412 | 439.101 | 46.935 | -66.3434 | -19.9898 | 1825.6919 |
| 2257 | 0   | Extremo | -3665.641 | 306.522 | 47.224 | -18.8891 | 27.0606  | 2178.9443 |
| 2257 | 0.5 | Extremo | -3665.641 | 321.86  | 47.224 | -18.8891 | 3.4488   | 2021.8489 |
| 2257 | 1   | Extremo | -3665.641 | 337.197 | 47.224 | -18.8891 | -20.163  | 1857.0846 |
| 2258 | 0   | Extremo | -3673.191 | 413.956 | 49.573 | -69.1788 | 26.3338  | 1966.7792 |
| 2258 | 0.5 | Extremo | -3673.191 | 429.294 | 49.573 | -69.1788 | 1.5471   | 1755.9668 |
| 2258 | 1   | Extremo | -3673.191 | 444.632 | 49.573 | -69.1788 | -23.2395 | 1537.4853 |
| 2258 | 0   | Extremo | -3631.614 | 313.457 | 49.796 | -22.8892 | 26.4233  | 1929.4143 |
| 2258 | 0.5 | Extremo | -3631.614 | 328.795 | 49.796 | -22.8892 | 1.5255   | 1768.8513 |
| 2258 | 1   | Extremo | -3631.614 | 344.133 | 49.796 | -22.8892 | -23.3724 | 1600.6194 |
| 2259 | 0   | Extremo | -3637.945 | 448.208 | 55.443 | -64.4639 | 27.1871  | 1681.357  |
| 2259 | 0.5 | Extremo | -3637.945 | 463.546 | 55.443 | -64.4639 | -0.5346  | 1453.4185 |
| 2259 | 1   | Extremo | -3637.945 | 478.884 | 55.443 | -64.4639 | -28.2563 | 1217.811  |
| 2259 | 0   | Extremo | -3596.526 | 349.494 | 55.58  | -19.2864 | 27.2411  | 1677.2332 |
| 2259 | 0.5 | Extremo | -3596.526 | 364.832 | 55.58  | -19.2864 | -0.5486  | 1498.6515 |
| 2259 | 1   | Extremo | -3596.526 | 380.17  | 55.58  | -19.2864 | -28.3384 | 1312.4009 |
| 2260 | 0   | Extremo | -3590.845 | 502.573 | 64.046 | -53.7861 | 29.6708  | 1351.4739 |
| 2260 | 0.5 | Extremo | -3590.845 | 517.911 | 64.046 | -53.7861 | -2.3524  | 1096.3527 |
| 2260 | 1   | Extremo | -3590.845 | 533.249 | 64.046 | -53.7861 | -34.3755 | 833.5626  |
| 2260 | 0   | Extremo | -3549.682 | 408.023 | 64.081 | -9.0287  | 29.6753  | 1379.4179 |
| 2260 | 0.5 | Extremo | -3549.682 | 423.361 | 64.081 | -9.0287  | -2.365   | 1171.5719 |
| 2260 | 1   | Extremo | -3549.682 | 438.699 | 64.081 | -9.0287  | -34.4052 | 956.057   |
| 2261 | 0   | Extremo | -3511.351 | 508.116 | 67.342 | -60.9363 | 38.1321  | 898.2022  |
| 2261 | 0.5 | Extremo | -3511.351 | 523.454 | 67.342 | -60.9363 | 4.4609   | 640.3098  |
| 2261 | 1   | Extremo | -3511.351 | 538.792 | 67.342 | -60.9363 | -29.2103 | 374.7486  |
| 2261 | 0   | Extremo | -3470.789 | 419.93  | 67.321 | -18.0716 | 38.0096  | 947.944   |
| 2261 | 0.5 | Extremo | -3470.789 | 435.268 | 67.321 | -18.0716 | 4.3491   | 734.1443  |
| 2261 | 1   | Extremo | -3470.789 | 450.606 | 67.321 | -18.0716 | -29.3113 | 512.6757  |
| 2262 | 0   | Extremo | -3458.796 | 490.69  | 68.171 | -59.7007 | 37.5576  | 554.92    |
| 2262 | 0.5 | Extremo | -3458.796 | 506.028 | 68.171 | -59.7007 | 3.4722   | 305.7403  |
| 2262 | 1   | Extremo | -3458.796 | 521.366 | 68.171 | -59.7007 | -30.6132 | 48.8917   |
| 2262 | 0   | Extremo | -3418     |         |        |          |          |           |





|      |     |         |           |          |         |          |           |           |
|------|-----|---------|-----------|----------|---------|----------|-----------|-----------|
| 2266 | 1   | Extremo | -3291.682 | 557.427  | 116.133 | -54.2331 | -64.8541  | -1332.141 |
| 2266 | 0   | Extremo | -3250.702 | 442.938  | 116.086 | -16.8278 | 51.1518   | -630.8198 |
| 2266 | 0.5 | Extremo | -3250.702 | 458.276  | 116.086 | -16.8278 | -6.8914   | -856.1234 |
| 2266 | 1   | Extremo | -3250.702 | 473.614  | 116.086 | -16.8278 | -64.9346  | -1089.096 |
| 2267 | 0   | Extremo | -3199.748 | 524.63   | 139.182 | -59.6033 | 65.4234   | -1012.131 |
| 2267 | 0.5 | Extremo | -3199.748 | 539.968  | 139.182 | -59.6033 | -4.1674   | -1278.281 |
| 2267 | 1   | Extremo | -3199.748 | 555.306  | 139.182 | -59.6033 | -73.7582  | -1552.099 |
| 2267 | 0   | Extremo | -3158.341 | 445.058  | 139.197 | -24.081  | 65.2143   | -851.7069 |
| 2267 | 0.5 | Extremo | -3158.341 | 460.395  | 139.197 | -24.081  | -4.3842   | -1078.07  |
| 2267 | 1   | Extremo | -3158.341 | 475.733  | 139.197 | -24.081  | -73.9828  | -1312.102 |
| 2268 | 0   | Extremo | -3100.937 | 575.172  | 172.794 | -40.1804 | 77.7476   | -1299.492 |
| 2268 | 0.5 | Extremo | -3100.937 | 590.509  | 172.794 | -40.1804 | -8.6496   | -1590.912 |
| 2268 | 1   | Extremo | -3100.937 | 605.847  | 172.794 | -40.1804 | -95.0469  | -1890.001 |
| 2268 | 0   | Extremo | -3057.846 | 487.844  | 173.048 | -8.0724  | 77.5983   | -1130.321 |
| 2268 | 0.5 | Extremo | -3057.846 | 503.181  | 173.048 | -8.0724  | -8.9255   | -1378.077 |
| 2268 | 1   | Extremo | -3057.846 | 518.519  | 173.048 | -8.0724  | -95.4494  | -1633.502 |
| 2269 | 0   | Extremo | -2963.704 | 605.498  | 225.887 | -25.6881 | 95.0584   | -1659.424 |
| 2269 | 0.5 | Extremo | -2963.704 | 620.836  | 225.887 | -25.6881 | -17.8849  | -1966.008 |
| 2269 | 1   | Extremo | -2963.704 | 636.174  | 225.887 | -25.6881 | -130.8282 | -2280.26  |
| 2269 | 0   | Extremo | -2916.717 | 511.437  | 226.622 | 4.1477   | 95.0174   | -1469.846 |
| 2269 | 0.5 | Extremo | -2916.717 | 526.775  | 226.622 | 4.1477   | -18.2939  | -1729.4   |
| 2269 | 1   | Extremo | -2916.717 | 542.113  | 226.622 | 4.1477   | -131.6051 | -1996.622 |
| 2270 | 0   | Extremo | -2726.012 | 603.57   | 312.076 | -2.757   | 119.8727  | -2069.645 |
| 2270 | 0.5 | Extremo | -2726.012 | 618.908  | 312.076 | -2.757   | -36.1655  | -2375.265 |
| 2270 | 1   | Extremo | -2726.012 | 634.245  | 312.076 | -2.757   | -192.2037 | -2688.553 |
| 2270 | 0   | Extremo | -2670.25  | 484.511  | 313.77  | 23.2859  | 120.0782  | -1852.949 |
| 2270 | 0.5 | Extremo | -2670.25  | 499.849  | 313.77  | 23.2859  | -36.8068  | -2099.04  |
| 2270 | 1   | Extremo | -2670.25  | 515.187  | 313.77  | 23.2859  | -193.6917 | -2352.799 |
| 2271 | 0   | Extremo | -2284.185 | 473.283  | 415.271 | 24.8243  | 142.6539  | -2511.449 |
| 2271 | 0.5 | Extremo | -2284.185 | 488.621  | 415.271 | 24.8243  | -64.9818  | -2751.925 |
| 2271 | 1   | Extremo | -2284.185 | 503.959  | 415.271 | 24.8243  | -272.6175 | -3000.071 |
| 2271 | 0   | Extremo | -2262.632 | 461.688  | 418.061 | 35.7244  | 143.8463  | -2220.951 |
| 2271 | 0.5 | Extremo | -2262.632 | 477.026  | 418.061 | 35.7244  | -65.1842  | -2455.629 |
| 2271 | 1   | Extremo | -2262.632 | 492.364  | 418.061 | 35.7244  | -274.2147 | -2697.976 |
| 2272 | 0   | Extremo | -1589.232 | -2.909   | 429.006 | -34.6499 | 222.5735  | -2701.372 |
| 2272 | 0.5 | Extremo | -1589.232 | 12.429   | 429.006 | -34.6499 | 8.0705    | -2703.752 |
| 2272 | 1   | Extremo | -1589.232 | 27.767   | 429.006 | -34.6499 | -206.4326 | -2713.8   |
| 2272 | 0   | Extremo | -1600.205 | 80.864   | 432.027 | -38.3257 | 224.2952  | -2420.472 |
| 2272 | 0.5 | Extremo | -1600.205 | 96.202   | 432.027 | -38.3257 | 8.2816    | -2464.738 |
| 2272 | 1   | Extremo | -1600.205 | 111.54   | 432.027 | -38.3257 | -207.732  | -2516.674 |
| 2273 | 0   | Extremo | -914.533  | -351.702 | 395.341 | -61.4288 | 263.2474  | -2815.316 |
| 2273 | 0.5 | Extremo | -914.533  | -336.364 | 395.341 | -61.4288 | 65.5769   | -2643.3   |
| 2273 | 1   | Extremo | -914.533  | -321.026 | 395.341 | -61.4288 | -132.0936 | -2478.952 |
| 2273 | 0   | Extremo | -914.794  | -313.736 | 396.022 | -70.1019 | 263.69    | -2584.321 |
| 2273 | 0.5 | Extremo | -914.794  | -298.398 | 396.022 | -70.1019 | 65.6789   | -2431.288 |
| 2273 | 1   | Extremo | -914.794  | -283.06  | 396.022 | -70.1019 | -132.3321 | -2285.923 |
| 2274 | 0   | Extremo | -503.78   | -427.817 | 290.816 | -35.104  | 183.9839  | -2544.469 |
| 2274 | 0.5 | Extremo | -503.78   | -412.479 | 290.816 | -35.104  | 38.5761   | -2334.395 |
| 2274 | 1   | Extremo | -503.78   | -397.141 | 290.816 | -35.104  | -106.8316 | -2131.99  |
| 2274 | 0   | Extremo | -499.619  | -396.144 | 290.822 | -43.17   | 184.0407  | -2328.354 |
| 2274 | 0.5 | Extremo | -499.619  | -380.806 | 290.822 | -43.17   | 38.6297   | -2134.117 |
| 2274 | 1   | Extremo | -499.619  | -365.469 | 290.822 | -43.17   | -106.7814 | -1947.548 |
| 2275 | 0   | Extremo | -288.92   | -417.011 | 203.829 | -17.8324 | 123.7246  | -2226.461 |
| 2275 | 0.5 | Extremo | -288.92   | -401.673 | 203.829 | -17.8324 | 21.81     | -2021.79  |
| 2275 | 1   | Extremo | -288.92   | -386.335 | 203.829 | -17.8324 | -80.1046  | -1824.788 |
| 2275 | 0   | Extremo | -282.905  | -386.934 | 203.563 | -25.8344 | 123.5784  | -2022.23  |
| 2275 | 0.5 | Extremo | -282.905  | -371.596 | 203.563 | -25.8344 | 21.7969   | -1832.597 |
| 2275 | 1   | Extremo | -282.905  | -356.258 | 203.563 | -25.8344 | -79.9847  | -1650.634 |
| 2276 | 0   | Extremo | -174.989  | -380.883 | 146.265 | -6.9015  | 86.8902   | -1931.353 |
| 2276 | 0.5 | Extremo | -174.989  | -365.545 | 146.265 | -6.9015  | 13.7575   | -1744.746 |
| 2276 | 1   | Extremo | -174.989  | -350.207 | 146.265 | -6.9015  | -59.3752  | -1565.808 |
| 2276 | 0   | Extremo | -168.245  | -353.078 | 145.88  | -15.3473 | 86.6362   | -1737.855 |
| 2276 | 0.5 | Extremo | -168.245  | -337.74  | 145.88  | -15.3473 | 13.696    | -1565.151 |
| 2276 | 1   | Extremo | -168.245  | -322.402 | 145.88  | -15.3473 | -59.2443  | -1400.115 |
| 2277 | 0   | Extremo | -110.339  | -318.216 | 106.63  | 11.7948  | 63.2503   | -1692.314 |
| 2277 | 0.5 | Extremo | -110.339  | -302.878 | 106.63  | 11.7948  | 9.9354    | -1537.04  |
| 2277 | 1   | Extremo | -110.339  | -287.54  | 106.63  | 11.7948  | -43.3796  | -1389.435 |
| 2277 | 0   | Extremo | -103.377  | -296.215 | 106.195 | 1.6502   | 62.9385   | -1504.79  |
| 2277 | 0.5 | Extremo | -103.377  | -280.877 | 106.195 | 1.6502   | 9.8409    | -1360.517 |
| 2277 | 1   | Extremo | -103.377  | -265.54  | 106.195 | 1.6502   | -43.2567  | -1223.912 |
| 2278 | 0   | Extremo | -76.668   | -307.054 | 81.212  | 4.6949   | 47.4736   | -1621.971 |
| 2278 | 0.5 | Extremo | -76.668   | -291.716 | 81.212  | 4.6949   | 6.8676    | -1472.279 |

|      |     |         |         |          |        |          |          |           |
|------|-----|---------|---------|----------|--------|----------|----------|-----------|
| 2278 | 1   | Extremo | -76.668 | -276.378 | 81.212 | 4.6949   | -33.7383 | -1330.255 |
| 2278 | 0   | Extremo | -69.689 | -283.326 | 80.726 | -5.7519  | 47.139   | -1420.96  |
| 2278 | 0.5 | Extremo | -69.689 | -267.989 | 80.726 | -5.7519  | 6.7761   | -1283.131 |
| 2278 | 1   | Extremo | -69.689 | -252.651 | 80.726 | -5.7519  | -33.5868 | -1152.972 |
| 2279 | 0   | Extremo | -55.003 | -324.06  | 61.532 | -7.7094  | 35.6661  | -1417.328 |
| 2279 | 0.5 | Extremo | -55.003 | -308.722 | 61.532 | -7.7094  | 4.9      | -1259.133 |
| 2279 | 1   | Extremo | -55.003 | -293.384 | 61.532 | -7.7094  | -25.8661 | -1108.606 |
| 2279 | 0   | Extremo | -48.184 | -294.847 | 61.035 | -16.9556 | 35.325   | -1219.916 |
| 2279 | 0.5 | Extremo | -48.184 | -279.509 | 61.035 | -16.9556 | 4.8074   | -1076.327 |
| 2279 | 1   | Extremo | -48.184 | -264.171 | 61.035 | -16.9556 | -25.7103 | -940.4072 |
| 2280 | 0   | Extremo | -40.19  | -307.889 | 47.183 | -8.7603  | 27.2416  | -1171.948 |
| 2280 | 0.5 | Extremo | -40.19  | -292.551 | 47.183 | -8.7603  | 3.6499   | -1021.838 |
| 2280 | 1   | Extremo | -40.19  | -277.213 | 47.183 | -8.7603  | -19.9418 | -879.3965 |
| 2280 | 0   | Extremo | -33.608 | -276.952 | 46.69  | -17.9793 | 26.9024  | -985.3164 |
| 2280 | 0.5 | Extremo | -33.608 | -261.614 | 46.69  | -17.9793 | 3.5575   | -850.6747 |
| 2280 | 1   | Extremo | -33.608 | -246.277 | 46.69  | -17.9793 | -19.7874 | -723.702  |
| 2281 | 0   | Extremo | -29.476 | -280.368 | 36.449 | -6.8026  | 20.9669  | -936.7542 |
| 2281 | 0.5 | Extremo | -29.476 | -265.031 | 36.449 | -6.8026  | 2.7427   | -800.4044 |
| 2281 | 1   | Extremo | -29.476 | -249.693 | 36.449 | -6.8026  | -15.4824 | -671.7236 |
| 2281 | 0   | Extremo | -23.16  | -249.346 | 35.967 | -16.3067 | 20.6352  | -762.4009 |
| 2281 | 0.5 | Extremo | -23.16  | -234.008 | 35.967 | -16.3067 | 2.6517   | -641.5624 |
| 2281 | 1   | Extremo | -23.16  | -218.67  | 35.967 | -16.3067 | -15.3317 | -528.3929 |
| 2282 | 0   | Extremo | -21.369 | -248.764 | 28.218 | -3.0073  | 16.1782  | -725.5775 |
| 2282 | 0.5 | Extremo | -21.369 | -233.427 | 28.218 | -3.0073  | 2.0691   | -605.0297 |
| 2282 | 1   | Extremo | -21.369 | -218.089 | 28.218 | -3.0073  | -12.04   | -492.1509 |
| 2282 | 0   | Extremo | -15.321 | -219.393 | 27.751 | -13.1749 | 15.8557  | -563.0334 |
| 2282 | 0.5 | Extremo | -15.321 | -204.055 | 27.751 | -13.1749 | 1.9801   | -457.1712 |
| 2282 | 1   | Extremo | -15.321 | -188.717 | 27.751 | -13.1749 | -11.8956 | -358.978  |
| 2283 | 0   | Extremo | -14.922 | -213.306 | 21.638 | 7.0029   | 12.5579  | -548.7525 |
| 2283 | 0.5 | Extremo | -14.922 | -197.968 | 21.638 | 7.0029   | 1.7391   | -445.934  |
| 2283 | 1   | Extremo | -14.922 | -182.63  | 21.638 | 7.0029   | -9.0797  | -350.7845 |
| 2283 | 0   | Extremo | -9.128  | -189.405 | 21.185 | -5.2371  | 12.2394  | -393.3885 |
| 2283 | 0.5 | Extremo | -9.128  | -174.068 | 21.185 | -5.2371  | 1.6467   | -302.5203 |
| 2283 | 1   | Extremo | -9.128  | -158.73  | 21.185 | -5.2371  | -8.9461  | -219.321  |
| 2284 | 0   | Extremo | -11.15  | -189.379 | 17.183 | -2.6784  | 9.8672   | -426.7566 |
| 2284 | 0.5 | Extremo | -11.15  | -174.041 | 17.183 | -2.6784  | 1.2756   | -335.9014 |
| 2284 | 1   | Extremo | -11.15  | -158.704 | 17.183 | -2.6784  | -7.3159  | -252.7151 |
| 2284 | 0   | Extremo | -5.536  | -162.821 | 16.708 | -15.2652 | 9.5597   | -261.8028 |
| 2284 | 0.5 | Extremo | -5.536  | -147.483 | 16.708 | -15.2652 | 1.2055   | -184.2266 |
| 2284 | 1   | Extremo | -5.536  | -132.146 | 16.708 | -15.2652 | -7.1487  | -114.3194 |
| 2285 | 0   | Extremo | -8.116  | -170.71  | 13.317 | -10.0211 | 7.5941   | -274.8233 |
| 2285 | 0.5 | Extremo | -8.116  | -155.373 | 13.317 | -10.0211 | 0.9356   | -193.3025 |
| 2285 | 1   | Extremo | -8.116  | -140.035 | 13.317 | -10.0211 | -5.7229  | -119.4507 |
| 2285 | 0   | Extremo | -2.733  | -138.311 | 12.836 | -21.3304 | 7.2931   | -116.8462 |
| 2285 | 0.5 | Extremo | -2.733  | -122.973 | 12.836 | -21.3304 | 0.875    | -51.525   |
| 2285 | 1   | Extremo | -2.733  | -107.636 | 12.836 | -21.3304 | -5.5431  | 6.1273    |
| 2286 | 0   | Extremo | -5.692  | -140.296 | 10.366 | -11.8831 | 5.8937   | -128.5677 |
| 2286 | 0.5 | Extremo | -5.692  | -124.959 | 10.366 | -11.8831 | 0.7106   | -62.254   |
| 2286 | 1   | Extremo | -5.692  | -109.621 | 10.366 | -11.8831 | -4.4725  | -3.6092   |
| 2286 | 0   | Extremo | -0.551  | -106.014 | 9.879  | -23.3257 | 5.596    | 15.1107   |
| 2286 | 0.5 | Extremo | -0.551  | -90.677  | 9.879  | -23.3257 | 0.6564   | 64.2835</ |



|      |     |         |        |          |          |          |         |           |
|------|-----|---------|--------|----------|----------|----------|---------|-----------|
| 2290 | 1   | Extremo | -0.378 | 45.684   | 3.917    | -24.7399 | -1.7263 | 201.5628  |
| 2290 | 0   | Extremo | 3.903  | 53.401   | 3.282    | -38.0214 | 1.8705  | 324.3547  |
| 2290 | 0.5 | Extremo | 3.903  | 68.739   | 3.282    | -38.0214 | 0.2293  | 293.82    |
| 2290 | 1   | Extremo | 3.903  | 84.076   | 3.282    | -38.0214 | -1.4119 | 255.6162  |
| 2291 | 0   | Extremo | 0.218  | 66.916   | 3.125    | -26.6365 | 1.7247  | 235.1313  |
| 2291 | 0.5 | Extremo | 0.218  | 82.254   | 3.125    | -26.6365 | 0.1624  | 197.8389  |
| 2291 | 1   | Extremo | 0.218  | 97.592   | 3.125    | -26.6365 | -1.3999 | 152.8775  |
| 2291 | 0   | Extremo | 4.202  | 107.405  | 2.392    | -39.227  | 1.384   | 306.7255  |
| 2291 | 0.5 | Extremo | 4.202  | 122.743  | 2.392    | -39.227  | 0.1881  | 249.1883  |
| 2291 | 1   | Extremo | 4.202  | 138.081  | 2.392    | -39.227  | -1.0077 | 183.9822  |
| 2292 | 0   | Extremo | 0.62   | 119.049  | 2.489    | -21.6824 | 1.3437  | 190.8216  |
| 2292 | 0.5 | Extremo | 0.62   | 134.387  | 2.489    | -21.6824 | 0.0991  | 127.4626  |
| 2292 | 1   | Extremo | 0.62   | 149.725  | 2.489    | -21.6824 | -1.1455 | 56.4346   |
| 2292 | 0   | Extremo | 4.137  | 160.816  | 1.593    | -32.3086 | 0.9807  | 238.5784  |
| 2292 | 0.5 | Extremo | 4.137  | 176.154  | 1.593    | -32.3086 | 0.1844  | 154.3359  |
| 2292 | 1   | Extremo | 4.137  | 191.492  | 1.593    | -32.3086 | -0.6119 | 62.4244   |
| 2293 | 0   | Extremo | 0.696  | 139.132  | 1.87     | -6.8142  | 0.9913  | 84.7597   |
| 2293 | 0.5 | Extremo | 0.696  | 154.47   | 1.87     | -6.8142  | 0.0563  | 11.3591   |
| 2293 | 1   | Extremo | 0.696  | 169.808  | 1.87     | -6.8142  | -0.8788 | -69.7105  |
| 2293 | 0   | Extremo | 3.314  | 176.458  | 0.755    | -13.5489 | 0.6475  | 104.0253  |
| 2293 | 0.5 | Extremo | 3.314  | 191.796  | 0.755    | -13.5489 | 0.2701  | 11.9617   |
| 2293 | 1   | Extremo | 3.314  | 207.134  | 0.755    | -13.5489 | -0.1074 | -87.7708  |
| 2294 | 0   | Extremo | 0.235  | -35.694  | 1.671    | -23.3292 | 0.6514  | -43.0635  |
| 2294 | 0.5 | Extremo | 0.235  | -20.356  | 1.671    | -23.3292 | -0.184  | -29.0512  |
| 2294 | 1   | Extremo | 0.235  | -5.018   | 1.671    | -23.3292 | -1.0195 | -22.7077  |
| 2294 | 0   | Extremo | 0.989  | -34.517  | 1.061    | -31.2252 | 0.4186  | -49.99    |
| 2294 | 0.5 | Extremo | 0.989  | -19.179  | 1.061    | -31.2252 | -0.1119 | -36.5661  |
| 2294 | 1   | Extremo | 0.989  | -3.841   | 1.061    | -31.2252 | -0.6424 | -30.8112  |
| 2295 | 0   | Extremo | 0.255  | -8.51    | -0.226   | -22.3654 | -0.0988 | -13.1342  |
| 2295 | 0.5 | Extremo | 0.255  | 6.828    | -0.226   | -22.3654 | 0.0144  | -12.7136  |
| 2295 | 1   | Extremo | 0.255  | 22.166   | -0.226   | -22.3654 | 0.1276  | -19.962   |
| 2295 | 0   | Extremo | -0.721 | -8.507   | 0.589    | -22.364  | 0.3067  | -13.133   |
| 2295 | 0.5 | Extremo | -0.721 | 6.831    | 0.589    | -22.364  | 0.0123  | -12.7138  |
| 2295 | 1   | Extremo | -0.721 | 22.168   | 0.589    | -22.364  | -0.2821 | -19.9636  |
| 2296 | 0   | Extremo | 0.709  | -145.855 | -0.071   | 17.3907  | -0.0578 | -17.4794  |
| 2296 | 0.5 | Extremo | 0.709  | -130.517 | -0.071   | 17.3907  | -0.0221 | 51.6136   |
| 2296 | 1   | Extremo | 0.709  | -115.179 | -0.071   | 17.3907  | 0.0136  | 113.0378  |
| 2296 | 0   | Extremo | -2.087 | -145.837 | 0.511    | 17.3891  | 0.375   | -17.4812  |
| 2296 | 0.5 | Extremo | -2.087 | -130.499 | 0.511    | 17.3891  | 0.1197  | 51.6027   |
| 2296 | 1   | Extremo | -2.087 | -115.161 | 0.511    | 17.3891  | -0.1356 | 113.0175  |
| 2297 | 0   | Extremo | 0.82   | -114.592 | -0.00936 | 10.1199  | -0.0277 | 129.052   |
| 2297 | 0.5 | Extremo | 0.82   | -99.254  | -0.00936 | 10.1199  | -0.0231 | 182.5133  |
| 2297 | 1   | Extremo | 0.82   | -83.916  | -0.00936 | 10.1199  | -0.0184 | 228.3057  |
| 2297 | 0   | Extremo | -2.585 | -114.57  | 0.34     | 10.119   | 0.2435  | 129.0304  |
| 2297 | 0.5 | Extremo | -2.585 | -99.232  | 0.34     | 10.119   | 0.0735  | 182.481   |
| 2297 | 1   | Extremo | -2.585 | -83.894  | 0.34     | 10.119   | -0.0965 | 228.2628  |
| 2298 | 0   | Extremo | 0.808  | -44.609  | 0.031    | 2.4853   | -0.0013 | 232.4689  |
| 2298 | 0.5 | Extremo | 0.808  | -29.271  | 0.031    | 2.4853   | -0.0168 | 250.9388  |
| 2298 | 1   | Extremo | 0.808  | -13.933  | 0.031    | 2.4853   | -0.0324 | 261.7398  |
| 2298 | 0   | Extremo | -2.738 | -44.587  | 0.219    | 2.4851   | 0.149   | 232.4254  |
| 2298 | 0.5 | Extremo | -2.738 | -29.249  | 0.219    | 2.4851   | 0.0395  | 250.8846  |
| 2298 | 1   | Extremo | -2.738 | -13.912  | 0.219    | 2.4851   | -0.0701 | 261.6748  |
| 2299 | 0   | Extremo | 0.746  | 27.778   | 0.054    | -0.4291  | 0.0139  | 261.0987  |
| 2299 | 0.5 | Extremo | 0.746  | 43.116   | 0.054    | -0.4291  | -0.0131 | 243.3753  |
| 2299 | 1   | Extremo | 0.746  | 58.454   | 0.054    | -0.4291  | -0.0402 | 217.9829  |
| 2299 | 0   | Extremo | -2.753 | 27.799   | 0.151    | -0.429   | 0.0971  | 261.0335  |
| 2299 | 0.5 | Extremo | -2.753 | 43.137   | 0.151    | -0.429   | 0.0217  | 243.2995  |
| 2299 | 1   | Extremo | -2.753 | 58.475   | 0.151    | -0.429   | -0.0537 | 217.8965  |
| 2300 | 0   | Extremo | 0.667  | 98.991   | 0.064    | -1.4374  | 0.0205  | 215.921   |
| 2300 | 0.5 | Extremo | 0.667  | 114.329  | 0.064    | -1.4374  | -0.0113 | 162.5908  |
| 2300 | 1   | Extremo | 0.667  | 129.667  | 0.064    | -1.4374  | -0.043  | 101.5918  |
| 2300 | 0   | Extremo | -2.721 | 99.013   | 0.121    | -1.4372  | 0.0715  | 215.8344  |
| 2300 | 0.5 | Extremo | -2.721 | 114.35   | 0.121    | -1.4372  | 0.0112  | 162.4937  |
| 2300 | 1   | Extremo | -2.721 | 129.688  | 0.121    | -1.4372  | -0.0491 | 101.484   |
| 2301 | 0   | Extremo | 0.588  | 171.634  | 0.062    | -3.6593  | 0.0213  | 99.1572   |
| 2301 | 0.5 | Extremo | 0.588  | 186.972  | 0.062    | -3.6593  | -0.0094 | 9.5057    |
| 2301 | 1   | Extremo | 0.588  | 202.31   | 0.062    | -3.6593  | -0.0402 | -87.8148  |
| 2301 | 0   | Extremo | -2.689 | 171.656  | 0.122    | -3.6593  | 0.0628  | 99.0494   |
| 2301 | 0.5 | Extremo | -2.689 | 186.993  | 0.122    | -3.6593  | 0.0019  | 9.3871    |
| 2301 | 1   | Extremo | -2.689 | 202.331  | 0.122    | -3.6593  | -0.059  | -87.9441  |
| 2302 | 0   | Extremo | 0.524  | 248.698  | 0.047    | -13.109  | 0.0183  | -91.6942  |
| 2302 | 0.5 | Extremo | 0.524  | 264.036  | 0.047    | -13.109  | -0.0049 | -219.8775 |

|      |     |         |        |          |          |          |         |           |
|------|-----|---------|--------|----------|----------|----------|---------|-----------|
| 2302 | 1   | Extremo | 0.524  | 279.373  | 0.047    | -13.109  | -0.0282 | -355.7297 |
| 2302 | 0   | Extremo | -2.701 | 248.72   | 0.157    | -13.1098 | 0.0666  | -91.8236  |
| 2302 | 0.5 | Extremo | -2.701 | 264.058  | 0.157    | -13.1098 | -0.0119 | -220.018  |
| 2302 | 1   | Extremo | -2.701 | 279.396  | 0.157    | -13.1098 | -0.0904 | -355.8813 |
| 2303 | 0   | Extremo | 0.504  | 316.455  | 0.013    | -39.0621 | 0.015   | -370.67   |
| 2303 | 0.5 | Extremo | 0.504  | 331.793  | 0.013    | -39.0621 | 0.0085  | -532.7319 |
| 2303 | 1   | Extremo | 0.504  | 347.131  | 0.013    | -39.0621 | 0.0021  | -702.4626 |
| 2303 | 0   | Extremo | -2.835 | 316.477  | 0.238    | -39.0651 | 0.0809  | -370.8225 |
| 2303 | 0.5 | Extremo | -2.835 | 331.815  | 0.238    | -39.0651 | -0.0379 | -532.8954 |
| 2303 | 1   | Extremo | -2.835 | 347.153  | 0.238    | -39.0651 | -0.1567 | -702.6372 |
| 2304 | 0   | Extremo | 0.591  | 255.355  | -0.03    | -63.5244 | 0.0262  | -750.5458 |
| 2304 | 0.5 | Extremo | 0.591  | 270.693  | -0.03    | -63.5244 | 0.0411  | -882.0577 |
| 2304 | 1   | Extremo | 0.591  | 286.03   | -0.03    | -63.5244 | 0.056   | -1021.238 |
| 2304 | 0   | Extremo | -3.269 | 255.366  | 0.355    | -63.5298 | 0.1058  | -750.7242 |
| 2304 | 0.5 | Extremo | -3.269 | 270.704  | 0.355    | -63.5298 | -0.0716 | -882.2417 |
| 2304 | 1   | Extremo | -3.269 | 286.042  | 0.355    | -63.5298 | -0.2491 | -1021.428 |
| 2305 | 0   | Extremo | 0.891  | -358.241 | 0.162    | 76.4327  | 0.064   | -1015.953 |
| 2305 | 0.5 | Extremo | 0.891  | -342.903 | 0.162    | 76.4327  | -0.0167 | -840.6664 |
| 2305 | 1   | Extremo | 0.891  | -327.565 | 0.162    | 76.4327  | -0.0975 | -673.493  |
| 2305 | 0   | Extremo | -4.416 | -358.285 | 0.293    | 76.4384  | 0.2279  | -1016.142 |
| 2305 | 0.5 | Extremo | -4.416 | -342.948 | 0.293    | 76.4384  | 0.0814  | -840.8336 |
| 2305 | 1   | Extremo | -4.416 | -327.61  | 0.293    | 76.4384  | -0.0651 | -673.1943 |
| 2306 | 0   | Extremo | 0.886  | -419.346 | 0.208    | 51.6494  | 0.0671  | -614.4865 |
| 2306 | 0.5 | Extremo | 0.886  | -404.008 | 0.208    | 51.6494  | -0.037  | -408.648  |
| 2306 | 1   | Extremo | 0.886  | -388.67  | 0.208    | 51.6494  | -0.1411 | -210.4786 |
| 2306 | 0   | Extremo | -4.827 | -419.401 | 0.161    | 51.6527  | 0.144   | -614.6268 |
| 2306 | 0.5 | Extremo | -4.827 | -404.063 | 0.161    | 51.6527  | 0.0635  | -408.7609 |
| 2306 | 1   | Extremo | -4.827 | -388.725 | 0.161    | 51.6527  | -0.017  | -210.564  |
| 2307 | 0   | Extremo | 0.775  | -351.597 | 0.238    | 24.9816  | 0.0786  | -185.365  |
| 2307 | 0.5 | Extremo | 0.775  | -336.259 | 0.238    | 24.9816  | -0.0401 | -13.4012  |
| 2307 | 1   | Extremo | 0.775  | -320.921 | 0.238    | 24.9816  | -0.1589 | 150.8937  |
| 2307 | 0   | Extremo | -4.942 | -351.652 | 0.066    | 24.9827  | 0.0762  | -185.4486 |
| 2307 | 0.5 | Extremo | -4.942 | -336.314 | 0.066    | 24.9827  | 0.0433  | -13.4573  |
| 2307 | 1   | Extremo | -4.942 | -320.976 | 0.066    | 24.9827  | 0.0104  | 150.8651  |
| 2308 | 0   | Extremo | 0.62   | -274.573 | 0.256    | 14.2964  | 0.0855  | 164.3292  |
| 2308 | 0.5 | Extremo | 0.62   | -259.235 | 0.256    | 14.2964  | -0.0423 | 297.7813  |
| 2308 | 1   | Extremo | 0.62   | -243.897 | 0.256    | 14.2964  | -0.1701 | 423.5645  |
| 2308 | 0   | Extremo | -4.937 | -274.627 | 0.009016 | 14.2966  | 0.0378  | 164.3016  |
| 2308 | 0.5 | Extremo | -4.937 | -259.29  | 0.009016 | 14.2966  | 0.0333  | 297.7809  |
| 2308 | 1   | Extremo | -4.937 | -243.952 | 0.009016 | 14.2966  | 0.0288  | 423.5912  |
| 2309 | 0   | Extremo | 0.448  | -202.181 | 0.266    | 10.243   | 0.0874  | 434.4565  |
| 2309 | 0.5 | Extremo | 0.448  | -186.843 | 0.266    | 10.243   | -0.0456 | 531.7126  |
| 2309 | 1   | Extremo | 0.448  | -171.505 | 0.266    | 10.243   | -0.1786 | 621.2997  |
| 2309 | 0   | Extremo | -4.884 | -202.235 | -0.024   | 10.2431  | 0.0172  | 434.4842  |
| 2309 | 0.5 | Extremo | -4.884 | -186.897 | -0.024   | 10.2431  | 0.0291  | 531.7673  |
| 2309 | 1   | Extremo | -4.884 | -171.559 | -0.024   | 10.2431  | 0.041   | 621.3815  |
| 2310 | 0   | Extremo | 0.27   | -132.026 | 0.271    | 7.1616   | 0.0861  | 630.0956  |
| 2310 | 0.5 | Extremo | 0.27   | -116.688 | 0.271    | 7.1616   | -0.0496 | 692.274   |
| 2310 | 1   | Extremo | 0.27   | -101.35  | 0.271    | 7.1616   | -0.1853 | 746.7834  |
| 2310 | 0   | Extremo | -4.814 | -132.08  | -0.042   | 7.1618   | 0.0064  | 630.1785  |
| 2310 | 0.5 | Extremo | -4.814 | -116.742 | -0.042   | 7.1618   | 0.0276  | 692.3839  |
| 2310 | 1   | Extremo | -4.814 | -101.404 | -0.042   | 7.1618   | 0.0489  | 746.9203  |
| 2311 | 0   | Extremo | 0.089  | -62.355  | 0.274    | 3.5432   | 0.0831  | 752.2756  |
| 2311 | 0.5 | Extremo | 0.089  | -47.017  | 0.274    | 3.5432   | -0.0539 | 779.6185  |
| 2311 | 1   | Extremo | 0.089  | -31.679  | 0.274    | 3.5432   | -0.191  | 799.2924  |
| 2311 | 0   | Extremo | -4.739 | -62.409  | -0.052   | 3.5434   | 0.0012  | 752.4137  |
| 2311 | 0.5 | Extremo | -4.739 | -47.071  | -0.052   | 3.5434   |         |           |



|      |     |         |        |          |          |          |         |           |
|------|-----|---------|--------|----------|----------|----------|---------|-----------|
| 2314 | 1   | Extremo | -0.458 | 177.214  | 0.269    | -7.7353  | -0.2012 | 513.8744  |
| 2314 | 0   | Extremo | -4.51  | 146.485  | -0.046   | -7.7357  | 0.0046  | 676.0541  |
| 2314 | 0.5 | Extremo | -4.51  | 161.822  | -0.046   | -7.7357  | 0.0276  | 598.9774  |
| 2314 | 1   | Extremo | -4.51  | 177.16   | -0.046   | -7.7357  | 0.0505  | 514.2317  |
| 2315 | 0   | Extremo | -0.64  | 216.687  | 0.261    | -10.2959 | 0.0602  | 503.9475  |
| 2315 | 0.5 | Extremo | -0.64  | 232.025  | 0.261    | -10.2959 | -0.0705 | 391.7693  |
| 2315 | 1   | Extremo | -0.64  | 247.363  | 0.261    | -10.2959 | -0.2011 | 271.9222  |
| 2315 | 0   | Extremo | -4.44  | 216.633  | -0.029   | -10.2966 | 0.0115  | 504.3053  |
| 2315 | 0.5 | Extremo | -4.44  | 231.971  | -0.029   | -10.2966 | 0.0261  | 392.1542  |
| 2315 | 1   | Extremo | -4.44  | 247.309  | -0.029   | -10.2966 | 0.0407  | 272.3343  |
| 2316 | 0   | Extremo | -0.816 | 289.391  | 0.248    | -13.8771 | 0.0515  | 260.5225  |
| 2316 | 0.5 | Extremo | -0.816 | 304.729  | 0.248    | -13.8771 | -0.0726 | 111.9924  |
| 2316 | 1   | Extremo | -0.816 | 320.067  | 0.248    | -13.8771 | -0.1968 | -44.2067  |
| 2316 | 0   | Extremo | -4.386 | 289.336  | 0.001517 | -13.8775 | 0.0226  | 260.9345  |
| 2316 | 0.5 | Extremo | -4.386 | 304.674  | 0.001517 | -13.8775 | 0.0218  | 112.432   |
| 2316 | 1   | Extremo | -4.386 | 320.012  | 0.001517 | -13.8775 | 0.0211  | -43.7394  |
| 2317 | 0   | Extremo | -0.975 | 367.42   | 0.226    | -25.0161 | 0.0416  | -57.5238  |
| 2317 | 0.5 | Extremo | -0.975 | 382.758  | 0.226    | -25.0161 | -0.0712 | -245.0682 |
| 2317 | 1   | Extremo | -0.975 | 398.096  | 0.226    | -25.0161 | -0.184  | -440.2814 |
| 2317 | 0   | Extremo | -4.381 | 367.362  | 0.056    | -25.0137 | 0.0393  | -57.0567  |
| 2317 | 0.5 | Extremo | -4.381 | 382.7    | 0.056    | -25.0137 | 0.0114  | -244.5722 |
| 2317 | 1   | Extremo | -4.381 | 398.038  | 0.056    | -25.0137 | -0.0166 | -439.7568 |
| 2318 | 0   | Extremo | -1.09  | 434.725  | 0.185    | -54.527  | 0.034   | -465.9852 |
| 2318 | 0.5 | Extremo | -1.09  | 450.063  | 0.185    | -54.527  | -0.0587 | -687.1821 |
| 2318 | 1   | Extremo | -1.09  | 465.401  | 0.185    | -54.527  | -0.1515 | -916.0481 |
| 2318 | 0   | Extremo | -4.496 | 434.668  | 0.149    | -54.517  | 0.0631  | -465.4578 |
| 2318 | 0.5 | Extremo | -4.496 | 450.006  | 0.149    | -54.517  | -0.0116 | -686.6261 |
| 2318 | 1   | Extremo | -4.496 | 465.343  | 0.149    | -54.517  | -0.0862 | -915.4633 |
| 2319 | 0   | Extremo | -1.101 | 353.202  | 0.139    | -81.8317 | 0.0489  | -979.2147 |
| 2319 | 0.5 | Extremo | -1.101 | 368.54   | 0.139    | -81.8317 | -0.0207 | -1159.65  |
| 2319 | 1   | Extremo | -1.101 | 383.878  | 0.139    | -81.8317 | -0.0903 | -1347.755 |
| 2319 | 0   | Extremo | -4.909 | 353.18   | 0.276    | -81.814  | 0.0976  | -978.6179 |
| 2319 | 0.5 | Extremo | -4.909 | 368.518  | 0.276    | -81.814  | -0.0405 | -1159.043 |
| 2319 | 1   | Extremo | -4.909 | 383.856  | 0.276    | -81.814  | -0.1785 | -1347.136 |
| 2320 | 0   | Extremo | -0.915 | -366.488 | 0.393    | 81.0579  | 0.1145  | -1348.197 |
| 2320 | 0.5 | Extremo | -0.915 | -351.151 | 0.393    | 81.0579  | -0.082  | -1168.787 |
| 2320 | 1   | Extremo | -0.915 | -335.813 | 0.393    | 81.0579  | -0.2785 | -997.0464 |
| 2320 | 0   | Extremo | -6.039 | -366.324 | 0.245    | 81.0386  | 0.2363  | -1347.58  |
| 2320 | 0.5 | Extremo | -6.039 | -350.986 | 0.245    | 81.0386  | 0.1139  | -1168.253 |
| 2320 | 1   | Extremo | -6.039 | -335.649 | 0.245    | 81.0386  | -0.0085 | -996.5938 |
| 2321 | 0   | Extremo | -1.05  | -448.011 | 0.438    | 53.7565  | 0.1041  | -934.7628 |
| 2321 | 0.5 | Extremo | -1.05  | -432.673 | 0.438    | 53.7565  | -0.1147 | -714.5918 |
| 2321 | 1   | Extremo | -1.05  | -417.335 | 0.438    | 53.7565  | -0.3336 | -502.0897 |
| 2321 | 0   | Extremo | -6.436 | -447.811 | 0.118    | 53.7449  | 0.1526  | -934.3262 |
| 2321 | 0.5 | Extremo | -6.436 | -432.474 | 0.118    | 53.7449  | 0.0937  | -714.2549 |
| 2321 | 1   | Extremo | -6.436 | -417.136 | 0.118    | 53.7449  | 0.0347  | -501.8526 |
| 2322 | 0   | Extremo | -1.293 | -380.706 | 0.464    | 24.2533  | 0.1079  | -477.2661 |
| 2322 | 0.5 | Extremo | -1.293 | -365.368 | 0.464    | 24.2533  | -0.1241 | -290.7477 |
| 2322 | 1   | Extremo | -1.293 | -350.03  | 0.464    | 24.2533  | -0.356  | -111.8982 |
| 2322 | 0   | Extremo | -6.535 | -380.506 | 0.026    | 24.2495  | 0.0864  | -477.0357 |
| 2322 | 0.5 | Extremo | -6.535 | -365.168 | 0.026    | 24.2495  | 0.0734  | -290.6171 |
| 2322 | 1   | Extremo | -6.535 | -349.83  | 0.026    | 24.2495  | 0.0605  | -111.8676 |
| 2323 | 0   | Extremo | -1.58  | -302.678 | 0.48     | 13.1288  | 0.1094  | -99.4554  |
| 2323 | 0.5 | Extremo | -1.58  | -287.34  | 0.48     | 13.1288  | -0.1306 | 48.0489   |
| 2323 | 1   | Extremo | -1.58  | -272.002 | 0.48     | 13.1288  | -0.3707 | 187.8843  |
| 2323 | 0   | Extremo | -6.514 | -302.48  | -0.028   | 13.1277  | 0.0499  | -99.4284  |
| 2323 | 0.5 | Extremo | -6.514 | -287.142 | -0.028   | 13.1277  | 0.064   | 47.9771   |
| 2323 | 1   | Extremo | -6.514 | -271.804 | -0.028   | 13.1277  | 0.078   | 187.7138  |
| 2324 | 0   | Extremo | -1.883 | -229.975 | 0.489    | 9.5728   | 0.1066  | 198.4203  |
| 2324 | 0.5 | Extremo | -1.883 | -214.637 | 0.489    | 9.5728   | -0.1379 | 309.5734  |
| 2324 | 1   | Extremo | -1.883 | -199.299 | 0.489    | 9.5728   | -0.3824 | 413.0576  |
| 2324 | 0   | Extremo | -6.445 | -229.779 | -0.059   | 9.5721   | 0.0309  | 198.246   |
| 2324 | 0.5 | Extremo | -6.445 | -214.441 | -0.059   | 9.5721   | 0.0603  | 309.3008  |
| 2324 | 1   | Extremo | -6.445 | -199.103 | -0.059   | 9.5721   | 0.0897  | 412.6867  |
| 2325 | 0   | Extremo | -2.194 | -159.83  | 0.493    | 7.0559   | 0.101   | 422.1393  |
| 2325 | 0.5 | Extremo | -2.194 | -144.492 | 0.493    | 7.0559   | -0.1458 | 498.2199  |
| 2325 | 1   | Extremo | -2.194 | -129.155 | 0.493    | 7.0559   | -0.3925 | 566.6317  |
| 2325 | 0   | Extremo | -6.359 | -159.634 | -0.076   | 7.0552   | 0.0215  | 421.7641  |
| 2325 | 0.5 | Extremo | -6.359 | -144.296 | -0.076   | 7.0552   | 0.0594  | 497.7467  |
| 2325 | 1   | Extremo | -6.359 | -128.958 | -0.076   | 7.0552   | 0.0973  | 566.0603  |
| 2326 | 0   | Extremo | -2.507 | -90.222  | 0.495    | 3.837    | 0.0937  | 572.8114  |
| 2326 | 0.5 | Extremo | -2.507 | -74.884  | 0.495    | 3.837    | -0.1539 | 614.0879  |

|      |     |         |          |          |        |          |           |           |
|------|-----|---------|----------|----------|--------|----------|-----------|-----------|
| 2326 | 1   | Extremo | -2.507   | -59.546  | 0.495  | 3.837    | -0.4015   | 647.6955  |
| 2326 | 0   | Extremo | -6.267   | -90.026  | -0.084 | 3.8363   | 0.0176    | 572.2355  |
| 2326 | 0.5 | Extremo | -6.267   | -74.688  | -0.084 | 3.8363   | 0.0597    | 613.4139  |
| 2326 | 1   | Extremo | -6.267   | -59.35   | -0.084 | 3.8363   | 0.1018    | 646.9233  |
| 2327 | 0   | Extremo | -2.822   | -20.617  | 0.495  | 0.0287   | 0.0853    | 649.9523  |
| 2327 | 0.5 | Extremo | -2.822   | -5.279   | 0.495  | 0.0287   | -0.1622   | 656.4264  |
| 2327 | 1   | Extremo | -2.822   | 10.059   | 0.495  | 0.0287   | -0.4096   | 655.2316  |
| 2327 | 0   | Extremo | -6.173   | -20.421  | -0.087 | 0.0283   | 0.0171    | 649.1757  |
| 2327 | 0.5 | Extremo | -6.173   | -5.083   | -0.087 | 0.0283   | 0.0605    | 655.5516  |
| 2327 | 1   | Extremo | -6.173   | 10.255   | -0.087 | 0.0283   | 0.1039    | 654.2587  |
| 2328 | 0   | Extremo | -3.137   | 48.988   | 0.493  | -3.7926  | 0.076     | 653.2307  |
| 2328 | 0.5 | Extremo | -3.137   | 64.326   | 0.493  | -3.7926  | -0.1703   | 624.9021  |
| 2328 | 1   | Extremo | -3.137   | 79.664   | 0.493  | -3.7926  | -0.4166   | 588.9046  |
| 2328 | 0   | Extremo | -6.08    | 49.185   | -0.084 | -3.7923  | 0.0192    | 652.2537  |
| 2328 | 0.5 | Extremo | -6.08    | 64.522   | -0.084 | -3.7923  | 0.0612    | 623.827   |
| 2328 | 1   | Extremo | -6.08    | 79.86    | -0.084 | -3.7923  | 0.1033    | 587.7313  |
| 2329 | 0   | Extremo | -3.453   | 118.595  | 0.488  | -7.0492  | 0.0658    | 582.9577  |
| 2329 | 0.5 | Extremo | -3.453   | 133.933  | 0.488  | -7.0492  | -0.1782   | 519.8258  |
| 2329 | 1   | Extremo | -3.453   | 149.271  | 0.488  | -7.0492  | -0.4222   | 449.025   |
| 2329 | 0   | Extremo | -5.988   | 118.791  | -0.075 | -7.0477  | 0.0238    | 581.7811  |
| 2329 | 0.5 | Extremo | -5.988   | 134.129  | -0.075 | -7.0477  | 0.0615    | 518.551   |
| 2329 | 1   | Extremo | -5.988   | 149.467  | -0.075 | -7.0477  | 0.0993    | 447.6519  |
| 2330 | 0   | Extremo | -3.768   | 188.715  | 0.48   | -9.6132  | 0.0545    | 440.1235  |
| 2330 | 0.5 | Extremo | -3.768   | 204.053  | 0.48   | -9.6132  | -0.1855   | 341.9313  |
| 2330 | 1   | Extremo | -3.768   | 219.391  | 0.48   | -9.6132  | -0.4254   | 236.0702  |
| 2330 | 0   | Extremo | -5.901   | 188.913  | -0.058 | -9.6107  | 0.0314    | 438.7486  |
| 2330 | 0.5 | Extremo | -5.901   | 204.251  | -0.058 | -9.6107  | 0.0606    | 340.4578  |
| 2330 | 1   | Extremo | -5.901   | 219.589  | -0.058 | -9.6107  | 0.0897    | 234.498   |
| 2331 | 0   | Extremo | -4.077   | 261.308  | 0.466  | -13.155  | 0.0419    | 225.6333  |
| 2331 | 0.5 | Extremo | -4.077   | 276.645  | 0.466  | -13.155  | -0.1913   | 91.145    |
| 2331 | 1   | Extremo | -4.077   | 291.983  | 0.466  | -13.155  | -0.4244   | -51.0122  |
| 2331 | 0   | Extremo | -5.831   | 261.509  | -0.027 | -13.1537 | 0.0431    | 224.0613  |
| 2331 | 0.5 | Extremo | -5.831   | 276.846  | -0.027 | -13.1537 | 0.0568    | 89.4725   |
| 2331 | 1   | Extremo | -5.831   | 292.184  | -0.027 | -13.1537 | 0.0705    | -52.7852  |
| 2332 | 0   | Extremo | -4.369   | 339.058  | 0.443  | -23.9911 | 0.0283    | -63.3943  |
| 2332 | 0.5 | Extremo | -4.369   | 354.396  | 0.443  | -23.9911 | -0.1931   | -236.7576 |
| 2332 | 1   | Extremo | -4.369   | 369.733  | 0.443  | -23.9911 | -0.4145   | -417.7899 |
| 2332 | 0   | Extremo | -5.81    | 339.267  | 0.027  | -23.9997 | 0.0606    | -65.1666  |
| 2332 | 0.5 | Extremo | -5.81    | 354.605  | 0.027  | -23.9997 | 0.0471    | -238.6347 |
| 2332 | 1   | Extremo | -5.81    | 369.943  | 0.027  | -23.9997 | 0.0335    | -419.7717 |
| 2333 | 0   | Extremo | -4.618   | 406.401  | 0.401  | -52.5995 | 0.0183    | -442.2352 |
| 2333 | 0.5 | Extremo | -4.618   | 421.739  | 0.401  | -52.5995 | -0.1822   | -649.2703 |
| 2333 | 1   | Extremo | -4.618   | 437.077  | 0.401  | -52.5995 | -0.3826   | -863.9743 |
| 2333 | 0   | Extremo | -5.909   | 406.61   | 0.12   | -52.6367 | 0.0855    | -444.2269 |
| 2333 | 0.5 | Extremo | -5.909   | 421.948  | 0.12   | -52.6367 | 0.0255    | -651.3665 |
| 2333 | 1   | Extremo | -5.909   | 437.286  | 0.12   | -52.6367 | -0.0345   | -866.1749 |
| 2334 | 0   | Extremo | -4.762   | 329.35   | 0.354  | -79.0199 | 0.0374    | -924.7666 |
| 2334 | 0.5 | Extremo | -4.762   | 344.688  | 0.354  | -79.0199 | -0.1397   | -1093.276 |
| 2334 | 1   | Extremo | -4.762   | 360.026  | 0.354  | -79.0199 | -0.3169   | -1269.455 |
| 2334 | 0   | Extremo | -6.306   | 329.426  | 0.247  | -79.0858 | 0.1239    | -927.0119 |
| 2334 | 0.5 | Extremo | -6.306   | 344.764  | 0.247  | -79.0858 | 0.0003976 | -1095.56  |
| 2334 | 1   | Extremo | -6.306   | 360.102  | 0.247  | -79.0858 | -0.1231   | -1271.776 |
| 2335 | 0   | Extremo | -4.724   | -366.885 | 0.67   | 79.1156  | 0.1295    | -1269.353 |
| 2335 | 0.5 | Extremo | -4.724   | -351.547 | 0.67   | 79.1156  | -0.2053   | -1089.745 |
| 2335 | 1   | Extremo | -4.724   | -336.209 | 0.67   | 79.1156  | -0.5401   | -917.8061 |
| 2335 | 0   | Extremo | -7.426   | -367.507 | 0.241  | 79.1885  | 0.2758    | -1271.667 |
| 2335 | 0.5 | Extremo | -7.426</ |          |        |          |           |           |



|      |     |         |         |          |        |           |         |           |
|------|-----|---------|---------|----------|--------|-----------|---------|-----------|
| 2338 | 1   | Extremo | -5.881  | -268.167 | 0.754  | 13.2442   | -0.6556 | 253.7771  |
| 2338 | 0   | Extremo | -7.892  | -299.59  | -0.033 | 13.2493   | 0.0847  | -29.8094  |
| 2338 | 0.5 | Extremo | -7.892  | -284.252 | -0.033 | 13.2493   | 0.101   | 116.1511  |
| 2338 | 1   | Extremo | -7.892  | -268.914 | -0.033 | 13.2493   | 0.1173  | 254.4426  |
| 2339 | 0   | Extremo | -6.349  | -226.252 | 0.762  | 9.6963    | 0.0902  | 264.4118  |
| 2339 | 0.5 | Extremo | -6.349  | -210.914 | 0.762  | 9.6963    | -0.2908 | 373.7031  |
| 2339 | 1   | Extremo | -6.349  | -196.576 | 0.762  | 9.6963    | -0.6719 | 475.3255  |
| 2339 | 0   | Extremo | -7.82   | -226.995 | -0.063 | 9.6998    | 0.0656  | 265.0923  |
| 2339 | 0.5 | Extremo | -7.82   | -211.657 | -0.063 | 9.6998    | 0.0974  | 374.7552  |
| 2339 | 1   | Extremo | -7.82   | -196.319 | -0.063 | 9.6998    | 0.1291  | 476.7492  |
| 2340 | 0   | Extremo | -6.824  | -156.132 | 0.766  | 7.1222    | 0.0797  | 484.4201  |
| 2340 | 0.5 | Extremo | -6.824  | -140.794 | 0.766  | 7.1222    | -0.3034 | 558.6515  |
| 2340 | 1   | Extremo | -6.824  | -126.456 | 0.766  | 7.1222    | -0.6866 | 625.214   |
| 2340 | 0   | Extremo | -7.73   | -156.874 | -0.081 | 7.1259    | 0.0562  | 485.8605  |
| 2340 | 0.5 | Extremo | -7.73   | -141.536 | -0.081 | 7.1259    | 0.0965  | 560.4631  |
| 2340 | 1   | Extremo | -7.73   | -126.198 | -0.081 | 7.1259    | 0.1368  | 627.3967  |
| 2341 | 0   | Extremo | -7.302  | -86.526  | 0.768  | 3.849     | 0.0676  | 631.3463  |
| 2341 | 0.5 | Extremo | -7.302  | -71.188  | 0.768  | 3.849     | -0.3163 | 670.7747  |
| 2341 | 1   | Extremo | -7.302  | -55.85   | 0.768  | 3.849     | -0.7002 | 702.5342  |
| 2341 | 0   | Extremo | -7.635  | -87.268  | -0.089 | 3.8526    | 0.0523  | 633.5466  |
| 2341 | 0.5 | Extremo | -7.635  | -71.93   | -0.089 | 3.8526    | 0.0969  | 673.3462  |
| 2341 | 1   | Extremo | -7.635  | -56.592  | -0.089 | 3.8526    | 0.1414  | 705.4768  |
| 2342 | 0   | Extremo | -7.781  | -16.921  | 0.767  | 0.0005537 | 0.0544  | 704.7071  |
| 2342 | 0.5 | Extremo | -7.781  | -1.583   | 0.767  | 0.0005537 | -0.3292 | 709.3329  |
| 2342 | 1   | Extremo | -7.781  | 13.755   | 0.767  | 0.0005537 | -0.7128 | 706.2897  |
| 2342 | 0   | Extremo | -7.539  | -17.663  | -0.092 | 0.0028    | 0.0519  | 707.667   |
| 2342 | 0.5 | Extremo | -7.539  | -2.325   | -0.092 | 0.0028    | 0.0977  | 712.664   |
| 2342 | 1   | Extremo | -7.539  | 13.013   | -0.092 | 0.0028    | 0.1436  | 709.992   |
| 2343 | 0   | Extremo | -8.261  | 52.685   | 0.765  | -3.8508   | 0.0403  | 704.1815  |
| 2343 | 0.5 | Extremo | -8.261  | 68.022   | 0.765  | -3.8508   | -0.342  | 674.0047  |
| 2343 | 1   | Extremo | -8.261  | 83.36    | 0.765  | -3.8508   | -0.7244 | 636.1591  |
| 2343 | 0   | Extremo | -7.442  | 51.942   | -0.089 | -3.8515   | 0.054   | 707.8996  |
| 2343 | 0.5 | Extremo | -7.442  | 67.28    | -0.089 | -3.8515   | 0.0986  | 678.094   |
| 2343 | 1   | Extremo | -7.442  | 82.618   | -0.089 | -3.8515   | 0.1431  | 640.6195  |
| 2344 | 0   | Extremo | -8.742  | 122.289  | 0.76   | -7.1316   | 0.0254  | 630.0857  |
| 2344 | 0.5 | Extremo | -8.742  | 137.626  | 0.76   | -7.1316   | -0.3545 | 565.1069  |
| 2344 | 1   | Extremo | -8.742  | 152.964  | 0.76   | -7.1316   | -0.7345 | 492.4592  |
| 2344 | 0   | Extremo | -7.347  | 121.546  | -0.081 | -7.137    | 0.0587  | 634.5588  |
| 2344 | 0.5 | Extremo | -7.347  | 136.884  | -0.081 | -7.137    | 0.0989  | 569.9514  |
| 2344 | 1   | Extremo | -7.347  | 152.222  | -0.081 | -7.137    | 0.1392  | 497.6751  |
| 2345 | 0   | Extremo | -9.221  | 192.398  | 0.752  | -9.7126   | 0.0093  | 483.4107  |
| 2345 | 0.5 | Extremo | -9.221  | 207.736  | 0.752  | -9.7126   | -0.3664 | 383.377   |
| 2345 | 1   | Extremo | -9.221  | 223.074  | 0.752  | -9.7126   | -0.7422 | 275.6744  |
| 2345 | 0   | Extremo | -7.258  | 191.652  | -0.063 | -9.7226   | 0.0664  | 488.6334  |
| 2345 | 0.5 | Extremo | -7.258  | 206.99   | -0.063 | -9.7226   | 0.0981  | 388.9727  |
| 2345 | 1   | Extremo | -7.258  | 222.328  | -0.063 | -9.7226   | 0.1298  | 281.6431  |
| 2346 | 0   | Extremo | -9.696  | 264.952  | 0.738  | -13.2428  | -0.008  | 265.0673  |
| 2346 | 0.5 | Extremo | -9.696  | 280.29   | 0.738  | -13.2428  | -0.3768 | 128.7567  |
| 2346 | 1   | Extremo | -9.696  | 295.628  | 0.738  | -13.2428  | -0.7456 | -15.2228  |
| 2346 | 0   | Extremo | -7.186  | 264.193  | -0.033 | -13.2495  | 0.0782  | 271.0344  |
| 2346 | 0.5 | Extremo | -7.186  | 279.531  | -0.033 | -13.2495  | 0.0945  | 135.1034  |
| 2346 | 1   | Extremo | -7.186  | 294.869  | -0.033 | -13.2495  | 0.1109  | -8.4966   |
| 2347 | 0   | Extremo | -10.153 | 342.611  | 0.713  | -23.9733  | -0.0261 | -27.7784  |
| 2347 | 0.5 | Extremo | -10.153 | 357.949  | 0.713  | -23.9733  | -0.3828 | -202.9185 |
| 2347 | 1   | Extremo | -10.153 | 373.287  | 0.713  | -23.9733  | -0.7396 | -385.7275 |
| 2347 | 0   | Extremo | -7.161  | 341.82   | 0.022  | -23.9445  | 0.0958  | -21.0565  |
| 2347 | 0.5 | Extremo | -7.161  | 357.158  | 0.022  | -23.9445  | 0.0851  | -195.801  |
| 2347 | 1   | Extremo | -7.161  | 372.496  | 0.022  | -23.9445  | 0.0743  | -378.2144 |
| 2348 | 0   | Extremo | -10.568 | 409.96   | 0.67   | -52.28    | -0.0396 | -410.233  |
| 2348 | 0.5 | Extremo | -10.568 | 425.298  | 0.67   | -52.28    | -0.3747 | -619.0477 |
| 2348 | 1   | Extremo | -10.568 | 440.636  | 0.67   | -52.28    | -0.7098 | -835.5313 |
| 2348 | 0   | Extremo | -7.258  | 409.173  | 0.114  | -52.1461  | 0.1215  | -402.6858 |
| 2348 | 0.5 | Extremo | -7.258  | 424.51   | 0.114  | -52.1461  | 0.0646  | -611.1065 |
| 2348 | 1   | Extremo | -7.258  | 439.848  | 0.114  | -52.1461  | 0.0076  | -827.1962 |
| 2349 | 0   | Extremo | -10.878 | 334.272  | 0.624  | -78.3945  | -0.0181 | -896.0191 |
| 2349 | 0.5 | Extremo | -10.878 | 349.61   | 0.624  | -78.3945  | -0.33   | -1066.99  |
| 2349 | 1   | Extremo | -10.878 | 364.948  | 0.624  | -78.3945  | -0.6419 | -1245.629 |
| 2349 | 0   | Extremo | -7.653  | 333.986  | 0.241  | -78.1558  | 0.1638  | -887.521  |
| 2349 | 0.5 | Extremo | -7.653  | 349.323  | 0.241  | -78.1558  | 0.0433  | -1058.348 |
| 2349 | 1   | Extremo | -7.653  | 364.661  | 0.241  | -78.1558  | -0.0773 | -1236.844 |
| 2350 | 0   | Extremo | -11.019 | -354.793 | 0.992  | 78.3272   | 0.0956  | -1245.754 |
| 2350 | 0.5 | Extremo | -11.019 | -339.455 | 0.992  | 78.3272   | -0.4005 | -1072.192 |

|      |     |         |         |          |        |         |         |           |
|------|-----|---------|---------|----------|--------|---------|---------|-----------|
| 2350 | 1   | Extremo | -11.019 | -324.117 | 0.992  | 78.3272 | -0.8967 | -906.2992 |
| 2350 | 0   | Extremo | -8.779  | -352.448 | 0.264  | 78.0389 | 0.3299  | -1237.007 |
| 2350 | 0.5 | Extremo | -8.779  | -337.11  | 0.264  | 78.0389 | 0.198   | -1064.617 |
| 2350 | 1   | Extremo | -8.779  | -321.772 | 0.264  | 78.0389 | 0.066   | -899.8964 |
| 2351 | 0   | Extremo | -11.511 | -430.48  | 1.037  | 52.2139 | 0.0598  | -846.06   |
| 2351 | 0.5 | Extremo | -11.511 | -415.142 | 1.037  | 52.2139 | -0.4586 | -634.6543 |
| 2351 | 1   | Extremo | -11.511 | -399.805 | 1.037  | 52.2139 | -0.9769 | -430.9176 |
| 2351 | 0   | Extremo | -9.185  | -427.635 | 0.137  | 52.0308 | 0.2389  | -839.8955 |
| 2351 | 0.5 | Extremo | -9.185  | -412.297 | 0.137  | 52.0308 | 0.1704  | -629.9125 |
| 2351 | 1   | Extremo | -9.185  | -396.959 | 0.137  | 52.0308 | 0.1019  | -427.5985 |
| 2352 | 0   | Extremo | -12.11  | -363.131 | 1.06   | 23.9099 | 0.0479  | -406.6597 |
| 2352 | 0.5 | Extremo | -12.11  | -347.793 | 1.06   | 23.9099 | -0.4821 | -228.9289 |
| 2352 | 1   | Extremo | -12.11  | -332.455 | 1.06   | 23.9099 | -1.0122 | -58.8669  |
| 2352 | 0   | Extremo | -9.294  | -360.282 | 0.044  | 23.8326 | 0.1698  | -403.4498 |
| 2352 | 0.5 | Extremo | -9.294  | -344.944 | 0.044  | 23.8326 | 0.1479  | -227.1433 |
| 2352 | 1   | Extremo | -9.294  | -329.606 | 0.044  | 23.8326 | 0.126   | -58.5058  |
| 2353 | 0   | Extremo | -12.753 | -285.471 | 1.075  | 13.184  | 0.0378  | -46.5568  |
| 2353 | 0.5 | Extremo | -12.753 | -270.133 | 1.075  | 13.184  | -0.4998 | 92.344    |
| 2353 | 1   | Extremo | -12.753 | -254.795 | 1.075  | 13.184  | -1.0374 | 223.576   |
| 2353 | 0   | Extremo | -9.281  | -282.654 | -0.01  | 13.1435 | 0.1325  | -46.2659  |
| 2353 | 0.5 | Extremo | -9.281  | -267.316 | -0.01  | 13.1435 | 0.1377  | 91.2266   |
| 2353 | 1   | Extremo | -9.281  | -251.978 | -0.01  | 13.1435 | 0.1429  | 221.0502  |
| 2354 | 0   | Extremo | -13.414 | -212.916 | 1.084  | 9.6615  | 0.0244  | 233.9412  |
| 2354 | 0.5 | Extremo | -13.414 | -197.578 | 1.084  | 9.6615  | -0.5175 | 336.5645  |
| 2354 | 1   | Extremo | -13.414 | -182.24  | 1.084  | 9.6615  | -1.0595 | 431.5188  |
| 2354 | 0   | Extremo | -9.221  | -210.112 | -0.041 | 9.6266  | 0.1132  | 231.3434  |
| 2354 | 0.5 | Extremo | -9.221  | -194.774 | -0.041 | 9.6266  | 0.1337  | 332.5648  |
| 2354 | 1   | Extremo | -9.221  | -179.436 | -0.041 | 9.6266  | 0.1542  | 426.1173  |
| 2355 | 0   | Extremo | -14.081 | -142.804 | 1.088  | 7.093   | 0.0085  | 440.3313  |
| 2355 | 0.5 | Extremo | -14.081 | -127.466 | 1.088  | 7.093   | -0.5357 | 507.8987  |
| 2355 | 1   | Extremo | -14.081 | -112.128 | 1.088  | 7.093   | -1.0799 | 567.7972  |
| 2355 | 0   | Extremo | -9.144  | -140.003 | -0.058 | 7.0572  | 0.1036  | 434.8511  |
| 2355 | 0.5 | Extremo | -9.144  | -124.665 | -0.058 | 7.0572  | 0.1324  | 501.0182  |
| 2355 | 1   | Extremo | -9.144  | -109.327 | -0.058 | 7.0572  | 0.1612  | 559.5164  |
| 2356 | 0   | Extremo | -14.753 | -73.197  | 1.091  | 3.8322  | -0.0087 | 573.6444  |
| 2356 | 0.5 | Extremo | -14.753 | -57.859  | 1.091  | 3.8322  | -0.5541 | 606.4084  |
| 2356 | 1   | Extremo | -14.753 | -42.521  | 1.091  | 3.8322  | -1.0995 | 631.5035  |
| 2356 | 0   | Extremo | -9.062  | -70.397  | -0.065 | 3.798   | 0.0996  | 565.2819  |
| 2356 | 0.5 | Extremo | -9.062  | -55.059  | -0.065 | 3.798   | 0.1323  | 596.646   |
| 2356 | 1   | Extremo | -9.062  | -39.721  | -0.065 | 3.798   | 0.1651  | 620.3411  |
| 2357 | 0   | Extremo | -15.426 | -3.589   | 1.091  | 0.0124  | -0.0269 | 633.4021  |
| 2357 | 0.5 | Extremo | -15.426 | 11.749   | 1.091  | 0.0124  | -0.5726 | 631.3619  |
| 2357 | 1   | Extremo | -15.426 | 27.087   | 1.091  | 0.0124  | -1.1182 | 621.6528  |
| 2357 | 0   | Extremo | -8.978  | -0.79    | -0.067 | -0.014  | 0.0992  | 622.1598  |
| 2357 | 0.5 | Extremo | -8.978  | 14.548   | -0.067 | -0.014  | 0.1328  | 618.7201  |
| 2357 | 1   | Extremo | -8.978  | 29.886   | -0.067 | -0.014  | 0.1663  | 607.6115  |
| 2358 | 0   | Extremo | -16.1   | 66.022   | 1.09   | -3.7882 | -0.0458 | 619.2989  |
| 2358 | 0.5 | Extremo | -16.1   | 81.36    | 1.09   | -3.7882 | -0.591  | 582.4533  |
| 2358 | 1   | Extremo | -16.1   | 96.698   | 1.09   | -3.7882 | -1.1361 | 537.9388  |
| 2358 | 0   | Extremo | -8.895  | 68.82    | -0.063 | -3.7985 | 0.1015  | 605.185   |
| 2358 | 0.5 | Extremo | -8.895  | 84.157   | -0.063 | -3.7985 | 0.1332  | 566.9408  |
| 2358 | 1   | Extremo | -8.895  | 99.495   | -0.063 | -3.7985 | 0.1648  | 521.0276  |
| 2359 | 0   | Extremo | -16.776 | 135.646  | 1.087  | -6.9988 | -0.0654 | 531.6764  |
| 2359 | 0.5 | Extremo | -16.776 | 150.983  | 1.087  | -6.9988 | -0.6091 | 460.0191  |
| 2359 | 1   | Extremo | -16.776 | 166.321  | 1.087  | -6.9988 | -1.1528 | 380.6929  |
| 2359 | 0   | Extremo | -8.815  | 138.441  | -0.053 | -6.9822 | 0.1066  | 514.7083  |
| 2359 | 0.5 | Extremo | -8.815  | 153.779  | -0.053 |         |         |           |



|      |     |         |         |          |       |          |         |           |
|------|-----|---------|---------|----------|-------|----------|---------|-----------|
| 2362 | 1   | Extremo | -18.78  | 387.706  | 1.051 | -24.7914 | -1.1794 | -539.0998 |
| 2362 | 0   | Extremo | -8.675  | 359.975  | 0.057 | -24.8053 | 0.1464  | -192.0964 |
| 2362 | 0.5 | Extremo | -8.675  | 375.313  | 0.057 | -24.8053 | 0.118   | -375.9186 |
| 2362 | 1   | Extremo | -8.675  | 390.651  | 0.057 | -24.8053 | 0.0895  | -567.4097 |
| 2363 | 0   | Extremo | -19.395 | 424.348  | 1.012 | -55.4195 | -0.1444 | -564.4653 |
| 2363 | 0.5 | Extremo | -19.395 | 439.686  | 1.012 | -55.4195 | -0.6504 | -780.474  |
| 2363 | 1   | Extremo | -19.395 | 455.024  | 1.012 | -55.4195 | -1.1565 | -1004.152 |
| 2363 | 0   | Extremo | -8.79   | 427.269  | 0.153 | -55.7494 | 0.1745  | -592.8244 |
| 2363 | 0.5 | Extremo | -8.79   | 442.607  | 0.153 | -55.7494 | 0.0979  | -810.2933 |
| 2363 | 1   | Extremo | -8.79   | 457.945  | 0.153 | -55.7494 | 0.0214  | -1035.431 |
| 2364 | 0   | Extremo | -19.908 | 338.494  | 0.973 | -83.8944 | -0.1204 | -1068.274 |
| 2364 | 0.5 | Extremo | -19.908 | 353.832  | 0.973 | -83.8944 | -0.6068 | -1241.356 |
| 2364 | 1   | Extremo | -19.908 | 369.17   | 0.973 | -83.8944 | -1.0932 | -1422.107 |
| 2364 | 0   | Extremo | -9.205  | 339.582  | 0.286 | -84.5226 | 0.2232  | -1100.017 |
| 2364 | 0.5 | Extremo | -9.205  | 354.92   | 0.286 | -84.5226 | 0.0802  | -1273.643 |
| 2364 | 1   | Extremo | -9.205  | 370.258  | 0.286 | -84.5226 | -0.0629 | -1454.937 |
| 2365 | 0   | Extremo | -20.265 | -404.097 | 1.387 | 83.3094  | 0.0099  | -1421.964 |
| 2365 | 0.5 | Extremo | -20.265 | -388.759 | 1.387 | 83.3094  | -0.6836 | -1223.75  |
| 2365 | 1   | Extremo | -20.265 | -373.421 | 1.387 | 83.3094  | -1.3772 | -1033.205 |
| 2365 | 0   | Extremo | -10.361 | -412.591 | 0.349 | 84.689   | 0.4085  | -1454.46  |
| 2365 | 0.5 | Extremo | -10.361 | -397.254 | 0.349 | 84.689   | 0.2339  | -1251.999 |
| 2365 | 1   | Extremo | -10.361 | -381.916 | 0.349 | 84.689   | 0.0593  | -1057.207 |
| 2366 | 0   | Extremo | -20.984 | -489.95  | 1.443 | 54.8368  | -0.032  | -968.7953 |
| 2366 | 0.5 | Extremo | -20.984 | -474.613 | 1.443 | 54.8368  | -0.7533 | -927.6545 |
| 2366 | 1   | Extremo | -20.984 | -459.275 | 1.443 | 54.8368  | -1.4747 | -944.1827 |
| 2366 | 0   | Extremo | -10.807 | -500.277 | 0.232 | 55.9184  | 0.3163  | -991.6659 |
| 2366 | 0.5 | Extremo | -10.807 | -484.939 | 0.232 | 55.9184  | 0.2004  | -745.3617 |
| 2366 | 1   | Extremo | -10.807 | -469.601 | 0.232 | 55.9184  | 0.0846  | -506.7265 |
| 2367 | 0   | Extremo | -21.815 | -422.632 | 1.479 | 24.2142  | -0.0455 | -468.5286 |
| 2367 | 0.5 | Extremo | -21.815 | -407.295 | 1.479 | 24.2142  | -0.7852 | -261.0469 |
| 2367 | 1   | Extremo | -21.815 | -391.957 | 1.479 | 24.2142  | -1.5249 | -61.2341  |
| 2367 | 0   | Extremo | -10.958 | -432.982 | 0.15  | 24.9799  | 0.2499  | -480.3548 |
| 2367 | 0.5 | Extremo | -10.958 | -417.644 | 0.15  | 24.9799  | 0.175   | -267.6985 |
| 2367 | 1   | Extremo | -10.958 | -402.306 | 0.15  | 24.9799  | 0.1001  | -62.7112  |
| 2368 | 0   | Extremo | -22.694 | -344.286 | 1.513 | 12.6431  | -0.0542 | -48.4158  |
| 2368 | 0.5 | Extremo | -22.694 | -328.948 | 1.513 | 12.6431  | -0.8104 | 119.8925  |
| 2368 | 1   | Extremo | -22.694 | -313.61  | 1.513 | 12.6431  | -1.5667 | 280.5319  |
| 2368 | 0   | Extremo | -10.991 | -354.525 | 0.111 | 13.3259  | 0.2179  | -49.2753  |
| 2368 | 0.5 | Extremo | -10.991 | -339.188 | 0.111 | 13.3259  | 0.1626  | 124.153   |
| 2368 | 1   | Extremo | -10.991 | -323.85  | 0.111 | 13.3259  | 0.1073  | 289.9123  |
| 2369 | 0   | Extremo | -23.599 | -271.441 | 1.544 | 8.9825   | -0.0638 | 291.3952  |
| 2369 | 0.5 | Extremo | -23.599 | -256.103 | 1.544 | 8.9825   | -0.8358 | 423.2813  |
| 2369 | 1   | Extremo | -23.599 | -240.765 | 1.544 | 8.9825   | -1.6079 | 547.4984  |
| 2369 | 0   | Extremo | -10.982 | -281.635 | 0.099 | 9.6804   | 0.2059  | 301.4275  |
| 2369 | 0.5 | Extremo | -10.982 | -266.297 | 0.099 | 9.6804   | 0.1562  | 438.4104  |
| 2369 | 1   | Extremo | -10.982 | -250.959 | 0.099 | 9.6804   | 0.1065  | 567.7244  |
| 2370 | 0   | Extremo | -24.519 | -201.253 | 1.578 | 6.4837   | -0.073  | 556.947   |
| 2370 | 0.5 | Extremo | -24.519 | -185.915 | 1.578 | 6.4837   | -0.862  | 653.7389  |
| 2370 | 1   | Extremo | -24.519 | -170.577 | 1.578 | 6.4837   | -1.651  | 742.8619  |
| 2370 | 0   | Extremo | -10.961 | -211.427 | 0.108 | 7.2087   | 0.2061  | 577.8685  |
| 2370 | 0.5 | Extremo | -10.961 | -196.089 | 0.108 | 7.2087   | 0.1522  | 679.7474  |
| 2370 | 1   | Extremo | -10.961 | -180.751 | 0.108 | 7.2087   | 0.0983  | 773.9574  |
| 2371 | 0   | Extremo | -25.454 | -131.637 | 1.617 | 3.3326   | -0.0801 | 749.4544  |
| 2371 | 0.5 | Extremo | -25.454 | -116.299 | 1.617 | 3.3326   | -0.8889 | 811.4384  |
| 2371 | 1   | Extremo | -25.454 | -100.961 | 1.617 | 3.3326   | -1.6976 | 865.7535  |
| 2371 | 0   | Extremo | -10.941 | -141.788 | 0.132 | 4.0653   | 0.2148  | 781.2699  |
| 2371 | 0.5 | Extremo | -10.941 | -126.45  | 0.132 | 4.0653   | 0.1489  | 848.3293  |
| 2371 | 1   | Extremo | -10.941 | -111.112 | 0.132 | 4.0653   | 0.0831  | 907.7197  |
| 2372 | 0   | Extremo | -26.404 | -62.043  | 1.665 | -0.3592  | -0.0839 | 868.4706  |
| 2372 | 0.5 | Extremo | -26.404 | -46.706  | 1.665 | -0.3592  | -0.9164 | 895.6579  |
| 2372 | 1   | Extremo | -26.404 | -31.368  | 1.665 | -0.3592  | -1.749  | 915.1762  |
| 2372 | 0   | Extremo | -10.929 | -72.15   | 0.17  | 0.3459   | 0.2308  | 911.16    |
| 2372 | 0.5 | Extremo | -10.929 | -56.812  | 0.17  | 0.3459   | 0.1456  | 943.4007  |
| 2372 | 1   | Extremo | -10.929 | -41.475  | 0.17  | 0.3459   | 0.0603  | 967.9724  |
| 2373 | 0   | Extremo | -27.371 | 7.52     | 1.724 | -3.9702  | -0.0828 | 913.695   |
| 2373 | 0.5 | Extremo | -27.371 | 22.858   | 1.724 | -3.9702  | -0.9446 | 906.1005  |
| 2373 | 1   | Extremo | -27.371 | 38.196   | 1.724 | -3.9702  | -1.8064 | 890.837   |
| 2373 | 0   | Extremo | -10.927 | -2.504   | 0.226 | -3.3523  | 0.2543  | 967.1912  |
| 2373 | 0.5 | Extremo | -10.927 | 12.834   | 0.226 | -3.3523  | 0.1414  | 964.6086  |
| 2373 | 1   | Extremo | -10.927 | 28.172   | 0.226 | -3.3523  | 0.0285  | 954.357   |
| 2374 | 0   | Extremo | -28.359 | 76.988   | 1.796 | -6.7966  | -0.0756 | 885.4945  |
| 2374 | 0.5 | Extremo | -28.359 | 92.326   | 1.796 | -6.7966  | -0.9733 | 843.1659  |

|      |     |         |         |          |       |          |           |           |
|------|-----|---------|---------|----------|-------|----------|-----------|-----------|
| 2374 | 1   | Extremo | -28.359 | 107.664  | 1.796 | -6.7966  | -1.8711   | 793.1684  |
| 2374 | 0   | Extremo | -10.939 | 67.119   | 0.301 | -6.3738  | 0.2864    | 949.6476  |
| 2374 | 0.5 | Extremo | -10.939 | 82.457   | 0.301 | -6.3738  | 0.1358    | 912.2537  |
| 2374 | 1   | Extremo | -10.939 | 97.795   | 0.301 | -6.3738  | -0.0149   | 867.1908  |
| 2375 | 0   | Extremo | -29.369 | 146.628  | 1.884 | -8.3538  | -0.0606   | 785.0176  |
| 2375 | 0.5 | Extremo | -29.369 | 161.966  | 1.884 | -8.3538  | -1.0025   | 707.8691  |
| 2375 | 1   | Extremo | -29.369 | 177.304  | 1.884 | -8.3538  | -1.9443   | 623.0516  |
| 2375 | 0   | Extremo | -10.97  | 137.042  | 0.403 | -8.3258  | 0.3294    | 859.5221  |
| 2375 | 0.5 | Extremo | -10.97  | 152.38   | 0.403 | -8.3258  | 0.1279    | 787.1665  |
| 2375 | 1   | Extremo | -10.97  | 167.718  | 0.403 | -8.3258  | -0.0737   | 707.142   |
| 2376 | 0   | Extremo | -30.397 | 217.639  | 1.99  | -9.2878  | -0.0361   | 613.7638  |
| 2376 | 0.5 | Extremo | -30.397 | 232.977  | 1.99  | -9.2878  | -1.0313   | 501.1097  |
| 2376 | 1   | Extremo | -30.397 | 248.315  | 1.99  | -9.2878  | -2.0265   | 380.7867  |
| 2376 | 0   | Extremo | -11.031 | 208.572  | 0.541 | -10.0155 | 0.3868    | 698.0206  |
| 2376 | 0.5 | Extremo | -11.031 | 223.91   | 0.541 | -10.0155 | 0.1163    | 589.9     |
| 2376 | 1   | Extremo | -11.031 | 239.248  | 0.541 | -10.0155 | -0.1542   | 474.1105  |
| 2377 | 0   | Extremo | -31.43  | 291.189  | 2.117 | -13.2751 | 0.0007265 | 371.1685  |
| 2377 | 0.5 | Extremo | -31.43  | 306.527  | 2.117 | -13.2751 | -1.0576   | 221.7397  |
| 2377 | 1   | Extremo | -31.43  | 321.864  | 2.117 | -13.2751 | -2.116    | 64.6419   |
| 2377 | 0   | Extremo | -11.152 | 283.094  | 0.731 | -15.3846 | 0.464     | 464.0253  |
| 2377 | 0.5 | Extremo | -11.152 | 298.431  | 0.731 | -15.3846 | 0.0984    | 318.6441  |
| 2377 | 1   | Extremo | -11.152 | 313.769  | 0.731 | -15.3846 | -0.2672   | 165.5939  |
| 2378 | 0   | Extremo | -32.429 | 353.112  | 2.26  | -26.0685 | 0.0556    | 49.5518   |
| 2378 | 0.5 | Extremo | -32.429 | 368.45   | 2.26  | -26.0685 | -1.0745   | -130.8389 |
| 2378 | 1   | Extremo | -32.429 | 383.788  | 2.26  | -26.0685 | -2.2045   | -318.8985 |
| 2378 | 0   | Extremo | -11.395 | 346.881  | 0.999 | -30.5811 | 0.5691    | 148.755   |
| 2378 | 0.5 | Extremo | -11.395 | 362.219  | 0.999 | -30.5811 | 0.0698    | -28.52    |
| 2378 | 1   | Extremo | -11.395 | 377.557  | 0.999 | -30.5811 | -0.4294   | -213.464  |
| 2379 | 0   | Extremo | -33.293 | 300.987  | 2.443 | -29.8676 | 0.1485    | -349.7224 |
| 2379 | 0.5 | Extremo | -33.293 | 316.325  | 2.443 | -29.8676 | -1.073    | -504.0505 |
| 2379 | 1   | Extremo | -33.293 | 331.663  | 2.443 | -29.8676 | -2.2945   | -666.0474 |
| 2379 | 0   | Extremo | -11.915 | 297.683  | 1.365 | -37.9991 | 0.7176    | -248.8929 |
| 2379 | 0.5 | Extremo | -11.915 | 313.021  | 1.365 | -37.9991 | 0.0351    | -401.5688 |
| 2379 | 1   | Extremo | -11.915 | 328.359  | 1.365 | -37.9991 | -0.6474   | -561.9136 |
| 2380 | 0   | Extremo | -33.846 | -177.91  | 3.036 | 96.9008  | 0.277     | -610.0444 |
| 2380 | 0.5 | Extremo | -33.846 | -162.572 | 3.036 | 96.9008  | -1.2411   | -524.9239 |
| 2380 | 1   | Extremo | -33.846 | -147.234 | 3.036 | 96.9008  | -2.7591   | -447.4724 |
| 2380 | 0   | Extremo | -13.098 | -183.677 | 1.761 | 87.5125  | 0.9916    | -517.6212 |
| 2380 | 0.5 | Extremo | -13.098 | -168.339 | 1.761 | 87.5125  | 0.1112    | -429.617  |
| 2380 | 1   | Extremo | -13.098 | -153.002 | 1.761 | 87.5125  | -0.7693   | -349.2817 |
| 2381 | 0   | Extremo | -35.212 | -210.987 | 3.579 | 52.0636  | 0.5113    | -384.9352 |
| 2381 | 0.5 | Extremo | -35.212 | -195.65  | 3.579 | 52.0636  | -1.2781   | -283.2759 |
| 2381 | 1   | Extremo | -35.212 | -180.312 | 3.579 | 52.0636  | -3.0676   | -189.2856 |
| 2381 | 0   | Extremo | -13.957 | -221.089 | 2.099 | 41.838   | 1.1148    | -296.1333 |
| 2381 | 0.5 | Extremo | -13.957 | -205.751 | 2.099 | 41.838   | 0.0654    | -189.4232 |
| 2381 | 1   | Extremo | -13.957 | -190.413 | 2.099 | 41.838   | -0.984    | -90.3821  |
| 2382 | 0   | Extremo | -36.849 | -142.536 | 4.185 | 27.7987  | 0.759     | -166.3007 |
| 2382 | 0.5 | Extremo | -36.849 | -127.198 | 4.185 | 27.7987  | -1.3335   | -98.867   |
| 2382 | 1   | Extremo | -36.849 | -111.86  | 4.185 | 27.7987  | -3.4261   | -39.1023  |
| 2382 | 0   | Extremo | -14.651 | -154.127 | 2.561 | 16.4792  | 1.2853    | -76.892   |
| 2382 | 0.5 | Extremo | -14.651 | -138.789 | 2.561 | 16.4792  | 0.0047    | -3.6631   |
| 2382 | 1   | Extremo | -14.651 | -123.451 | 2.561 | 16.4792  | -1.2759   | 61.897    |
| 2383 | 0   | Extremo | -38.687 | -73.068  | 4.906 | 22.1987  | 1.0485    | -24.4083  |
| 2383 | 0.5 | Extremo | -38.687 | -57.73   | 4.906 | 22.1987  | -1.4047   | 8.2912    |
| 2383 | 1   | Extremo | -38.687 | -42.392  | 4.906 | 22.1987  | -3.858    | 33.3219   |
| 2383 | 0   |         |         |          |       |          |           |           |



|      |     |         |          |         |         |          |          |           |
|------|-----|---------|----------|---------|---------|----------|----------|-----------|
| 2386 | 1   | Extremo | -45.043  | 132.783 | 8.17    | 29.5573  | -5.933   | -93.2068  |
| 2386 | 0   | Extremo | -18.386  | 94.207  | 6.49    | 15.765   | 2.8503   | 106.4228  |
| 2386 | 0.5 | Extremo | -18.386  | 109.545 | 6.49    | 15.765   | -0.3946  | 55.4847   |
| 2386 | 1   | Extremo | -18.386  | 124.883 | 6.49    | 15.765   | -3.6395  | -3.1223   |
| 2387 | 0   | Extremo | -48.247  | 145.228 | 10.151  | 20.9855  | 3.1649   | -63.5701  |
| 2387 | 0.5 | Extremo | -48.247  | 160.566 | 10.151  | 20.9855  | -1.9106  | -140.0186 |
| 2387 | 1   | Extremo | -48.247  | 175.904 | 10.151  | 20.9855  | -6.986   | -224.136  |
| 2387 | 0   | Extremo | -20.385  | 134.729 | 8.423   | 8.37     | 3.7402   | 12.6488   |
| 2387 | 0.5 | Extremo | -20.385  | 150.067 | 8.423   | 8.37     | -0.4715  | -58.5502  |
| 2387 | 1   | Extremo | -20.385  | 165.405 | 8.423   | 8.37     | -4.6832  | -137.4181 |
| 2388 | 0   | Extremo | -51.96   | 188.172 | 12.56   | 16.157   | 4.1856   | -195.773  |
| 2388 | 0.5 | Extremo | -51.96   | 203.51  | 12.56   | 16.157   | -2.0945  | -293.6935 |
| 2388 | 1   | Extremo | -51.96   | 218.848 | 12.56   | 16.157   | -8.3746  | -399.2829 |
| 2388 | 0   | Extremo | -22.881  | 176.777 | 10.804  | 4.0158   | 4.762    | -121.5027 |
| 2388 | 0.5 | Extremo | -22.881  | 192.115 | 10.804  | 4.0158   | -0.6399  | -213.7256 |
| 2388 | 1   | Extremo | -22.881  | 207.453 | 10.804  | 4.0158   | -6.0418  | -313.6175 |
| 2389 | 0   | Extremo | -56.275  | 224.367 | 15.605  | 15.2453  | 5.4544   | -370.6078 |
| 2389 | 0.5 | Extremo | -56.275  | 239.705 | 15.605  | 15.2453  | -2.3479  | -486.6257 |
| 2389 | 1   | Extremo | -56.275  | 255.043 | 15.605  | 15.2453  | -10.1502 | -610.3126 |
| 2389 | 0   | Extremo | -25.989  | 213.399 | 13.841  | 3.1362   | 6.0519   | -297.1498 |
| 2389 | 0.5 | Extremo | -25.989  | 228.737 | 13.841  | 3.1362   | -0.8686  | -407.684  |
| 2389 | 1   | Extremo | -25.989  | 244.075 | 13.841  | 3.1362   | -7.7891  | -525.8871 |
| 2390 | 0   | Extremo | -61.275  | 241.664 | 19.541  | 23.7594  | 7.0245   | -569.9753 |
| 2390 | 0.5 | Extremo | -61.275  | 257.002 | 19.541  | 23.7594  | -2.7459  | -694.642  |
| 2390 | 1   | Extremo | -61.275  | 272.34  | 19.541  | 23.7594  | -12.5163 | -826.9776 |
| 2390 | 0   | Extremo | -29.839  | 232.658 | 17.802  | 11.1334  | 7.6673   | -498.4615 |
| 2390 | 0.5 | Extremo | -29.839  | 247.995 | 17.802  | 11.1334  | -1.2335  | -618.6248 |
| 2390 | 1   | Extremo | -29.839  | 263.333 | 17.802  | 11.1334  | -10.1343 | -746.457  |
| 2391 | 0   | Extremo | -66.913  | 269.002 | 23.991  | 32.3679  | 8.6391   | -721.6887 |
| 2391 | 0.5 | Extremo | -66.913  | 284.34  | 23.991  | 32.3679  | -3.3561  | -860.0242 |
| 2391 | 1   | Extremo | -66.913  | 299.678 | 23.991  | 32.3679  | -15.3514 | -1006.029 |
| 2391 | 0   | Extremo | -34.52   | 260.722 | 22.341  | 20.2498  | 9.3843   | -658.5235 |
| 2391 | 0.5 | Extremo | -34.52   | 276.06  | 22.341  | 20.2498  | -1.7863  | -792.7191 |
| 2391 | 1   | Extremo | -34.52   | 291.398 | 22.341  | 20.2498  | -12.9569 | -934.5837 |
| 2392 | 0   | Extremo | -76.002  | 321.49  | 30.868  | 13.8273  | 11.8024  | -935.7426 |
| 2392 | 0.5 | Extremo | -76.002  | 336.828 | 30.868  | 13.8273  | -3.6315  | -1100.322 |
| 2392 | 1   | Extremo | -76.002  | 352.166 | 30.868  | 13.8273  | -19.0655 | -1272.57  |
| 2392 | 0   | Extremo | -42.383  | 310.55  | 29.153  | 2.8056   | 12.492   | -878.6407 |
| 2392 | 0.5 | Extremo | -42.383  | 325.888 | 29.153  | 2.8056   | -2.0844  | -1037.75  |
| 2392 | 1   | Extremo | -42.383  | 341.226 | 29.153  | 2.8056   | -16.6607 | -1204.529 |
| 2393 | 0   | Extremo | -87.366  | 365.289 | 39.41   | 4.7077   | 15.3775  | -1215.99  |
| 2393 | 0.5 | Extremo | -87.366  | 380.627 | 39.41   | 4.7077   | -4.3272  | -1402.469 |
| 2393 | 1   | Extremo | -87.366  | 395.965 | 39.41   | 4.7077   | -24.032  | -1596.617 |
| 2393 | 0   | Extremo | -52.456  | 353.292 | 37.647  | -5.9155  | 16.0531  | -1160.824 |
| 2393 | 0.5 | Extremo | -52.456  | 368.629 | 37.647  | -5.9155  | -2.7704  | -1341.304 |
| 2393 | 1   | Extremo | -52.456  | 383.967 | 37.647  | -5.9155  | -21.594  | -1529.453 |
| 2394 | 0   | Extremo | -102.102 | 399.502 | 50.505  | -0.004   | 19.9662  | -1542.646 |
| 2394 | 0.5 | Extremo | -102.102 | 414.84  | 50.505  | -0.004   | -5.2861  | -1746.232 |
| 2394 | 1   | Extremo | -102.102 | 430.178 | 50.505  | -0.004   | -30.5385 | -1957.486 |
| 2394 | 0   | Extremo | -65.858  | 387.305 | 48.715  | -10.5032 | 20.6446  | -1488.072 |
| 2394 | 0.5 | Extremo | -65.858  | 402.642 | 48.715  | -10.5032 | -3.7129  | -1685.559 |
| 2394 | 1   | Extremo | -65.858  | 417.98  | 48.715  | -10.5032 | -28.0703 | -1890.714 |
| 2395 | 0   | Extremo | -121.987 | 413.677 | 65.345  | 2.1495   | 26.055   | -1899.538 |
| 2395 | 0.5 | Extremo | -121.987 | 429.015 | 65.345  | 2.1495   | -6.6177  | -2110.211 |
| 2395 | 1   | Extremo | -121.987 | 444.353 | 65.345  | 2.1495   | -39.2904 | -2328.553 |
| 2395 | 0   | Extremo | -84.389  | 401.872 | 63.546  | -8.4123  | 26.7457  | -1845.347 |
| 2395 | 0.5 | Extremo | -84.389  | 417.21  | 63.546  | -8.4123  | -5.0275  | -2050.118 |
| 2395 | 1   | Extremo | -84.389  | 432.548 | 63.546  | -8.4123  | -36.8006 | -2262.557 |
| 2396 | 0   | Extremo | -150.23  | 382.684 | 85.764  | 22.3085  | 34.1208  | -2237.987 |
| 2396 | 0.5 | Extremo | -150.23  | 398.022 | 85.764  | 22.3085  | -8.7612  | -2433.163 |
| 2396 | 1   | Extremo | -150.23  | 413.36  | 85.764  | 22.3085  | -51.6432 | -2636.009 |
| 2396 | 0   | Extremo | -111.308 | 372.171 | 83.985  | 11.3321  | 34.842   | -2185.137 |
| 2396 | 0.5 | Extremo | -111.308 | 387.509 | 83.985  | 11.3321  | -7.1504  | -2375.057 |
| 2396 | 1   | Extremo | -111.308 | 402.847 | 83.985  | 11.3321  | -49.1427 | -2572.646 |
| 2397 | 0   | Extremo | -192.604 | 394.338 | 112.241 | 31.3769  | 43.873   | -2371.969 |
| 2397 | 0.5 | Extremo | -192.604 | 409.675 | 112.241 | 31.3769  | -12.2477 | -2572.972 |
| 2397 | 1   | Extremo | -192.604 | 425.013 | 112.241 | 31.3769  | -68.3685 | -2781.644 |
| 2397 | 0   | Extremo | -152.529 | 384.385 | 110.54  | 20.5709  | 44.6818  | -2324.983 |
| 2397 | 0.5 | Extremo | -152.529 | 399.723 | 110.54  | 20.5709  | -10.5884 | -2521.011 |
| 2397 | 1   | Extremo | -152.529 | 415.061 | 110.54  | 20.5709  | -65.8586 | -2724.707 |
| 2398 | 0   | Extremo | -270.566 | 481.908 | 154.167 | 3.1551   | 60.872   | -2647.698 |
| 2398 | 0.5 | Extremo | -270.566 | 497.246 | 154.167 | 3.1551   | -16.2116 | -2892.487 |

|      |     |         |           |          |         |          |           |           |
|------|-----|---------|-----------|----------|---------|----------|-----------|-----------|
| 2398 | 1   | Extremo | -270.566  | 512.583  | 154.167 | 3.1551   | -93.2951  | -3144.944 |
| 2398 | 0   | Extremo | -229.03   | 470.248  | 152.392 | -7.4545  | 61.611    | -2605.361 |
| 2398 | 0.5 | Extremo | -229.03   | 485.585  | 152.392 | -7.4545  | -14.5848  | -2844.319 |
| 2398 | 1   | Extremo | -229.03   | 500.923  | 152.392 | -7.4545  | -90.7806  | -3090.946 |
| 2399 | 0   | Extremo | -403.926  | 534.62   | 215.274 | -12.2941 | 82.6226   | -3045.976 |
| 2399 | 0.5 | Extremo | -403.926  | 549.958  | 215.274 | -12.2941 | -25.0144  | -3317.12  |
| 2399 | 1   | Extremo | -403.926  | 565.296  | 215.274 | -12.2941 | -132.6513 | -3595.934 |
| 2399 | 0   | Extremo | -360.788  | 522.241  | 213.438 | -23.431  | 83.3418   | -3006.269 |
| 2399 | 0.5 | Extremo | -360.788  | 537.579  | 213.438 | -23.431  | -23.3773  | -3271.224 |
| 2399 | 1   | Extremo | -360.788  | 552.917  | 213.438 | -23.431  | -130.0964 | -3543.848 |
| 2400 | 0   | Extremo | -646.505  | 548.44   | 307.642 | -30.5842 | 110.2356  | -3512.142 |
| 2400 | 0.5 | Extremo | -646.505  | 563.777  | 307.642 | -30.5842 | -43.5854  | -3790.196 |
| 2400 | 1   | Extremo | -646.505  | 579.115  | 307.642 | -30.5842 | -197.4064 | -4075.919 |
| 2400 | 0   | Extremo | -601.65   | 535.832  | 305.802 | -42.8741 | 111.0345  | -3475.3   |
| 2400 | 0.5 | Extremo | -601.65   | 551.17   | 305.802 | -42.8741 | -41.8667  | -3747.051 |
| 2400 | 1   | Extremo | -601.65   | 566.508  | 305.802 | -42.8741 | -194.7679 | -4026.47  |
| 2401 | 0   | Extremo | -1094.491 | 448.785  | 416.248 | -50.6041 | 135.8553  | -4009.449 |
| 2401 | 0.5 | Extremo | -1094.491 | 464.122  | 416.248 | -50.6041 | -72.2687  | -4237.676 |
| 2401 | 1   | Extremo | -1094.491 | 479.46   | 416.248 | -50.6041 | -280.3926 | -4473.571 |
| 2401 | 0   | Extremo | -1047.943 | 436.647  | 414.761 | -64.8201 | 137.0495  | -3977.257 |
| 2401 | 0.5 | Extremo | -1047.943 | 451.985  | 414.761 | -64.8201 | -70.331   | -4199.415 |
| 2401 | 1   | Extremo | -1047.943 | 467.323  | 414.761 | -64.8201 | -277.7114 | -4429.241 |
| 2402 | 0   | Extremo | -1815.044 | 42.475   | 446.858 | 3.7042   | 215.6947  | -4322.092 |
| 2402 | 0.5 | Extremo | -1815.044 | 57.813   | 446.858 | 3.7042   | -7.7342   | -4347.164 |
| 2402 | 1   | Extremo | -1815.044 | 73.15    | 446.858 | 3.7042   | -231.1632 | -4379.904 |
| 2402 | 0   | Extremo | -1767.875 | 31.399   | 447.636 | -12.8675 | 217.8412  | -4300.199 |
| 2402 | 0.5 | Extremo | -1767.875 | 46.737   | 447.636 | -12.8675 | -5.9768   | -4319.733 |
| 2402 | 1   | Extremo | -1767.875 | 62.075   | 447.636 | -12.8675 | -229.7947 | -4346.937 |
| 2403 | 0   | Extremo | -2555.847 | -496.095 | 434.865 | 112.1499 | 291.1375  | -4612.048 |
| 2403 | 0.5 | Extremo | -2555.847 | -480.757 | 434.865 | 112.1499 | 73.705    | -4367.835 |
| 2403 | 1   | Extremo | -2555.847 | -465.42  | 434.865 | 112.1499 | -143.7276 | -4131.291 |
| 2403 | 0   | Extremo | -2508.555 | -513.579 | 435.291 | 91.3541  | 292.461   | -4601.882 |
| 2403 | 0.5 | Extremo | -2508.555 | -498.241 | 435.291 | 91.3541  | 74.8153   | -4348.927 |
| 2403 | 1   | Extremo | -2508.555 | -482.903 | 435.291 | 91.3541  | -142.8303 | -4103.64  |
| 2404 | 0   | Extremo | -3035.052 | -673.088 | 327.825 | 99.677   | 207.4539  | -4154.473 |
| 2404 | 0.5 | Extremo | -3035.052 | -657.75  | 327.825 | 99.677   | 43.5415   | -3821.764 |
| 2404 | 1   | Extremo | -3035.052 | -642.412 | 327.825 | 99.677   | -120.3709 | -3496.723 |
| 2404 | 0   | Extremo | -2987.193 | -690.899 | 327.989 | 76.3895  | 208.5535  | -4153.853 |
| 2404 | 0.5 | Extremo | -2987.193 | -675.561 | 327.989 | 76.3895  | 44.5589   | -3812.238 |
| 2404 | 1   | Extremo | -2987.193 | -660.223 | 327.989 | 76.3895  | -119.4357 | -3478.292 |
| 2405 | 0   | Extremo | -3301.213 | -682.639 | 236.277 | 78.7628  | 141.5709  | -3528.084 |
| 2405 | 0.5 | Extremo | -3301.213 | -667.301 | 236.277 | 78.7628  | 23.4324   | -3190.6   |
| 2405 | 1   | Extremo | -3301.213 | -651.963 | 236.277 | 78.7628  | -94.7062  | -2860.784 |
| 2405 | 0   | Extremo | -3252.878 | -700.019 | 236.389 | 53.7844  | 142.6253  | -3539.302 |
| 2405 | 0.5 | Extremo | -3252.878 | -684.682 | 236.389 | 53.7844  | 24.4308   | -3193.127 |
| 2405 | 1   | Extremo | -3252.878 | -669.344 | 236.389 | 53.7844  | -93.7637  | -2854.621 |
| 2406 | 0   | Extremo | -3459.156 | -642.591 | 179.847 | 62.6585  | 103.3461  | -2910.305 |
| 2406 | 0.5 | Extremo | -3459.156 | -627.253 | 179.847 | 62.6585  | 13.4226   | -2592.844 |
| 2406 | 1   | Extremo | -3459.156 | -611.915 | 179.847 | 62.6585  | -76.5008  | -2283.052 |
| 2406 | 0   | Extremo | -3410.406 | -658.979 | 179.914 | 36.4245  | 104.3557  | -2935.455 |
| 2406 | 0.5 | Extremo | -3410.406 | -643.641 | 179.914 | 36.4245  | 14.3987   | -260      |



|      |     |         |           |          |        |          |          |           |
|------|-----|---------|-----------|----------|--------|----------|----------|-----------|
| 2410 | 1   | Extremo | -3785.911 | -557.309 | 82.576 | 70.4525  | -35.5306 | -279.7289 |
| 2410 | 0   | Extremo | -3735.522 | -602.01  | 82.677 | 40.5629  | 47.9577  | -951.4096 |
| 2410 | 0.5 | Extremo | -3735.522 | -586.672 | 82.677 | 40.5629  | 6.6194   | -654.2389 |
| 2410 | 1   | Extremo | -3735.522 | -571.335 | 82.677 | 40.5629  | -34.719  | -364.7371 |
| 2411 | 0   | Extremo | -3826.584 | -565.209 | 73.954 | 65.8843  | 40.3371  | -281.2742 |
| 2411 | 0.5 | Extremo | -3826.584 | -549.872 | 73.954 | 65.8843  | 3.3601   | -2.5039   |
| 2411 | 1   | Extremo | -3826.584 | -534.534 | 73.954 | 65.8843  | -33.6169 | 268.5974  |
| 2411 | 0   | Extremo | -3776.094 | -578.083 | 74.06  | 35.5803  | 41.2517  | -399.4483 |
| 2411 | 0.5 | Extremo | -3776.094 | -562.745 | 74.06  | 35.5803  | 4.2218   | -114.2415 |
| 2411 | 1   | Extremo | -3776.094 | -547.407 | 74.06  | 35.5803  | -32.808  | 163.2964  |
| 2412 | 0   | Extremo | -3870.334 | -556.612 | 70.481 | 63.2275  | 36.2277  | 267.49    |
| 2412 | 0.5 | Extremo | -3870.334 | -541.274 | 70.481 | 63.2275  | 0.9872   | 541.9616  |
| 2412 | 1   | Extremo | -3870.334 | -525.936 | 70.481 | 63.2275  | -34.2534 | 808.7643  |
| 2412 | 0   | Extremo | -3819.726 | -566.148 | 70.561 | 31.9151  | 37.1352  | 128.3246  |
| 2412 | 0.5 | Extremo | -3819.726 | -550.81  | 70.561 | 31.9151  | 1.8547   | 407.5639  |
| 2412 | 1   | Extremo | -3819.726 | -535.472 | 70.561 | 31.9151  | -33.4257 | 679.1344  |
| 2413 | 0   | Extremo | -3928.432 | -590.706 | 69.341 | 70.1564  | 34.9242  | 829.4047  |
| 2413 | 0.5 | Extremo | -3928.432 | -575.368 | 69.341 | 70.1564  | 0.2539   | 1120.9231 |
| 2413 | 1   | Extremo | -3928.432 | -560.03  | 69.341 | 70.1564  | -34.4164 | 1404.7726 |
| 2413 | 0   | Extremo | -3877.575 | -592.21  | 69.378 | 35.9615  | 35.8164  | 662.1143  |
| 2413 | 0.5 | Extremo | -3877.575 | -576.872 | 69.378 | 35.9615  | 1.1272   | 954.3846  |
| 2413 | 1   | Extremo | -3877.575 | -561.534 | 69.378 | 35.9615  | -33.5619 | 1238.986  |
| 2414 | 0   | Extremo | -4012.558 | -578.212 | 65.995 | 86.3976  | 40.5944  | 1537.2555 |
| 2414 | 0.5 | Extremo | -4012.558 | -562.875 | 65.995 | 86.3976  | 7.5969   | 1822.5272 |
| 2414 | 1   | Extremo | -4012.558 | -547.537 | 65.995 | 86.3976  | -25.4006 | 2100.1301 |
| 2414 | 0   | Extremo | -3961.12  | -579.737 | 66.081 | 50.3999  | 41.4231  | 1325.3846 |
| 2414 | 0.5 | Extremo | -3961.12  | -564.399 | 66.081 | 50.3999  | 8.3826   | 1611.4185 |
| 2414 | 1   | Extremo | -3961.12  | -549.061 | 66.081 | 50.3999  | -24.6579 | 1889.7835 |
| 2415 | 0   | Extremo | -4064.533 | -509.43  | 57.382 | 71.9952  | 34.498   | 2153.424  |
| 2415 | 0.5 | Extremo | -4064.533 | -494.092 | 57.382 | 71.9952  | 5.8071   | 2404.3044 |
| 2415 | 1   | Extremo | -4064.533 | -478.754 | 57.382 | 71.9952  | -22.8838 | 2647.516  |
| 2415 | 0   | Extremo | -4012.902 | -514.916 | 57.565 | 37.4226  | 35.376   | 1907.9548 |
| 2415 | 0.5 | Extremo | -4012.902 | -499.578 | 57.565 | 37.4226  | 6.5933   | 2161.5781 |
| 2415 | 1   | Extremo | -4012.902 | -484.24  | 57.565 | 37.4226  | -22.1895 | 2407.5325 |
| 2416 | 0   | Extremo | -4104.289 | -468.171 | 51.383 | 65.8744  | 29.2757  | 2683.1202 |
| 2416 | 0.5 | Extremo | -4104.289 | -452.833 | 51.383 | 65.8744  | 3.5844   | 2913.371  |
| 2416 | 1   | Extremo | -4104.289 | -437.495 | 51.383 | 65.8744  | -22.1069 | 3135.9529 |
| 2416 | 0   | Extremo | -4052.607 | -473.707 | 51.636 | 31.5392  | 30.1928  | 2410.062  |
| 2416 | 0.5 | Extremo | -4052.607 | -458.369 | 51.636 | 31.5392  | 4.3746   | 2643.0809 |
| 2416 | 1   | Extremo | -4052.607 | -443.031 | 51.636 | 31.5392  | -21.4435 | 2868.4308 |
| 2417 | 0   | Extremo | -4142.699 | -472.199 | 48.627 | 73.9125  | 25.8556  | 3174.8966 |
| 2417 | 0.5 | Extremo | -4142.699 | -456.861 | 48.627 | 73.9125  | 1.5422   | 3407.1616 |
| 2417 | 1   | Extremo | -4142.699 | -441.523 | 48.627 | 73.9125  | -22.7712 | 3631.7578 |
| 2417 | 0   | Extremo | -4090.986 | -473.287 | 48.924 | 38.5869  | 26.7979  | 2873.9432 |
| 2417 | 0.5 | Extremo | -4090.986 | -457.949 | 48.924 | 38.5869  | 2.3361   | 3106.7522 |
| 2417 | 1   | Extremo | -4090.986 | -442.611 | 48.924 | 38.5869  | -22.1257 | 3331.8923 |
| 2418 | 0   | Extremo | -4190.474 | -556.461 | 46.993 | 110.9947 | 24.4771  | 3724.7425 |
| 2418 | 0.5 | Extremo | -4190.474 | -541.124 | 46.993 | 110.9947 | 0.9808   | 3999.1387 |
| 2418 | 1   | Extremo | -4190.474 | -525.786 | 46.993 | 110.9947 | -22.5155 | 4265.866  |
| 2418 | 0   | Extremo | -4138.64  | -546.054 | 47.328 | 72.3184  | 25.4377  | 3386.7659 |
| 2418 | 0.5 | Extremo | -4138.64  | -530.716 | 47.328 | 72.3184  | 1.7738   | 3655.9585 |
| 2418 | 1   | Extremo | -4138.64  | -515.378 | 47.328 | 72.3184  | -21.8901 | 3917.4821 |
| 2419 | 0   | Extremo | -4259.446 | -510.871 | 42.128 | 121.4338 | 29.0466  | 4582.4323 |
| 2419 | 0.5 | Extremo | -4259.446 | -495.533 | 42.128 | 121.4338 | 7.9827   | 4834.0334 |
| 2419 | 1   | Extremo | -4259.446 | -480.195 | 42.128 | 121.4338 | -13.0812 | 5077.9655 |
| 2419 | 0   | Extremo | -4207.213 | -501.215 | 42.594 | 83.4194  | 29.9813  | 4182.1796 |
| 2419 | 0.5 | Extremo | -4207.213 | -485.877 | 42.594 | 83.4194  | 8.6841   | 4428.9524 |
| 2419 | 1   | Extremo | -4207.213 | -470.539 | 42.594 | 83.4194  | -12.6131 | 4668.0563 |
| 2420 | 0   | Extremo | -4297.33  | -349.798 | 31.92  | 75.7429  | 22.9685  | 5176.3158 |
| 2420 | 0.5 | Extremo | -4297.33  | -334.46  | 31.92  | 75.7429  | 7.0086   | 5347.3802 |
| 2420 | 1   | Extremo | -4297.33  | -319.122 | 31.92  | 75.7429  | -8.9514  | 5510.7757 |
| 2420 | 0   | Extremo | -4245.064 | -349.134 | 32.595 | 44.9296  | 23.9889  | 4734.7691 |
| 2420 | 0.5 | Extremo | -4245.064 | -333.796 | 32.595 | 44.9296  | 7.6912   | 4905.5016 |
| 2420 | 1   | Extremo | -4245.064 | -318.458 | 32.595 | 44.9296  | -8.6064  | 5068.5653 |
| 2421 | 0   | Extremo | -4319.648 | -245.213 | 22.392 | 52.5264  | 17.0118  | 5559.4705 |
| 2421 | 0.5 | Extremo | -4319.648 | -229.875 | 22.392 | 52.5264  | 5.8158   | 5678.2426 |
| 2421 | 1   | Extremo | -4319.648 | -214.537 | 22.392 | 52.5264  | -5.3802  | 5789.3458 |
| 2421 | 0   | Extremo | -4267.56  | -248.706 | 23.309 | 29.4853  | 18.1273  | 5093.4346 |
| 2421 | 0.5 | Extremo | -4267.56  | -233.369 | 23.309 | 29.4853  | 6.4727   | 5213.9534 |
| 2421 | 1   | Extremo | -4267.56  | -218.031 | 23.309 | 29.4853  | -5.1818  | 5326.8032 |
| 2422 | 0   | Extremo | -4332.84  | -169.545 | 14.319 | 37.1906  | 12.2971  | 5823.6639 |
| 2422 | 0.5 | Extremo | -4332.84  | -154.207 | 14.319 | 37.1906  | 5.1376   | 5904.6019 |

|      |     |         |           |          |         |           |          |           |
|------|-----|---------|-----------|----------|---------|-----------|----------|-----------|
| 2422 | 1   | Extremo | -4332.84  | -138.869 | 14.319  | 37.1906   | -2.0218  | 5977.8711 |
| 2422 | 0   | Extremo | -4281.109 | -174.564 | 15.52   | 24.5024   | 13.5039  | 5344.6828 |
| 2422 | 0.5 | Extremo | -4281.109 | -159.226 | 15.52   | 24.5024   | 5.7438   | 5428.1303 |
| 2422 | 1   | Extremo | -4281.109 | -143.888 | 15.52   | 24.5024   | -2.0164  | 5503.909  |
| 2423 | 0   | Extremo | -4340.071 | -104.796 | 7.403   | 21.2552   | 8.5522   | 6001.0968 |
| 2423 | 0.5 | Extremo | -4340.071 | -89.458  | 7.403   | 21.2552   | 4.8507   | 6049.6601 |
| 2423 | 1   | Extremo | -4340.071 | -74.12   | 7.403   | 21.2552   | 1.1492   | 6090.5546 |
| 2423 | 0   | Extremo | -4288.88  | -109.648 | 8.903   | 22.4478   | 9.8136   | 5520.9858 |
| 2423 | 0.5 | Extremo | -4288.88  | -94.31   | 8.903   | 22.4478   | 5.3619   | 5571.9751 |
| 2423 | 1   | Extremo | -4288.88  | -78.972  | 8.903   | 22.4478   | 0.9102   | 5615.2954 |
| 2424 | 0   | Extremo | -4342.97  | -44.662  | 1.305   | 3.3148    | 5.4776   | 6100.2719 |
| 2424 | 0.5 | Extremo | -4342.97  | -29.324  | 1.305   | 3.3148    | 4.8251   | 6118.7684 |
| 2424 | 1   | Extremo | -4342.97  | -13.986  | 1.305   | 3.3148    | 4.1727   | 6129.5959 |
| 2424 | 0   | Extremo | -4292.468 | -47.811  | 2.976   | 20.9776   | 6.6856   | 5632.3573 |
| 2424 | 0.5 | Extremo | -4292.468 | -32.474  | 2.976   | 20.9776   | 5.1976   | 5652.4286 |
| 2424 | 1   | Extremo | -4292.468 | -17.136  | 2.976   | 20.9776   | 3.7096   | 5664.8309 |
| 2425 | 0   | Extremo | -4342.327 | 14.634   | -4.333  | -14.5867  | 2.7969   | 6124.3624 |
| 2425 | 0.5 | Extremo | -4342.327 | 29.972   | -4.333  | -14.5867  | 4.9633   | 6113.2109 |
| 2425 | 1   | Extremo | -4342.327 | 45.31    | -4.333  | -14.5867  | 7.1298   | 6094.3904 |
| 2425 | 0   | Extremo | -4292.545 | 13.317   | -2.728  | 19.5689   | 3.8316   | 5681.8648 |
| 2425 | 0.5 | Extremo | -4292.545 | 28.654   | -2.728  | 19.5689   | 5.1954   | 5671.372  |
| 2425 | 1   | Extremo | -4292.545 | 43.992   | -2.728  | 19.5689   | 6.5591   | 5653.2103 |
| 2426 | 0   | Extremo | -4338.253 | 75.99    | -10.077 | -29.9571  | 0.1853   | 6075.5888 |
| 2426 | 0.5 | Extremo | -4338.253 | 91.328   | -10.077 | -29.9571  | 5.2236   | 6033.7595 |
| 2426 | 1   | Extremo | -4338.253 | 106.665  | -10.077 | -29.9571  | 10.2619  | 5984.2612 |
| 2426 | 0   | Extremo | -4289.108 | 75.336   | -8.656  | 18.0952   | 1.0272   | 5670.2234 |
| 2426 | 0.5 | Extremo | -4289.108 | 90.674   | -8.656  | 18.0952   | 5.3552   | 5628.7208 |
| 2426 | 1   | Extremo | -4289.108 | 106.012  | -8.656  | 18.0952   | 9.6832   | 5579.5492 |
| 2427 | 0   | Extremo | -4330.086 | 141.565  | -16.546 | -42.2058  | -2.6099  | 5955.1468 |
| 2427 | 0.5 | Extremo | -4330.086 | 156.903  | -16.546 | -42.2058  | 5.6629   | 5880.53   |
| 2427 | 1   | Extremo | -4330.086 | 172.24   | -16.546 | -42.2058  | 13.9357  | 5798.2442 |
| 2427 | 0   | Extremo | -4281.487 | 140.739  | -15.275 | 15.9767   | -1.905   | 5596.5538 |
| 2427 | 0.5 | Extremo | -4281.487 | 156.077  | -15.275 | 15.9767   | 5.7326   | 5522.3498 |
| 2427 | 1   | Extremo | -4281.487 | 171.415  | -15.275 | 15.9767   | 13.3701  | 5440.4769 |
| 2428 | 0   | Extremo | -4316.173 | 217.376  | -24.261 | -54.1214  | -5.6984  | 5761.3941 |
| 2428 | 0.5 | Extremo | -4316.173 | 232.714  | -24.261 | -54.1214  | 6.4323   | 5648.8715 |
| 2428 | 1   | Extremo | -4316.173 | 248.052  | -24.261 | -54.1214  | 18.5631  | 5528.6799 |
| 2428 | 0   | Extremo | -4268.085 | 216.066  | -23.067 | 10.6839   | -5.0767  | 5456.6074 |
| 2428 | 0.5 | Extremo | -4268.085 | 231.404  | -23.067 | 10.6839   | 6.457    | 5344.7398 |
| 2428 | 1   | Extremo | -4268.085 | 246.742  | -23.067 | 10.6839   | 17.9907  | 5225.2032 |
| 2429 | 0   | Extremo | -4293.267 | 321.595  | -33.543 | -74.6959  | -9.0833  | 5480.1168 |
| 2429 | 0.5 | Extremo | -4293.267 | 336.932  | -33.543 | -74.6959  | 7.688    | 5315.485  |
| 2429 | 1   | Extremo | -4293.267 | 352.27   | -33.543 | -74.6959  | 24.4593  | 5143.1843 |
| 2429 | 0   | Extremo | -4245.731 | 319.501  | -32.359 | -5.845    | -8.5087  | 5233.8391 |
| 2429 | 0.5 | Extremo | -4245.731 | 334.839  | -32.359 | -5.845    | 7.6706   | 5070.2542 |
| 2429 | 1   | Extremo | -4245.731 | 350.177  | -32.359 | -5.845    | 23.8499  | 4899.0004 |
| 2430 | 0   | Extremo | -4254.857 | 481.793  | -43.581 | -118.4302 | -13.0779 | 5047.0291 |
| 2430 | 0.5 | Extremo | -4254.857 | 497.131  | -43.581 | -118.4302 | 8.7125   | 4802.298  |
| 2430 | 1   | Extremo | -4254.857 | 512.469  | -43.581 | -118.4302 | 30.5029  | 4549.8979 |
| 2430 | 0   |         |           |          |         |           |          |           |



|      |     |         |           |         |          |           |           |           |
|------|-----|---------|-----------|---------|----------|-----------|-----------|-----------|
| 2434 | 1   | Extremo | -4057.729 | 512.047 | -58.591  | -67.5306  | 35.941    | 2129.6911 |
| 2434 | 0   | Extremo | -4014.139 | 494.551 | -57.392  | -3.7775   | -22.1452  | 2690.7355 |
| 2434 | 0.5 | Extremo | -4014.139 | 509.889 | -57.392  | -3.7775   | 6.5509    | 2439.6253 |
| 2434 | 1   | Extremo | -4014.139 | 525.227 | -57.392  | -3.7775   | 35.247    | 2180.8462 |
| 2435 | 0   | Extremo | -4005.171 | 549.741 | -67.193  | -81.7369  | -25.131   | 2081.0327 |
| 2435 | 0.5 | Extremo | -4005.171 | 565.079 | -67.193  | -81.7369  | 8.4656    | 1802.3276 |
| 2435 | 1   | Extremo | -4005.171 | 580.417 | -67.193  | -81.7369  | 42.0622   | 1515.9536 |
| 2435 | 0   | Extremo | -3962.423 | 569.399 | -65.927  | -20.9022  | -24.6291  | 2191.083  |
| 2435 | 0.5 | Extremo | -3962.423 | 584.737 | -65.927  | -20.9022  | 8.3346    | 1902.5491 |
| 2435 | 1   | Extremo | -3962.423 | 600.075 | -65.927  | -20.9022  | 41.2983   | 1606.3461 |
| 2436 | 0   | Extremo | -3920.484 | 562.108 | -70.503  | -65.6712  | -34.1102  | 1389.1996 |
| 2436 | 0.5 | Extremo | -3920.484 | 577.445 | -70.503  | -65.6712  | 1.1413    | 1104.3114 |
| 2436 | 1   | Extremo | -3920.484 | 592.783 | -70.503  | -65.6712  | 36.3927   | 811.7542  |
| 2436 | 0   | Extremo | -3878.907 | 582.991 | -69.253  | -8.6073   | -33.5548  | 1526.2723 |
| 2436 | 0.5 | Extremo | -3878.907 | 598.329 | -69.253  | -8.6073   | 1.0718    | 1230.9425 |
| 2436 | 1   | Extremo | -3878.907 | 613.666 | -69.253  | -8.6073   | 35.6983   | 927.9237  |
| 2437 | 0   | Extremo | -3861.738 | 528.806 | -71.694  | -59.0396  | -33.9719  | 796.2478  |
| 2437 | 0.5 | Extremo | -3861.738 | 544.144 | -71.694  | -59.0396  | 1.8752    | 528.0102  |
| 2437 | 1   | Extremo | -3861.738 | 559.482 | -71.694  | -59.0396  | 37.7223   | 252.1036  |
| 2437 | 0   | Extremo | -3821.067 | 549.493 | -70.459  | -2.5786   | -33.4334  | 973.6655  |
| 2437 | 0.5 | Extremo | -3821.067 | 564.831 | -70.459  | -2.5786   | 1.7962    | 695.0847  |
| 2437 | 1   | Extremo | -3821.067 | 580.168 | -70.459  | -2.5786   | 37.0259   | 408.8349  |
| 2438 | 0   | Extremo | -3817.351 | 537.734 | -75.229  | -61.8171  | -33.3438  | 257.9418  |
| 2438 | 0.5 | Extremo | -3817.351 | 553.071 | -75.229  | -61.8171  | 4.2705    | -14.7594  |
| 2438 | 1   | Extremo | -3817.351 | 568.409 | -75.229  | -61.8171  | 41.8849   | -295.1296 |
| 2438 | 0   | Extremo | -3777.407 | 558.773 | -73.983  | -6.0963   | -32.834   | 475.873   |
| 2438 | 0.5 | Extremo | -3777.407 | 574.111 | -73.983  | -6.0963   | 4.1574    | 192.6521  |
| 2438 | 1   | Extremo | -3777.407 | 589.449 | -73.983  | -6.0963   | 41.1487   | -98.2377  |
| 2439 | 0   | Extremo | -3776.036 | 560.613 | -83.935  | -66.4563  | -35.2714  | -288.951  |
| 2439 | 0.5 | Extremo | -3776.036 | 575.951 | -83.935  | -66.4563  | 6.6963    | -573.0922 |
| 2439 | 1   | Extremo | -3776.036 | 591.289 | -83.935  | -66.4563  | 48.6639   | -864.9023 |
| 2439 | 0   | Extremo | -3736.761 | 582.915 | -82.627  | -11.9259  | -34.7674  | -31.6802  |
| 2439 | 0.5 | Extremo | -3736.761 | 598.253 | -82.627  | -11.9259  | 6.546     | -326.972  |
| 2439 | 1   | Extremo | -3736.761 | 613.59  | -82.627  | -11.9259  | 47.8594   | -629.9328 |
| 2440 | 0   | Extremo | -3728.888 | 573.82  | -99.139  | -66.1938  | -40.0609  | -856.9035 |
| 2440 | 0.5 | Extremo | -3728.888 | 589.158 | -99.139  | -66.1938  | 9.5085    | -1147.648 |
| 2440 | 1   | Extremo | -3728.888 | 604.496 | -99.139  | -66.1938  | 59.0778   | -1446.062 |
| 2440 | 0   | Extremo | -3690.315 | 599.755 | -97.705  | -13.9706  | -39.5379  | -563.3258 |
| 2440 | 0.5 | Extremo | -3690.315 | 615.092 | -97.705  | -13.9706  | 9.3147    | -867.0376 |
| 2440 | 1   | Extremo | -3690.315 | 630.43  | -97.705  | -13.9706  | 58.1673   | -1178.418 |
| 2441 | 0   | Extremo | -3664.527 | 550.076 | -121.584 | -50.1895  | -48.0404  | -1412.673 |
| 2441 | 0.5 | Extremo | -3664.527 | 565.414 | -121.584 | -50.1895  | 12.7514   | -1691.545 |
| 2441 | 1   | Extremo | -3664.527 | 580.752 | -121.584 | -50.1895  | 73.5432   | -1978.087 |
| 2441 | 0   | Extremo | -3626.798 | 584.718 | -119.96  | -3.0176   | -47.474   | -1092.289 |
| 2441 | 0.5 | Extremo | -3626.798 | 600.056 | -119.96  | -3.0176   | 12.5062   | -1388.483 |
| 2441 | 1   | Extremo | -3626.798 | 615.394 | -119.96  | -3.0176   | 72.4864   | -1692.345 |
| 2442 | 0   | Extremo | -3561.122 | 551.198 | -145.901 | -36.0894  | -62.9406  | -1802.565 |
| 2442 | 0.5 | Extremo | -3561.122 | 566.536 | -145.901 | -36.0894  | 10.0101   | -2081.998 |
| 2442 | 1   | Extremo | -3561.122 | 581.873 | -145.901 | -36.0894  | 82.9607   | -2369.1   |
| 2442 | 0   | Extremo | -3524.601 | 585.681 | -144.092 | 6.2526    | -62.2711  | -1488.212 |
| 2442 | 0.5 | Extremo | -3524.601 | 601.019 | -144.092 | 6.2526    | 9.7747    | -1784.887 |
| 2442 | 1   | Extremo | -3524.601 | 616.357 | -144.092 | 6.2526    | 81.8205   | -2089.231 |
| 2443 | 0   | Extremo | -3446.046 | 615.309 | -182.107 | -59.4343  | -76.5146  | -2286.876 |
| 2443 | 0.5 | Extremo | -3446.046 | 630.647 | -182.107 | -59.4343  | 14.5391   | -2598.365 |
| 2443 | 1   | Extremo | -3446.046 | 645.985 | -182.107 | -59.4343  | 105.5928  | -2917.523 |
| 2443 | 0   | Extremo | -3410.817 | 641.784 | -179.995 | -19.7967  | -75.7581  | -1959.607 |
| 2443 | 0.5 | Extremo | -3410.817 | 657.122 | -179.995 | -19.7967  | 14.2396   | -2284.334 |
| 2443 | 1   | Extremo | -3410.817 | 672.46  | -179.995 | -19.7967  | 104.2374  | -2616.729 |
| 2444 | 0   | Extremo | -3286.501 | 655.482 | -239.129 | -75.9785  | -94.906   | -2864.045 |
| 2444 | 0.5 | Extremo | -3286.501 | 670.82  | -239.129 | -75.9785  | 24.6585   | -3195.621 |
| 2444 | 1   | Extremo | -3286.501 | 686.158 | -239.129 | -75.9785  | 144.223   | -3534.865 |
| 2444 | 0   | Extremo | -3252.989 | 676.702 | -236.499 | -41.9185  | -94.0092  | -2518.926 |
| 2444 | 0.5 | Extremo | -3252.989 | 692.04  | -236.499 | -41.9185  | 24.2405   | -2861.111 |
| 2444 | 1   | Extremo | -3252.989 | 707.378 | -236.499 | -41.9185  | 142.4903  | -3210.966 |
| 2445 | 0   | Extremo | -3017.714 | 646.051 | -331.608 | -97.6299  | -120.827  | -3500.244 |
| 2445 | 0.5 | Extremo | -3017.714 | 661.389 | -331.608 | -97.6299  | 44.9772   | -3827.104 |
| 2445 | 1   | Extremo | -3017.714 | 676.727 | -331.608 | -97.6299  | 210.7813  | -4161.633 |
| 2445 | 0   | Extremo | -2987.113 | 664.27  | -328.012 | -71.5294  | -119.6582 | -3140.263 |
| 2445 | 0.5 | Extremo | -2987.113 | 679.608 | -328.012 | -71.5294  | 44.348    | -3476.233 |
| 2445 | 1   | Extremo | -2987.113 | 694.946 | -328.012 | -71.5294  | 208.3541  | -3819.871 |
| 2446 | 0   | Extremo | -2533.844 | 469.043 | -439.888 | -111.4241 | -144.4278 | -4136.716 |
| 2446 | 0.5 | Extremo | -2533.844 | 484.381 | -439.888 | -111.4241 | 75.5159   | -4375.072 |

|      |     |         |           |          |          |           |           |           |
|------|-----|---------|-----------|----------|----------|-----------|-----------|-----------|
| 2446 | 1   | Extremo | -2533.844 | 499.719  | -439.888 | -111.4241 | 295.4597  | -4621.096 |
| 2446 | 0   | Extremo | -2508.722 | 490.735  | -434.913 | -96.1951  | -142.892  | -3772.616 |
| 2446 | 0.5 | Extremo | -2508.722 | 506.073  | -434.913 | -96.1951  | 74.5646   | -4021.818 |
| 2446 | 1   | Extremo | -2508.722 | 521.411  | -434.913 | -96.1951  | 292.0213  | -4278.689 |
| 2447 | 0   | Extremo | -1785.352 | -73.469  | -452.133 | -4.4593   | -232.2964 | -4391.242 |
| 2447 | 0.5 | Extremo | -1785.352 | -58.132  | -452.133 | -4.4593   | -6.2299   | -4358.342 |
| 2447 | 1   | Extremo | -1785.352 | -42.794  | -452.133 | -4.4593   | 219.8367  | -4333.11  |
| 2447 | 0   | Extremo | -1769.229 | -51.313  | -446.546 | -1.6141   | -229.5895 | -4062.005 |
| 2447 | 0.5 | Extremo | -1769.229 | -35.975  | -446.546 | -1.6141   | -6.3163   | -4040.183 |
| 2447 | 1   | Extremo | -1769.229 | -20.637  | -446.546 | -1.6141   | 216.9569  | -4026.03  |
| 2448 | 0   | Extremo | -1057.672 | -489.63  | -419.489 | 50.567    | -281.1119 | -4488.599 |
| 2448 | 0.5 | Extremo | -1057.672 | -474.292 | -419.489 | 50.567    | -71.3674  | -4247.619 |
| 2448 | 1   | Extremo | -1057.672 | -458.955 | -419.489 | 50.567    | 138.3771  | -4014.307 |
| 2448 | 0   | Extremo | -1050.292 | -482.327 | -414.964 | 50.1925   | -278.2323 | -4169.354 |
| 2448 | 0.5 | Extremo | -1050.292 | -466.989 | -414.964 | 50.1925   | -70.7501  | -3932.025 |
| 2448 | 1   | Extremo | -1050.292 | -451.651 | -414.964 | 50.1925   | 136.732   | -3702.366 |
| 2449 | 0   | Extremo | -606.199  | -592.484 | -309.564 | 29.5082   | -197.372  | -4083.849 |
| 2449 | 0.5 | Extremo | -606.199  | -577.146 | -309.564 | 29.5082   | -42.5898  | -3791.442 |
| 2449 | 1   | Extremo | -606.199  | -561.808 | -309.564 | 29.5082   | 112.1925  | -3506.703 |
| 2449 | 0   | Extremo | -603.758  | -587.761 | -306.641 | 24.0826   | -195.585  | -3772.488 |
| 2449 | 0.5 | Extremo | -603.758  | -572.423 | -306.641 | 24.0826   | -42.2647  | -3482.442 |
| 2449 | 1   | Extremo | -603.758  | -557.086 | -306.641 | 24.0826   | 111.0556  | -3200.065 |
| 2450 | 0   | Extremo | -362.215  | -579.529 | -216.314 | 10.3628   | -132.0628 | -3594.77  |
| 2450 | 0.5 | Extremo | -362.215  | -564.191 | -216.314 | 10.3628   | -23.9058  | -3308.84  |
| 2450 | 1   | Extremo | -362.215  | -548.853 | -216.314 | 10.3628   | 84.2513   | -3030.579 |
| 2450 | 0   | Extremo | -362.08   | -576.74  | -214.533 | 1.6815    | -131.0288 | -3294.858 |
| 2450 | 0.5 | Extremo | -362.08   | -561.402 | -214.533 | 1.6815    | -23.7626  | -3010.322 |
| 2450 | 1   | Extremo | -362.08   | -546.064 | -214.533 | 1.6815    | 83.5037   | -2733.456 |
| 2451 | 0   | Extremo | -228.43   | -527.382 | -154.682 | -5.5414   | -92.3696  | -3134.647 |
| 2451 | 0.5 | Extremo | -228.43   | -512.044 | -154.682 | -5.5414   | -15.0288  | -2874.79  |
| 2451 | 1   | Extremo | -228.43   | -496.706 | -154.682 | -5.5414   | 62.312    | -2622.603 |
| 2451 | 0   | Extremo | -229.276  | -528.085 | -153.588 | -15.7488  | -91.774   | -2847.197 |
| 2451 | 0.5 | Extremo | -229.276  | -512.748 | -153.588 | -15.7488  | -14.9799  | -2586.989 |
| 2451 | 1   | Extremo | -229.276  | -497.41  | -153.588 | -15.7488  | 61.8141   | -2334.45  |
| 2452 | 0   | Extremo | -150.438  | -440.979 | -112.434 | -33.8107  | -67.2256  | -2761.735 |
| 2452 | 0.5 | Extremo | -150.438  | -425.641 | -112.434 | -33.8107  | -11.0089  | -2545.08  |
| 2452 | 1   | Extremo | -150.438  | -410.303 | -112.434 | -33.8107  | 45.2079   | -2336.094 |
| 2452 | 0   | Extremo | -151.628  | -449.141 | -111.791 | -43.2471  | -66.9135  | -2481.705 |
| 2452 | 0.5 | Extremo | -151.628  | -433.804 | -111.791 | -43.2471  | -11.018   | -2260.968 |
| 2452 | 1   | Extremo | -151.628  | -418.466 | -111.791 | -43.2471  | 44.8775   | -2047.901 |
| 2453 | 0   | Extremo | -108.077  | -430.167 | -85.67   | -24.8263  | -50.3777  | -2602.668 |
| 2453 | 0.5 | Extremo | -108.077  | -414.829 | -85.67   | -24.8263  | -7.5428   | -2391.419 |
| 2453 | 1   | Extremo | -108.077  | -399.491 | -85.67   | -24.8263  | 35.2921   | -2187.839 |
| 2453 | 0   | Extremo | -109.259  | -437.469 | -85.342  | -35.7393  | -50.2543  | -2305.095 |
| 2453 | 0.5 | Extremo | -109.259  | -422.131 | -85.342  | -35.7393  | -7.5832   | -2090.194 |
| 2453 | 1   | Extremo | -109.259  | -406.794 | -85.342  | -35.7393  | 35.0878   | -1882.963 |
| 2454 | 0   | Extremo | -80.205   | -460.668 | -65.034  | -5.0877   | -37.9039  | -2283.095 |
| 2454 | 0.5 | Extremo | -80.205   | -445.33  | -65.034  | -5.0877   | -5.3868   | -2056.595 |
| 2454 | 1   | Extremo | -80.205   | -429.992 | -65.034  | -5.0877   | 27.1303   |           |





|      |     |         |         |          |         |          |          |           |
|------|-----|---------|---------|----------|---------|----------|----------|-----------|
| 2458 | 1   | Extremo | -27.184 | -291.944 | -23.478 | -34.2946 | 9.6562   | -605.3757 |
| 2458 | 0   | Extremo | -27.033 | -327.522 | -23.752 | -47.0514 | -14.0429 | -684.6649 |
| 2458 | 0.5 | Extremo | -27.033 | -312.184 | -23.752 | -47.0514 | -2.167   | -524.7385 |
| 2458 | 1   | Extremo | -27.033 | -296.846 | -23.752 | -47.0514 | 9.7089   | -372.4811 |
| 2459 | 0   | Extremo | -21.727 | -296.417 | -18.957 | -25.5925 | -11.0057 | -705.5834 |
| 2459 | 0.5 | Extremo | -21.727 | -281.079 | -18.957 | -25.5925 | -1.5271  | -561.2093 |
| 2459 | 1   | Extremo | -21.727 | -265.742 | -18.957 | -25.5925 | 7.9515   | -424.5041 |
| 2459 | 0   | Extremo | -21.248 | -299.659 | -19.295 | -39.6111 | -11.2536 | -467.5487 |
| 2459 | 0.5 | Extremo | -21.248 | -284.321 | -19.295 | -39.6111 | -1.6058  | -321.5536 |
| 2459 | 1   | Extremo | -21.248 | -268.983 | -19.295 | -39.6111 | 8.0419   | -183.2275 |
| 2460 | 0   | Extremo | -17.168 | -276.252 | -14.974 | -18.3951 | -8.6224  | -467.6917 |
| 2460 | 0.5 | Extremo | -17.168 | -260.914 | -14.974 | -18.3951 | -1.1356  | -333.4    |
| 2460 | 1   | Extremo | -17.168 | -245.577 | -14.974 | -18.3951 | 6.3513   | -206.7772 |
| 2460 | 0   | Extremo | -16.355 | -271.193 | -15.338 | -35.4949 | -8.8747  | -239.0822 |
| 2460 | 0.5 | Extremo | -16.355 | -255.855 | -15.338 | -35.4949 | -1.2058  | -107.3201 |
| 2460 | 1   | Extremo | -16.355 | -240.517 | -15.338 | -35.4949 | 6.4632   | 16.773    |
| 2461 | 0   | Extremo | -13.372 | -239.607 | -11.933 | -19.5744 | -6.8502  | -239.9291 |
| 2461 | 0.5 | Extremo | -13.372 | -224.269 | -11.933 | -19.5744 | -0.8838  | -123.96   |
| 2461 | 1   | Extremo | -13.372 | -208.931 | -11.933 | -19.5744 | 5.0826   | -15.6598  |
| 2461 | 0   | Extremo | -12.221 | -231.324 | -12.31  | -37.5446 | -7.1026  | -32.5539  |
| 2461 | 0.5 | Extremo | -12.221 | -215.986 | -12.31  | -37.5446 | -0.9477  | 79.2738   |
| 2461 | 1   | Extremo | -12.221 | -200.649 | -12.31  | -37.5446 | 5.2072   | 183.4326  |
| 2462 | 0   | Extremo | -10.171 | -198.858 | -9.572  | -23.5961 | -5.4825  | -48.2916  |
| 2462 | 0.5 | Extremo | -10.171 | -183.52  | -9.572  | -23.5961 | -0.6963  | 47.3029   |
| 2462 | 1   | Extremo | -10.171 | -168.182 | -9.572  | -23.5961 | 4.0898   | 135.2285  |
| 2462 | 0   | Extremo | -8.674  | -190.376 | -9.952  | -41.2445 | -5.7324  | 134.4261  |
| 2462 | 0.5 | Extremo | -8.674  | -175.038 | -9.952  | -41.2445 | -0.7563  | 225.7797  |
| 2462 | 1   | Extremo | -8.674  | -159.7   | -9.952  | -41.2445 | 4.2198   | 309.4644  |
| 2463 | 0   | Extremo | -7.401  | -161.948 | -7.677  | -29.484  | -4.4566  | 104.3519  |
| 2463 | 0.5 | Extremo | -7.401  | -146.61  | -7.677  | -29.484  | -0.618   | 181.4915  |
| 2463 | 1   | Extremo | -7.401  | -131.272 | -7.677  | -29.484  | 3.2207   | 250.9622  |
| 2463 | 0   | Extremo | -5.543  | -155.556 | -8.05   | -45.7551 | -4.7069  | 263.9274  |
| 2463 | 0.5 | Extremo | -5.543  | -140.218 | -8.05   | -45.7551 | -0.6817  | 337.871   |
| 2463 | 1   | Extremo | -5.543  | -124.88  | -8.05   | -45.7551 | 3.3435   | 404.1457  |
| 2464 | 0   | Extremo | -5.43   | -108.454 | -6.447  | -23.7457 | -3.6664  | 239.6417  |
| 2464 | 0.5 | Extremo | -5.43   | -93.116  | -6.447  | -23.7457 | -0.4427  | 290.0341  |
| 2464 | 1   | Extremo | -5.43   | -77.778  | -6.447  | -23.7457 | 2.781    | 332.7576  |
| 2464 | 0   | Extremo | -3.212  | -100.292 | -6.819  | -40.6606 | -3.9124  | 387.4918  |
| 2464 | 0.5 | Extremo | -3.212  | -84.954  | -6.819  | -40.6606 | -0.5031  | 433.8035  |
| 2464 | 1   | Extremo | -3.212  | -69.616  | -6.819  | -40.6606 | 2.9062   | 472.4462  |
| 2465 | 0   | Extremo | -3.672  | -43.383  | -5.37   | -23.8839 | -2.9934  | 313.1277  |
| 2465 | 0.5 | Extremo | -3.672  | -28.045  | -5.37   | -23.8839 | -0.3086  | 330.9846  |
| 2465 | 1   | Extremo | -3.672  | -12.707  | -5.37   | -23.8839 | 2.3762   | 341.1726  |
| 2465 | 0   | Extremo | -1.123  | -29.961  | -5.688  | -41.8479 | -3.2096  | 438.9132  |
| 2465 | 0.5 | Extremo | -1.123  | -14.623  | -5.688  | -41.8479 | -0.3656  | 450.0594  |
| 2465 | 1   | Extremo | -1.123  | 0.714    | -5.688  | -41.8479 | 2.4783   | 453.5366  |
| 2466 | 0   | Extremo | -2.115  | 22.232   | -4.568  | -24.1168 | -2.4859  | 321.5744  |
| 2466 | 0.5 | Extremo | -2.115  | 37.569   | -4.568  | -24.1168 | -0.2017  | 306.6241  |
| 2466 | 1   | Extremo | -2.115  | 52.907   | -4.568  | -24.1168 | 2.0824   | 284.0049  |
| 2466 | 0   | Extremo | 0.696   | 38.385   | -4.793  | -41.3684 | -2.6627  | 419.1212  |
| 2466 | 0.5 | Extremo | 0.696   | 53.722   | -4.793  | -41.3684 | -0.2661  | 396.0944  |
| 2466 | 1   | Extremo | 0.696   | 69.06    | -4.793  | -41.3684 | 2.1305   | 365.3988  |
| 2467 | 0   | Extremo | -0.773  | 86.53    | -3.945  | -27.827  | -2.0376  | 264.1545  |
| 2467 | 0.5 | Extremo | -0.773  | 101.868  | -3.945  | -27.827  | -0.065   | 217.0552  |
| 2467 | 1   | Extremo | -0.773  | 117.205  | -3.945  | -27.827  | 1.9077   | 162.2869  |
| 2467 | 0   | Extremo | 2.122   | 104.386  | -4.018  | -43.4636 | -2.1564  | 331.746   |
| 2467 | 0.5 | Extremo | 2.122   | 119.724  | -4.018  | -43.4636 | -0.1473  | 275.7186  |
| 2467 | 1   | Extremo | 2.122   | 135.062  | -4.018  | -43.4636 | 1.8617   | 212.0223  |
| 2468 | 0   | Extremo | 0.213   | 116.731  | -3.299  | -34.4885 | -1.4605  | 134.9839  |
| 2468 | 0.5 | Extremo | 0.213   | 132.068  | -3.299  | -34.4885 | 0.189    | 72.7841   |
| 2468 | 1   | Extremo | 0.213   | 147.406  | -3.299  | -34.4885 | 1.8384   | 2.9155    |
| 2468 | 0   | Extremo | 2.737   | 134.104  | -3.14   | -47.7613 | -1.4555  | 172.2186  |
| 2468 | 0.5 | Extremo | 2.737   | 149.442  | -3.14   | -47.7613 | 0.1145   | 101.332   |
| 2468 | 1   | Extremo | 2.737   | 164.78   | -3.14   | -47.7613 | 1.6845   | 22.7765   |
| 2469 | 0   | Extremo | 0.217   | -28.125  | -1.545  | -1.5223  | -0.3503  | -12.1636  |
| 2469 | 0.5 | Extremo | 0.217   | -12.787  | -1.545  | -1.5223  | 0.4224   | -1.9356   |
| 2469 | 1   | Extremo | 0.217   | 2.551    | -1.545  | -1.5223  | 1.1951   | 0.6235    |
| 2469 | 0   | Extremo | 1.073   | -23.261  | -0.791  | -7.8968  | 0.0921   | -1.7926   |
| 2469 | 0.5 | Extremo | 1.073   | -7.923   | -0.791  | -7.8968  | 0.4876   | 6.0035    |
| 2469 | 1   | Extremo | 1.073   | 7.415    | -0.791  | -7.8968  | 0.8831   | 6.1306    |
| 2470 | 0   | Extremo | 0.086   | 43.82    | 0.08    | 7.9884   | 0.0284   | -38.8329  |
| 2470 | 0.5 | Extremo | 0.086   | 49.713   | 0.08    | 7.9884   | -0.0116  | -62.2161  |

|      |     |         |           |         |        |         |         |           |
|------|-----|---------|-----------|---------|--------|---------|---------|-----------|
| 2470 | 1   | Extremo | 0.086     | 55.605  | 0.08   | 7.9884  | -0.0515 | -88.5456  |
| 2470 | 0   | Extremo | -0.235    | 43.82   | -0.224 | 7.9882  | -0.0912 | -38.8327  |
| 2470 | 0.5 | Extremo | -0.235    | 49.712  | -0.224 | 7.9882  | 0.021   | -62.2157  |
| 2470 | 1   | Extremo | -0.235    | 55.605  | -0.224 | 7.9882  | 0.1332  | -88.545   |
| 2472 | 0   | Extremo | 0.093     | -57.042 | -0.091 | -9.7501 | -0.05   | -91.1459  |
| 2472 | 0.5 | Extremo | 0.093     | -51.149 | -0.091 | -9.7501 | -0.0044 | -64.0983  |
| 2472 | 1   | Extremo | 0.093     | -45.256 | -0.091 | -9.7501 | 0.0412  | -39.997   |
| 2472 | 0   | Extremo | -0.269    | -57.041 | 0.257  | -9.7499 | 0.152   | -91.1452  |
| 2472 | 0.5 | Extremo | -0.269    | -51.148 | 0.257  | -9.7499 | 0.0236  | -64.0979  |
| 2472 | 1   | Extremo | -0.269    | -45.256 | 0.257  | -9.7499 | -0.1048 | -39.9968  |
| 2473 | 0   | Extremo | -0.044    | 54.188  | 0.07   | 5.1254  | 0.037   | -38.4927  |
| 2473 | 0.5 | Extremo | -0.044    | 60.08   | 0.07   | 5.1254  | 0.0021  | -67.0596  |
| 2473 | 1   | Extremo | -0.044    | 65.973  | 0.07   | 5.1254  | -0.0327 | -98.573   |
| 2473 | 0   | Extremo | -0.017    | 54.187  | -0.26  | 5.1252  | -0.1369 | -38.4927  |
| 2473 | 0.5 | Extremo | -0.017    | 60.08   | -0.26  | 5.1252  | -0.0071 | -67.0594  |
| 2473 | 1   | Extremo | -0.017    | 65.973  | -0.26  | 5.1252  | 0.1227  | -98.5725  |
| 2475 | 0   | Extremo | 0.078     | -67.76  | -0.137 | -7.0707 | -0.0652 | -100.6265 |
| 2475 | 0.5 | Extremo | 0.078     | -61.867 | -0.137 | -7.0707 | 0.003   | -68.2199  |
| 2475 | 1   | Extremo | 0.078     | -55.974 | -0.137 | -7.0707 | 0.0713  | -38.7596  |
| 2475 | 0   | Extremo | -0.073    | -67.759 | 0.32   | -7.0705 | 0.1529  | -100.626  |
| 2475 | 0.5 | Extremo | -0.073    | -61.866 | 0.32   | -7.0705 | -0.0069 | -68.2196  |
| 2475 | 1   | Extremo | -0.073    | -55.974 | 0.32   | -7.0705 | -0.1667 | -38.7596  |
| 2476 | 0   | Extremo | -0.019    | 55.753  | 0.047  | 1.4198  | 0.0187  | -42.8916  |
| 2476 | 0.5 | Extremo | -0.019    | 61.646  | 0.047  | 1.4198  | -0.0046 | -72.2411  |
| 2476 | 1   | Extremo | -0.019    | 67.538  | 0.047  | 1.4198  | -0.028  | -104.5371 |
| 2476 | 0   | Extremo | 0.017     | 55.752  | -0.269 | 1.4196  | -0.113  | -42.8915  |
| 2476 | 0.5 | Extremo | 0.017     | 61.645  | -0.269 | 1.4196  | 0.0215  | -72.2408  |
| 2476 | 1   | Extremo | 0.017     | 67.538  | -0.269 | 1.4196  | 0.1561  | -104.5366 |
| 2478 | 0   | Extremo | 0.008576  | -67.898 | -0.175 | -3.2513 | -0.0992 | -105.0374 |
| 2478 | 0.5 | Extremo | 0.008576  | -62.005 | -0.175 | -3.2513 | -0.0115 | -72.5615  |
| 2478 | 1   | Extremo | 0.008576  | -56.113 | -0.175 | -3.2513 | 0.0762  | -43.0319  |
| 2478 | 0   | Extremo | 0.01      | -67.898 | 0.354  | -3.2511 | 0.2029  | -105.0369 |
| 2478 | 0.5 | Extremo | 0.01      | -62.005 | 0.354  | -3.2511 | 0.026   | -72.5612  |
| 2478 | 1   | Extremo | 0.01      | -56.112 | 0.354  | -3.2511 | -0.151  | -43.0318  |
| 2479 | 0   | Extremo | -0.013    | 53.886  | 0.028  | 0.471   | 0.0053  | -44.7082  |
| 2479 | 0.5 | Extremo | -0.013    | 59.779  | 0.028  | 0.471   | -0.0085 | -73.1245  |
| 2479 | 1   | Extremo | -0.013    | 65.672  | 0.028  | 0.471   | -0.0223 | -104.4873 |
| 2479 | 0   | Extremo | 0.033     | 53.886  | -0.235 | 0.4707  | -0.0853 | -44.7081  |
| 2479 | 0.5 | Extremo | 0.033     | 59.779  | -0.235 | 0.4707  | 0.0321  | -73.1244  |
| 2479 | 1   | Extremo | 0.033     | 65.672  | -0.235 | 0.4707  | 0.1494  | -104.487  |
| 2481 | 0   | Extremo | -0.013    | -64.575 | -0.17  | -2.3742 | -0.0997 | -102.9922 |
| 2481 | 0.5 | Extremo | -0.013    | -58.683 | -0.17  | -2.3742 | -0.0148 | -72.1777  |
| 2481 | 1   | Extremo | -0.013    | -52.79  | -0.17  | -2.3742 | 0.0702  | -44.3096  |
| 2481 | 0   | Extremo | 0.039     | -64.575 | 0.319  | -2.3739 | 0.1957  | -102.9919 |
| 2481 | 0.5 | Extremo | 0.039     | -58.682 | 0.319  | -2.3739 | 0.0361  | -72.1775  |
| 2481 | 1   | Extremo | 0.039     | -52.79  | 0.319  | -2.3739 | -0.1235 | -44.3095  |
| 2482 | 0   | Extremo | -0.009694 | 52.843  | 0.012  | -0.3837 | -0.003  | -45.0045  |
| 2482 | 0.5 | Extremo | -0.009694 | 58.736  | 0.012  | -0.3837 | -0.009  | -72.8994  |
| 2482 | 1   | Extremo | -0.009694 | 64.629  | 0.012  | -0.3837 | -0.015  | -103.7407 |
| 2482 | 0   | Extremo | 0.031     | 52.843  | -0.193 | -0.3842 | -0.0636 | -45.0045  |
| 2482 | 0.5 | Extremo | 0.031     | 58.736  | -0.193 | -0.3842 | 0.0328  | -72.8993  |
| 2482 | 1   | Extremo | 0.031     | 64.629  | -0.193 | -0.3842 | 0.1293  | -103.7406 |
| 2484 | 0   | Extremo | -0.014    | -63.057 | -0.154 | -0.8579 | -0.0917 | -101.3058 |
| 2484 | 0.5 | Extremo | -0.014    | -57.164 | -0.154 | -0.8579 | -0.0146 | -71.2508  |
| 2484 | 1   | Extremo | -0.014    | -51.271 | -0.154 | -0.8579 | 0.0625  | -44.1421  |
| 2484 | 0   | Extremo | 0.036     | -63.056 | 0.273  | -0.8574 | 0.1726  | -101.3058 |
| 2484 | 0.5 | Extremo | 0.036     | -57.164 | 0.273  | -0.8574 | 0.0363  | -71.2507  |
| 2484 | 1   | Extremo |           |         |        |         |         |           |



|      |     |         |           |         |           |         |           |           |
|------|-----|---------|-----------|---------|-----------|---------|-----------|-----------|
| 2488 | 1   | Extremo | -0.001116 | 64.559  | -0.001775 | -2.5358 | -0.0071   | -104.4023 |
| 2488 | 0   | Extremo | 0.008501  | 52.773  | -0.148    | -2.5363 | -0.0456   | -45.7362  |
| 2488 | 0.5 | Extremo | 0.008501  | 58.666  | -0.148    | -2.5363 | 0.0283    | -73.5961  |
| 2488 | 1   | Extremo | 0.008501  | 64.559  | -0.148    | -2.5363 | 0.1023    | -104.4024 |
| 2490 | 0   | Extremo | -0.00529  | -62.912 | -0.135    | 3.4494  | -0.0797   | -101.9106 |
| 2490 | 0.5 | Extremo | -0.00529  | -57.019 | -0.135    | 3.4494  | -0.0123   | -71.9277  |
| 2490 | 1   | Extremo | -0.00529  | -51.127 | -0.135    | 3.4494  | 0.055     | -44.8913  |
| 2490 | 0   | Extremo | 0.01      | -62.912 | 0.222     | 3.4499  | 0.1424    | -101.9106 |
| 2490 | 0.5 | Extremo | 0.01      | -57.019 | 0.222     | 3.4499  | 0.0312    | -71.9278  |
| 2490 | 1   | Extremo | 0.01      | -51.127 | 0.222     | 3.4499  | -0.08     | -44.8914  |
| 2491 | 0   | Extremo | 0.002495  | 54.123  | -3.22E-05 | -2.5666 | -0.0074   | -47.0018  |
| 2491 | 0.5 | Extremo | 0.002495  | 60.016  | -3.22E-05 | -2.5666 | -0.0074   | -75.5365  |
| 2491 | 1   | Extremo | 0.002495  | 65.909  | -3.22E-05 | -2.5666 | -0.0073   | -107.0176 |
| 2491 | 0   | Extremo | -0.000996 | 54.123  | -0.149    | -2.567  | -0.0489   | -47.002   |
| 2491 | 0.5 | Extremo | -0.000996 | 60.016  | -0.149    | -2.567  | 0.0257    | -75.5368  |
| 2491 | 1   | Extremo | -0.000996 | 65.909  | -0.149    | -2.567  | 0.1002    | -107.018  |
| 2493 | 0   | Extremo | -0.00167  | -64.464 | -0.134    | 4.1356  | -0.0782   | -105.3347 |
| 2493 | 0.5 | Extremo | -0.00167  | -58.571 | -0.134    | 4.1356  | -0.0111   | -74.576   |
| 2493 | 1   | Extremo | -0.00167  | -52.678 | -0.134    | 4.1356  | 0.0561    | -46.7637  |
| 2493 | 0   | Extremo | -0.000922 | -64.464 | 0.224     | 4.136   | 0.1404    | -105.3349 |
| 2493 | 0.5 | Extremo | -0.000922 | -58.571 | 0.224     | 4.136   | 0.0284    | -74.5762  |
| 2493 | 1   | Extremo | -0.000922 | -52.678 | 0.224     | 4.136   | -0.0836   | -46.7639  |
| 2494 | 0   | Extremo | 0.001273  | 58.5    | 0.003538  | -0.4881 | -0.0042   | -48.4349  |
| 2494 | 0.5 | Extremo | 0.001273  | 64.393  | 0.003538  | -0.4881 | -0.006    | -79.1581  |
| 2494 | 1   | Extremo | 0.001273  | 70.286  | 0.003538  | -0.4881 | -0.0078   | -112.8277 |
| 2494 | 0   | Extremo | -0.002767 | 58.501  | -0.16     | -0.4882 | -0.0593   | -48.4352  |
| 2494 | 0.5 | Extremo | -0.002767 | 64.393  | -0.16     | -0.4882 | 0.0205    | -79.1587  |
| 2494 | 1   | Extremo | -0.002767 | 70.286  | -0.16     | -0.4882 | 0.1003    | -112.8285 |
| 2496 | 0   | Extremo | 0.001431  | -69.996 | -0.139    | 1.5267  | -0.0784   | -113.5039 |
| 2496 | 0.5 | Extremo | 0.001431  | -64.103 | -0.139    | 1.5267  | -0.0087   | -79.979   |
| 2496 | 1   | Extremo | 0.001431  | -58.21  | -0.139    | 1.5267  | 0.061     | -49.4006  |
| 2496 | 0   | Extremo | -0.005266 | -69.996 | 0.238     | 1.5268  | 0.1419    | -113.5047 |
| 2496 | 0.5 | Extremo | -0.005266 | -64.104 | 0.238     | 1.5268  | 0.023     | -79.9796  |
| 2496 | 1   | Extremo | -0.005266 | -58.211 | 0.238     | 1.5268  | -0.096    | -49.401   |
| 2497 | 0   | Extremo | -0.02     | 67.538  | -0.004073 | 3.0535  | -0.0034   | -46.9253  |
| 2497 | 0.5 | Extremo | -0.02     | 73.431  | -0.004073 | 3.0535  | -0.0014   | -82.1673  |
| 2497 | 1   | Extremo | -0.02     | 79.323  | -0.004073 | 3.0535  | 0.0006774 | -120.3558 |
| 2497 | 0   | Extremo | 0.013     | 67.539  | -0.161    | 3.054   | -0.0741   | -46.9255  |
| 2497 | 0.5 | Extremo | 0.013     | 73.432  | -0.161    | 3.054   | 0.0065    | -82.1682  |
| 2497 | 1   | Extremo | 0.013     | 79.325  | -0.161    | 3.054   | 0.0871    | -120.3573 |
| 2499 | 0   | Extremo | 0.014     | -82.76  | -0.151    | -4.3765 | -0.0788   | -125.8819 |
| 2499 | 0.5 | Extremo | 0.014     | -76.867 | -0.151    | -4.3765 | -0.0031   | -85.9752  |
| 2499 | 1   | Extremo | 0.014     | -70.974 | -0.151    | -4.3765 | 0.0727    | -49.015   |
| 2499 | 0   | Extremo | 0.0009942 | -82.761 | 0.249     | -4.3769 | 0.1331    | -125.8835 |
| 2499 | 0.5 | Extremo | 0.0009942 | -76.868 | 0.249     | -4.3769 | 0.0085    | -85.9762  |
| 2499 | 1   | Extremo | 0.0009942 | -70.975 | 0.249     | -4.3769 | -0.1162   | -49.0153  |
| 2500 | 0   | Extremo | -0.079    | 71.546  | -0.053    | -0.27   | -0.0122   | -40.2593  |
| 2500 | 0.5 | Extremo | -0.079    | 77.439  | -0.053    | -0.27   | 0.0144    | -77.5057  |
| 2500 | 1   | Extremo | -0.079    | 83.332  | -0.053    | -0.27   | 0.0409    | -117.6985 |
| 2500 | 0   | Extremo | 0.031     | 71.548  | -0.124    | -0.2696 | -0.0879   | -40.259   |
| 2500 | 0.5 | Extremo | 0.031     | 77.441  | -0.124    | -0.2696 | -0.0259   | -77.5062  |
| 2500 | 1   | Extremo | 0.031     | 83.334  | -0.124    | -0.2696 | 0.0361    | -117.6998 |
| 2502 | 0   | Extremo | 0.076     | -89.706 | -0.183    | -2.2036 | -0.0869   | -125.6466 |
| 2502 | 0.5 | Extremo | 0.076     | -83.813 | -0.183    | -2.2036 | 0.0047    | -82.2667  |
| 2502 | 1   | Extremo | 0.076     | -77.921 | -0.183    | -2.2036 | 0.0962    | -41.8332  |
| 2502 | 0   | Extremo | -0.014    | -89.708 | 0.236     | -2.2039 | 0.0944    | -125.6482 |
| 2502 | 0.5 | Extremo | -0.014    | -83.815 | 0.236     | -2.2039 | -0.0236   | -82.2674  |
| 2502 | 1   | Extremo | -0.014    | -77.922 | 0.236     | -2.2039 | -0.1417   | -41.833   |
| 2503 | 0   | Extremo | -0.02     | 67.586  | -0.09     | -3.5627 | -0.0358   | -46.978   |
| 2503 | 0.5 | Extremo | -0.02     | 73.479  | -0.09     | -3.5627 | 0.009     | -82.2442  |
| 2503 | 1   | Extremo | -0.02     | 79.372  | -0.09     | -3.5627 | 0.0538    | -120.4569 |
| 2503 | 0   | Extremo | 0.014     | 67.587  | -0.122    | -3.5624 | -0.0603   | -46.9782  |
| 2503 | 0.5 | Extremo | 0.014     | 73.48   | -0.122    | -3.5624 | 0.0007091 | -82.2451  |
| 2503 | 1   | Extremo | 0.014     | 79.373  | -0.122    | -3.5624 | 0.0617    | -120.4584 |
| 2505 | 0   | Extremo | 0.012     | -82.788 | -0.226    | -0.045  | -0.1229   | -125.9311 |
| 2505 | 0.5 | Extremo | 0.012     | -76.896 | -0.226    | -0.045  | -0.0098   | -86.0101  |
| 2505 | 1   | Extremo | 0.012     | -71.003 | -0.226    | -0.045  | 0.1033    | -49.0355  |
| 2505 | 0   | Extremo | 0.008427  | -82.79  | 0.256     | -0.0452 | 0.1355    | -125.9327 |
| 2505 | 0.5 | Extremo | 0.008427  | -76.897 | 0.256     | -0.0452 | 0.0076    | -86.0111  |
| 2505 | 1   | Extremo | 0.008427  | -71.004 | 0.256     | -0.0452 | -0.1203   | -49.0358  |
| 2506 | 0   | Extremo | -0.007831 | 58.608  | -0.107    | 0.0768  | -0.0486   | -48.5466  |
| 2506 | 0.5 | Extremo | -0.007831 | 64.5    | -0.107    | 0.0768  | 0.0048    | -79.3237  |

|      |     |         |           |         |          |         |         |           |
|------|-----|---------|-----------|---------|----------|---------|---------|-----------|
| 2506 | 1   | Extremo | -0.007831 | 70.393  | -0.107   | 0.0768  | 0.0581  | -113.0471 |
| 2506 | 0   | Extremo | 0.022     | 58.608  | -0.097   | 0.0775  | -0.0371 | -48.5469  |
| 2506 | 0.5 | Extremo | 0.022     | 64.501  | -0.097   | 0.0775  | 0.0116  | -79.3242  |
| 2506 | 1   | Extremo | 0.022     | 70.394  | -0.097   | 0.0775  | 0.0602  | -113.0479 |
| 2508 | 0   | Extremo | -0.00976  | -70.06  | -0.226   | -5.9924 | -0.1259 | -113.6076 |
| 2508 | 0.5 | Extremo | -0.00976  | -64.167 | -0.226   | -5.9924 | -0.013  | -80.0507  |
| 2508 | 1   | Extremo | -0.00976  | -58.275 | -0.226   | -5.9924 | 0.0998  | -49.4403  |
| 2508 | 0   | Extremo | 0.027     | -70.061 | 0.231    | -5.9932 | 0.134   | -113.6084 |
| 2508 | 0.5 | Extremo | 0.027     | -64.168 | 0.231    | -5.9932 | 0.0184  | -80.0513  |
| 2508 | 1   | Extremo | 0.027     | -58.275 | 0.231    | -5.9932 | -0.0971 | -49.4406  |
| 2509 | 0   | Extremo | -0.006213 | 54.311  | -0.118   | 2.3331  | -0.0556 | -47.1798  |
| 2509 | 0.5 | Extremo | -0.006213 | 60.203  | -0.118   | 2.3331  | 0.0036  | -75.8083  |
| 2509 | 1   | Extremo | -0.006213 | 66.096  | -0.118   | 2.3331  | 0.0629  | -107.3831 |
| 2509 | 0   | Extremo | 0.023     | 54.311  | -0.065   | 2.3342  | -0.0194 | -47.18    |
| 2509 | 0.5 | Extremo | 0.023     | 60.203  | -0.065   | 2.3342  | 0.0133  | -75.8086  |
| 2509 | 1   | Extremo | 0.023     | 66.096  | -0.065   | 2.3342  | 0.046   | -107.3835 |
| 2511 | 0   | Extremo | -0.012    | -64.576 | -0.213   | -8.6757 | -0.1197 | -105.4956 |
| 2511 | 0.5 | Extremo | -0.012    | -58.683 | -0.213   | -8.6757 | -0.013  | -74.6808  |
| 2511 | 1   | Extremo | -0.012    | -52.79  | -0.213   | -8.6757 | 0.0936  | -46.8124  |
| 2511 | 0   | Extremo | 0.028     | -64.576 | 0.195    | -8.6768 | 0.1171  | -105.4959 |
| 2511 | 0.5 | Extremo | 0.028     | -58.683 | 0.195    | -8.6768 | 0.0197  | -74.6811  |
| 2511 | 1   | Extremo | 0.028     | -52.791 | 0.195    | -8.6768 | -0.0777 | -46.8126  |
| 2512 | 0   | Extremo | -0.004907 | 53.058  | -0.127   | 2.5672  | -0.0598 | -45.9744  |
| 2512 | 0.5 | Extremo | -0.004907 | 58.95   | -0.127   | 2.5672  | 0.0037  | -73.9764  |
| 2512 | 1   | Extremo | -0.004907 | 64.843  | -0.127   | 2.5672  | 0.0673  | -104.9247 |
| 2512 | 0   | Extremo | 0.019     | 53.058  | -0.038   | 2.5684  | -0.0069 | -45.9745  |
| 2512 | 0.5 | Extremo | 0.019     | 58.95   | -0.038   | 2.5684  | 0.012   | -73.9765  |
| 2512 | 1   | Extremo | 0.019     | 64.843  | -0.038   | 2.5684  | 0.0309  | -104.9248 |
| 2514 | 0   | Extremo | -0.009482 | -63.079 | -0.201   | -8.0758 | -0.1128 | -102.0958 |
| 2514 | 0.5 | Extremo | -0.009482 | -57.187 | -0.201   | -8.0758 | -0.0121 | -72.0294  |
| 2514 | 1   | Extremo | -0.009482 | -51.294 | -0.201   | -8.0758 | 0.0885  | -44.9093  |
| 2514 | 0   | Extremo | 0.022     | -63.079 | 0.163    | -8.077  | 0.0997  | -102.0959 |
| 2514 | 0.5 | Extremo | 0.022     | -57.187 | 0.163    | -8.077  | 0.018   | -72.0294  |
| 2514 | 1   | Extremo | 0.022     | -51.294 | 0.163    | -8.077  | -0.0637 | -44.9094  |
| 2515 | 0   | Extremo | -0.003242 | 52.89   | -0.133   | 1.8771  | -0.0623 | -45.4192  |
| 2515 | 0.5 | Extremo | -0.003242 | 58.783  | -0.133   | 1.8771  | 0.0041  | -73.3375  |
| 2515 | 1   | Extremo | -0.003242 | 64.676  | -0.133   | 1.8771  | 0.0706  | -104.2022 |
| 2515 | 0   | Extremo | 0.013     | 52.89   | -0.018   | 1.8783  | 0.0012  | -45.4193  |
| 2515 | 0.5 | Extremo | 0.013     | 58.783  | -0.018   | 1.8783  | 0.0101  | -73.3376  |
| 2515 | 1   | Extremo | 0.013     | 64.676  | -0.018   | 1.8783  | 0.0189  | -104.2022 |
| 2517 | 0   | Extremo | -0.006973 | -62.838 | -0.192   | -5.9962 | -0.1072 | -100.9699 |
| 2517 | 0.5 | Extremo | -0.006973 | -56.945 | -0.192   | -5.9962 | -0.0111 | -71.0241  |
| 2517 | 1   | Extremo | -0.006973 | -51.052 | -0.192   | -5.9962 | 0.085   | -44.0247  |
| 2517 | 0   | Extremo | 0.016     | -62.838 | 0.141    | -5.9974 | 0.0862  | -100.9699 |
| 2517 | 0.5 | Extremo | 0.016     | -56.945 | 0.141    | -5.9974 | 0.0158  | -71.0241  |
| 2517 | 1   | Extremo | 0.016     | -51.052 | 0.141    | -5.9974 | -0.0546 | -44.0248  |
| 2518 | 0   | Extremo | -0.001494 | 52.963  | -0.136   | 0.9497  | -0.0637 | -45.2398  |
| 2518 | 0.5 | Extremo | -0.001494 | 58.856  | -0.136   | 0.9497  | 0.0044  | -73.1946  |
| 2518 | 1   | Extremo | -0.001494 | 64.749  | -0.136   | 0.9497  | 0.0725  | -104.0957 |
| 2518 | 0   | Extremo | 0.008171  | 52.963  | -0.00492 | 0.951   | 0.0061  | -45.2398  |
| 2518 | 0.5 | Extremo | 0.008171  | 58.856  | -0.00492 | 0.951   | 0.0085  | -73.1946  |
| 2518 | 1   | Extremo | 0.008171  | 64.749  | -0.00492 | 0.951   | 0.011   | -104.0957 |
| 2520 | 0   | Extremo | -0.0047   | -62.858 | -0.186   | -3.4367 | -0.1032 | -100.656  |
| 2520 | 0.5 | Extremo | -0.0047   | -56.966 | -0.186   | -3.4367 | -0.0102 | -70.7     |
| 2520 | 1   | Extremo | -0.0047   | -51.073 | -0.186   | -3.4367 | 0.0828  | -43.6904  |
| 2520 | 0   | Extremo | 0.009698  | -62.858 | 0.126    | -3.4379 | 0.0772  | -100.656  |
| 2520 | 0.5 | Extremo | 0.009698  | -56.966 | 0.126    | -3.4379 |         |           |



|      |     |         |           |         |           |         |           |           |
|------|-----|---------|-----------|---------|-----------|---------|-----------|-----------|
| 2524 | 1   | Extremo | 0.002066  | 64.793  | -0.136    | -0.922  | 0.0723    | -104.0888 |
| 2524 | 0   | Extremo | -0.001657 | 53.007  | 0.002158  | -0.9208 | 0.0086    | -45.1887  |
| 2524 | 0.5 | Extremo | -0.001657 | 58.9    | 0.002158  | -0.9208 | 0.0075    | -73.1656  |
| 2524 | 1   | Extremo | -0.001657 | 64.793  | 0.002158  | -0.9208 | 0.0064    | -104.0888 |
| 2526 | 0   | Extremo | -0.000896 | -62.886 | -0.181    | 1.937   | -0.0997   | -100.5901 |
| 2526 | 0.5 | Extremo | -0.000896 | -56.993 | -0.181    | 1.937   | -0.0093   | -70.6204  |
| 2526 | 1   | Extremo | -0.000896 | -51.1   | -0.181    | 1.937   | 0.0811    | -43.597   |
| 2526 | 0   | Extremo | -0.001282 | -62.886 | 0.118     | 1.9358  | 0.0716    | -100.5901 |
| 2526 | 0.5 | Extremo | -0.001282 | -56.993 | 0.118     | 1.9358  | 0.0127    | -70.6204  |
| 2526 | 1   | Extremo | -0.001282 | -51.1   | 0.118     | 1.9358  | -0.0461   | -43.597   |
| 2527 | 0   | Extremo | 0.004017  | 52.921  | -0.133    | -1.8905 | -0.0629   | -45.2211  |
| 2527 | 0.5 | Extremo | 0.004017  | 58.814  | -0.133    | -1.8905 | 0.0036    | -73.1548  |
| 2527 | 1   | Extremo | 0.004017  | 64.707  | -0.133    | -1.8905 | 0.0702    | -104.0349 |
| 2527 | 0   | Extremo | -0.006546 | 52.921  | -0.002854 | -1.8892 | 0.0068    | -45.221   |
| 2527 | 0.5 | Extremo | -0.006546 | 58.814  | -0.002854 | -1.8892 | 0.0082    | -73.1548  |
| 2527 | 1   | Extremo | -0.006546 | 64.707  | -0.002854 | -1.8892 | 0.0096    | -104.0349 |
| 2529 | 0   | Extremo | 0.0008178 | -62.849 | -0.181    | 4.608   | -0.0999   | -100.6813 |
| 2529 | 0.5 | Extremo | 0.0008178 | -56.956 | -0.181    | 4.608   | -0.0092   | -70.73    |
| 2529 | 1   | Extremo | 0.0008178 | -51.063 | -0.181    | 4.608   | 0.0814    | -43.7251  |
| 2529 | 0   | Extremo | -0.006688 | -62.849 | 0.123     | 4.6068  | 0.0747    | -100.6814 |
| 2529 | 0.5 | Extremo | -0.006688 | -56.956 | 0.123     | 4.6068  | 0.0134    | -70.73    |
| 2529 | 1   | Extremo | -0.006688 | -51.064 | 0.123     | 4.6068  | -0.048    | -43.7251  |
| 2530 | 0   | Extremo | 0.006179  | 52.823  | -0.128    | -2.8697 | -0.061    | -45.4133  |
| 2530 | 0.5 | Extremo | 0.006179  | 58.715  | -0.128    | -2.8697 | 0.0028    | -73.2978  |
| 2530 | 1   | Extremo | 0.006179  | 64.608  | -0.128    | -2.8697 | 0.0666    | -104.1286 |
| 2530 | 0   | Extremo | -0.012    | 52.823  | -0.014    | -2.8684 | 0.0025    | -45.4132  |
| 2530 | 0.5 | Extremo | -0.012    | 58.715  | -0.014    | -2.8684 | 0.0095    | -73.2977  |
| 2530 | 1   | Extremo | -0.012    | 64.608  | -0.014    | -2.8684 | 0.0165    | -104.1286 |
| 2532 | 0   | Extremo | 0.002498  | -62.829 | -0.184    | 7.1355  | -0.1014   | -101.0581 |
| 2532 | 0.5 | Extremo | 0.002498  | -56.936 | -0.184    | 7.1355  | -0.0094   | -71.117   |
| 2532 | 1   | Extremo | 0.002498  | -51.043 | -0.184    | 7.1355  | 0.0826    | -44.1223  |
| 2532 | 0   | Extremo | -0.012    | -62.829 | 0.134     | 7.1342  | 0.0818    | -101.0581 |
| 2532 | 0.5 | Extremo | -0.012    | -56.936 | 0.134     | 7.1342  | 0.0147    | -71.117   |
| 2532 | 1   | Extremo | -0.012    | -51.043 | 0.134     | 7.1342  | -0.0525   | -44.1223  |
| 2533 | 0   | Extremo | 0.00847   | 53.003  | -0.119    | -3.5937 | -0.0578   | -46.0417  |
| 2533 | 0.5 | Extremo | 0.00847   | 58.896  | -0.119    | -3.5937 | 0.0018    | -74.0165  |
| 2533 | 1   | Extremo | 0.00847   | 64.789  | -0.119    | -3.5937 | 0.0614    | -104.9377 |
| 2533 | 0   | Extremo | -0.017    | 53.003  | -0.032    | -3.5925 | -0.005    | -46.0414  |
| 2533 | 0.5 | Extremo | -0.017    | 58.896  | -0.032    | -3.5925 | 0.0111    | -74.0162  |
| 2533 | 1   | Extremo | -0.017    | 64.789  | -0.032    | -3.5925 | 0.0272    | -104.9373 |
| 2535 | 0   | Extremo | 0.004058  | -63.118 | -0.189    | 9.0947  | -0.1043   | -102.3862 |
| 2535 | 0.5 | Extremo | 0.004058  | -57.225 | -0.189    | 9.0947  | -0.0096   | -72.3005  |
| 2535 | 1   | Extremo | 0.004058  | -51.332 | -0.189    | 9.0947  | 0.085     | -45.1612  |
| 2535 | 0   | Extremo | -0.018    | -63.118 | 0.154     | 9.0935  | 0.0932    | -102.386  |
| 2535 | 0.5 | Extremo | -0.018    | -57.225 | 0.154     | 9.0935  | 0.0163    | -72.3003  |
| 2535 | 1   | Extremo | -0.018    | -51.332 | 0.154     | 9.0935  | -0.0606   | -45.161   |
| 2536 | 0   | Extremo | 0.01      | 54.438  | -0.109    | -3.267  | -0.0533   | -47.4235  |
| 2536 | 0.5 | Extremo | 0.01      | 60.331  | -0.109    | -3.267  | 0.0009996 | -76.1157  |
| 2536 | 1   | Extremo | 0.01      | 66.224  | -0.109    | -3.267  | 0.0553    | -107.7543 |
| 2536 | 0   | Extremo | -0.02     | 54.438  | -0.057    | -3.2663 | -0.0167   | -47.4229  |
| 2536 | 0.5 | Extremo | -0.02     | 60.33   | -0.057    | -3.2663 | 0.012     | -76.1148  |
| 2536 | 1   | Extremo | -0.02     | 66.223  | -0.057    | -3.2663 | 0.0407    | -107.7532 |
| 2538 | 0   | Extremo | 0.005203  | -64.872 | -0.198    | 9.3177  | -0.1084   | -106.3662 |
| 2538 | 0.5 | Extremo | 0.005203  | -58.979 | -0.198    | 9.3177  | -0.0096   | -75.4034  |
| 2538 | 1   | Extremo | 0.005203  | -53.086 | -0.198    | 9.3177  | 0.0892    | -47.3869  |
| 2538 | 0   | Extremo | -0.022    | -64.872 | 0.181     | 9.3168  | 0.1079    | -106.3653 |
| 2538 | 0.5 | Extremo | -0.022    | -58.979 | 0.181     | 9.3168  | 0.0173    | -75.4026  |
| 2538 | 1   | Extremo | -0.022    | -53.086 | 0.181     | 9.3168  | -0.0734   | -47.3863  |
| 2539 | 0   | Extremo | 0.006508  | 59.391  | -0.099    | -0.6186 | -0.0484   | -48.9967  |
| 2539 | 0.5 | Extremo | 0.006508  | 65.283  | -0.099    | -0.6186 | 0.0011    | -80.1652  |
| 2539 | 1   | Extremo | 0.006508  | 71.176  | -0.099    | -0.6186 | 0.0506    | -114.2802 |
| 2539 | 0   | Extremo | -0.018    | 59.389  | -0.085    | -0.6189 | -0.0329   | -48.9956  |
| 2539 | 0.5 | Extremo | -0.018    | 65.282  | -0.085    | -0.6189 | 0.0098    | -80.1633  |
| 2539 | 1   | Extremo | -0.018    | 71.175  | -0.085    | -0.6189 | 0.0524    | -114.2773 |
| 2541 | 0   | Extremo | 0.007027  | -71.266 | -0.209    | 5.703   | -0.1129   | -115.8307 |
| 2541 | 0.5 | Extremo | 0.007027  | -65.373 | -0.209    | 5.703   | -0.0082   | -81.6708  |
| 2541 | 1   | Extremo | 0.007027  | -59.481 | -0.209    | 5.703   | 0.0966    | -50.4572  |
| 2541 | 0   | Extremo | -0.021    | -71.265 | 0.214     | 5.703   | 0.1218    | -115.8281 |
| 2541 | 0.5 | Extremo | -0.021    | -65.372 | 0.214     | 5.703   | 0.015     | -81.6689  |
| 2541 | 1   | Extremo | -0.021    | -59.479 | 0.214     | 5.703   | -0.0918   | -50.456   |
| 2542 | 0   | Extremo | -0.022    | 69.759  | -0.105    | 3.621   | -0.0479   | -47.189   |
| 2542 | 0.5 | Extremo | -0.022    | 75.651  | -0.105    | 3.621   | 0.0048    | -83.5414  |

|      |     |         |           |         |        |         |         |           |
|------|-----|---------|-----------|---------|--------|---------|---------|-----------|
| 2542 | 1   | Extremo | -0.022    | 81.544  | -0.105 | 3.621   | 0.0576  | -122.8402 |
| 2542 | 0   | Extremo | 3.841E-05 | 69.754  | -0.101 | 3.6191  | -0.0522 | -47.1882  |
| 2542 | 0.5 | Extremo | 3.841E-05 | 75.647  | -0.101 | 3.6191  | -0.002  | -83.5386  |
| 2542 | 1   | Extremo | 3.841E-05 | 81.54   | -0.101 | 3.6191  | 0.0483  | -122.8353 |
| 2544 | 0   | Extremo | 0.024     | -86.082 | -0.229 | -1.73   | -0.1178 | -130.1917 |
| 2544 | 0.5 | Extremo | 0.024     | -80.189 | -0.229 | -1.73   | -0.0031 | -88.6241  |
| 2544 | 1   | Extremo | 0.024     | -74.296 | -0.229 | -1.73   | 0.1115  | -50.0028  |
| 2544 | 0   | Extremo | -0.008919 | -86.077 | 0.237  | -1.7283 | 0.1215  | -130.1863 |
| 2544 | 0.5 | Extremo | -0.008919 | -80.185 | 0.237  | -1.7283 | 0.0029  | -88.6208  |
| 2544 | 1   | Extremo | -0.008919 | -74.292 | 0.237  | -1.7283 | -0.1156 | -50.0017  |
| 2545 | 0   | Extremo | -0.103    | 74.348  | -0.165 | -0.137  | -0.061  | -39.4481  |
| 2545 | 0.5 | Extremo | -0.103    | 80.24   | -0.165 | -0.137  | 0.0215  | -78.0951  |
| 2545 | 1   | Extremo | -0.103    | 86.133  | -0.165 | -0.137  | 0.1041  | -119.6885 |
| 2545 | 0   | Extremo | 0.013     | 74.342  | -0.077 | -0.1386 | -0.0707 | -39.4492  |
| 2545 | 0.5 | Extremo | 0.013     | 80.235  | -0.077 | -0.1386 | -0.032  | -78.0935  |
| 2545 | 1   | Extremo | 0.013     | 86.128  | -0.077 | -0.1386 | 0.0067  | -119.6843 |
| 2547 | 0   | Extremo | 0.107     | -94.14  | -0.278 | 0.2358  | -0.1365 | -129.8933 |
| 2547 | 0.5 | Extremo | 0.107     | -88.248 | -0.278 | 0.2358  | 0.0026  | -84.2963  |
| 2547 | 1   | Extremo | 0.107     | -82.355 | -0.278 | 0.2358  | 0.1418  | -41.6456  |
| 2547 | 0   | Extremo | -0.013    | -94.134 | 0.228  | 0.2372  | 0.0863  | -129.888  |
| 2547 | 0.5 | Extremo | -0.013    | -88.242 | 0.228  | 0.2372  | -0.0279 | -84.294   |
| 2547 | 1   | Extremo | -0.013    | -82.349 | 0.228  | 0.2372  | -0.1422 | -41.6463  |
| 2548 | 0   | Extremo | -0.024    | 69.758  | -0.213 | -3.8954 | -0.0892 | -47.1883  |
| 2548 | 0.5 | Extremo | -0.024    | 75.651  | -0.213 | -3.8954 | 0.0173  | -83.5405  |
| 2548 | 1   | Extremo | -0.024    | 81.544  | -0.213 | -3.8954 | 0.1238  | -122.8391 |
| 2548 | 0   | Extremo | 0.005873  | 69.754  | -0.087 | -3.8966 | -0.0471 | -47.1875  |
| 2548 | 0.5 | Extremo | 0.005873  | 75.647  | -0.087 | -3.8966 | -0.0035 | -83.5376  |
| 2548 | 1   | Extremo | 0.005873  | 81.539  | -0.087 | -3.8966 | 0.0401  | -122.8341 |
| 2550 | 0   | Extremo | 0.02      | -86.081 | -0.338 | 2.2016  | -0.1826 | -130.1914 |
| 2550 | 0.5 | Extremo | 0.02      | -80.189 | -0.338 | 2.2016  | -0.0137 | -88.6238  |
| 2550 | 1   | Extremo | 0.02      | -74.296 | -0.338 | 2.2016  | 0.1552  | -50.0026  |
| 2550 | 0   | Extremo | 0.003798  | -86.077 | 0.25   | 2.2028  | 0.1292  | -130.186  |
| 2550 | 0.5 | Extremo | 0.003798  | -80.184 | 0.25   | 2.2028  | 0.0042  | -88.6206  |
| 2550 | 1   | Extremo | 0.003798  | -74.292 | 0.25   | 2.2028  | -0.1209 | -50.0016  |
| 2551 | 0   | Extremo | -0.006122 | 59.39   | -0.232 | 0.343   | -0.1032 | -48.9951  |
| 2551 | 0.5 | Extremo | -0.006122 | 65.282  | -0.232 | 0.343   | 0.0126  | -80.1631  |
| 2551 | 1   | Extremo | -0.006122 | 71.175  | -0.232 | 0.343   | 0.1284  | -114.2775 |
| 2551 | 0   | Extremo | 0.018     | 59.388  | -0.068 | 0.3402  | -0.026  | -48.994   |
| 2551 | 0.5 | Extremo | 0.018     | 65.281  | -0.068 | 0.3402  | 0.0083  | -80.1611  |
| 2551 | 1   | Extremo | 0.018     | 71.173  | -0.068 | 0.3402  | 0.0425  | -114.2746 |
| 2553 | 0   | Extremo | -0.008087 | -71.266 | -0.342 | -5.2311 | -0.1881 | -115.8301 |
| 2553 | 0.5 | Extremo | -0.008087 | -65.373 | -0.342 | -5.2311 | -0.017  | -81.6704  |
| 2553 | 1   | Extremo | -0.008087 | -59.48  | -0.342 | -5.2311 | 0.1541  | -50.457   |
| 2553 | 0   | Extremo | 0.022     | -71.264 | 0.229  | -5.2283 | 0.1307  | -115.8274 |
| 2553 | 0.5 | Extremo | 0.022     | -65.372 | 0.229  | -5.2283 | 0.016   | -81.6684  |
| 2553 | 1   | Extremo | 0.022     | -59.479 | 0.229  | -5.2283 | -0.0986 | -50.4558  |
| 2554 | 0   | Extremo | -0.004204 | 54.436  | -0.242 | 2.9892  | -0.11   | -47.4208  |
| 2554 | 0.5 | Extremo | -0.004204 | 60.329  | -0.242 | 2.9892  | 0.011   | -76.1119  |
| 2554 | 1   | Extremo | -0.004204 | 66.221  | -0.242 | 2.9892  | 0.1321  | -107.7494 |
| 2554 | 0   | Extremo | 0.02      | 54.435  | -0.04  | 2.9853  | -0.0094 | -47.4201  |
| 2554 | 0.5 | Extremo | 0.02      | 60.328  | -0.04  | 2.9853  | 0.0107  | -76.111   |
| 2554 | 1   | Extremo | 0.02      | 66.221  | -0.04  | 2.9853  | 0.0308  | -107.7482 |
| 2556 | 0   | Extremo | -0.011    | -64.871 | -0.331 | -8.8455 | -0.1828 | -106.3652 |
| 2556 | 0.5 | Extremo | -0.011    | -58.979 | -0.331 | -8.8455 | -0.0171 | -75.4028  |
| 2556 | 1   | Extremo | -0.011    | -53.086 | -0.331 | -8.8455 | 0.1486  | -47.3867  |
| 2556 | 0   | Extremo | 0.024     | -64.871 | 0.197  | -8.8417 | 0.1165  | -106.3644 |
| 2556 | 0.5 | Extremo | 0.024     | -58.978 | 0.197  | -8.8417 | 0.0181  | -75.4021  |
| 255  |     |         |           |         |        |         |         |           |



|      |     |         |           |         |          |         |           |           |
|------|-----|---------|-----------|---------|----------|---------|-----------|-----------|
| 2560 | 1   | Extremo | -0.001974 | 64.602  | -0.254   | 2.5811  | 0.1379    | -104.1148 |
| 2560 | 0   | Extremo | 0.012     | 52.816  | 0.003075 | 2.5766  | 0.0098    | -45.4055  |
| 2560 | 0.5 | Extremo | 0.012     | 58.709  | 0.003075 | 2.5766  | 0.0083    | -73.2869  |
| 2560 | 1   | Extremo | 0.012     | 64.602  | 0.003075 | 2.5766  | 0.0067    | -104.1146 |
| 2562 | 0   | Extremo | -0.00671  | -62.827 | -0.311   | -6.6622 | -0.1709   | -101.0571 |
| 2562 | 0.5 | Extremo | -0.00671  | -56.934 | -0.311   | -6.6622 | -0.0153   | -71.1167  |
| 2562 | 1   | Extremo | -0.00671  | -51.042 | -0.311   | -6.6622 | 0.1403    | -44.1228  |
| 2562 | 0   | Extremo | 0.013     | -62.827 | 0.148    | -6.6581 | 0.0892    | -101.0571 |
| 2562 | 0.5 | Extremo | 0.013     | -56.934 | 0.148    | -6.6581 | 0.0151    | -71.1167  |
| 2562 | 1   | Extremo | 0.013     | -51.042 | 0.148    | -6.6581 | -0.0589   | -44.1227  |
| 2563 | 0   | Extremo | -0.000477 | 52.911  | -0.256   | 1.5903  | -0.1171   | -45.2088  |
| 2563 | 0.5 | Extremo | -0.000477 | 58.803  | -0.256   | 1.5903  | 0.011     | -73.1373  |
| 2563 | 1   | Extremo | -0.000477 | 64.696  | -0.256   | 1.5903  | 0.1392    | -104.0122 |
| 2563 | 0   | Extremo | 0.006816  | 52.911  | 0.014    | 1.5858  | 0.0142    | -45.2087  |
| 2563 | 0.5 | Extremo | 0.006816  | 58.803  | 0.014    | 1.5858  | 0.0069    | -73.1372  |
| 2563 | 1   | Extremo | 0.006816  | 64.696  | 0.014    | 1.5858  | -0.000291 | -104.0121 |
| 2565 | 0   | Extremo | -0.00455  | -62.847 | -0.305   | -4.1344 | -0.1671   | -100.6811 |
| 2565 | 0.5 | Extremo | -0.00455  | -56.954 | -0.305   | -4.1344 | -0.0144   | -70.7308  |
| 2565 | 1   | Extremo | -0.00455  | -51.062 | -0.305   | -4.1344 | 0.1382    | -43.7269  |
| 2565 | 0   | Extremo | 0.007889  | -62.847 | 0.136    | -4.1303 | 0.0814    | -100.6811 |
| 2565 | 0.5 | Extremo | 0.007889  | -56.954 | 0.136    | -4.1303 | 0.0137    | -70.7308  |
| 2565 | 1   | Extremo | 0.007889  | -51.062 | 0.136    | -4.1303 | -0.0541   | -43.7269  |
| 2566 | 0   | Extremo | 0.001106  | 52.99   | -0.257   | 0.6027  | -0.1174   | -45.1698  |
| 2566 | 0.5 | Extremo | 0.001106  | 58.883  | -0.257   | 0.6027  | 0.0109    | -73.1379  |
| 2566 | 1   | Extremo | 0.001106  | 64.775  | -0.257   | 0.6027  | 0.1392    | -104.0524 |
| 2566 | 0   | Extremo | 0.002168  | 52.99   | 0.02     | 0.5981  | 0.0161    | -45.1698  |
| 2566 | 0.5 | Extremo | 0.002168  | 58.883  | 0.02     | 0.5981  | 0.0062    | -73.1379  |
| 2566 | 1   | Extremo | 0.002168  | 64.775  | 0.02     | 0.5981  | -0.0037   | -104.0523 |
| 2568 | 0   | Extremo | -0.002654 | -62.883 | -0.302   | -1.4638 | -0.1647   | -100.5925 |
| 2568 | 0.5 | Extremo | -0.002654 | -56.99  | -0.302   | -1.4638 | -0.0138   | -70.6242  |
| 2568 | 1   | Extremo | -0.002654 | -51.097 | -0.302   | -1.4638 | 0.137     | -43.6023  |
| 2568 | 0   | Extremo | 0.002669  | -62.883 | 0.129    | -1.4596 | 0.0776    | -100.5924 |
| 2568 | 0.5 | Extremo | 0.002669  | -56.99  | 0.129    | -1.4596 | 0.0129    | -70.6241  |
| 2568 | 1   | Extremo | 0.002669  | -51.097 | 0.129    | -1.4596 | -0.0519   | -43.6022  |
| 2569 | 0   | Extremo | 0.002813  | 52.992  | -0.255   | -0.3624 | -0.1169   | -45.1699  |
| 2569 | 0.5 | Extremo | 0.002813  | 58.884  | -0.255   | -0.3624 | 0.0105    | -73.1389  |
| 2569 | 1   | Extremo | 0.002813  | 64.777  | -0.255   | -0.3624 | 0.1379    | -104.0542 |
| 2569 | 0   | Extremo | -0.002385 | 52.992  | 0.02     | -0.367  | 0.0161    | -45.1699  |
| 2569 | 0.5 | Extremo | -0.002385 | 58.884  | 0.02     | -0.367  | 0.0063    | -73.1388  |
| 2569 | 1   | Extremo | -0.002385 | 64.777  | 0.02     | -0.367  | -0.0036   | -104.0541 |
| 2571 | 0   | Extremo | -0.000948 | -62.885 | -0.3     | 1.2293  | -0.1636   | -100.594  |
| 2571 | 0.5 | Extremo | -0.000948 | -56.992 | -0.3     | 1.2293  | -0.0135   | -70.6249  |
| 2571 | 1   | Extremo | -0.000948 | -51.099 | -0.3     | 1.2293  | 0.1366    | -43.6022  |
| 2571 | 0   | Extremo | -0.002403 | -62.884 | 0.129    | 1.2336  | 0.0775    | -100.5939 |
| 2571 | 0.5 | Extremo | -0.002403 | -56.992 | 0.129    | 1.2336  | 0.0128    | -70.6248  |
| 2571 | 1   | Extremo | -0.002403 | -51.099 | 0.129    | 1.2336  | -0.0518   | -43.6021  |
| 2572 | 0   | Extremo | 0.004723  | 52.916  | -0.251   | -1.3474 | -0.1157   | -45.2073  |
| 2572 | 0.5 | Extremo | 0.004723  | 58.809  | -0.251   | -1.3474 | 0.0098    | -73.1384  |
| 2572 | 1   | Extremo | 0.004723  | 64.701  | -0.251   | -1.3474 | 0.1353    | -104.016  |
| 2572 | 0   | Extremo | -0.007052 | 52.916  | 0.014    | -1.3522 | 0.0141    | -45.2073  |
| 2572 | 0.5 | Extremo | -0.007052 | 58.809  | 0.014    | -1.3522 | 0.007     | -73.1384  |
| 2572 | 1   | Extremo | -0.007052 | 64.701  | 0.014    | -1.3522 | -7.57E-05 | -104.0159 |
| 2574 | 0   | Extremo | 0.0006602 | -62.852 | -0.301   | 3.8976  | -0.1637   | -100.6848 |
| 2574 | 0.5 | Extremo | 0.0006602 | -56.96  | -0.301   | 3.8976  | -0.0134   | -70.7318  |
| 2574 | 1   | Extremo | 0.0006602 | -51.067 | -0.301   | 3.8976  | 0.1369    | -43.7252  |
| 2574 | 0   | Extremo | -0.007603 | -62.852 | 0.135    | 3.902   | 0.0812    | -100.6846 |
| 2574 | 0.5 | Extremo | -0.007603 | -56.959 | 0.135    | 3.902   | 0.0136    | -70.7317  |
| 2574 | 1   | Extremo | -0.007603 | -51.067 | 0.135    | 3.902   | -0.054    | -43.7252  |
| 2575 | 0   | Extremo | 0.006899  | 52.823  | -0.245   | -2.3361 | -0.1136   | -45.3964  |
| 2575 | 0.5 | Extremo | 0.006899  | 58.716  | -0.245   | -2.3361 | 0.0089    | -73.2812  |
| 2575 | 1   | Extremo | 0.006899  | 64.609  | -0.245   | -2.3361 | 0.1313    | -104.1124 |
| 2575 | 0   | Extremo | -0.012    | 52.823  | 0.002574 | -2.3408 | 0.0097    | -45.3967  |
| 2575 | 0.5 | Extremo | -0.012    | 58.716  | 0.002574 | -2.3408 | 0.0084    | -73.2814  |
| 2575 | 1   | Extremo | -0.012    | 64.609  | 0.002574 | -2.3408 | 0.0071    | -104.1125 |
| 2577 | 0   | Extremo | 0.002219  | -62.836 | -0.303   | 6.4229  | -0.1651   | -101.0569 |
| 2577 | 0.5 | Extremo | 0.002219  | -56.943 | -0.303   | 6.4229  | -0.0135   | -71.112   |
| 2577 | 1   | Extremo | 0.002219  | -51.051 | -0.303   | 6.4229  | 0.138     | -44.1136  |
| 2577 | 0   | Extremo | -0.013    | -62.836 | 0.148    | 6.4275  | 0.0888    | -101.0567 |
| 2577 | 0.5 | Extremo | -0.013    | -56.943 | 0.148    | 6.4275  | 0.015     | -71.112   |
| 2577 | 1   | Extremo | -0.013    | -51.05  | 0.148    | 6.4275  | -0.0588   | -44.1137  |
| 2578 | 0   | Extremo | 0.009258  | 52.997  | -0.236   | -3.0761 | -0.1102   | -46.0052  |
| 2578 | 0.5 | Extremo | 0.009258  | 58.89   | -0.236   | -3.0761 | 0.0078    | -73.977   |

|      |     |         |           |         |        |         |         |           |
|------|-----|---------|-----------|---------|--------|---------|---------|-----------|
| 2578 | 1   | Extremo | 0.009258  | 64.783  | -0.236 | -3.0761 | 0.1257  | -104.8952 |
| 2578 | 0   | Extremo | -0.017    | 52.997  | -0.016 | -3.0804 | 0.0021  | -46.0063  |
| 2578 | 0.5 | Extremo | -0.017    | 58.89   | -0.016 | -3.0804 | 0.01    | -73.9782  |
| 2578 | 1   | Extremo | -0.017    | 64.783  | -0.016 | -3.0804 | 0.0179  | -104.8964 |
| 2580 | 0   | Extremo | 0.003635  | -63.122 | -0.308 | 8.3901  | -0.1678 | -102.3582 |
| 2580 | 0.5 | Extremo | 0.003635  | -57.23  | -0.308 | 8.3901  | -0.0137 | -72.2702  |
| 2580 | 1   | Extremo | 0.003635  | -51.337 | -0.308 | 8.3901  | 0.1404  | -45.1285  |
| 2580 | 0   | Extremo | -0.019    | -63.122 | 0.168  | 8.3946  | 0.1006  | -102.3587 |
| 2580 | 0.5 | Extremo | -0.019    | -57.229 | 0.168  | 8.3946  | 0.0168  | -72.2708  |
| 2580 | 1   | Extremo | -0.019    | -51.337 | 0.168  | 8.3946  | -0.067  | -45.1293  |
| 2581 | 0   | Extremo | 0.011     | 54.385  | -0.225 | -2.8003 | -0.1056 | -47.3424  |
| 2581 | 0.5 | Extremo | 0.011     | 60.277  | -0.225 | -2.8003 | 0.0068  | -76.008   |
| 2581 | 1   | Extremo | 0.011     | 66.17   | -0.225 | -2.8003 | 0.1192  | -107.6198 |
| 2581 | 0   | Extremo | -0.02     | 54.386  | -0.041 | -2.8031 | -0.0096 | -47.345   |
| 2581 | 0.5 | Extremo | -0.02     | 60.279  | -0.041 | -2.8031 | 0.0109  | -76.0113  |
| 2581 | 1   | Extremo | -0.02     | 66.172  | -0.041 | -2.8031 | 0.0315  | -107.624  |
| 2583 | 0   | Extremo | 0.004653  | -64.836 | -0.316 | 8.6602  | -0.1716 | -106.2439 |
| 2583 | 0.5 | Extremo | 0.004653  | -58.944 | -0.316 | 8.6602  | -0.0136 | -75.2988  |
| 2583 | 1   | Extremo | 0.004653  | -53.051 | -0.316 | 8.6602  | 0.1445  | -47.3001  |
| 2583 | 0   | Extremo | -0.023    | -64.837 | 0.196  | 8.6636  | 0.1157  | -106.247  |
| 2583 | 0.5 | Extremo | -0.023    | -58.945 | 0.196  | 8.6636  | 0.0178  | -75.3015  |
| 2583 | 1   | Extremo | -0.023    | -53.052 | 0.196  | 8.6636  | -0.08   | -47.3024  |
| 2584 | 0   | Extremo | 0.006647  | 59.183  | -0.215 | -0.2787 | -0.1009 | -48.8641  |
| 2584 | 0.5 | Extremo | 0.006647  | 65.076  | -0.215 | -0.2787 | 0.0067  | -79.9288  |
| 2584 | 1   | Extremo | 0.006647  | 70.969  | -0.215 | -0.2787 | 0.1144  | -113.9399 |
| 2584 | 0   | Extremo | -0.018    | 59.189  | -0.069 | -0.2775 | -0.026  | -48.8683  |
| 2584 | 0.5 | Extremo | -0.018    | 65.082  | -0.069 | -0.2775 | 0.0086  | -79.9362  |
| 2584 | 1   | Extremo | -0.018    | 70.975  | -0.069 | -0.2775 | 0.0433  | -113.9505 |
| 2586 | 0   | Extremo | 0.007019  | -71.068 | -0.328 | 5.186   | -0.1761 | -115.4694 |
| 2586 | 0.5 | Extremo | 0.007019  | -65.175 | -0.328 | 5.186   | -0.012  | -81.4086  |
| 2586 | 1   | Extremo | 0.007019  | -59.283 | -0.328 | 5.186   | 0.1522  | -50.2941  |
| 2586 | 0   | Extremo | -0.022    | -71.073 | 0.228  | 5.1856  | 0.1298  | -115.4793 |
| 2586 | 0.5 | Extremo | -0.022    | -65.181 | 0.228  | 5.1856  | 0.0157  | -81.4157  |
| 2586 | 1   | Extremo | -0.022    | -59.288 | 0.228  | 5.1856  | -0.0984 | -50.2986  |
| 2587 | 0   | Extremo | -0.027    | 69.236  | -0.225 | 3.7791  | -0.102  | -47.1063  |
| 2587 | 0.5 | Extremo | -0.027    | 75.129  | -0.225 | 3.7791  | 0.0103  | -83.1974  |
| 2587 | 1   | Extremo | -0.027    | 81.021  | -0.225 | 3.7791  | 0.1226  | -122.235  |
| 2587 | 0   | Extremo | -0.00244  | 69.252  | -0.086 | 3.7861  | -0.0462 | -47.109   |
| 2587 | 0.5 | Extremo | -0.00244  | 75.145  | -0.086 | 3.7861  | -0.0031 | -83.2081  |
| 2587 | 1   | Extremo | -0.00244  | 81.037  | -0.086 | 3.7861  | 0.0399  | -122.2536 |
| 2589 | 0   | Extremo | 0.03      | -85.495 | -0.351 | -2.0134 | -0.1824 | -129.4587 |
| 2589 | 0.5 | Extremo | 0.03      | -79.602 | -0.351 | -2.0134 | -0.0068 | -88.1843  |
| 2589 | 1   | Extremo | 0.03      | -73.71  | -0.351 | -2.0134 | 0.1689  | -49.8564  |
| 2589 | 0   | Extremo | -0.006909 | -85.512 | 0.251  | -2.0201 | 0.129   | -129.4791 |
| 2589 | 0.5 | Extremo | -0.006909 | -79.619 | 0.251  | -2.0201 | 0.0037  | -88.1965  |
| 2589 | 1   | Extremo | -0.006909 | -73.726 | 0.251  | -2.0201 | -0.1217 | -49.8603  |
| 2590 | 0   | Extremo | -0.127    | 73.686  | -0.297 | 0.0725  | -0.1201 | -39.5944  |
| 2590 | 0.5 | Extremo | -0.127    | 79.579  | -0.297 | 0.0725  | 0.0285  | -77.9106  |
| 2590 | 1   | Extremo | -0.127    | 85.472  | -0.297 | 0.0725  | 0.1771  | -119.1731 |
| 2590 | 0   | Extremo | 0.002309  | 73.706  | -0.068 | 0.0783  | -0.0668 | -39.5903  |
| 2590 | 0.5 | Extremo | 0.002309  | 79.599  | -0.068 | 0.0783  | -0.0325 | -77.9166  |
| 2590 | 1   | Extremo | 0.002309  | 85.492  | -0.068 | 0.0783  | 0.0017  | -119.1891 |
| 2592 | 0   | Extremo | 0.133     | -93.342 | -0.413 | -0.0709 | -0.209  | -129.1732 |
| 2592 | 0.5 | Extremo | 0.133     | -87.449 | -0.413 | -0.0709 | -0.0023 | -83.9756  |
| 2592 | 1   | Extremo | 0.133     | -81.556 | -0.413 | -0.0709 | 0.2044  | -41.7244  |
| 2592 | 0   | Extremo | -0.002416 | -93.364 | 0.237  | -0.0765 | 0.0907  | -129.1932 |
| 2592 | 0.5 |         |           |         |        |         |         |           |



|      |     |         |           |         |          |         |         |           |
|------|-----|---------|-----------|---------|----------|---------|---------|-----------|
| 2596 | 1   | Extremo | -0.00604  | 70.969  | -0.38    | 0.4241  | 0.2108  | -113.9406 |
| 2596 | 0   | Extremo | 0.018     | 59.19   | -0.066   | 0.4345  | -0.0248 | -48.8687  |
| 2596 | 0.5 | Extremo | 0.018     | 65.083  | -0.066   | 0.4345  | 0.0084  | -79.9367  |
| 2596 | 1   | Extremo | 0.018     | 70.975  | -0.066   | 0.4345  | 0.0415  | -113.9512 |
| 2598 | 0   | Extremo | -0.008185 | -71.068 | -0.493   | -5.3281 | -0.2698 | -115.4699 |
| 2598 | 0.5 | Extremo | -0.008185 | -65.176 | -0.493   | -5.3281 | -0.023  | -81.4089  |
| 2598 | 1   | Extremo | -0.008185 | -59.283 | -0.493   | -5.3281 | 0.2237  | -50.2944  |
| 2598 | 0   | Extremo | 0.022     | -71.074 | 0.231    | -5.3389 | 0.1315  | -115.4798 |
| 2598 | 0.5 | Extremo | 0.022     | -65.181 | 0.231    | -5.3389 | 0.0159  | -81.4161  |
| 2598 | 1   | Extremo | 0.022     | -59.288 | 0.231    | -5.3389 | -0.0997 | -50.2988  |
| 2599 | 0   | Extremo | -0.003463 | 54.385  | -0.39    | 2.9462  | -0.1759 | -47.3431  |
| 2599 | 0.5 | Extremo | -0.003463 | 60.278  | -0.39    | 2.9462  | 0.0192  | -76.0089  |
| 2599 | 1   | Extremo | -0.003463 | 66.171  | -0.39    | 2.9462  | 0.2144  | -107.621  |
| 2599 | 0   | Extremo | 0.02      | 54.387  | -0.038   | 2.9607  | -0.0084 | -47.3456  |
| 2599 | 0.5 | Extremo | 0.02      | 60.28   | -0.038   | 2.9607  | 0.0107  | -76.0123  |
| 2599 | 1   | Extremo | 0.02      | 66.172  | -0.038   | 2.9607  | 0.0298  | -107.6253 |
| 2601 | 0   | Extremo | -0.012    | -64.837 | -0.483   | -8.8027 | -0.2644 | -106.2447 |
| 2601 | 0.5 | Extremo | -0.012    | -58.944 | -0.483   | -8.8027 | -0.023  | -75.2994  |
| 2601 | 1   | Extremo | -0.012    | -53.051 | -0.483   | -8.8027 | 0.2185  | -47.3005  |
| 2601 | 0   | Extremo | 0.023     | -64.838 | 0.199    | -8.8173 | 0.1174  | -106.2479 |
| 2601 | 0.5 | Extremo | 0.023     | -58.945 | 0.199    | -8.8173 | 0.018   | -75.3022  |
| 2601 | 1   | Extremo | 0.023     | -53.052 | 0.199    | -8.8173 | -0.0813 | -47.3029  |
| 2602 | 0   | Extremo | -0.002647 | 52.998  | -0.397   | 3.2229  | -0.1796 | -46.0062  |
| 2602 | 0.5 | Extremo | -0.002647 | 58.891  | -0.397   | 3.2229  | 0.0189  | -73.9785  |
| 2602 | 1   | Extremo | -0.002647 | 64.784  | -0.397   | 3.2229  | 0.2174  | -104.8972 |
| 2602 | 0   | Extremo | 0.017     | 52.998  | -0.013   | 3.2391  | 0.0033  | -46.0073  |
| 2602 | 0.5 | Extremo | 0.017     | 58.891  | -0.013   | 3.2391  | 0.0098  | -73.9797  |
| 2602 | 1   | Extremo | 0.017     | 64.784  | -0.013   | 3.2391  | 0.0163  | -104.8985 |
| 2604 | 0   | Extremo | -0.009668 | -63.123 | -0.471   | -8.5332 | -0.2576 | -102.3595 |
| 2604 | 0.5 | Extremo | -0.009668 | -57.23  | -0.471   | -8.5332 | -0.022  | -72.2711  |
| 2604 | 1   | Extremo | -0.009668 | -51.338 | -0.471   | -8.5332 | 0.2135  | -45.1291  |
| 2604 | 0   | Extremo | 0.019     | -63.123 | 0.171    | -8.5489 | 0.1022  | -102.3601 |
| 2604 | 0.5 | Extremo | 0.019     | -57.23  | 0.171    | -8.5489 | 0.0169  | -72.2719  |
| 2604 | 1   | Extremo | 0.019     | -51.337 | 0.171    | -8.5489 | -0.0684 | -45.13    |
| 2605 | 0   | Extremo | -0.001456 | 52.825  | -0.401   | 2.4845  | -0.1817 | -45.3979  |
| 2605 | 0.5 | Extremo | -0.001456 | 58.717  | -0.401   | 2.4845  | 0.0189  | -73.2834  |
| 2605 | 1   | Extremo | -0.001456 | 64.61   | -0.401   | 2.4845  | 0.2195  | -104.1154 |
| 2605 | 0   | Extremo | 0.012     | 52.825  | 0.005401 | 2.5012  | 0.0109  | -45.3983  |
| 2605 | 0.5 | Extremo | 0.012     | 58.717  | 0.005401 | 2.5012  | 0.0082  | -73.2839  |
| 2605 | 1   | Extremo | 0.012     | 64.61   | 0.005401 | 2.5012  | 0.0055  | -104.1158 |
| 2607 | 0   | Extremo | -0.007192 | -62.837 | -0.462   | -6.5671 | -0.2519 | -101.0589 |
| 2607 | 0.5 | Extremo | -0.007192 | -56.944 | -0.462   | -6.5671 | -0.0209 | -71.1135  |
| 2607 | 1   | Extremo | -0.007192 | -51.052 | -0.462   | -6.5671 | 0.21    | -44.1145  |
| 2607 | 0   | Extremo | 0.013     | -62.837 | 0.15     | -6.5829 | 0.0904  | -101.059  |
| 2607 | 0.5 | Extremo | 0.013     | -56.944 | 0.15     | -6.5829 | 0.0152  | -71.1137  |
| 2607 | 1   | Extremo | 0.013     | -51.051 | 0.15     | -6.5829 | -0.0601 | -44.1148  |
| 2608 | 0   | Extremo | -4.71E-05 | 52.918  | -0.403   | 1.4983  | -0.1827 | -45.2094  |
| 2608 | 0.5 | Extremo | -4.71E-05 | 58.811  | -0.403   | 1.4983  | 0.0189  | -73.1418  |
| 2608 | 1   | Extremo | -4.71E-05 | 64.704  | -0.403   | 1.4983  | 0.2205  | -104.0205 |
| 2608 | 0   | Extremo | 0.006964  | 52.918  | 0.017    | 1.5151  | 0.0153  | -45.2096  |
| 2608 | 0.5 | Extremo | 0.006964  | 58.811  | 0.017    | 1.5151  | 0.0068  | -73.142   |
| 2608 | 1   | Extremo | 0.006964  | 64.704  | 0.017    | 1.5151  | -0.0016 | -104.0208 |
| 2610 | 0   | Extremo | -0.004967 | -62.854 | -0.456   | -4.0433 | -0.2478 | -100.688  |
| 2610 | 0.5 | Extremo | -0.004967 | -56.961 | -0.456   | -4.0433 | -0.02   | -70.7341  |
| 2610 | 1   | Extremo | -0.004967 | -51.069 | -0.456   | -4.0433 | 0.2078  | -43.7266  |
| 2610 | 0   | Extremo | 0.007659  | -62.854 | 0.138    | -4.0592 | 0.0827  | -100.688  |
| 2610 | 0.5 | Extremo | 0.007659  | -56.961 | 0.138    | -4.0592 | 0.0137  | -70.7342  |
| 2610 | 1   | Extremo | 0.007659  | -51.069 | 0.138    | -4.0592 | -0.0553 | -43.7267  |
| 2611 | 0   | Extremo | 0.001484  | 52.995  | -0.403   | 0.5171  | -0.1828 | -45.1726  |
| 2611 | 0.5 | Extremo | 0.001484  | 58.888  | -0.403   | 0.5171  | 0.0187  | -73.1435  |
| 2611 | 1   | Extremo | 0.001484  | 64.781  | -0.403   | 0.5171  | 0.2202  | -104.0608 |
| 2611 | 0   | Extremo | 0.002303  | 52.996  | 0.022    | 0.5341  | 0.0173  | -45.1728  |
| 2611 | 0.5 | Extremo | 0.002303  | 58.888  | 0.022    | 0.5341  | 0.0061  | -73.1438  |
| 2611 | 1   | Extremo | 0.002303  | 64.781  | 0.022    | 0.5341  | -0.0051 | -104.0612 |
| 2613 | 0   | Extremo | -0.003039 | -62.888 | -0.452   | -1.3778 | -0.2451 | -100.5989 |
| 2613 | 0.5 | Extremo | -0.003039 | -56.995 | -0.452   | -1.3778 | -0.0193 | -70.6283  |
| 2613 | 1   | Extremo | -0.003039 | -51.102 | -0.452   | -1.3778 | 0.2065  | -43.604   |
| 2613 | 0   | Extremo | 0.002447  | -62.888 | 0.132    | -1.3937 | 0.079   | -100.5992 |
| 2613 | 0.5 | Extremo | 0.002447  | -56.995 | 0.132    | -1.3937 | 0.013   | -70.6285  |
| 2613 | 1   | Extremo | 0.002447  | -51.102 | 0.132    | -1.3937 | -0.0531 | -43.6042  |
| 2614 | 0   | Extremo | 0.00317   | 52.996  | -0.401   | -0.4425 | -0.1823 | -45.1724  |
| 2614 | 0.5 | Extremo | 0.00317   | 58.889  | -0.401   | -0.4425 | 0.0182  | -73.1436  |

|      |     |         |           |         |          |         |         |           |
|------|-----|---------|-----------|---------|----------|---------|---------|-----------|
| 2614 | 1   | Extremo | 0.00317   | 64.781  | -0.401   | -0.4425 | 0.2187  | -104.0611 |
| 2614 | 0   | Extremo | -0.00225  | 52.996  | 0.022    | -0.4252 | 0.0173  | -45.1726  |
| 2614 | 0.5 | Extremo | -0.00225  | 58.889  | 0.022    | -0.4252 | 0.0061  | -73.1439  |
| 2614 | 1   | Extremo | -0.00225  | 64.782  | 0.022    | -0.4252 | -0.0051 | -104.0616 |
| 2616 | 0   | Extremo | -0.001332 | -62.888 | -0.45    | 1.3111  | -0.2438 | -100.5997 |
| 2616 | 0.5 | Extremo | -0.001332 | -56.995 | -0.45    | 1.3111  | -0.0189 | -70.6287  |
| 2616 | 1   | Extremo | -0.001332 | -51.103 | -0.45    | 1.3111  | 0.2059  | -43.6042  |
| 2616 | 0   | Extremo | -0.002634 | -62.889 | 0.132    | 1.2949  | 0.0791  | -100.6002 |
| 2616 | 0.5 | Extremo | -0.002634 | -56.996 | 0.132    | 1.2949  | 0.013   | -70.6291  |
| 2616 | 1   | Extremo | -0.002634 | -51.103 | 0.132    | 1.2949  | -0.0532 | -43.6043  |
| 2617 | 0   | Extremo | 0.00509   | 52.92   | -0.397   | -1.4234 | -0.181  | -45.2083  |
| 2617 | 0.5 | Extremo | 0.00509   | 58.812  | -0.397   | -1.4234 | 0.0175  | -73.1413  |
| 2617 | 1   | Extremo | 0.00509   | 64.705  | -0.397   | -1.4234 | 0.2159  | -104.0206 |
| 2617 | 0   | Extremo | -0.006906 | 52.92   | 0.017    | -1.4056 | 0.0153  | -45.2082  |
| 2617 | 0.5 | Extremo | -0.006906 | 58.813  | 0.017    | -1.4056 | 0.0068  | -73.1415  |
| 2617 | 1   | Extremo | -0.006906 | 64.706  | 0.017    | -1.4056 | -0.0017 | -104.0211 |
| 2619 | 0   | Extremo | 0.0002481 | -62.856 | -0.45    | 3.9755  | -0.2437 | -100.69   |
| 2619 | 0.5 | Extremo | 0.0002481 | -56.963 | -0.45    | 3.9755  | -0.0188 | -70.7351  |
| 2619 | 1   | Extremo | 0.0002481 | -51.071 | -0.45    | 3.9755  | 0.2062  | -43.7267  |
| 2619 | 0   | Extremo | -0.00786  | -62.857 | 0.138    | 3.9588  | 0.0829  | -100.6907 |
| 2619 | 0.5 | Extremo | -0.00786  | -56.964 | 0.138    | 3.9588  | 0.0138  | -70.7355  |
| 2619 | 1   | Extremo | -0.00786  | -51.071 | 0.138    | 3.9588  | -0.0554 | -43.7267  |
| 2620 | 0   | Extremo | 0.007309  | 52.826  | -0.39    | -2.41   | -0.1788 | -45.3939  |
| 2620 | 0.5 | Extremo | 0.007309  | 58.719  | -0.39    | -2.41   | 0.0164  | -73.28    |
| 2620 | 1   | Extremo | 0.007309  | 64.611  | -0.39    | -2.41   | 0.2117  | -104.1125 |
| 2620 | 0   | Extremo | -0.012    | 52.827  | 0.005512 | -2.392  | 0.0109  | -45.3927  |
| 2620 | 0.5 | Extremo | -0.012    | 58.719  | 0.005512 | -2.392  | 0.0082  | -73.2792  |
| 2620 | 1   | Extremo | -0.012    | 64.612  | 0.005512 | -2.392  | 0.0054  | -104.1121 |
| 2622 | 0   | Extremo | 0.001746  | -62.841 | -0.452   | 6.4976  | -0.2448 | -101.0607 |
| 2622 | 0.5 | Extremo | 0.001746  | -56.948 | -0.452   | 6.4976  | -0.0188 | -71.1136  |
| 2622 | 1   | Extremo | 0.001746  | -51.055 | -0.452   | 6.4976  | 0.2072  | -44.1129  |
| 2622 | 0   | Extremo | -0.013    | -62.842 | 0.151    | 6.4804  | 0.0907  | -101.0611 |
| 2622 | 0.5 | Extremo | -0.013    | -56.949 | 0.151    | 6.4804  | 0.0152  | -71.1135  |
| 2622 | 1   | Extremo | -0.013    | -51.056 | 0.151    | 6.4804  | -0.0602 | -44.1121  |
| 2623 | 0   | Extremo | 0.009741  | 52.996  | -0.381   | -3.1531 | -0.1754 | -45.9945  |
| 2623 | 0.5 | Extremo | 0.009741  | 58.889  | -0.381   | -3.1531 | 0.0152  | -73.9657  |
| 2623 | 1   | Extremo | 0.009741  | 64.781  | -0.381   | -3.1531 | 0.2058  | -104.8832 |
| 2623 | 0   | Extremo | -0.017    | 52.995  | -0.013   | -3.1364 | 0.0034  | -45.9907  |
| 2623 | 0.5 | Extremo | -0.017    | 58.888  | -0.013   | -3.1364 | 0.0097  | -73.9616  |
| 2623 | 1   | Extremo | -0.017    | 64.781  | -0.013   | -3.1364 | 0.0161  | -104.8789 |
| 2625 | 0   | Extremo | 0.003063  | -63.126 | -0.457   | 8.4642  | -0.2472 | -102.3549 |
| 2625 | 0.5 | Extremo | 0.003063  | -57.233 | -0.457   | 8.4642  | -0.0189 | -72.265   |
| 2625 | 1   | Extremo | 0.003063  | -51.341 | -0.457   | 8.4642  | 0.2094  | -45.1215  |
| 2625 | 0   | Extremo | -0.019    | -63.127 | 0.171    | 8.4474  | 0.1027  | -102.3526 |
| 2625 | 0.5 | Extremo | -0.019    | -57.234 | 0.171    | 8.4474  | 0.017   | -72.2622  |
| 2625 | 1   | Extremo | -0.019    | -51.342 | 0.171    | 8.4474  | -0.0686 | -45.1182  |
| 2626 | 0   | Extremo | 0.011     | 54.367  | -0.37    | -2.8938 | -0.1707 | -47.3163  |
| 2626 | 0.5 | Extremo | 0.011     | 60.26   | -0.37    | -2.8938 | 0.0142  | -75.9729  |
| 2626 | 1   | Extremo | 0.011     | 66.152  | -0.37    | -2.8938 | 0.199   | -107.576  |
| 2626 | 0   | Extremo | -0.02     | 54.361  | -0.038   | -2.8827 | -0.0084 | -47.3071  |
| 2626 | 0.5 | Extremo | -0.02     | 60.254  | -0.038   | -2.8827 | 0.0106  | -75.9607  |
| 2626 | 1   | Extremo | -0.02     | 66.146  | -0.038   | -2.8827 | 0.0296  | -107.5606 |
| 2628 | 0   | Extremo | 0.003982  | -64.829 | -0.464   | 8.7442  | -0.2508 | -106.2146 |
| 2628 | 0.5 | Extremo | 0.003982  | -58.937 | -0.464   | 8.7442  | -0.0187 | -75.2731  |
| 2628 | 1   | Extremo | 0.003982  | -53.044 | -0.464   | 8.7442  | 0.2135  | -47.2781  |
| 2628 | 0   | Extremo | -0.024    | -64.826 | 0.2      | 8.7321  | 0.118   | -106.2022 |
| 2628 | 0.5 | Extremo | -0.024    | -58.9   |          |         |         |           |



|      |     |         |           |         |        |         |         |           |
|------|-----|---------|-----------|---------|--------|---------|---------|-----------|
| 2632 | 1   | Extremo | -0.032    | 80.857  | -0.372 | 3.5833  | 0.2037  | -122.0412 |
| 2632 | 0   | Extremo | -0.00513  | 69.012  | -0.085 | 3.5586  | -0.0458 | -47.0671  |
| 2632 | 0.5 | Extremo | -0.00513  | 74.905  | -0.085 | 3.5586  | -0.0036 | -83.0463  |
| 2632 | 1   | Extremo | -0.00513  | 80.798  | -0.085 | 3.5586  | 0.0387  | -121.972  |
| 2634 | 0   | Extremo | 0.034     | -85.33  | -0.502 | -1.8318 | -0.2625 | -129.2558 |
| 2634 | 0.5 | Extremo | 0.034     | -79.437 | -0.502 | -1.8318 | -0.0115 | -88.0639  |
| 2634 | 1   | Extremo | 0.034     | -73.545 | -0.502 | -1.8318 | 0.2395  | -49.8184  |
| 2634 | 0   | Extremo | -0.004574 | -85.267 | 0.253  | -1.8047 | 0.1309  | -129.1769 |
| 2634 | 0.5 | Extremo | -0.004574 | -79.374 | 0.253  | -1.8047 | 0.0042  | -88.0168  |
| 2634 | 1   | Extremo | -0.004574 | -73.481 | 0.253  | -1.8047 | -0.1225 | -49.803   |
| 2635 | 0   | Extremo | -0.149    | 73.478  | -0.456 | -0.1139 | -0.1913 | -39.6345  |
| 2635 | 0.5 | Extremo | -0.149    | 79.371  | -0.456 | -0.1139 | 0.037   | -77.8469  |
| 2635 | 1   | Extremo | -0.149    | 85.264  | -0.456 | -0.1139 | 0.2652  | -119.0056 |
| 2635 | 0   | Extremo | -0.009299 | 73.403  | -0.073 | -0.1338 | -0.0688 | -39.6502  |
| 2635 | 0.5 | Extremo | -0.009299 | 79.296  | -0.073 | -0.1338 | -0.0323 | -77.825   |
| 2635 | 1   | Extremo | -0.009299 | 85.189  | -0.073 | -0.1338 | 0.0043  | -118.9462 |
| 2637 | 0   | Extremo | 0.155     | -93.116 | -0.575 | 0.0972  | -0.2956 | -128.9745 |
| 2637 | 0.5 | Extremo | 0.155     | -87.223 | -0.575 | 0.0972  | -0.0081 | -83.8899  |
| 2637 | 1   | Extremo | 0.155     | -81.33  | -0.575 | 0.0972  | 0.2795  | -41.7517  |
| 2637 | 0   | Extremo | 0.009351  | -93.029 | 0.234  | 0.1207  | 0.089   | -128.8971 |
| 2637 | 0.5 | Extremo | 0.009351  | -87.136 | 0.234  | 0.1207  | -0.0278 | -83.8559  |
| 2637 | 1   | Extremo | 0.009351  | -81.243 | 0.234  | 0.1207  | -0.1446 | -41.761   |
| 2638 | 0   | Extremo | -0.035    | 69.071  | -0.529 | -3.8111 | -0.2288 | -47.0768  |
| 2638 | 0.5 | Extremo | -0.035    | 74.964  | -0.529 | -3.8111 | 0.0356  | -83.0856  |
| 2638 | 1   | Extremo | -0.035    | 80.857  | -0.529 | -3.8111 | 0.3     | -122.0408 |
| 2638 | 0   | Extremo | 0.000704  | 69.012  | -0.094 | -3.8263 | -0.0496 | -47.0668  |
| 2638 | 0.5 | Extremo | 0.000704  | 74.905  | -0.094 | -3.8263 | -0.0024 | -83.046   |
| 2638 | 1   | Extremo | 0.000704  | 80.797  | -0.094 | -3.8263 | 0.0448  | -121.9714 |
| 2640 | 0   | Extremo | 0.03      | -85.33  | -0.659 | 2.0263  | -0.3562 | -129.2554 |
| 2640 | 0.5 | Extremo | 0.03      | -79.437 | -0.659 | 2.0263  | -0.0268 | -88.0636  |
| 2640 | 1   | Extremo | 0.03      | -73.544 | -0.659 | 2.0263  | 0.3027  | -49.8182  |
| 2640 | 0   | Extremo | 0.008164  | -85.266 | 0.244  | 2.0462  | 0.1253  | -129.1765 |
| 2640 | 0.5 | Extremo | 0.008164  | -79.374 | 0.244  | 2.0462  | 0.0033  | -88.0165  |
| 2640 | 1   | Extremo | 0.008164  | -73.481 | 0.244  | 2.0462  | -0.1188 | -49.8028  |
| 2641 | 0   | Extremo | -0.006306 | 59.116  | -0.553 | 0.1858  | -0.2459 | -48.8203  |
| 2641 | 0.5 | Extremo | -0.006306 | 65.009  | -0.553 | 0.1858  | 0.0307  | -79.8514  |
| 2641 | 1   | Extremo | -0.006306 | 70.901  | -0.553 | 0.1858  | 0.3073  | -113.8289 |
| 2641 | 0   | Extremo | 0.018     | 59.092  | -0.079 | 0.1494  | -0.03   | -48.8049  |
| 2641 | 0.5 | Extremo | 0.018     | 64.985  | -0.079 | 0.1494  | 0.0094  | -79.8241  |
| 2641 | 1   | Extremo | 0.018     | 70.878  | -0.079 | 0.1494  | 0.0487  | -113.7896 |
| 2643 | 0   | Extremo | -0.008669 | -71.014 | -0.669 | -5.111  | -0.364  | -115.3719 |
| 2643 | 0.5 | Extremo | -0.008669 | -65.122 | -0.669 | -5.111  | -0.0297 | -81.3379  |
| 2643 | 1   | Extremo | -0.008669 | -59.229 | -0.669 | -5.111  | 0.3046  | -50.2503  |
| 2643 | 0   | Extremo | 0.021     | -70.993 | 0.221  | -5.0665 | 0.1259  | -115.3335 |
| 2643 | 0.5 | Extremo | 0.021     | -65.1   | 0.221  | -5.0665 | 0.0154  | -81.31    |
| 2643 | 1   | Extremo | 0.021     | -59.208 | 0.221  | -5.0665 | -0.0951 | -50.233   |
| 2644 | 0   | Extremo | -0.003244 | 54.366  | -0.564 | 2.6648  | -0.2533 | -47.3155  |
| 2644 | 0.5 | Extremo | -0.003244 | 60.259  | -0.564 | 2.6648  | 0.0289  | -75.9718  |
| 2644 | 1   | Extremo | -0.003244 | 66.152  | -0.564 | 2.6648  | 0.311   | -107.5744 |
| 2644 | 0   | Extremo | 0.02      | 54.36   | -0.051 | 2.6135  | -0.0138 | -47.3061  |
| 2644 | 0.5 | Extremo | 0.02      | 60.253  | -0.051 | 2.6135  | 0.0116  | -75.9592  |
| 2644 | 1   | Extremo | 0.02      | 66.145  | -0.051 | 2.6135  | 0.0371  | -107.5587 |
| 2646 | 0   | Extremo | -0.013    | -64.829 | -0.658 | -8.5488 | -0.3583 | -106.2132 |
| 2646 | 0.5 | Extremo | -0.013    | -58.936 | -0.658 | -8.5488 | -0.0295 | -75.2721  |
| 2646 | 1   | Extremo | -0.013    | -53.043 | -0.658 | -8.5488 | 0.2994  | -47.2774  |
| 2646 | 0   | Extremo | 0.023     | -64.825 | 0.189  | -8.4895 | 0.112   | -106.2006 |
| 2646 | 0.5 | Extremo | 0.023     | -58.932 | 0.189  | -8.4895 | 0.0176  | -75.2612  |
| 2646 | 1   | Extremo | 0.023     | -53.04  | 0.189  | -8.4895 | -0.0767 | -47.2682  |
| 2647 | 0   | Extremo | -0.002618 | 52.995  | -0.571 | 2.923   | -0.2571 | -45.9934  |
| 2647 | 0.5 | Extremo | -0.002618 | 58.887  | -0.571 | 2.923   | 0.0285  | -73.9639  |
| 2647 | 1   | Extremo | -0.002618 | 64.78   | -0.571 | 2.923   | 0.314   | -104.8808 |
| 2647 | 0   | Extremo | 0.017     | 52.994  | -0.026 | 2.8657  | -0.0022 | -45.9892  |
| 2647 | 0.5 | Extremo | 0.017     | 58.887  | -0.026 | 2.8657  | 0.0107  | -73.9593  |
| 2647 | 1   | Extremo | 0.017     | 64.779  | -0.026 | 2.8657  | 0.0236  | -104.8758 |
| 2649 | 0   | Extremo | -0.011    | -63.125 | -0.645 | -8.2676 | -0.3509 | -102.3526 |
| 2649 | 0.5 | Extremo | -0.011    | -57.232 | -0.645 | -8.2676 | -0.0284 | -72.2633  |
| 2649 | 1   | Extremo | -0.011    | -51.34  | -0.645 | -8.2676 | 0.2942  | -45.1203  |
| 2649 | 0   | Extremo | 0.018     | -63.126 | 0.161  | -8.2036 | 0.0972  | -102.35   |
| 2649 | 0.5 | Extremo | 0.018     | -57.233 | 0.161  | -8.2036 | 0.0166  | -72.2603  |
| 2649 | 1   | Extremo | 0.018     | -51.34  | 0.161  | -8.2036 | -0.0639 | -45.1169  |
| 2650 | 0   | Extremo | -0.001675 | 52.824  | -0.575 | 2.178   | -0.2592 | -45.3922  |
| 2650 | 0.5 | Extremo | -0.001675 | 58.717  | -0.575 | 2.178   | 0.0285  | -73.2774  |

|      |     |         |           |         |           |         |         |           |
|------|-----|---------|-----------|---------|-----------|---------|---------|-----------|
| 2650 | 1   | Extremo | -0.001675 | 64.609  | -0.575    | 2.178   | 0.3162  | -104.1089 |
| 2650 | 0   | Extremo | 0.012     | 52.824  | -0.007663 | 2.1189  | 0.0053  | -45.3904  |
| 2650 | 0.5 | Extremo | 0.012     | 58.717  | -0.007663 | 2.1189  | 0.0091  | -73.2757  |
| 2650 | 1   | Extremo | 0.012     | 64.61   | -0.007663 | 2.1189  | 0.013   | -104.1073 |
| 2652 | 0   | Extremo | -0.008365 | -62.839 | -0.635    | -6.2993 | -0.3446 | -101.057  |
| 2652 | 0.5 | Extremo | -0.008365 | -56.946 | -0.635    | -6.2993 | -0.0272 | -71.1109  |
| 2652 | 1   | Extremo | -0.008365 | -51.053 | -0.635    | -6.2993 | 0.2903  | -44.111   |
| 2652 | 0   | Extremo | 0.012     | -62.84  | 0.142     | -6.2346 | 0.0858  | -101.057  |
| 2652 | 0.5 | Extremo | 0.012     | -56.947 | 0.142     | -6.2346 | 0.015   | -71.1104  |
| 2652 | 1   | Extremo | 0.012     | -51.054 | 0.142     | -6.2346 | -0.0559 | -44.1101  |
| 2653 | 0   | Extremo | -0.000521 | 52.916  | -0.578    | 1.1885  | -0.2604 | -45.2062  |
| 2653 | 0.5 | Extremo | -0.000521 | 58.809  | -0.578    | 1.1885  | 0.0285  | -73.1376  |
| 2653 | 1   | Extremo | -0.000521 | 64.702  | -0.578    | 1.1885  | 0.3173  | -104.0154 |
| 2653 | 0   | Extremo | 0.006483  | 52.916  | 0.003475  | 1.1286  | 0.0096  | -45.2051  |
| 2653 | 0.5 | Extremo | 0.006483  | 58.809  | 0.003475  | 1.1286  | 0.0078  | -73.1364  |
| 2653 | 1   | Extremo | 0.006483  | 64.702  | 0.003475  | 1.1286  | 0.0061  | -104.0141 |
| 2655 | 0   | Extremo | -0.006279 | -62.853 | -0.628    | -3.7742 | -0.3398 | -100.684  |
| 2655 | 0.5 | Extremo | -0.006279 | -56.96  | -0.628    | -3.7742 | -0.0261 | -70.7307  |
| 2655 | 1   | Extremo | -0.006279 | -51.067 | -0.628    | -3.7742 | 0.2877  | -43.7238  |
| 2655 | 0   | Extremo | 0.006721  | -62.853 | 0.13      | -3.7097 | 0.0786  | -100.6841 |
| 2655 | 0.5 | Extremo | 0.006721  | -56.961 | 0.13      | -3.7097 | 0.0136  | -70.7307  |
| 2655 | 1   | Extremo | 0.006721  | -51.068 | 0.13      | -3.7097 | -0.0513 | -43.7236  |
| 2656 | 0   | Extremo | 0.0007378 | 52.991  | -0.578    | 0.2034  | -0.2608 | -45.1702  |
| 2656 | 0.5 | Extremo | 0.0007378 | 58.884  | -0.578    | 0.2034  | 0.0283  | -73.139   |
| 2656 | 1   | Extremo | 0.0007378 | 64.777  | -0.578    | 0.2034  | 0.3174  | -104.0541 |
| 2656 | 0   | Extremo | 0.001612  | 52.99   | 0.008413  | 0.1424  | 0.0113  | -45.169   |
| 2656 | 0.5 | Extremo | 0.001612  | 58.883  | 0.008413  | 0.1424  | 0.0071  | -73.1372  |
| 2656 | 1   | Extremo | 0.001612  | 64.776  | 0.008413  | 0.1424  | 0.0029  | -104.0519 |
| 2658 | 0   | Extremo | -0.004577 | -62.883 | -0.622    | -1.1046 | -0.3364 | -100.5901 |
| 2658 | 0.5 | Extremo | -0.004577 | -56.99  | -0.622    | -1.1046 | -0.0252 | -70.6218  |
| 2658 | 1   | Extremo | -0.004577 | -51.097 | -0.622    | -1.1046 | 0.2859  | -43.5999  |
| 2658 | 0   | Extremo | 0.001311  | -62.883 | 0.125     | -1.0401 | 0.0755  | -100.5898 |
| 2658 | 0.5 | Extremo | 0.001311  | -56.99  | 0.125     | -1.0401 | 0.013   | -70.6216  |
| 2658 | 1   | Extremo | 0.001311  | -51.097 | 0.125     | -1.0401 | -0.0495 | -43.5999  |
| 2659 | 0   | Extremo | 0.002117  | 52.988  | -0.577    | -0.7619 | -0.2606 | -45.1719  |
| 2659 | 0.5 | Extremo | 0.002117  | 58.881  | -0.577    | -0.7619 | 0.0279  | -73.1393  |
| 2659 | 1   | Extremo | 0.002117  | 64.774  | -0.577    | -0.7619 | 0.3164  | -104.0531 |
| 2659 | 0   | Extremo | -0.003188 | 52.986  | 0.007675  | -0.8249 | 0.0111  | -45.1704  |
| 2659 | 0.5 | Extremo | -0.003188 | 58.879  | 0.007675  | -0.8249 | 0.0072  | -73.1367  |
| 2659 | 1   | Extremo | -0.003188 | 64.772  | 0.007675  | -0.8249 | 0.0034  | -104.0494 |
| 2661 | 0   | Extremo | -0.003192 | -62.878 | -0.619    | 1.5926  | -0.334  | -100.5841 |
| 2661 | 0.5 | Extremo | -0.003192 | -56.986 | -0.619    | 1.5926  | -0.0246 | -70.6181  |
| 2661 | 1   | Extremo | -0.003192 | -51.093 | -0.619    | 1.5926  | 0.2849  | -43.5985  |
| 2661 | 0   | Extremo | -0.004038 | -62.877 | 0.126     | 1.6576  | 0.0763  | -100.5833 |
| 2661 | 0.5 | Extremo | -0.004038 | -56.985 | 0.126     | 1.6576  | 0.0132  | -70.6179  |
| 2661 | 1   | Extremo | -0.004038 | -51.092 | 0.126     | 1.6576  | -0.05   | -43.5988  |
| 2662 | 0   | Extremo | 0.003678  | 52.909  | -0.574    | -1.7487 | -0.2598 | -45.2155  |
| 2662 | 0.5 | Extremo | 0.003678  | 58.802  | -0.574    | -1.7487 | 0.0273  | -73.1431  |
| 2662 | 1   | Extremo | 0.003678  | 64.694  | -0.574    | -1.7487 | 0.3143  | -104.0171 |
| 2662 | 0   | Extremo | -0.00814  | 52.905  | 0.001219  | -1.8148 | 0.0087  | -45.2143  |
| 2662 | 0.5 | Extremo | -0.00814  | 58.798  | 0.001219  | -1.8148 | 0.0081  | -73.14    |
| 2662 | 1   | Extremo | -0.00814  | 64.691  | 0.001219  | -1.8148 | 0.0075  | -104.0122 |
| 2664 | 0   | Extremo | -0.002051 | -62.838 | -0.617    | 4.2712  | -0.3328 | -100.6673 |
| 2664 | 0.5 | Extremo | -0.002051 | -56.945 | -0.617    | 4.2712  | -0.0242 | -70.7215  |
| 2664 | 1   | Extremo | -0.002051 | -51.052 | -0.617    | 4.2712  | 0.2844  | -43.7221  |
| 2664 | 0   | Extremo | -0.009619 | -62.836 | 0.134     | 4.3369  | 0.081   | -100.6668 |
|      |     |         |           |         |           |         |         |           |



|      |     |         |           |         |        |         |          |           |
|------|-----|---------|-----------|---------|--------|---------|----------|-----------|
| 2668 | 1   | Extremo | 0.007368  | 64.801  | -0.562 | -3.4397 | 0.3064   | -104.992  |
| 2668 | 0   | Extremo | -0.019    | 53.013  | -0.032 | -3.509  | -0.0044  | -46.0936  |
| 2668 | 0.5 | Extremo | -0.019    | 58.906  | -0.032 | -3.509  | 0.0114   | -74.0733  |
| 2668 | 1   | Extremo | -0.019    | 64.799  | -0.032 | -3.509  | 0.0271   | -104.9995 |
| 2670 | 0   | Extremo | -0.000586 | -63.099 | -0.619 | 8.7799  | -0.333   | -102.3793 |
| 2670 | 0.5 | Extremo | -0.000586 | -57.206 | -0.619 | 8.7799  | -0.0236  | -72.303   |
| 2670 | 1   | Extremo | -0.000586 | -51.314 | -0.619 | 8.7799  | 0.2858   | -45.173   |
| 2670 | 0   | Extremo | -0.022    | -63.099 | 0.171  | 8.8396  | 0.1033   | -102.3957 |
| 2670 | 0.5 | Extremo | -0.022    | -57.206 | 0.171  | 8.8396  | 0.0179   | -72.3196  |
| 2670 | 1   | Extremo | -0.022    | -51.313 | 0.171  | 8.8396  | -0.0674  | -45.1898  |
| 2671 | 0   | Extremo | 0.008392  | 54.508  | -0.553 | -3.0463 | -0.2518  | -47.5207  |
| 2671 | 0.5 | Extremo | 0.008392  | 60.401  | -0.553 | -3.0463 | 0.0247   | -76.2477  |
| 2671 | 1   | Extremo | 0.008392  | 66.293  | -0.553 | -3.0463 | 0.3012   | -107.9212 |
| 2671 | 0   | Extremo | -0.023    | 54.524  | -0.059 | -3.1016 | -0.017   | -47.5478  |
| 2671 | 0.5 | Extremo | -0.023    | 60.417  | -0.059 | -3.1016 | 0.0125   | -76.2831  |
| 2671 | 1   | Extremo | -0.023    | 66.31   | -0.059 | -3.1016 | 0.042    | -107.9648 |
| 2673 | 0   | Extremo | -0.00063  | -64.879 | -0.623 | 8.9895  | -0.3343  | -106.4236 |
| 2673 | 0.5 | Extremo | -0.00063  | -58.987 | -0.623 | 8.9895  | -0.0229  | -75.457   |
| 2673 | 1   | Extremo | -0.00063  | -53.094 | -0.623 | 8.9895  | 0.2886   | -47.4368  |
| 2673 | 0   | Extremo | -0.027    | -64.898 | 0.202  | 9.0246  | 0.1204   | -106.4839 |
| 2673 | 0.5 | Extremo | -0.027    | -59.005 | 0.202  | 9.0246  | 0.0195   | -75.508   |
| 2673 | 1   | Extremo | -0.027    | -53.113 | 0.202  | 9.0246  | -0.0815  | -47.4784  |
| 2674 | 0   | Extremo | 0.002146  | 59.623  | -0.547 | -0.2423 | -0.2489  | -49.1541  |
| 2674 | 0.5 | Extremo | 0.002146  | 65.516  | -0.547 | -0.2423 | 0.0248   | -80.4389  |
| 2674 | 1   | Extremo | 0.002146  | 71.409  | -0.547 | -0.2423 | 0.2985   | -114.6702 |
| 2674 | 0   | Extremo | -0.022    | 59.701  | -0.091 | -0.2539 | -0.0348  | -49.2013  |
| 2674 | 0.5 | Extremo | -0.022    | 65.594  | -0.091 | -0.2539 | 0.0105   | -80.5252  |
| 2674 | 1   | Extremo | -0.022    | 71.487  | -0.091 | -0.2539 | 0.0558   | -114.7954 |
| 2676 | 0   | Extremo | 0.001366  | -71.4   | -0.631 | 5.2943  | -0.3359  | -116.0713 |
| 2676 | 0.5 | Extremo | 0.001366  | -65.508 | -0.631 | 5.2943  | -0.0205  | -81.8442  |
| 2676 | 1   | Extremo | 0.001366  | -59.615 | -0.631 | 5.2943  | 0.295    | -50.5636  |
| 2676 | 0   | Extremo | -0.026    | -71.492 | 0.238  | 5.2619  | 0.1367   | -116.2388 |
| 2676 | 0.5 | Extremo | -0.026    | -65.599 | 0.238  | 5.2619  | 0.0179   | -81.966   |
| 2676 | 1   | Extremo | -0.026    | -59.706 | 0.238  | 5.2619  | -0.101   | -50.6397  |
| 2677 | 0   | Extremo | -0.041    | 70.309  | -0.566 | 4.2192  | -0.2541  | -47.3048  |
| 2677 | 0.5 | Extremo | -0.041    | 76.202  | -0.566 | 4.2192  | 0.0288   | -83.9325  |
| 2677 | 1   | Extremo | -0.041    | 82.095  | -0.566 | 4.2192  | 0.3118   | -123.5067 |
| 2677 | 0   | Extremo | -0.013    | 70.514  | -0.115 | 4.272   | -0.0581  | -47.3309  |
| 2677 | 0.5 | Extremo | -0.013    | 76.407  | -0.115 | 4.272   | -0.00083 | -84.0612  |
| 2677 | 1   | Extremo | -0.013    | 82.3    | -0.115 | 4.272   | 0.0564   | -123.7379 |
| 2679 | 0   | Extremo | 0.031     | -86.533 | -0.652 | -2.2858 | -0.3404  | -130.7295 |
| 2679 | 0.5 | Extremo | 0.031     | -80.64  | -0.652 | -2.2858 | -0.0142  | -88.9362  |
| 2679 | 1   | Extremo | 0.031     | -74.748 | -0.652 | -2.2858 | 0.3121   | -50.0892  |
| 2679 | 0   | Extremo | -0.006841 | -86.795 | 0.261  | -2.4282 | 0.1373   | -131.0614 |
| 2679 | 0.5 | Extremo | -0.006841 | -80.902 | 0.261  | -2.4282 | 0.0065   | -89.137   |
| 2679 | 1   | Extremo | -0.006841 | -75.01  | 0.261  | -2.4282 | -0.1242  | -50.1591  |
| 2680 | 0   | Extremo | -0.171    | 75.038  | -0.664 | 0.4632  | -0.2819  | -39.343   |
| 2680 | 0.5 | Extremo | -0.171    | 80.931  | -0.664 | 0.4632  | 0.05     | -78.3354  |
| 2680 | 1   | Extremo | -0.171    | 86.824  | -0.664 | 0.4632  | 0.3818   | -120.2742 |
| 2680 | 0   | Extremo | -0.029    | 75.3    | -0.115 | 0.4843  | -0.0856  | -39.2754  |
| 2680 | 0.5 | Extremo | -0.029    | 81.192  | -0.115 | 0.4843  | -0.0281  | -78.3985  |
| 2680 | 1   | Extremo | -0.029    | 87.085  | -0.115 | 0.4843  | 0.0295   | -120.4679 |
| 2682 | 0   | Extremo | 0.162     | -94.766 | -0.726 | -0.2437 | -0.3738  | -130.4143 |
| 2682 | 0.5 | Extremo | 0.162     | -88.874 | -0.726 | -0.2437 | -0.0105  | -84.5043  |
| 2682 | 1   | Extremo | 0.162     | -82.981 | -0.726 | -0.2437 | 0.3527   | -41.5407  |
| 2682 | 0   | Extremo | 0.017     | -95.121 | 0.24   | -0.386  | 0.0945   | -130.7415 |
| 2682 | 0.5 | Extremo | 0.017     | -89.228 | 0.24   | -0.386  | -0.0255  | -84.6541  |
| 2682 | 1   | Extremo | 0.017     | -83.336 | 0.24   | -0.386  | -0.1455  | -41.5131  |
| 2683 | 0   | Extremo | -0.047    | 70.309  | -0.751 | -3.2931 | -0.3252  | -47.3041  |
| 2683 | 0.5 | Extremo | -0.047    | 76.201  | -0.751 | -3.2931 | 0.0505   | -83.9317  |
| 2683 | 1   | Extremo | -0.047    | 82.094  | -0.751 | -3.2931 | 0.4261   | -123.5056 |
| 2683 | 0   | Extremo | -0.01     | 70.514  | -0.15  | -3.3037 | -0.0715  | -47.3303  |
| 2683 | 0.5 | Extremo | -0.01     | 76.406  | -0.15  | -3.3037 | 0.0036   | -84.0603  |
| 2683 | 1   | Extremo | -0.01     | 82.299  | -0.15  | -3.3037 | 0.0786   | -123.7368 |
| 2685 | 0   | Extremo | 0.022     | -86.533 | -0.809 | 1.7983  | -0.4334  | -130.7294 |
| 2685 | 0.5 | Extremo | 0.022     | -80.64  | -0.809 | 1.7983  | -0.0289  | -88.9361  |
| 2685 | 1   | Extremo | 0.022     | -74.747 | -0.809 | 1.7983  | 0.3757   | -50.0892  |
| 2685 | 0   | Extremo | 0.002708  | -86.795 | 0.25   | 1.6565  | 0.1308   | -131.0603 |
| 2685 | 0.5 | Extremo | 0.002708  | -80.902 | 0.25   | 1.6565  | 0.0058   | -89.1362  |
| 2685 | 1   | Extremo | 0.002708  | -75.009 | 0.25   | 1.6565  | -0.1193  | -50.1585  |
| 2686 | 0   | Extremo | -0.018    | 59.622  | -0.787 | 1.1675  | -0.3468  | -49.1526  |
| 2686 | 0.5 | Extremo | -0.018    | 65.515  | -0.787 | 1.1675  | 0.0467   | -80.437   |

|      |     |           |           |         |        |         |         |           |
|------|-----|-----------|-----------|---------|--------|---------|---------|-----------|
| 2686 | 1   | Extremo   | -0.018    | 71.408  | -0.787 | 1.1675  | 0.4402  | -114.6678 |
| 2686 | 0   | Extremo   | 0.00722   | 59.7    | -0.144 | 1.2213  | -0.0557 | -49.2     |
| 2686 | 0.5 | Extremo   | 0.00722   | 65.593  | -0.144 | 1.2213  | 0.0164  | -80.5233  |
| 2686 | 1   | Extremo   | 0.00722   | 71.486  | -0.144 | 1.2213  | 0.0886  | -114.793  |
| 2688 | 0   | Extremo   | -0.023    | -71.4   | -0.809 | -5.7817 | -0.4347 | -116.0711 |
| 2688 | 0.5 | Extremo   | -0.023    | -65.507 | -0.809 | -5.7817 | -0.0303 | -81.8442  |
| 2688 | 1   | Extremo   | -0.023    | -59.615 | -0.809 | -5.7817 | 0.3742  | -50.5637  |
| 2688 | 0   | Extremo   | 0.011     | -71.491 | 0.234  | -6.0326 | 0.1361  | -116.2365 |
| 2688 | 0.5 | Extremo   | 0.011     | -65.598 | 0.234  | -6.0326 | 0.019   | -81.9643  |
| 2688 | 1   | Extremo   | 0.011     | -59.705 | 0.234  | -6.0326 | -0.098  | -50.6385  |
| 2689 | 0   | Extremo   | -0.017    | 54.506  | -0.81  | 3.9696  | -0.3587 | -47.5177  |
| 2689 | 0.5 | Extremo   | -0.017    | 60.399  | -0.81  | 3.9696  | 0.0463  | -76.244   |
| 2689 | 1   | Extremo   | -0.017    | 66.292  | -0.81  | 3.9696  | 0.4514  | -107.9166 |
| 2689 | 0   | Extremo   | 0.007336  | 54.522  | -0.127 | 4.0671  | -0.0434 | -47.5453  |
| 2689 | 0.5 | Extremo   | 0.007336  | 60.415  | -0.127 | 4.0671  | 0.0202  | -76.2797  |
| 2689 | 1   | Extremo   | 0.007336  | 66.308  | -0.127 | 4.0671  | 0.0838  | -107.9604 |
| 2691 | 0   | Extremo   | -0.032    | -64.879 | -0.783 | -9.477  | -0.4195 | -106.4236 |
| 2691 | 0.5 | Extremo   | -0.032    | -58.987 | -0.783 | -9.477  | -0.028  | -75.4572  |
| 2691 | 1   | Extremo   | -0.032    | -53.094 | -0.783 | -9.477  | 0.3636  | -47.4371  |
| 2691 | 0   | Extremo   | 0.008684  | -64.896 | 0.213  | -9.7935 | 0.129   | -106.4799 |
| 2691 | 0.5 | Extremo   | 0.008684  | -59.004 | 0.213  | -9.7935 | 0.0227  | -75.5049  |
| 2691 | 1   | Extremo   | 0.008684  | -53.111 | 0.213  | -9.7935 | -0.0835 | -47.4763  |
| 2692 | 0   | Extremo   | -0.021    | 53.012  | -0.832 | 4.3595  | -0.3681 | -46.0785  |
| 2692 | 0.5 | Extremo   | -0.021    | 58.905  | -0.832 | 4.3595  | 0.0478  | -74.0578  |
| 2692 | 1   | Extremo   | -0.021    | 64.798  | -0.832 | 4.3595  | 0.4638  | -104.9835 |
| 2692 | 0   | Extremo   | 5.686E-05 | 53.01   | -0.116 | 4.4714  | -0.0367 | -46.0891  |
| 2692 | 0.5 | Extremo   | 5.686E-05 | 58.903  | -0.116 | 4.4714  | 0.0211  | -74.0673  |
| 2692 | 1   | Extremo   | 5.686E-05 | 64.796  | -0.116 | 4.4714  | 0.0789  | -104.9919 |
| 2694 | 0   | Extremo   | -0.035    | -63.099 | -0.751 | -9.268  | -0.4    | -102.38   |
| 2694 | 0.5 | Extremo   | -0.035    | -57.206 | -0.751 | -9.268  | -0.0244 | -72.3036  |
| 2694 | 1   | Extremo   | -0.035    | -51.314 | -0.751 | -9.268  | 0.3513  | -45.1737  |
| 2694 | 0   | Extremo   | 0.0005135 | -63.096 | 0.199  | -9.6057 | 0.123   | -102.3893 |
| 2694 | 0.5 | Extremo   | 0.0005135 | -57.203 | 0.199  | -9.6057 | 0.0235  | -72.3146  |
| 2694 | 1   | Extremo   | 0.0005135 | -51.31  | 0.199  | -9.6057 | -0.0759 | -45.1863  |
| 2695 | 0   | Extremo   | -0.025    | 52.812  | -0.855 | 3.6467  | -0.3774 | -45.4142  |
| 2695 | 0.5 | Extremo   | -0.025    | 58.705  | -0.855 | 3.6467  | 0.0503  | -73.2933  |
| 2695 | 1   | Extremo   | -0.025    | 64.597  | -0.855 | 3.6467  | 0.478   | -104.1187 |
| 2695 | 0   | Extremo   | -0.00978  | 52.807  | -0.115 | 3.7599  | -0.0354 | -45.4178  |
| 2695 | 0.5 | Extremo   | -0.00978  | 58.7    | -0.115 | 3.7599  | 0.022   | -73.2946  |
| 2695 | 1   | Extremo   | -0.00978  | 64.593  | -0.115 | 3.7599  | 0.0794  | -104.1178 |
| 2697 | 0   | Extremo   | -0.039    | -62.813 | -0.717 | -7.3002 | -0.3783 | -101.0419 |
| 2697 | 0.5 | Extremo   | -0.039    | -56.92  | -0.717 | -7.3002 | -0.02   | -71.1088  |
| 2697 | 1   | Extremo   | -0.039    | -51.027 | -0.717 | -7.3002 | 0.3383  | -44.1221  |
| 2697 | 0   | Extremo   | -0.01     | -62.805 | 0.197  | -7.638  | 0.1229  | -101.0324 |
| 2697 | 0.5 | Extremo   | -0.01     | -56.912 | 0.197  | -7.638  | 0.0242  | -71.1032  |
| 2697 | 1   | Extremo   | -0.01     | -51.019 | 0.197  | -7.638  | -0.0745 | -44.1205  |
| 2698 | 0   | Extremo   | -0.03     | 52.9    | -0.882 | 2.6507  | -0.3876 | -45.196   |
| 2698 | 0.5 | Extremo   | -0.03     | 58.792  | -0.882 | 2.6507  | 0.0534  | -73.119   |
| 2698 | 1   | Extremo   | -0.03     | 64.685  | -0.882 | 2.6507  | 0.4944  | -103.9883 |
| 2698 | 0   | Extremo   | -0.021    | 52.897  | -0.126 | 2.7635  | -0.039  | -45.1998  |
| 2698 | 0.5 | Extremo   | -0.021    | 58.79   | -0.126 | 2.7635  | 0.0239  | -73.1215  |
| 2698 | 1   | Extremo   | -0.021    | 64.683  | -0.126 | 2.7635  | 0.0867  | -103.9896 |
| 2700 | 0   | Extremo   | -0.045    | -62.84  | -0.678 | -4.7648 | -0.3537 | -100.6724 |
| 2700 | 0.5 | Extremo   | -0.045    | -56.947 | -0.678 | -4.7648 | -0.0148 | -70.7255  |
| 2700 | 1   | Extremo   | -0.045    | -51.055 | -0.678 | -4.7648 | 0.3241  | -43.725   |
| 2700 | 0   | Extremo   | -0.022    | -62.83  | 0.209  | -5.0926 | 0.13    | -100.6511 |
| 2700 | 0.5 | Extremo   | -0.022    | -56.937 | 0.209  | -5.0926 | 0.0258  | -70.7095  |
| 2700 | 1   | Extremo   | -0.022    | -51.044 | 0.209  | -5.0926 | -0.0785 | -43.7143  |
| 2701 | 0   | Extremo</ |           |         |        |         |         |           |



|      |     |         |        |         |        |         |         |           |
|------|-----|---------|--------|---------|--------|---------|---------|-----------|
| 2704 | 1   | Extremo | -0.047 | 64.747  | -0.952 | 0.6355  | 0.5381  | -103.9508 |
| 2704 | 0   | Extremo | -0.049 | 52.969  | -0.186 | 0.7635  | -0.0604 | -45.1152  |
| 2704 | 0.5 | Extremo | -0.049 | 58.861  | -0.186 | 0.7635  | 0.0328  | -73.0727  |
| 2704 | 1   | Extremo | -0.049 | 64.754  | -0.186 | 0.7635  | 0.126   | -103.9765 |
| 2706 | 0   | Extremo | -0.066 | -62.898 | -0.578 | 0.5854  | -0.2907 | -100.609  |
| 2706 | 0.5 | Extremo | -0.066 | -57.005 | -0.578 | 0.5854  | -0.0016 | -70.6332  |
| 2706 | 1   | Extremo | -0.066 | -51.113 | -0.578 | 0.5854  | 0.2874  | -43.6037  |
| 2706 | 0   | Extremo | -0.051 | -62.873 | 0.271  | 0.3058  | 0.1694  | -100.5493 |
| 2706 | 0.5 | Extremo | -0.051 | -56.98  | 0.271  | 0.3058  | 0.034   | -70.586   |
| 2706 | 1   | Extremo | -0.051 | -51.088 | 0.271  | 0.3058  | -0.1014 | -43.569   |
| 2707 | 0   | Extremo | -0.059 | 52.86   | -0.999 | -0.4352 | -0.4312 | -45.0569  |
| 2707 | 0.5 | Extremo | -0.059 | 58.752  | -0.999 | -0.4352 | 0.0684  | -72.9598  |
| 2707 | 1   | Extremo | -0.059 | 64.645  | -0.999 | -0.4352 | 0.5679  | -103.8092 |
| 2707 | 0   | Extremo | -0.067 | 52.877  | -0.24  | -0.28   | -0.0791 | -45.0934  |
| 2707 | 0.5 | Extremo | -0.067 | 58.77   | -0.24  | -0.28   | 0.0407  | -73.005   |
| 2707 | 1   | Extremo | -0.067 | 64.662  | -0.24  | -0.28   | 0.1605  | -103.863  |
| 2709 | 0   | Extremo | -0.082 | -62.886 | -0.511 | 3.2272  | -0.2485 | -100.7077 |
| 2709 | 0.5 | Extremo | -0.082 | -56.993 | -0.511 | 3.2272  | 0.007   | -70.7379  |
| 2709 | 1   | Extremo | -0.082 | -51.1   | -0.511 | 3.2272  | 0.2625  | -43.7145  |
| 2709 | 0   | Extremo | -0.07  | -62.844 | 0.325  | 2.9983  | 0.2042  | -100.6078 |
| 2709 | 0.5 | Extremo | -0.07  | -56.951 | 0.325  | 2.9983  | 0.0414  | -70.659   |
| 2709 | 1   | Extremo | -0.07  | -51.058 | 0.325  | 2.9983  | -0.1213 | -43.6566  |
| 2710 | 0   | Extremo | -0.074 | 52.7    | -1.058 | -1.6126 | -0.4526 | -45.0832  |
| 2710 | 0.5 | Extremo | -0.074 | 58.593  | -1.058 | -1.6126 | 0.0764  | -72.9064  |
| 2710 | 1   | Extremo | -0.074 | 64.486  | -1.058 | -1.6126 | 0.6054  | -103.676  |
| 2710 | 0   | Extremo | -0.089 | 52.736  | -0.313 | -1.4028 | -0.1049 | -45.1491  |
| 2710 | 0.5 | Extremo | -0.089 | 58.629  | -0.313 | -1.4028 | 0.0514  | -72.9904  |
| 2710 | 1   | Extremo | -0.089 | 64.522  | -0.313 | -1.4028 | 0.2077  | -103.7782 |
| 2712 | 0   | Extremo | -0.103 | -62.897 | -0.427 | 5.7268  | -0.196  | -101.0493 |
| 2712 | 0.5 | Extremo | -0.103 | -57.004 | -0.427 | 5.7268  | 0.0176  | -71.074   |
| 2712 | 1   | Extremo | -0.103 | -51.112 | -0.427 | 5.7268  | 0.2312  | -44.045   |
| 2712 | 0   | Extremo | -0.093 | -62.825 | 0.4    | 5.5836  | 0.2518  | -100.8811 |
| 2712 | 0.5 | Extremo | -0.093 | -56.932 | 0.4    | 5.5836  | 0.0516  | -70.9419  |
| 2712 | 1   | Extremo | -0.093 | -51.039 | 0.4    | 5.5836  | -0.1486 | -43.949   |
| 2713 | 0   | Extremo | -0.095 | 52.68   | -1.133 | -2.7901 | -0.479  | -45.3557  |
| 2713 | 0.5 | Extremo | -0.095 | 58.573  | -1.133 | -2.7901 | 0.0872  | -73.1689  |
| 2713 | 1   | Extremo | -0.095 | 64.465  | -1.133 | -2.7901 | 0.6535  | -103.9285 |
| 2713 | 0   | Extremo | -0.117 | 52.749  | -0.41  | -2.4786 | -0.1398 | -45.468   |
| 2713 | 0.5 | Extremo | -0.117 | 58.642  | -0.41  | -2.4786 | 0.0654  | -73.3159  |
| 2713 | 1   | Extremo | -0.117 | 64.535  | -0.41  | -2.4786 | 0.2706  | -104.1101 |
| 2715 | 0   | Extremo | -0.13  | -63.176 | -0.322 | 7.7461  | -0.1303 | -102.1558 |
| 2715 | 0.5 | Extremo | -0.13  | -57.283 | -0.322 | 7.7461  | 0.0307  | -72.0409  |
| 2715 | 1   | Extremo | -0.13  | -51.391 | -0.322 | 7.7461  | 0.1917  | -44.8724  |
| 2715 | 0   | Extremo | -0.123 | -63.047 | 0.501  | 7.748   | 0.3155  | -101.8699 |
| 2715 | 0.5 | Extremo | -0.123 | -57.154 | 0.501  | 7.748   | 0.065   | -71.8196  |
| 2715 | 1   | Extremo | -0.123 | -51.261 | 0.501  | 7.748   | -0.1855 | -44.7158  |
| 2716 | 0   | Extremo | -0.124 | 53.488  | -1.228 | -3.5206 | -0.512  | -46.0819  |
| 2716 | 0.5 | Extremo | -0.124 | 59.381  | -1.228 | -3.5206 | 0.1022  | -74.2992  |
| 2716 | 1   | Extremo | -0.124 | 65.274  | -1.228 | -3.5206 | 0.7165  | -105.4628 |
| 2716 | 0   | Extremo | -0.151 | 53.61   | -0.539 | -3.0292 | -0.1868 | -46.2614  |
| 2716 | 0.5 | Extremo | -0.151 | 59.503  | -0.539 | -3.0292 | 0.0828  | -74.5396  |
| 2716 | 1   | Extremo | -0.151 | 65.396  | -0.539 | -3.0292 | 0.3524  | -105.7643 |
| 2718 | 0   | Extremo | -0.164 | -64.641 | -0.19  | 8.4063  | -0.048  | -105.3226 |
| 2718 | 0.5 | Extremo | -0.164 | -58.749 | -0.19  | 8.4063  | 0.047   | -74.475   |
| 2718 | 1   | Extremo | -0.164 | -52.856 | -0.19  | 8.4063  | 0.142   | -46.5738  |
| 2718 | 0   | Extremo | -0.159 | -64.395 | 0.633  | 8.6477  | 0.3985  | -104.8342 |
| 2718 | 0.5 | Extremo | -0.159 | -58.502 | 0.633  | 8.6477  | 0.0818  | -74.11    |
| 2718 | 1   | Extremo | -0.159 | -52.609 | 0.633  | 8.6477  | -0.2349 | -46.3321  |
| 2719 | 0   | Extremo | -0.168 | 56.725  | -1.358 | -3.0827 | -0.5547 | -46.8576  |
| 2719 | 0.5 | Extremo | -0.168 | 62.618  | -1.358 | -3.0827 | 0.1241  | -76.6935  |
| 2719 | 1   | Extremo | -0.168 | 68.511  | -1.358 | -3.0827 | 0.8028  | -109.4758 |
| 2719 | 0   | Extremo | -0.192 | 56.922  | -0.705 | -2.2932 | -0.2498 | -47.1194  |
| 2719 | 0.5 | Extremo | -0.192 | 62.814  | -0.705 | -2.2932 | 0.1029  | -77.0534  |
| 2719 | 1   | Extremo | -0.192 | 68.707  | -0.705 | -2.2932 | 0.4555  | -109.9338 |
| 2721 | 0   | Extremo | -0.206 | -69.712 | -0.026 | 6.2543  | 0.0547  | -112.5981 |
| 2721 | 0.5 | Extremo | -0.206 | -63.82  | -0.026 | 6.2543  | 0.0675  | -79.2151  |
| 2721 | 1   | Extremo | -0.206 | -57.927 | -0.026 | 6.2543  | 0.0803  | -48.7785  |
| 2721 | 0   | Extremo | -0.201 | -69.223 | 0.804  | 6.8553  | 0.5033  | -111.7915 |
| 2721 | 0.5 | Extremo | -0.201 | -63.33  | 0.804  | 6.8553  | 0.1015  | -78.6534  |
| 2721 | 1   | Extremo | -0.201 | -57.437 | 0.804  | 6.8553  | -0.3002 | -48.4616  |
| 2722 | 0   | Extremo | -0.247 | 63.635  | -1.547 | -2.2374 | -0.615  | -45.3445  |
| 2722 | 0.5 | Extremo | -0.247 | 69.528  | -1.547 | -2.2374 | 0.1583  | -78.6353  |

|      |     |         |        |         |        |         |         |           |
|------|-----|---------|--------|---------|--------|---------|---------|-----------|
| 2722 | 1   | Extremo | -0.247 | 75.421  | -1.547 | -2.2374 | 0.9316  | -114.8724 |
| 2722 | 0   | Extremo | -0.24  | 63.915  | -0.911 | -1.0038 | -0.3328 | -45.6599  |
| 2722 | 0.5 | Extremo | -0.24  | 69.808  | -0.911 | -1.0038 | 0.1225  | -79.0907  |
| 2722 | 1   | Extremo | -0.24  | 75.701  | -0.911 | -1.0038 | 0.5778  | -115.4679 |
| 2724 | 0   | Extremo | -0.236 | -80.888 | 0.17   | 1.8243  | 0.1785  | -123.1676 |
| 2724 | 0.5 | Extremo | -0.236 | -74.995 | 0.17   | 1.8243  | 0.0937  | -84.1971  |
| 2724 | 1   | Extremo | -0.236 | -69.102 | 0.17   | 1.8243  | 0.0089  | -48.1729  |
| 2724 | 0   | Extremo | -0.235 | -80.014 | 1.007  | 2.8119  | 0.6246  | -122.023  |
| 2724 | 0.5 | Extremo | -0.235 | -74.122 | 1.007  | 2.8119  | 0.1211  | -83.4889  |
| 2724 | 1   | Extremo | -0.235 | -68.229 | 1.007  | 2.8119  | -0.3824 | -47.9013  |
| 2725 | 0   | Extremo | -0.383 | 66.285  | -1.848 | -7.4664 | -0.7071 | -40.7573  |
| 2725 | 0.5 | Extremo | -0.383 | 72.178  | -1.848 | -7.4664 | 0.2171  | -75.3729  |
| 2725 | 1   | Extremo | -0.383 | 78.07   | -1.848 | -7.4664 | 1.1413  | -112.9348 |
| 2725 | 0   | Extremo | -0.312 | 66.582  | -1.152 | -5.7372 | -0.4386 | -40.9808  |
| 2725 | 0.5 | Extremo | -0.312 | 72.475  | -1.152 | -5.7372 | 0.1375  | -75.745   |
| 2725 | 1   | Extremo | -0.312 | 78.368  | -1.152 | -5.7372 | 0.7136  | -113.4556 |
| 2727 | 0   | Extremo | -0.194 | -85.595 | 0.367  | 5.4671  | 0.3027  | -122.4554 |
| 2727 | 0.5 | Extremo | -0.194 | -79.703 | 0.367  | 5.4671  | 0.1193  | -81.1309  |
| 2727 | 1   | Extremo | -0.194 | -73.81  | 0.367  | 5.4671  | -0.0641 | -42.7528  |
| 2727 | 0   | Extremo | -0.251 | -84.719 | 1.22   | 6.5043  | 0.7412  | -121.4061 |
| 2727 | 0.5 | Extremo | -0.251 | -78.826 | 1.22   | 6.5043  | 0.1312  | -80.52    |
| 2727 | 1   | Extremo | -0.251 | -72.933 | 1.22   | 6.5043  | -0.4787 | -42.5802  |
| 2728 | 0   | Extremo | -0.401 | 67.147  | -2.186 | -9.304  | -0.8549 | -47.192   |
| 2728 | 0.5 | Extremo | -0.401 | 73.04   | -2.186 | -9.304  | 0.2379  | -82.2386  |
| 2728 | 1   | Extremo | -0.401 | 78.932  | -2.186 | -9.304  | 1.3308  | -120.2316 |
| 2728 | 0   | Extremo | -0.373 | 67.542  | -1.476 | -7.3763 | -0.5373 | -47.3505  |
| 2728 | 0.5 | Extremo | -0.373 | 73.434  | -1.476 | -7.3763 | 0.2005  | -82.5945  |
| 2728 | 1   | Extremo | -0.373 | 79.327  | -1.476 | -7.3763 | 0.9384  | -120.7848 |
| 2730 | 0   | Extremo | -0.403 | -84.396 | 0.648  | 4.0468  | 0.4876  | -128.6861 |
| 2730 | 0.5 | Extremo | -0.403 | -78.503 | 0.648  | 4.0468  | 0.1637  | -87.9615  |
| 2730 | 1   | Extremo | -0.403 | -72.61  | 0.648  | 4.0468  | -0.1601 | -50.1833  |
| 2730 | 0   | Extremo | -0.379 | -83.703 | 1.517  | 5.7397  | 0.9461  | -127.5684 |
| 2730 | 0.5 | Extremo | -0.379 | -77.81  | 1.517  | 5.7397  | 0.1877  | -87.1901  |
| 2730 | 1   | Extremo | -0.379 | -71.917 | 1.517  | 5.7397  | -0.5707 | -49.7583  |
| 2731 | 0   | Extremo | -0.499 | 57.928  | -2.607 | -5.1487 | -1.0137 | -48.315   |
| 2731 | 0.5 | Extremo | -0.499 | 63.821  | -2.607 | -5.1487 | 0.2898  | -78.7522  |
| 2731 | 1   | Extremo | -0.499 | 69.714  | -2.607 | -5.1487 | 1.5932  | -112.1358 |
| 2731 | 0   | Extremo | -0.46  | 58.206  | -1.852 | -3.0163 | -0.6587 | -48.4743  |
| 2731 | 0.5 | Extremo | -0.46  | 64.099  | -1.852 | -3.0163 | 0.2671  | -79.0507  |
| 2731 | 1   | Extremo | -0.46  | 69.992  | -1.852 | -3.0163 | 1.1929  | -112.5734 |
| 2733 | 0   | Extremo | -0.534 | -70.547 | 1.069  | -4.1704 | 0.7593  | -114.8229 |
| 2733 | 0.5 | Extremo | -0.534 | -64.654 | 1.069  | -4.1704 | 0.2248  | -81.0226  |
| 2733 | 1   | Extremo | -0.534 | -58.762 | 1.069  | -4.1704 | -0.3097 | -50.1686  |
| 2733 | 0   | Extremo | -0.489 | -70.269 | 1.9    | -1.8159 | 1.2013  | -114.2021 |
| 2733 | 0.5 | Extremo | -0.489 | -64.376 | 1.9    | -1.8159 | 0.2513  | -80.5408  |
| 2733 | 1   | Extremo | -0.489 | -58.484 | 1.9    | -1.8159 | -0.6987 | -49.8258  |
| 2734 | 0   | Extremo | -0.629 | 54.012  | -3.13  | -3.3641 | -1.2013 | -46.736   |
| 2734 | 0.5 | Extremo | -0.629 | 59.904  | -3.13  | -3.3641 | 0.3638  | -75.215   |
| 2734 | 1   | Extremo | -0.629 | 65.797  | -3.13  | -3.3641 | 1.929   | -106.6404 |
| 2734 | 0   | Extremo | -0.591 | 54.156  | -2.323 | -1.0369 | -0.8192 | -46.8669  |
| 2734 | 0.5 | Extremo | -0.591 | 60.049  | -2.323 | -1.0369 | 0.3422  | -75.4181  |
| 2734 | 1   | Extremo | -0.591 | 65.942  | -2.323 | -1.0369 | 1.5035  | -106.9156 |
| 2736 | 0   | Extremo | -0.679 | -65.167 | 1.617  | -7.5324 | 1.1078  | -106.4723 |
| 2736 | 0.5 | Extremo | -0.679 | -59.274 | 1.617  | -7.5324 | 0.2994  | -75.3622  |
| 2736 | 1   | Extremo | -0.679 | -53.381 | 1.617  | -7.5324 | -0.509  | -47.1985  |
| 2736 | 0   | Extremo | -0.63  | -65.05  | 2.392  | -4.8194 | 1.5195  | -106.1692 |
| 2736 | 0.5 | Extremo | -0.63  | -59.157 | 2.392  | -4.8194 | 0.3233  | -75.1174  |
| 2736 | 1   | Extremo | -0.63  | -53.265 | 2.392  | -4.8194 | -0.8729 | -47.0119  |
| 2737 | 0   | Extremo | -0.797 | 53.129  | -3.786 | -3.7688 | -1.4311 | -45.5701  |
| 2737 | 0.5 | Extremo | -0.797 | 59.022  | -3.78  |         |         |           |





|      |     |         |        |         |         |          |         |           |
|------|-----|---------|--------|---------|---------|----------|---------|-----------|
| 2740 | 1   | Extremo | -1.001 | 64.903  | -4.613  | -5.0458  | 2.8973  | -104.1339 |
| 2740 | 0   | Extremo | -0.993 | 53.075  | -3.741  | -2.4407  | -1.309  | -45.1925  |
| 2740 | 0.5 | Extremo | -0.993 | 58.968  | -3.741  | -2.4407  | 0.5615  | -73.2034  |
| 2740 | 1   | Extremo | -0.993 | 64.861  | -3.741  | -2.4407  | 2.432   | -104.1606 |
| 2742 | 0   | Extremo | -1.115 | -63.69  | 3.22    | -5.2505  | 2.1213  | -102.2214 |
| 2742 | 0.5 | Extremo | -1.115 | -57.797 | 3.22    | -5.2505  | 0.5113  | -71.8497  |
| 2742 | 1   | Extremo | -1.115 | -51.904 | 3.22    | -5.2505  | -1.0986 | -44.4243  |
| 2742 | 0   | Extremo | -1.058 | -63.631 | 3.879   | -2.4365  | 2.4756  | -102.1962 |
| 2742 | 0.5 | Extremo | -1.058 | -57.738 | 3.879   | -2.4365  | 0.5359  | -71.854   |
| 2742 | 1   | Extremo | -1.058 | -51.845 | 3.879   | -2.4365  | -1.4038 | -44.4582  |
| 2743 | 0   | Extremo | -1.197 | 53.293  | -5.643  | -6.5223  | -2.0671 | -45.1823  |
| 2743 | 0.5 | Extremo | -1.197 | 59.186  | -5.643  | -6.5223  | 0.7546  | -73.302   |
| 2743 | 1   | Extremo | -1.197 | 65.078  | -5.643  | -6.5223  | 3.5764  | -104.368  |
| 2743 | 0   | Extremo | -1.223 | 53.2    | -4.771  | -3.796   | -1.6634 | -45.1748  |
| 2743 | 0.5 | Extremo | -1.223 | 59.093  | -4.771  | -3.796   | 0.7219  | -73.2479  |
| 2743 | 1   | Extremo | -1.223 | 64.985  | -4.771  | -3.796   | 3.1072  | -104.2673 |
| 2745 | 0   | Extremo | -1.396 | -63.578 | 4.36    | -2.8333  | 2.839   | -102.0578 |
| 2745 | 0.5 | Extremo | -1.396 | -57.686 | 4.36    | -2.8333  | 0.659   | -71.7418  |
| 2745 | 1   | Extremo | -1.396 | -51.793 | 4.36    | -2.8333  | -1.521  | -44.3722  |
| 2745 | 0   | Extremo | -1.306 | -63.691 | 4.964   | -0.215   | 3.1766  | -102.1942 |
| 2745 | 0.5 | Extremo | -1.306 | -57.799 | 4.964   | -0.215   | 0.6945  | -71.8217  |
| 2745 | 1   | Extremo | -1.306 | -51.906 | 4.964   | -0.215   | -1.7876 | -44.3956  |
| 2746 | 0   | Extremo | -1.653 | 55.545  | -6.946  | -7.5067  | -2.5465 | -45.5408  |
| 2746 | 0.5 | Extremo | -1.653 | 61.437  | -6.946  | -7.5067  | 0.9265  | -74.7864  |
| 2746 | 1   | Extremo | -1.653 | 67.33   | -6.946  | -7.5067  | 4.3995  | -106.9783 |
| 2746 | 0   | Extremo | -1.645 | 55.538  | -6.083  | -4.9044  | -2.1391 | -45.46    |
| 2746 | 0.5 | Extremo | -1.645 | 61.431  | -6.083  | -4.9044  | 0.9024  | -74.7024  |
| 2746 | 1   | Extremo | -1.645 | 67.324  | -6.083  | -4.9044  | 3.944   | -106.8912 |
| 2748 | 0   | Extremo | -1.827 | -66.445 | 5.835   | -0.9305  | 3.7835  | -105.266  |
| 2748 | 0.5 | Extremo | -1.827 | -60.552 | 5.835   | -0.9305  | 0.866   | -73.5167  |
| 2748 | 1   | Extremo | -1.827 | -54.659 | 5.835   | -0.9305  | -2.0515 | -44.7138  |
| 2748 | 0   | Extremo | -1.76  | -66.589 | 6.351   | 1.8424   | 4.0445  | -105.4101 |
| 2748 | 0.5 | Extremo | -1.76  | -60.696 | 6.351   | 1.8424   | 0.869   | -73.5889  |
| 2748 | 1   | Extremo | -1.76  | -54.803 | 6.351   | 1.8424   | -2.3065 | -44.714   |
| 2749 | 0   | Extremo | -2.138 | 55.404  | -8.701  | -7.7745  | -3.1601 | -45.7139  |
| 2749 | 0.5 | Extremo | -2.138 | 61.297  | -8.701  | -7.7745  | 1.1903  | -74.8892  |
| 2749 | 1   | Extremo | -2.138 | 67.19   | -8.701  | -7.7745  | 5.5406  | -107.0109 |
| 2749 | 0   | Extremo | -2.121 | 55.404  | -7.824  | -5.2911  | -2.7484 | -45.6585  |
| 2749 | 0.5 | Extremo | -2.121 | 61.296  | -7.824  | -5.2911  | 1.1635  | -74.8335  |
| 2749 | 1   | Extremo | -2.121 | 67.189  | -7.824  | -5.2911  | 5.0754  | -106.9549 |
| 2751 | 0   | Extremo | -2.318 | -66.366 | 7.725   | 0.2065   | 4.9976  | -105.4847 |
| 2751 | 0.5 | Extremo | -2.318 | -60.473 | 7.725   | 0.2065   | 1.1351  | -73.7749  |
| 2751 | 1   | Extremo | -2.318 | -54.58  | 7.725   | 0.2065   | -2.7274 | -45.0116  |
| 2751 | 0   | Extremo | -2.264 | -66.429 | 8.185   | 2.9954   | 5.215   | -105.5769 |
| 2751 | 0.5 | Extremo | -2.264 | -60.536 | 8.185   | 2.9954   | 1.1227  | -73.8356  |
| 2751 | 1   | Extremo | -2.264 | -54.644 | 8.185   | 2.9954   | -2.9696 | -45.0406  |
| 2752 | 0   | Extremo | -2.727 | 55.467  | -10.953 | -8.2733  | -3.9458 | -45.4815  |
| 2752 | 0.5 | Extremo | -2.727 | 61.36   | -10.953 | -8.2733  | 1.5307  | -74.6884  |
| 2752 | 1   | Extremo | -2.727 | 67.253  | -10.953 | -8.2733  | 7.0071  | -106.8417 |
| 2752 | 0   | Extremo | -2.718 | 55.421  | -10.064 | -5.8385  | -3.5311 | -45.4559  |
| 2752 | 0.5 | Extremo | -2.718 | 61.314  | -10.064 | -5.8385  | 1.5011  | -74.6396  |
| 2752 | 1   | Extremo | -2.718 | 67.206  | -10.064 | -5.8385  | 6.5333  | -106.7696 |
| 2754 | 0   | Extremo | -2.965 | -66.548 | 10.137  | 1.438    | 6.5405  | -105.5491 |
| 2754 | 0.5 | Extremo | -2.965 | -60.656 | 10.137  | 1.438    | 1.4718  | -73.748   |
| 2754 | 1   | Extremo | -2.965 | -54.763 | 10.137  | 1.438    | -3.5969 | -44.8933  |
| 2754 | 0   | Extremo | -2.902 | -66.543 | 10.541  | 4.1773   | 6.7225  | -105.597  |
| 2754 | 0.5 | Extremo | -2.902 | -60.65  | 10.541  | 4.1773   | 1.4518  | -73.7988  |
| 2754 | 1   | Extremo | -2.902 | -54.757 | 10.541  | 4.1773   | -3.8189 | -44.947   |
| 2755 | 0   | Extremo | -3.447 | 55.565  | -13.834 | -9.6362  | -4.9452 | -45.0169  |
| 2755 | 0.5 | Extremo | -3.447 | 61.458  | -13.834 | -9.6362  | 1.972   | -74.2727  |
| 2755 | 1   | Extremo | -3.447 | 67.351  | -13.834 | -9.6362  | 8.8892  | -106.4748 |
| 2755 | 0   | Extremo | -3.457 | 55.469  | -12.946 | -7.1908  | -4.5334 | -45.0124  |
| 2755 | 0.5 | Extremo | -3.457 | 61.361  | -12.946 | -7.1908  | 1.9398  | -74.2199  |
| 2755 | 1   | Extremo | -3.457 | 67.254  | -12.946 | -7.1908  | 8.413   | -106.3738 |
| 2757 | 0   | Extremo | -3.784 | -66.868 | 13.239  | 3.5551   | 8.5222  | -105.4185 |
| 2757 | 0.5 | Extremo | -3.784 | -60.975 | 13.239  | 3.5551   | 1.9028  | -73.4579  |
| 2757 | 1   | Extremo | -3.784 | -55.082 | 13.239  | 3.5551   | -4.7165 | -44.4436  |
| 2757 | 0   | Extremo | -3.699 | -66.835 | 13.575  | 6.1673   | 8.6698  | -105.4807 |
| 2757 | 0.5 | Extremo | -3.699 | -60.942 | 13.575  | 6.1673   | 1.8824  | -73.5365  |
| 2757 | 1   | Extremo | -3.699 | -55.049 | 13.575  | 6.1673   | -4.9049 | -44.5386  |
| 2758 | 0   | Extremo | -4.157 | 54.803  | -17.473 | -12.2454 | -6.209  | -45.4201  |
| 2758 | 0.5 | Extremo | -4.157 | 60.696  | -17.473 | -12.2454 | 2.5275  | -74.2947  |

|      |     |         |         |         |         |          |          |           |
|------|-----|---------|---------|---------|---------|----------|----------|-----------|
| 2758 | 1   | Extremo | -4.157  | 66.588  | -17.473 | -12.2454 | 11.2639  | -106.1156 |
| 2758 | 0   | Extremo | -4.203  | 54.683  | -16.603 | -9.74    | -5.8077  | -45.3781  |
| 2758 | 0.5 | Extremo | -4.203  | 60.575  | -16.603 | -9.74    | 2.4936   | -74.1927  |
| 2758 | 1   | Extremo | -4.203  | 66.468  | -16.603 | -9.74    | 10.7949  | -105.9535 |
| 2760 | 0   | Extremo | -4.65   | -65.705 | 17.182  | 7.3916   | 11.0357  | -104.6786 |
| 2760 | 0.5 | Extremo | -4.65   | -59.812 | 17.182  | 7.3916   | 2.4446   | -73.2994  |
| 2760 | 1   | Extremo | -4.65   | -53.919 | 17.182  | 7.3916   | -6.1465  | -44.8666  |
| 2760 | 0   | Extremo | -4.512  | -65.847 | 17.436  | 9.7554   | 11.1504  | -104.8811 |
| 2760 | 0.5 | Extremo | -4.512  | -59.955 | 17.436  | 9.7554   | 2.4324   | -73.4306  |
| 2760 | 1   | Extremo | -4.512  | -54.062 | 17.436  | 9.7554   | -6.2856  | -44.9264  |
| 2761 | 0   | Extremo | -5.639  | 56.246  | -22.132 | -11.7209 | -7.9231  | -46.4034  |
| 2761 | 0.5 | Extremo | -5.639  | 62.139  | -22.132 | -11.7209 | 3.1429   | -75.9997  |
| 2761 | 1   | Extremo | -5.639  | 68.032  | -22.132 | -11.7209 | 14.2088  | -108.5423 |
| 2761 | 0   | Extremo | -5.642  | 56.26   | -21.287 | -9.3619  | -7.5192  | -46.3165  |
| 2761 | 0.5 | Extremo | -5.642  | 62.153  | -21.287 | -9.3619  | 3.1245   | -75.9197  |
| 2761 | 1   | Extremo | -5.642  | 68.045  | -21.287 | -9.3619  | 13.7681  | -108.4692 |
| 2763 | 0   | Extremo | -6.2    | -67.293 | 22.295  | 7.1619   | 14.2688  | -107.2671 |
| 2763 | 0.5 | Extremo | -6.2    | -61.4   | 22.295  | 7.1619   | 3.1215   | -75.0939  |
| 2763 | 1   | Extremo | -6.2    | -55.507 | 22.295  | 7.1619   | -8.0258  | -45.8671  |
| 2763 | 0   | Extremo | -6.066  | -67.464 | 22.409  | 9.6472   | 14.267   | -107.4623 |
| 2763 | 0.5 | Extremo | -6.066  | -61.571 | 22.409  | 9.6472   | 3.0627   | -75.2037  |
| 2763 | 1   | Extremo | -6.066  | -55.678 | 22.409  | 9.6472   | -8.1416  | -45.8915  |
| 2764 | 0   | Extremo | -7.185  | 55.848  | -28.352 | -10.7167 | -10.1529 | -46.427   |
| 2764 | 0.5 | Extremo | -7.185  | 61.741  | -28.352 | -10.7167 | 4.023    | -75.8242  |
| 2764 | 1   | Extremo | -7.185  | 67.633  | -28.352 | -10.7167 | 18.199   | -108.1677 |
| 2764 | 0   | Extremo | -7.177  | 55.881  | -27.501 | -8.4703  | -9.7434  | -46.3797  |
| 2764 | 0.5 | Extremo | -7.177  | 61.773  | -27.501 | -8.4703  | 4.0072   | -75.7932  |
| 2764 | 1   | Extremo | -7.177  | 67.666  | -27.501 | -8.4703  | 17.7578  | -108.1531 |
| 2766 | 0   | Extremo | -7.865  | -66.976 | 28.997  | 6.6165   | 18.5294  | -107.0547 |
| 2766 | 0.5 | Extremo | -7.865  | -61.084 | 28.997  | 6.6165   | 4.031    | -75.0397  |
| 2766 | 1   | Extremo | -7.865  | -55.191 | 28.997  | 6.6165   | -10.4674 | -45.9711  |
| 2766 | 0   | Extremo | -7.717  | -67.062 | 28.982  | 9.0974   | 18.4311  | -107.1739 |
| 2766 | 0.5 | Extremo | -7.717  | -61.169 | 28.982  | 9.0974   | 3.9402   | -75.1163  |
| 2766 | 1   | Extremo | -7.717  | -55.276 | 28.982  | 9.0974   | -10.5508 | -46.0049  |
| 2767 | 0   | Extremo | -9.053  | 56.196  | -36.371 | -10.3468 | -13.0814 | -46.1636  |
| 2767 | 0.5 | Extremo | -9.053  | 62.088  | -36.371 | -10.3468 | 5.1042   | -75.7346  |
| 2767 | 1   | Extremo | -9.053  | 67.981  | -36.371 | -10.3468 | 23.2898  | -108.252  |
| 2767 | 0   | Extremo | -9.055  | 56.198  | -35.516 | -8.1421  | -12.6665 | -46.1448  |
| 2767 | 0.5 | Extremo | -9.055  | 62.09   | -35.516 | -8.1421  | 5.0916   | -75.7168  |
| 2767 | 1   | Extremo | -9.055  | 67.983  | -35.516 | -8.1421  | 22.8496  | -108.2351 |
| 2769 | 0   | Extremo | -9.954  | -67.5   | 37.643  | 6.6378   | 23.9632  | -107.5251 |
| 2769 | 0.5 | Extremo | -9.954  | -61.607 | 37.643  | 6.6378   | 5.1416   | -75.2485  |
| 2769 | 1   | Extremo | -9.954  | -55.714 | 37.643  | 6.6378   | -13.6799 | -45.9182  |
| 2769 | 0   | Extremo | -9.758  | -67.526 | 37.465  | 9.0868   | 23.7537  | -107.5767 |
| 2769 | 0.5 | Extremo | -9.758  | -61.633 | 37.465  | 9.0868   | 5.0213   | -75.287   |
| 2769 | 1   | Extremo | -9.758  | -55.74  | 37.465  | 9.0868   | -13.7111 | -45.9438  |
| 2770 | 0   | Extremo | -11.417 | 57.138  | -46.762 | -10.7043 | -16.9685 | -45.6332  |
| 2770 | 0.5 | Extremo | -11.417 | 63.031  | -46.762 | -10.7043 | 6.4127   | -75.6755  |
| 2770 | 1   | Extremo | -11.417 | 68.924  | -46.762 | -10.7043 | 29.794   | -108.6641 |
| 2770 | 0   | Extremo | -11.432 | 57.108  | -45.915 | -8.5091  | -16.5525 | -45.6313  |
| 2770 | 0.5 | Extremo | -11.432 | 63      | -45.915 | -8.5091  | 6.4051   | -75.6584  |
| 2770 | 1   | Extremo | -11.432 | 68.893  | -45.915 | -8.5091  | 29.3627  | -108.6318 |
| 2772 | 0   | Extremo | -12.626 | -68.826 | 48.904  | 7.1408   | 30.9426  | -108.5804 |
| 2772 | 0.5 | Extremo | -12.626 | -62.934 | 48.904  | 7.1408   | 6.4904   | -75.6404  |
| 2772 | 1   | Extremo | -12.626 | -57.041 | 48.904  | 7.1408   | -17.9619 | -45.6469  |
| 2772 | 0   | Extremo | -12.364 | -68.803 | 48.497  | 9.5587   | 30.5875  | -108.5775 |
| 2772 | 0.5 | Extremo | -12.364 | -62.91  | 48.497  | 9.5587   | 6.3389   | -75.6492  |
| 2772 | 1   | Extremo | -12.364 | -57.018 | 48.497  | 9.5587   | -17      |           |



|      |     |         |         |         |          |          |           |           |
|------|-----|---------|---------|---------|----------|----------|-----------|-----------|
| 2776 | 1   | Extremo | -16.785 | 67.599  | -77.615  | -17.7154 | 48.4029   | -107.4306 |
| 2776 | 0   | Extremo | -16.861 | 55.751  | -76.836  | -15.4207 | -28.8165  | -45.7375  |
| 2776 | 0.5 | Extremo | -16.861 | 61.644  | -76.836  | -15.4207 | 9.6014    | -75.0863  |
| 2776 | 1   | Extremo | -16.861 | 67.537  | -76.836  | -15.4207 | 48.0194   | -107.3814 |
| 2778 | 0   | Extremo | -18.941 | -67.395 | 82.704   | 15.6534  | 51.1665   | -107.2547 |
| 2778 | 0.5 | Extremo | -18.941 | -61.502 | 82.704   | 15.6534  | 9.8146    | -75.0303  |
| 2778 | 1   | Extremo | -18.941 | -55.61  | 82.704   | 15.6534  | -31.5372  | -45.7523  |
| 2778 | 0   | Extremo | -18.494 | -67.466 | 81.573   | 17.8909  | 50.392    | -107.3104 |
| 2778 | 0.5 | Extremo | -18.494 | -61.573 | 81.573   | 17.8909  | 9.6056    | -75.0506  |
| 2778 | 1   | Extremo | -18.494 | -55.68  | 81.573   | 17.8909  | -31.1809  | -45.7373  |
| 2779 | 0   | Extremo | -21.25  | 54.959  | -99.664  | -14.5861 | -39.0407  | -47.7356  |
| 2779 | 0.5 | Extremo | -21.25  | 60.852  | -99.664  | -14.5861 | 10.7912   | -76.6884  |
| 2779 | 1   | Extremo | -21.25  | 66.745  | -99.664  | -14.5861 | 60.623    | -108.5875 |
| 2779 | 0   | Extremo | -21.293 | 55.033  | -98.946  | -12.3221 | -38.6477  | -47.7525  |
| 2779 | 0.5 | Extremo | -21.293 | 60.926  | -98.946  | -12.3221 | 10.8253   | -76.7421  |
| 2779 | 1   | Extremo | -21.293 | 66.818  | -98.946  | -12.3221 | 60.2984   | -108.6781 |
| 2781 | 0   | Extremo | -24.012 | -65.996 | 107.278  | 11.3924  | 64.8597   | -107.9312 |
| 2781 | 0.5 | Extremo | -24.012 | -60.104 | 107.278  | 11.3924  | 11.2207   | -76.4062  |
| 2781 | 1   | Extremo | -24.012 | -54.211 | 107.278  | 11.3924  | -42.4183  | -47.8276  |
| 2781 | 0   | Extremo | -23.49  | -66.042 | 105.584  | 13.8014  | 63.7365   | -107.8986 |
| 2781 | 0.5 | Extremo | -23.49  | -60.15  | 105.584  | 13.8014  | 10.9443   | -76.3506  |
| 2781 | 1   | Extremo | -23.49  | -54.257 | 105.584  | 13.8014  | -41.8478  | -47.7489  |
| 2782 | 0   | Extremo | -24.169 | 56.107  | -126.984 | -11.6667 | -52.1473  | -48.0833  |
| 2782 | 0.5 | Extremo | -24.169 | 62      | -126.984 | -11.6667 | 11.3448   | -77.6099  |
| 2782 | 1   | Extremo | -24.169 | 67.892  | -126.984 | -11.6667 | 74.8368   | -110.0829 |
| 2782 | 0   | Extremo | -24.217 | 56.229  | -126.315 | -9.3539  | -51.7608  | -48.1701  |
| 2782 | 0.5 | Extremo | -24.217 | 62.121  | -126.315 | -9.3539  | 11.3965   | -77.7576  |
| 2782 | 1   | Extremo | -24.217 | 68.014  | -126.315 | -9.3539  | 74.5538   | -110.2916 |
| 2784 | 0   | Extremo | -27.605 | -67.739 | 137.895  | 7.9468   | 80.8667   | -110.3356 |
| 2784 | 0.5 | Extremo | -27.605 | -61.846 | 137.895  | 7.9468   | 11.9193   | -77.9392  |
| 2784 | 1   | Extremo | -27.605 | -55.954 | 137.895  | 7.9468   | -57.0282  | -48.4893  |
| 2784 | 0   | Extremo | -27.012 | -67.65  | 135.538  | 10.5129  | 79.3768   | -110.1009 |
| 2784 | 0.5 | Extremo | -27.012 | -61.757 | 135.538  | 10.5129  | 11.6078   | -77.7493  |
| 2784 | 1   | Extremo | -27.012 | -55.864 | 135.538  | 10.5129  | -56.1612  | -48.344   |
| 2785 | 0   | Extremo | -21.966 | 60.436  | -155.58  | -8.6727  | -68.4646  | -48.6755  |
| 2785 | 0.5 | Extremo | -21.966 | 66.328  | -155.58  | -8.6727  | 9.3252    | -80.3664  |
| 2785 | 1   | Extremo | -21.966 | 72.221  | -155.58  | -8.6727  | 87.115    | -115.0038 |
| 2785 | 0   | Extremo | -22.097 | 60.589  | -155.012 | -6.1927  | -68.1091  | -48.8395  |
| 2785 | 0.5 | Extremo | -22.097 | 66.482  | -155.012 | -6.1927  | 9.3966    | -80.6073  |
| 2785 | 1   | Extremo | -22.097 | 72.375  | -155.012 | -6.1927  | 86.9024   | -115.3214 |
| 2787 | 0   | Extremo | -26.191 | -73.032 | 170.835  | 3.8264   | 95.3769   | -117.1019 |
| 2787 | 0.5 | Extremo | -26.191 | -67.139 | 170.835  | 3.8264   | 9.9594    | -82.0593  |
| 2787 | 1   | Extremo | -26.191 | -61.246 | 170.835  | 3.8264   | -75.458   | -49.9631  |
| 2787 | 0   | Extremo | -25.555 | -72.744 | 167.726  | 6.6625   | 93.5382   | -116.5636 |
| 2787 | 0.5 | Extremo | -25.555 | -66.851 | 167.726  | 6.6625   | 9.675     | -81.665   |
| 2787 | 1   | Extremo | -25.555 | -60.958 | 167.726  | 6.6625   | -74.1882  | -49.7128  |
| 2788 | 0   | Extremo | -3.415  | 68.565  | -172.06  | -4.9514  | -85.5933  | -47.7488  |
| 2788 | 0.5 | Extremo | -3.415  | 74.457  | -172.06  | -4.9514  | 0.4366    | -83.5043  |
| 2788 | 1   | Extremo | -3.415  | 80.35   | -172.06  | -4.9514  | 86.4665   | -122.2062 |
| 2788 | 0   | Extremo | -3.841  | 68.76   | -171.766 | -2.1775  | -85.3431  | -48.0067  |
| 2788 | 0.5 | Extremo | -3.841  | 74.653  | -171.766 | -2.1775  | 0.5399    | -83.8601  |
| 2788 | 1   | Extremo | -3.841  | 80.546  | -171.766 | -2.1775  | 86.4229   | -122.6598 |
| 2790 | 0   | Extremo | -7.505  | -83.435 | 192.205  | -2.3461  | 96.9436   | -127.5658 |
| 2790 | 0.5 | Extremo | -7.505  | -77.543 | 192.205  | -2.3461  | 0.8412    | -87.3213  |
| 2790 | 1   | Extremo | -7.505  | -71.65  | 192.205  | -2.3461  | -95.2612  | -50.0231  |
| 2790 | 0   | Extremo | -7      | -82.831 | 188.444  | 0.928    | 94.9574   | -126.6219 |
| 2790 | 0.5 | Extremo | -7      | -76.938 | 188.444  | 0.928    | 0.7353    | -86.6797  |
| 2790 | 1   | Extremo | -7      | -71.045 | 188.444  | 0.928    | -93.4868  | -49.6839  |
| 2791 | 0   | Extremo | 13.013  | 71.605  | -153.827 | -5.065   | -100.3823 | -44.0174  |
| 2791 | 0.5 | Extremo | 13.013  | 77.497  | -153.827 | -5.065   | -23.469   | -81.2929  |
| 2791 | 1   | Extremo | 13.013  | 83.39   | -153.827 | -5.065   | 53.4444   | -121.5148 |
| 2791 | 0   | Extremo | 12.036  | 71.928  | -154.162 | -1.8221  | -100.3553 | -44.3702  |
| 2791 | 0.5 | Extremo | 12.036  | 77.82   | -154.162 | -1.8221  | -23.2743  | -81.8072  |
| 2791 | 1   | Extremo | 12.036  | 83.713  | -154.162 | -1.8221  | 53.8067   | -122.1905 |
| 2793 | 0   | Extremo | 10.471  | -88.394 | 176.261  | -4.7637  | 63.5042   | -129.3856 |
| 2793 | 0.5 | Extremo | 10.471  | -82.502 | 176.261  | -4.7637  | -24.6264  | -86.6617  |
| 2793 | 1   | Extremo | 10.471  | -76.609 | 176.261  | -4.7637  | -112.757  | -46.8841  |
| 2793 | 0   | Extremo | 11.183  | -87.543 | 172.322  | -0.9791  | 61.9133   | -128.1768 |
| 2793 | 0.5 | Extremo | 11.183  | -81.65  | 172.322  | -0.9791  | -24.2475  | -85.8786  |
| 2793 | 1   | Extremo | 11.183  | -75.757 | 172.322  | -0.9791  | -110.4082 | -46.5268  |
| 2794 | 0   | Extremo | -16.523 | 72.216  | -152.08  | -0.2292  | -102.4595 | -42.1938  |
| 2794 | 0.5 | Extremo | -16.523 | 78.109  | -152.08  | -0.2292  | -26.4194  | -79.7752  |

|      |     |         |         |         |          |          |           |           |
|------|-----|---------|---------|---------|----------|----------|-----------|-----------|
| 2794 | 1   | Extremo | -16.523 | 84.002  | -152.08  | -0.2292  | 49.6206   | -120.303  |
| 2794 | 0   | Extremo | -16.538 | 73.065  | -152.889 | 3.5159   | -102.5897 | -42.5364  |
| 2794 | 0.5 | Extremo | -16.538 | 78.958  | -152.889 | 3.5159   | -26.145   | -80.542   |
| 2794 | 1   | Extremo | -16.538 | 84.85   | -152.889 | 3.5159   | 50.2996   | -121.4939 |
| 2796 | 0   | Extremo | -16.63  | -91.799 | 175.388  | -16.1562 | 59.9602   | -130.9582 |
| 2796 | 0.5 | Extremo | -16.63  | -85.907 | 175.388  | -16.1562 | -27.7336  | -86.5317  |
| 2796 | 1   | Extremo | -16.63  | -80.014 | 175.388  | -16.1562 | -115.4274 | -45.0517  |
| 2796 | 0   | Extremo | -16.299 | -90.356 | 170.953  | -11.6675 | 58.0429   | -129.1892 |
| 2796 | 0.5 | Extremo | -16.299 | -84.464 | 170.953  | -11.6675 | -27.4338  | -85.4842  |
| 2796 | 1   | Extremo | -16.299 | -78.571 | 170.953  | -11.6675 | -112.9105 | -44.7256  |
| 2797 | 0   | Extremo | -0.74   | 73.536  | -177.708 | -4.7612  | -89.335   | -46.9285  |
| 2797 | 0.5 | Extremo | -0.74   | 79.429  | -177.708 | -4.7612  | -0.4811   | -85.1696  |
| 2797 | 1   | Extremo | -0.74   | 85.321  | -177.708 | -4.7612  | 88.3728   | -126.3571 |
| 2797 | 0   | Extremo | -0.507  | 73.929  | -178.376 | -0.435   | -89.4726  | -47.2765  |
| 2797 | 0.5 | Extremo | -0.507  | 79.822  | -178.376 | -0.435   | -0.2844   | -85.7142  |
| 2797 | 1   | Extremo | -0.507  | 85.715  | -178.376 | -0.435   | 88.9037   | -127.0983 |
| 2799 | 0   | Extremo | 2.551   | -90.495 | 200.606  | -13.9388 | 100.3325  | -134.685  |
| 2799 | 0.5 | Extremo | 2.551   | -84.602 | 200.606  | -13.9388 | 0.0293    | -90.9107  |
| 2799 | 1   | Extremo | 2.551   | -78.709 | 200.606  | -13.9388 | -100.2738 | -50.0829  |
| 2799 | 0   | Extremo | 2.223   | -89.628 | 195.861  | -8.7985  | 97.7732   | -133.354  |
| 2799 | 0.5 | Extremo | 2.223   | -83.735 | 195.861  | -8.7985  | -0.1574   | -90.0132  |
| 2799 | 1   | Extremo | 2.223   | -77.842 | 195.861  | -8.7985  | -98.0879  | -49.6189  |
| 2800 | 0   | Extremo | 19.6    | 63.402  | -165.481 | -1.1674  | -73.3756  | -49.1927  |
| 2800 | 0.5 | Extremo | 19.6    | 69.295  | -165.481 | -1.1674  | 9.3649    | -82.367   |
| 2800 | 1   | Extremo | 19.6    | 75.188  | -165.481 | -1.1674  | 92.1053   | -118.4876 |
| 2800 | 0   | Extremo | 19.756  | 63.593  | -165.977 | 3.5782   | -73.4752  | -49.4516  |
| 2800 | 0.5 | Extremo | 19.756  | 69.485  | -165.977 | 3.5782   | 9.5133    | -82.7211  |
| 2800 | 1   | Extremo | 19.756  | 75.378  | -165.977 | 3.5782   | 92.5017   | -118.9371 |
| 2802 | 0   | Extremo | 23.567  | -76.718 | 184.086  | -21.196  | 102.1973  | -122.2838 |
| 2802 | 0.5 | Extremo | 23.567  | -70.826 | 184.086  | -21.196  | 10.1544   | -85.3978  |
| 2802 | 1   | Extremo | 23.567  | -64.933 | 184.086  | -21.196  | -81.8886  | -51.4581  |
| 2802 | 0   | Extremo | 22.9    | -76.3   | 179.899  | -15.421  | 99.7583   | -121.4688 |
| 2802 | 0.5 | Extremo | 22.9    | -70.407 | 179.899  | -15.421  | 9.8088    | -84.7922  |
| 2802 | 1   | Extremo | 22.9    | -64.514 | 179.899  | -15.421  | -80.1406  | -51.0619  |
| 2803 | 0   | Extremo | 22.243  | 57.698  | -139.415 | 2.5686   | -58.0873  | -48.5895  |
| 2803 | 0.5 | Extremo | 22.243  | 63.591  | -139.415 | 2.5686   | 11.6201   | -78.9118  |
| 2803 | 1   | Extremo | 22.243  | 69.484  | -139.415 | 2.5686   | 81.3276   | -112.1804 |
| 2803 | 0   | Extremo | 22.348  | 57.785  | -139.79  | 7.6031   | -58.1562  | -48.79    |
| 2803 | 0.5 | Extremo | 22.348  | 63.678  | -139.79  | 7.6031   | 11.7388   | -79.1559  |
| 2803 | 1   | Extremo | 22.348  | 69.571  | -139.79  | 7.6031   | 81.6339   | -112.4682 |
| 2805 | 0   | Extremo | 25.434  | -69.785 | 153.968  | -27.1741 | 89.3538   | -113.776  |
| 2805 | 0.5 | Extremo | 25.434  | -63.893 | 153.968  | -27.1741 | 12.3699   | -80.3565  |
| 2805 | 1   | Extremo | 25.434  | -58     | 153.968  | -27.1741 | -64.614   | -49.8834  |
| 2805 | 0   | Extremo | 24.784  | -69.527 | 150.553  | -20.953  | 87.283    | -113.2186 |
| 2805 | 0.5 | Extremo | 24.784  | -63.634 | 150.553  | -20.953  | 12.0064   | -79.9283  |
| 2805 | 1   | Extremo | 24.784  | -57.741 | 150.553  | -20.953  | -63.2702  | -49.5844  |
| 2806 | 0   | Extremo | 19.953  | 56.135  | -113.702 | 5.5359   | -46.1612  | -47.7137  |
| 2806 | 0.5 | Extremo | 19.953  | 62.028  | -113.702 | 5.5359   | 10.6898   | -77.2544  |
| 2806 | 1   | Extremo | 19.953  | 67.921  | -113.702 | 5.5359   | 67.5407   | -109.7415 |
| 2806 | 0   | Extremo | 20.033  | 56.213  | -113.99  | 10.822   | -46.2063  | -47.9011  |
| 2806 | 0.5 | Extremo | 20.033  | 62.106  | -113.99  | 10.822   | 10.7887   | -77.481   |
| 2806 | 1   | Extremo | 20.033  | 67.999  | -113.99  | 10.822   | 67.7838   | -110.0073 |
| 2808 | 0   | Extremo | 22.461  | -68.181 | 125.226  | -31.7198 | 73.8998   | -110.9861 |
| 2808 | 0.5 | Extremo | 22.461  | -62.289 | 125.226  | -31.7198 | 11.2869   | -78.3686  |
| 2808 |     |         |         |         |          |          |           |           |



|      |     |         |        |         |         |          |          |           |
|------|-----|---------|--------|---------|---------|----------|----------|-----------|
| 2812 | 1   | Extremo | 12.177 | 69.76   | -77.606 | 3.5536   | 47.1121  | -108.8912 |
| 2812 | 0   | Extremo | 12.221 | 58.054  | -77.78  | 9.1713   | -30.5209 | -45.1105  |
| 2812 | 0.5 | Extremo | 12.221 | 63.947  | -77.78  | 9.1713   | 8.3692   | -75.6108  |
| 2812 | 1   | Extremo | 12.221 | 69.84   | -77.78  | 9.1713   | 47.2592  | -109.0575 |
| 2814 | 0   | Extremo | 13.764 | -70.839 | 85.124  | -31.1985 | 51.1681  | -110.7735 |
| 2814 | 0.5 | Extremo | 13.764 | -64.947 | 85.124  | -31.1985 | 8.6064   | -76.827   |
| 2814 | 1   | Extremo | 13.764 | -59.054 | 85.124  | -31.1985 | -33.9554 | -45.8268  |
| 2814 | 0   | Extremo | 13.424 | -70.695 | 83.377  | -24.2578 | 50.0617  | -110.4331 |
| 2814 | 0.5 | Extremo | 13.424 | -64.802 | 83.377  | -24.2578 | 8.3733   | -76.559   |
| 2814 | 1   | Extremo | 13.424 | -58.909 | 83.377  | -24.2578 | -33.3152 | -45.6313  |
| 2815 | 0   | Extremo | 10.044 | 57.488  | -65.756 | 2.0023   | -25.3859 | -45.949   |
| 2815 | 0.5 | Extremo | 10.044 | 63.381  | -65.756 | 2.0023   | 7.4919   | -76.1662  |
| 2815 | 1   | Extremo | 10.044 | 69.274  | -65.756 | 2.0023   | 40.3697  | -109.3299 |
| 2815 | 0   | Extremo | 10.074 | 57.5    | -65.897 | 7.6899   | -25.4149 | -46.0045  |
| 2815 | 0.5 | Extremo | 10.074 | 63.393  | -65.897 | 7.6899   | 7.5337   | -76.2279  |
| 2815 | 1   | Extremo | 10.074 | 69.286  | -65.897 | 7.6899   | 40.4823  | -109.3976 |
| 2817 | 0   | Extremo | 11.206 | -69.584 | 72.029  | -30.4113 | 43.7544  | -110.3447 |
| 2817 | 0.5 | Extremo | 11.206 | -63.691 | 72.029  | -30.4113 | 7.74     | -77.026   |
| 2817 | 1   | Extremo | 11.206 | -57.798 | 72.029  | -30.4113 | -28.2744 | -46.6536  |
| 2817 | 0   | Extremo | 10.942 | -69.458 | 70.593  | -23.238  | 42.845   | -110.0537 |
| 2817 | 0.5 | Extremo | 10.942 | -63.565 | 70.593  | -23.238  | 7.5487   | -76.7978  |
| 2817 | 1   | Extremo | 10.942 | -57.673 | 70.593  | -23.238  | -27.7476 | -46.4883  |
| 2818 | 0   | Extremo | 8.025  | 57.325  | -56.551 | 2.0054   | -21.8927 | -46.3711  |
| 2818 | 0.5 | Extremo | 8.025  | 63.218  | -56.551 | 2.0054   | 6.3826   | -76.5068  |
| 2818 | 1   | Extremo | 8.025  | 69.111  | -56.551 | 2.0054   | 34.6579  | -109.5889 |
| 2818 | 0   | Extremo | 8.045  | 57.269  | -56.671 | 7.7496   | -21.9215 | -46.4258  |
| 2818 | 0.5 | Extremo | 8.045  | 63.161  | -56.671 | 7.7496   | 6.4138   | -76.5332  |
| 2818 | 1   | Extremo | 8.045  | 69.054  | -56.671 | 7.7496   | 34.7491  | -109.5871 |
| 2820 | 0   | Extremo | 8.788  | -69.174 | 62.021  | -31.1937 | 37.6011  | -110.281  |
| 2820 | 0.5 | Extremo | 8.788  | -63.282 | 62.021  | -31.1937 | 6.5905   | -77.167   |
| 2820 | 1   | Extremo | 8.788  | -57.389 | 62.021  | -31.1937 | -24.4202 | -46.9994  |
| 2820 | 0   | Extremo | 8.589  | -68.987 | 60.815  | -23.8204 | 36.8409  | -109.9265 |
| 2820 | 0.5 | Extremo | 8.589  | -63.095 | 60.815  | -23.8204 | 6.4332   | -76.906   |
| 2820 | 1   | Extremo | 8.589  | -57.202 | 60.815  | -23.8204 | -23.9745 | -46.832   |
| 2821 | 0   | Extremo | 6.674  | 58.16   | -49.447 | 2.2572   | -19.6778 | -46.1263  |
| 2821 | 0.5 | Extremo | 6.674  | 64.052  | -49.447 | 2.2572   | 5.0457   | -76.6794  |
| 2821 | 1   | Extremo | 6.674  | 69.945  | -49.447 | 2.2572   | 29.7693  | -110.1788 |
| 2821 | 0   | Extremo | 6.684  | 58.017  | -49.553 | 8.1006   | -19.7035 | -46.2375  |
| 2821 | 0.5 | Extremo | 6.684  | 63.909  | -49.553 | 8.1006   | 5.0728   | -76.7189  |
| 2821 | 1   | Extremo | 6.684  | 69.802  | -49.553 | 8.1006   | 29.849   | -110.1468 |
| 2823 | 0   | Extremo | 7.123  | -70.302 | 54.498  | -32.2876 | 32.4735  | -111.3246 |
| 2823 | 0.5 | Extremo | 7.123  | -64.409 | 54.498  | -32.2876 | 5.2246   | -77.6469  |
| 2823 | 1   | Extremo | 7.123  | -58.516 | 54.498  | -32.2876 | -22.0243 | -46.9155  |
| 2823 | 0   | Extremo | 6.977  | -69.973 | 53.46   | -24.7178 | 31.8241  | -110.8181 |
| 2823 | 0.5 | Extremo | 6.977  | -64.081 | 53.46   | -24.7178 | 5.094    | -77.3046  |
| 2823 | 1   | Extremo | 6.977  | -58.188 | 53.46   | -24.7178 | -21.6361 | -46.7374  |
| 2824 | 0   | Extremo | 6.019  | 59.22   | -43.305 | 1.3751   | -18.4079 | -45.1038  |
| 2824 | 0.5 | Extremo | 6.019  | 65.113  | -43.305 | 1.3751   | 3.2447   | -76.187   |
| 2824 | 1   | Extremo | 6.019  | 71.005  | -43.305 | 1.3751   | 24.8972  | -110.2165 |
| 2824 | 0   | Extremo | 6.01   | 59.103  | -43.41  | 7.4951   | -18.4289 | -45.3185  |
| 2824 | 0.5 | Extremo | 6.01   | 64.996  | -43.41  | 7.4951   | 3.2762   | -76.3432  |
| 2824 | 1   | Extremo | 6.01   | 70.889  | -43.41  | 7.4951   | 24.9812  | -110.3142 |
| 2826 | 0   | Extremo | 6.322  | -72.61  | 48.166  | -32.3743 | 27.4576  | -112.673  |
| 2826 | 0.5 | Extremo | 6.322  | -66.717 | 48.166  | -32.3743 | 3.3745   | -77.8411  |
| 2826 | 1   | Extremo | 6.322  | -60.825 | 48.166  | -32.3743 | -20.7086 | -45.9556  |
| 2826 | 0   | Extremo | 6.226  | -72.017 | 47.247  | -24.6899 | 26.8873  | -111.9406 |
| 2826 | 0.5 | Extremo | 6.226  | -66.124 | 47.247  | -24.6899 | 3.2637   | -77.4053  |
| 2826 | 1   | Extremo | 6.226  | -60.231 | 47.247  | -24.6899 | -20.3598 | -45.8163  |
| 2827 | 0   | Extremo | 3.744  | 54.972  | -37.67  | -2.0534  | -17.6934 | -45.33    |
| 2827 | 0.5 | Extremo | 3.744  | 60.865  | -37.67  | -2.0534  | 1.1415   | -74.2894  |
| 2827 | 1   | Extremo | 3.744  | 66.758  | -37.67  | -2.0534  | 19.9764  | -106.1951 |
| 2827 | 0   | Extremo | 3.719  | 55.215  | -37.801 | 4.455    | -17.7117 | -45.4293  |
| 2827 | 0.5 | Extremo | 3.719  | 61.108  | -37.801 | 4.455    | 1.1886   | -74.5099  |
| 2827 | 1   | Extremo | 3.719  | 67      | -37.801 | 4.455    | 20.0889  | -106.5368 |
| 2829 | 0   | Extremo | 4.021  | -68.302 | 42.234  | -28.2831 | 22.2218  | -108.3505 |
| 2829 | 0.5 | Extremo | 4.021  | -62.409 | 42.234  | -28.2831 | 1.1048   | -75.6727  |
| 2829 | 1   | Extremo | 4.021  | -56.516 | 42.234  | -28.2831 | -20.0122 | -45.9413  |
| 2829 | 0   | Extremo | 3.994  | -67.76  | 41.378  | -20.8854 | 21.6913  | -107.602  |
| 2829 | 0.5 | Extremo | 3.994  | -61.867 | 41.378  | -20.8854 | 1.002    | -75.1951  |
| 2829 | 1   | Extremo | 3.994  | -55.975 | 41.378  | -20.8854 | -19.6872 | -45.7346  |
| 2830 | 0   | Extremo | 2.874  | 54.707  | -35.622 | -1.0649  | -15.6939 | -46.3112  |
| 2830 | 0.5 | Extremo | 2.874  | 60.6    | -35.622 | -1.0649  | 2.1169   | -75.138   |

|      |     |         |       |         |         |          |          |           |
|------|-----|---------|-------|---------|---------|----------|----------|-----------|
| 2830 | 1   | Extremo | 2.874 | 66.493  | -35.622 | -1.0649  | 19.9277  | -106.9112 |
| 2830 | 0   | Extremo | 2.845 | 54.85   | -35.767 | 5.2799   | -15.7319 | -46.278   |
| 2830 | 0.5 | Extremo | 2.845 | 60.743  | -35.767 | 5.2799   | 2.1515   | -75.1762  |
| 2830 | 1   | Extremo | 2.845 | 66.635  | -35.767 | 5.2799   | 20.0349  | -107.0207 |
| 2832 | 0   | Extremo | 3.215 | -66.128 | 39.991  | -30.7931 | 22.2156  | -107.0343 |
| 2832 | 0.5 | Extremo | 3.215 | -60.235 | 39.991  | -30.7931 | 2.2202   | -75.4435  |
| 2832 | 1   | Extremo | 3.215 | -54.342 | 39.991  | -30.7931 | -17.7752 | -46.7991  |
| 2832 | 0   | Extremo | 3.223 | -66.07  | 39.15   | -22.7016 | 21.6919  | -106.6672 |
| 2832 | 0.5 | Extremo | 3.223 | -60.177 | 39.15   | -22.7016 | 2.1168   | -75.1054  |
| 2832 | 1   | Extremo | 3.223 | -54.285 | 39.15   | -22.7016 | -17.4583 | -46.4899  |
| 2833 | 0   | Extremo | 3.33  | 55.825  | -32.785 | -0.4492  | -14.0773 | -45.9309  |
| 2833 | 0.5 | Extremo | 3.33  | 61.718  | -32.785 | -0.4492  | 2.3151   | -75.3165  |
| 2833 | 1   | Extremo | 3.33  | 67.61   | -32.785 | -0.4492  | 18.7075  | -107.6485 |
| 2833 | 0   | Extremo | 3.288 | 55.799  | -32.964 | 5.7982   | -14.1342 | -45.9148  |
| 2833 | 0.5 | Extremo | 3.288 | 61.692  | -32.964 | 5.7982   | 2.3477   | -75.2877  |
| 2833 | 1   | Extremo | 3.288 | 67.585  | -32.964 | 5.7982   | 18.8296  | -107.6071 |
| 2835 | 0   | Extremo | 3.566 | -67.291 | 36.886  | -32.0788 | 20.911   | -107.6439 |
| 2835 | 0.5 | Extremo | 3.566 | -61.398 | 36.886  | -32.0788 | 2.4677   | -75.4716  |
| 2835 | 1   | Extremo | 3.566 | -55.505 | 36.886  | -32.0788 | -15.9255 | -46.2457  |
| 2835 | 0   | Extremo | 3.612 | -67.164 | 36.029  | -23.5825 | 20.3708  | -107.3228 |
| 2835 | 0.5 | Extremo | 3.612 | -61.271 | 36.029  | -23.5825 | 2.3563   | -75.2142  |
| 2835 | 1   | Extremo | 3.612 | -55.378 | 36.029  | -23.5825 | -15.6581 | -46.0519  |
| 2836 | 0   | Extremo | 3.798 | 57.621  | -29.368 | -1.2384  | -12.8343 | -44.8399  |
| 2836 | 0.5 | Extremo | 3.798 | 63.514  | -29.368 | -1.2384  | 1.85     | -75.1238  |
| 2836 | 1   | Extremo | 3.798 | 69.407  | -29.368 | -1.2384  | 16.5342  | -108.354  |
| 2836 | 0   | Extremo | 3.739 | 57.399  | -29.597 | 5.0358   | -12.9088 | -44.8792  |
| 2836 | 0.5 | Extremo | 3.739 | 63.292  | -29.597 | 5.0358   | 1.8897   | -75.0522  |
| 2836 | 1   | Extremo | 3.739 | 69.185  | -29.597 | 5.0358   | 16.6881  | -108.1715 |
| 2838 | 0   | Extremo | 3.871 | -69.859 | 33.362  | -31.7585 | 18.7141  | -109.206  |
| 2838 | 0.5 | Extremo | 3.871 | -63.967 | 33.362  | -31.7585 | 2.0331   | -75.7494  |
| 2838 | 1   | Extremo | 3.871 | -58.074 | 33.362  | -31.7585 | -14.6478 | -45.2393  |
| 2838 | 0   | Extremo | 3.963 | -69.506 | 32.453  | -23.095  | 18.1314  | -108.7718 |
| 2838 | 0.5 | Extremo | 3.963 | -63.613 | 32.453  | -23.095  | 1.905    | -75.4922  |
| 2838 | 1   | Extremo | 3.963 | -57.72  | 32.453  | -23.095  | -14.3215 | -45.1589  |
| 2839 | 0   | Extremo | 4.399 | 58.559  | -25.242 | -5.0594  | -11.9093 | -43.1607  |
| 2839 | 0.5 | Extremo | 4.399 | 64.452  | -25.242 | -5.0594  | 0.7118   | -73.9134  |
| 2839 | 1   | Extremo | 4.399 | 70.345  | -25.242 | -5.0594  | 13.3328  | -107.6125 |
| 2839 | 0   | Extremo | 4.315 | 58.259  | -25.54  | 1.4433   | -12.0025 | -43.2442  |
| 2839 | 0.5 | Extremo | 4.315 | 64.151  | -25.54  | 1.4433   | 0.7678   | -73.8467  |
| 2839 | 1   | Extremo | 4.315 | 70.044  | -25.54  | 1.4433   | 13.538   | -107.3955 |
| 2841 | 0   | Extremo | 4.398 | -72.146 | 29.265  | -27.8761 | 15.5359  | -109.3615 |
| 2841 | 0.5 | Extremo | 4.398 | -66.253 | 29.265  | -27.8761 | 0.9032   | -74.7617  |
| 2841 | 1   | Extremo | 4.398 | -60.36  | 29.265  | -27.8761 | -13.7296 | -43.1083  |
| 2841 | 0   | Extremo | 4.553 | -71.532 | 28.26   | -19.3687 | 14.8766  | -108.8549 |
| 2841 | 0.5 | Extremo | 4.553 | -65.639 | 28.26   | -19.3687 | 0.7466   | -74.5621  |
| 2841 | 1   | Extremo | 4.553 | -59.746 | 28.26   | -19.3687 | -13.3833 | -43.2157  |
| 2842 | 0   | Extremo | 3.277 | 53.206  | -20.467 | -12.1202 | -11.1311 | -45.1908  |
| 2842 | 0.5 | Extremo | 3.277 | 59.099  | -20.467 | -12.1202 | -0.8975  | -73.2671  |
| 2842 | 1   | Extremo | 3.277 | 64.992  | -20.467 | -12.1202 | 9.3362   | -104.2897 |
| 2842 | 0   | Extremo | 3.169 | 53.167  | -20.868 | -5.3776  | -11.2481 | -44.9078  |
| 2842 | 0.5 | Extremo | 3.169 | 59.06   | -20.868 | -5.3776  | -0.8139  | -72.9644  |
| 2842 | 1   | Extremo | 3.169 | 64.952  | -20.868 | -5.3776  | 9.6204   | -103.9674 |
| 2844 | 0   | Extremo | 3.281 | -65.068 | 24.421  | -17.6182 | 11.4233  | -103.4332 |
| 2844 | 0.5 | Extremo | 3.281 | -59.175 | 24.421  | -17.6182 | -0.787   | -72.3726  |
| 2844 | 1   | Extremo | 3.281 | -53.282 | 24.421  | -17.6182 | -12.9973 | -44.2583  |
| 2844 | 0   | Extremo | 3.532 | -64.718 | 23.248  | -9.9191  | 10.632   | -103.1701 |
| 2844 |     |         |       |         |         |          |          |           |



|      |     |         |       |         |         |          |         |           |
|------|-----|---------|-------|---------|---------|----------|---------|-----------|
| 2848 | 1   | Extremo | 3.705 | 64.297  | -14.832 | -4.325   | 8.0588  | -105.394  |
| 2848 | 0   | Extremo | 3.545 | 51.797  | -15.476 | 0.2387   | -6.9975 | -45.9844  |
| 2848 | 0.5 | Extremo | 3.545 | 57.69   | -15.476 | 0.2387   | 0.7404  | -73.356   |
| 2848 | 1   | Extremo | 3.545 | 63.582  | -15.476 | 0.2387   | 8.4784  | -103.6739 |
| 2850 | 0   | Extremo | 3.584 | -60.917 | 18.888  | -23.4019 | 10.5784 | -98.6853  |
| 2850 | 0.5 | Extremo | 3.584 | -55.025 | 18.888  | -23.4019 | 1.1344  | -69.6999  |
| 2850 | 1   | Extremo | 3.584 | -49.132 | 18.888  | -23.4019 | -8.3097 | -43.6608  |
| 2850 | 0   | Extremo | 4.088 | -61.329 | 16.993  | -15.3686 | 9.2284  | -99.7914  |
| 2850 | 0.5 | Extremo | 4.088 | -55.437 | 16.993  | -15.3686 | 0.7321  | -70.5998  |
| 2850 | 1   | Extremo | 4.088 | -49.544 | 16.993  | -15.3686 | -7.7642 | -44.3547  |
| 2851 | 0   | Extremo | 4.013 | 53.812  | -10.761 | -3.0113  | -4.7417 | -46.601   |
| 2851 | 0.5 | Extremo | 4.013 | 59.704  | -10.761 | -3.0113  | 0.639   | -74.98    |
| 2851 | 1   | Extremo | 4.013 | 65.597  | -10.761 | -3.0113  | 6.0198  | -106.3054 |
| 2851 | 0   | Extremo | 3.827 | 52.527  | -11.572 | -0.0127  | -5.0316 | -45.2606  |
| 2851 | 0.5 | Extremo | 3.827 | 58.42   | -11.572 | -0.0127  | 0.7542  | -72.9972  |
| 2851 | 1   | Extremo | 3.827 | 64.312  | -11.572 | -0.0127  | 6.54    | -103.6801 |
| 2853 | 0   | Extremo | 3.613 | -61.962 | 15.27   | -20.2127 | 8.9921  | -98.0049  |
| 2853 | 0.5 | Extremo | 3.613 | -56.069 | 15.27   | -20.2127 | 1.3571  | -68.4969  |
| 2853 | 1   | Extremo | 3.613 | -50.177 | 15.27   | -20.2127 | -6.2779 | -41.9354  |
| 2853 | 0   | Extremo | 4.324 | -62.473 | 12.585  | -13.2725 | 7.0453  | -100.1703 |
| 2853 | 0.5 | Extremo | 4.324 | -56.58  | 12.585  | -13.2725 | 0.7529  | -70.407   |
| 2853 | 1   | Extremo | 4.324 | -50.687 | 12.585  | -13.2725 | -5.5394 | -43.5902  |
| 2854 | 0   | Extremo | 3.962 | 54.884  | -6.625  | -1.9664  | -2.8766 | -46.6972  |
| 2854 | 0.5 | Extremo | 3.962 | 60.777  | -6.625  | -1.9664  | 0.4358  | -75.6125  |
| 2854 | 1   | Extremo | 3.962 | 66.67   | -6.625  | -1.9664  | 3.7482  | -107.4742 |
| 2854 | 0   | Extremo | 3.783 | 53      | -7.605  | -1.0622  | -3.2323 | -45.0096  |
| 2854 | 0.5 | Extremo | 3.783 | 58.893  | -7.605  | -1.0622  | 0.5704  | -72.9827  |
| 2854 | 1   | Extremo | 3.783 | 64.785  | -7.605  | -1.0622  | 4.3732  | -103.9023 |
| 2856 | 0   | Extremo | 3.33  | -61.192 | 12.401  | -14.6811 | 7.7402  | -95.3539  |
| 2856 | 0.5 | Extremo | 3.33  | -55.3   | 12.401  | -14.6811 | 1.5398  | -66.2309  |
| 2856 | 1   | Extremo | 3.33  | -49.407 | 12.401  | -14.6811 | -4.6606 | -40.0542  |
| 2856 | 0   | Extremo | 4.233 | -63.116 | 8.183   | -10.3771 | 4.6603  | -100.6528 |
| 2856 | 0.5 | Extremo | 4.233 | -57.223 | 8.183   | -10.3771 | 0.5686  | -70.5679  |
| 2856 | 1   | Extremo | 4.233 | -51.331 | 8.183   | -10.3771 | -3.523  | -43.4295  |
| 2857 | 0   | Extremo | 3.776 | 55.552  | -2.671  | -0.6225  | -1.1824 | -46.8682  |
| 2857 | 0.5 | Extremo | 3.776 | 61.444  | -2.671  | -0.6225  | 0.1532  | -76.1172  |
| 2857 | 1   | Extremo | 3.776 | 67.337  | -2.671  | -0.6225  | 1.4888  | -108.3125 |
| 2857 | 0   | Extremo | 3.677 | 53.235  | -3.78   | -2.3025  | -1.5872 | -44.9577  |
| 2857 | 0.5 | Extremo | 3.677 | 59.128  | -3.78   | -2.3025  | 0.3027  | -73.0486  |
| 2857 | 1   | Extremo | 3.677 | 65.021  | -3.78   | -2.3025  | 2.1925  | -104.0859 |
| 2859 | 0   | Extremo | 3.622 | -50.554 | 11.472  | -6.7099  | 7.6541  | -84.9023  |
| 2859 | 0.5 | Extremo | 3.622 | -44.661 | 11.472  | -6.7099  | 1.9182  | -61.0983  |
| 2859 | 1   | Extremo | 3.622 | -38.769 | 11.472  | -6.7099  | -3.8177 | -40.2408  |
| 2859 | 0   | Extremo | 4.096 | -63.404 | 3.976   | -7.3726  | 2.2856  | -100.9476 |
| 2859 | 0.5 | Extremo | 4.096 | -57.511 | 3.976   | -7.3726  | 0.2976  | -70.7188  |
| 2859 | 1   | Extremo | 4.096 | -51.618 | 3.976   | -7.3726  | -1.6905 | -43.4364  |
| 2860 | 0   | Extremo | 3.602 | 55.633  | 1.076   | 0.9061   | 0.3892  | -46.8679  |
| 2860 | 0.5 | Extremo | 3.602 | 61.526  | 1.076   | 0.9061   | -0.1488 | -76.1576  |
| 2860 | 1   | Extremo | 3.602 | 67.419  | 1.076   | 0.9061   | -0.6869 | -108.3937 |
| 2860 | 0   | Extremo | 3.632 | 53.301  | -0.068  | -3.5637  | -0.03   | -44.9534  |
| 2860 | 0.5 | Extremo | 3.632 | 59.194  | -0.068  | -3.5637  | 0.0038  | -73.0772  |
| 2860 | 1   | Extremo | 3.632 | 65.087  | -0.068  | -3.5637  | 0.0376  | -104.1473 |
| 2862 | 0   | Extremo | 4.571 | -50.648 | 7.378   | 2.5058   | 5.3022  | -85.013   |
| 2862 | 0.5 | Extremo | 4.571 | -44.755 | 7.378   | 2.5058   | 1.6132  | -61.1623  |
| 2862 | 1   | Extremo | 4.571 | -38.862 | 7.378   | 2.5058   | -2.0758 | -40.2581  |
| 2862 | 0   | Extremo | 4.041 | -63.475 | -0.09   | -4.3828  | -0.0506 | -101.0213 |
| 2862 | 0.5 | Extremo | 4.041 | -57.582 | -0.09   | -4.3828  | -0.0055 | -70.7572  |
| 2862 | 1   | Extremo | 4.041 | -51.689 | -0.09   | -4.3828  | 0.0397  | -43.4395  |
| 2863 | 0   | Extremo | 3.569 | 55.155  | 4.732   | 2.2381   | 1.9272  | -46.6526  |
| 2863 | 0.5 | Extremo | 3.569 | 61.047  | 4.732   | 2.2381   | -0.4389 | -75.703   |
| 2863 | 1   | Extremo | 3.569 | 66.94   | 4.732   | 2.2381   | -2.8049 | -107.6999 |
| 2863 | 0   | Extremo | 3.678 | 53.219  | 3.645   | -4.8262  | 1.5273  | -44.958   |
| 2863 | 0.5 | Extremo | 3.678 | 59.112  | 3.645   | -4.8262  | -0.295  | -73.0408  |
| 2863 | 1   | Extremo | 3.678 | 65.005  | 3.645   | -4.8262  | -2.1173 | -104.07   |
| 2865 | 0   | Extremo | 5.06  | -61.515 | -0.024  | 10.4502  | 0.6449  | -95.6866  |
| 2865 | 0.5 | Extremo | 5.06  | -55.622 | -0.024  | 10.4502  | 0.6568  | -66.4024  |
| 2865 | 1   | Extremo | 5.06  | -49.729 | -0.024  | 10.4502  | 0.6686  | -40.0646  |
| 2865 | 0   | Extremo | 4.099 | -63.363 | -4.158  | -1.3704  | -2.3875 | -100.8709 |
| 2865 | 0.5 | Extremo | 4.099 | -57.47  | -4.158  | -1.3704  | -0.3087 | -70.6626  |
| 2865 | 1   | Extremo | 4.099 | -51.577 | -4.158  | -1.3704  | 1.7701  | -43.4007  |
| 2866 | 0   | Extremo | 3.67  | 54.348  | 8.463   | 3.0935   | 3.5394  | -46.3468  |
| 2866 | 0.5 | Extremo | 3.67  | 60.24   | 8.463   | 3.0935   | -0.6919 | -74.9938  |

|      |     |         |       |         |         |         |          |            |
|------|-----|---------|-------|---------|---------|---------|----------|------------|
| 2866 | 1   | Extremo | 3.67  | 66.133  | 8.463   | 3.0935  | -4.9232  | -106.5872  |
| 2866 | 0   | Extremo | 3.784 | 52.964  | 7.471   | -6.0669 | 3.1728   | -45.0169   |
| 2866 | 0.5 | Extremo | 3.784 | 58.856  | 7.471   | -6.0669 | -0.5627  | -72.9719   |
| 2866 | 1   | Extremo | 3.784 | 64.749  | 7.471   | -6.0669 | -4.2982  | -103.8733  |
| 2868 | 0   | Extremo | 5.009 | -62.666 | -5.825  | 16.105  | -2.8975  | -98.5225   |
| 2868 | 0.5 | Extremo | 5.009 | -56.773 | -5.825  | 16.105  | 0.0148   | -68.6628   |
| 2868 | 1   | Extremo | 5.009 | -50.88  | -5.825  | 16.105  | 2.9272   | -41.7495   |
| 2868 | 0   | Extremo | 4.238 | -63.025 | -8.368  | 1.7025  | -4.7643  | -100.4889  |
| 2868 | 0.5 | Extremo | 4.238 | -57.132 | -8.368  | 1.7025  | -0.5803  | -70.4497   |
| 2868 | 1   | Extremo | 4.238 | -51.239 | -8.368  | 1.7025  | 3.6037   | -43.357    |
| 2869 | 0   | Extremo | 3.74  | 53.341  | 12.341  | 3.5635  | 5.3106   | -46.2289   |
| 2869 | 0.5 | Extremo | 3.74  | 59.234  | 12.341  | 3.5635  | -0.8597  | -74.3727   |
| 2869 | 1   | Extremo | 3.74  | 65.127  | 12.341  | 3.5635  | -7.0301  | -105.4629  |
| 2869 | 0   | Extremo | 3.828 | 52.461  | 11.438  | -7.0976 | 4.9729   | -45.2952   |
| 2869 | 0.5 | Extremo | 3.828 | 58.354  | 11.438  | -7.0976 | -0.7463  | -72.9988   |
| 2869 | 1   | Extremo | 3.828 | 64.246  | 11.438  | -7.0976 | -6.4654  | -103.6489  |
| 2871 | 0   | Extremo | 4.897 | -62.156 | -11.082 | 20.1929 | -5.9158  | -99.0584   |
| 2871 | 0.5 | Extremo | 4.897 | -56.263 | -11.082 | 20.1929 | -0.3748  | -69.4539   |
| 2871 | 1   | Extremo | 4.897 | -50.37  | -11.082 | 20.1929 | 5.1663   | -42.7957   |
| 2871 | 0   | Extremo | 4.332 | -62.307 | -12.775 | 4.7084  | -7.1529  | -99.898    |
| 2871 | 0.5 | Extremo | 4.332 | -56.414 | -12.775 | 4.7084  | -0.7655  | -70.218    |
| 2871 | 1   | Extremo | 4.332 | -50.521 | -12.775 | 4.7084  | 5.6219   | -43.4843   |
| 2872 | 0   | Extremo | 3.484 | 52.179  | 16.179  | 4.3684  | 7.2601   | -46.6701   |
| 2872 | 0.5 | Extremo | 3.484 | 58.072  | 16.179  | 4.3684  | -0.8296  | -74.2329   |
| 2872 | 1   | Extremo | 3.484 | 63.965  | 16.179  | 4.3684  | -8.9194  | -104.7421  |
| 2872 | 0   | Extremo | 3.547 | 51.694  | 15.344  | -7.2614 | 6.9398   | -46.0897   |
| 2872 | 0.5 | Extremo | 3.547 | 57.587  | 15.344  | -7.2614 | -0.7323  | -73.4099   |
| 2872 | 1   | Extremo | 3.547 | 63.479  | 15.344  | -7.2614 | -8.4044  | -103.6764  |
| 2874 | 0   | Extremo | 4.511 | -61.016 | -16.005 | 22.8067 | -8.4787  | -99.1611   |
| 2874 | 0.5 | Extremo | 4.511 | -55.124 | -16.005 | 22.8067 | -0.476   | -70.1262   |
| 2874 | 1   | Extremo | 4.511 | -49.231 | -16.005 | 22.8067 | 7.5266   | -44.0376   |
| 2874 | 0   | Extremo | 4.099 | -61.041 | -17.191 | 6.9277  | -9.3416  | -99.3861   |
| 2874 | 0.5 | Extremo | 4.099 | -55.148 | -17.191 | 6.9277  | -0.7462  | -70.339    |
| 2874 | 1   | Extremo | 4.099 | -49.255 | -17.191 | 6.9277  | 7.8491   | -44.2382   |
| 2875 | 0   | Extremo | 2.741 | 51.455  | 19.393  | 7.0349  | 9.3393   | -47.4301   |
| 2875 | 0.5 | Extremo | 2.741 | 57.347  | 19.393  | 7.0349  | -0.3569  | -74.6307   |
| 2875 | 1   | Extremo | 2.741 | 63.24   | 19.393  | 7.0349  | -10.0532 | -104.7776  |
| 2875 | 0   | Extremo | 2.791 | 51.297  | 18.608  | -5.1525 | 9.026    | -47.1501   |
| 2875 | 0.5 | Extremo | 2.791 | 57.19   | 18.608  | -5.1525 | -0.2782  | -74.2718   |
| 2875 | 1   | Extremo | 2.791 | 63.083  | 18.608  | -5.1525 | -9.5824  | -104.3399  |
| 2877 | 0   | Extremo | 3.616 | -60.389 | -20.132 | 22.049  | -10.126  | -100.398   |
| 2877 | 0.5 | Extremo | 3.616 | -54.496 | -20.132 | 22.049  | -0.0602  | -71.6765   |
| 2877 | 1   | Extremo | 3.616 | -48.604 | -20.132 | 22.049  | 10.0055  | -45.9015   |
| 2877 | 0   | Extremo | 3.316 | -60.187 | -20.989 | 6.2507  | -10.7539 | -100.068   |
| 2877 | 0.5 | Extremo | 3.316 | -54.294 | -20.989 | 6.2507  | -0.2594  | -71.4479   |
| 2877 | 1   | Extremo | 3.316 | -48.401 | -20.989 | 6.2507  | 10.2352  | -45.7741   |
| 2878 | 0   | Extremo | 3.139 | 53.102  | 21.481  | 11.4915 | 11.5085  | -45.042    |
| 2878 | 0.5 | Extremo | 3.139 | 58.994  | 21.481  | 11.4915 | 0.7681   | -73.066    |
| 2878 | 1   | Extremo | 3.139 | 64.887  | 21.481  | 11.4915 | -9.9724  | -104.0364  |
| 2878 | 0   | Extremo | 3.177 | 53.359  | 20.744  | -0.9027 | 11.1949  | -45.0417   |
| 2878 | 0.5 | Extremo | 3.177 | 59.252  | 20.744  | -0.9027 | 0.8228   | -73.1945   |
| 2878 | 1   | Extremo | 3.177 | 65.145  | 20.744  | -0.9027 | -9.5493  | -104.2937  |
| 2880 | 0   | Extremo | 3.782 | -65.049 | -22.832 | 16.7164 | -10.2812 | -103.4991  |
| 2880 | 0.5 | Extremo | 3.782 | -59.156 | -22.832 | 16.7164 | 1.135    | -72.4481   |
| 2880 | 1   | Extremo | 3.782 | -53.263 | -22.832 | 16.7164 | 12.5513  | -44.3434   |
| 2880 | 0   | Extremo | 3.545 | -64.192 | -23.47  | 1.3507  | -10.7621 | -102.4606  |
| 2880 | 0.5 | Extremo | 3.545 | -58.299 | -23.47  | 1.3507  | 0.9729   | -71.8379   |
| 2880 | 1   | Extremo | 3.545 | -52.406 | -23.47  | 1.3507  | 12.7078  | -44.1615</ |



|      |     |         |       |         |         |          |          |           |
|------|-----|---------|-------|---------|---------|----------|----------|-----------|
| 2884 | 1   | Extremo | 3.744 | 69.353  | 30.215  | 0.4437   | -17.0526 | -108.2559 |
| 2884 | 0   | Extremo | 3.741 | 57.409  | 29.484  | -11.5244 | 12.8611  | -44.9369  |
| 2884 | 0.5 | Extremo | 3.741 | 63.302  | 29.484  | -11.5244 | -1.8807  | -75.1147  |
| 2884 | 1   | Extremo | 3.741 | 69.195  | 29.484  | -11.5244 | -16.6225 | -108.2389 |
| 2886 | 0   | Extremo | 4.134 | -69.833 | -32.411 | 30.6835  | -18.0679 | -109.1899 |
| 2886 | 0.5 | Extremo | 4.134 | -63.94  | -32.411 | 30.6835  | -1.8622  | -75.7468  |
| 2886 | 1   | Extremo | 4.134 | -58.047 | -32.411 | 30.6835  | 14.3435  | -45.25    |
| 2886 | 0   | Extremo | 3.997 | -69.344 | -32.718 | 15.4802  | -18.2896 | -108.354  |
| 2886 | 0.5 | Extremo | 3.997 | -63.451 | -32.718 | 15.4802  | -1.9304  | -75.1554  |
| 2886 | 1   | Extremo | 3.997 | -57.558 | -32.718 | 15.4802  | 14.4288  | -44.9031  |
| 2887 | 0   | Extremo | 3.295 | 55.807  | 33.59   | -0.3844  | 14.3934  | -45.9037  |
| 2887 | 0.5 | Extremo | 3.295 | 61.7    | 33.59   | -0.3844  | -2.4013  | -75.2804  |
| 2887 | 1   | Extremo | 3.295 | 67.592  | 33.59   | -0.3844  | -19.1961 | -107.6034 |
| 2887 | 0   | Extremo | 3.289 | 55.663  | 32.854  | -12.1662 | 14.0894  | -46.0703  |
| 2887 | 0.5 | Extremo | 3.289 | 61.556  | 32.854  | -12.1662 | -2.3374  | -75.3749  |
| 2887 | 1   | Extremo | 3.289 | 67.448  | 32.854  | -12.1662 | -18.7641 | -107.626  |
| 2889 | 0   | Extremo | 3.757 | -67.282 | -36.123 | 31.0081  | -20.4022 | -107.6243 |
| 2889 | 0.5 | Extremo | 3.757 | -61.389 | -36.123 | 31.0081  | -2.3407  | -75.4565  |
| 2889 | 1   | Extremo | 3.757 | -55.496 | -36.123 | 31.0081  | 15.7209  | -46.2351  |
| 2889 | 0   | Extremo | 3.656 | -66.792 | -36.331 | 16.2129  | -20.5533 | -106.7883 |
| 2889 | 0.5 | Extremo | 3.656 | -60.899 | -36.331 | 16.2129  | -2.3877  | -74.8655  |
| 2889 | 1   | Extremo | 3.656 | -55.007 | -36.331 | 16.2129  | 15.7779  | -45.889   |
| 2890 | 0   | Extremo | 2.851 | 54.717  | 36.4    | 0.2023   | 16.0031  | -46.2964  |
| 2890 | 0.5 | Extremo | 2.851 | 60.61   | 36.4    | 0.2023   | -2.1968  | -75.1282  |
| 2890 | 1   | Extremo | 2.851 | 66.503  | 36.4    | 0.2023   | -20.3966 | -106.9063 |
| 2890 | 0   | Extremo | 2.848 | 54.659  | 35.66   | -11.2525 | 15.6907  | -46.5881  |
| 2890 | 0.5 | Extremo | 2.848 | 60.551  | 35.66   | -11.2525 | -2.1392  | -75.3906  |
| 2890 | 1   | Extremo | 2.848 | 66.444  | 35.66   | -11.2525 | -19.9691 | -107.1395 |
| 2892 | 0   | Extremo | 3.354 | -66.122 | -39.363 | 29.7585  | -21.7982 | -106.9994 |
| 2892 | 0.5 | Extremo | 3.354 | -60.229 | -39.363 | 29.7585  | -2.1166  | -75.4116  |
| 2892 | 1   | Extremo | 3.354 | -54.336 | -39.363 | 29.7585  | 17.565   | -46.7702  |
| 2892 | 0   | Extremo | 3.279 | -65.449 | -39.5   | 15.304   | -21.9058 | -106.0037 |
| 2892 | 0.5 | Extremo | 3.279 | -59.556 | -39.5   | 15.304   | -2.1558  | -74.7526  |
| 2892 | 1   | Extremo | 3.279 | -53.663 | -39.5   | 15.304   | 17.5943  | -46.4479  |
| 2893 | 0   | Extremo | 3.729 | 55.005  | 38.432  | 1.1681   | 17.999   | -45.3355  |
| 2893 | 0.5 | Extremo | 3.729 | 60.898  | 38.432  | 1.1681   | -1.2171  | -74.3113  |
| 2893 | 1   | Extremo | 3.729 | 66.791  | 38.432  | 1.1681   | -20.4333 | -106.2334 |
| 2893 | 0   | Extremo | 3.723 | 55.453  | 37.697  | -9.6748  | 17.675   | -45.6029  |
| 2893 | 0.5 | Extremo | 3.723 | 61.346  | 37.697  | -9.6748  | -1.1737  | -74.8027  |
| 2893 | 1   | Extremo | 3.723 | 67.239  | 37.697  | -9.6748  | -20.0223 | -106.9489 |
| 2895 | 0   | Extremo | 4.137 | -68.238 | -41.698 | 27.32    | -21.8549 | -108.2645 |
| 2895 | 0.5 | Extremo | 4.137 | -62.346 | -41.698 | 27.32    | -1.0057  | -75.6186  |
| 2895 | 1   | Extremo | 4.137 | -56.453 | -41.698 | 27.32    | 19.8435  | -45.919   |
| 2895 | 0   | Extremo | 4.059 | -67.245 | -41.789 | 13.0255  | -21.9448 | -106.9309 |
| 2895 | 0.5 | Extremo | 4.059 | -61.353 | -41.789 | 13.0255  | -1.0504  | -74.7815  |
| 2895 | 1   | Extremo | 4.059 | -55.46  | -41.789 | 13.0255  | 19.844   | -45.5784  |
| 2896 | 0   | Extremo | 6.051 | 59.215  | 44.078  | -2.2265  | 18.7194  | -45.1262  |
| 2896 | 0.5 | Extremo | 6.051 | 65.107  | 44.078  | -2.2265  | -3.3198  | -76.2066  |
| 2896 | 1   | Extremo | 6.051 | 71      | 44.078  | -2.2265  | -25.3591 | -110.2334 |
| 2896 | 0   | Extremo | 6.01  | 59.496  | 43.31   | -13.061  | 18.3963  | -45.3123  |
| 2896 | 0.5 | Extremo | 6.01  | 65.388  | 43.31   | -13.061  | -3.2587  | -76.5333  |
| 2896 | 1   | Extremo | 6.01  | 71.281  | 43.31   | -13.061  | -24.9137 | -110.7007 |
| 2898 | 0   | Extremo | 6.395 | -72.549 | -47.72  | 31.3848  | -27.1703 | -112.5941 |
| 2898 | 0.5 | Extremo | 6.395 | -66.656 | -47.72  | 31.3848  | -3.3103  | -77.7929  |
| 2898 | 1   | Extremo | 6.395 | -60.763 | -47.72  | 31.3848  | 20.5497  | -45.9381  |
| 2898 | 0   | Extremo | 6.318 | -72.153 | -47.736 | 17.5634  | -27.1889 | -111.7339 |
| 2898 | 0.5 | Extremo | 6.318 | -66.26  | -47.736 | 17.5634  | -3.321   | -77.1307  |
| 2898 | 1   | Extremo | 6.318 | -60.367 | -47.736 | 17.5634  | 20.5469  | -45.4739  |
| 2899 | 0   | Extremo | 6.735 | 58.15   | 50.268  | -3.0777  | 20.0038  | -46.141   |
| 2899 | 0.5 | Extremo | 6.735 | 64.042  | 50.268  | -3.0777  | -5.1303  | -76.689   |
| 2899 | 1   | Extremo | 6.735 | 69.935  | 50.268  | -3.0777  | -30.2643 | -110.1833 |
| 2899 | 0   | Extremo | 6.679 | 58.261  | 49.451  | -13.7519 | 19.6749  | -46.3107  |
| 2899 | 0.5 | Extremo | 6.679 | 64.154  | 49.451  | -13.7519 | -5.0507  | -76.9146  |
| 2899 | 1   | Extremo | 6.679 | 70.047  | 49.451  | -13.7519 | -29.7762 | -110.4648 |
| 2901 | 0   | Extremo | 7.161 | -70.269 | -54.095 | 31.3143  | -32.2251 | -111.2712 |
| 2901 | 0.5 | Extremo | 7.161 | -64.377 | -54.095 | 31.3143  | -5.1776  | -77.6098  |
| 2901 | 1   | Extremo | 7.161 | -58.484 | -54.095 | 31.3143  | 21.8699  | -46.8947  |
| 2901 | 0   | Extremo | 7.093 | -70.1   | -54.057 | 18.0865  | -32.1928 | -110.7458 |
| 2901 | 0.5 | Extremo | 7.093 | -64.207 | -54.057 | 18.0865  | -5.1641  | -77.1692  |
| 2901 | 1   | Extremo | 7.093 | -58.314 | -54.057 | 18.0865  | 21.8646  | -46.539   |
| 2902 | 0   | Extremo | 8.109 | 57.325  | 57.443  | -2.8105  | 22.2419  | -46.3821  |
| 2902 | 0.5 | Extremo | 8.109 | 63.217  | 57.443  | -2.8105  | -6.4795  | -76.5176  |

|      |     |         |        |         |          |          |          |           |
|------|-----|---------|--------|---------|----------|----------|----------|-----------|
| 2902 | 1   | Extremo | 8.109  | 69.11   | 57.443   | -2.8105  | -35.2009 | -109.5996 |
| 2902 | 0   | Extremo | 8.036  | 57.36   | 56.564   | -13.2931 | 21.8965  | -46.5745  |
| 2902 | 0.5 | Extremo | 8.036  | 63.253  | 56.564   | -13.2931 | -6.3854  | -76.7279  |
| 2902 | 1   | Extremo | 8.036  | 69.146  | 56.564   | -13.2931 | -34.6673 | -109.8277 |
| 2904 | 0   | Extremo | 8.807  | -69.155 | -61.639  | 30.2437  | -37.3696 | -110.2418 |
| 2904 | 0.5 | Extremo | 8.807  | -63.263 | -61.639  | 30.2437  | -6.55    | -77.1373  |
| 2904 | 1   | Extremo | 8.807  | -57.37  | -61.639  | 30.2437  | 24.2697  | -46.9792  |
| 2904 | 0   | Extremo | 8.73   | -68.895 | -61.554  | 17.4073  | -37.2937 | -109.6907 |
| 2904 | 0.5 | Extremo | 8.73   | -63.002 | -61.554  | 17.4073  | -6.517   | -76.7165  |
| 2904 | 1   | Extremo | 8.73   | -57.109 | -61.554  | 17.4073  | 24.2598  | -46.6887  |
| 2905 | 0   | Extremo | 10.153 | 57.498  | 66.745   | -2.794   | 25.7681  | -45.9627  |
| 2905 | 0.5 | Extremo | 10.153 | 63.391  | 66.745   | -2.794   | -7.6043  | -76.1848  |
| 2905 | 1   | Extremo | 10.153 | 69.283  | 66.745   | -2.794   | -40.9766 | -109.3533 |
| 2905 | 0   | Extremo | 10.061 | 57.464  | 65.781   | -12.976  | 25.3931  | -46.2716  |
| 2905 | 0.5 | Extremo | 10.061 | 63.356  | 65.781   | -12.976  | -7.4974  | -76.4766  |
| 2905 | 1   | Extremo | 10.061 | 69.249  | 65.781   | -12.976  | -40.3879 | -109.628  |
| 2907 | 0   | Extremo | 11.213 | -69.571 | -71.657  | 29.4866  | -43.5269 | -110.3089 |
| 2907 | 0.5 | Extremo | 11.213 | -63.678 | -71.657  | 29.4866  | -7.6983  | -76.9968  |
| 2907 | 1   | Extremo | 11.213 | -57.785 | -71.657  | 29.4866  | 28.1302  | -46.6311  |
| 2907 | 0   | Extremo | 11.112 | -69.105 | -71.511  | 16.9693  | -43.4003 | -109.5699 |
| 2907 | 0.5 | Extremo | 11.112 | -63.212 | -71.511  | 16.9693  | -7.6446  | -76.4907  |
| 2907 | 1   | Extremo | 11.112 | -57.319 | -71.511  | 16.9693  | 28.1111  | -46.3578  |
| 2908 | 0   | Extremo | 12.315 | 57.996  | 78.724   | -4.3276  | 30.9216  | -45.0447  |
| 2908 | 0.5 | Extremo | 12.315 | 63.889  | 78.724   | -4.3276  | -8.4405  | -75.516   |
| 2908 | 1   | Extremo | 12.315 | 69.782  | 78.724   | -4.3276  | -47.8025 | -108.9337 |
| 2908 | 0   | Extremo | 12.205 | 57.996  | 77.65    | -13.8905 | 30.5016  | -45.5869  |
| 2908 | 0.5 | Extremo | 12.205 | 63.888  | 77.65    | -13.8905 | -8.3233  | -76.0579  |
| 2908 | 1   | Extremo | 12.205 | 69.781  | 77.65    | -13.8905 | -47.1481 | -109.4752 |
| 2910 | 0   | Extremo | 13.757 | -70.822 | -84.752  | 30.3081  | -50.931  | -110.7254 |
| 2910 | 0.5 | Extremo | 13.757 | -64.93  | -84.752  | 30.3081  | -8.5552  | -76.7874  |
| 2910 | 1   | Extremo | 13.757 | -59.037 | -84.752  | 30.3081  | 33.8206  | -45.7958  |
| 2910 | 0   | Extremo | 13.618 | -70.069 | -84.522  | 17.9554  | -50.7362 | -109.7481 |
| 2910 | 0.5 | Extremo | 13.618 | -64.176 | -84.522  | 17.9554  | -8.475   | -76.1869  |
| 2910 | 1   | Extremo | 13.618 | -58.283 | -84.522  | 17.9554  | 33.7862  | -45.572   |
| 2911 | 0   | Extremo | 15.172 | 55.926  | 93.571   | -8.4943  | 38.0939  | -45.7542  |
| 2911 | 0.5 | Extremo | 15.172 | 61.819  | 93.571   | -8.4943  | -8.6916  | -75.1904  |
| 2911 | 1   | Extremo | 15.172 | 67.712  | 93.571   | -8.4943  | -55.4772 | -107.573  |
| 2911 | 0   | Extremo | 15.042 | 56.59   | 92.361   | -16.9109 | 37.61    | -46.3198  |
| 2911 | 0.5 | Extremo | 15.042 | 62.483  | 92.361   | -16.9109 | -8.5703  | -76.0881  |
| 2911 | 1   | Extremo | 15.042 | 68.376  | 92.361   | -16.9109 | -54.7506 | -108.8027 |
| 2913 | 0   | Extremo | 16.937 | -69.041 | -101.044 | 34.5662  | -59.2976 | -109.6378 |
| 2913 | 0.5 | Extremo | 16.937 | -63.148 | -101.044 | 34.5662  | -8.7758  | -76.5906  |
| 2913 | 1   | Extremo | 16.937 | -57.255 | -101.044 | 34.5662  | 41.7461  | -46.4898  |
| 2913 | 0   | Extremo | 16.717 | -68.324 | -100.684 | 22.009   | -58.9978 | -108.5428 |
| 2913 | 0.5 | Extremo | 16.717 | -62.431 | -100.684 | 22.009   | -8.6555  | -75.8542  |
| 2913 | 1   | Extremo | 16.717 | -56.538 | -100.684 | 22.009   | 41.6867  | -46.112   |
| 2914 | 0   | Extremo | 20.191 | 56.166  | 115.222  | -6.2289  | 46.7485  | -47.7667  |
| 2914 | 0.5 | Extremo | 20.191 | 62.059  | 115.222  | -6.2289  | -10.8627 | -77.3229  |
| 2914 | 1   | Extremo | 20.191 | 67.951  | 115.222  | -6.2289  | -68.4739 | -109.8254 |
| 2914 | 0   | Extremo | 20.016 | 57.212  | 113.809  | -14.3165 | 46.1868  | -48.3468  |
| 2914 | 0.5 | Extremo | 20.016 | 63.105  | 113.809  | -14.3165 | -10.7174 | -78.426   |
| 2914 | 1   | Extremo | 20.016 | 68.998  | 113.809  | -14.3165 | -67.6217 | -111.4516 |
| 2916 | 0   | Extremo | 22.423 | -68.125 | -124.817 | 30.9133  | -73.6292 | -110.8787 |
| 2916 | 0.5 | Extremo | 22.423 | -62.232 | -124.817 | 30.9133  | -11.2207 | -78.2893  |
| 2916 | 1   | Extremo | 22.423 | -56.34  | -124.817 | 30.9133  | 51.1879  | -48.6462  |
| 2916 | 0   | Extremo | 22.087 | -68.222 |          |          |          |           |



|      |     |         |         |         |          |         |          |           |
|------|-----|---------|---------|---------|----------|---------|----------|-----------|
| 2920 | 1   | Extremo | 19.892  | 75.271  | 167.639  | 0.6742  | -93.3729 | -118.6864 |
| 2920 | 0   | Extremo | 19.696  | 64.598  | 165.704  | -5.213  | 73.4267  | -50.3355  |
| 2920 | 0.5 | Extremo | 19.696  | 70.491  | 165.704  | -5.213  | -9.425   | -84.1079  |
| 2920 | 1   | Extremo | 19.696  | 76.384  | 165.704  | -5.213  | -92.2768 | -120.8266 |
| 2922 | 0   | Extremo | 23.467  | -76.583 | -183.544 | 20.5834 | -101.837 | -122.05   |
| 2922 | 0.5 | Extremo | 23.467  | -70.69  | -183.544 | 20.5834 | -10.065  | -85.2318  |
| 2922 | 1   | Extremo | 23.467  | -64.797 | -183.544 | 20.5834 | 81.7069  | -51.36    |
| 2922 | 0   | Extremo | 22.787  | -76.024 | -181.067 | 11.4598 | -99.787  | -119.3107 |
| 2922 | 0.5 | Extremo | 22.787  | -70.131 | -181.067 | 11.4598 | -9.2534  | -82.7721  |
| 2922 | 1   | Extremo | 22.787  | -64.238 | -181.067 | 11.4598 | 81.2803  | -49.1798  |
| 2923 | 0   | Extremo | -0.602  | 73.718  | 180.097  | 4.4748  | 90.4047  | -47.0969  |
| 2923 | 0.5 | Extremo | -0.602  | 79.611  | 180.097  | 4.4748  | 0.3561   | -85.4294  |
| 2923 | 1   | Extremo | -0.602  | 85.504  | 180.097  | 4.4748  | -89.6226 | -126.7082 |
| 2923 | 0   | Extremo | -0.659  | 74.778  | 178      | 0.3506  | 89.3709  | -48.3803  |
| 2923 | 0.5 | Extremo | -0.659  | 80.671  | 178      | 0.3506  | 0.3711   | -87.2427  |
| 2923 | 1   | Extremo | -0.659  | 86.564  | 178      | 0.3506  | -88.6288 | -129.0515 |
| 2925 | 0   | Extremo | 2.399   | -90.253 | -199.946 | 13.4693 | -99.8832 | -134.3435 |
| 2925 | 0.5 | Extremo | 2.399   | -84.361 | -199.946 | 13.4693 | 0.0898   | -90.69    |
| 2925 | 1   | Extremo | 2.399   | -78.468 | -199.946 | 13.4693 | 100.0627 | -49.9829  |
| 2925 | 0   | Extremo | 2.179   | -80.203 | -194.412 | 7.6201  | -95.5844 | -122.6765 |
| 2925 | 0.5 | Extremo | 2.179   | -74.31  | -194.412 | 7.6201  | 1.6216   | -84.0484  |
| 2925 | 1   | Extremo | 2.179   | -68.417 | -194.412 | 7.6201  | 98.8276  | -48.3667  |
| 2926 | 0   | Extremo | -16.774 | 72.634  | 154.286  | 0.2542  | 103.6401 | -42.3478  |
| 2926 | 0.5 | Extremo | -16.774 | 78.527  | 154.286  | 0.2542  | 26.4972  | -80.1381  |
| 2926 | 1   | Extremo | -16.774 | 84.42   | 154.286  | 0.2542  | -50.6458 | -120.8749 |
| 2926 | 0   | Extremo | -16.704 | 74.376  | 152.415  | -1.5314 | 102.4244 | -43.5444  |
| 2926 | 0.5 | Extremo | -16.704 | 80.269  | 152.415  | -1.5314 | 26.2169  | -82.2055  |
| 2926 | 1   | Extremo | -16.704 | 86.161  | 152.415  | -1.5314 | -49.9905 | -123.8129 |
| 2928 | 0   | Extremo | -16.543 | -91.558 | -174.649 | 15.7746 | -59.4227 | -130.6263 |
| 2928 | 0.5 | Extremo | -16.543 | -85.665 | -174.649 | 15.7746 | 27.9018  | -86.3206  |
| 2928 | 1   | Extremo | -16.543 | -79.772 | -174.649 | 15.7746 | 115.2264 | -44.9613  |
| 2928 | 0   | Extremo | -15.948 | -82.944 | -169.251 | 13.7096 | -55.157  | -120.328  |
| 2928 | 0.5 | Extremo | -15.948 | -77.051 | -169.251 | 13.7096 | 29.4686  | -80.3291  |
| 2928 | 1   | Extremo | -15.948 | -71.159 | -169.251 | 13.7096 | 114.0942 | -43.2765  |
| 2929 | 0   | Extremo | 12.381  | 72.068  | 155.633  | 5.3019  | 101.4134 | -44.0943  |
| 2929 | 0.5 | Extremo | 12.381  | 77.961  | 155.633  | 5.3019  | 23.5967  | -81.6015  |
| 2929 | 1   | Extremo | 12.381  | 83.854  | 155.633  | 5.3019  | -54.22   | -122.0551 |
| 2929 | 0   | Extremo | 12.477  | 73.541  | 153.804  | 4.3293  | 100.2461 | -44.8817  |
| 2929 | 0.5 | Extremo | 12.477  | 79.434  | 153.804  | 4.3293  | 23.3444  | -83.1253  |
| 2929 | 1   | Extremo | 12.477  | 85.326  | 153.804  | 4.3293  | -53.5574 | -124.3153 |
| 2931 | 0   | Extremo | 11.246  | -88.263 | -175.958 | 4.602   | -63.2751 | -129.0879 |
| 2931 | 0.5 | Extremo | 11.246  | -82.371 | -175.958 | 4.602   | 24.7039  | -86.4294  |
| 2931 | 1   | Extremo | 11.246  | -76.478 | -175.958 | 4.602   | 112.683  | -46.7172  |
| 2931 | 0   | Extremo | 11.436  | -89.486 | -173.59  | 6.8701  | -61.2046 | -128.1954 |
| 2931 | 0.5 | Extremo | 11.436  | -83.594 | -173.59  | 6.8701  | 25.5902  | -84.9254  |
| 2931 | 1   | Extremo | 11.436  | -77.701 | -173.59  | 6.8701  | 112.385  | -44.6017  |
| 2932 | 0   | Extremo | -3.743  | 68.958  | 173.581  | 5.325   | 86.3037  | -47.8881  |
| 2932 | 0.5 | Extremo | -3.743  | 74.851  | 173.581  | 5.325   | -0.4869  | -83.8405  |
| 2932 | 1   | Extremo | -3.743  | 80.744  | 173.581  | 5.325   | -87.2774 | -122.7392 |
| 2932 | 0   | Extremo | -3.536  | 69.845  | 171.709  | 5.4997  | 85.3873  | -48.6223  |
| 2932 | 0.5 | Extremo | -3.536  | 75.738  | 171.709  | 5.4997  | -0.4672  | -85.0182  |
| 2932 | 1   | Extremo | -3.536  | 81.631  | 171.709  | 5.4997  | -86.3216 | -124.3605 |
| 2934 | 0   | Extremo | -7.226  | -83.49  | -192.344 | 2.4691  | -96.9709 | -127.5219 |
| 2934 | 0.5 | Extremo | -7.226  | -77.597 | -192.344 | 2.4691  | -0.7989  | -87.2502  |
| 2934 | 1   | Extremo | -7.226  | -71.704 | -192.344 | 2.4691  | 95.373   | -49.9249  |
| 2934 | 0   | Extremo | -6.818  | -84.323 | -191.083 | 5.596   | -95.871  | -127.852  |
| 2934 | 0.5 | Extremo | -6.818  | -78.431 | -191.083 | 5.596   | -0.3295  | -87.1635  |
| 2934 | 1   | Extremo | -6.818  | -72.538 | -191.083 | 5.596   | 95.212   | -49.4214  |
| 2935 | 0   | Extremo | -22.249 | 60.648  | 156.757  | 9.2544  | 68.9313  | -48.8171  |
| 2935 | 0.5 | Extremo | -22.249 | 66.54   | 156.757  | 9.2544  | -9.4474  | -80.6141  |
| 2935 | 1   | Extremo | -22.249 | 72.433  | 156.757  | 9.2544  | -87.8262 | -115.3575 |
| 2935 | 0   | Extremo | -21.941 | 61.243  | 155.183  | 10.3079 | 68.2655  | -49.3547  |
| 2935 | 0.5 | Extremo | -21.941 | 67.135  | 155.183  | 10.3079 | -9.326   | -81.4492  |
| 2935 | 1   | Extremo | -21.941 | 73.028  | 155.183  | 10.3079 | -86.9174 | -116.4901 |
| 2937 | 0   | Extremo | -26.127 | -73.063 | -171.147 | -3.6087 | -95.4976 | -117.1003 |
| 2937 | 0.5 | Extremo | -26.127 | -67.17  | -171.147 | -3.6087 | -9.924   | -82.0422  |
| 2937 | 1   | Extremo | -26.127 | -61.277 | -171.147 | -3.6087 | 75.6497  | -49.9304  |
| 2937 | 0   | Extremo | -25.798 | -73.364 | -170.393 | -0.52   | -94.8719 | -117.323  |
| 2937 | 0.5 | Extremo | -25.798 | -67.471 | -170.393 | -0.52   | -9.6753  | -82.1142  |
| 2937 | 1   | Extremo | -25.798 | -61.578 | -170.393 | -0.52   | 75.5213  | -49.8518  |
| 2938 | 0   | Extremo | -24.412 | 56.233  | 127.832  | 12.4039 | 52.4381  | -48.1829  |
| 2938 | 0.5 | Extremo | -24.412 | 62.126  | 127.832  | 12.4039 | -11.4779 | -77.7726  |

|      |     |         |         |         |          |          |          |           |
|------|-----|---------|---------|---------|----------|----------|----------|-----------|
| 2938 | 1   | Extremo | -24.412 | 68.019  | 127.832  | 12.4039  | -75.394  | -110.3087 |
| 2938 | 0   | Extremo | -24.127 | 56.749  | 126.63   | 14.0058  | 51.9809  | -48.5135  |
| 2938 | 0.5 | Extremo | -24.127 | 62.642  | 126.63   | 14.0058  | -11.334  | -78.3613  |
| 2938 | 1   | Extremo | -24.127 | 68.535  | 126.63   | 14.0058  | -74.649  | -111.1554 |
| 2940 | 0   | Extremo | -27.596 | -67.775 | -138.259 | -7.6948  | -81.0208 | -110.3582 |
| 2940 | 0.5 | Extremo | -27.596 | -61.883 | -138.259 | -7.6948  | -11.8913 | -77.9438  |
| 2940 | 1   | Extremo | -27.596 | -55.99  | -138.259 | -7.6948  | 57.2382  | -48.4757  |
| 2940 | 0   | Extremo | -27.386 | -68.042 | -137.743 | -4.6124  | -80.6263 | -110.5623 |
| 2940 | 0.5 | Extremo | -27.386 | -62.149 | -137.743 | -4.6124  | -11.7545 | -78.0146  |
| 2940 | 1   | Extremo | -27.386 | -56.256 | -137.743 | -4.6124  | 57.1172  | -48.4132  |
| 2941 | 0   | Extremo | -21.461 | 55.071  | 100.234  | 15.4022  | 39.2075  | -47.7887  |
| 2941 | 0.5 | Extremo | -21.461 | 60.964  | 100.234  | 15.4022  | -10.9096 | -76.7976  |
| 2941 | 1   | Extremo | -21.461 | 66.857  | 100.234  | 15.4022  | -61.0266 | -108.7529 |
| 2941 | 0   | Extremo | -21.214 | 55.569  | 99.362   | 17.1957  | 38.9062  | -47.9204  |
| 2941 | 0.5 | Extremo | -21.214 | 61.462  | 99.362   | 17.1957  | -10.7747 | -77.1781  |
| 2941 | 1   | Extremo | -21.214 | 67.355  | 99.362   | 17.1957  | -60.4556 | -109.3821 |
| 2943 | 0   | Extremo | -24.002 | -66.061 | -107.658 | -11.1013 | -65.033  | -107.9758 |
| 2943 | 0.5 | Extremo | -24.002 | -60.169 | -107.658 | -11.1013 | -11.2039 | -76.4183  |
| 2943 | 1   | Extremo | -24.002 | -54.276 | -107.658 | -11.1013 | 42.6253  | -47.8072  |
| 2943 | 0   | Extremo | -23.882 | -66.378 | -107.253 | -7.774   | -64.751  | -108.117  |
| 2943 | 0.5 | Extremo | -23.882 | -60.486 | -107.253 | -7.774   | -11.1243 | -76.401   |
| 2943 | 1   | Extremo | -23.882 | -54.593 | -107.253 | -7.774   | 42.5024  | -47.6313  |
| 2944 | 0   | Extremo | -16.974 | 55.886  | 77.95    | 18.5253  | 29.2905  | -45.7655  |
| 2944 | 0.5 | Extremo | -16.974 | 61.779  | 77.95    | 18.5253  | -9.6844  | -75.1816  |
| 2944 | 1   | Extremo | -16.974 | 67.671  | 77.95    | 18.5253  | -48.6593 | -107.5441 |
| 2944 | 0   | Extremo | -16.766 | 56.033  | 77.347   | 20.1418  | 29.1026  | -45.9557  |
| 2944 | 0.5 | Extremo | -16.766 | 61.925  | 77.347   | 20.1418  | -9.5709  | -75.4452  |
| 2944 | 1   | Extremo | -16.766 | 67.818  | 77.347   | 20.1418  | -48.2445 | -107.8811 |
| 2946 | 0   | Extremo | -18.908 | -67.407 | -83.114  | -15.2761 | -51.3761 | -107.2623 |
| 2946 | 0.5 | Extremo | -18.908 | -61.514 | -83.114  | -15.2761 | -9.8191  | -75.0319  |
| 2946 | 1   | Extremo | -18.908 | -55.622 | -83.114  | -15.2761 | 31.7378  | -45.7479  |
| 2946 | 0   | Extremo | -18.847 | -67.196 | -82.753  | -11.3586 | -51.1428 | -107.0005 |
| 2946 | 0.5 | Extremo | -18.847 | -61.303 | -82.753  | -11.3586 | -9.7661  | -74.8759  |
| 2946 | 1   | Extremo | -18.847 | -55.41  | -82.753  | -11.3586 | 31.6105  | -45.6976  |
| 2947 | 0   | Extremo | -14.351 | 58.056  | 60.438   | 13.7182  | 22.1877  | -44.7369  |
| 2947 | 0.5 | Extremo | -14.351 | 63.949  | 60.438   | 13.7182  | -8.0315  | -75.2382  |
| 2947 | 1   | Extremo | -14.351 | 69.842  | 60.438   | 13.7182  | -38.2507 | -108.6859 |
| 2947 | 0   | Extremo | -14.186 | 57.843  | 60.043   | 15.9883  | 22.081   | -44.9874  |
| 2947 | 0.5 | Extremo | -14.186 | 63.736  | 60.043   | 15.9883  | -7.9407  | -75.3823  |
| 2947 | 1   | Extremo | -14.186 | 69.629  | 60.043   | 15.9883  | -37.9624 | -108.7236 |
| 2949 | 0   | Extremo | -15.821 | -70.396 | -64.065  | -9.0968  | -40.1199 | -109.2548 |
| 2949 | 0.5 | Extremo | -15.821 | -64.503 | -64.065  | -9.0968  | -8.0874  | -75.53    |
| 2949 | 1   | Extremo | -15.821 | -58.61  | -64.065  | -9.0968  | 23.945   | -44.7516  |
| 2949 | 0   | Extremo | -15.776 | -69.916 | -63.729  | -5.6973  | -39.9178 | -108.8166 |
| 2949 | 0.5 | Extremo | -15.776 | -64.023 | -63.729  | -5.6973  | -8.0532  | -75.3316  |
| 2949 | 1   | Extremo | -15.776 | -58.131 | -63.729  | -5.6973  | 23.8114  | -44.7931  |
| 2950 | 0   | Extremo | -11.52  | 57.17   | 46.793   | 11.6719  | 16.9202  | -45.6746  |
| 2950 | 0.5 | Extremo | -11.52  | 63.063  | 46.793   | 11.6719  | -6.4761  | -75.733   |
| 2950 | 1   | Extremo | -11.52  | 68.956  | 46.793   | 11.6719  | -29.8723 | -108.7378 |
| 2950 | 0   | Extremo | -11.392 | 57.038  | 46.554   | 14.2525  | 16.8711  | -45.7889  |
| 2950 | 0.5 | Extremo | -11.392 | 62.931  | 46.554   | 14.2525  | -6.4057  | -75.7809  |
| 2950 | 1   | Extremo | -11.392 | 68.823  | 46.554   | 14.2525  | -29.6824 | -108.7194 |
| 2952 | 0   | Extremo | -12.619 | -68.847 | -49.338  | -6.8666  | -31.1564 | -108.6275 |
| 2952 | 0.5 | Extremo | -12.619 | -62.954 | -49.338  | -6.8666  | -6.4875  | -75.6772  |
| 2952 |     |         |         |         |          |          |          |           |



|      |     |         |        |         |         |         |          |           |
|------|-----|---------|--------|---------|---------|---------|----------|-----------|
| 2956 | 1   | Extremo | -7.23  | 67.769  | 28.236  | 11.7485 | -18.1813 | -108.3108 |
| 2956 | 0   | Extremo | -7.155 | 56.133  | 28.199  | 14.4271 | 10.0758  | -46.4232  |
| 2956 | 0.5 | Extremo | -7.155 | 62.025  | 28.199  | 14.4271 | -4.0237  | -75.9627  |
| 2956 | 1   | Extremo | -7.155 | 67.918  | 28.199  | 14.4271 | -18.1233 | -108.4487 |
| 2958 | 0   | Extremo | -7.865 | -67.135 | -29.433 | -6.4056 | -18.7497 | -107.2299 |
| 2958 | 0.5 | Extremo | -7.865 | -61.242 | -29.433 | -6.4056 | -4.0333  | -75.1356  |
| 2958 | 1   | Extremo | -7.865 | -55.35  | -29.433 | -6.4056 | 10.6831  | -45.9876  |
| 2958 | 0   | Extremo | -7.852 | -67.253 | -29.135 | -2.9183 | -18.5844 | -107.2247 |
| 2958 | 0.5 | Extremo | -7.852 | -61.36  | -29.135 | -2.9183 | -4.0168  | -75.0716  |
| 2958 | 1   | Extremo | -7.852 | -55.467 | -29.135 | -2.9183 | 10.5508  | -45.8649  |
| 2959 | 0   | Extremo | -5.675 | 56.439  | 21.977  | 12.6845 | 7.8159   | -46.3613  |
| 2959 | 0.5 | Extremo | -5.675 | 62.332  | 21.977  | 12.6845 | -3.1728  | -76.0538  |
| 2959 | 1   | Extremo | -5.675 | 68.224  | 21.977  | 12.6845 | -14.1615 | -108.6928 |
| 2959 | 0   | Extremo | -5.615 | 56.683  | 22.006  | 15.2083 | 7.8599   | -46.2859  |
| 2959 | 0.5 | Extremo | -5.615 | 62.575  | 22.006  | 15.2083 | -3.1432  | -76.1004  |
| 2959 | 1   | Extremo | -5.615 | 68.468  | 22.006  | 15.2083 | -14.1463 | -108.8612 |
| 2961 | 0   | Extremo | -6.185 | -67.526 | -22.734 | -6.8756 | -14.4986 | -107.459  |
| 2961 | 0.5 | Extremo | -6.185 | -61.633 | -22.734 | -6.8756 | -3.1315  | -75.1691  |
| 2961 | 1   | Extremo | -6.185 | -55.741 | -22.734 | -6.8756 | 8.2356   | -45.8257  |
| 2961 | 0   | Extremo | -6.185 | -67.682 | -22.44  | -3.0381 | -14.3345 | -107.3823 |
| 2961 | 0.5 | Extremo | -6.185 | -61.789 | -22.44  | -3.0381 | -3.1147  | -75.0147  |
| 2961 | 1   | Extremo | -6.185 | -55.896 | -22.44  | -3.0381 | 8.105    | -45.5933  |
| 2962 | 0   | Extremo | -4.202 | 54.881  | 17.274  | 13.0108 | 6.0974   | -45.4347  |
| 2962 | 0.5 | Extremo | -4.202 | 60.773  | 17.274  | 13.0108 | -2.5396  | -74.3482  |
| 2962 | 1   | Extremo | -4.202 | 66.666  | 17.274  | 13.0108 | -11.1767 | -106.2081 |
| 2962 | 0   | Extremo | -4.15  | 54.952  | 17.357  | 15.1993 | 6.1586   | -45.5155  |
| 2962 | 0.5 | Extremo | -4.15  | 60.845  | 17.357  | 15.1993 | -2.5198  | -74.4648  |
| 2962 | 1   | Extremo | -4.15  | 66.738  | 17.357  | 15.1993 | -11.1982 | -106.3604 |
| 2964 | 0   | Extremo | -4.604 | -65.739 | -17.657 | -6.8433 | -11.3035 | -104.723  |
| 2964 | 0.5 | Extremo | -4.604 | -59.847 | -17.657 | -6.8433 | -2.475   | -73.3265  |
| 2964 | 1   | Extremo | -4.604 | -53.954 | -17.657 | -6.8433 | 6.3536   | -44.8764  |
| 2964 | 0   | Extremo | -4.618 | -65.422 | -17.353 | -2.4318 | -11.1292 | -104.3217 |
| 2964 | 0.5 | Extremo | -4.618 | -59.529 | -17.353 | -2.4318 | -2.4529  | -73.084   |
| 2964 | 1   | Extremo | -4.618 | -53.636 | -17.353 | -2.4318 | 6.2234   | -44.7926  |
| 2965 | 0   | Extremo | -3.461 | 55.531  | 13.616  | 10.6233 | 4.8192   | -45.0945  |
| 2965 | 0.5 | Extremo | -3.461 | 61.424  | 13.616  | 10.6233 | -1.9888  | -74.3331  |
| 2965 | 1   | Extremo | -3.461 | 67.316  | 13.616  | 10.6233 | -8.7968  | -106.5181 |
| 2965 | 0   | Extremo | -3.432 | 55.311  | 13.735  | 13.3506 | 4.8927   | -45.2838  |
| 2965 | 0.5 | Extremo | -3.432 | 61.203  | 13.735  | 13.3506 | -1.975   | -74.4123  |
| 2965 | 1   | Extremo | -3.432 | 67.096  | 13.735  | 13.3506 | -8.8427  | -106.4872 |
| 2967 | 0   | Extremo | -3.752 | -66.777 | -13.737 | -3.2776 | -8.7925  | -105.3978 |
| 2967 | 0.5 | Extremo | -3.752 | -60.885 | -13.737 | -3.2776 | -1.9238  | -73.4823  |
| 2967 | 1   | Extremo | -3.752 | -54.992 | -13.737 | -3.2776 | 4.9448   | -44.5131  |
| 2967 | 0   | Extremo | -3.759 | -66.292 | -13.426 | 0.6889  | -8.6159  | -104.9203 |
| 2967 | 0.5 | Extremo | -3.759 | -60.399 | -13.426 | 0.6889  | -1.9027  | -73.2474  |
| 2967 | 1   | Extremo | -3.759 | -54.507 | -13.426 | 0.6889  | 4.8104   | -44.5208  |
| 2968 | 0   | Extremo | -2.718 | 55.471  | 10.732  | 9.3702  | 3.8153   | -45.489   |
| 2968 | 0.5 | Extremo | -2.718 | 61.364  | 10.732  | 9.3702  | -1.5507  | -74.6976  |
| 2968 | 1   | Extremo | -2.718 | 67.256  | 10.732  | 9.3702  | -6.9167  | -106.8527 |
| 2968 | 0   | Extremo | -2.706 | 55.306  | 10.87   | 12.3471 | 3.8953   | -45.5493  |
| 2968 | 0.5 | Extremo | -2.706 | 61.198  | 10.87   | 12.3471 | -1.5397  | -74.6753  |
| 2968 | 1   | Extremo | -2.706 | 67.091  | 10.87   | 12.3471 | -6.9748  | -106.7476 |
| 2970 | 0   | Extremo | -2.933 | -66.54  | -10.666 | -1.2742 | -6.823   | -105.5493 |
| 2970 | 0.5 | Extremo | -2.933 | -60.647 | -10.666 | -1.2742 | -1.4902  | -73.7525  |
| 2970 | 1   | Extremo | -2.933 | -54.754 | -10.666 | -1.2742 | 3.8426   | -44.9021  |
| 2970 | 0   | Extremo | -2.943 | -66.238 | -10.346 | 2.6261  | -6.6416  | -105.1474 |
| 2970 | 0.5 | Extremo | -2.943 | -60.345 | -10.346 | 2.6261  | -1.4685  | -73.5018  |
| 2970 | 1   | Extremo | -2.943 | -54.452 | -10.346 | 2.6261  | 3.7047   | -44.8025  |
| 2971 | 0   | Extremo | -2.112 | 55.482  | 8.495   | 8.8326  | 3.0348   | -45.6183  |
| 2971 | 0.5 | Extremo | -2.112 | 61.375  | 8.495   | 8.8326  | -1.2126  | -74.8326  |
| 2971 | 1   | Extremo | -2.112 | 67.268  | 8.495   | 8.8326  | -5.4599  | -106.9933 |
| 2971 | 0   | Extremo | -2.111 | 55.419  | 8.638   | 11.8258 | 3.1171   | -45.5839  |
| 2971 | 0.5 | Extremo | -2.111 | 61.311  | 8.638   | 11.8258 | -1.202   | -74.7663  |
| 2971 | 1   | Extremo | -2.111 | 67.204  | 8.638   | 11.8258 | -5.5211  | -106.8952 |
| 2973 | 0   | Extremo | -2.278 | -66.482 | -8.287  | -0.0103 | -5.3     | -105.5277 |
| 2973 | 0.5 | Extremo | -2.278 | -60.589 | -8.287  | -0.0103 | -1.1565  | -73.7599  |
| 2973 | 1   | Extremo | -2.278 | -54.696 | -8.287  | -0.0103 | 2.987    | -44.9385  |
| 2973 | 0   | Extremo | -2.297 | -66.344 | -7.954  | 4.0519  | -5.1089  | -105.2239 |
| 2973 | 0.5 | Extremo | -2.297 | -60.451 | -7.954  | 4.0519  | -1.1321  | -73.5251  |
| 2973 | 1   | Extremo | -2.297 | -54.558 | -7.954  | 4.0519  | 2.8447   | -44.7726  |
| 2974 | 0   | Extremo | -1.618 | 55.645  | 6.767   | 8.3208  | 2.4333   | -45.3127  |
| 2974 | 0.5 | Extremo | -1.618 | 61.537  | 6.767   | 8.3208  | -0.9499  | -74.6081  |

|      |     |         |        |         |        |         |         |           |
|------|-----|---------|--------|---------|--------|---------|---------|-----------|
| 2974 | 1   | Extremo | -1.618 | 67.43   | 6.767  | 8.3208  | -4.3332 | -106.85   |
| 2974 | 0   | Extremo | -1.624 | 55.645  | 6.905  | 11.1824 | 2.5148  | -45.2214  |
| 2974 | 0.5 | Extremo | -1.624 | 61.537  | 6.905  | 11.1824 | -0.9376 | -74.5169  |
| 2974 | 1   | Extremo | -1.624 | 67.43   | 6.905  | 11.1824 | -4.39   | -106.7588 |
| 2976 | 0   | Extremo | -1.764 | -66.619 | -6.443 | 1.3811  | -4.1175 | -105.2372 |
| 2976 | 0.5 | Extremo | -1.764 | -60.726 | -6.443 | 1.3811  | -0.8963 | -73.401   |
| 2976 | 1   | Extremo | -1.764 | -54.833 | -6.443 | 1.3811  | 2.325   | -44.5112  |
| 2976 | 0   | Extremo | -1.796 | -66.487 | -6.084 | 5.7623  | -3.9091 | -104.9    |
| 2976 | 0.5 | Extremo | -1.796 | -60.594 | -6.084 | 5.7623  | -0.867  | -73.1299  |
| 2976 | 1   | Extremo | -1.796 | -54.701 | -6.084 | 5.7623  | 2.1751  | -44.3061  |
| 2977 | 0   | Extremo | -1.165 | 53.228  | 5.486  | 6.8935  | 1.9698  | -44.9758  |
| 2977 | 0.5 | Extremo | -1.165 | 59.12   | 5.486  | 6.8935  | -0.7731 | -73.0627  |
| 2977 | 1   | Extremo | -1.165 | 65.013  | 5.486  | 6.8935  | -3.516  | -104.0961 |
| 2977 | 0   | Extremo | -1.175 | 53.195  | 5.612  | 9.5072  | 2.0464  | -44.9462  |
| 2977 | 0.5 | Extremo | -1.175 | 59.088  | 5.612  | 9.5072  | -0.7595 | -73.017   |
| 2977 | 1   | Extremo | -1.175 | 64.981  | 5.612  | 9.5072  | -3.5655 | -104.0341 |
| 2979 | 0   | Extremo | -1.297 | -63.481 | -5.047 | 3.8119  | -3.2349 | -101.8037 |
| 2979 | 0.5 | Extremo | -1.297 | -57.588 | -5.047 | 3.8119  | -0.7115 | -71.5365  |
| 2979 | 1   | Extremo | -1.297 | -51.695 | -5.047 | 3.8119  | 1.8119  | -44.2158  |
| 2979 | 0   | Extremo | -1.347 | -63.14  | -4.645 | 8.5215  | -2.9953 | -101.4093 |
| 2979 | 0.5 | Extremo | -1.347 | -57.247 | -4.645 | 8.5215  | -0.6727 | -71.3124  |
| 2979 | 1   | Extremo | -1.347 | -51.355 | -4.645 | 8.5215  | 1.6499  | -44.1619  |
| 2980 | 0   | Extremo | -0.935 | 52.91   | 4.499  | 5.5644  | 1.6267  | -44.844   |
| 2980 | 0.5 | Extremo | -0.935 | 58.803  | 4.499  | 5.5644  | -0.6226 | -72.7722  |
| 2980 | 1   | Extremo | -0.935 | 64.696  | 4.499  | 5.5644  | -2.872  | -103.6469 |
| 2980 | 0   | Extremo | -0.967 | 52.658  | 4.596  | 8.3508  | 1.6919  | -44.8283  |
| 2980 | 0.5 | Extremo | -0.967 | 58.551  | 4.596  | 8.3508  | -0.606  | -72.6306  |
| 2980 | 1   | Extremo | -0.967 | 64.444  | 4.596  | 8.3508  | -2.9038 | -103.3792 |
| 2982 | 0   | Extremo | -1.02  | -63.44  | -3.979 | 5.9207  | -2.5523 | -101.8174 |
| 2982 | 0.5 | Extremo | -1.02  | -57.547 | -3.979 | 5.9207  | -0.5626 | -71.5705  |
| 2982 | 1   | Extremo | -1.02  | -51.655 | -3.979 | 5.9207  | 1.4271  | -44.27    |
| 2982 | 0   | Extremo | -1.071 | -63.127 | -3.526 | 10.395  | -2.2821 | -101.6008 |
| 2982 | 0.5 | Extremo | -1.071 | -57.234 | -3.526 | 10.395  | -0.5189 | -71.5104  |
| 2982 | 1   | Extremo | -1.071 | -51.342 | -3.526 | 10.395  | 1.2442  | -44.3664  |
| 2983 | 0   | Extremo | -0.706 | 52.977  | 3.729  | 4.1515  | 1.3566  | -44.7121  |
| 2983 | 0.5 | Extremo | -0.706 | 58.87   | 3.729  | 4.1515  | -0.5079 | -72.6737  |
| 2983 | 1   | Extremo | -0.706 | 64.762  | 3.729  | 4.1515  | -2.3723 | -103.5817 |
| 2983 | 0   | Extremo | -0.753 | 52.657  | 3.774  | 6.8839  | 1.4001  | -44.5686  |
| 2983 | 0.5 | Extremo | -0.753 | 58.55   | 3.774  | 6.8839  | -0.4871 | -72.3703  |
| 2983 | 1   | Extremo | -0.753 | 64.442  | 3.774  | 6.8839  | -2.3743 | -103.1183 |
| 2985 | 0   | Extremo | -0.766 | -63.958 | -3.158 | 7.7472  | -2.0296 | -102.7435 |
| 2985 | 0.5 | Extremo | -0.766 | -58.066 | -3.158 | 7.7472  | -0.4506 | -72.2375  |
| 2985 | 1   | Extremo | -0.766 | -52.173 | -3.158 | 7.7472  | 1.1285  | -44.6779  |
| 2985 | 0   | Extremo | -0.827 | -63.874 | -2.641 | 12.017  | -1.7221 | -102.9003 |
| 2985 | 0.5 | Extremo | -0.827 | -57.981 | -2.641 | 12.017  | -0.4018 | -72.4364  |
| 2985 | 1   | Extremo | -0.827 | -52.089 | -2.641 | 12.017  | 0.9186  | -44.9189  |
| 2986 | 0   | Extremo | -0.545 | 53.8    | 3.125  | 2.8736  | 1.1349  | -44.3986  |
| 2986 | 0.5 | Extremo | -0.545 | 59.693  | 3.125  | 2.8736  | -0.4275 | -72.7717  |
| 2986 | 1   | Extremo | -0.545 | 65.585  | 3.125  | 2.8736  | -1.9899 | -104.0911 |
| 2986 | 0   | Extremo | -0.601 | 53.464  | 3.101  | 5.3542  | 1.1443  | -44.1444  |
| 2986 | 0.5 | Extremo | -0.601 | 59.356  | 3.101  | 5.3542  | -0.4062 | -72.3494  |
| 2986 | 1   | Extremo | -0.601 | 65.249  | 3.101  | 5.3542  | -1.9566 | -103.5007 |
| 2988 | 0   | Extremo | -0.572 | -65.887 | -2.531 | 8.4886  | -1.6372 | -105.3243 |
| 2988 | 0.5 | Extremo | -0.572 | -59.995 | -2.531 | 8.4886  | -0.3717 | -73.8538  |
| 2988 | 1   | Extremo | -0.572 | -54.102 | -2.531 | 8.4886  | 0.8939  | -45.3297  |
| 2988 | 0   | Extremo | -0.63  | -66.308 | -1.943 | 12.3351 | -1.2917 | -106.2683 |
| 2988 | 0.5 | Extremo | -0.63  | -60.415 | -1.943 | 12.3351 | -0.3204 | -74.5877  |
| 2988 | 1   | Extremo | -0.63  | -54.522 | -1.943 | 12.3351 | 0.6509  | -4        |



|      |     |         |        |          |        |          |           |           |
|------|-----|---------|--------|----------|--------|----------|-----------|-----------|
| 2992 | 1   | Extremo | -1.001 | 66.578   | 1.891  | -2.1654  | -1.287    | -98.5413  |
| 2992 | 0   | Extremo | -1.183 | 54.436   | 1.687  | -0.7138  | 0.4878    | -37.224   |
| 2992 | 0.5 | Extremo | -1.183 | 60.328   | 1.687  | -0.7138  | -0.3556   | -65.9151  |
| 2992 | 1   | Extremo | -1.183 | 66.221   | 1.687  | -0.7138  | -1.199    | -97.5525  |
| 2994 | 0   | Extremo | -0.418 | -72.938  | -1.652 | 9.3719   | -1.1606   | -106.8327 |
| 2994 | 0.5 | Extremo | -0.418 | -67.045  | -1.652 | 9.3719   | -0.3344   | -71.8369  |
| 2994 | 1   | Extremo | -0.418 | -61.152  | -1.652 | 9.3719   | 0.4919    | -39.7875  |
| 2994 | 0   | Extremo | -0.14  | -75.497  | -1.164 | 11.6986  | -0.9267   | -109.8901 |
| 2994 | 0.5 | Extremo | -0.14  | -69.604  | -1.164 | 11.6986  | -0.3447   | -73.6147  |
| 2994 | 1   | Extremo | -0.14  | -63.712  | -1.164 | 11.6986  | 0.2373    | -40.2857  |
| 2995 | 0   | Extremo | -1.631 | 40.891   | 1.092  | -5.7115  | 0.2194    | -37.4011  |
| 2995 | 0.5 | Extremo | -1.631 | 46.783   | 1.092  | -5.7115  | -0.3265   | -59.3196  |
| 2995 | 1   | Extremo | -1.631 | 52.676   | 1.092  | -5.7115  | -0.8724   | -84.1845  |
| 2995 | 0   | Extremo | -1.364 | 40.638   | 0.834  | -4.904   | 0.1265    | -36.7774  |
| 2995 | 0.5 | Extremo | -1.364 | 46.531   | 0.834  | -4.904   | -0.2904   | -58.5697  |
| 2995 | 1   | Extremo | -1.364 | 52.424   | 0.834  | -4.904   | -0.7074   | -83.3083  |
| 2997 | 0   | Extremo | -1.719 | -56.267  | -1.099 | 10.6227  | -0.9093   | -91.4431  |
| 2997 | 0.5 | Extremo | -1.719 | -50.374  | -1.099 | 10.6227  | -0.3598   | -64.7829  |
| 2997 | 1   | Extremo | -1.719 | -44.481  | -1.099 | 10.6227  | 0.1898    | -41.0691  |
| 2997 | 0   | Extremo | -1.393 | -57.925  | -0.769 | 12.2737  | -0.7231   | -94.337   |
| 2997 | 0.5 | Extremo | -1.393 | -52.032  | -0.769 | 12.2737  | -0.3385   | -66.8479  |
| 2997 | 1   | Extremo | -1.393 | -46.139  | -0.769 | 12.2737  | 0.0462    | -42.3051  |
| 2998 | 0   | Extremo | -0.678 | 169.674  | -0.059 | 11.6248  | -0.0016   | 38.2412   |
| 2998 | 0.5 | Extremo | -0.678 | 187.096  | -0.059 | 11.6248  | 0.0278    | -50.9513  |
| 2998 | 1   | Extremo | -0.678 | 204.519  | -0.059 | 11.6248  | 0.0573    | -148.8549 |
| 2998 | 0   | Extremo | 2.003  | 169.666  | 0.075  | 11.6245  | 0.0232    | 38.2387   |
| 2998 | 0.5 | Extremo | 2.003  | 187.088  | 0.075  | 11.6245  | -0.0144   | -50.9497  |
| 2998 | 1   | Extremo | 2.003  | 204.511  | 0.075  | 11.6245  | -0.052    | -148.8493 |
| 2999 | 0   | Extremo | 2.335  | -341.458 | 0.211  | 19.1073  | 0.1355    | -148.026  |
| 2999 | 0.5 | Extremo | 2.335  | -324.036 | 0.211  | 19.1073  | 0.0299    | 18.3474   |
| 2999 | 1   | Extremo | 2.335  | -306.613 | 0.211  | 19.1073  | -0.0757   | 176.0096  |
| 2999 | 0   | Extremo | -6.51  | -341.429 | -0.095 | 19.1066  | -0.0689   | -148.0206 |
| 2999 | 0.5 | Extremo | -6.51  | -324.006 | -0.095 | 19.1066  | -0.0213   | 18.3381   |
| 2999 | 1   | Extremo | -6.51  | -306.584 | -0.095 | 19.1066  | 0.0263    | 175.9855  |
| 3000 | 0   | Extremo | 1.799  | -146.989 | 0.185  | 19.2246  | 0.0935    | 141.7079  |
| 3000 | 0.5 | Extremo | 1.799  | -129.567 | 0.185  | 19.2246  | 0.0009484 | 210.847   |
| 3000 | 1   | Extremo | 1.799  | -112.144 | 0.185  | 19.2246  | -0.0916   | 271.2749  |
| 3000 | 0   | Extremo | -4.869 | -146.967 | -0.114 | 19.2237  | -0.0611   | 141.6856  |
| 3000 | 0.5 | Extremo | -4.869 | -129.545 | -0.114 | 19.2237  | -0.0041   | 210.8137  |
| 3000 | 1   | Extremo | -4.869 | -112.122 | -0.114 | 19.2237  | 0.0529    | 271.2305  |
| 3001 | 0   | Extremo | 1.547  | -51.284  | 0.189  | 12.8832  | 0.09      | 258.6095  |
| 3001 | 0.5 | Extremo | 1.547  | -33.862  | 0.189  | 12.8832  | -0.0044   | 279.896   |
| 3001 | 1   | Extremo | 1.547  | -16.439  | 0.189  | 12.8832  | -0.0989   | 292.4713  |
| 3001 | 0   | Extremo | -4.026 | -51.263  | -0.125 | 12.8824  | -0.0605   | 258.5653  |
| 3001 | 0.5 | Extremo | -4.026 | -33.841  | -0.125 | 12.8824  | 0.0022    | 279.8414  |
| 3001 | 1   | Extremo | -4.026 | -16.418  | -0.125 | 12.8824  | 0.0649    | 292.4062  |
| 3002 | 0   | Extremo | 1.43   | 26.085   | 0.19   | 4.1984   | 0.0873    | 288.416   |
| 3002 | 0.5 | Extremo | 1.43   | 43.507   | 0.19   | 4.1984   | -0.0076   | 271.0181  |
| 3002 | 1   | Extremo | 1.43   | 60.93    | 0.19   | 4.1984   | -0.1024   | 244.909   |
| 3002 | 0   | Extremo | -3.559 | 26.105   | -0.127 | 4.1976   | -0.0585   | 288.3504  |
| 3002 | 0.5 | Extremo | -3.559 | 43.528   | -0.127 | 4.1976   | 0.0049    | 270.9421  |
| 3002 | 1   | Extremo | -3.559 | 60.95    | -0.127 | 4.1976   | 0.0682    | 244.8225  |
| 3003 | 0   | Extremo | 1.372  | 100.891  | 0.189  | -5.0988  | 0.0846    | 242.3252  |
| 3003 | 0.5 | Extremo | 1.372  | 118.313  | 0.189  | -5.0988  | -0.0098   | 187.5247  |
| 3003 | 1   | Extremo | 1.372  | 135.736  | 0.189  | -5.0988  | -0.1042   | 124.012   |
| 3003 | 0   | Extremo | -3.252 | 100.912  | -0.124 | -5.0997  | -0.0564   | 242.2381  |
| 3003 | 0.5 | Extremo | -3.252 | 118.334  | -0.124 | -5.0997  | 0.0058    | 187.4267  |
| 3003 | 1   | Extremo | -3.252 | 135.757  | -0.124 | -5.0997  | 0.0679    | 123.904   |
| 3004 | 0   | Extremo | 1.325  | 175.772  | 0.187  | -14.7672 | 0.0821    | 122.3723  |
| 3004 | 0.5 | Extremo | 1.325  | 193.194  | 0.187  | -14.7672 | -0.0116   | 30.1307   |
| 3004 | 1   | Extremo | 1.325  | 210.617  | 0.187  | -14.7672 | -0.1053   | -70.8222  |
| 3004 | 0   | Extremo | -2.971 | 175.793  | -0.12  | -14.7683 | -0.0537   | 122.2638  |
| 3004 | 0.5 | Extremo | -2.971 | 193.215  | -0.12  | -14.7683 | 0.0063    | 30.0118   |
| 3004 | 1   | Extremo | -2.971 | 210.638  | -0.12  | -14.7683 | 0.0664    | -70.9514  |
| 3005 | 0   | Extremo | 1.248  | 257.74   | 0.186  | -23.5873 | 0.0795    | -64.8313  |
| 3005 | 0.5 | Extremo | 1.248  | 275.162  | 0.186  | -23.5873 | -0.0133   | -198.0569 |
| 3005 | 1   | Extremo | 1.248  | 292.585  | 0.186  | -23.5873 | -0.1061   | -339.9937 |
| 3005 | 0   | Extremo | -2.593 | 257.761  | -0.114 | -23.5889 | -0.0496   | -64.9604  |
| 3005 | 0.5 | Extremo | -2.593 | 275.183  | -0.114 | -23.5889 | 0.0074    | -198.1964 |
| 3005 | 1   | Extremo | -2.593 | 292.606  | -0.114 | -23.5889 | 0.0644    | -340.1437 |
| 3006 | 0   | Extremo | 1.078  | 396.648  | 0.181  | -25.6236 | 0.0769    | -302.6766 |
| 3006 | 0.5 | Extremo | 1.078  | 414.07   | 0.181  | -25.6236 | -0.0138   | -505.3561 |

|      |     |         |        |          |        |          |         |           |
|------|-----|---------|--------|----------|--------|----------|---------|-----------|
| 3006 | 1   | Extremo | 1.078  | 431.493  | 0.181  | -25.6236 | -0.1044 | -716.7468 |
| 3006 | 0   | Extremo | -1.938 | 396.673  | -0.103 | -25.6253 | -0.0426 | -302.8241 |
| 3006 | 0.5 | Extremo | -1.938 | 414.095  | -0.103 | -25.6253 | 0.0091  | -505.5161 |
| 3006 | 1   | Extremo | -1.938 | 431.518  | -0.103 | -25.6253 | 0.0607  | -716.9193 |
| 3007 | 0   | Extremo | 0.698  | 845.518  | 0.126  | -8.9649  | 0.0787  | -607.0571 |
| 3007 | 0.5 | Extremo | 0.698  | 862.941  | 0.126  | -8.9649  | 0.0155  | -1034.172 |
| 3007 | 1   | Extremo | 0.698  | 880.363  | 0.126  | -8.9649  | -0.0478 | -1469.998 |
| 3007 | 0   | Extremo | -0.66  | 845.569  | -0.073 | -8.9657  | -0.0349 | -607.2217 |
| 3007 | 0.5 | Extremo | -0.66  | 862.992  | -0.073 | -8.9657  | 0.0014  | -1034.362 |
| 3007 | 1   | Extremo | -0.66  | 880.414  | -0.073 | -8.9657  | 0.0377  | -1470.213 |
| 3008 | 0   | Extremo | 3.594  | -963.093 | 0.439  | 23.813   | 0.2313  | -1469.633 |
| 3008 | 0.5 | Extremo | 3.594  | -945.671 | 0.439  | 23.813   | 0.0121  | -992.4421 |
| 3008 | 1   | Extremo | 3.594  | -928.248 | 0.439  | 23.813   | -0.2072 | -523.9622 |
| 3008 | 0   | Extremo | -8.709 | -963.177 | -0.161 | 23.8142  | -0.0781 | -1469.848 |
| 3008 | 0.5 | Extremo | -8.709 | -945.755 | -0.161 | 23.8142  | 0.0023  | -992.6152 |
| 3008 | 1   | Extremo | -8.709 | -928.332 | -0.161 | 23.8142  | 0.0827  | -524.0935 |
| 3009 | 0   | Extremo | 3.242  | -514.246 | 0.394  | 40.5884  | 0.172   | -632.9097 |
| 3009 | 0.5 | Extremo | 3.242  | -496.823 | 0.394  | 40.5884  | -0.0248 | -380.1425 |
| 3009 | 1   | Extremo | 3.242  | -479.401 | 0.394  | 40.5884  | -0.2216 | -136.0866 |
| 3009 | 0   | Extremo | -7.453 | -514.303 | -0.158 | 40.5904  | -0.065  | -633.0479 |
| 3009 | 0.5 | Extremo | -7.453 | -496.881 | -0.158 | 40.5904  | 0.014   | -380.2519 |
| 3009 | 1   | Extremo | -7.453 | -479.458 | -0.158 | 40.5904  | 0.0929  | -136.1671 |
| 3010 | 0   | Extremo | 3.125  | -375.38  | 0.395  | 38.8185  | 0.1651  | -172.6211 |
| 3010 | 0.5 | Extremo | 3.125  | -357.958 | 0.395  | 38.8185  | -0.0325 | 10.7135   |
| 3010 | 1   | Extremo | 3.125  | -340.535 | 0.395  | 38.8185  | -0.23   | 185.3368  |
| 3010 | 0   | Extremo | -6.847 | -375.434 | -0.163 | 38.8203  | -0.0638 | -172.7031 |
| 3010 | 0.5 | Extremo | -6.847 | -358.012 | -0.163 | 38.8203  | 0.0179  | 10.6583   |
| 3010 | 1   | Extremo | -6.847 | -340.589 | -0.163 | 38.8203  | 0.0996  | 185.3084  |
| 3011 | 0   | Extremo | 3.122  | -293.461 | 0.396  | 30.4917  | 0.1598  | 180.1867  |
| 3011 | 0.5 | Extremo | 3.122  | -276.038 | 0.396  | 30.4917  | -0.0383 | 322.5615  |
| 3011 | 1   | Extremo | 3.122  | -258.616 | 0.396  | 30.4917  | -0.2364 | 456.2252  |
| 3011 | 0   | Extremo | -6.553 | -293.514 | -0.165 | 30.4932  | -0.0621 | 180.1592  |
| 3011 | 0.5 | Extremo | -6.553 | -276.092 | -0.165 | 30.4932  | 0.0205  | 322.5608  |
| 3011 | 1   | Extremo | -6.553 | -258.669 | -0.165 | 30.4932  | 0.1032  | 456.2511  |
| 3012 | 0   | Extremo | 3.176  | -218.606 | 0.396  | 21.669   | 0.1546  | 458.6998  |
| 3012 | 0.5 | Extremo | 3.176  | -201.184 | 0.396  | 21.669   | -0.0436 | 563.6474  |
| 3012 | 1   | Extremo | 3.176  | -183.761 | 0.396  | 21.669   | -0.2418 | 652.8837  |
| 3012 | 0   | Extremo | -6.414 | -218.66  | -0.166 | 21.6701  | -0.0604 | 458.7273  |
| 3012 | 0.5 | Extremo | -6.414 | -201.238 | -0.166 | 21.6701  | 0.0224  | 563.7017  |
| 3012 | 1   | Extremo | -6.414 | -183.815 | -0.166 | 21.6701  | 0.1052  | 652.9649  |
| 3013 | 0   | Extremo | 3.26   | -143.967 | 0.396  | 13.6463  | 0.1496  | 662.81    |
| 3013 | 0.5 | Extremo | 3.26   | -126.544 | 0.396  | 13.6463  | -0.0486 | 730.4377  |
| 3013 | 1   | Extremo | 3.26   | -109.122 | 0.396  | 13.6463  | -0.2468 | 789.3542  |
| 3013 | 0   | Extremo | -6.352 | -144.021 | -0.165 | 13.6472  | -0.0588 | 662.8927  |
| 3013 | 0.5 | Extremo | -6.352 | -126.598 | -0.165 | 13.6472  | 0.024   | 730.5474  |
| 3013 | 1   | Extremo | -6.352 | -109.176 | -0.165 | 13.6472  | 0.1067  | 789.4908  |
| 3014 | 0   | Extremo | 3.359  | -69.13   | 0.396  | 6.2323   | 0.1446  | 791.0563  |
| 3014 | 0.5 | Extremo | 3.359  | -51.707  | 0.396  | 6.2323   | -0.0536 | 821.2655  |
| 3014 | 1   | Extremo | 3.359  | -34.285  | 0.396  | 6.2323   | -0.2517 | 842.7635  |
| 3014 | 0   | Extremo | -6.327 | -69.183  | -0.165 | 6.2332   | -0.057  | 791.1945  |
| 3014 | 0.5 | Extremo | -6.327 | -51.761  | -0.165 | 6.2332   | 0.0255  | 821.4306  |
| 3014 | 1   | Extremo | -6.327 | -34.338  | -0.165 | 6.2332   | 0.108   | 842.9555  |
| 3015 | 0   | Extremo | 3.464  | 5.783    | 0.396  | -0.9206  | 0.1396  | 842.9356  |
| 3015 | 0.5 | Extremo | 3.464  | 23.206   | 0.396  | -0.9206  | -0.0585 | 835.6885  |
| 3015 | 1   | Extremo | 3.464  | 40.628   | 0.396  | -0.9206  | -0.2566 | 819.73    |
| 3015 | 0   | Extremo | -6.319 | 5.729    | -0.164 | -0.9197  | -0.0551 | 843.1293  |
| 3015 | 0.5 | Extremo | -6.319 | 23.152   | -0.164 | -0.91    |         |           |





|      |     |         |         |           |        |          |         |           |
|------|-----|---------|---------|-----------|--------|----------|---------|-----------|
| 3018 | 1   | Extremo | 3.769   | 265.157   | 0.395  | -23.689  | -0.2706 | 292.4163  |
| 3018 | 0   | Extremo | -6.231  | 230.259   | -0.161 | -23.687  | -0.0487 | 540.5105  |
| 3018 | 0.5 | Extremo | -6.231  | 247.681   | -0.161 | -23.687  | 0.0317  | 421.0257  |
| 3018 | 1   | Extremo | -6.231  | 265.104   | -0.161 | -23.687  | 0.1121  | 292.8295  |
| 3019 | 0   | Extremo | 3.839   | 305.344   | 0.394  | -32.692  | 0.1196  | 289.0857  |
| 3019 | 0.5 | Extremo | 3.839   | 322.766   | 0.394  | -32.692  | -0.0776 | 132.0582  |
| 3019 | 1   | Extremo | 3.839   | 340.189   | 0.394  | -32.692  | -0.2748 | -33.6806  |
| 3019 | 0   | Extremo | -6.098  | 305.291   | -0.159 | -32.6888 | -0.0459 | 289.5003  |
| 3019 | 0.5 | Extremo | -6.098  | 322.714   | -0.159 | -32.6888 | 0.0334  | 132.4991  |
| 3019 | 1   | Extremo | -6.098  | 340.136   | -0.159 | -32.6888 | 0.1127  | -33.2134  |
| 3020 | 0   | Extremo | 3.86    | 388.689   | 0.394  | -41.0063 | 0.1149  | -27.9125  |
| 3020 | 0.5 | Extremo | 3.86    | 406.111   | 0.394  | -41.0063 | -0.082  | -226.6124 |
| 3020 | 1   | Extremo | 3.86    | 423.534   | 0.394  | -41.0063 | -0.2788 | -434.0235 |
| 3020 | 0   | Extremo | -5.814  | 388.635   | -0.155 | -41.0015 | -0.0418 | -27.4461  |
| 3020 | 0.5 | Extremo | -5.814  | 406.058   | -0.155 | -41.0015 | 0.0357  | -226.1194 |
| 3020 | 1   | Extremo | -5.814  | 423.48    | -0.155 | -41.0015 | 0.1131  | -433.5039 |
| 3021 | 0   | Extremo | 3.781   | 538.334   | 0.39   | -41.5402 | 0.1105  | -391.5745 |
| 3021 | 0.5 | Extremo | 3.781   | 555.757   | 0.39   | -41.5402 | -0.0845 | -665.0972 |
| 3021 | 1   | Extremo | 3.781   | 573.179   | 0.39   | -41.5402 | -0.2796 | -947.3311 |
| 3021 | 0   | Extremo | -5.222  | 538.267   | -0.147 | -41.5347 | -0.0348 | -391.0637 |
| 3021 | 0.5 | Extremo | -5.222  | 555.69    | -0.147 | -41.5347 | 0.0385  | -664.5529 |
| 3021 | 1   | Extremo | -5.222  | 573.112   | -0.147 | -41.5347 | 0.1119  | -946.7535 |
| 3022 | 0   | Extremo | 3.488   | 1048.325  | 0.319  | -20.3477 | 0.1125  | -820.5831 |
| 3022 | 0.5 | Extremo | 3.488   | 1065.747  | 0.319  | -20.3477 | -0.0472 | -1349.101 |
| 3022 | 1   | Extremo | 3.488   | 1083.17   | 0.319  | -20.3477 | -0.2069 | -1886.33  |
| 3022 | 0   | Extremo | -3.988  | 1048.171  | -0.125 | -20.3453 | -0.0266 | -820.0323 |
| 3022 | 0.5 | Extremo | -3.988  | 1065.594  | -0.125 | -20.3453 | 0.0358  | -1348.474 |
| 3022 | 1   | Extremo | -3.988  | 1083.016  | -0.125 | -20.3453 | 0.0982  | -1885.626 |
| 3023 | 0   | Extremo | 6.473   | -1065.333 | 0.74   | 19.5546  | 0.3162  | -1886.552 |
| 3023 | 0.5 | Extremo | 6.473   | -1047.911 | 0.74   | 19.5546  | -0.0539 | -1358.241 |
| 3023 | 1   | Extremo | 6.473   | -1030.488 | 0.74   | 19.5546  | -0.4239 | -838.6416 |
| 3023 | 0   | Extremo | -12.075 | -1065.038 | -0.176 | 19.5505  | -0.0508 | -1885.85  |
| 3023 | 0.5 | Extremo | -12.075 | -1047.615 | -0.176 | 19.5505  | 0.0373  | -1357.687 |
| 3023 | 1   | Extremo | -12.075 | -1030.193 | -0.176 | 19.5505  | 0.1253  | -838.2349 |
| 3024 | 0   | Extremo | 6.209   | -555.342  | 0.679  | 40.7463  | 0.2342  | -965.8332 |
| 3024 | 0.5 | Extremo | 6.209   | -537.919  | 0.679  | 40.7463  | -0.1053 | -692.518  |
| 3024 | 1   | Extremo | 6.209   | -520.497  | 0.679  | 40.7463  | -0.4449 | -427.9139 |
| 3024 | 0   | Extremo | -10.844 | -555.133  | -0.182 | 40.7392  | -0.0454 | -965.4039 |
| 3024 | 0.5 | Extremo | -10.844 | -537.711  | -0.182 | 40.7392  | 0.0454  | -692.193  |
| 3024 | 1   | Extremo | -10.844 | -520.288  | -0.182 | 40.7392  | 0.1362  | -427.6933 |
| 3025 | 0   | Extremo | 6.182   | -405.695  | 0.681  | 40.2109  | 0.223   | -470.8067 |
| 3025 | 0.5 | Extremo | 6.182   | -388.272  | 0.681  | 40.2109  | -0.1175 | -272.315  |
| 3025 | 1   | Extremo | 6.182   | -370.85   | 0.681  | 40.2109  | -0.4581 | -82.5345  |
| 3025 | 0   | Extremo | -10.259 | -405.5    | -0.189 | 40.2045  | -0.0452 | -470.5816 |
| 3025 | 0.5 | Extremo | -10.259 | -388.077  | -0.189 | 40.2045  | 0.0494  | -272.1874 |
| 3025 | 1   | Extremo | -10.259 | -370.655  | -0.189 | 40.2045  | 0.1441  | -82.5045  |
| 3026 | 0   | Extremo | 6.271   | -322.347  | 0.683  | 31.8944  | 0.2141  | -88.7467  |
| 3026 | 0.5 | Extremo | 6.271   | -304.924  | 0.683  | 31.8944  | -0.1273 | 68.0712   |
| 3026 | 1   | Extremo | 6.271   | -287.502  | 0.683  | 31.8944  | -0.4688 | 216.1778  |
| 3026 | 0   | Extremo | -9.983  | -322.152  | -0.193 | 31.8895  | -0.044  | -88.7201  |
| 3026 | 0.5 | Extremo | -9.983  | -304.73   | -0.193 | 31.8895  | 0.0524  | 68.0004   |
| 3026 | 1   | Extremo | -9.983  | -287.307  | -0.193 | 31.8895  | 0.1487  | 216.0097  |
| 3027 | 0   | Extremo | 6.417   | -247.309  | 0.684  | 22.8886  | 0.2054  | 219.0639  |
| 3027 | 0.5 | Extremo | 6.417   | -229.886  | 0.684  | 22.8886  | -0.1364 | 338.3626  |
| 3027 | 1   | Extremo | 6.417   | -212.464  | 0.684  | 22.8886  | -0.4783 | 448.9501  |
| 3027 | 0   | Extremo | -9.86   | -247.113  | -0.195 | 22.8848  | -0.0427 | 218.8903  |
| 3027 | 0.5 | Extremo | -9.86   | -229.691  | -0.195 | 22.8848  | 0.0546  | 338.0914  |
| 3027 | 1   | Extremo | -9.86   | -212.268  | -0.195 | 22.8848  | 0.1518  | 448.5812  |
| 3028 | 0   | Extremo | 6.593   | -172.587  | 0.684  | 14.7464  | 0.1969  | 452.6055  |
| 3028 | 0.5 | Extremo | 6.593   | -155.165  | 0.684  | 14.7464  | -0.1452 | 534.5434  |
| 3028 | 1   | Extremo | 6.593   | -137.742  | 0.684  | 14.7464  | -0.4873 | 607.7701  |
| 3028 | 0   | Extremo | -9.812  | -172.392  | -0.196 | 14.7432  | -0.0413 | 452.2307  |
| 3028 | 0.5 | Extremo | -9.812  | -154.969  | -0.196 | 14.7432  | 0.0565  | 534.0708  |
| 3028 | 1   | Extremo | -9.812  | -137.547  | -0.196 | 14.7432  | 0.1543  | 607.1997  |
| 3029 | 0   | Extremo | 6.784   | -97.679   | 0.684  | 7.2798   | 0.1883  | 610.2471  |
| 3029 | 0.5 | Extremo | 6.784   | -80.257   | 0.684  | 7.2798   | -0.1539 | 654.7311  |
| 3029 | 1   | Extremo | 6.784   | -62.834   | 0.684  | 7.2798   | -0.4961 | 690.5038  |
| 3029 | 0   | Extremo | -9.802  | -97.483   | -0.196 | 7.2766   | -0.0396 | 609.6707  |
| 3029 | 0.5 | Extremo | -9.802  | -80.061   | -0.196 | 7.2766   | 0.0585  | 654.0568  |
| 3029 | 1   | Extremo | -9.802  | -62.638   | -0.196 | 7.2766   | 0.1566  | 689.7316  |
| 3030 | 0   | Extremo | 6.982   | -22.713   | 0.685  | 0.1107   | 0.1797  | 691.4481  |
| 3030 | 0.5 | Extremo | 6.982   | -5.29     | 0.685  | 0.1107   | -0.1626 | 698.4488  |

|      |     |         |         |           |        |          |         |           |
|------|-----|---------|---------|-----------|--------|----------|---------|-----------|
| 3030 | 1   | Extremo | 6.982   | 12.132    | 0.685  | 0.1107   | -0.5049 | 696.7382  |
| 3030 | 0   | Extremo | -9.806  | -22.517   | -0.196 | 0.1073   | -0.0377 | 690.6699  |
| 3030 | 0.5 | Extremo | -9.806  | -5.094    | -0.196 | 0.1073   | 0.0605  | 697.5728  |
| 3030 | 1   | Extremo | -9.806  | 12.328    | -0.196 | 0.1073   | 0.1587  | 695.7644  |
| 3031 | 0   | Extremo | 7.183   | 52.257    | 0.685  | -7.0494  | 0.1711  | 696.1118  |
| 3031 | 0.5 | Extremo | 7.183   | 69.679    | 0.685  | -7.0494  | -0.1712 | 665.6279  |
| 3031 | 1   | Extremo | 7.183   | 87.102    | 0.685  | -7.0494  | -0.5136 | 626.4327  |
| 3031 | 0   | Extremo | -9.811  | 52.452    | -0.196 | -7.0533  | -0.0356 | 695.1318  |
| 3031 | 0.5 | Extremo | -9.811  | 69.875    | -0.196 | -7.0533  | 0.0625  | 664.5501  |
| 3031 | 1   | Extremo | -9.811  | 87.297    | -0.196 | -7.0533  | 0.1606  | 625.2572  |
| 3032 | 0   | Extremo | 7.38    | 127.177   | 0.685  | -14.4841 | 0.1625  | 624.2763  |
| 3032 | 0.5 | Extremo | 7.38    | 144.599   | 0.685  | -14.4841 | -0.1798 | 556.3323  |
| 3032 | 1   | Extremo | 7.38    | 162.022   | 0.685  | -14.4841 | -0.5221 | 479.677   |
| 3032 | 0   | Extremo | -9.8    | 127.372   | -0.196 | -14.4892 | -0.0334 | 623.0945  |
| 3032 | 0.5 | Extremo | -9.8    | 144.794   | -0.196 | -14.4892 | 0.0644  | 555.053   |
| 3032 | 1   | Extremo | -9.8    | 162.217   | -0.196 | -14.4892 | 0.1622  | 478.3002  |
| 3033 | 0   | Extremo | 7.568   | 201.931   | 0.684  | -22.5564 | 0.1539  | 476.3386  |
| 3033 | 0.5 | Extremo | 7.568   | 219.354   | 0.684  | -22.5564 | -0.1883 | 371.0175  |
| 3033 | 1   | Extremo | 7.568   | 236.776   | 0.684  | -22.5564 | -0.5304 | 256.985   |
| 3033 | 0   | Extremo | -9.753  | 202.125   | -0.194 | -22.5639 | -0.0309 | 474.9556  |
| 3033 | 0.5 | Extremo | -9.753  | 219.547   | -0.194 | -22.5639 | 0.0664  | 369.5375  |
| 3033 | 1   | Extremo | -9.753  | 236.97    | -0.194 | -22.5639 | 0.1636  | 255.4083  |
| 3034 | 0   | Extremo | 7.733   | 277.023   | 0.684  | -31.4375 | 0.1453  | 254.362   |
| 3034 | 0.5 | Extremo | 7.733   | 294.445   | 0.684  | -31.4375 | -0.1965 | 111.4949  |
| 3034 | 1   | Extremo | 7.733   | 311.868   | 0.684  | -31.4375 | -0.5383 | -40.0835  |
| 3034 | 0   | Extremo | -9.631  | 277.214   | -0.193 | -31.4494 | -0.0278 | 252.7804  |
| 3034 | 0.5 | Extremo | -9.631  | 294.637   | -0.193 | -31.4494 | 0.0685  | 109.8176  |
| 3034 | 1   | Extremo | -9.631  | 312.059   | -0.193 | -31.4494 | 0.1648  | -41.8565  |
| 3035 | 0   | Extremo | 7.85    | 360.249   | 0.683  | -39.5975 | 0.1372  | -33.8884  |
| 3035 | 0.5 | Extremo | 7.85    | 377.672   | 0.683  | -39.5975 | -0.2044 | -218.3686 |
| 3035 | 1   | Extremo | 7.85    | 395.094   | 0.683  | -39.5975 | -0.546  | -411.56   |
| 3035 | 0   | Extremo | -9.357  | 360.443   | -0.189 | -39.6151 | -0.0232 | -35.6582  |
| 3035 | 0.5 | Extremo | -9.357  | 377.865   | -0.189 | -39.6151 | 0.0713  | -220.2352 |
| 3035 | 1   | Extremo | -9.357  | 395.288   | -0.189 | -39.6151 | 0.1658  | -413.5235 |
| 3036 | 0   | Extremo | 7.867   | 508.059   | 0.68   | -40.1153 | 0.1298  | -369.718  |
| 3036 | 0.5 | Extremo | 7.867   | 525.482   | 0.68   | -40.1153 | -0.21   | -628.1034 |
| 3036 | 1   | Extremo | 7.867   | 542.904   | 0.68   | -40.1153 | -0.5498 | -895.1999 |
| 3036 | 0   | Extremo | -8.774  | 508.304   | -0.181 | -40.1353 | -0.0157 | -371.6485 |
| 3036 | 0.5 | Extremo | -8.774  | 525.727   | -0.181 | -40.1353 | 0.0749  | -630.1561 |
| 3036 | 1   | Extremo | -8.774  | 543.149   | -0.181 | -40.1353 | 0.1656  | -897.375  |
| 3037 | 0   | Extremo | 7.674   | 1006.624  | 0.593  | -19.4176 | 0.1304  | -771.4001 |
| 3037 | 0.5 | Extremo | 7.674   | 1024.046  | 0.593  | -19.4176 | -0.1661 | -1279.068 |
| 3037 | 1   | Extremo | 7.674   | 1041.469  | 0.593  | -19.4176 | -0.4626 | -1795.446 |
| 3037 | 0   | Extremo | -7.548  | 1007.194  | -0.166 | -19.4262 | -0.0062 | -773.4744 |
| 3037 | 0.5 | Extremo | -7.548  | 1024.616  | -0.166 | -19.4262 | 0.0769  | -1281.427 |
| 3037 | 1   | Extremo | -7.548  | 1042.039  | -0.166 | -19.4262 | 0.1599  | -1798.091 |
| 3038 | 0   | Extremo | 10.768  | -1048.334 | 1.116  | 19.5199  | 0.3808  | -1795.347 |
| 3038 | 0.5 | Extremo | 10.768  | -1030.911 | 1.116  | 19.5199  | -0.177  | -1275.536 |
| 3038 | 1   | Extremo | 10.768  | -1013.489 | 1.116  | 19.5199  | -0.7347 | -764.4359 |
| 3038 | 0   | Extremo | -15.648 | -1049.449 | -0.176 | 19.5359  | -0.0092 | -1797.983 |
| 3038 | 0.5 | Extremo | -15.648 | -1032.027 | -0.176 | 19.5359  | 0.0786  | -1277.614 |
| 3038 | 1   | Extremo | -15.648 | -1014.604 | -0.176 | 19.5359  | 0.1664  | -765.9566 |
| 3039 | 0   | Extremo | 10.61   | -549.769  | 1.039  | 40.218   | 0.2759  | -888.0371 |
| 3039 | 0.5 | Extremo | 10.61   | -532.347  | 1.039  | 40.218   | -0.2434 | -617.5081 |
| 3039 | 1   | Extremo | 10.61   | -514.924  | 1.039  | 40.218   | -0.7628 | -355.6902 |
| 3039 | 0   | Extremo | -14.422 | -550.56   | -0.188 |          |         |           |



|      |     |         |         |           |        |          |          |           |
|------|-----|---------|---------|-----------|--------|----------|----------|-----------|
| 3042 | 1   | Extremo | 11.153  | -208.796  | 1.043  | 22.6647  | -0.8112  | 511.5591  |
| 3042 | 0   | Extremo | -13.447 | -244.381  | -0.201 | 22.6802  | -0.0089  | 286.0174  |
| 3042 | 0.5 | Extremo | -13.447 | -226.958  | -0.201 | 22.6802  | 0.0916   | 403.8522  |
| 3042 | 1   | Extremo | -13.447 | -209.536  | -0.201 | 22.6802  | 0.1921   | 512.9758  |
| 3043 | 0   | Extremo | 11.442  | -168.887  | 1.044  | 14.5969  | 0.2189   | 515.0979  |
| 3043 | 0.5 | Extremo | 11.442  | -151.465  | 1.044  | 14.5969  | -0.303   | 595.186   |
| 3043 | 1   | Extremo | 11.442  | -134.042  | 1.044  | 14.5969  | -0.8249  | 666.5628  |
| 3043 | 0   | Extremo | -13.402 | -169.628  | -0.202 | 14.6104  | -0.0075  | 516.5368  |
| 3043 | 0.5 | Extremo | -13.402 | -152.206  | -0.202 | 14.6104  | 0.0936   | 596.9952  |
| 3043 | 1   | Extremo | -13.402 | -134.783  | -0.202 | 14.6104  | 0.1947   | 668.7424  |
| 3044 | 0   | Extremo | 11.748  | -93.967   | 1.044  | 7.1701   | 0.2057   | 668.9215  |
| 3044 | 0.5 | Extremo | 11.748  | -76.545   | 1.044  | 7.1701   | -0.3164  | 711.5495  |
| 3044 | 1   | Extremo | 11.748  | -59.122   | 1.044  | 7.1701   | -0.8384  | 745.4663  |
| 3044 | 0   | Extremo | -13.393 | -94.709   | -0.203 | 7.1829   | -0.0057  | 671.1234  |
| 3044 | 0.5 | Extremo | -13.393 | -77.286   | -0.203 | 7.1829   | 0.0956   | 714.1221  |
| 3044 | 1   | Extremo | -13.393 | -59.864   | -0.203 | 7.1829   | 0.197    | 748.4095  |
| 3045 | 0   | Extremo | 12.061  | -18.997   | 1.044  | 0.0238   | 0.1924   | 746.2982  |
| 3045 | 0.5 | Extremo | 12.061  | -1.575    | 1.044  | 0.0238   | -0.3297  | 751.4411  |
| 3045 | 1   | Extremo | 12.061  | 15.848    | 1.044  | 0.0238   | -0.8519  | 747.8728  |
| 3045 | 0   | Extremo | -13.4   | -19.738   | -0.203 | 0.0372   | -0.0038  | 749.2639  |
| 3045 | 0.5 | Extremo | -13.4   | -2.316    | -0.203 | 0.0372   | 0.0977   | 754.7774  |
| 3045 | 1   | Extremo | -13.4   | 15.107    | -0.203 | 0.0372   | 0.1992   | 751.5797  |
| 3046 | 0   | Extremo | 12.377  | 55.975    | 1.044  | -7.1191  | 0.1792   | 747.1393  |
| 3046 | 0.5 | Extremo | 12.377  | 73.397    | 1.044  | -7.1191  | -0.343   | 714.7964  |
| 3046 | 1   | Extremo | 12.377  | 90.82     | 1.044  | -7.1191  | -0.8652  | 673.7421  |
| 3046 | 0   | Extremo | -13.406 | 55.234    | -0.203 | -7.1037  | -0.0016  | 750.8692  |
| 3046 | 0.5 | Extremo | -13.406 | 72.656    | -0.203 | -7.1037  | 0.0998   | 718.8965  |
| 3046 | 1   | Extremo | -13.406 | 90.079    | -0.203 | -7.1037  | 0.2012   | 678.2127  |
| 3047 | 0   | Extremo | 12.69   | 130.901   | 1.044  | -14.5342 | 0.1659   | 671.483   |
| 3047 | 0.5 | Extremo | 12.69   | 148.323   | 1.044  | -14.5342 | -0.3562  | 601.6769  |
| 3047 | 1   | Extremo | 12.69   | 165.746   | 1.044  | -14.5342 | -0.8783  | 523.1596  |
| 3047 | 0   | Extremo | -13.398 | 130.162   | -0.202 | -14.5143 | 0.000739 | 675.9769  |
| 3047 | 0.5 | Extremo | -13.398 | 147.584   | -0.202 | -14.5143 | 0.1019   | 606.5404  |
| 3047 | 1   | Extremo | -13.398 | 165.007   | -0.202 | -14.5143 | 0.203    | 528.3926  |
| 3048 | 0   | Extremo | 12.993  | 205.67    | 1.044  | -22.5763 | 0.1526   | 519.7199  |
| 3048 | 0.5 | Extremo | 12.993  | 223.092   | 1.044  | -22.5763 | -0.3693  | 412.5293  |
| 3048 | 1   | Extremo | 12.993  | 240.515   | 1.044  | -22.5763 | -0.8912  | 296.6274  |
| 3048 | 0   | Extremo | -13.352 | 204.935   | -0.201 | -22.5476 | 0.0033   | 524.9761  |
| 3048 | 0.5 | Extremo | -13.352 | 222.358   | -0.201 | -22.5476 | 0.1039   | 418.1528  |
| 3048 | 1   | Extremo | -13.352 | 239.78    | -0.201 | -22.5476 | 0.2045   | 302.6182  |
| 3049 | 0   | Extremo | 13.274  | 280.788   | 1.043  | -31.4082 | 0.1395   | 293.8891  |
| 3049 | 0.5 | Extremo | 13.274  | 298.21    | 1.043  | -31.4082 | -0.3821  | 149.1397  |
| 3049 | 1   | Extremo | 13.274  | 315.633   | 1.043  | -31.4082 | -0.9037  | -4.321    |
| 3049 | 0   | Extremo | -13.231 | 280.061   | -0.199 | -31.364  | 0.0065   | 299.8974  |
| 3049 | 0.5 | Extremo | -13.231 | 297.483   | -0.199 | -31.364  | 0.1062   | 155.5114  |
| 3049 | 1   | Extremo | -13.231 | 314.906   | -0.199 | -31.364  | 0.2059   | 2.4142    |
| 3050 | 0   | Extremo | 13.509  | 363.997   | 1.043  | -39.5028 | 0.1268   | 1.6783    |
| 3050 | 0.5 | Extremo | 13.509  | 381.419   | 1.043  | -39.5028 | -0.3945  | -184.6756 |
| 3050 | 1   | Extremo | 13.509  | 398.842   | 1.043  | -39.5028 | -0.9158  | -379.7407 |
| 3050 | 0   | Extremo | -12.957 | 363.259   | -0.196 | -39.4385 | 0.0112   | 8.4004    |
| 3050 | 0.5 | Extremo | -12.957 | 380.682   | -0.196 | -39.4385 | 0.1092   | -177.5848 |
| 3050 | 1   | Extremo | -12.957 | 398.104   | -0.196 | -39.4385 | 0.2071   | -372.2813 |
| 3051 | 0   | Extremo | 13.645  | 511.302   | 1.039  | -39.9852 | 0.1153   | -338.3961 |
| 3051 | 0.5 | Extremo | 13.645  | 528.725   | 1.039  | -39.9852 | -0.4041  | -598.4029 |
| 3051 | 1   | Extremo | 13.645  | 546.147   | 1.039  | -39.9852 | -0.9235  | -867.1209 |
| 3051 | 0   | Extremo | -12.373 | 510.368   | -0.188 | -39.9141 | 0.019    | -331.0635 |
| 3051 | 0.5 | Extremo | -12.373 | 527.79    | -0.188 | -39.9141 | 0.1132   | -590.6031 |
| 3051 | 1   | Extremo | -12.373 | 545.213   | -0.188 | -39.9141 | 0.2074   | -858.8539 |
| 3052 | 0   | Extremo | 13.572  | 1006.591  | 0.938  | -19.3898 | 0.1131   | -744.5043 |
| 3052 | 0.5 | Extremo | 13.572  | 1024.013  | 0.938  | -19.3898 | -0.356   | -1252.155 |
| 3052 | 1   | Extremo | 13.572  | 1041.436  | 0.938  | -19.3898 | -0.8252  | -1768.518 |
| 3052 | 0   | Extremo | -11.143 | 1004.41   | -0.181 | -19.3664 | 0.0297   | -736.622  |
| 3052 | 0.5 | Extremo | -11.143 | 1021.832  | -0.181 | -19.3664 | 0.12     | -1243.183 |
| 3052 | 1   | Extremo | -11.143 | 1039.255  | -0.181 | -19.3664 | 0.2103   | -1758.454 |
| 3053 | 0   | Extremo | 16.799  | -1031.332 | 1.548  | 19.3131  | 0.4023   | -1768.669 |
| 3053 | 0.5 | Extremo | 16.799  | -1013.909 | 1.548  | 19.3131  | -0.3719  | -1257.359 |
| 3053 | 1   | Extremo | 16.799  | -996.487  | 1.548  | 19.3131  | -1.1462  | -754.7596 |
| 3053 | 0   | Extremo | -19.249 | -1027.074 | -0.143 | 19.2381  | 0.05     | -1758.634 |
| 3053 | 0.5 | Extremo | -19.249 | -1009.652 | -0.143 | 19.2381  | 0.1216   | -1249.453 |
| 3053 | 1   | Extremo | -19.249 | -992.229  | -0.143 | 19.2381  | 0.1933   | -748.9822 |
| 3054 | 0   | Extremo | 16.768  | -536.043  | 1.458  | 39.9078  | 0.2761   | -877.6785 |
| 3054 | 0.5 | Extremo | 16.768  | -518.621  | 1.458  | 39.9078  | -0.4527  | -614.0126 |

|      |     |         |         |          |        |          |         |           |
|------|-----|---------|---------|----------|--------|----------|---------|-----------|
| 3054 | 1   | Extremo | 16.768  | -501.198 | 1.458  | 39.9078  | -1.1815 | -359.058  |
| 3054 | 0   | Extremo | -18.017 | -533.032 | -0.163 | 39.7849  | 0.0389  | -871.5737 |
| 3054 | 0.5 | Extremo | -18.017 | -515.61  | -0.163 | 39.7849  | 0.1205  | -609.4131 |
| 3054 | 1   | Extremo | -18.017 | -498.187 | -0.163 | 39.7849  | 0.2021  | -355.9637 |
| 3055 | 0   | Extremo | 16.981  | -388.738 | 1.459  | 39.4238  | 0.2532  | -400.7052 |
| 3055 | 0.5 | Extremo | 16.981  | -371.315 | 1.459  | 39.4238  | -0.4763 | -210.692  |
| 3055 | 1   | Extremo | 16.981  | -353.893 | 1.459  | 39.4238  | -1.2058 | -29.3901  |
| 3055 | 0   | Extremo | -17.428 | -385.924 | -0.171 | 39.3074  | 0.0381  | -397.5414 |
| 3055 | 0.5 | Extremo | -17.428 | -368.501 | -0.171 | 39.3074  | 0.1237  | -208.9351 |
| 3055 | 1   | Extremo | -17.428 | -351.079 | -0.171 | 39.3074  | 0.2094  | -29.0401  |
| 3056 | 0   | Extremo | 17.313  | -305.529 | 1.461  | 31.3262  | 0.2337  | -35.6925  |
| 3056 | 0.5 | Extremo | 17.313  | -288.106 | 1.461  | 31.3262  | -0.4966 | 112.7163  |
| 3056 | 1   | Extremo | 17.313  | -270.684 | 1.461  | 31.3262  | -1.2268 | 252.4138  |
| 3056 | 0   | Extremo | -17.148 | -302.725 | -0.175 | 31.2296  | 0.0387  | -35.3867  |
| 3056 | 0.5 | Extremo | -17.148 | -285.303 | -0.175 | 31.2296  | 0.1262  | 111.6204  |
| 3056 | 1   | Extremo | -17.148 | -267.88  | -0.175 | 31.2296  | 0.2138  | 249.9162  |
| 3057 | 0   | Extremo | 17.705  | -230.412 | 1.461  | 22.4894  | 0.2145  | 254.8482  |
| 3057 | 0.5 | Extremo | 17.705  | -212.989 | 1.461  | 22.4894  | -0.5159 | 365.6984  |
| 3057 | 1   | Extremo | 17.705  | -195.567 | 1.461  | 22.4894  | -1.2463 | 467.8374  |
| 3057 | 0   | Extremo | -17.02  | -227.6   | -0.177 | 22.4076  | 0.0394  | 252.2756  |
| 3057 | 0.5 | Extremo | -17.02  | -210.178 | -0.177 | 22.4076  | 0.1281  | 361.7202  |
| 3057 | 1   | Extremo | -17.02  | -192.755 | -0.177 | 22.4076  | 0.2169  | 462.4535  |
| 3058 | 0   | Extremo | 18.129  | -155.644 | 1.46   | 14.4392  | 0.1955  | 470.9715  |
| 3058 | 0.5 | Extremo | 18.129  | -138.221 | 1.46   | 14.4392  | -0.5348 | 544.4377  |
| 3058 | 1   | Extremo | 18.129  | -120.799 | 1.46   | 14.4392  | -1.265  | 609.1927  |
| 3058 | 0   | Extremo | -16.966 | -152.827 | -0.179 | 14.3652  | 0.0402  | 465.5067  |
| 3058 | 0.5 | Extremo | -16.966 | -135.405 | -0.179 | 14.3652  | 0.1299  | 537.5648  |
| 3058 | 1   | Extremo | -16.966 | -117.982 | -0.179 | 14.3652  | 0.2195  | 600.9116  |
| 3059 | 0   | Extremo | 18.569  | -80.72   | 1.46   | 7.0101   | 0.1764  | 611.1431  |
| 3059 | 0.5 | Extremo | 18.569  | -63.298  | 1.46   | 7.0101   | -0.5536 | 647.1477  |
| 3059 | 1   | Extremo | 18.569  | -45.875  | 1.46   | 7.0101   | -1.2835 | 674.441   |
| 3059 | 0   | Extremo | -16.949 | -77.901  | -0.181 | 6.9388   | 0.0413  | 602.7806  |
| 3059 | 0.5 | Extremo | -16.949 | -60.479  | -0.181 | 6.9388   | 0.1316  | 637.3757  |
| 3059 | 1   | Extremo | -16.949 | -43.056  | -0.181 | 6.9388   | 0.2219  | 663.2595  |
| 3060 | 0   | Extremo | 19.017  | -5.756   | 1.459  | -0.1583  | 0.1571  | 674.86    |
| 3060 | 0.5 | Extremo | 19.017  | 11.667   | 1.459  | -0.1583  | -0.5723 | 673.3823  |
| 3060 | 1   | Extremo | 19.017  | 29.089   | 1.459  | -0.1583  | -1.3016 | 663.1932  |
| 3060 | 0   | Extremo | -16.947 | -2.935   | -0.182 | -0.2304  | 0.0425  | 663.5969  |
| 3060 | 0.5 | Extremo | -16.947 | 14.488   | -0.182 | -0.2304  | 0.1334  | 660.7088  |
| 3060 | 1   | Extremo | -16.947 | 31.91    | -0.182 | -0.2304  | 0.2244  | 649.1094  |
| 3061 | 0   | Extremo | 19.468  | 69.196   | 1.457  | -7.3529  | 0.1377  | 662.0373  |
| 3061 | 0.5 | Extremo | 19.468  | 86.618   | 1.457  | -7.3529  | -0.5909 | 623.0837  |
| 3061 | 1   | Extremo | 19.468  | 104.041  | 1.457  | -7.3529  | -1.3195 | 575.4189  |
| 3061 | 0   | Extremo | -16.944 | 72.018   | -0.183 | -7.4297  | 0.0438  | 647.871   |
| 3061 | 0.5 | Extremo | -16.944 | 89.44    | -0.183 | -7.4297  | 0.1353  | 607.5064  |
| 3061 | 1   | Extremo | -16.944 | 106.863  | -0.183 | -7.4297  | 0.2268  | 558.4305  |
| 3062 | 0   | Extremo | 19.918  | 144.069  | 1.455  | -14.8744 | 0.1182  | 572.723   |
| 3062 | 0.5 | Extremo | 19.918  | 161.491  | 1.455  | -14.8744 | -0.6094 | 496.3329  |
| 3062 | 1   | Extremo | 19.918  | 178.914  | 1.455  | -14.8744 | -1.3369 | 411.2315  |
| 3062 | 0   | Extremo | -16.925 | 146.891  | -0.184 | -14.9623 | 0.0452  | 555.6509  |
| 3062 | 0.5 | Extremo | -16.925 | 164.313  | -0.184 | -14.9623 | 0.1371  | 477.8499  |
| 3062 | 1   | Extremo | -16.925 | 181.736  | -0.184 | -14.9623 | 0.2291  | 391.3377  |
| 3063 | 0   | Extremo | 20.359  | 218.715  | 1.452  | -23.1248 | 0.0984  | 407.3536  |
| 3063 | 0.5 | Extremo | 20.359  | 236.137  | 1.452  | -23.1248 | -0.6277 | 293.6406  |
| 3063 | 1   | Extremo | 20.359  | 253.56   | 1.452  | -23.1248 | -1.     |           |



|      |     |         |         |           |        |          |         |           |
|------|-----|---------|---------|-----------|--------|----------|---------|-----------|
| 3066 | 1   | Extremo | 21.43   | 562.72    | 1.434  | -41.7285 | -1.3945 | -1032.438 |
| 3066 | 0   | Extremo | -15.85  | 531.608   | -0.182 | -41.8799 | 0.0575  | -515.1171 |
| 3066 | 0.5 | Extremo | -15.85  | 549.03    | -0.182 | -41.8799 | 0.1486  | -785.2767 |
| 3066 | 1   | Extremo | -15.85  | 566.453   | -0.182 | -41.8799 | 0.2397  | -1064.148 |
| 3067 | 0   | Extremo | 21.502  | 1047.187  | 1.318  | -20.464  | 0.0309  | -902.2711 |
| 3067 | 0.5 | Extremo | 21.502  | 1064.609  | 1.318  | -20.464  | -0.6279 | -1430.22  |
| 3067 | 1   | Extremo | 21.502  | 1082.032  | 1.318  | -20.464  | -1.2867 | -1966.88  |
| 3067 | 0   | Extremo | -14.602 | 1055.934  | -0.188 | -20.3384 | 0.0668  | -932.4686 |
| 3067 | 0.5 | Extremo | -14.602 | 1073.356  | -0.188 | -20.3384 | 0.161   | -1464.791 |
| 3067 | 1   | Extremo | -14.602 | 1090.779  | -0.188 | -20.3384 | 0.2551  | -2005.825 |
| 3068 | 0   | Extremo | 24.891  | -1116.11  | 1.98   | 19.8664  | 0.3412  | -1966.315 |
| 3068 | 0.5 | Extremo | 24.891  | -1098.687 | 1.98   | 19.8664  | -0.6489 | -1412.616 |
| 3068 | 1   | Extremo | 24.891  | -1081.265 | 1.98   | 19.8664  | -1.639  | -867.6273 |
| 3068 | 0   | Extremo | -22.699 | -1132.792 | -0.104 | 20.4801  | 0.1107  | -2005.189 |
| 3068 | 0.5 | Extremo | -22.699 | -1115.37  | -0.104 | 20.4801  | 0.1625  | -1443.148 |
| 3068 | 1   | Extremo | -22.699 | -1097.947 | -0.104 | 20.4801  | 0.2143  | -889.8188 |
| 3069 | 0   | Extremo | 25.013  | -596.798  | 1.869  | 41.1305  | 0.1934  | -996.6628 |
| 3069 | 0.5 | Extremo | 25.013  | -579.376  | 1.869  | 41.1305  | -0.741  | -702.6194 |
| 3069 | 1   | Extremo | 25.013  | -561.953  | 1.869  | 41.1305  | -1.6754 | -417.2872 |
| 3069 | 0   | Extremo | -21.442 | -608.467  | -0.141 | 42.0192  | 0.0855  | -1020.225 |
| 3069 | 0.5 | Extremo | -21.442 | -591.045  | -0.141 | 42.0192  | 0.1557  | -720.3474 |
| 3069 | 1   | Extremo | -21.442 | -573.622  | -0.141 | 42.0192  | 0.226   | -429.1807 |
| 3070 | 0   | Extremo | 25.385  | -445.837  | 1.856  | 40.3306  | 0.1582  | -459.9879 |
| 3070 | 0.5 | Extremo | 25.385  | -428.414  | 1.856  | 40.3306  | -0.7699 | -241.4252 |
| 3070 | 1   | Extremo | 25.385  | -410.992  | 1.856  | 40.3306  | -1.698  | -31.5737  |
| 3070 | 0   | Extremo | -20.826 | -456.668  | -0.16  | 41.2525  | 0.0786  | -472.25   |
| 3070 | 0.5 | Extremo | -20.826 | -439.245  | -0.16  | 41.2525  | 0.1586  | -248.2717 |
| 3070 | 1   | Extremo | -20.826 | -421.823  | -0.16  | 41.2525  | 0.2385  | -33.0047  |
| 3071 | 0   | Extremo | 25.882  | -362.537  | 1.84   | 31.7261  | 0.1252  | -36.7033  |
| 3071 | 0.5 | Extremo | 25.882  | -345.114  | 1.84   | 31.7261  | -0.7949 | 140.2095  |
| 3071 | 1   | Extremo | 25.882  | -327.692  | 1.84   | 31.7261  | -1.715  | 308.4111  |
| 3071 | 0   | Extremo | -20.515 | -373.292  | -0.178 | 32.5996  | 0.0724  | -38.0596  |
| 3071 | 0.5 | Extremo | -20.515 | -355.869  | -0.178 | 32.5996  | 0.1612  | 144.2305  |
| 3071 | 1   | Extremo | -20.515 | -338.447  | -0.178 | 32.5996  | 0.2499  | 317.8094  |
| 3072 | 0   | Extremo | 26.446  | -287.626  | 1.818  | 22.5278  | 0.0905  | 312.6151  |
| 3072 | 0.5 | Extremo | 26.446  | -270.204  | 1.818  | 22.5278  | -0.8185 | 452.0726  |
| 3072 | 1   | Extremo | 26.446  | -252.781  | 1.818  | 22.5278  | -1.7274 | 582.8188  |
| 3072 | 0   | Extremo | -20.353 | -298.397  | -0.198 | 23.3474  | 0.0647  | 322.2074  |
| 3072 | 0.5 | Extremo | -20.353 | -280.975  | -0.198 | 23.3474  | 0.1635  | 467.0503  |
| 3072 | 1   | Extremo | -20.353 | -263.552  | -0.198 | 23.3474  | 0.2623  | 603.1821  |
| 3073 | 0   | Extremo | 27.049  | -212.965  | 1.789  | 14.2846  | 0.0534  | 587.8335  |
| 3073 | 0.5 | Extremo | 27.049  | -195.543  | 1.789  | 14.2846  | -0.8411 | 689.9605  |
| 3073 | 1   | Extremo | 27.049  | -178.12   | 1.789  | 14.2846  | -1.7356 | 783.3762  |
| 3073 | 0   | Extremo | -20.262 | -223.76   | -0.222 | 15.0546  | 0.0551  | 608.4109  |
| 3073 | 0.5 | Extremo | -20.262 | -206.337  | -0.222 | 15.0546  | 0.166   | 715.9351  |
| 3073 | 1   | Extremo | -20.262 | -188.915  | -0.222 | 15.0546  | 0.2769  | 814.7481  |
| 3074 | 0   | Extremo | 27.679  | -138.06   | 1.752  | 6.784    | 0.0129  | 787.2158  |
| 3074 | 0.5 | Extremo | 27.679  | -120.637  | 1.752  | 6.784    | -0.863  | 851.8899  |
| 3074 | 1   | Extremo | 27.679  | -103.215  | 1.752  | 6.784    | -1.7388 | 907.8528  |
| 3074 | 0   | Extremo | -20.202 | -148.888  | -0.252 | 7.4959   | 0.0432  | 818.797   |
| 3074 | 0.5 | Extremo | -20.202 | -131.466  | -0.252 | 7.4959   | 0.169   | 888.8854  |
| 3074 | 1   | Extremo | -20.202 | -114.043  | -0.252 | 7.4959   | 0.2947  | 950.2626  |
| 3075 | 0   | Extremo | 28.333  | -63.038   | 1.704  | -0.3571  | -0.0319 | 910.1654  |
| 3075 | 0.5 | Extremo | 28.333  | -45.615   | 1.704  | -0.3571  | -0.8839 | 937.3287  |
| 3075 | 1   | Extremo | 28.333  | -28.193   | 1.704  | -0.3571  | -1.7358 | 955.7807  |
| 3075 | 0   | Extremo | -20.15  | -73.927   | -0.289 | 0.2681   | 0.0282  | 952.772   |
| 3075 | 0.5 | Extremo | -20.15  | -56.504   | -0.289 | 0.2681   | 0.1725  | 985.3797  |
| 3075 | 1   | Extremo | -20.15  | -39.082   | -0.289 | 0.2681   | 0.3169  | 1009.2762 |
| 3076 | 0   | Extremo | 29.007  | 12.076    | 1.643  | -7.3988  | -0.0822 | 956.54    |
| 3076 | 0.5 | Extremo | 29.007  | 29.498    | 1.643  | -7.3988  | -0.9036 | 946.1464  |
| 3076 | 1   | Extremo | 29.007  | 46.921    | 1.643  | -7.3988  | -1.725  | 927.0416  |
| 3076 | 0   | Extremo | -20.091 | 1.077     | -0.335 | -6.9172  | 0.0092  | 1010.213  |
| 3076 | 0.5 | Extremo | -20.091 | 18.5      | -0.335 | -6.9172  | 0.1767  | 1005.3188 |
| 3076 | 1   | Extremo | -20.091 | 35.922    | -0.335 | -6.9172  | 0.3443  | 991.7133  |
| 3077 | 0   | Extremo | 29.706  | 87.31     | 1.564  | -14.5483 | -0.1396 | 926.2927  |
| 3077 | 0.5 | Extremo | 29.706  | 104.733   | 1.564  | -14.5483 | -0.9217 | 878.2819  |
| 3077 | 1   | Extremo | 29.706  | 122.155   | 1.564  | -14.5483 | -1.7038 | 821.5598  |
| 3077 | 0   | Extremo | -20.007 | 76.116    | -0.393 | -14.31   | -0.0149 | 991.1126  |
| 3077 | 0.5 | Extremo | -20.007 | 93.539    | -0.393 | -14.31   | 0.1817  | 948.6989  |
| 3077 | 1   | Extremo | -20.007 | 110.961   | -0.393 | -14.31   | 0.3783  | 897.5739  |
| 3078 | 0   | Extremo | 30.433  | 162.708   | 1.463  | -22.0374 | -0.206  | 819.595   |
| 3078 | 0.5 | Extremo | 30.433  | 180.13    | 1.463  | -22.0374 | -0.9377 | 733.8855  |

|      |     |         |         |          |        |          |         |           |
|------|-----|---------|---------|----------|--------|----------|---------|-----------|
| 3078 | 1   | Extremo | 30.433  | 197.553  | 1.463  | -22.0374 | -1.6694 | 639.4647  |
| 3078 | 0   | Extremo | -19.877 | 151.174  | -0.466 | -22.2083 | -0.0453 | 895.7083  |
| 3078 | 0.5 | Extremo | -19.877 | 168.596  | -0.466 | -22.2083 | 0.1875  | 815.7658  |
| 3078 | 1   | Extremo | -19.877 | 186.019  | -0.466 | -22.2083 | 0.4204  | 727.1119  |
| 3079 | 0   | Extremo | 31.191  | 238.978  | 1.333  | -29.9409 | -0.2841 | 637.835   |
| 3079 | 0.5 | Extremo | 31.191  | 256.4    | 1.333  | -29.9409 | -0.9508 | 513.9905  |
| 3079 | 1   | Extremo | 31.191  | 273.823  | 1.333  | -29.9409 | -1.6175 | 381.4348  |
| 3079 | 0   | Extremo | -19.663 | 226.851  | -0.556 | -30.7823 | -0.0838 | 725.4803  |
| 3079 | 0.5 | Extremo | -19.663 | 244.274  | -0.556 | -30.7823 | 0.1945  | 607.6989  |
| 3079 | 1   | Extremo | -19.663 | 261.696  | -0.556 | -30.7823 | 0.4727  | 481.2064  |
| 3080 | 0   | Extremo | 31.986  | 323.425  | 1.166  | -37.148  | -0.3773 | 386.6902  |
| 3080 | 0.5 | Extremo | 31.986  | 340.848  | 1.166  | -37.148  | -0.9602 | 220.622   |
| 3080 | 1   | Extremo | 31.986  | 358.27   | 1.166  | -37.148  | -1.5432 | 45.8425   |
| 3080 | 0   | Extremo | -19.295 | 310.09   | -0.669 | -39.0306 | -0.1318 | 486.1809  |
| 3080 | 0.5 | Extremo | -19.295 | 327.512  | -0.669 | -39.0306 | 0.2027  | 326.7804  |
| 3080 | 1   | Extremo | -19.295 | 344.935  | -0.669 | -39.0306 | 0.5372  | 158.6687  |
| 3081 | 0   | Extremo | 32.818  | 465.283  | 0.946  | -38.9862 | -0.4921 | 78.9436   |
| 3081 | 0.5 | Extremo | 32.818  | 482.705  | 0.946  | -38.9862 | -0.9652 | -158.0533 |
| 3081 | 1   | Extremo | 32.818  | 500.128  | 0.946  | -38.9862 | -1.4384 | -403.7615 |
| 3081 | 0   | Extremo | -18.634 | 448.295  | -0.809 | -42.3113 | -0.1918 | 190.7015  |
| 3081 | 0.5 | Extremo | -18.634 | 465.717  | -0.809 | -42.3113 | 0.2128  | -37.8014  |
| 3081 | 1   | Extremo | -18.634 | 483.14   | -0.809 | -42.3113 | 0.6174  | -275.0156 |
| 3082 | 0   | Extremo | 33.675  | 902.383  | 0.561  | -26.278  | -0.6413 | -312.882  |
| 3082 | 0.5 | Extremo | 33.675  | 919.806  | 0.561  | -26.278  | -0.922  | -768.4292 |
| 3082 | 1   | Extremo | 33.675  | 937.228  | 0.561  | -26.278  | -1.2027 | -1232.688 |
| 3082 | 0   | Extremo | -17.393 | 871.426  | -1.019 | -31.3232 | -0.2671 | -186.136  |
| 3082 | 0.5 | Extremo | -17.393 | 888.849  | -1.019 | -31.3232 | 0.2427  | -626.2047 |
| 3082 | 1   | Extremo | -17.393 | 906.271  | -1.019 | -31.3232 | 0.7524  | -1074.985 |
| 3083 | 0   | Extremo | 38.305  | -861.547 | 0.899  | 11.7973  | -0.6188 | -1295.332 |
| 3083 | 0.5 | Extremo | 38.305  | -842.662 | 0.899  | 11.7973  | -1.0682 | -869.2794 |
| 3083 | 1   | Extremo | 38.305  | -823.777 | 0.899  | 11.7973  | -1.5175 | -452.6696 |
| 3083 | 0   | Extremo | -25.716 | -841.809 | -1.223 | 2.1631   | -0.2717 | -1129.87  |
| 3083 | 0.5 | Extremo | -25.716 | -822.924 | -1.223 | 2.1631   | 0.3398  | -713.6873 |
| 3083 | 1   | Extremo | -25.716 | -804.039 | -1.223 | 2.1631   | 0.9514  | -306.9466 |
| 3084 | 0   | Extremo | 39.472  | -388.895 | 0.358  | 47.9505  | -0.952  | -573.1776 |
| 3084 | 0.5 | Extremo | 39.472  | -370.01  | 0.358  | 47.9505  | -1.131  | -383.4515 |
| 3084 | 1   | Extremo | 39.472  | -351.125 | 0.358  | 47.9505  | -1.31   | -203.1679 |
| 3084 | 0   | Extremo | -24.224 | -380.418 | -1.71  | 33.4785  | -0.5185 | -421.2331 |
| 3084 | 0.5 | Extremo | -24.224 | -361.533 | -1.71  | 33.4785  | 0.3365  | -235.7454 |
| 3084 | 1   | Extremo | -24.224 | -342.648 | -1.71  | 33.4785  | 1.1916  | -59.7002  |
| 3085 | 0   | Extremo | 40.845  | -232.865 | -0.15  | 54.5486  | -1.1887 | -244.8836 |
| 3085 | 0.5 | Extremo | 40.845  | -213.98  | -0.15  | 54.5486  | -1.1137 | -133.1723 |
| 3085 | 1   | Extremo | 40.845  | -195.095 | -0.15  | 54.5486  | -1.0387 | -30.9035  |
| 3085 | 0   | Extremo | -23.243 | -227.533 | -2.249 | 37.7763  | -0.7569 | -97.512   |
| 3085 | 0.5 | Extremo | -23.243 | -208.648 | -2.249 | 37.7763  | 0.3678  | 11.5333   |
| 3085 | 1   | Extremo | -23.243 | -189.763 | -2.249 | 37.7763  | 1.4924  | 111.1361  |
| 3086 | 0   | Extremo | 42.426  | -138.168 | -0.805 | 48.5814  | -1.4921 | -42.3579  |
| 3086 | 0.5 | Extremo | 42.426  | -119.283 | -0.805 | 48.5814  | -1.0896 | 22.0047   |
| 3086 | 1   | Extremo | 42.426  | -100.398 | -0.805 | 48.5814  | -0.687  | 76.9248   |
| 3086 | 0   | Extremo | -22.44  | -133.986 | -2.905 | 30.9246  | -1.0439 | 102.8609  |
| 3086 | 0.5 | Extremo | -22.44  | -115.101 | -2.905 | 30.9246  | 0.4087  | 165.1328  |
| 3086 | 1   | Extremo | -22.44  | -96.216  | -2.905 | 30.9246  | 1.8613  | 217.9622  |
| 3087 | 0   | Extremo | 44.269  | -52.843  | -1.655 | 40.012   | -1.8873 | 71.4589   |
| 3087 | 0.5 | Extremo | 44.269  | -33.958  | -1.655 | 40.012   | -1.0599 | 93.159    |
| 3087 | 1   | Extremo | 44.269  | -15.073  | -1.655 | 40.012   | -0.2325 |           |



|      |     |         |         |          |          |          |          |           |
|------|-----|---------|---------|----------|----------|----------|----------|-----------|
| 3090 | 1   | Extremo | 52.249  | 253.886  | -6.319   | 23.4799  | 2.1885   | -355.0979 |
| 3090 | 0   | Extremo | -18.671 | 216.401  | -8.327   | 3.9956   | -3.3519  | 28.1904   |
| 3090 | 0.5 | Extremo | -18.671 | 236.524  | -8.327   | 3.9956   | 0.8116   | -85.041   |
| 3090 | 1   | Extremo | -18.671 | 256.646  | -8.327   | 3.9956   | 4.9751   | -208.3336 |
| 3091 | 0   | Extremo | 55.603  | 304.981  | -8.636   | 21.879   | -5.1368  | -377.7116 |
| 3091 | 0.5 | Extremo | 55.603  | 325.103  | -8.636   | 21.879   | -0.8186  | -535.2326 |
| 3091 | 1   | Extremo | 55.603  | 345.226  | -8.636   | 21.879   | 3.4996   | -702.8148 |
| 3091 | 0   | Extremo | -16.854 | 308.259  | -10.633  | 2.4795   | -4.3465  | -227.4857 |
| 3091 | 0.5 | Extremo | -16.854 | 328.381  | -10.633  | 2.4795   | 0.9701   | -386.6457 |
| 3091 | 1   | Extremo | -16.854 | 348.504  | -10.633  | 2.4795   | 6.2868   | -555.8668 |
| 3092 | 0   | Extremo | 59.61   | 398.347  | -11.585  | 17.1711  | -6.4348  | -728.133  |
| 3092 | 0.5 | Extremo | 59.61   | 418.47   | -11.585  | 17.1711  | -0.6424  | -932.3372 |
| 3092 | 1   | Extremo | 59.61   | 438.592  | -11.585  | 17.1711  | 5.15     | -1146.603 |
| 3092 | 0   | Extremo | -14.444 | 401.813  | -13.532  | -1.7169  | -5.6061  | -577.8673 |
| 3092 | 0.5 | Extremo | -14.444 | 421.936  | -13.532  | -1.7169  | 1.1596   | -783.8045 |
| 3092 | 1   | Extremo | -14.444 | 442.058  | -13.532  | -1.7169  | 7.9254   | -999.803  |
| 3093 | 0   | Extremo | 64.593  | 505.09   | -15.421  | 3.5444   | -8.1809  | -1178.84  |
| 3093 | 0.5 | Extremo | 64.593  | 525.212  | -15.421  | 3.5444   | -0.4707  | -1436.416 |
| 3093 | 1   | Extremo | 64.593  | 545.335  | -15.421  | 3.5444   | 7.2396   | -1704.053 |
| 3093 | 0   | Extremo | -11.336 | 507.735  | -17.293  | -14.4374 | -7.2688  | -1028.629 |
| 3093 | 0.5 | Extremo | -11.336 | 527.858  | -17.293  | -14.4374 | 1.3776   | -1287.527 |
| 3093 | 1   | Extremo | -11.336 | 547.98   | -17.293  | -14.4374 | 10.024   | -1556.487 |
| 3094 | 0   | Extremo | 70.886  | 608.636  | -21.448  | -8.7999  | -10.695  | -1786.776 |
| 3094 | 0.5 | Extremo | 70.886  | 630.333  | -21.448  | -8.7999  | 0.029    | -2096.518 |
| 3094 | 1   | Extremo | 70.886  | 652.031  | -21.448  | -8.7999  | 10.7529  | -2417.109 |
| 3094 | 0   | Extremo | -7.572  | 610.558  | -23.262  | -28.4891 | -9.4806  | -1632.395 |
| 3094 | 0.5 | Extremo | -7.572  | 632.255  | -23.262  | -28.4891 | 2.1503   | -1943.098 |
| 3094 | 1   | Extremo | -7.572  | 653.953  | -23.262  | -28.4891 | 13.7813  | -2264.65  |
| 3095 | 0   | Extremo | 78.83   | 700.085  | -28.414  | 5.2729   | -13.9432 | -2474.893 |
| 3095 | 0.5 | Extremo | 78.83   | 721.783  | -28.414  | 5.2729   | 0.2637   | -2830.36  |
| 3095 | 1   | Extremo | 78.83   | 743.48   | -28.414  | 5.2729   | 14.4707  | -3196.676 |
| 3095 | 0   | Extremo | -1.816  | 703.154  | -30.203  | -14.9804 | -12.7174 | -2317.771 |
| 3095 | 0.5 | Extremo | -1.816  | 724.852  | -30.203  | -14.9804 | 2.384    | -2674.772 |
| 3095 | 1   | Extremo | -1.816  | 746.549  | -30.203  | -14.9804 | 17.4854  | -3042.623 |
| 3096 | 0   | Extremo | 89.185  | 798.031  | -36.834  | 12.7071  | -17.5114 | -3254.966 |
| 3096 | 0.5 | Extremo | 89.185  | 819.729  | -36.834  | 12.7071  | 0.9055   | -3659.406 |
| 3096 | 1   | Extremo | 89.185  | 841.426  | -36.834  | 12.7071  | 19.3223  | -4074.695 |
| 3096 | 0   | Extremo | 6.531   | 801.521  | -38.577  | -7.4427  | -16.2652 | -3096.623 |
| 3096 | 0.5 | Extremo | 6.531   | 823.218  | -38.577  | -7.4427  | 3.0231   | -3502.808 |
| 3096 | 1   | Extremo | 6.531   | 844.916  | -38.577  | -7.4427  | 22.3114  | -3919.841 |
| 3097 | 0   | Extremo | 103.599 | 897.365  | -47.643  | 16.0011  | -22.0985 | -4138.498 |
| 3097 | 0.5 | Extremo | 103.599 | 919.062  | -47.643  | 16.0011  | 1.7232   | -4592.604 |
| 3097 | 1   | Extremo | 103.599 | 940.76   | -47.643  | 16.0011  | 25.5449  | -5057.56  |
| 3097 | 0   | Extremo | 18.866  | 901.084  | -49.275  | -3.9107  | -20.7959 | -3979.417 |
| 3097 | 0.5 | Extremo | 18.866  | 922.782  | -49.275  | -3.9107  | 3.8417   | -4435.383 |
| 3097 | 1   | Extremo | 18.866  | 944.479  | -49.275  | -3.9107  | 28.4794  | -4902.198 |
| 3098 | 0   | Extremo | 124.707 | 1002.425 | -61.804  | 12.0114  | -28.1631 | -5124.825 |
| 3098 | 0.5 | Extremo | 124.707 | 1024.123 | -61.804  | 12.0114  | 2.7392   | -5631.462 |
| 3098 | 1   | Extremo | 124.707 | 1045.82  | -61.804  | 12.0114  | 33.6414  | -6148.948 |
| 3098 | 0   | Extremo | 37.599  | 1006.198 | -63.243  | -7.6096  | -26.7656 | -4965.376 |
| 3098 | 0.5 | Extremo | 37.599  | 1027.896 | -63.243  | -7.6096  | 4.8561   | -5473.899 |
| 3098 | 1   | Extremo | 37.599  | 1049.593 | -63.243  | -7.6096  | 36.4778  | -5993.271 |
| 3099 | 0   | Extremo | 157.013 | 1139.281 | -80.913  | -11.729  | -36.4278 | -6228.95  |
| 3099 | 0.5 | Extremo | 157.013 | 1160.978 | -80.913  | -11.729  | 4.0286   | -6804.015 |
| 3099 | 1   | Extremo | 157.013 | 1182.676 | -80.913  | -11.729  | 44.4851  | -7389.928 |
| 3099 | 0   | Extremo | 66.936  | 1142.269 | -82.067  | -30.9811 | -34.8705 | -6069.147 |
| 3099 | 0.5 | Extremo | 66.936  | 1163.966 | -82.067  | -30.9811 | 6.1629   | -6645.706 |
| 3099 | 1   | Extremo | 66.936  | 1185.664 | -82.067  | -30.9811 | 47.1962  | -7233.113 |
| 3100 | 0   | Extremo | 208.149 | 1257.804 | -111.458 | -23.4536 | -48.1425 | -7600.299 |
| 3100 | 0.5 | Extremo | 208.149 | 1280.851 | -111.458 | -23.4536 | 7.5862   | -8234.963 |
| 3100 | 1   | Extremo | 208.149 | 1303.899 | -111.458 | -23.4536 | 63.315   | -8881.15  |
| 3100 | 0   | Extremo | 113.992 | 1259.714 | -112.158 | -44.5077 | -46.1796 | -7436.827 |
| 3100 | 0.5 | Extremo | 113.992 | 1282.762 | -112.158 | -44.5077 | 9.8995   | -8072.446 |
| 3100 | 1   | Extremo | 113.992 | 1305.809 | -112.158 | -44.5077 | 65.9786  | -8719.589 |
| 3101 | 0   | Extremo | 297.417 | 1338.233 | -151.488 | 11.991   | -64.9574 | -8992.149 |
| 3101 | 0.5 | Extremo | 297.417 | 1361.281 | -151.488 | 11.991   | 10.7864  | -9667.028 |
| 3101 | 1   | Extremo | 297.417 | 1384.328 | -151.488 | 11.991   | 86.5302  | -10353.43 |
| 3101 | 0   | Extremo | 198.546 | 1339.816 | -151.606 | -10.2939 | -62.7885 | -8825.154 |
| 3101 | 0.5 | Extremo | 198.546 | 1362.864 | -151.606 | -10.2939 | 13.0146  | -9500.824 |
| 3101 | 1   | Extremo | 198.546 | 1385.911 | -151.606 | -10.2939 | 88.8178  | -10188.02 |
| 3102 | 0   | Extremo | 453.018 | 1454.032 | -208.823 | 36.8279  | -85.6654 | -10458.25 |
| 3102 | 0.5 | Extremo | 453.018 | 1477.079 | -208.823 | 36.8279  | 18.7463  | -11191.03 |

|      |     |         |           |           |          |          |           |           |
|------|-----|---------|-----------|-----------|----------|----------|-----------|-----------|
| 3102 | 1   | Extremo | 453.018   | 1500.127  | -208.823 | 36.8279  | 123.1581  | -11935.33 |
| 3102 | 0   | Extremo | 348.116   | 1453.989  | -208.001 | 12.9626  | -83.1895  | -10287.5  |
| 3102 | 0.5 | Extremo | 348.116   | 1477.037  | -208.001 | 12.9626  | 20.811    | -11020.25 |
| 3102 | 1   | Extremo | 348.116   | 1500.084  | -208.001 | 12.9626  | 124.8115  | -11764.53 |
| 3103 | 0   | Extremo | 733.522   | 1610.561  | -308.055 | 72.5315  | -112.3833 | -12037.01 |
| 3103 | 0.5 | Extremo | 733.522   | 1633.608  | -308.055 | 72.5315  | 41.644    | -12848.05 |
| 3103 | 1   | Extremo | 733.522   | 1656.656  | -308.055 | 72.5315  | 195.6714  | -13670.62 |
| 3103 | 0   | Extremo | 619.937   | 1607.231  | -305.324 | 45.7285  | -109.3625 | -11860.71 |
| 3103 | 0.5 | Extremo | 619.937   | 1630.278  | -305.324 | 45.7285  | 43.2994   | -12670.09 |
| 3103 | 1   | Extremo | 619.937   | 1653.326  | -305.324 | 45.7285  | 195.9613  | -13490.99 |
| 3104 | 0   | Extremo | 1235.473  | 1893.43   | -570.954 | 143.5693 | -108.4697 | -13751.43 |
| 3104 | 0.5 | Extremo | 1235.473  | 1916.478  | -570.954 | 143.5693 | 177.0071  | -14703.91 |
| 3104 | 1   | Extremo | 1235.473  | 1939.525  | -570.954 | 143.5693 | 462.4839  | -15676.91 |
| 3104 | 0   | Extremo | 1108.611  | 1883.948  | -562.717 | 111.481  | -105.1941 | -13566.42 |
| 3104 | 0.5 | Extremo | 1108.611  | 1906.995  | -562.717 | 111.481  | 176.1645  | -14514.15 |
| 3104 | 1   | Extremo | 1108.611  | 1930.043  | -562.717 | 111.481  | 457.5231  | -15473.41 |
| 3106 | 0   | Extremo | -6817.047 | -2629.465 | -637.041 | -36.7375 | -521.3984 | -16864.48 |
| 3106 | 0.5 | Extremo | -6817.047 | -2606.418 | -637.041 | -36.7375 | -202.878  | -15555.51 |
| 3106 | 1   | Extremo | -6817.047 | -2583.37  | -637.041 | -36.7375 | 115.6424  | -14258.06 |
| 3106 | 0   | Extremo | -6785.718 | -2547.886 | -625.615 | -79.6581 | -510.6262 | -16671.53 |
| 3106 | 0.5 | Extremo | -6785.718 | -2524.838 | -625.615 | -79.6581 | -197.8187 | -15403.35 |
| 3106 | 1   | Extremo | -6785.718 | -2501.791 | -625.615 | -79.6581 | 114.9887  | -14146.7  |
| 3107 | 0   | Extremo | -6290.269 | -2249.546 | -338.377 | 48.4457  | -210.4683 | -14169.57 |
| 3107 | 0.5 | Extremo | -6290.269 | -2226.499 | -338.377 | 48.4457  | -41.28    | -13050.56 |
| 3107 | 1   | Extremo | -6290.269 | -2203.451 | -338.377 | 48.4457  | 127.9083  | -11943.07 |
| 3107 | 0   | Extremo | -6270.82  | -2179.446 | -332.341 | -0.0828  | -205.1034 | -14050.41 |
| 3107 | 0.5 | Extremo | -6270.82  | -2156.398 | -332.341 | -0.0828  | -38.9329  | -12966.45 |
| 3107 | 1   | Extremo | -6270.82  | -2133.351 | -332.341 | -0.0828  | 127.2375  | -11894.01 |
| 3108 | 0   | Extremo | -5991.887 | -2058.876 | -238.089 | 96.7285  | -134.7235 | -11839.18 |
| 3108 | 0.5 | Extremo | -5991.887 | -2035.828 | -238.089 | 96.7285  | -15.679   | -10815.51 |
| 3108 | 1   | Extremo | -5991.887 | -2012.781 | -238.089 | 96.7285  | 103.3656  | -9803.355 |
| 3108 | 0   | Extremo | -5979.544 | -1994.288 | -233.947 | 44.1135  | -130.8157 | -11781.3  |
| 3108 | 0.5 | Extremo | -5979.544 | -1971.241 | -233.947 | 44.1135  | -13.8422  | -10789.92 |
| 3108 | 1   | Extremo | -5979.544 | -1948.193 | -233.947 | 44.1135  | 103.1314  | -9810.059 |
| 3109 | 0   | Extremo | -5819.925 | -1931.266 | -186.884 | 129.1717 | -99.8283  | -9692.603 |
| 3109 | 0.5 | Extremo | -5819.925 | -1908.219 | -186.884 | 129.1717 | -6.3861   | -8732.731 |
| 3109 | 1   | Extremo | -5819.925 | -1885.171 | -186.884 | 129.1717 | 87.056    | -7784.384 |
| 3109 | 0   | Extremo | -5811.811 | -1869.738 | -183.718 | 73.8551  | -96.6264  | -9689.819 |
| 3109 | 0.5 | Extremo | -5811.811 | -1846.69  | -183.718 | 73.8551  | -4.7675   | -8760.712 |
| 3109 | 1   | Extremo | -5811.811 | -1823.643 | -183.718 | 73.8551  | 87.0914   | -7843.128 |
| 3110 | 0   | Extremo | -5705.626 | -1839.446 | -154.027 | 165.0123 | -79.612   | -7667.318 |
| 3110 | 0.5 | Extremo | -5705.626 | -1816.399 | -154.027 | 165.0123 | -2.5986   | -6753.356 |
| 3110 | 1   | Extremo | -5705.626 | -1793.351 | -154.027 | 165.0123 | 74.4148   | -5850.919 |
| 3110 | 0   | Extremo | -5700.047 | -1779.74  | -151.476 | 108.2632 | -76.8386  | -7715.957 |
| 3110 | 0.5 | Extremo | -5700.047 | -1756.692 | -151.476 | 108.2632 | -1.1009   | -6831.849 |
| 3110 | 1   | Extremo | -5700.047 | -1733.645 | -151.476 | 108.2632 | 74.6369   | -5959.264 |
| 3111 | 0   | Extremo | -5605.202 | -1713.371 | -124.429 | 143.8262 | -67.596   | -5658.226 |
| 3111 | 0.5 | Extremo | -5605.202 | -1691.673 | -124.429 | 143.8262 | -5.3815   | -4806.965 |
| 3111 | 1   | Extremo | -5605.202 | -1669.976 | -124.429 | 143.8262 | 56.833    | -3966.553 |
| 3111 | 0   | Extremo | -5601.037 | -1653.    |          |          |           |           |



|      |     |         |           |           |         |          |          |           |
|------|-----|---------|-----------|-----------|---------|----------|----------|-----------|
| 3115 | 1   | Extremo | -5466.843 | -1225.68  | -80.103 | 154.7414 | 44.659   | 1944.5553 |
| 3115 | 0   | Extremo | -5464.351 | -1213.25  | -78.65  | 96.4423  | -33.5458 | 397.9673  |
| 3115 | 0.5 | Extremo | -5464.351 | -1191.553 | -78.65  | 96.4423  | 5.7792   | 999.1681  |
| 3115 | 1   | Extremo | -5464.351 | -1169.855 | -78.65  | 96.4423  | 45.1041  | 1589.5202 |
| 3116 | 0   | Extremo | -5428.925 | -1139.012 | -79.305 | 150.1819 | -34.1391 | 2004.0625 |
| 3116 | 0.5 | Extremo | -5428.925 | -1117.314 | -79.305 | 150.1819 | 5.5133   | 2568.144  |
| 3116 | 1   | Extremo | -5428.925 | -1095.617 | -79.305 | 150.1819 | 45.1656  | 3121.3768 |
| 3116 | 0   | Extremo | -5426.359 | -1086.358 | -77.906 | 92.8325  | -32.287  | 1658.8326 |
| 3116 | 0.5 | Extremo | -5426.359 | -1064.66  | -77.906 | 92.8325  | 6.6661   | 2196.587  |
| 3116 | 1   | Extremo | -5426.359 | -1042.963 | -77.906 | 92.8325  | 45.6193  | 2723.4927 |
| 3117 | 0   | Extremo | -5360.399 | -1027.595 | -70.871 | 125.6052 | -37.0748 | 3095.9187 |
| 3117 | 0.5 | Extremo | -5360.399 | -1007.473 | -70.871 | 125.6052 | -1.6394  | 3604.6856 |
| 3117 | 1   | Extremo | -5360.399 | -987.35   | -70.871 | 125.6052 | 33.796   | 4103.3912 |
| 3117 | 0   | Extremo | -5357.681 | -973.831  | -69.567 | 73.4186  | -35.3559 | 2713.6461 |
| 3117 | 0.5 | Extremo | -5357.681 | -953.708  | -69.567 | 73.4186  | -0.5726  | 3195.5308 |
| 3117 | 1   | Extremo | -5357.681 | -933.586  | -69.567 | 73.4186  | 34.2107  | 3667.3542 |
| 3118 | 0   | Extremo | -5325.479 | -951.545  | -62.919 | 141.235  | -31.8136 | 4136.2727 |
| 3118 | 0.5 | Extremo | -5325.479 | -931.423  | -62.919 | 141.235  | -0.3543  | 4607.0147 |
| 3118 | 1   | Extremo | -5325.479 | -911.3    | -62.919 | 141.235  | 31.105   | 5067.6955 |
| 3118 | 0   | Extremo | -5322.653 | -895.812  | -61.669 | 86.4375  | -30.154  | 3707.4032 |
| 3118 | 0.5 | Extremo | -5322.653 | -875.689  | -61.669 | 86.4375  | 0.6804   | 4150.2784 |
| 3118 | 1   | Extremo | -5322.653 | -855.567  | -61.669 | 86.4375  | 31.5147  | 4583.0923 |
| 3119 | 0   | Extremo | -5303.211 | -862.555  | -57.215 | 149.1362 | -26.7555 | 5101.8755 |
| 3119 | 0.5 | Extremo | -5303.211 | -842.432  | -57.215 | 149.1362 | 1.852    | 5528.1223 |
| 3119 | 1   | Extremo | -5303.211 | -822.31   | -57.215 | 149.1362 | 30.4595  | 5944.3079 |
| 3119 | 0   | Extremo | -5300.328 | -807.067  | -56.008 | 92.6915  | -25.1405 | 4624.1254 |
| 3119 | 0.5 | Extremo | -5300.328 | -786.945  | -56.008 | 92.6915  | 2.8633   | 5022.6283 |
| 3119 | 1   | Extremo | -5300.328 | -766.822  | -56.008 | 92.6915  | 30.8671  | 5411.07   |
| 3120 | 0   | Extremo | -5282.155 | -760.4    | -54.639 | 141.585  | -23.3167 | 5977.1903 |
| 3120 | 0.5 | Extremo | -5282.155 | -740.278  | -54.639 | 141.585  | 4.0028   | 6352.3597 |
| 3120 | 1   | Extremo | -5282.155 | -720.155  | -54.639 | 141.585  | 31.3222  | 6717.4678 |
| 3120 | 0   | Extremo | -5279.265 | -706.042  | -53.469 | 85.1514  | -21.7414 | 5450.9874 |
| 3120 | 0.5 | Extremo | -5279.265 | -685.92   | -53.469 | 85.1514  | 4.9932   | 5798.9779 |
| 3120 | 1   | Extremo | -5279.265 | -665.797  | -53.469 | 85.1514  | 31.7279  | 6136.9071 |
| 3121 | 0   | Extremo | -5251.019 | -604.023  | -52.955 | 98.8921  | -21.7032 | 6733.6675 |
| 3121 | 0.5 | Extremo | -5251.019 | -583.901  | -52.955 | 98.8921  | 4.7741   | 7030.6486 |
| 3121 | 1   | Extremo | -5251.019 | -563.778  | -52.955 | 98.8921  | 31.2515  | 7317.5685 |
| 3121 | 0   | Extremo | -5248.166 | -553.956  | -51.831 | 46.1072  | -20.1654 | 6161.5271 |
| 3121 | 0.5 | Extremo | -5248.166 | -533.834  | -51.831 | 46.1072  | 5.7502   | 6433.4747 |
| 3121 | 1   | Extremo | -5248.166 | -513.711  | -51.831 | 46.1072  | 31.6658  | 6695.3611 |
| 3122 | 0   | Extremo | -5194.02  | -512.429  | -44.837 | 76.2093  | -24.3529 | 7156.1275 |
| 3122 | 0.5 | Extremo | -5194.02  | -493.544  | -44.837 | 76.2093  | -1.9347  | 7407.621  |
| 3122 | 1   | Extremo | -5194.02  | -474.659  | -44.837 | 76.2093  | 20.4836  | 7649.6719 |
| 3122 | 0   | Extremo | -5191.203 | -459.411  | -43.823 | 29.4861  | -22.9295 | 6554.4596 |
| 3122 | 0.5 | Extremo | -5191.203 | -440.526  | -43.823 | 29.4861  | -1.0179  | 6779.444  |
| 3122 | 1   | Extremo | -5191.203 | -421.641  | -43.823 | 29.4861  | 20.8937  | 6994.986  |
| 3123 | 0   | Extremo | -5167.288 | -484.606  | -34.682 | 103.1929 | -18.6128 | 7650.504  |
| 3123 | 0.5 | Extremo | -5167.288 | -465.721  | -34.682 | 103.1929 | -1.2716  | 7888.0856 |
| 3123 | 1   | Extremo | -5167.288 | -446.836  | -34.682 | 103.1929 | 16.0696  | 8116.2247 |
| 3123 | 0   | Extremo | -5164.431 | -423.347  | -33.782 | 55.5993  | -17.2652 | 7002.1668 |
| 3123 | 0.5 | Extremo | -5164.431 | -404.462  | -33.782 | 55.5993  | -0.3741  | 7209.1189 |
| 3123 | 1   | Extremo | -5164.431 | -385.577  | -33.782 | 55.5993  | 16.517   | 7406.6286 |
| 3124 | 0   | Extremo | -5154.535 | -415.188  | -24.965 | 102.5711 | -12.6283 | 8126.3778 |
| 3124 | 0.5 | Extremo | -5154.535 | -396.303  | -24.965 | 102.5711 | -0.146   | 8329.2508 |
| 3124 | 1   | Extremo | -5154.535 | -377.418  | -24.965 | 102.5711 | 12.3364  | 8522.6813 |
| 3124 | 0   | Extremo | -5151.12  | -346.016  | -24.217 | 58.2239  | -11.3632 | 7421.312  |
| 3124 | 0.5 | Extremo | -5151.12  | -327.131  | -24.217 | 58.2239  | 0.745    | 7589.599  |
| 3124 | 1   | Extremo | -5151.12  | -308.246  | -24.217 | 58.2239  | 12.8533  | 7748.4435 |
| 3125 | 0   | Extremo | -5149.964 | -339.631  | -16.6   | 86.0806  | -7.7439  | 8529.7311 |
| 3125 | 0.5 | Extremo | -5149.964 | -320.746  | -16.6   | 86.0806  | 0.5563   | 8694.8253 |
| 3125 | 1   | Extremo | -5149.964 | -301.861  | -16.6   | 86.0806  | 8.8565   | 8850.477  |
| 3125 | 0   | Extremo | -5144.327 | -259.941  | -16.056 | 50.6055  | -6.5759  | 7756.685  |
| 3125 | 0.5 | Extremo | -5144.327 | -241.056  | -16.056 | 50.6055  | 1.4521   | 7881.9343 |
| 3125 | 1   | Extremo | -5144.327 | -222.171  | -16.056 | 50.6055  | 9.4801   | 7997.7411 |
| 3126 | 0   | Extremo | -5153.324 | -250.079  | -9.394  | 56.7562  | -3.73    | 8863.2422 |
| 3126 | 0.5 | Extremo | -5153.324 | -231.194  | -9.394  | 56.7562  | 0.967    | 8983.5602 |
| 3126 | 1   | Extremo | -5153.324 | -212.309  | -9.394  | 56.7562  | 5.664    | 9094.4357 |
| 3126 | 0   | Extremo | -5140.904 | -174.875  | -9.078  | 40.4356  | -2.7048  | 8001.4701 |
| 3126 | 0.5 | Extremo | -5140.904 | -155.99   | -9.078  | 40.4356  | 1.8341   | 8084.1865 |
| 3126 | 1   | Extremo | -5140.904 | -137.105  | -9.078  | 40.4356  | 6.3729   | 8157.4604 |
| 3127 | 0   | Extremo | -5170.443 | -62.703   | -2.994  | 8.7774   | 0.0494   | 9104.1734 |
| 3127 | 0.5 | Extremo | -5170.443 | -43.818   | -2.994  | 8.7774   | 1.5466   | 9130.8038 |

|      |     |         |           |         |        |           |          |           |
|------|-----|---------|-----------|---------|--------|-----------|----------|-----------|
| 3127 | 1   | Extremo | -5170.443 | -24.933 | -2.994 | 8.7774    | 3.0437   | 9147.9917 |
| 3127 | 0   | Extremo | -5139.435 | -91.128 | -2.814 | 30.0146   | 0.5931   | 8157.7907 |
| 3127 | 0.5 | Extremo | -5139.435 | -72.243 | -2.814 | 30.0146   | 2        | 8198.6333 |
| 3127 | 1   | Extremo | -5139.435 | -53.358 | -2.814 | 30.0146   | 3.4068   | 8230.0334 |
| 3128 | 0   | Extremo | -5188.972 | 124.218 | 2.994  | -39.1071  | 3.4535   | 9140.4494 |
| 3128 | 0.5 | Extremo | -5188.972 | 143.103 | 2.994  | -39.1071  | 1.9563   | 9073.6191 |
| 3128 | 1   | Extremo | -5188.972 | 161.988 | 2.994  | -39.1071  | 0.4591   | 8997.3464 |
| 3128 | 0   | Extremo | -5139.377 | -7.821  | 3.216  | 19.5925   | 3.605    | 8227.1736 |
| 3128 | 0.5 | Extremo | -5139.377 | 11.064  | 3.216  | 19.5925   | 1.997    | 8226.3628 |
| 3128 | 1   | Extremo | -5139.377 | 29.949  | 3.216  | 19.5925   | 0.3891   | 8216.1095 |
| 3129 | 0   | Extremo | -5197.108 | 212.282 | 9.133  | -68.6899  | 6.3764   | 8987.01   |
| 3129 | 0.5 | Extremo | -5197.108 | 231.167 | 9.133  | -68.6899  | 1.81     | 8876.1476 |
| 3129 | 1   | Extremo | -5197.108 | 250.052 | 9.133  | -68.6899  | -2.7565  | 8755.8427 |
| 3129 | 0   | Extremo | -5140.729 | 75.82   | 9.481  | 8.9227    | 6.5659   | 8210.0666 |
| 3129 | 0.5 | Extremo | -5140.729 | 94.705  | 9.481  | 8.9227    | 1.8253   | 8167.4353 |
| 3129 | 1   | Extremo | -5140.729 | 113.59  | 9.481  | 8.9227    | -2.9153  | 8115.3615 |
| 3130 | 0   | Extremo | -5202.643 | 286.598 | 16.024 | -88.036   | 9.4228   | 8752.465  |
| 3130 | 0.5 | Extremo | -5202.643 | 305.483 | 16.024 | -88.036   | 1.4107   | 8604.4449 |
| 3130 | 1   | Extremo | -5202.643 | 324.368 | 16.024 | -88.036   | -6.6014  | 8446.9823 |
| 3130 | 0   | Extremo | -5144.038 | 160.689 | 16.462 | -1.7337   | 9.6685   | 8105.9348 |
| 3130 | 0.5 | Extremo | -5144.038 | 179.574 | 16.462 | -1.7337   | 1.4374   | 8020.8689 |
| 3130 | 1   | Extremo | -5144.038 | 198.459 | 16.462 | -1.7337   | -6.7938  | 7926.3606 |
| 3131 | 0   | Extremo | -5209.902 | 365.366 | 24.168 | -99.987   | 12.7761  | 8442.675  |
| 3131 | 0.5 | Extremo | -5209.902 | 384.251 | 24.168 | -99.987   | 0.6921   | 8255.2707 |
| 3131 | 1   | Extremo | -5209.902 | 403.136 | 24.168 | -99.987   | -11.3919 | 8058.4239 |
| 3131 | 0   | Extremo | -5150.718 | 246.427 | 24.627 | -9.9701   | 13.038   | 7912.4074 |
| 3131 | 0.5 | Extremo | -5150.718 | 265.312 | 24.627 | -9.9701   | 0.7243   | 7784.4728 |
| 3131 | 1   | Extremo | -5150.718 | 284.197 | 24.627 | -9.9701   | -11.5893 | 7647.0958 |
| 3132 | 0   | Extremo | -5223.21  | 438.35  | 33.777 | -98.5192  | 16.4517  | 8048.3071 |
| 3132 | 0.5 | Extremo | -5223.21  | 457.235 | 33.777 | -98.5192  | -0.4367  | 7824.4111 |
| 3132 | 1   | Extremo | -5223.21  | 476.12  | 33.777 | -98.5192  | -17.3252 | 7591.0725 |
| 3132 | 0   | Extremo | -5163.92  | 322.714 | 34.199 | -7.6217   | 16.6986  | 7626.6317 |
| 3132 | 0.5 | Extremo | -5163.92  | 341.599 | 34.199 | -7.6217   | -0.401   | 7460.5532 |
| 3132 | 1   | Extremo | -5163.92  | 360.484 | 34.199 | -7.6217   | -17.5006 | 7285.0322 |
| 3133 | 0   | Extremo | -5250.019 | 468.53  | 43.896 | -70.6982  | 20.865   | 7589.4782 |
| 3133 | 0.5 | Extremo | -5250.019 | 487.415 | 43.896 | -70.6982  | -1.083   | 7350.4919 |
| 3133 | 1   | Extremo | -5250.019 | 506.3   | 43.896 | -70.6982  | -23.031  | 7102.0631 |
| 3133 | 0   | Extremo | -5190.587 | 355.282 | 44.249 | 19.9923   | 21.0726  | 7272.8383 |
| 3133 | 0.5 | Extremo | -5190.587 | 374.167 | 44.249 | 19.9923   | -1.0519  | 7090.4762 |
| 3133 | 1   | Extremo | -5190.587 | 393.052 | 44.249 | 19.9923   | -23.1764 | 6898.6716 |
| 3134 | 0   | Extremo | -5307.4   | 558.772 | 51.959 | -92.2188  | 31.7521  | 7261.3006 |
| 3134 | 0.5 | Extremo | -5307.4   | 578.894 | 51.959 | -92.2188  | 5.7725   | 6976.8842 |
| 3134 | 1   | Extremo | -5307.4   | 599.017 | 51.959 | -92.2188  | -20.207  | 6682.4066 |
| 3134 | 0   | Extremo | -5247.444 | 447.81  | 52.279 | 8.1926    | 31.8395  | 7043.3995 |
| 3134 | 0.5 | Extremo | -5247.444 | 467.933 | 52.279 | 8.1926    | 5.7      | 6814.4636 |
| 3134 | 1   | Extremo | -5247.444 | 488.055 | 52.279 | 8.1926    | -20.4395 | 6575.4665 |
| 3135 | 0   | Extremo | -5338.699 | 715.224 | 53.611 | -134.3519 | 31.8148  | 6664.9722 |
| 3135 | 0.5 | Extremo | -5338.699 | 735.347 | 53.611 | -134.3519 | 5.0092   | 6302.3294 |
| 3135 | 1   | Extremo | -5338.699 | 755.469 | 53.611 | -134.3519 | -21.7964 | 5929.6253 |
| 3135 |     |         |           |         |        |           |          |           |



|      |     |         |           |           |         |           |           |           |
|------|-----|---------|-----------|-----------|---------|-----------|-----------|-----------|
| 3139 | 1   | Extremo | -5487.717 | 1134.716  | 78.379  | -142.5057 | -32.4562  | 1969.6752 |
| 3139 | 0   | Extremo | -5425.383 | 971.943   | 78.548  | -35.9706  | 45.8322   | 3386.9144 |
| 3139 | 0.5 | Extremo | -5425.383 | 993.64    | 78.548  | -35.9706  | 6.5581    | 2895.5187 |
| 3139 | 1   | Extremo | -5425.383 | 1015.338  | 78.548  | -35.9706  | -32.7159  | 2393.2742 |
| 3140 | 0   | Extremo | -5526.42  | 1221.091  | 79.168  | -146.9855 | 45.4171   | 1908.6415 |
| 3140 | 0.5 | Extremo | -5526.42  | 1242.789  | 79.168  | -146.9855 | 5.8332    | 1292.6715 |
| 3140 | 1   | Extremo | -5526.42  | 1264.486  | 79.168  | -146.9855 | -33.7507  | 665.8527  |
| 3140 | 0   | Extremo | -5463.458 | 1103.378  | 79.38   | -44.0306  | 45.3524   | 2316.4843 |
| 3140 | 0.5 | Extremo | -5463.458 | 1125.076  | 79.38   | -44.0306  | 5.6622    | 1759.3707 |
| 3140 | 1   | Extremo | -5463.458 | 1146.773  | 79.38   | -44.0306  | -34.028   | 1191.4084 |
| 3141 | 0   | Extremo | -5552.348 | 1325.495  | 81.726  | -137.9815 | 44.0963   | 596.5698  |
| 3141 | 0.5 | Extremo | -5552.348 | 1347.192  | 81.726  | -137.9815 | 3.2331    | -71.6019  |
| 3141 | 1   | Extremo | -5552.348 | 1368.89   | 81.726  | -137.9815 | -37.6302  | -750.6224 |
| 3141 | 0   | Extremo | -5488.925 | 1206.095  | 81.982  | -38.2026  | 44.0607   | 1106.3762 |
| 3141 | 0.5 | Extremo | -5488.925 | 1227.792  | 81.982  | -38.2026  | 3.0699    | 497.9043  |
| 3141 | 1   | Extremo | -5488.925 | 1249.49   | 81.982  | -38.2026  | -37.9209  | -121.4163 |
| 3142 | 0   | Extremo | -5577.565 | 1425.798  | 89.464  | -127.2941 | 45.4736   | -823.134  |
| 3142 | 0.5 | Extremo | -5577.565 | 1447.495  | 89.464  | -127.2941 | 0.7416    | -1541.457 |
| 3142 | 1   | Extremo | -5577.565 | 1469.193  | 89.464  | -127.2941 | -43.9904  | -2270.629 |
| 3142 | 0   | Extremo | -5513.744 | 1304.026  | 89.736  | -30.0208  | 45.446    | -208.7624 |
| 3142 | 0.5 | Extremo | -5513.744 | 1325.724  | 89.736  | -30.0208  | 0.5782    | -866.1999 |
| 3142 | 1   | Extremo | -5513.744 | 1347.421  | 89.736  | -30.0208  | -44.2897  | -1534.486 |
| 3143 | 0   | Extremo | -5611.536 | 1531.797  | 103.424 | -122.6473 | 49.8206   | -2346.928 |
| 3143 | 0.5 | Extremo | -5611.536 | 1553.494  | 103.424 | -122.6473 | -1.8915   | -3118.25  |
| 3143 | 1   | Extremo | -5611.536 | 1575.192  | 103.424 | -122.6473 | -53.6036  | -3900.422 |
| 3143 | 0   | Extremo | -5547.344 | 1406.57   | 103.694 | -27.0959  | 49.7854   | -1625.132 |
| 3143 | 0.5 | Extremo | -5547.344 | 1428.267  | 103.694 | -27.0959  | -2.0616   | -2333.842 |
| 3143 | 1   | Extremo | -5547.344 | 1449.965  | 103.694 | -27.0959  | -53.9086  | -3053.4   |
| 3144 | 0   | Extremo | -5666.989 | 1664.744  | 123.675 | -136.7772 | 57.7317   | -3988.55  |
| 3144 | 0.5 | Extremo | -5666.989 | 1686.441  | 123.675 | -136.7772 | -4.1058   | -4826.346 |
| 3144 | 1   | Extremo | -5666.989 | 1708.139  | 123.675 | -136.7772 | -65.9432  | -5674.991 |
| 3144 | 0   | Extremo | -5602.443 | 1531.657  | 123.957 | -40.2236  | 57.6762   | -3154.037 |
| 3144 | 0.5 | Extremo | -5602.443 | 1553.355  | 123.957 | -40.2236  | -4.3022   | -3925.29  |
| 3144 | 1   | Extremo | -5602.443 | 1575.052  | 123.957 | -40.2236  | -66.2807  | -4707.392 |
| 3145 | 0   | Extremo | -5768.273 | 1788.004  | 153.339 | -157.6361 | 75.5087   | -5869.153 |
| 3145 | 0.5 | Extremo | -5768.273 | 1811.052  | 153.339 | -157.6361 | -1.161    | -6768.917 |
| 3145 | 1   | Extremo | -5768.273 | 1834.099  | 153.339 | -157.6361 | -77.8307  | -7680.205 |
| 3145 | 0   | Extremo | -5703.405 | 1651.272  | 153.732 | -55.4877  | 75.3571   | -4897.153 |
| 3145 | 0.5 | Extremo | -5703.405 | 1674.319  | 153.732 | -55.4877  | -1.5089   | -5728.551 |
| 3145 | 1   | Extremo | -5703.405 | 1697.367  | 153.732 | -55.4877  | -78.3749  | -6571.473 |
| 3146 | 0   | Extremo | -5882.984 | 1879.234  | 186.248 | -122.1803 | 88.2009   | -7798.805 |
| 3146 | 0.5 | Extremo | -5882.984 | 1902.281  | 186.248 | -122.1803 | -4.9232   | -8744.184 |
| 3146 | 1   | Extremo | -5882.984 | 1925.329  | 186.248 | -122.1803 | -98.0472  | -9701.087 |
| 3146 | 0   | Extremo | -5819.04  | 1737.79   | 186.919 | -27.543   | 88.1102   | -6703.652 |
| 3146 | 0.5 | Extremo | -5819.04  | 1760.837  | 186.919 | -27.543   | -5.3491   | -7578.309 |
| 3146 | 1   | Extremo | -5819.04  | 1783.885  | 186.919 | -27.543   | -98.8085  | -8464.489 |
| 3147 | 0   | Extremo | -6055.042 | 2005.774  | 237.523 | -90.4902  | 104.5652  | -9813.222 |
| 3147 | 0.5 | Extremo | -6055.042 | 2028.821  | 237.523 | -90.4902  | -14.1965  | -10821.87 |
| 3147 | 1   | Extremo | -6055.042 | 2051.869  | 237.523 | -90.4902  | -132.9582 | -11842.04 |
| 3147 | 0   | Extremo | -5994.461 | 1850.877  | 238.657 | -4.4871   | 104.5771  | -8584.919 |
| 3147 | 0.5 | Extremo | -5994.461 | 1873.924  | 238.657 | -4.4871   | -14.7514  | -9516.12  |
| 3147 | 1   | Extremo | -5994.461 | 1896.972  | 238.657 | -4.4871   | -134.0799 | -10458.84 |
| 3148 | 0   | Extremo | -6353.284 | 2194.461  | 337.96  | -43.4415  | 129.1663  | -11947.07 |
| 3148 | 0.5 | Extremo | -6353.284 | 2217.509  | 337.96  | -43.4415  | -39.8137  | -13050.06 |
| 3148 | 1   | Extremo | -6353.284 | 2240.556  | 337.96  | -43.4415  | -208.7937 | -14164.58 |
| 3148 | 0   | Extremo | -6301.821 | 2041.364  | 339.795 | 26.0678   | 129.4131  | -10557.02 |
| 3148 | 0.5 | Extremo | -6301.821 | 2064.412  | 339.795 | 26.0678   | -40.4844  | -11583.46 |
| 3148 | 1   | Extremo | -6301.821 | 2087.459  | 339.795 | 26.0678   | -210.382  | -12621.43 |
| 3149 | 0   | Extremo | -6879.684 | 2570.829  | 637.165 | 40.0815   | 116.7586  | -14253.52 |
| 3149 | 0.5 | Extremo | -6879.684 | 2593.877  | 637.165 | 40.0815   | -201.8241 | -15544.7  |
| 3149 | 1   | Extremo | -6879.684 | 2616.924  | 637.165 | 40.0815   | -520.4068 | -16847.4  |
| 3149 | 0   | Extremo | -6851.527 | 2533.304  | 639.978 | 68.7851   | 118.1117  | -12701.79 |
| 3149 | 0.5 | Extremo | -6851.527 | 2556.351  | 639.978 | 68.7851   | -201.8772 | -13974.2  |
| 3149 | 1   | Extremo | -6851.527 | 2579.399  | 639.978 | 68.7851   | -521.8661 | -15258.14 |
| 3151 | 0   | Extremo | 1175.331  | -1926.888 | 573.369 | -146.4518 | 466.1996  | -15694.83 |
| 3151 | 0.5 | Extremo | 1175.331  | -1939.841 | 573.369 | -146.4518 | 179.5153  | -14719.15 |
| 3151 | 1   | Extremo | 1175.331  | -1916.793 | 573.369 | -146.4518 | -107.1691 | -13754.99 |
| 3151 | 0   | Extremo | 1197.342  | -1887.273 | 573.323 | -166.802  | 466.1835  | -14458.89 |
| 3151 | 0.5 | Extremo | 1197.342  | -1864.225 | 573.323 | -166.802  | 179.5219  | -13521.02 |
| 3151 | 1   | Extremo | 1197.342  | -1841.178 | 573.323 | -166.802  | -107.1398 | -12594.67 |
| 3152 | 0   | Extremo | 675.142   | -1679.675 | 310.298 | -76.3369  | 198.8879  | -13671.87 |
| 3152 | 0.5 | Extremo | 675.142   | -1656.627 | 310.298 | -76.3369  | 43.7388   | -12837.8  |

|      |     |         |         |           |         |          |           |           |
|------|-----|---------|---------|-----------|---------|----------|-----------|-----------|
| 3152 | 1   | Extremo | 675.142 | -1633.58  | 310.298 | -76.3369 | -111.4103 | -12015.25 |
| 3152 | 0   | Extremo | 691.743 | -1608.878 | 309.785 | -98.8511 | 198.6617  | -12519.71 |
| 3152 | 0.5 | Extremo | 691.743 | -1585.831 | 309.785 | -98.8511 | 43.7691   | -11721.03 |
| 3152 | 1   | Extremo | 691.743 | -1562.783 | 309.785 | -98.8511 | -111.1235 | -10933.88 |
| 3153 | 0   | Extremo | 396.269 | -1523.76  | 210.948 | -41.2791 | 126.2291  | -11910.75 |
| 3153 | 0.5 | Extremo | 396.269 | -1500.713 | 210.948 | -41.2791 | 20.7552   | -11154.63 |
| 3153 | 1   | Extremo | 396.269 | -1477.665 | 210.948 | -41.2791 | -84.7188  | -10410.04 |
| 3153 | 0   | Extremo | 410.077 | -1459.305 | 210.167 | -64.8322 | 125.7807  | -10830.29 |
| 3153 | 0.5 | Extremo | 410.077 | -1436.258 | 210.167 | -64.8322 | 20.697    | -10106.4  |
| 3153 | 1   | Extremo | 410.077 | -1413.21  | 210.167 | -64.8322 | -84.3867  | -9394.034 |
| 3154 | 0   | Extremo | 242.246 | -1408.541 | 153.477 | -16.8759 | 89.5144   | -10301.95 |
| 3154 | 0.5 | Extremo | 242.246 | -1385.493 | 153.477 | -16.8759 | 12.7758   | -9603.444 |
| 3154 | 1   | Extremo | 242.246 | -1362.446 | 153.477 | -16.8759 | -63.9627  | -8916.459 |
| 3154 | 0   | Extremo | 254.405 | -1347.375 | 152.578 | -42.0119 | 88.9374   | -9284.193 |
| 3154 | 0.5 | Extremo | 254.405 | -1324.328 | 152.578 | -42.0119 | 12.6484   | -8616.267 |
| 3154 | 1   | Extremo | 254.405 | -1301.28  | 152.578 | -42.0119 | -63.6406  | -7959.865 |
| 3155 | 0   | Extremo | 154.625 | -1327.976 | 113.326 | 18.081   | 66.2359   | -8802.053 |
| 3155 | 0.5 | Extremo | 154.625 | -1304.929 | 113.326 | 18.081   | 9.5729    | -8143.827 |
| 3155 | 1   | Extremo | 154.625 | -1281.881 | 113.326 | 18.081   | -47.0901  | -7497.124 |
| 3155 | 0   | Extremo | 165.64  | -1264.628 | 112.39  | -10.4893 | 65.5908   | -7843.779 |
| 3155 | 0.5 | Extremo | 165.64  | -1241.58  | 112.39  | -10.4893 | 9.3958    | -7217.227 |
| 3155 | 1   | Extremo | 165.64  | -1218.533 | 112.39  | -10.4893 | -46.7993  | -6602.199 |
| 3156 | 0   | Extremo | 105.283 | -1206.442 | 82.694  | 6.5521   | 47.1886   | -7285.466 |
| 3156 | 0.5 | Extremo | 105.283 | -1184.745 | 82.694  | 6.5521   | 5.8414    | -6687.669 |
| 3156 | 1   | Extremo | 105.283 | -1163.047 | 82.694  | 6.5521   | -35.5058  | -6100.721 |
| 3156 | 0   | Extremo | 115.423 | -1144.045 | 81.759  | -19.9349 | 46.5616   | -6403.615 |
| 3156 | 0.5 | Extremo | 115.423 | -1122.348 | 81.759  | -19.9349 | 5.6819    | -5837.016 |
| 3156 | 1   | Extremo | 115.423 | -1100.65  | 81.759  | -19.9349 | -35.1977  | -5281.267 |
| 3157 | 0   | Extremo | 74.348  | -1070.103 | 63.542  | -16.8033 | 36.2884   | -6017.856 |
| 3157 | 0.5 | Extremo | 74.348  | -1048.405 | 63.542  | -16.8033 | 4.5174    | -5488.229 |
| 3157 | 1   | Extremo | 74.348  | -1026.708 | 63.542  | -16.8033 | -27.2537  | -4969.451 |
| 3157 | 0   | Extremo | 83.83   | -1012.322 | 62.623  | -40.9342 | 35.6699   | -5197.087 |
| 3157 | 0.5 | Extremo | 83.83   | -990.624  | 62.623  | -40.9342 | 4.3584    | -4696.35  |
| 3157 | 1   | Extremo | 83.83   | -968.927  | 62.623  | -40.9342 | -26.953   | -4206.462 |
| 3158 | 0   | Extremo | 54.411  | -965.271  | 49.347  | -20.544  | 28.1585   | -4899.162 |
| 3158 | 0.5 | Extremo | 54.411  | -943.573  | 49.347  | -20.544  | 3.4849    | -4421.951 |
| 3158 | 1   | Extremo | 54.411  | -921.876  | 49.347  | -20.544  | -21.1887  | -3955.588 |
| 3158 | 0   | Extremo | 63.351  | -908.683  | 48.454  | -44.5448 | 27.5559   | -4133.854 |
| 3158 | 0.5 | Extremo | 63.351  | -886.986  | 48.454  | -44.5448 | 3.3288    | -3684.937 |
| 3158 | 1   | Extremo | 63.351  | -865.288  | 48.454  | -44.5448 | -20.8983  | -3246.868 |
| 3159 | 0   | Extremo | 41.09   | -866.144  | 38.501  | -17.0793 | 21.9026   | -3888.693 |
| 3159 | 0.5 | Extremo | 41.09   | -844.446  | 38.501  | -17.0793 | 2.6523    | -3461.046 |
| 3159 | 1   | Extremo | 41.09   | -822.749  | 38.501  | -17.0793 | -16.598   | -3044.247 |
| 3159 | 0   | Extremo | 49.558  | -810.176  | 37.639  | -41.7747 | 21.3212   | -3177.683 |
| 3159 | 0.5 | Extremo | 49.558  | -788.479  | 37.639  | -41.7747 | 2.5018    | -2778.019 |
| 3159 | 1   | Extremo | 49.558  | -766.781  | 37.639  | -41.7747 | -16.3177  | -2389.204 |
| 3160 | 0   | Extremo | 31.86   | -768.081  | 30.04   | -9.8222  | 17.0193   | -2982.639 |
| 3160 | 0.5 | Extremo | 31.86   | -746.383  | 30.04   | -9.8222  | 1.9995    |           |



|      |     |         |        |          |        |          |         |           |
|------|-----|---------|--------|----------|--------|----------|---------|-----------|
| 3164 | 1   | Extremo | 13.599 | -329.287 | 10.293 | -25.5042 | -4.4885 | -42.6121  |
| 3164 | 0   | Extremo | 20.172 | -315.55  | 9.547  | -50.0787 | 5.3461  | 29.0756   |
| 3164 | 0.5 | Extremo | 20.172 | -295.428 | 9.547  | -50.0787 | 0.5727  | 181.8201  |
| 3164 | 1   | Extremo | 20.172 | -275.305 | 9.547  | -50.0787 | -4.2006 | 324.5034  |
| 3165 | 0   | Extremo | 11.216 | -277.881 | 8.017  | -27.9434 | 4.5006  | -17.1616  |
| 3165 | 0.5 | Extremo | 11.216 | -257.758 | 8.017  | -27.9434 | 0.4922  | 116.7482  |
| 3165 | 1   | Extremo | 11.216 | -237.636 | 8.017  | -27.9434 | -3.5162 | 240.5967  |
| 3165 | 0   | Extremo | 17.542 | -223.908 | 7.28   | -53.9282 | 4.0534  | 352.3304  |
| 3165 | 0.5 | Extremo | 17.542 | -203.786 | 7.28   | -53.9282 | 0.4134  | 459.254   |
| 3165 | 1   | Extremo | 17.542 | -183.663 | 7.28   | -53.9282 | -3.2265 | 556.1164  |
| 3166 | 0   | Extremo | 9.304  | -179.726 | 6.154  | -32.017  | 3.4951  | 262.6394  |
| 3166 | 0.5 | Extremo | 9.304  | -159.604 | 6.154  | -32.017  | 0.4183  | 347.472   |
| 3166 | 1   | Extremo | 9.304  | -139.481 | 6.154  | -32.017  | -2.6584 | 422.2433  |
| 3166 | 0   | Extremo | 15.422 | -123.711 | 5.426  | -60.3065 | 3.0516  | 580.0194  |
| 3166 | 0.5 | Extremo | 15.422 | -103.588 | 5.426  | -60.3065 | 0.3387  | 636.8441  |
| 3166 | 1   | Extremo | 15.422 | -83.466  | 5.426  | -60.3065 | -2.3742 | 683.6075  |
| 3167 | 0   | Extremo | 7.811  | -89.6    | 4.565  | -38.9326 | 2.5317  | 425.4646  |
| 3167 | 0.5 | Extremo | 7.811  | -70.715  | 4.565  | -38.9326 | 0.2494  | 465.5435  |
| 3167 | 1   | Extremo | 7.811  | -51.83   | 4.565  | -38.9326 | -2.0329 | 496.18    |
| 3167 | 0   | Extremo | 13.784 | -33.624  | 3.854  | -64.6082 | 2.1281  | 681.8308  |
| 3167 | 0.5 | Extremo | 13.784 | -14.739  | 3.854  | -64.6082 | 0.2013  | 693.9217  |
| 3167 | 1   | Extremo | 13.784 | 4.146    | 3.854  | -64.6082 | -1.7255 | 696.5702  |
| 3168 | 0   | Extremo | 6.594  | -7.341   | 3.591  | -45.774  | 1.9838  | 505.039   |
| 3168 | 0.5 | Extremo | 6.594  | 11.544   | 3.591  | -45.774  | 0.1885  | 503.988   |
| 3168 | 1   | Extremo | 6.594  | 30.429   | 3.591  | -45.774  | -1.6068 | 493.4945  |
| 3168 | 0   | Extremo | 12.614 | 46.576   | 2.88   | -70.1964 | 1.5918  | 707.2223  |
| 3168 | 0.5 | Extremo | 12.614 | 65.461   | 2.88   | -70.1964 | 0.1516  | 679.2133  |
| 3168 | 1   | Extremo | 12.614 | 84.346   | 2.88   | -70.1964 | -1.2886 | 641.7617  |
| 3169 | 0   | Extremo | 5.696  | 81.462   | 2.891  | -53.3958 | 1.5667  | 503.1068  |
| 3169 | 0.5 | Extremo | 5.696  | 100.347  | 2.891  | -53.3958 | 0.1212  | 457.6543  |
| 3169 | 1   | Extremo | 5.696  | 119.232  | 2.891  | -53.3958 | -1.3242 | 402.7593  |
| 3169 | 0   | Extremo | 12.061 | 136.232  | 2.187  | -77.4217 | 1.1903  | 654.3054  |
| 3169 | 0.5 | Extremo | 12.061 | 155.117  | 2.187  | -77.4217 | 0.0967  | 581.4681  |
| 3169 | 1   | Extremo | 12.061 | 174.002  | 2.187  | -77.4217 | -0.997  | 499.1883  |
| 3170 | 0   | Extremo | 5.209  | 196.708  | 2.369  | -57.1236 | 1.2227  | 421.4683  |
| 3170 | 0.5 | Extremo | 5.209  | 215.593  | 2.369  | -57.1236 | 0.0383  | 318.393   |
| 3170 | 1   | Extremo | 5.209  | 234.478  | 2.369  | -57.1236 | -1.1461 | 205.8751  |
| 3170 | 0   | Extremo | 12.478 | 257.388  | 1.682  | -79.8614 | 0.8762  | 522.8204  |
| 3170 | 0.5 | Extremo | 12.478 | 276.273  | 1.682  | -79.8614 | 0.0351  | 389.4049  |
| 3170 | 1   | Extremo | 12.478 | 295.158  | 1.682  | -79.8614 | -0.806  | 246.5469  |
| 3171 | 0   | Extremo | 5.401  | 439.644  | 1.668  | -48.8259 | 0.8685  | 250.0783  |
| 3171 | 0.5 | Extremo | 5.401  | 458.529  | 1.668  | -48.8259 | 0.0347  | 25.5349   |
| 3171 | 1   | Extremo | 5.401  | 477.414  | 1.668  | -48.8259 | -0.7991 | -208.451  |
| 3171 | 0   | Extremo | 14.707 | 527.346  | 0.876  | -67.7382 | 0.5864  | 300.3336  |
| 3171 | 0.5 | Extremo | 14.707 | 546.231  | 0.876  | -67.7382 | 0.1483  | 31.9391   |
| 3171 | 1   | Extremo | 14.707 | 565.116  | 0.876  | -67.7382 | -0.2898 | -245.8978 |
| 3172 | 0   | Extremo | -0.919 | -247.054 | 2.147  | -27.0233 | 0.9661  | -199.5095 |
| 3172 | 0.5 | Extremo | -0.919 | -228.169 | 2.147  | -27.0233 | -0.1074 | -80.7039  |
| 3172 | 1   | Extremo | -0.919 | -209.284 | 2.147  | -27.0233 | -1.181  | 28.6593   |
| 3172 | 0   | Extremo | -3.352 | -281.387 | 2.437  | -39.0583 | 1.2165  | -232.3901 |
| 3172 | 0.5 | Extremo | -3.352 | -262.502 | 2.437  | -39.0583 | -0.002  | -96.4179  |
| 3172 | 1   | Extremo | -3.352 | -243.617 | 2.437  | -39.0583 | -1.2205 | 30.1119   |
| 3173 | 0   | Extremo | 0.288  | -8.74    | -0.176 | -6.4061  | -0.0642 | -10.6334  |
| 3173 | 0.5 | Extremo | 0.288  | 8.683    | -0.176 | -6.4061  | 0.0237  | -10.6191  |
| 3173 | 1   | Extremo | 0.288  | 26.105   | -0.176 | -6.4061  | 0.1116  | -19.316   |
| 3173 | 0   | Extremo | -0.764 | -8.736   | 0.573  | -6.4054  | 0.2763  | -10.6326  |
| 3173 | 0.5 | Extremo | -0.764 | 8.686    | 0.573  | -6.4054  | -0.0102 | -10.6201  |
| 3173 | 1   | Extremo | -0.764 | 26.109   | 0.573  | -6.4054  | -0.2967 | -19.3188  |
| 3174 | 0   | Extremo | 0.812  | -147.499 | 0.025  | 34.7119  | 0.002   | -15.1193  |
| 3174 | 0.5 | Extremo | 0.812  | -130.076 | 0.025  | 34.7119  | -0.0106 | 54.2745   |
| 3174 | 1   | Extremo | 0.812  | -112.654 | 0.025  | 34.7119  | -0.0231 | 114.9571  |
| 3174 | 0   | Extremo | -2.203 | -147.481 | 0.397  | 34.7101  | 0.2814  | -15.1223  |
| 3174 | 0.5 | Extremo | -2.203 | -130.059 | 0.397  | 34.7101  | 0.0831  | 54.2627   |
| 3174 | 1   | Extremo | -2.203 | -112.636 | 0.397  | 34.7101  | -0.1152 | 114.9365  |
| 3175 | 0   | Extremo | 1.025  | -117.248 | 0.111  | 27.2084  | 0.0389  | 132.1177  |
| 3175 | 0.5 | Extremo | 1.025  | -99.826  | 0.111  | 27.2084  | -0.0163 | 186.3863  |
| 3175 | 1   | Extremo | 1.025  | -82.403  | 0.111  | 27.2084  | -0.0716 | 231.9436  |
| 3175 | 0   | Extremo | -2.765 | -117.228 | 0.178  | 27.207   | 0.1412  | 132.0959  |
| 3175 | 0.5 | Extremo | -2.765 | -99.805  | 0.178  | 27.207   | 0.052   | 186.3541  |
| 3175 | 1   | Extremo | -2.765 | -82.383  | 0.178  | 27.207   | -0.0372 | 231.9011  |
| 3176 | 0   | Extremo | 1.125  | -47.748  | 0.156  | 14.4929  | 0.0633  | 239.6308  |
| 3176 | 0.5 | Extremo | 1.125  | -30.325  | 0.156  | 14.4929  | -0.0144 | 259.1492  |

|      |     |         |        |          |           |          |          |           |
|------|-----|---------|--------|----------|-----------|----------|----------|-----------|
| 3176 | 1   | Extremo | 1.125  | -12.903  | 0.156     | 14.4929  | -0.0922  | 269.9563  |
| 3176 | 0   | Extremo | -2.985 | -47.727  | 0.052     | 14.492   | 0.0566   | 239.5876  |
| 3176 | 0.5 | Extremo | -2.985 | -30.304  | 0.052     | 14.492   | 0.0305   | 259.0952  |
| 3176 | 1   | Extremo | -2.985 | -12.882  | 0.052     | 14.492   | 0.0044   | 269.8916  |
| 3177 | 0   | Extremo | 1.181  | 27.83    | 0.178     | 4.1756   | 0.0765   | 272.8437  |
| 3177 | 0.5 | Extremo | 1.181  | 45.252   | 0.178     | 4.1756   | -0.0126  | 254.5733  |
| 3177 | 1   | Extremo | 1.181  | 62.675   | 0.178     | 4.1756   | -0.1017  | 227.5916  |
| 3177 | 0   | Extremo | -3.073 | 27.851   | -0.008919 | 4.175    | 0.0134   | 272.7786  |
| 3177 | 0.5 | Extremo | -3.073 | 45.274   | -0.008919 | 4.175    | 0.0178   | 254.4974  |
| 3177 | 1   | Extremo | -3.073 | 62.696   | -0.008919 | 4.175    | 0.0223   | 227.505   |
| 3178 | 0   | Extremo | 1.222  | 104.366  | 0.187     | -4.9988  | 0.0822   | 227.453   |
| 3178 | 0.5 | Extremo | 1.222  | 121.788  | 0.187     | -4.9988  | -0.0114  | 170.9144  |
| 3178 | 1   | Extremo | 1.222  | 139.211  | 0.187     | -4.9988  | -0.1051  | 105.6646  |
| 3178 | 0   | Extremo | -3.116 | 104.387  | -0.031    | -4.9995  | -0.0065  | 227.3659  |
| 3178 | 0.5 | Extremo | -3.116 | 121.81   | -0.031    | -4.9995  | 0.0088   | 170.8166  |
| 3178 | 1   | Extremo | -3.116 | 139.232  | -0.031    | -4.9995  | 0.0242   | 105.556   |
| 3179 | 0   | Extremo | 1.265  | 180.82   | 0.186     | -15.7175 | 0.0829   | 102.3303  |
| 3179 | 0.5 | Extremo | 1.265  | 198.242  | 0.186     | -15.7175 | -0.0102  | 7.5649    |
| 3179 | 1   | Extremo | 1.265  | 215.665  | 0.186     | -15.7175 | -0.1033  | -95.9119  |
| 3179 | 0   | Extremo | -3.157 | 180.841  | -0.022    | -15.7185 | -0.0107  | 102.2212  |
| 3179 | 0.5 | Extremo | -3.157 | 198.264  | -0.022    | -15.7185 | 0.000408 | 7.4449    |
| 3179 | 1   | Extremo | -3.157 | 215.686  | -0.022    | -15.7185 | 0.0116   | -96.0425  |
| 3180 | 0   | Extremo | 1.323  | 254.813  | 0.174     | -31.9888 | 0.0796   | -104.2812 |
| 3180 | 0.5 | Extremo | 1.323  | 272.236  | 0.174     | -31.9888 | -0.0073  | -236.0435 |
| 3180 | 1   | Extremo | 1.323  | 289.658  | 0.174     | -31.9888 | -0.0941  | -376.517  |
| 3180 | 0   | Extremo | -3.236 | 254.834  | 0.019     | -31.9907 | -0.0013  | -104.4127 |
| 3180 | 0.5 | Extremo | -3.236 | 272.257  | 0.019     | -31.9907 | -0.0109  | -236.1855 |
| 3180 | 1   | Extremo | -3.236 | 289.679  | 0.019     | -31.9907 | -0.0206  | -376.6696 |
| 3181 | 0   | Extremo | 1.424  | 309.974  | 0.144     | -56.4744 | 0.0752   | -396.2359 |
| 3181 | 0.5 | Extremo | 1.424  | 327.396  | 0.144     | -56.4744 | 0.003    | -555.5784 |
| 3181 | 1   | Extremo | 1.424  | 344.819  | 0.144     | -56.4744 | -0.0692  | -723.6321 |
| 3181 | 0   | Extremo | -3.429 | 309.993  | 0.109     | -56.4781 | 0.023    | -396.3902 |
| 3181 | 0.5 | Extremo | -3.429 | 327.415  | 0.109     | -56.4781 | -0.0317  | -555.7422 |
| 3181 | 1   | Extremo | -3.429 | 344.838  | 0.109     | -56.4781 | -0.0864  | -723.8054 |
| 3182 | 0   | Extremo | 1.638  | 241.494  | 0.111     | -65.0061 | 0.0866   | -769.1495 |
| 3182 | 0.5 | Extremo | 1.638  | 258.916  | 0.111     | -65.0061 | 0.0312   | -894.2519 |
| 3182 | 1   | Extremo | 1.638  | 276.339  | 0.111     | -65.0061 | -0.0243  | -1028.066 |
| 3182 | 0   | Extremo | -3.913 | 241.501  | 0.244     | -65.0108 | 0.0596   | -769.3263 |
| 3182 | 0.5 | Extremo | -3.913 | 258.924  | 0.244     | -65.0108 | -0.0626  | -894.4325 |
| 3182 | 1   | Extremo | -3.913 | 276.346  | 0.244     | -65.0108 | -0.1848  | -1028.25  |
| 3183 | 0   | Extremo | 2.103  | -359.488 | 0.317     | 79.5642  | 0.1393   | -1027.847 |
| 3183 | 0.5 | Extremo | 2.103  | -342.065 | 0.317     | 79.5642  | -0.0194  | -852.4587 |
| 3183 | 1   | Extremo | 2.103  | -324.643 | 0.317     | 79.5642  | -0.178   | -685.7816 |
| 3183 | 0   | Extremo | -5.128 | -359.529 | 0.184     | 79.5691  | 0.1648   | -1028.032 |
| 3183 | 0.5 | Extremo | -5.128 | -342.107 | 0.184     | 79.5691  | 0.0729   | -852.6225 |
| 3183 | 1   | Extremo | -5.128 | -324.684 | 0.184     | 79.5691  | -0.0189  | -685.9247 |
| 3184 | 0   | Extremo | 2.309  | -427.984 | 0.383     | 71.0861  | 0.1544   | -639.7902 |
| 3184 | 0.5 | Extremo | 2.309  | -410.561 | 0.383     | 71.0861  | -0.0368  | -430.154  |
| 3184 | 1   | Extremo | 2.309  | -393.139 | 0.383     | 71.0861  | -0.2281  | -229.2291 |
| 3184 | 0   | Extremo | -5.611 | -428.036 | 0.037     | 71.09    | 0.0742   | -639.9297 |
| 3184 | 0.5 | Extremo | -5.611 | -410.614 | 0.037     | 71.09    | 0.0557   | -430.2672 |
| 3184 | 1   | Extremo | -5.611 | -393.191 | 0.037     | 71.09    | 0.0373   | -229.316  |
| 3185 | 0   | Extremo | 2.425  | -372.866 | 0.419     | 46.7267  | 0.1687   | -208.912  |
| 3185 | 0.5 | Extremo | 2.425  | -355.444 | 0.419     | 46.7267  | -0.0406  | -26.8345  |
| 3185 | 1   | Extremo | 2.425  | -338.021 | 0.419     | 46.7267  | -0.2499  | 146.5316  |
| 3185 | 0   | Extremo | -5.809 | -372.921 | -0.06     | 46.7289  | 0.0103   | -208.     |



|      |     |         |        |          |           |          |         |           |
|------|-----|---------|--------|----------|-----------|----------|---------|-----------|
| 3188 | 1   | Extremo | 2.634  | -111.325 | 0.458     | 12.8495  | -0.279  | 778.3116  |
| 3188 | 0   | Extremo | -5.961 | -146.226 | -0.157    | 12.8502  | -0.051  | 649.6456  |
| 3188 | 0.5 | Extremo | -5.961 | -128.803 | -0.157    | 12.8502  | 0.0273  | 718.4028  |
| 3188 | 1   | Extremo | -5.961 | -111.381 | -0.157    | 12.8502  | 0.1057  | 778.4487  |
| 3189 | 0   | Extremo | 2.695  | -69.89   | 0.461     | 5.8803   | 0.1762  | 779.386   |
| 3189 | 0.5 | Extremo | 2.695  | -52.468  | 0.461     | 5.8803   | -0.0545 | 809.9754  |
| 3189 | 1   | Extremo | 2.695  | -35.045  | 0.461     | 5.8803   | -0.2852 | 831.8535  |
| 3189 | 0   | Extremo | -5.978 | -69.945  | -0.164    | 5.881    | -0.055  | 779.5235  |
| 3189 | 0.5 | Extremo | -5.978 | -52.523  | -0.164    | 5.881    | 0.0271  | 810.1405  |
| 3189 | 1   | Extremo | -5.978 | -35.1    | -0.164    | 5.881    | 0.1091  | 832.0462  |
| 3190 | 0   | Extremo | 2.756  | 6.258    | 0.463     | -0.8833  | 0.1727  | 832.0729  |
| 3190 | 0.5 | Extremo | 2.756  | 23.681   | 0.463     | -0.8833  | -0.059  | 824.5881  |
| 3190 | 1   | Extremo | 2.756  | 41.103   | 0.463     | -0.8833  | -0.2906 | 808.392   |
| 3190 | 0   | Extremo | -5.994 | 6.203    | -0.166    | -0.8825  | -0.0558 | 832.266   |
| 3190 | 0.5 | Extremo | -5.994 | 23.626   | -0.166    | -0.8825  | 0.0273  | 824.8087  |
| 3190 | 1   | Extremo | -5.994 | 41.048   | -0.166    | -0.8825  | 0.1104  | 808.6402  |
| 3191 | 0   | Extremo | 2.819  | 82.436   | 0.464     | -7.6481  | 0.1684  | 807.8698  |
| 3191 | 0.5 | Extremo | 2.819  | 99.858   | 0.464     | -7.6481  | -0.0635 | 762.2967  |
| 3191 | 1   | Extremo | 2.819  | 117.281  | 0.464     | -7.6481  | -0.2954 | 708.0114  |
| 3191 | 0   | Extremo | -6.011 | 82.381   | -0.164    | -7.6473  | -0.0543 | 808.1185  |
| 3191 | 0.5 | Extremo | -6.011 | 99.803   | -0.164    | -7.6473  | 0.0276  | 762.5725  |
| 3191 | 1   | Extremo | -6.011 | 117.226  | -0.164    | -7.6473  | 0.1095  | 708.3153  |
| 3192 | 0   | Extremo | 2.885  | 158.809  | 0.463     | -14.6383 | 0.1635  | 706.5861  |
| 3192 | 0.5 | Extremo | 2.885  | 176.231  | 0.463     | -14.6383 | -0.0678 | 622.826   |
| 3192 | 1   | Extremo | 2.885  | 193.654  | 0.463     | -14.6383 | -0.2991 | 530.3547  |
| 3192 | 0   | Extremo | -6.03  | 158.754  | -0.156    | -14.6373 | -0.0508 | 706.8906  |
| 3192 | 0.5 | Extremo | -6.03  | 176.176  | -0.156    | -14.6373 | 0.0273  | 623.1581  |
| 3192 | 1   | Extremo | -6.03  | 193.599  | -0.156    | -14.6373 | 0.1055  | 530.7143  |
| 3193 | 0   | Extremo | 2.955  | 235.442  | 0.459     | -22.4995 | 0.1579  | 527.5013  |
| 3193 | 0.5 | Extremo | 2.955  | 252.865  | 0.459     | -22.4995 | -0.0717 | 405.4246  |
| 3193 | 1   | Extremo | 2.955  | 270.287  | 0.459     | -22.4995 | -0.3012 | 274.6366  |
| 3193 | 0   | Extremo | -6.058 | 235.387  | -0.141    | -22.4981 | -0.0446 | 527.8619  |
| 3193 | 0.5 | Extremo | -6.058 | 252.81   | -0.141    | -22.4981 | 0.0259  | 405.8127  |
| 3193 | 1   | Extremo | -6.058 | 270.232  | -0.141    | -22.4981 | 0.0964  | 275.0523  |
| 3194 | 0   | Extremo | 3.034  | 311.96   | 0.452     | -33.0815 | 0.1511  | 269.2058  |
| 3194 | 0.5 | Extremo | 3.034  | 329.382  | 0.452     | -33.0815 | -0.0746 | 108.8703  |
| 3194 | 1   | Extremo | 3.034  | 346.805  | 0.452     | -33.0815 | -0.3004 | -60.1765  |
| 3194 | 0   | Extremo | -6.105 | 311.905  | -0.112    | -33.0788 | -0.034  | 269.6231  |
| 3194 | 0.5 | Extremo | -6.105 | 329.328  | -0.112    | -33.0788 | 0.0223  | 109.3149  |
| 3194 | 1   | Extremo | -6.105 | 346.75   | -0.112    | -33.0788 | 0.0785  | -59.7045  |
| 3195 | 0   | Extremo | 3.131  | 385.782  | 0.436     | -50.3957 | 0.143   | -70.7808  |
| 3195 | 0.5 | Extremo | 3.131  | 403.204  | 0.436     | -50.3957 | -0.0749 | -268.0274 |
| 3195 | 1   | Extremo | 3.131  | 420.627  | 0.436     | -50.3957 | -0.2929 | -473.9852 |
| 3195 | 0   | Extremo | -6.199 | 385.729  | -0.06     | -50.3898 | -0.0158 | -70.306   |
| 3195 | 0.5 | Extremo | -6.199 | 403.151  | -0.06     | -50.3898 | 0.0141  | -267.5259 |
| 3195 | 1   | Extremo | -6.199 | 420.574  | -0.06     | -50.3898 | 0.044   | -473.4571 |
| 3196 | 0   | Extremo | 3.275  | 437.966  | 0.405     | -77.2324 | 0.1367  | -497.3612 |
| 3196 | 0.5 | Extremo | 3.275  | 455.389  | 0.405     | -77.2324 | -0.066  | -720.6999 |
| 3196 | 1   | Extremo | 3.275  | 472.811  | 0.405     | -77.2324 | -0.2687 | -952.7499 |
| 3196 | 0   | Extremo | -6.407 | 437.92   | 0.036     | -77.2206 | 0.0142  | -496.8274 |
| 3196 | 0.5 | Extremo | -6.407 | 455.342  | 0.036     | -77.2206 | -0.0038 | -720.1429 |
| 3196 | 1   | Extremo | -6.407 | 472.765  | 0.036     | -77.2206 | -0.0219 | -952.1697 |
| 3197 | 0   | Extremo | 3.534  | 346.715  | 0.376     | -85.3566 | 0.1545  | -1005.905 |
| 3197 | 0.5 | Extremo | 3.534  | 364.137  | 0.376     | -85.3566 | -0.0336 | -1183.618 |
| 3197 | 1   | Extremo | 3.534  | 381.56   | 0.376     | -85.3566 | -0.2216 | -1370.043 |
| 3197 | 0   | Extremo | -6.906 | 346.706  | 0.176     | -85.3414 | 0.0574  | -1005.314 |
| 3197 | 0.5 | Extremo | -6.906 | 364.128  | 0.176     | -85.3414 | -0.0306 | -1183.022 |
| 3197 | 1   | Extremo | -6.906 | 381.551  | 0.176     | -85.3414 | -0.1185 | -1369.442 |
| 3198 | 0   | Extremo | 4.044  | -363.352 | 0.653     | 84.566   | 0.2389  | -1370.08  |
| 3198 | 0.5 | Extremo | 4.044  | -345.93  | 0.653     | 84.566   | -0.0876 | -1192.759 |
| 3198 | 1   | Extremo | 4.044  | -328.507 | 0.653     | 84.566   | -0.414  | -1024.15  |
| 3198 | 0   | Extremo | -8.137 | -363.198 | 0.142     | 84.549   | 0.1772  | -1369.479 |
| 3198 | 0.5 | Extremo | -8.137 | -345.775 | 0.142     | 84.549   | 0.1061  | -1192.236 |
| 3198 | 1   | Extremo | -8.137 | -328.353 | 0.142     | 84.549   | 0.0351  | -1023.704 |
| 3199 | 0   | Extremo | 4.292  | -454.603 | 0.723     | 76.4413  | 0.2455  | -971.0682 |
| 3199 | 0.5 | Extremo | 4.292  | -437.181 | 0.723     | 76.4413  | -0.1162 | -748.1222 |
| 3199 | 1   | Extremo | 4.292  | -419.758 | 0.723     | 76.4413  | -0.4779 | -533.8874 |
| 3199 | 0   | Extremo | -8.635 | -454.411 | -0.002491 | 76.4278  | 0.0856  | -970.6345 |
| 3199 | 0.5 | Extremo | -8.635 | -436.989 | -0.002491 | 76.4278  | 0.0869  | -747.7844 |
| 3199 | 1   | Extremo | -8.635 | -419.566 | -0.002491 | 76.4278  | 0.0881  | -533.6456 |
| 3200 | 0   | Extremo | 4.454  | -402.418 | 0.76      | 49.6038  | 0.2546  | -510.586  |
| 3200 | 0.5 | Extremo | 4.454  | -384.996 | 0.76      | 49.6038  | -0.1256 | -313.7324 |

|      |     |         |        |          |        |          |         |           |
|------|-----|---------|--------|----------|--------|----------|---------|-----------|
| 3200 | 1   | Extremo | 4.454  | -367.573 | 0.76   | 49.6038  | -0.5058 | -125.59   |
| 3200 | 0   | Extremo | -8.846 | -402.22  | -0.099 | 49.5963  | 0.0216  | -510.3506 |
| 3200 | 0.5 | Extremo | -8.846 | -384.797 | -0.099 | 49.5963  | 0.0711  | -313.5964 |
| 3200 | 1   | Extremo | -8.846 | -367.375 | -0.099 | 49.5963  | 0.1207  | -125.5534 |
| 3201 | 0   | Extremo | 4.582  | -328.595 | 0.782  | 32.2885  | 0.2587  | -115.0617 |
| 3201 | 0.5 | Extremo | 4.582  | -311.172 | 0.782  | 32.2885  | -0.1322 | 44.8802   |
| 3201 | 1   | Extremo | 4.582  | -293.75  | 0.782  | 32.2885  | -0.5231 | 196.1108  |
| 3201 | 0   | Extremo | -8.944 | -328.395 | -0.152 | 32.2841  | -0.0124 | -115.0286 |
| 3201 | 0.5 | Extremo | -8.944 | -310.972 | -0.152 | 32.2841  | 0.0638  | 44.8131   |
| 3201 | 1   | Extremo | -8.944 | -293.55  | -0.152 | 32.2841  | 0.1399  | 195.9436  |
| 3202 | 0   | Extremo | 4.696  | -252.074 | 0.794  | 21.7055  | 0.2579  | 201.4632  |
| 3202 | 0.5 | Extremo | 4.696  | -234.652 | 0.794  | 21.7055  | -0.1392 | 323.1447  |
| 3202 | 1   | Extremo | 4.696  | -217.229 | 0.794  | 21.7055  | -0.5364 | 436.1149  |
| 3202 | 0   | Extremo | -8.996 | -251.874 | -0.181 | 21.7023  | -0.03   | 201.2937  |
| 3202 | 0.5 | Extremo | -8.996 | -234.451 | -0.181 | 21.7023  | 0.0606  | 322.8749  |
| 3202 | 1   | Extremo | -8.996 | -217.029 | -0.181 | 21.7023  | 0.1512  | 435.7448  |
| 3203 | 0   | Extremo | 4.805  | -175.434 | 0.802  | 13.844   | 0.254   | 438.8862  |
| 3203 | 0.5 | Extremo | 4.805  | -158.012 | 0.802  | 13.844   | -0.1469 | 522.2476  |
| 3203 | 1   | Extremo | 4.805  | -140.589 | 0.802  | 13.844   | -0.5477 | 596.8978  |
| 3203 | 0   | Extremo | -9.03  | -175.233 | -0.197 | 13.8412  | -0.0387 | 438.5144  |
| 3203 | 0.5 | Extremo | -9.03  | -157.811 | -0.197 | 13.8412  | 0.0596  | 521.7755  |
| 3203 | 1   | Extremo | -9.03  | -140.388 | -0.197 | 13.8412  | 0.158   | 596.3254  |
| 3204 | 0   | Extremo | 4.914  | -99.047  | 0.806  | 6.8555   | 0.2482  | 598.2348  |
| 3204 | 0.5 | Extremo | 4.914  | -81.624  | 0.806  | 6.8555   | -0.1549 | 643.4026  |
| 3204 | 1   | Extremo | 4.914  | -64.202  | 0.806  | 6.8555   | -0.558  | 679.8591  |
| 3204 | 0   | Extremo | -9.056 | -98.846  | -0.204 | 6.8529   | -0.0424 | 597.6609  |
| 3204 | 0.5 | Extremo | -9.056 | -81.424  | -0.204 | 6.8529   | 0.0598  | 642.7283  |
| 3204 | 1   | Extremo | -9.056 | -64.001  | -0.204 | 6.8529   | 0.162   | 679.0845  |
| 3205 | 0   | Extremo | 5.024  | -22.84   | 0.809  | 0.0957   | 0.2412  | 680.282   |
| 3205 | 0.5 | Extremo | 5.024  | -5.418   | 0.809  | 0.0957   | -0.1631 | 687.3466  |
| 3205 | 1   | Extremo | 5.024  | 12.005   | 0.809  | 0.0957   | -0.5674 | 685.7     |
| 3205 | 0   | Extremo | -9.08  | -22.64   | -0.207 | 0.093    | -0.0428 | 679.506   |
| 3205 | 0.5 | Extremo | -9.08  | -5.217   | -0.207 | 0.093    | 0.0605  | 686.4703  |
| 3205 | 1   | Extremo | -9.08  | 12.205   | -0.207 | 0.093    | 0.1639  | 684.7233  |
| 3206 | 0   | Extremo | 5.135  | 53.364   | 0.81   | -6.66    | 0.2334  | 685.3599  |
| 3206 | 0.5 | Extremo | 5.135  | 70.787   | 0.81   | -6.66    | -0.1713 | 654.3222  |
| 3206 | 1   | Extremo | 5.135  | 88.209   | 0.81   | -6.66    | -0.5761 | 614.5731  |
| 3206 | 0   | Extremo | -9.104 | 53.565   | -0.205 | -6.6629  | -0.0411 | 684.3815  |
| 3206 | 0.5 | Extremo | -9.104 | 70.987   | -0.205 | -6.6629  | 0.0612  | 653.2434  |
| 3206 | 1   | Extremo | -9.104 | 88.41    | -0.205 | -6.6629  | 0.1635  | 613.3941  |
| 3207 | 0   | Extremo | 5.249  | 129.747  | 0.809  | -13.6313 | 0.225   | 613.3331  |
| 3207 | 0.5 | Extremo | 5.249  | 147.17   | 0.809  | -13.6313 | -0.1794 | 544.1038  |
| 3207 | 1   | Extremo | 5.249  | 164.592  | 0.809  | -13.6313 | -0.5839 | 466.1633  |
| 3207 | 0   | Extremo | -9.131 | 129.948  | -0.197 | -13.6349 | -0.0371 | 612.1518  |
| 3207 | 0.5 | Extremo | -9.131 | 147.371  | -0.197 | -13.6349 | 0.0614  | 542.8222  |
| 3207 | 1   | Extremo | -9.131 | 164.793  | -0.197 | -13.6349 | 0.16    | 464.7813  |
| 3208 | 0   | Extremo | 5.368  | 206.386  | 0.806  | -21.4406 | 0.2159  | 463.525   |
| 3208 | 0.5 | Extremo | 5.368  | 223.809  | 0.806  | -21.4406 | -0.1871 | 355.9763  |
| 3208 | 1   | Extremo | 5.368  | 241.231  | 0.806  | -21.4406 | -0.59   | 239.7163  |
| 3208 | 0   | Extremo | -9.165 | 206.587  | -0.182 | -21.446  | -0.0304 | 462.1395  |
| 3208 | 0.5 | Extremo | -9.165 | 224.009  | -0.182 | -21.446  | 0.0604  | 354.4906  |
| 3208 | 1   | Extremo | -9.165 | 241.432  | -0.182 | -21.446  | 0.1513  | 238.1304  |
| 3209 | 0   | Extremo | 5.496  | 282.932  | 0.799  | -31.8754 | 0.2058  | 234.5726  |
| 3209 | 0.5 | Extremo | 5.496  | 300.355  | 0.799  | -31.8754 | -0.1937 | 88.7507   |
| 3209 | 1   | Extremo | 5.496  | 317.777  | 0.799  | -31.8754 | -0.5932 | -65.7824  |
| 3209 | 0   | Extremo | -9.218 | 283.132  | -0.153 | -31.8855 | -0.0193 | 232.9808  |
| 3209 | 0.5 | Extremo | -9.218 | 300.554  |        |          |         |           |





|      |     |         |         |          |        |          |         |           |
|------|-----|---------|---------|----------|--------|----------|---------|-----------|
| 3212 | 1   | Extremo | 6.153   | 358.275  | 0.73   | -82.7329 | -0.5199 | -1292.625 |
| 3212 | 0   | Extremo | -10.034 | 323.458  | 0.138  | -82.7897 | 0.0783  | -954.0009 |
| 3212 | 0.5 | Extremo | -10.034 | 340.88   | 0.138  | -82.7897 | 0.0095  | -1120.085 |
| 3212 | 1   | Extremo | -10.034 | 358.303  | 0.138  | -82.7897 | -0.0594 | -1294.881 |
| 3213 | 0   | Extremo | 6.717   | -365.306 | 1.074  | 82.834   | 0.3238  | -1292.609 |
| 3213 | 0.5 | Extremo | 6.717   | -347.884 | 1.074  | 82.834   | -0.2131 | -1114.311 |
| 3213 | 1   | Extremo | 6.717   | -330.461 | 1.074  | 82.834   | -0.7501 | -944.7252 |
| 3213 | 0   | Extremo | -11.269 | -365.893 | 0.131  | 82.8982  | 0.2122  | -1294.864 |
| 3213 | 0.5 | Extremo | -11.269 | -348.471 | 0.131  | 82.8982  | 0.1465  | -1116.273 |
| 3213 | 1   | Extremo | -11.269 | -331.048 | 0.131  | 82.8982  | 0.0808  | -946.3929 |
| 3214 | 0   | Extremo | 7.018   | -451.789 | 1.149  | 75.0405  | 0.3213  | -893.1094 |
| 3214 | 0.5 | Extremo | 7.018   | -434.367 | 1.149  | 75.0405  | -0.2534 | -671.5704 |
| 3214 | 1   | Extremo | 7.018   | -416.944 | 1.149  | 75.0405  | -0.8281 | -458.7426 |
| 3214 | 0   | Extremo | -11.772 | -452.516 | -0.011 | 75.0921  | 0.1188  | -894.7312 |
| 3214 | 0.5 | Extremo | -11.772 | -435.094 | -0.011 | 75.0921  | 0.1245  | -672.8287 |
| 3214 | 1   | Extremo | -11.772 | -417.671 | -0.011 | 75.0921  | 0.1301  | -459.6374 |
| 3215 | 0   | Extremo | 7.236   | -398.782 | 1.187  | 48.9176  | 0.3244  | -436.1301 |
| 3215 | 0.5 | Extremo | 7.236   | -381.359 | 1.187  | 48.9176  | -0.2692 | -241.0949 |
| 3215 | 1   | Extremo | 7.236   | -363.937 | 1.187  | 48.9176  | -0.8628 | -54.7709  |
| 3215 | 0   | Extremo | -11.986 | -399.534 | -0.108 | 48.9468  | 0.0542  | -437.0011 |
| 3215 | 0.5 | Extremo | -11.986 | -382.112 | -0.108 | 48.9468  | 0.1081  | -241.5895 |
| 3215 | 1   | Extremo | -11.986 | -364.689 | -0.108 | 48.9468  | 0.1619  | -54.8891  |
| 3216 | 0   | Extremo | 7.42    | -324.808 | 1.209  | 31.9782  | 0.324   | -44.5723  |
| 3216 | 0.5 | Extremo | 7.42    | -307.386 | 1.209  | 31.9782  | -0.2808 | 113.4763  |
| 3216 | 1   | Extremo | 7.42    | -289.963 | 1.209  | 31.9782  | -0.8855 | 262.8136  |
| 3216 | 0   | Extremo | -12.086 | -325.567 | -0.161 | 31.9958  | 0.0203  | -44.6772  |
| 3216 | 0.5 | Extremo | -12.086 | -308.144 | -0.161 | 31.9958  | 0.1006  | 113.7504  |
| 3216 | 1   | Extremo | -12.086 | -290.722 | -0.161 | 31.9958  | 0.181   | 263.4668  |
| 3217 | 0   | Extremo | 7.592   | -248.262 | 1.223  | 21.5448  | 0.3188  | 267.9927  |
| 3217 | 0.5 | Extremo | 7.592   | -230.839 | 1.223  | 21.5448  | -0.2925 | 387.768   |
| 3217 | 1   | Extremo | 7.592   | -213.417 | 1.223  | 21.5448  | -0.9038 | 498.8322  |
| 3217 | 0   | Extremo | -12.14  | -249.021 | -0.189 | 21.5577  | 0.0029  | 268.6545  |
| 3217 | 0.5 | Extremo | -12.14  | -231.599 | -0.189 | 21.5577  | 0.0975  | 388.8095  |
| 3217 | 1   | Extremo | -12.14  | -214.176 | -0.189 | 21.5577  | 0.1922  | 500.2533  |
| 3218 | 0   | Extremo | 7.759   | -171.623 | 1.23   | 13.7374  | 0.3105  | 501.5079  |
| 3218 | 0.5 | Extremo | 7.759   | -154.201 | 1.23   | 13.7374  | -0.3048 | 582.9639  |
| 3218 | 1   | Extremo | 7.759   | -136.778 | 1.23   | 13.7374  | -0.92   | 655.7086  |
| 3218 | 0   | Extremo | -12.175 | -172.383 | -0.205 | 13.7488  | -0.0057 | 502.9355  |
| 3218 | 0.5 | Extremo | -12.175 | -154.96  | -0.205 | 13.7488  | 0.0966  | 584.7713  |
| 3218 | 1   | Extremo | -12.175 | -137.538 | -0.205 | 13.7488  | 0.199   | 657.8957  |
| 3219 | 0   | Extremo | 7.927   | -95.24   | 1.235  | 6.7691   | 0.3002  | 656.9898  |
| 3219 | 0.5 | Extremo | 7.927   | -77.818  | 1.235  | 6.7691   | -0.3175 | 700.2544  |
| 3219 | 1   | Extremo | 7.927   | -60.395  | 1.235  | 6.7691   | -0.9351 | 734.8078  |
| 3219 | 0   | Extremo | -12.202 | -96      | -0.212 | 6.7801   | -0.0092 | 659.1825  |
| 3219 | 0.5 | Extremo | -12.202 | -78.577  | -0.212 | 6.7801   | 0.0969  | 702.8269  |
| 3219 | 1   | Extremo | -12.202 | -61.155  | -0.212 | 6.7801   | 0.2031  | 737.76    |
| 3220 | 0   | Extremo | 8.095   | -19.037  | 1.238  | 0.0187   | 0.2887  | 735.1959  |
| 3220 | 0.5 | Extremo | 8.095   | -1.615   | 1.238  | 0.0187   | -0.3303 | 740.3587  |
| 3220 | 1   | Extremo | 8.095   | 15.808   | 1.238  | 0.0187   | -0.9494 | 736.8104  |
| 3220 | 0   | Extremo | -12.227 | -19.797  | -0.214 | 0.0299   | -0.0095 | 738.1537  |
| 3220 | 0.5 | Extremo | -12.227 | -2.374   | -0.214 | 0.0299   | 0.0977  | 743.6963  |
| 3220 | 1   | Extremo | -12.227 | 15.048   | -0.214 | 0.0299   | 0.205   | 740.5278  |
| 3221 | 0   | Extremo | 8.266   | 57.166   | 1.239  | -6.7302  | 0.2764  | 736.4484  |
| 3221 | 0.5 | Extremo | 8.266   | 74.589   | 1.239  | -6.7302  | -0.3432 | 703.5096  |
| 3221 | 1   | Extremo | 8.266   | 92.011   | 1.239  | -6.7302  | -0.9629 | 661.8595  |
| 3221 | 0   | Extremo | -12.252 | 56.407   | -0.212 | -6.7182  | -0.0076 | 740.1722  |
| 3221 | 0.5 | Extremo | -12.252 | 73.829   | -0.212 | -6.7182  | 0.0985  | 707.6132  |
| 3221 | 1   | Extremo | -12.252 | 91.252   | -0.212 | -6.7182  | 0.2046  | 666.343   |
| 3222 | 0   | Extremo | 8.44    | 133.549  | 1.239  | -13.692  | 0.2635  | 660.609   |
| 3222 | 0.5 | Extremo | 8.44    | 150.972  | 1.239  | -13.692  | -0.356  | 589.4787  |
| 3222 | 1   | Extremo | 8.44    | 168.394  | 1.239  | -13.692  | -0.9755 | 509.6371  |
| 3222 | 0   | Extremo | -12.28  | 132.789  | -0.205 | -13.6777 | -0.0035 | 665.101   |
| 3222 | 0.5 | Extremo | -12.28  | 150.212  | -0.205 | -13.6777 | 0.0988  | 594.3506  |
| 3222 | 1   | Extremo | -12.28  | 167.634  | -0.205 | -13.6777 | 0.2011  | 514.889   |
| 3223 | 0   | Extremo | 8.619   | 210.191  | 1.236  | -21.4809 | 0.25    | 507.0038  |
| 3223 | 0.5 | Extremo | 8.619   | 227.614  | 1.236  | -21.4809 | -0.3683 | 397.5524  |
| 3223 | 1   | Extremo | 8.619   | 245.036  | 1.236  | -21.4809 | -0.9865 | 279.3899  |
| 3223 | 0   | Extremo | -12.315 | 209.432  | -0.189 | -21.4602 | 0.0033  | 512.2686  |
| 3223 | 0.5 | Extremo | -12.315 | 226.854  | -0.189 | -21.4602 | 0.0979  | 403.197   |
| 3223 | 1   | Extremo | -12.315 | 244.277  | -0.189 | -21.4602 | 0.1924  | 285.4142  |
| 3224 | 0   | Extremo | 8.808   | 286.753  | 1.23   | -31.8643 | 0.2354  | 274.2777  |
| 3224 | 0.5 | Extremo | 8.808   | 304.175  | 1.23   | -31.8643 | -0.3795 | 126.5457  |

|      |     |         |         |          |        |          |         |           |
|------|-----|---------|---------|----------|--------|----------|---------|-----------|
| 3224 | 1   | Extremo | 8.808   | 321.598  | 1.23   | -31.8643 | -0.9945 | -29.8976  |
| 3224 | 0   | Extremo | -12.368 | 285.997  | -0.16  | -31.8261 | 0.0147  | 280.3237  |
| 3224 | 0.5 | Extremo | -12.368 | 303.42   | -0.16  | -31.8261 | 0.0948  | 132.9695  |
| 3224 | 1   | Extremo | -12.368 | 320.842  | -0.16  | -31.8261 | 0.1749  | -23.096   |
| 3225 | 0   | Extremo | 9.017   | 360.785  | 1.216  | -48.6806 | 0.2201  | -39.9805  |
| 3225 | 0.5 | Extremo | 9.017   | 378.208  | 1.216  | -48.6806 | -0.3876 | -224.7288 |
| 3225 | 1   | Extremo | 9.017   | 395.63   | 1.216  | -48.6806 | -0.9954 | -418.1883 |
| 3225 | 0   | Extremo | -12.467 | 360.049  | -0.107 | -48.5989 | 0.0339  | -33.1396  |
| 3225 | 0.5 | Extremo | -12.467 | 377.471  | -0.107 | -48.5989 | 0.0874  | -217.5196 |
| 3225 | 1   | Extremo | -12.467 | 394.894  | -0.107 | -48.5989 | 0.1409  | -410.6108 |
| 3226 | 0   | Extremo | 9.274   | 414.062  | 1.186  | -74.5685 | 0.2093  | -440.5775 |
| 3226 | 0.5 | Extremo | 9.274   | 431.485  | 1.186  | -74.5685 | -0.3839 | -651.9642 |
| 3226 | 1   | Extremo | 9.274   | 448.907  | 1.186  | -74.5685 | -0.977  | -872.0622 |
| 3226 | 0   | Extremo | -12.68  | 413.421  | -0.01  | -74.404  | 0.0663  | -432.9207 |
| 3226 | 0.5 | Extremo | -12.68  | 430.843  | -0.01  | -74.404  | 0.0715  | -643.9867 |
| 3226 | 1   | Extremo | -12.68  | 448.266  | -0.01  | -74.404  | 0.0767  | -863.764  |
| 3227 | 0   | Extremo | 9.654   | 329.009  | 1.166  | -82.2195 | 0.2362  | -923.2318 |
| 3227 | 0.5 | Extremo | 9.654   | 346.431  | 1.166  | -82.2195 | -0.3468 | -1092.092 |
| 3227 | 1   | Extremo | 9.654   | 363.854  | 1.166  | -82.2195 | -0.9299 | -1269.663 |
| 3227 | 0   | Extremo | -13.181 | 328.898  | 0.134  | -82.0111 | 0.1183  | -914.7695 |
| 3227 | 0.5 | Extremo | -13.181 | 346.32   | 0.134  | -82.0111 | 0.0514  | -1083.574 |
| 3227 | 1   | Extremo | -13.181 | 363.743  | 0.134  | -82.0111 | -0.0155 | -1261.09  |
| 3228 | 0   | Extremo | 10.284  | -353.496 | 1.568  | 82.1444  | 0.3735  | -1269.688 |
| 3228 | 0.5 | Extremo | 10.284  | -336.074 | 1.568  | 82.1444  | -0.4103 | -1097.296 |
| 3228 | 1   | Extremo | 10.284  | -318.651 | 1.568  | 82.1444  | -1.1941 | -933.6143 |
| 3228 | 0   | Extremo | -14.416 | -351.261 | 0.158  | 81.8848  | 0.2676  | -1261.119 |
| 3228 | 0.5 | Extremo | -14.416 | -333.839 | 0.158  | 81.8848  | 0.1884  | -1089.845 |
| 3228 | 1   | Extremo | -14.416 | -316.416 | 0.158  | 81.8848  | 0.1093  | -927.2809 |
| 3229 | 0   | Extremo | 10.649  | -438.55  | 1.647  | 74.4931  | 0.3617  | -882.4946 |
| 3229 | 0.5 | Extremo | 10.649  | -421.127 | 1.647  | 74.4931  | -0.462  | -667.5753 |
| 3229 | 1   | Extremo | 10.649  | -403.705 | 1.647  | 74.4931  | -1.2857 | -461.3673 |
| 3229 | 0   | Extremo | -14.917 | -435.784 | 0.018  | 74.2773  | 0.1717  | -876.3347 |
| 3229 | 0.5 | Extremo | -14.917 | -418.362 | 0.018  | 74.2773  | 0.1628  | -662.7983 |
| 3229 | 1   | Extremo | -14.917 | -400.939 | 0.018  | 74.2773  | 0.154   | -457.9731 |
| 3230 | 0   | Extremo | 10.934  | -385.273 | 1.686  | 48.6043  | 0.3582  | -439.0287 |
| 3230 | 0.5 | Extremo | 10.934  | -367.851 | 1.686  | 48.6043  | -0.4847 | -250.7477 |
| 3230 | 1   | Extremo | 10.934  | -350.428 | 1.686  | 48.6043  | -1.3275 | -71.1781  |
| 3230 | 0   | Extremo | -15.128 | -382.412 | -0.079 | 48.4711  | 0.106   | -435.7234 |
| 3230 | 0.5 | Extremo | -15.128 | -364.99  | -0.079 | 48.4711  | 0.1453  | -248.8728 |
| 3230 | 1   | Extremo | -15.128 | -347.567 | -0.079 | 48.4711  | 0.1846  | -70.7335  |
| 3231 | 0   | Extremo | 11.186  | -311.241 | 1.708  | 31.7866  | 0.3522  | -61.1468  |
| 3231 | 0.5 | Extremo | 11.186  | -293.819 | 1.708  | 31.7866  | -0.5019 | 90.1181   |
| 3231 | 1   | Extremo | 11.186  | -276.396 | 1.708  | 31.7866  | -1.3561 | 232.6718  |
| 3231 | 0   | Extremo | -15.224 | -308.361 | -0.132 | 31.6967  | 0.0716  | -60.7514  |
| 3231 | 0.5 | Extremo | -15.224 | -290.939 | -0.132 | 31.6967  | 0.1374  | 89.0736   |
| 3231 | 1   | Extremo | -15.224 | -273.516 | -0.132 | 31.6967  | 0.2032  | 230.1874  |
| 3232 | 0   | Extremo | 11.427  | -234.68  | 1.722  | 21.401   | 0.3417  | 237.7301  |
| 3232 | 0.5 | Extremo | 11.427  | -217.258 | 1.722  | 21.401   | -0.5191 | 350.7148  |
| 3232 | 1   | Extremo | 11.427  | -199.835 | 1.722  | 21.401   | -1.3799 | 454.9881  |
| 3232 | 0   | Extremo | -15.273 | -231.797 | -0.16  | 21.3282  | 0.0538  | 235.214   |
| 3232 | 0.5 | Extremo | -15.273 | -214.374 | -0.16  | 21.3282  | 0.134   | 346.7567  |
| 3232 | 1   | Extremo | -15.273 | -196.952 | -0.16  | 21.3282  | 0.2141  | 449.5881  |
| 3233 | 0   | Extremo | 11.665  | -158.04  | 1.73   | 13.6085  | 0.328   | 457.564   |
| 3233 | 0.5 | Extremo | 11.665  | -140.617 | 1.73   | 13.6085  | -0.5368 | 532.2282  |
| 3233 | 1   | Extremo | 11.665  | -123.195 | 1.73   | 13.6085  | -1.4016 | 598.1811  |
| 3233 | 0   | Extremo | -15.303 |          |        |          |         |           |



|      |     |         |         |          |        |          |         |           |
|------|-----|---------|---------|----------|--------|----------|---------|-----------|
| 3236 | 1   | Extremo | 12.387  | 105.59   | 1.737  | -6.8907  | -1.46   | 563.273   |
| 3236 | 0   | Extremo | -15.36  | 73.633   | -0.185 | -6.9574  | 0.0414  | 637.2985  |
| 3236 | 0.5 | Extremo | -15.36  | 91.056   | -0.185 | -6.9574  | 0.1337  | 596.1261  |
| 3236 | 1   | Extremo | -15.36  | 108.478  | -0.185 | -6.9574  | 0.226   | 546.2425  |
| 3237 | 0   | Extremo | 12.636  | 147.12   | 1.736  | -13.9091 | 0.2585  | 561.8539  |
| 3237 | 0.5 | Extremo | 12.636  | 164.543  | 1.736  | -13.9091 | -0.6095 | 483.9381  |
| 3237 | 1   | Extremo | 12.636  | 181.965  | 1.736  | -13.9091 | -1.4775 | 397.311   |
| 3237 | 0   | Extremo | -15.379 | 150.014  | -0.178 | -13.9813 | 0.0449  | 544.7945  |
| 3237 | 0.5 | Extremo | -15.379 | 167.437  | -0.178 | -13.9813 | 0.1337  | 465.4317  |
| 3237 | 1   | Extremo | -15.379 | 184.859  | -0.178 | -13.9813 | 0.2226  | 377.3577  |
| 3238 | 0   | Extremo | 12.891  | 223.731  | 1.732  | -21.8446 | 0.239   | 394.414   |
| 3238 | 0.5 | Extremo | 12.891  | 241.153  | 1.732  | -21.8446 | -0.6271 | 278.193   |
| 3238 | 1   | Extremo | 12.891  | 258.576  | 1.732  | -21.8446 | -1.4932 | 153.2607  |
| 3238 | 0   | Extremo | -15.404 | 226.631  | -0.163 | -21.9345 | 0.051   | 374.4174  |
| 3238 | 0.5 | Extremo | -15.404 | 244.054  | -0.163 | -21.9345 | 0.1326  | 256.7462  |
| 3238 | 1   | Extremo | -15.404 | 261.476  | -0.163 | -21.9345 | 0.2142  | 130.3638  |
| 3239 | 0   | Extremo | 13.158  | 300.166  | 1.724  | -32.6132 | 0.2184  | 147.6964  |
| 3239 | 0.5 | Extremo | 13.158  | 317.589  | 1.724  | -32.6132 | -0.6437 | -6.7422   |
| 3239 | 1   | Extremo | 13.158  | 335.011  | 1.724  | -32.6132 | -1.5058 | -169.8921 |
| 3239 | 0   | Extremo | -15.446 | 303.067  | -0.136 | -32.7567 | 0.0615  | 124.7267  |
| 3239 | 0.5 | Extremo | -15.446 | 320.49   | -0.136 | -32.7567 | 0.1293  | -31.1625  |
| 3239 | 1   | Extremo | -15.446 | 337.912  | -0.136 | -32.7567 | 0.1971  | -195.7629 |
| 3240 | 0   | Extremo | 13.449  | 373.729  | 1.708  | -50.3674 | 0.1971  | -180.7968 |
| 3240 | 0.5 | Extremo | 13.449  | 391.151  | 1.708  | -50.3674 | -0.6569 | -372.0169 |
| 3240 | 1   | Extremo | 13.449  | 408.574  | 1.708  | -50.3674 | -1.5108 | -571.9482 |
| 3240 | 0   | Extremo | -15.531 | 376.59   | -0.084 | -50.6511 | 0.08    | -206.802  |
| 3240 | 0.5 | Extremo | -15.531 | 394.013  | -0.084 | -50.6511 | 0.1219  | -399.4527 |
| 3240 | 1   | Extremo | -15.531 | 411.435  | -0.084 | -50.6511 | 0.1638  | -600.8147 |
| 3241 | 0   | Extremo | 13.791  | 424.959  | 1.676  | -78.0435 | 0.1808  | -595.9612 |
| 3241 | 0.5 | Extremo | 13.791  | 442.382  | 1.676  | -78.0435 | -0.6573 | -812.7964 |
| 3241 | 1   | Extremo | 13.791  | 459.804  | 1.676  | -78.0435 | -1.4953 | -1038.343 |
| 3241 | 0   | Extremo | -15.728 | 427.512  | 0.011  | -78.5932 | 0.1122  | -625.1121 |
| 3241 | 0.5 | Extremo | -15.728 | 444.935  | 0.011  | -78.5932 | 0.1067  | -843.2239 |
| 3241 | 1   | Extremo | -15.728 | 462.357  | 0.011  | -78.5932 | 0.1013  | -1070.047 |
| 3242 | 0   | Extremo | 14.263  | 329.285  | 1.655  | -86.8428 | 0.2063  | -1092.773 |
| 3242 | 0.5 | Extremo | 14.263  | 346.708  | 1.655  | -86.8428 | -0.6212 | -1261.771 |
| 3242 | 1   | Extremo | 14.263  | 364.13   | 1.655  | -86.8428 | -1.4487 | -1439.481 |
| 3242 | 0   | Extremo | -16.208 | 329.846  | 0.155  | -87.4626 | 0.1675  | -1125.102 |
| 3242 | 0.5 | Extremo | -16.208 | 347.269  | 0.155  | -87.4626 | 0.0902  | -1294.381 |
| 3242 | 1   | Extremo | -16.208 | 364.691  | 0.155  | -87.4626 | 0.0129  | -1472.371 |
| 3243 | 0   | Extremo | 14.99   | -399.162 | 2.092  | 86.2465  | 0.3559  | -1439.392 |
| 3243 | 0.5 | Extremo | 14.99   | -381.739 | 2.092  | 86.2465  | -0.6902 | -1244.167 |
| 3243 | 1   | Extremo | 14.99   | -364.317 | 2.092  | 86.2465  | -1.7363 | -1057.653 |
| 3243 | 0   | Extremo | -17.421 | -407.778 | 0.211  | 87.6091  | 0.3326  | -1472.273 |
| 3243 | 0.5 | Extremo | -17.421 | -390.355 | 0.211  | 87.6091  | 0.2272  | -1272.74  |
| 3243 | 1   | Extremo | -17.421 | -372.933 | 0.211  | 87.6091  | 0.1217  | -1081.918 |
| 3244 | 0   | Extremo | 15.456  | -494.835 | 2.169  | 77.4467  | 0.3332  | -1003.046 |
| 3244 | 0.5 | Extremo | 15.456  | -477.413 | 2.169  | 77.4467  | -0.7516 | -759.9838 |
| 3244 | 1   | Extremo | 15.456  | -459.99  | 2.169  | 77.4467  | -1.8363 | -525.6331 |
| 3244 | 0   | Extremo | -17.896 | -505.444 | 0.067  | 78.7382  | 0.2311  | -1026.666 |
| 3244 | 0.5 | Extremo | -17.896 | -488.022 | 0.067  | 78.7382  | 0.1974  | -778.2991 |
| 3244 | 1   | Extremo | -17.896 | -470.599 | 0.067  | 78.7382  | 0.1637  | -538.6438 |
| 3245 | 0   | Extremo | 15.852  | -443.605 | 2.201  | 49.7699  | 0.3198  | -501.443  |
| 3245 | 0.5 | Extremo | 15.852  | -426.182 | 2.201  | 49.7699  | -0.7807 | -283.9963 |
| 3245 | 1   | Extremo | 15.852  | -408.76  | 2.201  | 49.7699  | -1.8813 | -75.2609  |
| 3245 | 0   | Extremo | -18.072 | -454.524 | -0.035 | 50.7929  | 0.161   | -514.1515 |
| 3245 | 0.5 | Extremo | -18.072 | -437.101 | -0.035 | 50.7929  | 0.1786  | -291.2452 |
| 3245 | 1   | Extremo | -18.072 | -419.679 | -0.035 | 50.7929  | 0.1961  | -77.0501  |
| 3246 | 0   | Extremo | 16.227  | -370.041 | 2.215  | 32.0146  | 0.3041  | -64.1791  |
| 3246 | 0.5 | Extremo | 16.227  | -352.618 | 2.215  | 32.0146  | -0.8034 | 116.4855  |
| 3246 | 1   | Extremo | 16.227  | -335.196 | 2.215  | 32.0146  | -1.911  | 288.4389  |
| 3246 | 0   | Extremo | -18.124 | -381.004 | -0.096 | 32.8927  | 0.1222  | -65.8188  |
| 3246 | 0.5 | Extremo | -18.124 | -363.581 | -0.096 | 32.8927  | 0.1703  | 120.3274  |
| 3246 | 1   | Extremo | -18.124 | -346.159 | -0.096 | 32.8927  | 0.2184  | 297.7623  |
| 3247 | 0   | Extremo | 16.604  | -293.603 | 2.217  | 21.2452  | 0.283   | 294.1806  |
| 3247 | 0.5 | Extremo | 16.604  | -276.18  | 2.217  | 21.2452  | -0.8257 | 436.6264  |
| 3247 | 1   | Extremo | 16.604  | -258.758 | 2.217  | 21.2452  | -1.9344 | 570.3609  |
| 3247 | 0   | Extremo | -18.121 | -304.572 | -0.135 | 22.0612  | 0.0992  | 303.5873  |
| 3247 | 0.5 | Extremo | -18.121 | -287.15  | -0.135 | 22.0612  | 0.1668  | 451.5179  |
| 3247 | 1   | Extremo | -18.121 | -269.727 | -0.135 | 22.0612  | 0.2344  | 590.7373  |
| 3248 | 0   | Extremo | 16.996  | -216.986 | 2.211  | 13.3105  | 0.2573  | 573.4373  |
| 3248 | 0.5 | Extremo | 16.996  | -199.564 | 2.211  | 13.3105  | -0.8482 | 677.5749  |

|      |     |         |         |          |        |          |         |           |
|------|-----|---------|---------|----------|--------|----------|---------|-----------|
| 3248 | 1   | Extremo | 16.996  | -182.141 | 2.211  | 13.3105  | -1.9538 | 773.0012  |
| 3248 | 0   | Extremo | -18.087 | -227.963 | -0.164 | 14.0936  | 0.0838  | 593.8593  |
| 3248 | 0.5 | Extremo | -18.087 | -210.541 | -0.164 | 14.0936  | 0.1657  | 703.4854  |
| 3248 | 1   | Extremo | -18.087 | -193.118 | -0.164 | 14.0936  | 0.2477  | 804.4001  |
| 3249 | 0   | Extremo | 17.411  | -140.598 | 2.198  | 6.2984   | 0.2281  | 774.6057  |
| 3249 | 0.5 | Extremo | 17.411  | -123.175 | 2.198  | 6.2984   | -0.8709 | 840.549   |
| 3249 | 1   | Extremo | 17.411  | -105.753 | 2.198  | 6.2984   | -1.9698 | 897.781   |
| 3249 | 0   | Extremo | -18.03  | -151.595 | -0.189 | 7.049    | 0.0718  | 806.0222  |
| 3249 | 0.5 | Extremo | -18.03  | -134.172 | -0.189 | 7.049    | 0.1661  | 877.4639  |
| 3249 | 1   | Extremo | -18.03  | -116.75  | -0.189 | 7.049    | 0.2604  | 940.1944  |
| 3250 | 0   | Extremo | 17.857  | -64.37   | 2.178  | -0.4515  | 0.1956  | 898.4663  |
| 3250 | 0.5 | Extremo | 17.857  | -46.947  | 2.178  | -0.4515  | -0.8933 | 926.2955  |
| 3250 | 1   | Extremo | 17.857  | -29.525  | 2.178  | -0.4515  | -1.9823 | 945.4135  |
| 3250 | 0   | Extremo | -17.951 | -75.41   | -0.213 | 0.2491   | 0.061   | 940.8676  |
| 3250 | 0.5 | Extremo | -17.951 | -57.988  | -0.213 | 0.2491   | 0.1674  | 974.2171  |
| 3250 | 1   | Extremo | -17.951 | -40.565  | -0.213 | 0.2491   | 0.2737  | 998.8553  |
| 3251 | 0   | Extremo | 18.345  | 11.891   | 2.151  | -7.146   | 0.16    | 945.3658  |
| 3251 | 0.5 | Extremo | 18.345  | 29.313   | 2.151  | -7.146   | -0.9154 | 935.0647  |
| 3251 | 1   | Extremo | 18.345  | 46.736   | 2.151  | -7.146   | -1.9907 | 916.0524  |
| 3251 | 0   | Extremo | -17.848 | 0.766    | -0.238 | -6.532   | 0.05    | 998.7545  |
| 3251 | 0.5 | Extremo | -17.848 | 18.188   | -0.238 | -6.532   | 0.1691  | 994.016   |
| 3251 | 1   | Extremo | -17.848 | 35.611   | -0.238 | -6.532   | 0.2882  | 980.5663  |
| 3252 | 0   | Extremo | 18.886  | 88.41    | 2.115  | -13.9367 | 0.1207  | 915.1942  |
| 3252 | 0.5 | Extremo | 18.886  | 105.833  | 2.115  | -13.9367 | -0.9367 | 866.6335  |
| 3252 | 1   | Extremo | 18.886  | 123.255  | 2.115  | -13.9367 | -1.9942 | 809.3615  |
| 3252 | 0   | Extremo | -17.719 | 77.124   | -0.266 | -13.4738 | 0.0378  | 979.592   |
| 3252 | 0.5 | Extremo | -17.719 | 94.547   | -0.266 | -13.4738 | 0.1708  | 936.6744  |
| 3252 | 1   | Extremo | -17.719 | 111.969  | -0.266 | -13.4738 | 0.3039  | 885.0454  |
| 3253 | 0   | Extremo | 19.499  | 165.41   | 2.069  | -21.2629 | 0.0773  | 807.3102  |
| 3253 | 0.5 | Extremo | 19.499  | 182.833  | 2.069  | -21.2629 | -0.957  | 720.2494  |
| 3253 | 1   | Extremo | 19.499  | 200.255  | 2.069  | -21.2629 | -1.9914 | 624.4775  |
| 3253 | 0   | Extremo | -17.56  | 153.814  | -0.296 | -21.0568 | 0.0241  | 882.7797  |
| 3253 | 0.5 | Extremo | -17.56  | 171.237  | -0.296 | -21.0568 | 0.1721  | 801.5169  |
| 3253 | 1   | Extremo | -17.56  | 188.659  | -0.296 | -21.0568 | 0.3202  | 711.5428  |
| 3254 | 0   | Extremo | 20.207  | 242.969  | 2.009  | -30.4557 | 0.0289  | 620.3267  |
| 3254 | 0.5 | Extremo | 20.207  | 260.391  | 2.009  | -30.4557 | -0.9757 | 494.4866  |
| 3254 | 1   | Extremo | 20.207  | 277.814  | 2.009  | -30.4557 | -1.9804 | 359.9352  |
| 3254 | 0   | Extremo | -17.373 | 230.76   | -0.326 | -30.6629 | 0.0094  | 707.0354  |
| 3254 | 0.5 | Extremo | -17.373 | 248.182  | -0.326 | -30.6629 | 0.1722  | 587.3     |
| 3254 | 1   | Extremo | -17.373 | 265.605  | -0.326 | -30.6629 | 0.3351  | 458.8534  |
| 3255 | 0   | Extremo | 21.045  | 319.788  | 1.932  | -44.3889 | -0.025  | 351.4386  |
| 3255 | 0.5 | Extremo | 21.045  | 337.211  | 1.932  | -44.3889 | -0.9912 | 187.189   |
| 3255 | 1   | Extremo | 21.045  | 354.633  | 1.932  | -44.3889 | -1.9573 | 14.2281   |
| 3255 | 0   | Extremo | -17.17  | 306.372  | -0.349 | -45.2192 | -0.005  | 449.8647  |
| 3255 | 0.5 | Extremo | -17.17  | 323.794  | -0.349 | -45.2192 | 0.1697  | 292.3231  |
| 3255 | 1   | Extremo | -17.17  | 341.217  | -0.349 | -45.2192 | 0.3444  | 126.0703  |
| 3256 | 0   | Extremo | 22.068  | 381.45   | 1.832  | -64.2658 | -0.0815 | -5.6235   |
| 3256 | 0.5 | Extremo | 22.068  | 398.873  | 1.832  | -64.2658 | -0.9976 | -200.7042 |
| 3256 | 1   | Extremo | 22.068  | 416.295  | 1.832  | -64.2658 | -1.9137 | -404.4962 |
| 3256 | 0   | Extremo | -17.001 | 366.152  | -0.357 | -66.079  | -0.0156 | 105.9226  |
| 3256 | 0.5 | Extremo | -17.001 | 383.575  | -0.357 | -66.079  | 0.1629  | -81.5091  |
| 3256 | 1   | Extremo | -17.001 | 400.997  | -0.357 | -66.079  | 0.3414  | -277.6521 |
| 3257 | 0   | Extremo | 23.377  | 328.883  | 1.736  | -64.0813 | -0.1185 | -451.4704 |
| 3257 | 0.5 | Extremo | 23.377  | 346.305  | 1.736  | -64.0813 | -0.9863 | -620.2674 |
| 3257 | 1   | Extremo | 23.377  | 363.728  | 1.736  | -64.0813 | -1.     |           |



|      |     |         |         |          |         |          |          |           |
|------|-----|---------|---------|----------|---------|----------|----------|-----------|
| 3260 | 1   | Extremo | 28.964  | -183.984 | 1.571   | 62.3644  | -1.9754  | -75.1805  |
| 3260 | 0   | Extremo | -16.304 | -220.574 | -1.192  | 44.9747  | -0.2841  | -134.1748 |
| 3260 | 0.5 | Extremo | -16.304 | -201.689 | -1.192  | 44.9747  | 0.3119   | -28.6092  |
| 3260 | 1   | Extremo | -16.304 | -182.804 | -1.192  | 44.9747  | 0.9079   | 67.5139   |
| 3261 | 0   | Extremo | 31.282  | -137.109 | 1.222   | 48.6052  | -0.5866  | -66.5499  |
| 3261 | 0.5 | Extremo | 31.282  | -118.224 | 1.222   | 48.6052  | -1.1977  | -2.7167   |
| 3261 | 1   | Extremo | 31.282  | -99.339  | 1.222   | 48.6052  | -1.8088  | 51.674    |
| 3261 | 0   | Extremo | -14.931 | -136.603 | -1.616  | 30.7925  | -0.4813  | 76.5805   |
| 3261 | 0.5 | Extremo | -14.931 | -117.718 | -1.616  | 30.7925  | 0.3269   | 140.1605  |
| 3261 | 1   | Extremo | -14.931 | -98.833  | -1.616  | 30.7925  | 1.1351   | 194.2981  |
| 3262 | 0   | Extremo | 34.024  | -49.766  | 0.787   | 39.3048  | -0.8124  | 55.1429   |
| 3262 | 0.5 | Extremo | 34.024  | -30.881  | 0.787   | 39.3048  | -1.2058  | 75.3045   |
| 3262 | 1   | Extremo | 34.024  | -11.996  | 0.787   | 39.3048  | -1.5993  | 86.0237   |
| 3262 | 0   | Extremo | -13.086 | -49.844  | -2.118  | 21.5643  | -0.7072  | 198.1551  |
| 3262 | 0.5 | Extremo | -13.086 | -30.959  | -2.118  | 21.5643  | 0.3516   | 218.356   |
| 3262 | 1   | Extremo | -13.086 | -12.074  | -2.118  | 21.5643  | 1.4104   | 229.1143  |
| 3263 | 0   | Extremo | 37.325  | 37.834   | 0.229   | 32.2949  | -1.1129  | 86.2884   |
| 3263 | 0.5 | Extremo | 37.325  | 56.719   | 0.229   | 32.2949  | -1.2275  | 62.45     |
| 3263 | 1   | Extremo | 37.325  | 75.604   | 0.229   | 32.2949  | -1.3421  | 29.5691   |
| 3263 | 0   | Extremo | -10.681 | 37.099   | -2.755  | 14.8077  | -0.9894  | 230       |
| 3263 | 0.5 | Extremo | -10.681 | 55.984   | -2.755  | 14.8077  | 0.3882   | 206.7294  |
| 3263 | 1   | Extremo | -10.681 | 74.869   | -2.755  | 14.8077  | 1.7659   | 174.0164  |
| 3264 | 0   | Extremo | 41.342  | 126.337  | -0.617  | 28.8312  | -1.5563  | 27.3673   |
| 3264 | 0.5 | Extremo | 41.342  | 146.459  | -0.617  | 28.8312  | -1.2478  | -40.8317  |
| 3264 | 1   | Extremo | 41.342  | 166.582  | -0.617  | 28.8312  | -0.9394  | -119.092  |
| 3264 | 0   | Extremo | -7.555  | 125.136  | -3.674  | 9.7004   | -1.3399  | 172.9879  |
| 3264 | 0.5 | Extremo | -7.555  | 145.259  | -3.674  | 9.7004   | 0.4972   | 105.389   |
| 3264 | 1   | Extremo | -7.555  | 165.381  | -3.674  | 9.7004   | 2.3344   | 27.7289   |
| 3265 | 0   | Extremo | 46.551  | 227.319  | -1.698  | 25.5331  | -2.0771  | -123.562  |
| 3265 | 0.5 | Extremo | 46.551  | 247.442  | -1.698  | 25.5331  | -1.2278  | -242.2521 |
| 3265 | 1   | Extremo | 46.551  | 267.564  | -1.698  | 25.5331  | -0.3786  | -371.0036 |
| 3265 | 0   | Extremo | -3.356  | 226.436  | -4.737  | 6.1423   | -1.833   | 24.1134   |
| 3265 | 0.5 | Extremo | -3.356  | 246.558  | -4.737  | 6.1423   | 0.5353   | -94.135   |
| 3265 | 1   | Extremo | -3.356  | 266.681  | -4.737  | 6.1423   | 2.9037   | -222.4446 |
| 3266 | 0   | Extremo | 52.922  | 328.462  | -2.974  | 22.3382  | -2.6629  | -375.7632 |
| 3266 | 0.5 | Extremo | 52.922  | 348.584  | -2.974  | 22.3382  | -1.1761  | -545.0248 |
| 3266 | 1   | Extremo | 52.922  | 368.707  | -2.974  | 22.3382  | 0.3107   | -724.3476 |
| 3266 | 0   | Extremo | 1.973   | 327.911  | -6.008  | 3.156    | -2.3793  | -226.7361 |
| 3266 | 0.5 | Extremo | 1.973   | 348.033  | -6.008  | 3.156    | 0.6246   | -395.722  |
| 3266 | 1   | Extremo | 1.973   | 368.156  | -6.008  | 3.156    | 3.6286   | -574.7691 |
| 3267 | 0   | Extremo | 60.789  | 430.928  | -4.539  | 17.7336  | -3.3897  | -729.9937 |
| 3267 | 0.5 | Extremo | 60.789  | 451.051  | -4.539  | 17.7336  | -1.1204  | -950.4884 |
| 3267 | 1   | Extremo | 60.789  | 471.173  | -4.539  | 17.7336  | 1.149    | -1181.044 |
| 3267 | 0   | Extremo | 8.755   | 430.411  | -7.606  | -0.9833  | -3.0772  | -580.0271 |
| 3267 | 0.5 | Extremo | 8.755   | 450.533  | -7.606  | -0.9833  | 0.726    | -800.2632 |
| 3267 | 1   | Extremo | 8.755   | 470.656  | -7.606  | -0.9833  | 4.5292   | -1030.561 |
| 3268 | 0   | Extremo | 70.588  | 535.144  | -6.555  | 10.086   | -4.3545  | -1191.087 |
| 3268 | 0.5 | Extremo | 70.588  | 555.267  | -6.555  | 10.086   | -1.0769  | -1463.689 |
| 3268 | 1   | Extremo | 70.588  | 575.389  | -6.555  | 10.086   | 2.2007   | -1746.353 |
| 3268 | 0   | Extremo | 17.42   | 534.311  | -9.702  | -8.1622  | -4.0067  | -1039.973 |
| 3268 | 0.5 | Extremo | 17.42   | 554.433  | -9.702  | -8.1622  | 0.8444   | -1312.159 |
| 3268 | 1   | Extremo | 17.42   | 574.556  | -9.702  | -8.1622  | 5.6955   | -1594.406 |
| 3269 | 0   | Extremo | 82.918  | 636.508  | -9.601  | 4.9967   | -5.6696  | -1765.226 |
| 3269 | 0.5 | Extremo | 82.918  | 656.206  | -9.601  | 4.9967   | -0.8689  | -2088.905 |
| 3269 | 1   | Extremo | 82.918  | 679.903  | -9.601  | 4.9967   | 3.9318   | -2423.432 |
| 3269 | 0   | Extremo | 28.583  | 635.306  | -12.831 | -14.9729 | -5.2015  | -1612.087 |
| 3269 | 0.5 | Extremo | 28.583  | 657.004  | -12.831 | -14.9729 | 1.2137   | -1935.165 |
| 3269 | 1   | Extremo | 28.583  | 678.701  | -12.831 | -14.9729 | 7.629    | -2269.091 |
| 3270 | 0   | Extremo | 99.427  | 746.623  | -13.179 | 9.0943   | -7.4189  | -2440.957 |
| 3270 | 0.5 | Extremo | 99.427  | 768.32   | -13.179 | 9.0943   | -0.8293  | -2819.692 |
| 3270 | 1   | Extremo | 99.427  | 790.018  | -13.179 | 9.0943   | 5.7602   | -3209.277 |
| 3270 | 0   | Extremo | 43.708  | 745.786  | -16.383 | -11.0649 | -6.9149  | -2285.607 |
| 3270 | 0.5 | Extremo | 43.708  | 767.483  | -16.383 | -11.0649 | 1.2768   | -2663.924 |
| 3270 | 1   | Extremo | 43.708  | 789.181  | -16.383 | -11.0649 | 9.4685   | -3053.09  |
| 3271 | 0   | Extremo | 120.222 | 856.446  | -17.221 | 11.9329  | -9.2479  | -3221.583 |
| 3271 | 0.5 | Extremo | 120.222 | 878.144  | -17.221 | 11.9329  | -0.6377  | -3655.231 |
| 3271 | 1   | Extremo | 120.222 | 899.841  | -17.221 | 11.9329  | 7.9726   | -4099.727 |
| 3271 | 0   | Extremo | 63.008  | 856.03   | -20.432 | -8.0278  | -8.704   | -3064.73  |
| 3271 | 0.5 | Extremo | 63.008  | 877.727  | -20.432 | -8.0278  | 1.5122   | -3498.17  |
| 3271 | 1   | Extremo | 63.008  | 899.425  | -20.432 | -8.0278  | 11.7284  | -3942.458 |
| 3272 | 0   | Extremo | 146.828 | 969.478  | -21.939 | 12.6926  | -11.4434 | -4109.605 |
| 3272 | 0.5 | Extremo | 146.828 | 991.175  | -21.939 | 12.6926  | -0.4739  | -4599.768 |

|      |     |         |           |           |         |          |           |           |
|------|-----|---------|-----------|-----------|---------|----------|-----------|-----------|
| 3272 | 1   | Extremo | 146.828   | 1012.873  | -21.939 | 12.6926  | 10.4955   | -5100.78  |
| 3272 | 0   | Extremo | 87.953    | 969.284   | -25.215 | -7.0047  | -10.8844  | -3951.803 |
| 3272 | 0.5 | Extremo | 87.953    | 990.982   | -25.215 | -7.0047  | 1.7232    | -4441.87  |
| 3272 | 1   | Extremo | 87.953    | 1012.679  | -25.215 | -7.0047  | 14.3308   | -4942.785 |
| 3273 | 0   | Extremo | 181.571   | 1088.604  | -27.315 | 9.2012   | -14.1114  | -5112.129 |
| 3273 | 0.5 | Extremo | 181.571   | 1110.302  | -27.315 | 9.2012   | -0.4541   | -5661.856 |
| 3273 | 1   | Extremo | 181.571   | 1131.999  | -27.315 | 9.2012   | 13.2033   | -6222.431 |
| 3273 | 0   | Extremo | 120.759   | 1088.354  | -30.727 | -10.2252 | -13.5636  | -4953.609 |
| 3273 | 0.5 | Extremo | 120.759   | 1110.051  | -30.727 | -10.2252 | 1.7998    | -5503.21  |
| 3273 | 1   | Extremo | 120.759   | 1131.749  | -30.727 | -10.2252 | 17.1632   | -6063.66  |
| 3274 | 0   | Extremo | 228.368   | 1212.803  | -33.202 | -1.4198  | -17.3308  | -6243.52  |
| 3274 | 0.5 | Extremo | 228.368   | 1234.501  | -33.202 | -1.4198  | -0.73     | -6855.346 |
| 3274 | 1   | Extremo | 228.368   | 1256.198  | -33.202 | -1.4198  | 15.8708   | -7478.021 |
| 3274 | 0   | Extremo | 165.19    | 1212.167  | -36.848 | -20.733  | -16.8117  | -6084.074 |
| 3274 | 0.5 | Extremo | 165.19    | 1233.864  | -36.848 | -20.733  | 1.6125    | -6695.582 |
| 3274 | 1   | Extremo | 165.19    | 1255.562  | -36.848 | -20.733  | 20.0367   | -7317.938 |
| 3275 | 0   | Extremo | 294.381   | 1327.59   | -39.443 | -5.5978  | -20.7844  | -7518.033 |
| 3275 | 0.5 | Extremo | 294.381   | 1350.637  | -39.443 | -5.5978  | -1.0626   | -8187.59  |
| 3275 | 1   | Extremo | 294.381   | 1373.685  | -39.443 | -5.5978  | 18.6591   | -8868.67  |
| 3275 | 0   | Extremo | 228.188   | 1326.345  | -43.427 | -26.6227 | -20.2563  | -7356.951 |
| 3275 | 0.5 | Extremo | 228.188   | 1349.392  | -43.427 | -26.6227 | 1.4572    | -8025.886 |
| 3275 | 1   | Extremo | 228.188   | 1372.44   | -43.427 | -26.6227 | 23.1708   | -8706.343 |
| 3276 | 0   | Extremo | 396.822   | 1440.08   | -42.118 | 8.1592   | -24.4908  | -8897.498 |
| 3276 | 0.5 | Extremo | 396.822   | 1463.127  | -42.118 | 8.1592   | -3.4317   | -9623.299 |
| 3276 | 1   | Extremo | 396.822   | 1486.175  | -42.118 | 8.1592   | 17.6274   | -10360.63 |
| 3276 | 0   | Extremo | 326.306   | 1438.318  | -46.503 | -13.6099 | -24.0932  | -8734.412 |
| 3276 | 0.5 | Extremo | 326.306   | 1461.365  | -46.503 | -13.6099 | -0.8417   | -9459.333 |
| 3276 | 1   | Extremo | 326.306   | 1484.413  | -46.503 | -13.6099 | 22.4099   | -10195.78 |
| 3277 | 0   | Extremo | 559.594   | 1557.541  | -33.561 | 16.9055  | -23.877   | -10373.54 |
| 3277 | 0.5 | Extremo | 559.594   | 1580.588  | -33.561 | 16.9055  | -7.0968   | -11158.08 |
| 3277 | 1   | Extremo | 559.594   | 1603.636  | -33.561 | 16.9055  | 9.6835    | -11954.13 |
| 3277 | 0   | Extremo | 482.942   | 1554.384  | -38.696 | -5.844   | -23.7274  | -10208.51 |
| 3277 | 0.5 | Extremo | 482.942   | 1577.431  | -38.696 | -5.844   | -4.3793   | -10991.47 |
| 3277 | 1   | Extremo | 482.942   | 1600.479  | -38.696 | -5.844   | 14.9687   | -11785.95 |
| 3278 | 0   | Extremo | 841.052   | 1710.241  | 18.502  | 17.6687  | -11.6837  | -11950.54 |
| 3278 | 0.5 | Extremo | 841.052   | 1733.288  | 18.502  | 17.6687  | -20.9346  | -12811.42 |
| 3278 | 1   | Extremo | 841.052   | 1756.336  | 18.502  | 17.6687  | -30.1855  | -13683.83 |
| 3278 | 0   | Extremo | 755.125   | 1702.684  | 11.566  | -6.9233  | -12.0043  | -11782.86 |
| 3278 | 0.5 | Extremo | 755.125   | 1725.732  | 11.566  | -6.9233  | -17.7871  | -12639.97 |
| 3278 | 1   | Extremo | 755.125   | 1748.779  | 11.566  | -6.9233  | -23.5698  | -13508.59 |
| 3279 | 0   | Extremo | 1357.893  | 2011.508  | 281.774 | -14.7289 | -10.5531  | -13672.29 |
| 3279 | 0.5 | Extremo | 1357.893  | 2034.555  | 281.774 | -14.7289 | -151.4403 | -14683.81 |
| 3279 | 1   | Extremo | 1357.893  | 2057.603  | 281.774 | -14.7289 | -292.3275 | -15706.85 |
| 3279 | 0   | Extremo | 1257.428  | 1991.279  | 268.411 | -42.5759 | -10.5372  | -13497.37 |
| 3279 | 0.5 | Extremo | 1257.428  | 2014.326  | 268.411 | -42.5759 | -144.7428 | -14498.77 |
| 3279 | 1   | Extremo | 1257.428  | 2037.374  | 268.411 | -42.5759 | -278.9484 | -15511.69 |
| 3281 | 0   | Extremo | -6904.392 | -2731.91  | 317.567 | 158.2073 | 341.1093  | -16861.7  |
| 3281 | 0.5 | Extremo | -6904.392 | -2708.862 | 317.567 | 158.2073 | 182.326   | -15501.51 |
| 3281 | 1   | Extremo | -6904.392 | -2685.815 | 317.567 | 158.2073 | 23.5428   | -14152.84 |
| 3281 | 0   | Extremo | -6852.192 | -2668.697 | 309.034 | 110.4117 | 335.0006  | -16701.4  |
| 3281 | 0.5 | Extremo | -6852.192 | -2645.649 | 309.034 | 110.4117 | 180.4838  | -15372.81 |
| 3281 | 1   | Extremo | -6852.192 | -2622.602 | 309.034 | 110.4117 | 25.967    | -14055.75 |
| 3282 | 0   | Extremo | -6350.424 |           |         |          |           |           |



|      |     |         |           |           |         |          |          |           |
|------|-----|---------|-----------|-----------|---------|----------|----------|-----------|
| 3285 | 1   | Extremo | -5740.566 | -1866.198 | -59.474 | 147.5818 | 32.7151  | -5764.113 |
| 3285 | 0   | Extremo | -5719.007 | -1860.6   | -59.007 | 90.8201  | -25.3154 | -7711.471 |
| 3285 | 0.5 | Extremo | -5719.007 | -1837.553 | -59.007 | 90.8201  | 4.1882   | -6786.933 |
| 3285 | 1   | Extremo | -5719.007 | -1814.505 | -59.007 | 90.8201  | 33.6917  | -5873.918 |
| 3286 | 0   | Extremo | -5657.212 | -1792.257 | -54.865 | 135.3386 | -25.678  | -5726.037 |
| 3286 | 0.5 | Extremo | -5657.212 | -1770.559 | -54.865 | 135.3386 | 1.7544   | -4835.333 |
| 3286 | 1   | Extremo | -5657.212 | -1748.862 | -54.865 | 135.3386 | 29.1868  | -3955.478 |
| 3286 | 0   | Extremo | -5637.697 | -1740.617 | -54.101 | 81.8013  | -24.1055 | -5834.292 |
| 3286 | 0.5 | Extremo | -5637.697 | -1718.92  | -54.101 | 81.8013  | 2.9452   | -4969.408 |
| 3286 | 1   | Extremo | -5637.697 | -1697.222 | -54.101 | 81.8013  | 29.996   | -4115.373 |
| 3287 | 0   | Extremo | -5590.422 | -1666.115 | -51.195 | 130.4766 | -24.2634 | -3932.305 |
| 3287 | 0.5 | Extremo | -5590.422 | -1644.418 | -51.195 | 130.4766 | 1.3341   | -3104.672 |
| 3287 | 1   | Extremo | -5590.422 | -1622.72  | -51.195 | 130.4766 | 26.9317  | -2287.887 |
| 3287 | 0   | Extremo | -5572.244 | -1615.045 | -50.266 | 76.0731  | -22.6218 | -4090.946 |
| 3287 | 0.5 | Extremo | -5572.244 | -1593.347 | -50.266 | 76.0731  | 2.511    | -3288.848 |
| 3287 | 1   | Extremo | -5572.244 | -1571.65  | -50.266 | 76.0731  | 27.6439  | -2497.599 |
| 3288 | 0   | Extremo | -5534.264 | -1542.412 | -47.341 | 133.78   | -21.9124 | -2271.314 |
| 3288 | 0.5 | Extremo | -5534.264 | -1520.714 | -47.341 | 133.78   | 1.7583   | -1505.532 |
| 3288 | 1   | Extremo | -5534.264 | -1499.017 | -47.341 | 133.78   | 25.4291  | -750.5994 |
| 3288 | 0   | Extremo | -5516.984 | -1492.283 | -46.302 | 78.1081  | -20.2279 | -2479.913 |
| 3288 | 0.5 | Extremo | -5516.984 | -1470.585 | -46.302 | 78.1081  | 2.9229   | -1739.197 |
| 3288 | 1   | Extremo | -5516.984 | -1448.888 | -46.302 | 78.1081  | 26.0738  | -1009.328 |
| 3289 | 0   | Extremo | -5484.85  | -1420.087 | -44.304 | 140.552  | -19.6906 | -733.9335 |
| 3289 | 0.5 | Extremo | -5484.85  | -1398.39  | -44.304 | 140.552  | 2.4613   | -29.3143  |
| 3289 | 1   | Extremo | -5484.85  | -1376.692 | -44.304 | 140.552  | 24.6132  | 664.4561  |
| 3289 | 0   | Extremo | -5468.18  | -1371.242 | -43.18  | 83.6343  | -17.9785 | -991.5826 |
| 3289 | 0.5 | Extremo | -5468.18  | -1349.545 | -43.18  | 83.6343  | 3.6118   | -311.3858 |
| 3289 | 1   | Extremo | -5468.18  | -1327.847 | -43.18  | 83.6343  | 25.202   | 357.9622  |
| 3290 | 0   | Extremo | -5439.384 | -1294.188 | -41.884 | 145.8776 | -17.8109 | 682.0457  |
| 3290 | 0.5 | Extremo | -5439.384 | -1272.49  | -41.884 | 145.8776 | 3.1311   | 1323.7151 |
| 3290 | 1   | Extremo | -5439.384 | -1250.793 | -41.884 | 145.8776 | 24.0732  | 1954.5358 |
| 3290 | 0   | Extremo | -5423.133 | -1246.973 | -40.693 | 87.9324  | -16.0814 | 376.8376  |
| 3290 | 0.5 | Extremo | -5423.133 | -1225.275 | -40.693 | 87.9324  | 4.265    | 994.8997  |
| 3290 | 1   | Extremo | -5423.133 | -1203.578 | -40.693 | 87.9324  | 24.6114  | 1602.113  |
| 3291 | 0   | Extremo | -5396.788 | -1163.766 | -38.275 | 143.9717 | -16.5042 | 1967.7438 |
| 3291 | 0.5 | Extremo | -5396.788 | -1142.068 | -38.275 | 143.9717 | 2.6334   | 2544.2023 |
| 3291 | 1   | Extremo | -5396.788 | -1120.371 | -38.275 | 143.9717 | 21.7709  | 3109.8121 |
| 3291 | 0   | Extremo | -5380.832 | -1118.037 | -37.043 | 86.1801  | -14.7633 | 1617.3639 |
| 3291 | 0.5 | Extremo | -5380.832 | -1096.34  | -37.043 | 86.1801  | 3.7581   | 2170.9582 |
| 3291 | 1   | Extremo | -5380.832 | -1074.642 | -37.043 | 86.1801  | 22.2795  | 2713.7038 |
| 3292 | 0   | Extremo | -5361.084 | -1056.067 | -34.429 | 127.9443 | -15.2208 | 3109.8271 |
| 3292 | 0.5 | Extremo | -5361.084 | -1035.945 | -34.429 | 127.9443 | 1.9938   | 3632.8301 |
| 3292 | 1   | Extremo | -5361.084 | -1015.822 | -34.429 | 127.9443 | 19.2084  | 4145.7718 |
| 3292 | 0   | Extremo | -5345.341 | -1009.87  | -33.237 | 75.0881  | -13.5558 | 2716.3202 |
| 3292 | 0.5 | Extremo | -5345.341 | -989.747  | -33.237 | 75.0881  | 3.0626   | 3216.2245 |
| 3292 | 1   | Extremo | -5345.341 | -969.625  | -33.237 | 75.0881  | 19.681   | 3706.0675 |
| 3293 | 0   | Extremo | -5325.699 | -956.697  | -32.904 | 134.7778 | -14.5945 | 4154.144  |
| 3293 | 0.5 | Extremo | -5325.699 | -936.575  | -32.904 | 134.7778 | 1.8574   | 4627.4619 |
| 3293 | 1   | Extremo | -5325.699 | -916.452  | -32.904 | 134.7778 | 18.3093  | 5090.7185 |
| 3293 | 0   | Extremo | -5310.132 | -910.196  | -31.776 | 80.4946  | -12.9888 | 3715.6268 |
| 3293 | 0.5 | Extremo | -5310.132 | -890.073  | -31.776 | 80.4946  | 2.8993   | 4165.694  |
| 3293 | 1   | Extremo | -5310.132 | -869.951  | -31.776 | 80.4946  | 18.7874  | 4605.7    |
| 3294 | 0   | Extremo | -5292.112 | -850.2    | -30.818 | 139.3447 | -13.0465 | 5104.5717 |
| 3294 | 0.5 | Extremo | -5292.112 | -830.077  | -30.818 | 139.3447 | 2.3623   | 5524.641  |
| 3294 | 1   | Extremo | -5292.112 | -809.955  | -30.818 | 139.3447 | 17.7711  | 5934.649  |
| 3294 | 0   | Extremo | -5276.727 | -804.336  | -29.764 | 83.6229  | -11.4951 | 4620.0611 |
| 3294 | 0.5 | Extremo | -5276.727 | -784.213  | -29.764 | 83.6229  | 3.3871   | 5017.1984 |
| 3294 | 1   | Extremo | -5276.727 | -764.091  | -29.764 | 83.6229  | 18.2693  | 5404.2745 |
| 3295 | 0   | Extremo | -5260.681 | -731.003  | -28.376 | 134.0498 | -11.3254 | 5945.9345 |
| 3295 | 0.5 | Extremo | -5260.681 | -710.88   | -28.376 | 134.0498 | 2.8624   | 6306.4052 |
| 3295 | 1   | Extremo | -5260.681 | -690.758  | -28.376 | 134.0498 | 17.0502  | 6656.8146 |
| 3295 | 0   | Extremo | -5245.521 | -686.689  | -27.409 | 77.9285  | -9.8314  | 5416.3294 |
| 3295 | 0.5 | Extremo | -5245.521 | -666.566  | -27.409 | 77.9285  | 3.8731   | 5754.6432 |
| 3295 | 1   | Extremo | -5245.521 | -646.444  | -27.409 | 77.9285  | 17.5776  | 6082.8958 |
| 3296 | 0   | Extremo | -5231.821 | -604.422  | -24.549 | 113.6619 | -9.814   | 6649.8152 |
| 3296 | 0.5 | Extremo | -5231.821 | -584.299  | -24.549 | 113.6619 | 2.4605   | 6946.9954 |
| 3296 | 1   | Extremo | -5231.821 | -564.177  | -24.549 | 113.6619 | 14.7351  | 7234.1143 |
| 3296 | 0   | Extremo | -5216.985 | -561.563  | -23.704 | 59.124   | -8.3889  | 6078.2057 |
| 3296 | 0.5 | Extremo | -5216.985 | -541.44   | -23.704 | 59.124   | 3.4631   | 6353.9563 |
| 3296 | 1   | Extremo | -5216.985 | -521.318  | -23.704 | 59.124   | 15.3151  | 6619.6457 |
| 3297 | 0   | Extremo | -5208.868 | -516.825  | -20.404 | 95.689   | -8.6523  | 7198.5065 |
| 3297 | 0.5 | Extremo | -5208.868 | -497.94   | -20.404 | 95.689   | 1.5498   | 7452.1975 |

|      |     |         |           |          |         |          |         |           |
|------|-----|---------|-----------|----------|---------|----------|---------|-----------|
| 3297 | 1   | Extremo | -5208.868 | -479.055 | -20.404 | 95.689   | 11.7519 | 7696.4461 |
| 3297 | 0   | Extremo | -5194.521 | -472.078 | -19.757 | 46.9123  | -7.3592 | 6588.116  |
| 3297 | 0.5 | Extremo | -5194.521 | -453.193 | -19.757 | 46.9123  | 2.5193  | 6819.4336 |
| 3297 | 1   | Extremo | -5194.521 | -434.308 | -19.757 | 46.9123  | 12.3978 | 7041.3088 |
| 3298 | 0   | Extremo | -5187.513 | -453.778 | -17.15  | 102.2081 | -7.3152 | 7685.5367 |
| 3298 | 0.5 | Extremo | -5187.513 | -434.893 | -17.15  | 102.2081 | 1.2598  | 7907.7045 |
| 3298 | 1   | Extremo | -5187.513 | -416.008 | -17.15  | 102.2081 | 9.8349  | 8120.4299 |
| 3298 | 0   | Extremo | -5174.043 | -405.216 | -16.771 | 54.3643  | -6.1708 | 7032.0349 |
| 3298 | 0.5 | Extremo | -5174.043 | -386.331 | -16.771 | 54.3643  | 2.2145  | 7229.9216 |
| 3298 | 1   | Extremo | -5174.043 | -367.446 | -16.771 | 54.3643  | 10.5997 | 7418.3659 |
| 3299 | 0   | Extremo | -5169.241 | -386.975 | -12.949 | 97.9666  | -5.0241 | 8123.7013 |
| 3299 | 0.5 | Extremo | -5169.241 | -368.09  | -12.949 | 97.9666  | 1.4505  | 8312.4674 |
| 3299 | 1   | Extremo | -5169.241 | -349.205 | -12.949 | 97.9666  | 7.9251  | 8491.7909 |
| 3299 | 0   | Extremo | -5157.483 | -334.16  | -12.878 | 53.9244  | -4.0417 | 7421.7914 |
| 3299 | 0.5 | Extremo | -5157.483 | -315.275 | -12.878 | 53.9244  | 2.3974  | 7584.1504 |
| 3299 | 1   | Extremo | -5157.483 | -296.39  | -12.878 | 53.9244  | 8.8365  | 7737.0668 |
| 3300 | 0   | Extremo | -5153.631 | -315.157 | -8.63   | 81.3485  | -2.6414 | 8497.0362 |
| 3300 | 0.5 | Extremo | -5153.631 | -296.272 | -8.63   | 81.3485  | 1.6737  | 8649.8934 |
| 3300 | 1   | Extremo | -5153.631 | -277.387 | -8.63   | 81.3485  | 5.9888  | 8793.3081 |
| 3300 | 0   | Extremo | -5145.455 | -255.902 | -8.857  | 47.1383  | -1.8293 | 7742.733  |
| 3300 | 0.5 | Extremo | -5145.455 | -237.017 | -8.857  | 47.1383  | 2.5994  | 7865.9628 |
| 3300 | 1   | Extremo | -5145.455 | -218.132 | -8.857  | 47.1383  | 7.0281  | 7979.7501 |
| 3301 | 0   | Extremo | -5137.978 | -256.721 | -4.701  | 51.9896  | -0.4299 | 8793.2369 |
| 3301 | 0.5 | Extremo | -5137.978 | -237.836 | -4.701  | 51.9896  | 1.9205  | 8916.8761 |
| 3301 | 1   | Extremo | -5137.978 | -218.951 | -4.701  | 51.9896  | 4.271   | 9031.0727 |
| 3301 | 0   | Extremo | -5137.748 | -173.53  | -5.071  | 38.3674  | 0.1947  | 7983.9337 |
| 3301 | 0.5 | Extremo | -5137.748 | -154.645 | -5.071  | 38.3674  | 2.7303  | 8065.9775 |
| 3301 | 1   | Extremo | -5137.748 | -135.76  | -5.071  | 38.3674  | 5.266   | 8138.5287 |
| 3302 | 0   | Extremo | -5170.625 | -62.853  | -1.115  | 7.9937   | 1.7846  | 9029.4904 |
| 3302 | 0.5 | Extremo | -5170.625 | -43.968  | -1.115  | 7.9937   | 2.3421  | 9056.1955 |
| 3302 | 1   | Extremo | -5170.625 | -25.083  | -1.115  | 7.9937   | 2.8995  | 9073.458  |
| 3302 | 0   | Extremo | -5133.996 | -89.365  | -1.51   | 29.4349  | 2.0371  | 8140.4135 |
| 3302 | 0.5 | Extremo | -5133.996 | -70.48   | -1.51   | 29.4349  | 2.7919  | 8180.3748 |
| 3302 | 1   | Extremo | -5133.996 | -51.595  | -1.51   | 29.4349  | 3.5467  | 8210.8937 |
| 3303 | 0   | Extremo | -5207.02  | 131.559  | 2.408   | -35.8972 | 3.9029  | 9077.4609 |
| 3303 | 0.5 | Extremo | -5207.02  | 150.444  | 2.408   | -35.8972 | 2.6987  | 9006.9604 |
| 3303 | 1   | Extremo | -5207.02  | 169.329  | 2.408   | -35.8972 | 1.4945  | 8927.0173 |
| 3303 | 0   | Extremo | -5133.974 | -4.758   | 1.968   | 20.5362  | 3.773   | 8210.251  |
| 3303 | 0.5 | Extremo | -5133.974 | 14.127   | 1.968   | 20.5362  | 2.7892  | 8207.9088 |
| 3303 | 1   | Extremo | -5133.974 | 33.012   | 1.968   | 20.5362  | 1.8053  | 8196.1242 |
| 3304 | 0   | Extremo | -5202.842 | 191.954  | 5.902   | -65.4396 | 5.6963  | 8929.4029 |
| 3304 | 0.5 | Extremo | -5202.842 | 210.839  | 5.902   | -65.4396 | 2.7455  | 8828.7044 |
| 3304 | 1   | Extremo | -5202.842 | 229.724  | 5.902   | -65.4396 | -0.2053 | 8718.5635 |
| 3304 | 0   | Extremo | -5137.68  | 79.216   | 5.53    | 11.407   | 5.4869  | 8192.9727 |
| 3304 | 0.5 | Extremo | -5137.68  | 98.101   | 5.53    | 11.407   | 2.7221  | 8148.6435 |
| 3304 | 1   | Extremo | -5137.68  | 116.986  | 5.53    | 11.407   | -0.0427 | 8094.8719 |
| 3305 | 0   | Extremo | -5207.031 | 268.242  | 9.473   | -84.3153 | 7.3629  | 8714.7223 |
| 3305 | 0.5 | Extremo | -5207.031 | 287.127  | 9.473   | -84.3153 | 2.6262  | 8575.8798 |
| 3305 | 1   | Extremo | -5207.031 | 306.012  | 9.473   | -84.3153 | -2.1105 |           |



|      |     |         |           |          |        |           |          |           |
|------|-----|---------|-----------|----------|--------|-----------|----------|-----------|
| 3309 | 1   | Extremo | -5275.989 | 600.823  | 23.723 | -106.7663 | -8.3697  | 6598.6293 |
| 3309 | 0   | Extremo | -5216.767 | 460.117  | 24.176 | -5.9238   | 15.5056  | 6962.2534 |
| 3309 | 0.5 | Extremo | -5216.767 | 480.239  | 24.176 | -5.9238   | 3.4179   | 6727.1643 |
| 3309 | 1   | Extremo | -5216.767 | 500.362  | 24.176 | -5.9238   | -8.6699  | 6482.014  |
| 3310 | 0   | Extremo | -5304.691 | 687.311  | 27.374 | -126.8188 | 17.5907  | 6605.3878 |
| 3310 | 0.5 | Extremo | -5304.691 | 707.433  | 27.374 | -126.8188 | 3.9038   | 6256.7019 |
| 3310 | 1   | Extremo | -5304.691 | 727.556  | 27.374 | -126.8188 | -9.783   | 5897.9547 |
| 3310 | 0   | Extremo | -5245.306 | 585.607  | 27.883 | -26.3435  | 17.7693  | 6486.0255 |
| 3310 | 0.5 | Extremo | -5245.306 | 605.729  | 27.883 | -26.3435  | 3.828    | 6188.1916 |
| 3310 | 1   | Extremo | -5245.306 | 625.852  | 27.883 | -26.3435  | -10.1133 | 5880.2963 |
| 3311 | 0   | Extremo | -5336.187 | 806.513  | 29.684 | -132.0762 | 18.2564  | 5886.5472 |
| 3311 | 0.5 | Extremo | -5336.187 | 826.635  | 29.684 | -132.0762 | 3.4144   | 5478.2602 |
| 3311 | 1   | Extremo | -5336.187 | 846.758  | 29.684 | -132.0762 | -11.4275 | 5059.9119 |
| 3311 | 0   | Extremo | -5276.54  | 702.571  | 30.237 | -33.7257  | 18.4552  | 5866.6354 |
| 3311 | 0.5 | Extremo | -5276.54  | 722.693  | 30.237 | -33.7257  | 3.3367   | 5510.3194 |
| 3311 | 1   | Extremo | -5276.54  | 742.816  | 30.237 | -33.7257  | -11.7818 | 5143.9421 |
| 3312 | 0   | Extremo | -5369.981 | 913.027  | 31.663 | -127.6196 | 18.7568  | 5045.9531 |
| 3312 | 0.5 | Extremo | -5369.981 | 933.15   | 31.663 | -127.6196 | 2.9253   | 4584.4088 |
| 3312 | 1   | Extremo | -5369.981 | 953.272  | 31.663 | -127.6196 | -12.9063 | 4112.8032 |
| 3312 | 0   | Extremo | -5310.007 | 806.494  | 32.247 | -31.3854  | 18.9663  | 5128.1057 |
| 3312 | 0.5 | Extremo | -5310.007 | 826.616  | 32.247 | -31.3854  | 2.8427   | 4719.8282 |
| 3312 | 1   | Extremo | -5310.007 | 846.739  | 32.247 | -31.3854  | -13.2809 | 4301.4895 |
| 3313 | 0   | Extremo | -5405.664 | 1012.48  | 33.094 | -120.9021 | 19.6437  | 4104.2581 |
| 3313 | 0.5 | Extremo | -5405.664 | 1032.603 | 33.094 | -120.9021 | 3.0968   | 3592.9873 |
| 3313 | 1   | Extremo | -5405.664 | 1052.725 | 33.094 | -120.9021 | -13.4501 | 3071.6552 |
| 3313 | 0   | Extremo | -5345.326 | 903.739  | 33.707 | -25.1601  | 19.852   | 4291.8626 |
| 3313 | 0.5 | Extremo | -5345.326 | 923.861  | 33.707 | -25.1601  | 2.9985   | 3834.9626 |
| 3313 | 1   | Extremo | -5345.326 | 943.984  | 33.707 | -25.1601  | -13.855  | 3368.0013 |
| 3314 | 0   | Extremo | -5441.699 | 1117.145 | 36.893 | -136.2499 | 22.263   | 3071.3219 |
| 3314 | 0.5 | Extremo | -5441.699 | 1138.843 | 36.893 | -136.2499 | 3.8166   | 2507.325  |
| 3314 | 1   | Extremo | -5441.699 | 1160.54  | 36.893 | -136.2499 | -14.6298 | 1932.4793 |
| 3314 | 0   | Extremo | -5380.996 | 1008.74  | 37.518 | -31.3417  | 22.4363  | 3367.7495 |
| 3314 | 0.5 | Extremo | -5380.996 | 1030.437 | 37.518 | -31.3417  | 3.6773   | 2857.9553 |
| 3314 | 1   | Extremo | -5380.996 | 1052.135 | 37.518 | -31.3417  | -15.0818 | 2337.3123 |
| 3315 | 0   | Extremo | -5484.706 | 1247.454 | 40.54  | -138.1468 | 24.5977  | 1918.971  |
| 3315 | 0.5 | Extremo | -5484.706 | 1269.152 | 40.54  | -138.1468 | 4.3277   | 1289.8194 |
| 3315 | 1   | Extremo | -5484.706 | 1290.849 | 40.54  | -138.1468 | -15.9424 | 649.8191  |
| 3315 | 0   | Extremo | -5423.587 | 1139.184 | 41.158 | -35.1537  | 24.7635  | 2321.9256 |
| 3315 | 0.5 | Extremo | -5423.587 | 1160.882 | 41.158 | -35.1537  | 4.1842   | 1746.9092 |
| 3315 | 1   | Extremo | -5423.587 | 1182.579 | 41.158 | -35.1537  | -16.395  | 1161.044  |
| 3316 | 0   | Extremo | -5530.58  | 1373.19  | 43.01  | -132.9544 | 25.1791  | 632.0028  |
| 3316 | 0.5 | Extremo | -5530.58  | 1394.888 | 43.01  | -132.9544 | 3.6744   | -60.0168  |
| 3316 | 1   | Extremo | -5530.58  | 1416.585 | 43.01  | -132.9544 | -17.8304 | -762.8851 |
| 3316 | 0   | Extremo | -5469.065 | 1263.863 | 43.625 | -32.7507  | 25.3379  | 1140.4734 |
| 3316 | 0.5 | Extremo | -5469.065 | 1285.561 | 43.625 | -32.7507  | 3.5254   | 503.1175  |
| 3316 | 1   | Extremo | -5469.065 | 1307.258 | 43.625 | -32.7507  | -18.2871 | -145.0872 |
| 3317 | 0   | Extremo | -5580.372 | 1495.366 | 46.107 | -126.3431 | 26.0414  | -779.7523 |
| 3317 | 0.5 | Extremo | -5580.372 | 1517.064 | 46.107 | -126.3431 | 2.9877   | -1532.86  |
| 3317 | 1   | Extremo | -5580.372 | 1538.761 | 46.107 | -126.3431 | -20.066  | -2296.816 |
| 3317 | 0   | Extremo | -5518.502 | 1383.84  | 46.71  | -28.5176  | 26.1862  | -164.8261 |
| 3317 | 0.5 | Extremo | -5518.502 | 1405.537 | 46.71  | -28.5176  | 2.8312   | -862.1704 |
| 3317 | 1   | Extremo | -5518.502 | 1427.235 | 46.71  | -28.5176  | -20.5238 | -1570.363 |
| 3318 | 0   | Extremo | -5636.861 | 1618.943 | 50.036 | -123.2196 | 27.6014  | -2313.591 |
| 3318 | 0.5 | Extremo | -5636.861 | 1640.641 | 50.036 | -123.2196 | 2.5833   | -3128.487 |
| 3318 | 1   | Extremo | -5636.861 | 1662.338 | 50.036 | -123.2196 | -22.4347 | -3954.232 |
| 3318 | 0   | Extremo | -5574.688 | 1504.09  | 50.612 | -27.3287  | 27.7222  | -1589.551 |
| 3318 | 0.5 | Extremo | -5574.688 | 1525.788 | 50.612 | -27.3287  | 2.416    | -2347.02  |
| 3318 | 1   | Extremo | -5574.688 | 1547.485 | 50.612 | -27.3287  | -22.8902 | -3115.339 |
| 3319 | 0   | Extremo | -5703.904 | 1744.985 | 53.799 | -128.2412 | 29.9385  | -3977.626 |
| 3319 | 0.5 | Extremo | -5703.904 | 1766.683 | 53.799 | -128.2412 | 3.0389   | -4855.543 |
| 3319 | 1   | Extremo | -5703.904 | 1788.38  | 53.799 | -128.2412 | -23.8606 | -5744.309 |
| 3319 | 0   | Extremo | -5641.485 | 1626.21  | 54.341 | -33.0836  | 30.0204  | -3139.541 |
| 3319 | 0.5 | Extremo | -5641.485 | 1647.907 | 54.341 | -33.0836  | 2.85     | -3958.07  |
| 3319 | 1   | Extremo | -5641.485 | 1669.605 | 54.341 | -33.0836  | -24.3205 | -4787.448 |
| 3320 | 0   | Extremo | -5787.365 | 1862.25  | 58.574 | -140.1507 | 33.617   | -5782.66  |
| 3320 | 0.5 | Extremo | -5787.365 | 1885.298 | 58.574 | -140.1507 | 4.3302   | -6719.547 |
| 3320 | 1   | Extremo | -5787.365 | 1908.345 | 58.574 | -140.1507 | -24.9565 | -7667.958 |
| 3320 | 0   | Extremo | -5724.724 | 1741.7   | 59.043 | -40.5904  | 33.6181  | -4823.822 |
| 3320 | 0.5 | Extremo | -5724.724 | 1764.748 | 59.043 | -40.5904  | 4.0967   | -5700.434 |
| 3320 | 1   | Extremo | -5724.724 | 1787.795 | 59.043 | -40.5904  | -25.4246 | -6588.57  |
| 3321 | 0   | Extremo | -5908.89  | 1980.921 | 58.981 | -125.8342 | 36.8013  | -7698.04  |
| 3321 | 0.5 | Extremo | -5908.89  | 2003.969 | 58.981 | -125.8342 | 7.3108   | -8694.263 |

|      |     |         |           |           |          |           |           |           |
|------|-----|---------|-----------|-----------|----------|-----------|-----------|-----------|
| 3321 | 1   | Extremo | -5908.89  | 2027.016  | 58.981   | -125.8342 | -22.1797  | -9702.009 |
| 3321 | 0   | Extremo | -5845.769 | 1858.962  | 59.304   | -32.3437  | 36.7086   | -6618.394 |
| 3321 | 0.5 | Extremo | -5845.769 | 1882.01   | 59.304   | -32.3437  | 7.0567    | -7553.637 |
| 3321 | 1   | Extremo | -5845.769 | 1905.057  | 59.304   | -32.3437  | -22.5952  | -8500.404 |
| 3322 | 0   | Extremo | -6091.175 | 2105.921  | 45.946   | -114.5004 | 34.1084   | -9716.523 |
| 3322 | 0.5 | Extremo | -6091.175 | 2128.968  | 45.946   | -114.5004 | 11.1355   | -10775.25 |
| 3322 | 1   | Extremo | -6091.175 | 2152.016  | 45.946   | -114.5004 | -11.8373  | -11845.49 |
| 3322 | 0   | Extremo | -6026.589 | 1979.323  | 45.971   | -31.4165  | 33.8699   | -8515.579 |
| 3322 | 0.5 | Extremo | -6026.589 | 2002.37   | 45.971   | -31.4165  | 10.8843   | -9511.003 |
| 3322 | 1   | Extremo | -6026.589 | 2025.418  | 45.971   | -31.4165  | -12.1012  | -10517.95 |
| 3323 | 0   | Extremo | -6396.517 | 2282.366  | -16.111  | -112.7154 | 19.3194   | -11841.94 |
| 3323 | 0.5 | Extremo | -6396.517 | 2305.413  | -16.111  | -112.7154 | 27.3751   | -12988.88 |
| 3323 | 1   | Extremo | -6396.517 | 2328.461  | -16.111  | -112.7154 | 35.4309   | -14147.35 |
| 3323 | 0   | Extremo | -6327.283 | 2132.809  | -16.807  | -49.1342  | 18.9182   | -10516.67 |
| 3323 | 0.5 | Extremo | -6327.283 | 2155.856  | -16.807  | -49.1342  | 27.3216   | -11588.84 |
| 3323 | 1   | Extremo | -6327.283 | 2178.904  | -16.807  | -49.1342  | 35.725    | -12672.53 |
| 3324 | 0   | Extremo | -6950.226 | 2675.019  | -317.793 | -154.134  | 25.0807   | -14152.71 |
| 3324 | 0.5 | Extremo | -6950.226 | 2698.067  | -317.793 | -154.134  | 183.9774  | -15495.98 |
| 3324 | 1   | Extremo | -6950.226 | 2721.114  | -317.793 | -154.134  | 342.874   | -16850.78 |
| 3324 | 0   | Extremo | -6921.951 | 2632.568  | -319.745 | -126.2028 | 25.1182   | -12673.31 |
| 3324 | 0.5 | Extremo | -6921.951 | 2655.616  | -319.745 | -126.2028 | 184.9905  | -13995.36 |
| 3324 | 1   | Extremo | -6921.951 | 2678.663  | -319.745 | -126.2028 | 344.8628  | -15328.93 |
| 3326 | 0   | Extremo | 1323.203  | -2084.329 | -277.568 | 12.7092   | -287.3571 | -15740.07 |
| 3326 | 0.5 | Extremo | 1323.203  | -2061.281 | -277.568 | 12.7092   | -148.573  | -14703.67 |
| 3326 | 1   | Extremo | 1323.203  | -2038.234 | -277.568 | 12.7092   | -9.7889   | -13678.79 |
| 3326 | 0   | Extremo | 1336.875  | -2022.152 | -281.948 | -0.8141   | -290.7844 | -14534.08 |
| 3326 | 0.5 | Extremo | 1336.875  | -1999.105 | -281.948 | -0.8141   | -149.8104 | -13528.76 |
| 3326 | 1   | Extremo | 1336.875  | -1976.057 | -281.948 | -0.8141   | -8.8364   | -12534.97 |
| 3327 | 0   | Extremo | 807.526   | -1782.55  | -14.93   | -21.3958  | -26.2386  | -13689.29 |
| 3327 | 0.5 | Extremo | 807.526   | -1759.503 | -14.93   | -21.3958  | -18.7737  | -12803.77 |
| 3327 | 1   | Extremo | 807.526   | -1736.455 | -14.93   | -21.3958  | -11.3089  | -11929.78 |
| 3327 | 0   | Extremo | 820.177   | -1719.844 | -17.692  | -41.2579  | -27.9266  | -12550.92 |
| 3327 | 0.5 | Extremo | 820.177   | -1696.796 | -17.692  | -41.2579  | -19.0808  | -11696.76 |
| 3327 | 1   | Extremo | 820.177   | -1673.749 | -17.692  | -41.2579  | -10.2349  | -10854.12 |
| 3328 | 0   | Extremo | 527.416   | -1630.247 | 36.802   | -21.4931  | 13.3466   | -11932.63 |
| 3328 | 0.5 | Extremo | 527.416   | -1607.2   | 36.802   | -21.4931  | -5.0542   | -11123.27 |
| 3328 | 1   | Extremo | 527.416   | -1584.152 | 36.802   | -21.4931  | -23.455   | -10325.43 |
| 3328 | 0   | Extremo | 538.411   | -1568.764 | 34.603   | -44.3908  | 12.0125   | -10859.17 |
| 3328 | 0.5 | Extremo | 538.411   | -1545.716 | 34.603   | -44.3908  | -5.2891   | -10080.55 |
| 3328 | 1   | Extremo | 538.411   | -1522.669 | 34.603   | -44.3908  | -22.5906  | -9313.45  |
| 3329 | 0   | Extremo | 365.859   | -1513     | 45.127   | -13.2178  | 21.134    | -10311.75 |
| 3329 | 0.5 | Extremo | 365.859   | -1489.953 | 45.127   | -13.2178  | -1.4294   | -9561.013 |
| 3329 | 1   | Extremo | 365.859   | -1466.905 | 45.127   | -13.2178  | -23.9228  | -8821.799 |
| 3329 | 0   | Extremo | 375.407   | -1451.934 | 43.253   | -38.1401  | 19.962    | -9300.665 |
| 3329 | 0.5 | Extremo | 375.407   | -1428.887 | 43.253   | -38.1401  | -1.6646   | -8580.46  |
| 3329 | 1   | Extremo | 375.407   | -1405.839 | 43.253   | -38.1401  | -23.2913  | -7871.778 |
| 3330 | 0   | Extremo | 264.464   | -1400.389 | 42.277   | 0.2356    | 22.0577   | -8792.326 |
| 3330 | 0.5 | Extremo | 264.464   | -1377.342 | 42.277   | 0.2356    | 0.919     |           |



|      |     |         |        |          |        |          |           |           |
|------|-----|---------|--------|----------|--------|----------|-----------|-----------|
| 3334 | 1   | Extremo | 93.159 | -882.637 | 19.509 | -16.6227 | -8.6481   | -3010.31  |
| 3334 | 0   | Extremo | 99.58  | -869.323 | 18.394 | -41.9511 | 10.1424   | -3205.827 |
| 3334 | 0.5 | Extremo | 99.58  | -847.626 | 18.394 | -41.9511 | 0.9452    | -2776.59  |
| 3334 | 1   | Extremo | 99.58  | -825.928 | 18.394 | -41.9511 | -8.252    | -2358.202 |
| 3335 | 0   | Extremo | 72.964 | -815.451 | 15.458 | -13.9092 | 8.6102    | -2997.239 |
| 3335 | 0.5 | Extremo | 72.964 | -793.753 | 15.458 | -13.9092 | 0.8814    | -2594.938 |
| 3335 | 1   | Extremo | 72.964 | -772.056 | 15.458 | -13.9092 | -6.8474   | -2203.486 |
| 3335 | 0   | Extremo | 79.125 | -758.199 | 14.4   | -40.4318 | 7.9325    | -2344.468 |
| 3335 | 0.5 | Extremo | 79.125 | -736.501 | 14.4   | -40.4318 | 0.7325    | -1970.793 |
| 3335 | 1   | Extremo | 79.125 | -714.804 | 14.4   | -40.4318 | -6.4675   | -1607.967 |
| 3336 | 0   | Extremo | 57.042 | -704.216 | 11.896 | -10.2619 | 6.7692    | -2185.735 |
| 3336 | 0.5 | Extremo | 57.042 | -682.519 | 11.896 | -10.2619 | 0.8215    | -1839.052 |
| 3336 | 1   | Extremo | 57.042 | -660.821 | 11.896 | -10.2619 | -5.1263   | -1503.216 |
| 3336 | 0   | Extremo | 62.977 | -645.773 | 10.886 | -38.3313 | 6.1148    | -1590.856 |
| 3336 | 0.5 | Extremo | 62.977 | -624.076 | 10.886 | -38.3313 | 0.672     | -1273.394 |
| 3336 | 1   | Extremo | 62.977 | -602.378 | 10.886 | -38.3313 | -4.7707   | -966.7803 |
| 3337 | 0   | Extremo | 45.213 | -599.347 | 8.784  | -14.809  | 4.8897    | -1485.095 |
| 3337 | 0.5 | Extremo | 45.213 | -579.224 | 8.784  | -14.809  | 0.4976    | -1190.453 |
| 3337 | 1   | Extremo | 45.213 | -559.102 | 8.784  | -14.809  | -3.8945   | -925.871  |
| 3337 | 0   | Extremo | 50.963 | -541.212 | 7.83   | -40.3195 | 4.2981    | -951.1032 |
| 3337 | 0.5 | Extremo | 50.963 | -521.089 | 7.83   | -40.3195 | 0.383     | -685.5279 |
| 3337 | 1   | Extremo | 50.963 | -500.967 | 7.83   | -40.3195 | -3.5321   | -430.0139 |
| 3338 | 0   | Extremo | 35.914 | -495.462 | 6.717  | -21.8332 | 3.7574    | -895.7009 |
| 3338 | 0.5 | Extremo | 35.914 | -475.34  | 6.717  | -21.8332 | 0.3991    | -653.0005 |
| 3338 | 1   | Extremo | 35.914 | -455.217 | 6.717  | -21.8332 | -2.9591   | -420.3613 |
| 3338 | 0   | Extremo | 41.491 | -439.299 | 5.797  | -46.5773 | 3.1974    | -420.2983 |
| 3338 | 0.5 | Extremo | 41.491 | -419.176 | 5.797  | -46.5773 | 0.2991    | -205.6796 |
| 3338 | 1   | Extremo | 41.491 | -399.054 | 5.797  | -46.5773 | -2.5992   | -1.1222   |
| 3339 | 0   | Extremo | 28.518 | -392.954 | 5.145  | -26.2926 | 2.8805    | -414.0839 |
| 3339 | 0.5 | Extremo | 28.518 | -372.832 | 5.145  | -26.2926 | 0.3078    | -222.6374 |
| 3339 | 1   | Extremo | 28.518 | -352.709 | 5.145  | -26.2926 | -2.2648   | -41.2523  |
| 3339 | 0   | Extremo | 33.932 | -338.259 | 4.251  | -51.4181 | 2.3435    | 5.7761    |
| 3339 | 0.5 | Extremo | 33.932 | -318.137 | 4.251  | -51.4181 | 0.2181    | 1.69.8751 |
| 3339 | 1   | Extremo | 33.932 | -298.014 | 4.251  | -51.4181 | -1.9073   | 323.9129  |
| 3340 | 0   | Extremo | 22.582 | -291.022 | 3.907  | -30.0269 | 2.1779    | -36.0212  |
| 3340 | 0.5 | Extremo | 22.582 | -270.9   | 3.907  | -30.0269 | 0.2246    | 104.4593  |
| 3340 | 1   | Extremo | 22.582 | -250.777 | 3.907  | -30.0269 | -1.7287   | 234.8786  |
| 3340 | 0   | Extremo | 27.836 | -236.828 | 3.036  | -56.2518 | 1.6605    | 329.7992  |
| 3340 | 0.5 | Extremo | 27.836 | -216.705 | 3.036  | -56.2518 | 0.1423    | 443.1825  |
| 3340 | 1   | Extremo | 27.836 | -196.583 | 3.036  | -56.2518 | -1.3758   | 546.5045  |
| 3341 | 0   | Extremo | 17.761 | -188.777 | 2.887  | -34.6467 | 1.6288    | 238.703   |
| 3341 | 0.5 | Extremo | 17.761 | -168.654 | 2.887  | -34.6467 | 0.1854    | 328.0608  |
| 3341 | 1   | Extremo | 17.761 | -148.532 | 2.887  | -34.6467 | -1.2579   | 407.3574  |
| 3341 | 0   | Extremo | 22.856 | -134.386 | 2.048  | -62.0725 | 1.1235    | 550.2322  |
| 3341 | 0.5 | Extremo | 22.856 | -114.264 | 2.048  | -62.0725 | 0.0997    | 612.3948  |
| 3341 | 1   | Extremo | 22.856 | -94.141  | 2.048  | -62.0725 | -0.9242   | 664.4961  |
| 3342 | 0   | Extremo | 14.032 | -97.98   | 2.042  | -38.1883 | 1.1253    | 407.2491  |
| 3342 | 0.5 | Extremo | 14.032 | -79.095  | 2.042  | -38.1883 | 0.1045    | 451.5178  |
| 3342 | 1   | Extremo | 14.032 | -60.21   | 2.042  | -38.1883 | -0.9163   | 486.344   |
| 3342 | 0   | Extremo | 18.973 | -43.841  | 1.255  | -63.4357 | 0.667     | 663.1945  |
| 3342 | 0.5 | Extremo | 18.973 | -24.956  | 1.255  | -63.4357 | 0.0393    | 680.3939  |
| 3342 | 1   | Extremo | 18.973 | -6.071   | 1.255  | -63.4357 | -0.5883   | 688.1507  |
| 3343 | 0   | Extremo | 10.957 | -11.991  | 1.521  | -45.1678 | 0.8333    | 484.9159  |
| 3343 | 0.5 | Extremo | 10.957 | 6.894    | 1.521  | -45.1678 | 0.073     | 486.1901  |
| 3343 | 1   | Extremo | 10.957 | 25.779   | 1.521  | -45.1678 | -0.6873   | 478.0217  |
| 3343 | 0   | Extremo | 15.717 | 41.103   | 0.801  | -70.1676 | 0.4112    | 686.5855  |
| 3343 | 0.5 | Extremo | 15.717 | 59.988   | 0.801  | -70.1676 | 0.0109    | 661.3126  |
| 3343 | 1   | Extremo | 15.717 | 78.873   | 0.801  | -70.1676 | -0.3894   | 626.5973  |
| 3344 | 0   | Extremo | 8.338  | 73.206   | 1.177  | -54.9045 | 0.6256    | 473.9299  |
| 3344 | 0.5 | Extremo | 8.338  | 92.091   | 1.177  | -54.9045 | 0.0373    | 432.6055  |
| 3344 | 1   | Extremo | 8.338  | 110.976  | 1.177  | -54.9045 | -0.551    | 381.8386  |
| 3344 | 0   | Extremo | 12.847 | 125.821  | 0.563  | -80.2981 | 0.2526    | 622.8537  |
| 3344 | 0.5 | Extremo | 12.847 | 144.706  | 0.563  | -80.2981 | -0.0287   | 555.2217  |
| 3344 | 1   | Extremo | 12.847 | 163.591  | 0.563  | -80.2981 | -0.31     | 478.1472  |
| 3345 | 0   | Extremo | 6.005  | 150.966  | 0.967  | -67.0758 | 0.4842    | 371.9137  |
| 3345 | 0.5 | Extremo | 6.005  | 169.851  | 0.967  | -67.0758 | 0.0008243 | 291.7095  |
| 3345 | 1   | Extremo | 6.005  | 188.736  | 0.967  | -67.0758 | -0.4825   | 202.0628  |
| 3345 | 0   | Extremo | 10.082 | 203.149  | 0.541  | -92.8952 | 0.2003    | 468.2289  |
| 3345 | 0.5 | Extremo | 10.082 | 222.034  | 0.541  | -92.8952 | -0.0702   | 361.9331  |
| 3345 | 1   | Extremo | 10.082 | 240.919  | 0.541  | -92.8952 | -0.3408   | 246.1949  |
| 3346 | 0   | Extremo | 3.804  | 177.505  | 0.876  | -72.0849 | 0.4367    | 181.2575  |
| 3346 | 0.5 | Extremo | 3.804  | 196.39   | 0.876  | -72.0849 | -0.0015   | 87.7836   |

|      |     |         |        |         |        |          |           |           |
|------|-----|---------|--------|---------|--------|----------|-----------|-----------|
| 3346 | 1   | Extremo | 3.804  | 215.275 | 0.876  | -72.0849 | -0.4397   | -15.1327  |
| 3346 | 0   | Extremo | 7.001  | 222.572 | 0.797  | -96.4229 | 0.3507    | 224.0152  |
| 3346 | 0.5 | Extremo | 7.001  | 241.457 | 0.797  | -96.4229 | -0.0478   | 108.0079  |
| 3346 | 1   | Extremo | 7.001  | 260.342 | 0.797  | -96.4229 | -0.4464   | -17.4418  |
| 3347 | 0   | Extremo | 1.377  | -20.711 | 1.338  | -15.537  | 0.6576    | -17.4747  |
| 3347 | 0.5 | Extremo | 1.377  | -1.826  | 1.338  | -15.537  | -0.0112   | -11.8405  |
| 3347 | 1   | Extremo | 1.377  | 17.059  | 1.338  | -15.537  | -0.6801   | -15.6489  |
| 3347 | 0   | Extremo | 2.469  | -17.402 | 2.058  | -27.2047 | 1.1069    | -18.1948  |
| 3347 | 0.5 | Extremo | 2.469  | 1.483   | 2.058  | -27.2047 | 0.078     | -14.2151  |
| 3347 | 1   | Extremo | 2.469  | 20.368  | 2.058  | -27.2047 | -0.9508   | -19.6778  |
| 3348 | 0   | Extremo | 0.256  | -48.63  | 0.053  | 6.3048   | 0.0495    | -13.0619  |
| 3348 | 0.5 | Extremo | 0.256  | -31.208 | 0.053  | 6.3048   | 0.0229    | 6.8975    |
| 3348 | 1   | Extremo | 0.256  | -13.785 | 0.053  | 6.3048   | -0.0037   | 18.1456   |
| 3348 | 0   | Extremo | -0.72  | -48.624 | -0.024 | 6.3046   | -0.0215   | -13.0609  |
| 3348 | 0.5 | Extremo | -0.72  | -31.201 | -0.024 | 6.3046   | -0.0097   | 6.8955    |
| 3348 | 1   | Extremo | -0.72  | -13.779 | -0.024 | 6.3046   | 0.0022    | 18.1406   |
| 3349 | 0   | Extremo | 0.507  | -98.217 | 0.196  | 8.61     | 0.1179    | 25.504    |
| 3349 | 0.5 | Extremo | 0.507  | -80.795 | 0.196  | 8.61     | 0.02      | 70.2572   |
| 3349 | 1   | Extremo | 0.507  | -63.372 | 0.196  | 8.61     | -0.0779   | 106.299   |
| 3349 | 0   | Extremo | -1.428 | -98.203 | -0.089 | 8.6099   | -0.0519   | 25.4986   |
| 3349 | 0.5 | Extremo | -1.428 | -80.78  | -0.089 | 8.6099   | -0.0076   | 70.2444   |
| 3349 | 1   | Extremo | -1.428 | -63.358 | -0.089 | 8.6099   | 0.0367    | 106.2789  |
| 3350 | 0   | Extremo | 0.725  | -95.722 | 0.219  | 8.229    | 0.1117    | 132.9947  |
| 3350 | 0.5 | Extremo | 0.725  | -78.3   | 0.219  | 8.229    | 0.0024    | 176.5001  |
| 3350 | 1   | Extremo | 0.725  | -60.877 | 0.219  | 8.229    | -0.107    | 211.2943  |
| 3350 | 0   | Extremo | -2.042 | -95.702 | -0.098 | 8.2289   | -0.0481   | 132.9728  |
| 3350 | 0.5 | Extremo | -2.042 | -78.28  | -0.098 | 8.2289   | 0.0009592 | 176.4683  |
| 3350 | 1   | Extremo | -2.042 | -60.857 | -0.098 | 8.2289   | 0.05      | 211.2526  |
| 3351 | 0   | Extremo | 0.88   | -43.172 | 0.22   | 5.4851   | 0.1048    | 228.5563  |
| 3351 | 0.5 | Extremo | 0.88   | -25.749 | 0.22   | 5.4851   | -0.0053   | 245.7865  |
| 3351 | 1   | Extremo | 0.88   | -8.327  | 0.22   | 5.4851   | -0.1154   | 254.3055  |
| 3351 | 0   | Extremo | -2.474 | -43.15  | -0.098 | 5.485    | -0.0443   | 228.5134  |
| 3351 | 0.5 | Extremo | -2.474 | -25.728 | -0.098 | 5.485    | 0.0046    | 245.733   |
| 3351 | 1   | Extremo | -2.474 | -8.305  | -0.098 | 5.485    | 0.0536    | 254.2413  |
| 3352 | 0   | Extremo | 0.984  | 28.471  | 0.222  | 1.3851   | 0.1022    | 261.3749  |
| 3352 | 0.5 | Extremo | 0.984  | 45.894  | 0.222  | 1.3851   | -0.0087   | 242.7838  |
| 3352 | 1   | Extremo | 0.984  | 63.316  | 0.222  | 1.3851   | -0.1195   | 215.4814  |
| 3352 | 0   | Extremo | -2.765 | 28.493  | -0.098 | 1.3849   | -0.0428   | 261.31    |
| 3352 | 0.5 | Extremo | -2.765 | 45.915  | -0.098 | 1.3849   | 0.0062    | 242.708   |
| 3352 | 1   | Extremo | -2.765 | 63.338  | -0.098 | 1.3849   | 0.0551    | 215.3947  |
| 3353 | 0   | Extremo | 1.06   | 104.859 | 0.224  | -2.9937  | 0.101     | 216.0063  |
| 3353 | 0.5 | Extremo | 1.06   | 122.282 | 0.224  | -2.9937  | -0.0111   | 159.221   |
| 3353 | 1   | Extremo | 1.06   | 139.704 | 0.224  | -2.9937  | -0.1232   | 93.7244   |
| 3353 | 0   | Extremo | -2.978 | 104.881 | -0.099 | -2.9938  | -0.0422   | 215.9192  |
| 3353 | 0.5 | Extremo | -2.978 | 122.304 | -0.099 | -2.9938  | 0.0072    | 159.123   |
| 3353 | 1   | Extremo | -2.978 | 139.726 | -0.099 | -2.9938  | 0.0566    | 93.6156   |
| 3354 | 0   | Extremo | 1.131  | 180.497 | 0.227  | -6.5585  | 0.1004    | 87.3496   |
| 3354 | 0.5 | Extremo | 1.131  | 197.92  | 0.227  | -6.5585  | -0.0132   | -7.2547   |
| 3354 | 1   | Extremo | 1.131  | 215.342 | 0.227  | -6.5585  | -0.1269   | -110.5702 |
| 3354 | 0   | Extremo | -3.173 | 180.519 | -0.1   | -6.5585  | -0.0419   | 87.24     |
| 3354 | 0.5 | Extremo | -3.173 | 197.942 | -0.1   | -6.5585  | 0.0081    | -7.3751   |
| 3354 | 1   | Extremo | -3.173 | 215.364 | -0.1   | -6.5585  | 0.0582    | -110.7016 |
| 3355 | 0   | Extremo | 1.215  | 242.913 | 0.231  | -7.9103  | 0.1011    | -130.7571 |
| 3355 | 0.5 | Extremo | 1.215  | 260.336 | 0.231  | -7.9103  | -0.0143   | -256.5692 |
| 3355 | 1   | Extremo | 1.215  | 277.758 | 0.231  | -7.9103  | -0.1298   | -391.0926 |
| 3355 | 0   | Extremo | -3.406 | 242.934 | -0.102 | -7.9102  | -0.0422   | -130.89   |
| 3355 | 0.5 | Extremo |        |         |        |          |           |           |



|      |     |         |        |          |        |          |         |           |
|------|-----|---------|--------|----------|--------|----------|---------|-----------|
| 3358 | 1   | Extremo | 1.621  | -176.482 | 0.447  | 11.9893  | -0.222  | -690.2986 |
| 3358 | 0   | Extremo | -4.538 | -211.358 | -0.167 | 11.9892  | -0.0769 | -884.3786 |
| 3358 | 0.5 | Extremo | -4.538 | -193.936 | -0.167 | 11.9892  | 0.0067  | -783.0551 |
| 3358 | 1   | Extremo | -4.538 | -176.513 | -0.167 | 11.9892  | 0.0902  | -690.4429 |
| 3359 | 0   | Extremo | 1.765  | -364.234 | 0.479  | 19.4046  | 0.2181  | -618.4278 |
| 3359 | 0.5 | Extremo | 1.765  | -346.811 | 0.479  | 19.4046  | -0.0215 | -440.6666 |
| 3359 | 1   | Extremo | 1.765  | -329.389 | 0.479  | 19.4046  | -0.2611 | -271.6166 |
| 3359 | 0   | Extremo | -4.939 | -364.283 | -0.176 | 19.4046  | -0.0737 | -618.5666 |
| 3359 | 0.5 | Extremo | -4.939 | -346.86  | -0.176 | 19.4046  | 0.0142  | -440.7809 |
| 3359 | 1   | Extremo | -4.939 | -329.438 | -0.176 | 19.4046  | 0.1021  | -271.7064 |
| 3360 | 0   | Extremo | 1.872  | -360.849 | 0.483  | 21.9039  | 0.2088  | -223.3856 |
| 3360 | 0.5 | Extremo | 1.872  | -343.427 | 0.483  | 21.9039  | -0.0329 | -47.3165  |
| 3360 | 1   | Extremo | 1.872  | -326.004 | 0.483  | 21.9039  | -0.2745 | 120.0412  |
| 3360 | 0   | Extremo | -5.233 | -360.904 | -0.176 | 21.9041  | -0.0701 | -223.4717 |
| 3360 | 0.5 | Extremo | -5.233 | -343.481 | -0.176 | 21.9041  | 0.0181  | -47.3755  |
| 3360 | 1   | Extremo | -5.233 | -326.059 | -0.176 | 21.9041  | 0.1062  | 120.0094  |
| 3361 | 0   | Extremo | 1.941  | -298.489 | 0.486  | 20.3367  | 0.2039  | 141.3105  |
| 3361 | 0.5 | Extremo | 1.941  | -281.067 | 0.486  | 20.3367  | -0.0391 | 286.1995  |
| 3361 | 1   | Extremo | 1.941  | -263.644 | 0.486  | 20.3367  | -0.2821 | 422.3772  |
| 3361 | 0   | Extremo | -5.42  | -298.545 | -0.177 | 20.3371  | -0.068  | 141.2804  |
| 3361 | 0.5 | Extremo | -5.42  | -281.122 | -0.177 | 20.3371  | 0.0203  | 286.1971  |
| 3361 | 1   | Extremo | -5.42  | -263.7   | -0.177 | 20.3371  | 0.1086  | 422.4025  |
| 3362 | 0   | Extremo | 1.983  | -222.968 | 0.488  | 16.34    | 0.2     | 430.629   |
| 3362 | 0.5 | Extremo | 1.983  | -205.546 | 0.488  | 16.34    | -0.0442 | 537.7576  |
| 3362 | 1   | Extremo | 1.983  | -188.123 | 0.488  | 16.34    | -0.2884 | 636.175   |
| 3362 | 0   | Extremo | -5.532 | -223.024 | -0.177 | 16.3405  | -0.0665 | 430.655   |
| 3362 | 0.5 | Extremo | -5.532 | -205.601 | -0.177 | 16.3405  | 0.0221  | 537.8113  |
| 3362 | 1   | Extremo | -5.532 | -188.179 | -0.177 | 16.3405  | 0.1107  | 636.2564  |
| 3363 | 0   | Extremo | 2.009  | -146.175 | 0.491  | 11.0926  | 0.1961  | 639.4191  |
| 3363 | 0.5 | Extremo | 2.009  | -128.753 | 0.491  | 11.0926  | -0.0492 | 708.151   |
| 3363 | 1   | Extremo | 2.009  | -111.33  | 0.491  | 11.0926  | -0.2945 | 768.1718  |
| 3363 | 0   | Extremo | -5.597 | -146.231 | -0.178 | 11.0932  | -0.065  | 639.5009  |
| 3363 | 0.5 | Extremo | -5.597 | -128.808 | -0.178 | 11.0932  | 0.0239  | 708.2605  |
| 3363 | 1   | Extremo | -5.597 | -111.386 | -0.178 | 11.0932  | 0.1128  | 768.3089  |
| 3364 | 0   | Extremo | 2.026  | -69.811  | 0.493  | 5.2544   | 0.1921  | 769.4508  |
| 3364 | 0.5 | Extremo | 2.026  | -52.388  | 0.493  | 5.2544   | -0.0542 | 800.0006  |
| 3364 | 1   | Extremo | 2.026  | -34.966  | 0.493  | 5.2544   | -0.3004 | 821.8392  |
| 3364 | 0   | Extremo | -5.636 | -69.866  | -0.178 | 5.2549   | -0.0634 | 769.5882  |
| 3364 | 0.5 | Extremo | -5.636 | -52.444  | -0.178 | 5.2549   | 0.0257  | 800.1657  |
| 3364 | 1   | Extremo | -5.636 | -35.021  | -0.178 | 5.2549   | 0.1148  | 822.032   |
| 3365 | 0   | Extremo | 2.039  | 6.279    | 0.494  | -0.8081  | 0.188   | 822.1234  |
| 3365 | 0.5 | Extremo | 2.039  | 23.701   | 0.494  | -0.8081  | -0.0592 | 814.6285  |
| 3365 | 1   | Extremo | 2.039  | 41.124   | 0.494  | -0.8081  | -0.3064 | 798.4222  |
| 3365 | 0   | Extremo | -5.664 | 6.223    | -0.179 | -0.8075  | -0.0619 | 822.3164  |
| 3365 | 0.5 | Extremo | -5.664 | 23.646   | -0.179 | -0.8075  | 0.0275  | 814.8491  |
| 3365 | 1   | Extremo | -5.664 | 41.068   | -0.179 | -0.8075  | 0.1168  | 798.6706  |
| 3366 | 0   | Extremo | 2.052  | 82.392   | 0.496  | -6.8398  | 0.1839  | 797.91    |
| 3366 | 0.5 | Extremo | 2.052  | 99.814   | 0.496  | -6.8398  | -0.0643 | 752.3586  |
| 3366 | 1   | Extremo | 2.052  | 117.237  | 0.496  | -6.8398  | -0.3124 | 698.096   |
| 3366 | 0   | Extremo | -5.692 | 82.336   | -0.179 | -6.8393  | -0.0603 | 798.1586  |
| 3366 | 0.5 | Extremo | -5.692 | 99.759   | -0.179 | -6.8393  | 0.0293  | 752.6349  |
| 3366 | 1   | Extremo | -5.692 | 117.181  | -0.179 | -6.8393  | 0.1188  | 698.4     |
| 3367 | 0   | Extremo | 2.069  | 158.842  | 0.499  | -12.5721 | 0.18    | 696.5067  |
| 3367 | 0.5 | Extremo | 2.069  | 176.264  | 0.499  | -12.5721 | -0.0693 | 612.7302  |
| 3367 | 1   | Extremo | 2.069  | 193.687  | 0.499  | -12.5721 | -0.3187 | 520.2425  |
| 3367 | 0   | Extremo | -5.733 | 158.786  | -0.179 | -12.5717 | -0.0587 | 696.8111  |
| 3367 | 0.5 | Extremo | -5.733 | 176.209  | -0.179 | -12.5717 | 0.0311  | 613.0624  |
| 3367 | 1   | Extremo | -5.733 | 193.631  | -0.179 | -12.5717 | 0.1208  | 520.6025  |
| 3368 | 0   | Extremo | 2.096  | 235.796  | 0.502  | -17.5884 | 0.1763  | 516.4292  |
| 3368 | 0.5 | Extremo | 2.096  | 253.219  | 0.502  | -17.5884 | -0.0744 | 394.1753  |
| 3368 | 1   | Extremo | 2.096  | 270.641  | 0.502  | -17.5884 | -0.3252 | 263.2102  |
| 3368 | 0   | Extremo | -5.8   | 235.741  | -0.18  | -17.5882 | -0.0571 | 516.79    |
| 3368 | 0.5 | Extremo | -5.8   | 253.163  | -0.18  | -17.5882 | 0.0329  | 394.564   |
| 3368 | 1   | Extremo | -5.8   | 270.586  | -0.18  | -17.5882 | 0.1229  | 263.6268  |
| 3369 | 0   | Extremo | 2.14   | 311.281  | 0.505  | -21.1159 | 0.1733  | 253.6378  |
| 3369 | 0.5 | Extremo | 2.14   | 328.703  | 0.505  | -21.1159 | -0.0794 | 93.6417   |
| 3369 | 1   | Extremo | 2.14   | 346.126  | 0.505  | -21.1159 | -0.332  | -75.0656  |
| 3369 | 0   | Extremo | -5.914 | 311.225  | -0.181 | -21.116  | -0.0557 | 254.0565  |
| 3369 | 0.5 | Extremo | -5.914 | 328.648  | -0.181 | -21.116  | 0.0347  | 94.0882   |
| 3369 | 1   | Extremo | -5.914 | 346.07   | -0.181 | -21.116  | 0.125   | -74.5914  |
| 3370 | 0   | Extremo | 2.21   | 371.519  | 0.51   | -21.7525 | 0.172   | -99.6787  |
| 3370 | 0.5 | Extremo | 2.21   | 388.941  | 0.51   | -21.7525 | -0.0829 | -289.7938 |

|      |     |         |        |          |        |          |         |           |
|------|-----|---------|--------|----------|--------|----------|---------|-----------|
| 3370 | 1   | Extremo | 2.21   | 406.364  | 0.51   | -21.7525 | -0.3377 | -488.62   |
| 3370 | 0   | Extremo | -6.104 | 371.467  | -0.182 | -21.7532 | -0.0545 | -99.1991  |
| 3370 | 0.5 | Extremo | -6.104 | 388.889  | -0.182 | -21.7532 | 0.0364  | -289.2881 |
| 3370 | 1   | Extremo | -6.104 | 406.312  | -0.182 | -21.7532 | 0.1273  | -488.0883 |
| 3371 | 0   | Extremo | 2.319  | 363.424  | 0.517  | -17.5021 | 0.1787  | -544.4206 |
| 3371 | 0.5 | Extremo | 2.319  | 380.846  | 0.517  | -17.5021 | -0.0796 | -730.4882 |
| 3371 | 1   | Extremo | 2.319  | 398.269  | 0.517  | -17.5021 | -0.3378 | -925.267  |
| 3371 | 0   | Extremo | -6.401 | 363.39   | -0.184 | -17.5036 | -0.0544 | -543.8767 |
| 3371 | 0.5 | Extremo | -6.401 | 380.813  | -0.184 | -17.5036 | 0.0374  | -729.9274 |
| 3371 | 1   | Extremo | -6.401 | 398.235  | -0.184 | -17.5036 | 0.1292  | -924.6894 |
| 3372 | 0   | Extremo | 2.466  | 174.241  | 0.561  | -7.1827  | 0.2197  | -1008.381 |
| 3372 | 0.5 | Extremo | 2.466  | 191.664  | 0.561  | -7.1827  | -0.0607 | -1099.857 |
| 3372 | 1   | Extremo | 2.466  | 209.086  | 0.561  | -7.1827  | -0.341  | -1200.044 |
| 3372 | 0   | Extremo | -6.803 | 174.266  | -0.19  | -7.1843  | -0.0581 | -1007.785 |
| 3372 | 0.5 | Extremo | -6.803 | 191.688  | -0.19  | -7.1843  | 0.0368  | -1099.273 |
| 3372 | 1   | Extremo | -6.803 | 209.111  | -0.19  | -7.1843  | 0.1318  | -1199.473 |
| 3373 | 0   | Extremo | 2.612  | -190.824 | 0.799  | 6.396    | 0.332   | -1200.054 |
| 3373 | 0.5 | Extremo | 2.612  | -173.401 | 0.799  | 6.396    | -0.0676 | -1108.998 |
| 3373 | 1   | Extremo | 2.612  | -155.979 | 0.799  | 6.396    | -0.4672 | -1026.653 |
| 3373 | 0   | Extremo | -7.205 | -190.702 | -0.219 | 6.396    | -0.0699 | -1199.483 |
| 3373 | 0.5 | Extremo | -7.205 | -173.28  | -0.219 | 6.396    | 0.0396  | -1108.487 |
| 3373 | 1   | Extremo | -7.205 | -155.857 | -0.219 | 6.396    | 0.1492  | -1026.203 |
| 3374 | 0   | Extremo | 2.759  | -380.007 | 0.842  | 16.7157  | 0.3206  | -943.5584 |
| 3374 | 0.5 | Extremo | 2.759  | -362.584 | 0.842  | 16.7157  | -0.1006 | -757.9107 |
| 3374 | 1   | Extremo | 2.759  | -345.162 | 0.842  | 16.7157  | -0.5217 | -580.9742 |
| 3374 | 0   | Extremo | -7.608 | -379.827 | -0.223 | 16.7156  | -0.0663 | -943.1271 |
| 3374 | 0.5 | Extremo | -7.608 | -362.404 | -0.223 | 16.7156  | 0.0454  | -757.5692 |
| 3374 | 1   | Extremo | -7.608 | -344.982 | -0.223 | 16.7156  | 0.1572  | -580.7226 |
| 3375 | 0   | Extremo | 2.869  | -388.102 | 0.848  | 20.9668  | 0.3062  | -525.1944 |
| 3375 | 0.5 | Extremo | 2.869  | -370.68  | 0.848  | 20.9668  | -0.1179 | -335.4989 |
| 3375 | 1   | Extremo | 2.869  | -353.257 | 0.848  | 20.9668  | -0.5419 | -154.5147 |
| 3375 | 0   | Extremo | -7.905 | -387.904 | -0.223 | 20.9659  | -0.0627 | -524.9551 |
| 3375 | 0.5 | Extremo | -7.905 | -370.482 | -0.223 | 20.9659  | 0.049   | -335.3587 |
| 3375 | 1   | Extremo | -7.905 | -353.059 | -0.223 | 20.9659  | 0.1606  | -154.4736 |
| 3376 | 0   | Extremo | 2.941  | -327.865 | 0.852  | 20.3319  | 0.2976  | -129.925  |
| 3376 | 0.5 | Extremo | 2.941  | -310.443 | 0.852  | 20.3319  | -0.1282 | 29.652    |
| 3376 | 1   | Extremo | 2.941  | -292.02  | 0.852  | 20.3319  | -0.5541 | 180.5179  |
| 3376 | 0   | Extremo | -8.096 | -327.664 | -0.223 | 20.3304  | -0.0601 | -129.8895 |
| 3376 | 0.5 | Extremo | -8.096 | -310.241 | -0.223 | 20.3304  | 0.0515  | 29.5868   |
| 3376 | 1   | Extremo | -8.096 | -292.819 | -0.223 | 20.3304  | 0.1631  | 180.3518  |
| 3377 | 0   | Extremo | 2.988  | -252.382 | 0.855  | 16.8078  | 0.2904  | 190.0622  |
| 3377 | 0.5 | Extremo | 2.988  | -234.96  | 0.855  | 16.8078  | -0.1371 | 311.8977  |
| 3377 | 1   | Extremo | 2.988  | -217.537 | 0.855  | 16.8078  | -0.5646 | 425.022   |
| 3377 | 0   | Extremo | -8.212 | -252.18  | -0.223 | 16.806   | -0.0578 | 189.8939  |
| 3377 | 0.5 | Extremo | -8.212 | -234.758 | -0.223 | 16.806   | 0.0538  | 311.6285  |
| 3377 | 1   | Extremo | -8.212 | -217.335 | -0.223 | 16.806   | 0.1654  | 424.6519  |
| 3378 | 0   | Extremo | 3.017  | -175.428 | 0.858  | 11.7985  | 0.2831  | 428.7998  |
| 3378 | 0.5 | Extremo | 3.017  | -158.006 | 0.858  | 11.7985  | -0.1458 | 512.1584  |
| 3378 | 1   | Extremo | 3.017  | -140.583 | 0.858  | 11.7985  | -0.5748 | 586.8058  |
| 3378 | 0   | Extremo | -8.28  | -175.227 | -0.223 | 11.7965  | -0.0557 | 428.4286  |
| 3378 | 0.5 | Extremo | -8.28  | -157.804 | -0.223 | 11.7965  | 0.056   | 511.6864  |
| 3378 | 1   | Extremo | -8.28  | -140.382 | -0.223 | 11.7965  | 0.1678  | 586.233   |
| 3379 | 0   | Extremo | 3.037  | -98.978  | 0.86   | 6.0804   | 0.2756  | 588.3472  |
| 3379 | 0.5 | Extremo | 3.037  | -81.555  | 0.86   | 6.0804   | -0.1546 | 633.4804  |
| 3379 | 1   | Extremo | 3.037  | -64.133  | 0.86   | 6.0804   | -0.5848 | 669.9023  |
| 3379 | 0   | Extremo | -8.322 | -98.776  | -0.224 | 6.0783   | -0.0536 | 587.7737  |
| 3379 | 0.5 | Extremo | -8.322 | -81.354  |        |          |         |           |



|      |     |         |         |          |        |          |         |           |
|------|-----|---------|---------|----------|--------|----------|---------|-----------|
| 3382 | 1   | Extremo | 3.09    | 164.54   | 0.868  | -11.6624 | -0.6151 | 456.1125  |
| 3382 | 0   | Extremo | -8.425  | 129.897  | -0.224 | -11.6639 | -0.047  | 602.0484  |
| 3382 | 0.5 | Extremo | -8.425  | 147.319  | -0.224 | -11.6639 | 0.0651  | 532.7445  |
| 3382 | 1   | Extremo | -8.425  | 164.742  | -0.224 | -11.6639 | 0.1771  | 454.7293  |
| 3383 | 0   | Extremo | 3.12    | 206.619  | 0.872  | -16.7001 | 0.246   | 452.4548  |
| 3383 | 0.5 | Extremo | 3.12    | 224.041  | 0.872  | -16.7001 | -0.1899 | 344.7897  |
| 3383 | 1   | Extremo | 3.12    | 241.464  | 0.872  | -16.7001 | -0.6257 | 228.4133  |
| 3383 | 0   | Extremo | -8.494  | 206.822  | -0.224 | -16.7008 | -0.0448 | 451.0683  |
| 3383 | 0.5 | Extremo | -8.494  | 224.244  | -0.224 | -16.7008 | 0.0673  | 343.3019  |
| 3383 | 1   | Extremo | -8.494  | 241.667  | -0.224 | -16.7008 | 0.1795  | 226.8241  |
| 3384 | 0   | Extremo | 3.167   | 282.115  | 0.876  | -20.2801 | 0.2396  | 219.1441  |
| 3384 | 0.5 | Extremo | 3.167   | 299.537  | 0.876  | -20.2801 | -0.1985 | 73.731    |
| 3384 | 1   | Extremo | 3.167   | 316.96   | 0.876  | -20.2801 | -0.6367 | -80.3933  |
| 3384 | 0   | Extremo | -8.61   | 282.317  | -0.225 | -20.2795 | -0.0428 | 217.5471  |
| 3384 | 0.5 | Extremo | -8.61   | 299.74   | -0.225 | -20.2795 | 0.0696  | 72.0329   |
| 3384 | 1   | Extremo | -8.61   | 317.162  | -0.225 | -20.2795 | 0.1819  | -82.1926  |
| 3385 | 0   | Extremo | 3.241   | 342.794  | 0.882  | -21.0171 | 0.2354  | -104.29   |
| 3385 | 0.5 | Extremo | 3.241   | 360.217  | 0.882  | -21.0171 | -0.2054 | -280.0428 |
| 3385 | 1   | Extremo | 3.241   | 377.639  | 0.882  | -21.0171 | -0.6462 | -464.5068 |
| 3385 | 0   | Extremo | -8.801  | 342.984  | -0.225 | -21.0142 | -0.0408 | -106.1094 |
| 3385 | 0.5 | Extremo | -8.801  | 360.406  | -0.225 | -21.0142 | 0.0719  | -281.9569 |
| 3385 | 1   | Extremo | -8.801  | 377.829  | -0.225 | -21.0142 | 0.1846  | -466.5156 |
| 3386 | 0   | Extremo | 3.352   | 337.068  | 0.89   | -16.9195 | 0.2412  | -518.7191 |
| 3386 | 0.5 | Extremo | 3.352   | 354.49   | 0.89   | -16.9195 | -0.2038 | -691.6085 |
| 3386 | 1   | Extremo | 3.352   | 371.913  | 0.89   | -16.9195 | -0.6488 | -873.2092 |
| 3386 | 0   | Extremo | -9.099  | 337.188  | -0.227 | -16.9136 | -0.039  | -520.7735 |
| 3386 | 0.5 | Extremo | -9.099  | 354.61   | -0.227 | -16.9136 | 0.0742  | -693.7229 |
| 3386 | 1   | Extremo | -9.099  | 372.033  | -0.227 | -16.9136 | 0.1875  | -875.3836 |
| 3387 | 0   | Extremo | 3.502   | 155.361  | 0.945  | -6.7386  | 0.2895  | -953.9667 |
| 3387 | 0.5 | Extremo | 3.502   | 172.784  | 0.945  | -6.7386  | -0.1828 | -1036.003 |
| 3387 | 1   | Extremo | 3.502   | 190.206  | 0.945  | -6.7386  | -0.6552 | -1126.751 |
| 3387 | 0   | Extremo | -9.502  | 155.263  | -0.228 | -6.7321  | -0.0377 | -956.2092 |
| 3387 | 0.5 | Extremo | -9.502  | 172.685  | -0.228 | -6.7321  | 0.0765  | -1038.196 |
| 3387 | 1   | Extremo | -9.502  | 190.108  | -0.228 | -6.7321  | 0.1907  | -1128.895 |
| 3388 | 0   | Extremo | 3.652   | -197.263 | 1.241  | 6.8383   | 0.4265  | -1126.747 |
| 3388 | 0.5 | Extremo | 3.652   | -179.841 | 1.241  | 6.8383   | -0.194  | -1032.471 |
| 3388 | 1   | Extremo | 3.652   | -162.418 | 1.241  | 6.8383   | -0.8145 | -946.9061 |
| 3388 | 0   | Extremo | -9.905  | -197.726 | -0.234 | 6.8391   | -0.0373 | -1128.891 |
| 3388 | 0.5 | Extremo | -9.905  | -180.303 | -0.234 | 6.8391   | 0.0796  | -1034.383 |
| 3388 | 1   | Extremo | -9.905  | -162.881 | -0.234 | 6.8391   | 0.1965  | -948.5875 |
| 3389 | 0   | Extremo | 3.802   | -378.969 | 1.295  | 17.0191  | 0.4099  | -866.1412 |
| 3389 | 0.5 | Extremo | 3.802   | -361.547 | 1.295  | 17.0191  | -0.2375 | -681.0122 |
| 3389 | 1   | Extremo | 3.802   | -344.124 | 1.295  | 17.0191  | -0.8848 | -504.5944 |
| 3389 | 0   | Extremo | -10.309 | -379.65  | -0.234 | 17.0205  | -0.0339 | -867.7538 |
| 3389 | 0.5 | Extremo | -10.309 | -362.228 | -0.234 | 17.0205  | 0.0831  | -682.2842 |
| 3389 | 1   | Extremo | -10.309 | -344.805 | -0.234 | 17.0205  | 0.2     | -505.5259 |
| 3390 | 0   | Extremo | 3.915   | -384.696 | 1.302  | 21.1166  | 0.3895  | -450.3742 |
| 3390 | 0.5 | Extremo | 3.915   | -367.273 | 1.302  | 21.1166  | -0.2615 | -262.3819 |
| 3390 | 1   | Extremo | 3.915   | -349.851 | 1.302  | 21.1166  | -0.9125 | -83.1009  |
| 3390 | 0   | Extremo | -10.607 | -385.446 | -0.233 | 21.1209  | -0.0307 | -451.2595 |
| 3390 | 0.5 | Extremo | -10.607 | -368.024 | -0.233 | 21.1209  | 0.0859  | -262.892  |
| 3390 | 1   | Extremo | -10.607 | -350.601 | -0.233 | 21.1209  | 0.2024  | -83.2359  |
| 3391 | 0   | Extremo | 3.991   | -324.016 | 1.307  | 20.3792  | 0.3764  | -59.1952  |
| 3391 | 0.5 | Extremo | 3.991   | -306.593 | 1.307  | 20.3792  | -0.2769 | 98.4571   |
| 3391 | 1   | Extremo | 3.991   | -289.171 | 1.307  | 20.3792  | -0.9302 | 247.3982  |
| 3391 | 0   | Extremo | -10.798 | -324.779 | -0.232 | 20.3858  | -0.0279 | -59.3094  |
| 3391 | 0.5 | Extremo | -10.798 | -307.357 | -0.232 | 20.3858  | 0.0883  | 98.7245   |
| 3391 | 1   | Extremo | -10.798 | -289.934 | -0.232 | 20.3858  | 0.2046  | 248.0471  |
| 3392 | 0   | Extremo | 4.04    | -248.519 | 1.311  | 16.7985  | 0.3649  | 256.6779  |
| 3392 | 0.5 | Extremo | 4.04    | -231.097 | 1.311  | 16.7985  | -0.2905 | 376.582   |
| 3392 | 1   | Extremo | 4.04    | -213.674 | 1.311  | 16.7985  | -0.9458 | 487.7747  |
| 3392 | 0   | Extremo | -10.914 | -249.283 | -0.232 | 16.8064  | -0.0255 | 257.3356  |
| 3392 | 0.5 | Extremo | -10.914 | -231.86  | -0.232 | 16.8064  | 0.0907  | 377.6214  |
| 3392 | 1   | Extremo | -10.914 | -214.438 | -0.232 | 16.8064  | 0.2068  | 489.196   |
| 3393 | 0   | Extremo | 4.073   | -171.594 | 1.314  | 11.7595  | 0.3533  | 491.4456  |
| 3393 | 0.5 | Extremo | 4.073   | -154.172 | 1.314  | 11.7595  | -0.3038 | 572.8871  |
| 3393 | 1   | Extremo | 4.073   | -136.749 | 1.314  | 11.7595  | -0.961  | 645.6174  |
| 3393 | 0   | Extremo | -10.983 | -172.357 | -0.232 | 11.768   | -0.0231 | 492.8712  |
| 3393 | 0.5 | Extremo | -10.983 | -154.934 | -0.232 | 11.768   | 0.093   | 574.694   |
| 3393 | 1   | Extremo | -10.983 | -137.512 | -0.232 | 11.768   | 0.2091  | 647.8056  |
| 3394 | 0   | Extremo | 4.096   | -95.158  | 1.317  | 6.0255   | 0.3415  | 647.1099  |
| 3394 | 0.5 | Extremo | 4.096   | -77.736  | 1.317  | 6.0255   | -0.3172 | 690.3334  |

|      |     |         |         |          |        |          |         |           |
|------|-----|---------|---------|----------|--------|----------|---------|-----------|
| 3394 | 1   | Extremo | 4.096   | -60.313  | 1.317  | 6.0255   | -0.9759 | 724.8457  |
| 3394 | 0   | Extremo | -11.025 | -95.921  | -0.232 | 6.0342   | -0.0207 | 649.3011  |
| 3394 | 0.5 | Extremo | -11.025 | -78.498  | -0.232 | 6.0342   | 0.0954  | 692.9058  |
| 3394 | 1   | Extremo | -11.025 | -61.076  | -0.232 | 6.0342   | 0.2114  | 727.7992  |
| 3395 | 0   | Extremo | 4.116   | -19.043  | 1.32   | 0.0127   | 0.3295  | 725.2644  |
| 3395 | 0.5 | Extremo | 4.116   | -1.621   | 1.32   | 0.0127   | -0.3306 | 730.4303  |
| 3395 | 1   | Extremo | 4.116   | 15.802   | 1.32   | 0.0127   | -0.9907 | 726.885   |
| 3395 | 0   | Extremo | -11.055 | -19.805  | -0.232 | 0.0211   | -0.0184 | 728.2209  |
| 3395 | 0.5 | Extremo | -11.055 | -2.383   | -0.232 | 0.0211   | 0.0977  | 733.7679  |
| 3395 | 1   | Extremo | -11.055 | 15.04    | -0.232 | 0.0211   | 0.2138  | 730.6037  |
| 3396 | 0   | Extremo | 4.135   | 57.071   | 1.323  | -6.001   | 0.3175  | 726.4809  |
| 3396 | 0.5 | Extremo | 4.135   | 74.493   | 1.323  | -6.001   | -0.3441 | 693.5898  |
| 3396 | 1   | Extremo | 4.135   | 91.916   | 1.323  | -6.001   | -1.0057 | 651.9875  |
| 3396 | 0   | Extremo | -11.086 | 56.308   | -0.232 | -5.9932  | -0.016  | 730.2035  |
| 3396 | 0.5 | Extremo | -11.086 | 73.731   | -0.232 | -5.9932  | 0.1     | 697.6938  |
| 3396 | 1   | Extremo | -11.086 | 91.153   | -0.232 | -5.9932  | 0.216   | 656.4728  |
| 3397 | 0   | Extremo | 4.159   | 133.502  | 1.327  | -11.738  | 0.3057  | 650.5147  |
| 3397 | 0.5 | Extremo | 4.159   | 150.925  | 1.327  | -11.738  | -0.3576 | 579.4079  |
| 3397 | 1   | Extremo | 4.159   | 168.347  | 1.327  | -11.738  | -1.0209 | 499.5898  |
| 3397 | 0   | Extremo | -11.128 | 132.738  | -0.232 | -11.7317 | -0.0136 | 655.0062  |
| 3397 | 0.5 | Extremo | -11.128 | 150.161  | -0.232 | -11.7317 | 0.1024  | 584.2816  |
| 3397 | 1   | Extremo | -11.128 | 167.583  | -0.232 | -11.7317 | 0.2183  | 504.8457  |
| 3398 | 0   | Extremo | 4.193   | 210.419  | 1.331  | -16.7833 | 0.2942  | 495.9543  |
| 3398 | 0.5 | Extremo | 4.193   | 227.841  | 1.331  | -16.7833 | -0.3712 | 386.3892  |
| 3398 | 1   | Extremo | 4.193   | 245.264  | 1.331  | -16.7833 | -1.0365 | 268.1129  |
| 3398 | 0   | Extremo | -11.197 | 209.651  | -0.232 | -16.7799 | -0.0112 | 501.2227  |
| 3398 | 0.5 | Extremo | -11.197 | 227.074  | -0.232 | -16.7799 | 0.1047  | 392.0413  |
| 3398 | 1   | Extremo | -11.197 | 244.496  | -0.232 | -16.7799 | 0.2206  | 274.1487  |
| 3399 | 0   | Extremo | 4.243   | 285.92   | 1.336  | -20.3761 | 0.2835  | 258.9145  |
| 3399 | 0.5 | Extremo | 4.243   | 303.342  | 1.336  | -20.3761 | -0.3845 | 111.599   |
| 3399 | 1   | Extremo | 4.243   | 320.765  | 1.336  | -20.3761 | -1.0525 | -44.4277  |
| 3399 | 0   | Extremo | -11.312 | 285.154  | -0.232 | -20.3782 | -0.0088 | 264.9801  |
| 3399 | 0.5 | Extremo | -11.312 | 302.576  | -0.232 | -20.3782 | 0.1071  | 118.0477  |
| 3399 | 1   | Extremo | -11.312 | 319.999  | -0.232 | -20.3782 | 0.2229  | -37.5961  |
| 3400 | 0   | Extremo | 4.321   | 346.732  | 1.342  | -21.1338 | 0.2754  | -68.1278  |
| 3400 | 0.5 | Extremo | 4.321   | 364.154  | 1.342  | -21.1338 | -0.3957 | -245.8494 |
| 3400 | 1   | Extremo | 4.321   | 381.577  | 1.342  | -21.1338 | -1.0667 | -432.2823 |
| 3400 | 0   | Extremo | -11.504 | 346.015  | -0.232 | -21.1457 | -0.0063 | -61.22    |
| 3400 | 0.5 | Extremo | -11.504 | 363.438  | -0.232 | -21.1457 | 0.1096  | -238.5832 |
| 3400 | 1   | Extremo | -11.504 | 380.86   | -0.232 | -21.1457 | 0.2256  | -424.6577 |
| 3401 | 0   | Extremo | 4.436   | 341.712  | 1.352  | -17.0588 | 0.279   | -486.0364 |
| 3401 | 0.5 | Extremo | 4.436   | 359.134  | 1.352  | -17.0588 | -0.397  | -661.2479 |
| 3401 | 1   | Extremo | 4.436   | 376.557  | 1.352  | -17.0588 | -1.0729 | -845.1707 |
| 3401 | 0   | Extremo | -11.801 | 341.258  | -0.232 | -17.084  | -0.0032 | -478.2386 |
| 3401 | 0.5 | Extremo | -11.801 | 358.68   | -0.232 | -17.084  | 0.113   | -653.2231 |
| 3401 | 1   | Extremo | -11.801 | 376.103  | -0.232 | -17.084  | 0.2292  | -836.9189 |
| 3402 | 0   | Extremo | 4.59    | 162.234  | 1.416  | -6.8678  | 0.3322  | -925.2399 |
| 3402 | 0.5 | Extremo | 4.59    | 179.657  | 1.416  | -6.8678  | -0.3756 | -1010.713 |
| 3402 | 1   | Extremo | 4.59    | 197.079  | 1.416  | -6.8678  | -1.0834 | -1104.897 |
| 3402 | 0   | Extremo | -12.205 | 162.61   | -0.229 | -6.9     | 0.0033  | -916.7295 |
| 3402 | 0.5 | Extremo | -12.205 | 180.032  | -0.229 | -6.9     | 0.1181  | -1002.39  |
| 3402 | 1   | Extremo | -12.205 | 197.455  | -0.229 | -6.9     | 0.2328  | -1096.762 |
| 3403 | 0   | Extremo | 4.744   | -186.682 | 1.762  | 6.795    | 0.4889  | -1104.902 |
| 3403 | 0.5 | Extremo | 4.744   | -169.26  | 1.762  | 6.795    | -0.3919 | -1015.916 |
| 3403 | 1   | Extremo | 4.744   | -151.837 | 1.762  | 6.795    | -1.2727 | -935.6421 |
| 3403 | 0   | Extremo | -12.607 | -184.926 | -0.208 | 6.7764   | 0.0169  | -1096.768 |





|      |     |         |         |          |        |          |         |           |
|------|-----|---------|---------|----------|--------|----------|---------|-----------|
| 3406 | 1   | Extremo | 5.097   | -275.524 | 1.839  | 20.3039  | -1.4176 | 217.2882  |
| 3406 | 0   | Extremo | -13.498 | -307.472 | -0.201 | 20.2554  | 0.0245  | -75.2296  |
| 3406 | 0.5 | Extremo | -13.498 | -290.05  | -0.201 | 20.2554  | 0.1249  | 74.1508   |
| 3406 | 1   | Extremo | -13.498 | -272.627 | -0.201 | 20.2554  | 0.2253  | 214.8199  |
| 3407 | 0   | Extremo | 5.152   | -234.87  | 1.844  | 16.7119  | 0.4045  | 226.4711  |
| 3407 | 0.5 | Extremo | 5.152   | -217.447 | 1.844  | 16.7119  | -0.5173 | 339.5502  |
| 3407 | 1   | Extremo | 5.152   | -200.025 | 1.844  | 16.7119  | -1.4391 | 443.9181  |
| 3407 | 0   | Extremo | -13.612 | -231.971 | -0.2   | 16.6581  | 0.0269  | 223.9697  |
| 3407 | 0.5 | Extremo | -13.612 | -214.549 | -0.2   | 16.6581  | 0.127   | 335.5996  |
| 3407 | 1   | Extremo | -13.612 | -197.126 | -0.2   | 16.6581  | 0.227   | 438.5183  |
| 3408 | 0   | Extremo | 5.191   | -157.954 | 1.848  | 11.6681  | 0.3878  | 447.5342  |
| 3408 | 0.5 | Extremo | 5.191   | -140.532 | 1.848  | 11.6681  | -0.5361 | 522.1557  |
| 3408 | 1   | Extremo | 5.191   | -123.109 | 1.848  | 11.6681  | -1.46   | 588.0659  |
| 3408 | 0   | Extremo | -13.679 | -155.059 | -0.2   | 11.612   | 0.0291  | 442.1178  |
| 3408 | 0.5 | Extremo | -13.679 | -137.637 | -0.2   | 11.612   | 0.129   | 515.2917  |
| 3408 | 1   | Extremo | -13.679 | -120.214 | -0.2   | 11.612   | 0.2289  | 579.7544  |
| 3409 | 0   | Extremo | 5.222   | -81.524  | 1.851  | 5.9342   | 0.3708  | 589.513   |
| 3409 | 0.5 | Extremo | 5.222   | -64.101  | 1.851  | 5.9342   | -0.5549 | 625.9193  |
| 3409 | 1   | Extremo | 5.222   | -46.679  | 1.851  | 5.9342   | -1.4806 | 653.6143  |
| 3409 | 0   | Extremo | -13.718 | -78.63   | -0.199 | 5.8776   | 0.0312  | 581.1898  |
| 3409 | 0.5 | Extremo | -13.718 | -61.208  | -0.199 | 5.8776   | 0.131   | 616.1494  |
| 3409 | 1   | Extremo | -13.718 | -43.785  | -0.199 | 5.8776   | 0.2307  | 642.3977  |
| 3410 | 0   | Extremo | 5.249   | -5.409   | 1.855  | -0.0738  | 0.3536  | 653.9816  |
| 3410 | 0.5 | Extremo | 5.249   | 12.014   | 1.855  | -0.0738  | -0.5737 | 652.3303  |
| 3410 | 1   | Extremo | 5.249   | 29.436   | 1.855  | -0.0738  | -1.5011 | 641.9677  |
| 3410 | 0   | Extremo | -13.745 | -2.515   | -0.199 | -0.1289  | 0.0334  | 642.7534  |
| 3410 | 0.5 | Extremo | -13.745 | 14.907   | -0.199 | -0.1289  | 0.133   | 639.6554  |
| 3410 | 1   | Extremo | -13.745 | 32.33    | -0.199 | -0.1289  | 0.2326  | 627.8461  |
| 3411 | 0   | Extremo | 5.277   | 70.715   | 1.858  | -6.0758  | 0.3364  | 641.492   |
| 3411 | 0.5 | Extremo | 5.277   | 88.138   | 1.858  | -6.0758  | -0.5927 | 601.7788  |
| 3411 | 1   | Extremo | 5.277   | 105.56   | 1.858  | -6.0758  | -1.5218 | 553.3544  |
| 3411 | 0   | Extremo | -13.772 | 73.611   | -0.199 | -6.1272  | 0.0356  | 627.3553  |
| 3411 | 0.5 | Extremo | -13.772 | 91.033   | -0.199 | -6.1272  | 0.135   | 586.1944  |
| 3411 | 1   | Extremo | -13.772 | 108.456  | -0.199 | -6.1272  | 0.2344  | 536.3221  |
| 3412 | 0   | Extremo | 5.311   | 147.178  | 1.862  | -11.7898 | 0.3194  | 551.7617  |
| 3412 | 0.5 | Extremo | 5.311   | 164.601  | 1.862  | -11.7898 | -0.6117 | 473.817   |
| 3412 | 1   | Extremo | 5.311   | 182.023  | 1.862  | -11.7898 | -1.5427 | 387.1611  |
| 3412 | 0   | Extremo | -13.809 | 150.08   | -0.198 | -11.8331 | 0.0378  | 534.7051  |
| 3412 | 0.5 | Extremo | -13.809 | 167.503  | -0.198 | -11.8331 | 0.137   | 455.3093  |
| 3412 | 1   | Extremo | -13.809 | 184.925  | -0.198 | -11.8331 | 0.2361  | 367.2022  |
| 3413 | 0   | Extremo | 5.356   | 224.155  | 1.867  | -16.7912 | 0.3028  | 383.2821  |
| 3413 | 0.5 | Extremo | 5.356   | 241.578  | 1.867  | -16.7912 | -0.6307 | 266.8488  |
| 3413 | 1   | Extremo | 5.356   | 259      | 1.867  | -16.7912 | -1.5641 | 141.7042  |
| 3413 | 0   | Extremo | -13.871 | 227.07   | -0.198 | -16.8187 | 0.0401  | 363.2751  |
| 3413 | 0.5 | Extremo | -13.871 | 244.493  | -0.198 | -16.8187 | 0.139   | 245.3843  |
| 3413 | 1   | Extremo | -13.871 | 261.915  | -0.198 | -16.8187 | 0.2379  | 118.7822  |
| 3414 | 0   | Extremo | 5.42    | 299.623  | 1.873  | -20.3027 | 0.2871  | 131.9179  |
| 3414 | 0.5 | Extremo | 5.42    | 317.045  | 1.873  | -20.3027 | -0.6494 | -22.2491  |
| 3414 | 1   | Extremo | 5.42    | 334.468  | 1.873  | -20.3027 | -1.5858 | -185.1274 |
| 3414 | 0   | Extremo | -13.978 | 302.533  | -0.197 | -20.2992 | 0.0424  | 108.8813  |
| 3414 | 0.5 | Extremo | -13.978 | 319.955  | -0.197 | -20.2992 | 0.141   | -46.7408  |
| 3414 | 1   | Extremo | -13.978 | 337.378  | -0.197 | -20.2992 | 0.2397  | -211.0742 |
| 3415 | 0   | Extremo | 5.514   | 359.452  | 1.88   | -20.9294 | 0.2741  | -210.3383 |
| 3415 | 0.5 | Extremo | 5.514   | 376.875  | 1.88   | -20.9294 | -0.6658 | -394.42   |
| 3415 | 1   | Extremo | 5.514   | 394.297  | 1.88   | -20.9294 | -1.6058 | -587.213  |
| 3415 | 0   | Extremo | -14.16  | 362.177  | -0.197 | -20.8668 | 0.0449  | -236.5766 |
| 3415 | 0.5 | Extremo | -14.16  | 379.599  | -0.197 | -20.8668 | 0.1434  | -422.0204 |
| 3415 | 1   | Extremo | -14.16  | 397.022  | -0.197 | -20.8668 | 0.2419  | -616.1756 |
| 3416 | 0   | Extremo | 5.65    | 349.195  | 1.891  | -16.7344 | 0.2741  | -644.411  |
| 3416 | 0.5 | Extremo | 5.65    | 366.617  | 1.891  | -16.7344 | -0.6714 | -823.3641 |
| 3416 | 1   | Extremo | 5.65    | 384.04   | 1.891  | -16.7344 | -1.6169 | -1011.028 |
| 3416 | 0   | Extremo | -14.444 | 350.922  | -0.197 | -16.5703 | 0.0493  | -674.0341 |
| 3416 | 0.5 | Extremo | -14.444 | 368.345  | -0.197 | -16.5703 | 0.1475  | -853.8509 |
| 3416 | 1   | Extremo | -14.444 | 385.767  | -0.197 | -16.5703 | 0.2458  | -1042.379 |
| 3417 | 0   | Extremo | 5.829   | 153.193  | 1.962  | -6.723   | 0.3287  | -1096.246 |
| 3417 | 0.5 | Extremo | 5.829   | 170.615  | 1.962  | -6.723   | -0.6521 | -1177.198 |
| 3417 | 1   | Extremo | 5.829   | 188.038  | 1.962  | -6.723   | -1.6329 | -1266.861 |
| 3417 | 0   | Extremo | -14.831 | 151.774  | -0.188 | -6.4187  | 0.0614  | -1128.581 |
| 3417 | 0.5 | Extremo | -14.831 | 169.197  | -0.188 | -6.4187  | 0.1554  | -1208.824 |
| 3417 | 1   | Extremo | -14.831 | 186.619  | -0.188 | -6.4187  | 0.2494  | -1297.778 |
| 3418 | 0   | Extremo | 6.014   | -223.219 | 2.343  | 6.129    | 0.4974  | -1266.848 |
| 3418 | 0.5 | Extremo | 6.014   | -205.797 | 2.343  | 6.129    | -0.6742 | -1159.594 |

|      |     |         |         |          |        |          |         |           |
|------|-----|---------|---------|----------|--------|----------|---------|-----------|
| 3418 | 1   | Extremo | 6.014   | -188.374 | 2.343  | 6.129    | -1.8458 | -1061.051 |
| 3418 | 0   | Extremo | -15.213 | -229.872 | -0.136 | 6.5711   | 0.0898  | -1297.763 |
| 3418 | 0.5 | Extremo | -15.213 | -212.449 | -0.136 | 6.5711   | 0.1578  | -1187.183 |
| 3418 | 1   | Extremo | -15.213 | -195.027 | -0.136 | 6.5711   | 0.2257  | -1085.314 |
| 3419 | 0   | Extremo | 6.206   | -419.221 | 2.414  | 16.1404  | 0.4691  | -975.8072 |
| 3419 | 0.5 | Extremo | 6.206   | -401.799 | 2.414  | 16.1404  | -0.7377 | -770.5521 |
| 3419 | 1   | Extremo | 6.206   | -384.376 | 2.414  | 16.1404  | -1.9445 | -574.0083 |
| 3419 | 0   | Extremo | -15.59  | -429.02  | -0.125 | 16.7225  | 0.0916  | -999.0828 |
| 3419 | 0.5 | Extremo | -15.59  | -411.598 | -0.125 | 16.7225  | 0.1543  | -788.9283 |
| 3419 | 1   | Extremo | -15.59  | -394.175 | -0.125 | 16.7225  | 0.217   | -587.485  |
| 3420 | 0   | Extremo | 6.371   | -429.479 | 2.425  | 20.3352  | 0.4362  | -516.7847 |
| 3420 | 0.5 | Extremo | 6.371   | -412.057 | 2.425  | 20.3352  | -0.7762 | -306.4006 |
| 3420 | 1   | Extremo | 6.371   | -394.634 | 2.425  | 20.3352  | -1.9887 | -104.7278 |
| 3420 | 0   | Extremo | -15.853 | -440.276 | -0.123 | 21.0183  | 0.0924  | -529.5994 |
| 3420 | 0.5 | Extremo | -15.853 | -422.853 | -0.123 | 21.0183  | 0.1539  | -313.8171 |
| 3420 | 1   | Extremo | -15.853 | -405.431 | -0.123 | 21.0183  | 0.2155  | -106.7461 |
| 3421 | 0   | Extremo | 6.51    | -369.651 | 2.433  | 19.7084  | 0.4128  | -79.4929  |
| 3421 | 0.5 | Extremo | 6.51    | -352.229 | 2.433  | 19.7084  | -0.8038 | 100.977   |
| 3421 | 1   | Extremo | 6.51    | -334.806 | 2.433  | 19.7084  | -2.0203 | 272.7356  |
| 3421 | 0   | Extremo | -16     | -380.635 | -0.122 | 20.4493  | 0.094   | -81.2201  |
| 3421 | 0.5 | Extremo | -16     | -363.212 | -0.122 | 20.4493  | 0.1549  | 104.7417  |
| 3421 | 1   | Extremo | -16     | -345.79  | -0.122 | 20.4493  | 0.2157  | 281.9922  |
| 3422 | 0   | Extremo | 6.639   | -294.186 | 2.442  | 16.1969  | 0.3918  | 282.5434  |
| 3422 | 0.5 | Extremo | 6.639   | -276.763 | 2.442  | 16.1969  | -0.829  | 425.2806  |
| 3422 | 1   | Extremo | 6.639   | -259.341 | 2.442  | 16.1969  | -2.0498 | 559.3065  |
| 3422 | 0   | Extremo | -16.06  | -305.177 | -0.121 | 16.9661  | 0.0957  | 291.9109  |
| 3422 | 0.5 | Extremo | -16.06  | -287.754 | -0.121 | 16.9661  | 0.156   | 440.1438  |
| 3422 | 1   | Extremo | -16.06  | -270.332 | -0.121 | 16.9661  | 0.2164  | 579.6654  |
| 3423 | 0   | Extremo | 6.769   | -217.212 | 2.45   | 11.196   | 0.371   | 563.2033  |
| 3423 | 0.5 | Extremo | 6.769   | -199.79  | 2.45   | 11.196   | -0.8541 | 667.4538  |
| 3423 | 1   | Extremo | 6.769   | -182.367 | 2.45   | 11.196   | -2.0791 | 762.993   |
| 3423 | 0   | Extremo | -16.058 | -228.196 | -0.12  | 11.9756  | 0.0972  | 583.6012  |
| 3423 | 0.5 | Extremo | -16.058 | -210.773 | -0.12  | 11.9756  | 0.1572  | 693.3434  |
| 3423 | 1   | Extremo | -16.058 | -193.351 | -0.12  | 11.9756  | 0.2172  | 794.3742  |
| 3424 | 0   | Extremo | 6.915   | -140.757 | 2.46   | 5.4842   | 0.3506  | 764.5992  |
| 3424 | 0.5 | Extremo | 6.915   | -123.335 | 2.46   | 5.4842   | -0.8792 | 830.6222  |
| 3424 | 1   | Extremo | 6.915   | -105.912 | 2.46   | 5.4842   | -2.109  | 887.934   |
| 3424 | 0   | Extremo | -16.01  | -151.742 | -0.12  | 6.2608   | 0.0986  | 795.9868  |
| 3424 | 0.5 | Extremo | -16.01  | -134.32  | -0.12  | 6.2608   | 0.1584  | 867.5023  |
| 3424 | 1   | Extremo | -16.01  | -116.897 | -0.12  | 6.2608   | 0.2183  | 930.3066  |
| 3425 | 0   | Extremo | 7.088   | -64.651  | 2.471  | -0.5115  | 0.3308  | 888.42    |
| 3425 | 0.5 | Extremo | 7.088   | -47.229  | 2.471  | -0.5115  | -0.9046 | 916.39    |
| 3425 | 1   | Extremo | 7.088   | -29.806  | 2.471  | -0.5115  | -2.14   | 935.6488  |
| 3425 | 0   | Extremo | -15.926 | -75.65   | -0.119 | 0.247    | 0.1     | 930.7759  |
| 3425 | 0.5 | Extremo | -15.926 | -58.227  | -0.119 | 0.247    | 0.1597  | 964.2451  |
| 3425 | 1   | Extremo | -15.926 | -40.805  | -0.119 | 0.247    | 0.2193  | 989.0031  |
| 3426 | 0   | Extremo | 7.299   | 11.425   | 2.485  | -6.5026  | 0.3122  | 935.2983  |
| 3426 | 0.5 | Extremo | 7.299   | 28.848   | 2.485  | -6.5026  | -0.9303 | 925.23    |
| 3426 | 1   | Extremo | 7.299   | 46.27    | 2.485  | -6.5026  | -2.1728 | 906.4504  |
| 3426 | 0   | Extremo | -15.812 | 0.396    | -0.119 | -5.7866  | 0.1012  | 988.6108  |
| 3426 | 0.5 | Extremo | -15.812 | 17.819   | -0.119 | -5.7866  | 0.1609  | 984.0571  |
| 3426 | 1   | Extremo | -15.812 | 35.241   | -0.119 | -5.7866  | 0.2205  | 970.7922  |
| 3427 | 0   | Extremo | 7.564   | 87.78    | 2.504  | -12.1966 | 0.2955  | 905.0661  |
| 3427 | 0.5 | Extremo | 7.564   | 105.202  | 2.504  | -12.1966 | -0.9564 | 856.8207  |
| 3427 | 1   | Extremo | 7.564   | 122.625  | 2.504  | -12.1966 | -2.2084 | 799.864   |
| 3427 | 0   | Extremo | -15.67  | 76.684   | -0.119 | -11.5679 | 0.1024  | 969.3344  |
| 3427 | 0.5 | Extremo | -15.67  | 94       |        |          |         |           |



|      |     |         |         |          |          |          |         |           |
|------|-----|---------|---------|----------|----------|----------|---------|-----------|
| 3430 | 1   | Extremo | 8.885   | 339.189  | 2.614    | -20.8347 | -2.3435 | 5.9862    |
| 3430 | 0   | Extremo | -15.126 | 292.537  | -0.124   | -21.4761 | 0.105   | 425.6577  |
| 3430 | 0.5 | Extremo | -15.126 | 309.96   | -0.124   | -21.4761 | 0.1669  | 275.0335  |
| 3430 | 1   | Extremo | -15.126 | 327.382  | -0.124   | -21.4761 | 0.2288  | 115.6981  |
| 3431 | 0   | Extremo | 9.598   | 315.131  | 2.686    | -15.3282 | 0.2871  | -39.7065  |
| 3431 | 0.5 | Extremo | 9.598   | 332.554  | 2.686    | -15.3282 | -1.0557 | -201.6277 |
| 3431 | 1   | Extremo | 9.598   | 349.976  | 2.686    | -15.3282 | -2.3985 | -372.2601 |
| 3431 | 0   | Extremo | -14.921 | 303.469  | -0.128   | -17.6128 | 0.1086  | 70.5036   |
| 3431 | 0.5 | Extremo | -14.921 | 320.891  | -0.128   | -17.6128 | 0.1724  | -85.5865  |
| 3431 | 1   | Extremo | -14.921 | 338.314  | -0.128   | -17.6128 | 0.2363  | -250.3878 |
| 3432 | 0   | Extremo | 10.505  | 187.975  | 2.842    | -0.9453  | 0.3549  | -438.4146 |
| 3432 | 0.5 | Extremo | 10.505  | 205.398  | 2.842    | -0.9453  | -1.066  | -536.758  |
| 3432 | 1   | Extremo | 10.505  | 222.82   | 2.842    | -0.9453  | -2.4869 | -643.8126 |
| 3432 | 0   | Extremo | -14.666 | 178.227  | -0.118   | -6.8248  | 0.1266  | -315.3717 |
| 3432 | 0.5 | Extremo | -14.666 | 195.649  | -0.118   | -6.8248  | 0.1857  | -408.8406 |
| 3432 | 1   | Extremo | -14.666 | 213.072  | -0.118   | -6.8248  | 0.2449  | -511.0207 |
| 3433 | 0   | Extremo | 11.616  | -60.188  | 3.342    | 21.2171  | 0.4818  | -639.8737 |
| 3433 | 0.5 | Extremo | 11.616  | -41.303  | 3.342    | 21.2171  | -1.1892 | -614.5012 |
| 3433 | 1   | Extremo | 11.616  | -22.418  | 3.342    | 21.2171  | -2.8601 | -598.5711 |
| 3433 | 0   | Extremo | -14.215 | -66.265  | -0.029   | 8.6077   | 0.178   | -506.4066 |
| 3433 | 0.5 | Extremo | -14.215 | -47.38   | -0.029   | 8.6077   | 0.1925  | -477.9956 |
| 3433 | 1   | Extremo | -14.215 | -28.495  | -0.029   | 8.6077   | 0.207   | -459.0271 |
| 3434 | 0   | Extremo | 13.085  | -212.595 | 3.418    | 34.6359  | 0.4802  | -530.7161 |
| 3434 | 0.5 | Extremo | 13.085  | -193.71  | 3.418    | 34.6359  | -1.229  | -429.14   |
| 3434 | 1   | Extremo | 13.085  | -174.825 | 3.418    | 34.6359  | -2.9382 | -337.0065 |
| 3434 | 0   | Extremo | -13.5   | -215.501 | 0.003657 | 18.8158  | 0.1874  | -391.5929 |
| 3434 | 0.5 | Extremo | -13.5   | -196.616 | 0.003657 | 18.8158  | 0.1856  | -288.5639 |
| 3434 | 1   | Extremo | -13.5   | -177.731 | 0.003657 | 18.8158  | 0.1837  | -194.9773 |
| 3435 | 0   | Extremo | 14.84   | -204.814 | 3.412    | 39.1453  | 0.4231  | -289.1636 |
| 3435 | 0.5 | Extremo | 14.84   | -185.929 | 3.412    | 39.1453  | -1.2828 | -191.4779 |
| 3435 | 1   | Extremo | 14.84   | -167.044 | 3.412    | 39.1453  | -2.9886 | -103.2347 |
| 3435 | 0   | Extremo | -12.368 | -206.329 | 0.022    | 22.0887  | 0.1939  | -147.8893 |
| 3435 | 0.5 | Extremo | -12.368 | -187.444 | 0.022    | 22.0887  | 0.183   | -49.4461  |
| 3435 | 1   | Extremo | -12.368 | -168.559 | 0.022    | 22.0887  | 0.1721  | 39.5547   |
| 3436 | 0   | Extremo | 16.965  | -134.34  | 3.429    | 38.5594  | 0.3865  | -80.7906  |
| 3436 | 0.5 | Extremo | 16.965  | -115.455 | 3.429    | 38.5594  | -1.3282 | -18.3418  |
| 3436 | 1   | Extremo | 16.965  | -96.57   | 3.429    | 38.5594  | -3.0429 | 34.6646   |
| 3436 | 0   | Extremo | -10.722 | -135.514 | 0.038    | 21.0609  | 0.2011  | 61.3331   |
| 3436 | 0.5 | Extremo | -10.722 | -116.629 | 0.038    | 21.0609  | 0.1823  | 124.369   |
| 3436 | 1   | Extremo | -10.722 | -97.744  | 0.038    | 21.0609  | 0.1635  | 177.9624  |
| 3437 | 0   | Extremo | 19.582  | -48.612  | 3.484    | 35.4931  | 0.367   | 43.5119   |
| 3437 | 0.5 | Extremo | 19.582  | -29.727  | 3.484    | 35.4931  | -1.3748 | 63.0967   |
| 3437 | 1   | Extremo | 19.582  | -10.842  | 3.484    | 35.4931  | -3.1166 | 73.239    |
| 3437 | 0   | Extremo | -8.479  | -49.957  | 0.052    | 17.8761  | 0.2081  | 186.4163  |
| 3437 | 0.5 | Extremo | -8.479  | -31.072  | 0.052    | 17.8761  | 0.1821  | 206.6736  |
| 3437 | 1   | Extremo | -8.479  | -12.187  | 0.052    | 17.8761  | 0.1562  | 217.4884  |
| 3438 | 0   | Extremo | 22.849  | 39.181   | 3.575    | 31.7197  | 0.3518  | 75.9972   |
| 3438 | 0.5 | Extremo | 22.849  | 58.066   | 3.575    | 31.7197  | -1.4359 | 51.6852   |
| 3438 | 1   | Extremo | 22.849  | 76.951   | 3.575    | 31.7197  | -3.2237 | 17.9308   |
| 3438 | 0   | Extremo | -5.514  | 37.594   | 0.068    | 13.9717  | 0.2171  | 220.2763  |
| 3438 | 0.5 | Extremo | -5.514  | 56.479   | 0.068    | 13.9717  | 0.1831  | 196.758   |
| 3438 | 1   | Extremo | -5.514  | 75.364   | 0.068    | 13.9717  | 0.1491  | 163.7972  |
| 3439 | 0   | Extremo | 26.971  | 127.59   | 3.708    | 30.7352  | 0.2928  | 17.8204   |
| 3439 | 0.5 | Extremo | 26.971  | 147.713  | 3.708    | 30.7352  | -1.5614 | -51.0054  |
| 3439 | 1   | Extremo | 26.971  | 167.835  | 3.708    | 30.7352  | -3.4156 | -129.8924 |
| 3439 | 0   | Extremo | -1.653  | 125.912  | 0.099    | 11.2603  | 0.2323  | 164.0506  |
| 3439 | 0.5 | Extremo | -1.653  | 146.034  | 0.099    | 11.2603  | 0.183   | 96.0641   |
| 3439 | 1   | Extremo | -1.653  | 166.157  | 0.099    | 11.2603  | 0.1338  | 18.0164   |
| 3440 | 0   | Extremo | 32.434  | 228.972  | 3.752    | 26.8616  | 0.3002  | -131.2345 |
| 3440 | 0.5 | Extremo | 32.434  | 249.094  | 3.752    | 26.8616  | -1.5756 | -250.7511 |
| 3440 | 1   | Extremo | 32.434  | 269.217  | 3.752    | 26.8616  | -3.4514 | -380.329  |
| 3440 | 0   | Extremo | 3.539   | 227.427  | 0.138    | 7.5321   | 0.2528  | 16.8401   |
| 3440 | 0.5 | Extremo | 3.539   | 247.549  | 0.138    | 7.5321   | 0.1837  | -101.9039 |
| 3440 | 1   | Extremo | 3.539   | 267.672  | 0.138    | 7.5321   | 0.1147  | -230.7092 |
| 3441 | 0   | Extremo | 39.248  | 332.054  | 3.808    | 23.1336  | 0.279   | -382.0217 |
| 3441 | 0.5 | Extremo | 39.248  | 352.176  | 3.808    | 23.1336  | -1.6248 | -553.0793 |
| 3441 | 1   | Extremo | 39.248  | 372.299  | 3.808    | 23.1336  | -3.5285 | -734.1982 |
| 3441 | 0   | Extremo | 10.078  | 330.652  | 0.182    | 4.1994   | 0.2729  | -232.5469 |
| 3441 | 0.5 | Extremo | 10.078  | 350.775  | 0.182    | 4.1994   | 0.1817  | -402.9037 |
| 3441 | 1   | Extremo | 10.078  | 370.897  | 0.182    | 4.1994   | 0.0905  | -583.3217 |
| 3442 | 0   | Extremo | 47.765  | 435.765  | 3.919    | 20.0472  | 0.2776  | -737.1083 |
| 3442 | 0.5 | Extremo | 47.765  | 455.887  | 3.919    | 20.0472  | -1.682  | -960.0213 |

|      |     |         |         |          |       |          |         |           |
|------|-----|---------|---------|----------|-------|----------|---------|-----------|
| 3442 | 1   | Extremo | 47.765  | 476.01   | 3.919 | 20.0472  | -3.6417 | -1192.996 |
| 3442 | 0   | Extremo | 18.315  | 434.303  | 0.232 | 1.4661   | 0.2951  | -586.3958 |
| 3442 | 0.5 | Extremo | 18.315  | 454.426  | 0.232 | 1.4661   | 0.1791  | -808.5781 |
| 3442 | 1   | Extremo | 18.315  | 474.548  | 0.232 | 1.4661   | 0.0631  | -1040.822 |
| 3443 | 0   | Extremo | 58.421  | 537.904  | 4.096 | 17.601   | 0.2884  | -1199.67  |
| 3443 | 0.5 | Extremo | 58.421  | 558.027  | 4.096 | 17.601   | -1.7594 | -1473.653 |
| 3443 | 1   | Extremo | 58.421  | 578.149  | 4.096 | 17.601   | -3.8073 | -1757.697 |
| 3443 | 0   | Extremo | 28.686  | 536.336  | 0.291 | -0.8769  | 0.3231  | -1047.384 |
| 3443 | 0.5 | Extremo | 28.686  | 556.458  | 0.291 | -0.8769  | 0.1773  | -1320.582 |
| 3443 | 1   | Extremo | 28.686  | 576.581  | 0.291 | -0.8769  | 0.0316  | -1603.842 |
| 3444 | 0   | Extremo | 71.745  | 638.453  | 4.354 | 16.7908  | 0.2516  | -1768.478 |
| 3444 | 0.5 | Extremo | 71.745  | 660.151  | 4.354 | 16.7908  | -1.9253 | -2093.129 |
| 3444 | 1   | Extremo | 71.745  | 681.848  | 4.354 | 16.7908  | -4.1022 | -2428.628 |
| 3444 | 0   | Extremo | 41.713  | 636.878  | 0.389 | -3.5163  | 0.363   | -1614.238 |
| 3444 | 0.5 | Extremo | 41.713  | 658.576  | 0.389 | -3.5163  | 0.1684  | -1938.101 |
| 3444 | 1   | Extremo | 41.713  | 680.273  | 0.389 | -3.5163  | -0.0262 | -2272.813 |
| 3445 | 0   | Extremo | 89.114  | 752.311  | 4.495 | 13.8036  | 0.3024  | -2439.104 |
| 3445 | 0.5 | Extremo | 89.114  | 774.008  | 4.495 | 13.8036  | -1.9453 | -2820.684 |
| 3445 | 1   | Extremo | 89.114  | 795.706  | 4.495 | 13.8036  | -4.1929 | -3213.112 |
| 3445 | 0   | Extremo | 58.732  | 750.972  | 0.489 | -6.334   | 0.4121  | -2283.058 |
| 3445 | 0.5 | Extremo | 58.732  | 772.669  | 0.489 | -6.334   | 0.1676  | -2663.969 |
| 3445 | 1   | Extremo | 58.732  | 794.367  | 0.489 | -6.334   | -0.0769 | -3055.727 |
| 3446 | 0   | Extremo | 109.819 | 865.544  | 4.67  | 11.0183  | 0.3241  | -3218.287 |
| 3446 | 0.5 | Extremo | 109.819 | 887.242  | 4.67  | 11.0183  | -2.0109 | -3656.483 |
| 3446 | 1   | Extremo | 109.819 | 908.939  | 4.67  | 11.0183  | -4.3459 | -4105.528 |
| 3446 | 0   | Extremo | 79.055  | 864.519  | 0.593 | -8.7251  | 0.4571  | -3060.975 |
| 3446 | 0.5 | Extremo | 79.055  | 886.216  | 0.593 | -8.7251  | 0.1609  | -3498.659 |
| 3446 | 1   | Extremo | 79.055  | 907.914  | 0.593 | -8.7251  | -0.1354 | -3947.191 |
| 3447 | 0   | Extremo | 133.685 | 981.733  | 4.936 | 9.3916   | 0.3839  | -4107.353 |
| 3447 | 0.5 | Extremo | 133.685 | 1003.43  | 4.936 | 9.3916   | -2.0843 | -4603.644 |
| 3447 | 1   | Extremo | 133.685 | 1025.128 | 4.936 | 9.3916   | -4.5524 | -5110.784 |
| 3447 | 0   | Extremo | 102.515 | 980.837  | 0.694 | -10.0606 | 0.4997  | -3949.211 |
| 3447 | 0.5 | Extremo | 102.515 | 1002.534 | 0.694 | -10.0606 | 0.1526  | -4445.054 |
| 3447 | 1   | Extremo | 102.515 | 1024.232 | 0.694 | -10.0606 | -0.1945 | -4951.746 |
| 3448 | 0   | Extremo | 159.334 | 1101.677 | 5.301 | 9.2247   | 0.4828  | -5114.223 |
| 3448 | 0.5 | Extremo | 159.334 | 1123.375 | 5.301 | 9.2247   | -2.1677 | -5670.486 |
| 3448 | 1   | Extremo | 159.334 | 1145.072 | 5.301 | 9.2247   | -4.8182 | -6237.598 |
| 3448 | 0   | Extremo | 127.76  | 1100.702 | 0.772 | -10.0591 | 0.5306  | -4955.317 |
| 3448 | 0.5 | Extremo | 127.76  | 1122.4   | 0.772 | -10.0591 | 0.1446  | -5511.092 |
| 3448 | 1   | Extremo | 127.76  | 1144.097 | 0.772 | -10.0591 | -0.2415 | -6077.716 |
| 3449 | 0   | Extremo | 182.732 | 1219.665 | 5.763 | 9.9838   | 0.6063  | -6249.137 |
| 3449 | 0.5 | Extremo | 182.732 | 1241.362 | 5.763 | 9.9838   | -2.2751 | -6864.394 |
| 3449 | 1   | Extremo | 182.732 | 1263.06  | 5.763 | 9.9838   | -5.1566 | -7490.499 |
| 3449 | 0   | Extremo | 150.804 | 1218.573 | 0.793 | -9.4163  | 0.5361  | -6089.186 |
| 3449 | 0.5 | Extremo | 150.804 | 1240.271 | 0.793 | -9.4163  | 0.1394  | -6703.897 |
| 3449 | 1   | Extremo | 150.804 | 1261.968 | 0.793 | -9.4163  | -0.2572 | -7329.456 |
| 3450 | 0   | Extremo | 193.721 | 1333.735 | 6.368 | 10.7719  | 0.6943  | -7510.573 |
| 3450 | 0.5 | Extremo | 193.721 | 1355.433 | 6.368 | 10.7719  | -2.4895 | -8183.202 |
| 3450 | 1   | Extremo | 193.721 | 1377.13  | 6.368 | 10.7719  | -5.6734 | -8867.355 |
| 3450 | 0   | Extremo | 161.609 | 1332.586 | 0.733 | -10.3615 | 0.4918  | -7349.279 |
| 3450 | 0.5 | Extremo | 161.609 | 1354.284 | 0.733 | -10.3615 | 0.1252  | -8021.334 |
| 3450 | 1   | Extremo | 161.609 | 1375.981 | 0.733 | -10.3615 | -0.2413 | -8704.912 |
| 3451 | 0   | Extremo | 167.667 | 1455.315 | 6.808 | 9.9449   | 0.8567  | -8885.791 |
| 3451 | 0.5 | Extremo | 167.667 | 1477.013 | 6.808 | 9.9449   | -2.5471 | -9619.211 |
| 3451 | 1   | Extremo | 167.667 | 1        |       |          |         |           |



|      |     |         |           |           |        |          |         |           |
|------|-----|---------|-----------|-----------|--------|----------|---------|-----------|
| 3454 | 1   | Extremo | -1099.961 | 1323.805  | 9.565  | 32.4197  | -7.7971 | -14946.29 |
| 3454 | 0   | Extremo | -1117.711 | 1284.706  | -2.027 | 5.3176   | 0.0506  | -13481.29 |
| 3454 | 0.5 | Extremo | -1117.711 | 1307.753  | -2.027 | 5.3176   | 1.0638  | -14129.41 |
| 3454 | 1   | Extremo | -1117.711 | 1330.801  | -2.027 | 5.3176   | 2.0771  | -14789.05 |
| 3455 | 0   | Extremo | -2654.67  | 99.158    | 6.72   | 56.973   | 2.9969  | -14715.31 |
| 3455 | 0.5 | Extremo | -2654.67  | 122.205   | 6.72   | 56.973   | -0.3632 | -14770.65 |
| 3455 | 1   | Extremo | -2654.67  | 145.253   | 6.72   | 56.973   | -3.7233 | -14837.51 |
| 3455 | 0   | Extremo | -2655.322 | 123.287   | -1.8   | 21.7851  | 0.9846  | -14562.67 |
| 3455 | 0.5 | Extremo | -2655.322 | 146.335   | -1.8   | 21.7851  | 1.8845  | -14630.07 |
| 3455 | 1   | Extremo | -2655.322 | 169.382   | -1.8   | 21.7851  | 2.7844  | -14709    |
| 3456 | 0   | Extremo | -4258.686 | -1515.426 | 5.679  | 88.0031  | 5.6213  | -15436.41 |
| 3456 | 0.5 | Extremo | -4258.686 | -1492.378 | 5.679  | 88.0031  | 2.7816  | -14684.45 |
| 3456 | 1   | Extremo | -4258.686 | -1425.331 | 5.679  | 88.0031  | -0.0581 | -13944.03 |
| 3456 | 0   | Extremo | -4242.29  | -1472.06  | -1.662 | 42.0624  | 2.417   | -15305.4  |
| 3456 | 0.5 | Extremo | -4242.29  | -1449.012 | -1.662 | 42.0624  | 3.248   | -14575.13 |
| 3456 | 1   | Extremo | -4242.29  | -1425.965 | -1.662 | 42.0624  | 4.0789  | -13856.39 |
| 3457 | 0   | Extremo | -5121.867 | -2087.591 | 4.188  | 108.6121 | 5.1608  | -13935.33 |
| 3457 | 0.5 | Extremo | -5121.867 | -2064.544 | 4.188  | 108.6121 | 3.0667  | -12897.29 |
| 3457 | 1   | Extremo | -5121.867 | -2041.496 | 4.188  | 108.6121 | 0.9725  | -11870.78 |
| 3457 | 0   | Extremo | -5096.432 | -2038.255 | -0.815 | 58.1739  | 3.3957  | -13848.71 |
| 3457 | 0.5 | Extremo | -5096.432 | -2015.208 | -0.815 | 58.1739  | 3.8033  | -12835.35 |
| 3457 | 1   | Extremo | -5096.432 | -1992.16  | -0.815 | 58.1739  | 4.2109  | -11833.5  |
| 3458 | 0   | Extremo | -5477.057 | -2137.425 | 3.257  | 121.6861 | 4.7367  | -11825.94 |
| 3458 | 0.5 | Extremo | -5477.057 | -2114.377 | 3.257  | 121.6861 | 3.108   | -10762.99 |
| 3458 | 1   | Extremo | -5477.057 | -2091.33  | 3.257  | 121.6861 | 1.4794  | -9711.561 |
| 3458 | 0   | Extremo | -5447.867 | -2087.171 | 0.269  | 68.1954  | 4.203   | -11789.44 |
| 3458 | 0.5 | Extremo | -5447.867 | -2064.123 | 0.269  | 68.1954  | 4.0683  | -10751.61 |
| 3458 | 1   | Extremo | -5447.867 | -2041.076 | 0.269  | 68.1954  | 3.9337  | -9725.312 |
| 3459 | 0   | Extremo | -5596.217 | -2043.7   | 2.722  | 128.7432 | 4.4613  | -9685.205 |
| 3459 | 0.5 | Extremo | -5596.217 | -2020.652 | 2.722  | 128.7432 | 3.1005  | -8669.117 |
| 3459 | 1   | Extremo | -5596.217 | -1997.605 | 2.722  | 128.7432 | 1.7397  | -7664.553 |
| 3459 | 0   | Extremo | -5565.714 | -1993.774 | 1.073  | 73.0475  | 4.6972  | -9699.384 |
| 3459 | 0.5 | Extremo | -5565.714 | -1970.726 | 1.073  | 73.0475  | 4.1605  | -8708.259 |
| 3459 | 1   | Extremo | -5565.714 | -1947.679 | 1.073  | 73.0475  | 3.6239  | -7728.658 |
| 3460 | 0   | Extremo | -5613.888 | -1919.003 | 2.278  | 131.4838 | 4.2162  | -7641.517 |
| 3460 | 0.5 | Extremo | -5613.888 | -1895.956 | 2.278  | 131.4838 | 3.0773  | -6687.777 |
| 3460 | 1   | Extremo | -5613.888 | -1872.908 | 2.278  | 131.4838 | 1.9384  | -5745.561 |
| 3460 | 0   | Extremo | -5583.121 | -1869.564 | 1.551  | 74.6533  | 4.9561  | -7705.84  |
| 3460 | 0.5 | Extremo | -5583.121 | -1846.517 | 1.551  | 74.6533  | 4.1806  | -6776.82  |
| 3460 | 1   | Extremo | -5583.121 | -1823.469 | 1.551  | 74.6533  | 3.405   | -5859.323 |
| 3461 | 0   | Extremo | -5590.646 | -1798.673 | 1.744  | 124.6585 | 3.8792  | -5724.31  |
| 3461 | 0.5 | Extremo | -5590.646 | -1776.976 | 1.744  | 124.6585 | 3.0071  | -4830.398 |
| 3461 | 1   | Extremo | -5590.646 | -1755.278 | 1.744  | 124.6585 | 2.1349  | -3947.334 |
| 3461 | 0   | Extremo | -5560.044 | -1749.569 | 1.637  | 71.1107  | 4.9467  | -5838.159 |
| 3461 | 0.5 | Extremo | -5560.044 | -1727.871 | 1.637  | 71.1107  | 4.1281  | -4968.799 |
| 3461 | 1   | Extremo | -5560.044 | -1706.174 | 1.637  | 71.1107  | 3.3095  | -4110.288 |
| 3462 | 0   | Extremo | -5549.955 | -1677.247 | 1.322  | 127.5826 | 3.647   | -3932.807 |
| 3462 | 0.5 | Extremo | -5549.955 | -1655.55  | 1.322  | 127.5826 | 2.9858  | -3099.608 |
| 3462 | 1   | Extremo | -5549.955 | -1633.852 | 1.322  | 127.5826 | 2.3246  | -2277.258 |
| 3462 | 0   | Extremo | -5519.683 | -1628.478 | 1.585  | 73.4264  | 4.9012  | -4096.007 |
| 3462 | 0.5 | Extremo | -5519.683 | -1606.78  | 1.585  | 73.4264  | 4.1087  | -3287.193 |
| 3462 | 1   | Extremo | -5519.683 | -1585.083 | 1.585  | 73.4264  | 3.3162  | -2489.227 |
| 3463 | 0   | Extremo | -5503.048 | -1552.121 | 0.992  | 131.1448 | 3.4723  | -2267.373 |
| 3463 | 0.5 | Extremo | -5503.048 | -1530.424 | 0.992  | 131.1448 | 2.9763  | -1496.737 |
| 3463 | 1   | Extremo | -5503.048 | -1508.726 | 0.992  | 131.1448 | 2.4802  | -736.949  |
| 3463 | 0   | Extremo | -5473.158 | -1503.853 | 1.512  | 75.9419  | 4.8568  | -2479.849 |
| 3463 | 0.5 | Extremo | -5473.158 | -1482.156 | 1.512  | 75.9419  | 4.1007  | -1733.347 |
| 3463 | 1   | Extremo | -5473.158 | -1460.458 | 1.512  | 75.9419  | 3.3446  | -997.6931 |
| 3464 | 0   | Extremo | -5455.442 | -1425.412 | 0.738  | 134.4991 | 3.3429  | -726.7419 |
| 3464 | 0.5 | Extremo | -5455.442 | -1403.714 | 0.738  | 134.4991 | 2.9739  | -19.4603  |
| 3464 | 1   | Extremo | -5455.442 | -1382.017 | 0.738  | 134.4991 | 2.6048  | 676.9724  |
| 3464 | 0   | Extremo | -5425.932 | -1378.076 | 1.452  | 78.119   | 4.8217  | -988.1415 |
| 3464 | 0.5 | Extremo | -5425.932 | -1356.378 | 1.452  | 78.119   | 4.0959  | -304.5279 |
| 3464 | 1   | Extremo | -5425.932 | -1334.681 | 1.452  | 78.119   | 3.3701  | 368.2369  |
| 3465 | 0   | Extremo | -5409.877 | -1296.372 | 0.571  | 138.1568 | 3.2631  | 688.1683  |
| 3465 | 0.5 | Extremo | -5409.877 | -1274.675 | 0.571  | 138.1568 | 2.9777  | 1330.93   |
| 3465 | 1   | Extremo | -5409.877 | -1252.977 | 0.571  | 138.1568 | 2.6922  | 1962.843  |
| 3465 | 0   | Extremo | -5380.721 | -1250.386 | 1.436  | 80.4247  | 4.8101  | 378.9614  |
| 3465 | 0.5 | Extremo | -5380.721 | -1228.689 | 1.436  | 80.4247  | 4.0921  | 998.7303  |
| 3465 | 1   | Extremo | -5380.721 | -1206.991 | 1.436  | 80.4247  | 3.3742  | 1607.6504 |
| 3466 | 0   | Extremo | -5368.078 | -1168.517 | 0.494  | 140.027  | 3.2246  | 1970.8994 |
| 3466 | 0.5 | Extremo | -5368.078 | -1146.82  | 0.494  | 140.027  | 2.9775  | 2549.7336 |

|      |     |         |           |           |       |          |        |           |
|------|-----|---------|-----------|-----------|-------|----------|--------|-----------|
| 3466 | 1   | Extremo | -5368.078 | -1125.122 | 0.494 | 140.027  | 2.7304 | 3117.7191 |
| 3466 | 0   | Extremo | -5339.239 | -1123.729 | 1.467 | 81.6375  | 4.8193 | 1615.8985 |
| 3466 | 0.5 | Extremo | -5339.239 | -1102.031 | 1.467 | 81.6375  | 4.0859 | 2172.3384 |
| 3466 | 1   | Extremo | -5339.239 | -1080.334 | 1.467 | 81.6375  | 3.3526 | 2717.9296 |
| 3467 | 0   | Extremo | -5332.851 | -1059.097 | 0.355 | 127.206  | 3.1383 | 3120.0744 |
| 3467 | 0.5 | Extremo | -5332.851 | -1038.974 | 0.355 | 127.206  | 2.9607 | 3644.5922 |
| 3467 | 1   | Extremo | -5332.851 | -1018.852 | 0.355 | 127.206  | 2.7831 | 4159.0487 |
| 3467 | 0   | Extremo | -5304.269 | -1014.821 | 1.337 | 73.9326  | 4.6906 | 2720.9284 |
| 3467 | 0.5 | Extremo | -5304.269 | -994.698  | 1.337 | 73.9326  | 4.0223 | 3223.308  |
| 3467 | 1   | Extremo | -5304.269 | -974.576  | 1.337 | 73.9326  | 3.354  | 3715.6265 |
| 3468 | 0   | Extremo | -5298.595 | -952.972  | 0.245 | 126.8976 | 3.0878 | 4165.709  |
| 3468 | 0.5 | Extremo | -5298.595 | -932.85   | 0.245 | 126.8976 | 2.9655 | 4637.1646 |
| 3468 | 1   | Extremo | -5298.595 | -912.727  | 0.245 | 126.8976 | 2.8431 | 5098.5589 |
| 3468 | 0   | Extremo | -5270.245 | -909.083  | 1.177 | 73.204   | 4.5918 | 3722.1858 |
| 3468 | 0.5 | Extremo | -5270.245 | -888.961  | 1.177 | 73.204   | 4.0032 | 4171.6267 |
| 3468 | 1   | Extremo | -5270.245 | -868.838  | 1.177 | 73.204   | 3.4146 | 4611.1465 |
| 3469 | 0   | Extremo | -5265.371 | -841.528  | 0.215 | 128.4419 | 3.0865 | 5110.46   |
| 3469 | 0.5 | Extremo | -5265.371 | -821.405  | 0.215 | 128.4419 | 2.9789 | 5526.1932 |
| 3469 | 1   | Extremo | -5265.371 | -801.283  | 0.215 | 128.4419 | 2.8713 | 5931.8652 |
| 3469 | 0   | Extremo | -5237.224 | -798.367  | 1.079 | 73.6812  | 4.543  | 4622.1364 |
| 3469 | 0.5 | Extremo | -5237.224 | -778.245  | 1.079 | 73.6812  | 4.0035 | 5016.2895 |
| 3469 | 1   | Extremo | -5237.224 | -758.122  | 1.079 | 73.6812  | 3.4641 | 5400.3813 |
| 3470 | 0   | Extremo | -5234.691 | -722.119  | 0.273 | 130.8273 | 3.1262 | 5940.2655 |
| 3470 | 0.5 | Extremo | -5234.691 | -701.996  | 0.273 | 130.8273 | 2.99   | 6296.2943 |
| 3470 | 1   | Extremo | -5234.691 | -681.874  | 0.273 | 130.8273 | 2.8537 | 6642.2618 |
| 3470 | 0   | Extremo | -5206.701 | -680.432  | 1.048 | 75.0182  | 4.5294 | 5407.9482 |
| 3470 | 0.5 | Extremo | -5206.701 | -660.309  | 1.048 | 75.0182  | 4.0052 | 5743.1334 |
| 3470 | 1   | Extremo | -5206.701 | -640.187  | 1.048 | 75.0182  | 3.4811 | 6068.2574 |
| 3471 | 0   | Extremo | -5208.217 | -606.742  | 0.42  | 130.7176 | 3.1966 | 6634.1991 |
| 3471 | 0.5 | Extremo | -5208.217 | -586.619  | 0.42  | 130.7176 | 2.9868 | 6932.5394 |
| 3471 | 1   | Extremo | -5208.217 | -566.497  | 0.42  | 130.7176 | 2.7771 | 7220.8185 |
| 3471 | 0   | Extremo | -5180.314 | -566.383  | 1.063 | 74.8736  | 4.5293 | 6060.5048 |
| 3471 | 0.5 | Extremo | -5180.314 | -546.26   | 1.063 | 74.8736  | 3.998  | 6338.6657 |
| 3471 | 1   | Extremo | -5180.314 | -526.138  | 1.063 | 74.8736  | 3.4666 | 6606.7653 |
| 3472 | 0   | Extremo | -5187.773 | -516.742  | 0.527 | 114.4317 | 3.2213 | 7199.599  |
| 3472 | 0.5 | Extremo | -5187.773 | -497.857  | 0.527 | 114.4317 | 2.9577 | 7453.2487 |
| 3472 | 1   | Extremo | -5187.773 | -478.972  | 0.527 | 114.4317 | 2.6941 | 7697.4559 |
| 3472 | 0   | Extremo | -5159.85  | -476.563  | 0.942 | 64.6491  | 4.4203 | 6586.642  |
| 3472 | 0.5 | Extremo | -5159.85  | -457.678  | 0.942 | 64.6491  | 3.9492 | 6820.2023 |
| 3472 | 1   | Extremo | -5159.85  | -438.793  | 0.942 | 64.6491  | 3.478  | 7044.3201 |
| 3473 | 0   | Extremo | -5169.807 | -440.539  | 0.708 | 104.3116 | 3.288  | 7686.7845 |
| 3473 | 0.5 | Extremo | -5169.807 | -421.654  | 0.708 | 104.3116 | 2.9342 | 7902.3329 |
| 3473 | 1   | Extremo | -5169.807 | -402.769  | 0.708 | 104.3116 | 2.5804 | 8108.4388 |
| 3473 | 0   | Extremo | -5141.69  | -399.897  | 0.76  | 57.3857  | 4.3109 | 7033.1172 |
| 3473 | 0.5 | Extremo | -5141.69  | -381.012  | 0.76  | 57.3857  | 3.9308 | 7228.3443 |
| 3473 | 1   | Extremo | -5141.69  | -362.127  | 0.76  | 57.3857  | 3.5508 | 7414.1288 |
| 3474 | 0   | Extremo | -5154.746 | -369.374  | 1.066 | 91.4153  | 3.4255 | 8112.2399 |
| 3474 | 0.5 | Extremo | -5154.746 | -350.489  | 1.066 | 91.4153  | 2.8925 | 8292.2055 |
| 3474 | 1   | Extremo | -5154.746 | -331.604  | 1.066 | 91.4153  | 2.3594 | 8462.7285 |
| 3474 | 0   | Extremo | -5126.07  | -328.6    | 0.614 | 49.5599  | 4.2358 | 7415.1747 |



|      |     |         |           |          |        |           |        |           |
|------|-----|---------|-----------|----------|--------|-----------|--------|-----------|
| 3478 | 1   | Extremo | -5152.388 | 112.61   | 2.358  | -35.4201  | 3.0787 | 8891.5679 |
| 3478 | 0   | Extremo | -5101.668 | -4.04    | 0.184  | 21.9833   | 4.012  | 8196.5773 |
| 3478 | 0.5 | Extremo | -5101.668 | 14.845   | 0.184  | 21.9833   | 3.92   | 8193.8761 |
| 3478 | 1   | Extremo | -5101.668 | 33.73    | 0.184  | 21.9833   | 3.8281 | 8181.7324 |
| 3479 | 0   | Extremo | -5160.022 | 170.88   | 1.297  | -60.0956  | 4.8058 | 8882.3956 |
| 3479 | 0.5 | Extremo | -5160.022 | 189.765  | 1.297  | -60.0956  | 4.1576 | 8792.2345 |
| 3479 | 1   | Extremo | -5160.022 | 208.65   | 1.297  | -60.0956  | 3.5093 | 8692.6309 |
| 3479 | 0   | Extremo | -5105.77  | 79.673   | 0.08   | 15.3001   | 3.9576 | 8178.6897 |
| 3479 | 0.5 | Extremo | -5105.77  | 98.558   | 0.08   | 15.3001   | 3.9177 | 8134.1321 |
| 3479 | 1   | Extremo | -5105.77  | 117.443  | 0.08   | 15.3001   | 3.8779 | 8080.1319 |
| 3480 | 0   | Extremo | -5169.782 | 254.429  | 0.493  | -76.9031  | 4.3105 | 8682.8721 |
| 3480 | 0.5 | Extremo | -5169.782 | 273.314  | 0.493  | -76.9031  | 4.0638 | 8550.9364 |
| 3480 | 1   | Extremo | -5169.782 | 292.199  | 0.493  | -76.9031  | 3.8171 | 8409.5582 |
| 3480 | 0   | Extremo | -5113.967 | 159.857  | -0.029 | 8.0228    | 3.9003 | 8074.5104 |
| 3480 | 0.5 | Extremo | -5113.967 | 178.742  | -0.029 | 8.0228    | 3.915  | 7989.8607 |
| 3480 | 1   | Extremo | -5113.967 | 197.627  | -0.029 | 8.0228    | 3.9297 | 7895.7685 |
| 3481 | 0   | Extremo | -5182.736 | 329.998  | -0.094 | -89.6729  | 3.9675 | 8400.6106 |
| 3481 | 0.5 | Extremo | -5182.736 | 348.883  | -0.094 | -89.6729  | 4.0145 | 8230.8902 |
| 3481 | 1   | Extremo | -5182.736 | 367.768  | -0.094 | -89.6729  | 4.0614 | 8051.7272 |
| 3481 | 0   | Extremo | -5126.133 | 234.228  | -0.151 | -0.0906   | 3.8357 | 7889.4645 |
| 3481 | 0.5 | Extremo | -5126.133 | 253.113  | -0.151 | -0.0906   | 3.9109 | 7767.629  |
| 3481 | 1   | Extremo | -5126.133 | 271.998  | -0.151 | -0.0906   | 3.9862 | 7636.351  |
| 3482 | 0   | Extremo | -5198.859 | 400.49   | -0.564 | -100.0693 | 3.7095 | 8048.9455 |
| 3482 | 0.5 | Extremo | -5198.859 | 419.375  | -0.564 | -100.0693 | 3.9917 | 7843.979  |
| 3482 | 1   | Extremo | -5198.859 | 438.26   | -0.564 | -100.0693 | 4.2738 | 7629.5701 |
| 3482 | 0   | Extremo | -5141.778 | 304.266  | -0.301 | -8.7245   | 3.7576 | 7634.9632 |
| 3482 | 0.5 | Extremo | -5141.778 | 323.151  | -0.301 | -8.7245   | 3.9081 | 7478.1092 |
| 3482 | 1   | Extremo | -5141.778 | 342.036  | -0.301 | -8.7245   | 4.0587 | 7311.8127 |
| 3483 | 0   | Extremo | -5217.394 | 476.451  | -0.979 | -108.8322 | 3.5095 | 7640.8274 |
| 3483 | 0.5 | Extremo | -5217.394 | 495.336  | -0.979 | -108.8322 | 3.9991 | 7397.8808 |
| 3483 | 1   | Extremo | -5217.394 | 514.221  | -0.979 | -108.8322 | 4.4888 | 7145.4916 |
| 3483 | 0   | Extremo | -5159.971 | 379.729  | -0.489 | -16.4762  | 3.6764 | 7323.3628 |
| 3483 | 0.5 | Extremo | -5159.971 | 398.614  | -0.489 | -16.4762  | 3.9207 | 7128.7771 |
| 3483 | 1   | Extremo | -5159.971 | 417.499  | -0.489 | -16.4762  | 4.1649 | 6924.749  |
| 3484 | 0   | Extremo | -5238.185 | 563.839  | -1.262 | -123.872  | 3.4141 | 7166.9409 |
| 3484 | 0.5 | Extremo | -5238.185 | 583.962  | -1.262 | -123.872  | 4.0451 | 6879.9906 |
| 3484 | 1   | Extremo | -5238.185 | 604.084  | -1.262 | -123.872  | 4.6761 | 6582.979  |
| 3484 | 0   | Extremo | -5180.475 | 466.249  | -0.611 | -22.4897  | 3.6513 | 6945.8761 |
| 3484 | 0.5 | Extremo | -5180.475 | 486.372  | -0.611 | -22.4897  | 3.9569 | 6707.7209 |
| 3484 | 1   | Extremo | -5180.475 | 506.494  | -0.611 | -22.4897  | 4.2626 | 6459.5045 |
| 3485 | 0   | Extremo | -5264.936 | 679.061  | -1.379 | -123.7223 | 3.3585 | 6591.246  |
| 3485 | 0.5 | Extremo | -5264.936 | 699.183  | -1.379 | -123.7223 | 4.0479 | 6246.6849 |
| 3485 | 1   | Extremo | -5264.936 | 719.306  | -1.379 | -123.7223 | 4.7374 | 5892.0626 |
| 3485 | 0   | Extremo | -5206.918 | 579.724  | -0.61  | -23.1395  | 3.6606 | 6467.7469 |
| 3485 | 0.5 | Extremo | -5206.918 | 599.846  | -0.61  | -23.1395  | 3.9657 | 6172.8545 |
| 3485 | 1   | Extremo | -5206.918 | 619.969  | -0.61  | -23.1395  | 4.2709 | 5867.9009 |
| 3486 | 0   | Extremo | -5295.851 | 798.343  | -1.513 | -121.3175 | 3.2911 | 5883.8666 |
| 3486 | 0.5 | Extremo | -5295.851 | 818.465  | -1.513 | -121.3175 | 4.0473 | 5479.6645 |
| 3486 | 1   | Extremo | -5295.851 | 838.588  | -1.513 | -121.3175 | 4.8036 | 5065.4011 |
| 3486 | 0   | Extremo | -5237.511 | 696.946  | -0.663 | -23.0382  | 3.6293 | 5860.0049 |
| 3486 | 0.5 | Extremo | -5237.511 | 717.069  | -0.663 | -23.0382  | 3.9606 | 5506.5011 |
| 3486 | 1   | Extremo | -5237.511 | 737.191  | -0.663 | -23.0382  | 4.2919 | 5142.9359 |
| 3487 | 0   | Extremo | -5329.287 | 909.74   | -1.697 | -119.8262 | 3.2025 | 5053.6511 |
| 3487 | 0.5 | Extremo | -5329.287 | 929.863  | -1.697 | -119.8262 | 4.0509 | 4593.7503 |
| 3487 | 1   | Extremo | -5329.287 | 949.985  | -1.697 | -119.8262 | 4.8992 | 4123.7882 |
| 3487 | 0   | Extremo | -5270.623 | 806.334  | -0.79  | -23.9201  | 3.5615 | 5131.6673 |
| 3487 | 0.5 | Extremo | -5270.623 | 826.457  | -0.79  | -23.9201  | 3.9564 | 4723.4696 |
| 3487 | 1   | Extremo | -5270.623 | 846.579  | -0.79  | -23.9201  | 4.3513 | 4305.2108 |
| 3488 | 0   | Extremo | -5363.74  | 1015.848 | -1.936 | -120.1407 | 3.1092 | 4117.1684 |
| 3488 | 0.5 | Extremo | -5363.74  | 1035.97  | -1.936 | -120.1407 | 4.0772 | 3604.2138 |
| 3488 | 1   | Extremo | -5363.74  | 1056.093 | -1.936 | -120.1407 | 5.0452 | 3081.1979 |
| 3488 | 0   | Extremo | -5304.764 | 910.827  | -0.988 | -25.4356  | 3.4772 | 4299.4874 |
| 3488 | 0.5 | Extremo | -5304.764 | 930.949  | -0.988 | -25.4356  | 3.9711 | 3839.0435 |
| 3488 | 1   | Extremo | -5304.764 | 951.072  | -0.988 | -25.4356  | 4.4651 | 3368.5383 |
| 3489 | 0   | Extremo | -5399.156 | 1122.083 | -2.156 | -132.2503 | 3.0831 | 3078.7908 |
| 3489 | 0.5 | Extremo | -5399.156 | 1143.78  | -2.156 | -132.2503 | 4.161  | 2512.3249 |
| 3489 | 1   | Extremo | -5399.156 | 1165.478 | -2.156 | -132.2503 | 5.2389 | 1935.0103 |
| 3489 | 0   | Extremo | -5339.885 | 1015.948 | -1.173 | -28.5718  | 3.4393 | 3367.492  |
| 3489 | 0.5 | Extremo | -5339.885 | 1037.645 | -1.173 | -28.5718  | 4.0257 | 2854.0938 |
| 3489 | 1   | Extremo | -5339.885 | 1059.343 | -1.173 | -28.5718  | 4.6122 | 2329.8468 |
| 3490 | 0   | Extremo | -5441.174 | 1249.837 | -2.212 | -130.4449 | 3.0608 | 1926.9366 |
| 3490 | 0.5 | Extremo | -5441.174 | 1271.534 | -2.212 | -130.4449 | 4.167  | 1296.5939 |

|      |     |         |           |          |        |           |        |           |
|------|-----|---------|-----------|----------|--------|-----------|--------|-----------|
| 3490 | 1   | Extremo | -5441.174 | 1293.232 | -2.212 | -130.4449 | 5.2731 | 655.4024  |
| 3490 | 0   | Extremo | -5381.572 | 1142.925 | -1.227 | -27.6601  | 3.4238 | 2322.9181 |
| 3490 | 0.5 | Extremo | -5381.572 | 1164.623 | -1.227 | -27.6601  | 4.0373 | 1746.0309 |
| 3490 | 1   | Extremo | -5381.572 | 1186.32  | -1.227 | -27.6601  | 4.6508 | 1158.2951 |
| 3491 | 0   | Extremo | -5486.975 | 1378.758 | -2.326 | -126.9539 | 3.0191 | 644.2506  |
| 3491 | 0.5 | Extremo | -5486.975 | 1400.455 | -2.326 | -126.9539 | 4.182  | -50.5526  |
| 3491 | 1   | Extremo | -5486.975 | 1422.153 | -2.326 | -126.9539 | 5.3448 | -756.2046 |
| 3491 | 0   | Extremo | -5427.04  | 1271.29  | -1.362 | -26.3925  | 3.3639 | 1147.5418 |
| 3491 | 0.5 | Extremo | -5427.04  | 1292.987 | -1.362 | -26.3925  | 4.0451 | 506.4724  |
| 3491 | 1   | Extremo | -5427.04  | 1314.685 | -1.362 | -26.3925  | 4.7262 | -145.4457 |
| 3492 | 0   | Extremo | -5534.826 | 1505.389 | -2.511 | -123.7562 | 2.9469 | -766.3485 |
| 3492 | 0.5 | Extremo | -5534.826 | 1527.087 | -2.511 | -123.7562 | 4.2023 | -1524.468 |
| 3492 | 1   | Extremo | -5534.826 | 1548.784 | -2.511 | -123.7562 | 5.4577 | -2293.435 |
| 3492 | 0   | Extremo | -5474.582 | 1396.883 | -1.592 | -25.5236  | 3.261  | -155.5073 |
| 3492 | 0.5 | Extremo | -5474.582 | 1418.581 | -1.592 | -25.5236  | 4.0571 | -859.3733 |
| 3492 | 1   | Extremo | -5474.582 | 1440.278 | -1.592 | -25.5236  | 4.8532 | -1574.088 |
| 3493 | 0   | Extremo | -5581.977 | 1630.48  | -2.751 | -120.3503 | 2.8546 | -2303.27  |
| 3493 | 0.5 | Extremo | -5581.977 | 1652.177 | -2.751 | -120.3503 | 4.23   | -3123.934 |
| 3493 | 1   | Extremo | -5581.977 | 1673.875 | -2.751 | -120.3503 | 5.6054 | -3955.447 |
| 3493 | 0   | Extremo | -5521.487 | 1520.378 | -1.907 | -24.7979  | 3.1235 | -1583.381 |
| 3493 | 0.5 | Extremo | -5521.487 | 1542.075 | -1.907 | -24.7979  | 4.0771 | -2348.994 |
| 3493 | 1   | Extremo | -5521.487 | 1563.773 | -1.907 | -24.7979  | 5.0308 | -3125.456 |
| 3494 | 0   | Extremo | -5622.882 | 1751.882 | -3.039 | -117.5517 | 2.7563 | -3969.951 |
| 3494 | 0.5 | Extremo | -5622.882 | 1773.58  | -3.039 | -117.5517 | 4.2758 | -4851.316 |
| 3494 | 1   | Extremo | -5622.882 | 1795.277 | -3.039 | -117.5517 | 5.7954 | -5743.53  |
| 3494 | 0   | Extremo | -5562.284 | 1640.531 | -2.315 | -24.6206  | 2.9564 | -3137.961 |
| 3494 | 0.5 | Extremo | -5562.284 | 1662.229 | -2.315 | -24.6206  | 4.1137 | -3963.651 |
| 3494 | 1   | Extremo | -5562.284 | 1683.926 | -2.315 | -24.6206  | 5.271  | -4800.19  |
| 3495 | 0   | Extremo | -5646.256 | 1869.492 | -3.326 | -124.035  | 2.723  | -5764.763 |
| 3495 | 0.5 | Extremo | -5646.256 | 1892.539 | -3.326 | -124.035  | 4.386  | -6705.271 |
| 3495 | 1   | Extremo | -5646.256 | 1915.587 | -3.326 | -124.035  | 6.049  | -7657.303 |
| 3495 | 0   | Extremo | -5585.82  | 1758.074 | -2.8   | -27.9022  | 2.8059 | -4817.581 |
| 3495 | 0.5 | Extremo | -5585.82  | 1781.121 | -2.8   | -27.9022  | 4.2058 | -5702.38  |
| 3495 | 1   | Extremo | -5585.82  | 1804.169 | -2.8   | -27.9022  | 5.6056 | -6598.703 |
| 3496 | 0   | Extremo | -5628.529 | 1994.224 | -3.346 | -121.6008 | 2.7267 | -7680.263 |
| 3496 | 0.5 | Extremo | -5628.529 | 2017.272 | -3.346 | -121.6008 | 4.3997 | -8683.137 |
| 3496 | 1   | Extremo | -5628.529 | 2040.319 | -3.346 | -121.6008 | 6.0727 | -9697.534 |
| 3496 | 0   | Extremo | -5568.825 | 1886.112 | -3.136 | -31.317   | 2.6499 | -6616.648 |
| 3496 | 0.5 | Extremo | -5568.825 | 1909.16  | -3.136 | -31.317   | 4.2179 | -7565.466 |
| 3496 | 1   | Extremo | -5568.825 | 1932.207 | -3.136 | -31.317   | 5.7858 | -8525.808 |
| 3497 | 0   | Extremo | -5508.837 | 2088.283 | -3.274 | -115.1162 | 2.7453 | -9723.737 |
| 3497 | 0.5 | Extremo | -5508.837 | 2111.33  | -3.274 | -115.1162 | 4.3826 | -10773.64 |
| 3497 | 1   | Extremo | -5508.837 | 2134.378 | -3.274 | -115.1162 | 6.0198 | -11835.07 |
| 3497 | 0   | Extremo | -5451.158 | 1990.237 | -3.561 | -35.8679  | 2.4142 | -8546.01  |
| 3497 | 0.5 | Extremo | -5451.158 | 2013.285 | -3.561 | -35.8679  | 4.1947 | -9546.891 |
| 3497 | 1   | Extremo | -5451.158 | 2036.332 | -3.561 | -35.8679  | 5.9753 | -10559.3  |
| 3498 | 0   | Extremo | -5151.997 | 2039.757 | -3.335 | -102.9475 | 2.5984 | -11879.85 |
| 3498 | 0.5 | Extremo | -5151.997 | 2062.805 | -3.335 | -102.9475 | 4.266  | -12905.49 |
| 3498 | 1   | Extremo | -5151.997 | 2085.852 | -3.335 | -102.9475 | 5.9337 | -13942.65 |
| 3498 | 0   | Extremo | -5099.445 | 1971.1   | -4.483 | -42.193   | 1.9671 | -10597.75 |



|      |     |         |          |           |        |          |         |           |
|------|-----|---------|----------|-----------|--------|----------|---------|-----------|
| 3502 | 1   | Extremo | -295.357 | -1613.642 | -3.446 | -22.1144 | 1.3405  | -11976.23 |
| 3502 | 0   | Extremo | -288.054 | -1608.093 | -7.866 | -39.5146 | -4.9543 | -12497.91 |
| 3502 | 0.5 | Extremo | -288.054 | -1585.045 | -7.866 | -39.5146 | -1.0214 | -11699.63 |
| 3502 | 1   | Extremo | -288.054 | -1561.998 | -7.866 | -39.5146 | 2.9115  | -10912.87 |
| 3503 | 0   | Extremo | 42.673   | -1634.633 | -3.347 | -16.1485 | -2.1609 | -11944.63 |
| 3503 | 0.5 | Extremo | 42.673   | -1611.585 | -3.347 | -16.1485 | -0.4876 | -11133.07 |
| 3503 | 1   | Extremo | 42.673   | -1588.538 | -3.347 | -16.1485 | 1.1858  | -10333.04 |
| 3503 | 0   | Extremo | 47.807   | -1578.907 | -6.562 | -37.6677 | -4.191  | -10882.82 |
| 3503 | 0.5 | Extremo | 47.807   | -1555.86  | -6.562 | -37.6677 | -0.9101 | -10099.13 |
| 3503 | 1   | Extremo | 47.807   | -1532.812 | -6.562 | -37.6677 | 2.3708  | -9326.96  |
| 3504 | 0   | Extremo | 161.983  | -1529.141 | -3.335 | -15.1372 | -2.1615 | -10316.75 |
| 3504 | 0.5 | Extremo | 161.983  | -1506.093 | -3.335 | -15.1372 | -0.4939 | -9557.94  |
| 3504 | 1   | Extremo | 161.983  | -1483.046 | -3.335 | -15.1372 | 1.1736  | -8810.655 |
| 3504 | 0   | Extremo | 166.239  | -1470.735 | -5.809 | -38.9434 | -3.7373 | -9312.528 |
| 3504 | 0.5 | Extremo | 166.239  | -1447.687 | -5.809 | -38.9434 | -0.833  | -8582.922 |
| 3504 | 1   | Extremo | 166.239  | -1424.64  | -5.809 | -38.9434 | 2.0713  | -7864.84  |
| 3505 | 0   | Extremo | 188.147  | -1407.292 | -3.196 | -16.1028 | -2.0801 | -8792.075 |
| 3505 | 0.5 | Extremo | 188.147  | -1384.244 | -3.196 | -16.1028 | -0.4819 | -8094.191 |
| 3505 | 1   | Extremo | 188.147  | -1361.197 | -3.196 | -16.1028 | 1.1162  | -7407.83  |
| 3505 | 0   | Extremo | 192.092  | -1347.831 | -5.187 | -41.0092 | -3.3803 | -7848.497 |
| 3505 | 0.5 | Extremo | 192.092  | -1324.783 | -5.187 | -41.0092 | -0.7869 | -7180.344 |
| 3505 | 1   | Extremo | 192.092  | -1301.736 | -5.187 | -41.0092 | 1.8065  | -6523.714 |
| 3506 | 0   | Extremo | 177.102  | -1290.343 | -2.884 | -15.0102 | -1.8274 | -7387.741 |
| 3506 | 0.5 | Extremo | 177.102  | -1268.645 | -2.884 | -15.0102 | -0.3856 | -6747.994 |
| 3506 | 1   | Extremo | 177.102  | -1246.948 | -2.884 | -15.0102 | 1.0563  | -6119.095 |
| 3506 | 0   | Extremo | 180.988  | -1231.214 | -4.519 | -38.9625 | -2.885  | -6505.83  |
| 3506 | 0.5 | Extremo | 180.988  | -1209.516 | -4.519 | -38.9625 | -0.6254 | -5895.647 |
| 3506 | 1   | Extremo | 180.988  | -1187.819 | -4.519 | -38.9625 | 1.6342  | -5296.313 |
| 3507 | 0   | Extremo | 153.594  | -1172.198 | -2.628 | -14.2879 | -1.6545 | -6107.414 |
| 3507 | 0.5 | Extremo | 153.594  | -1150.501 | -2.628 | -14.2879 | -0.3404 | -5526.739 |
| 3507 | 1   | Extremo | 153.594  | -1128.803 | -2.628 | -14.2879 | 0.9736  | -4956.913 |
| 3507 | 0   | Extremo | 157.517  | -1114.017 | -4.05  | -38.9947 | -2.574  | -5285.623 |
| 3507 | 0.5 | Extremo | 157.517  | -1092.32  | -4.05  | -38.9947 | -0.5491 | -4734.039 |
| 3507 | 1   | Extremo | 157.517  | -1070.622 | -4.05  | -38.9947 | 1.4758  | -4193.303 |
| 3508 | 0   | Extremo | 127.825  | -1052.005 | -2.393 | -14.4845 | -1.4985 | -4953.133 |
| 3508 | 0.5 | Extremo | 127.825  | -1030.307 | -2.393 | -14.4845 | -0.3021 | -4432.555 |
| 3508 | 1   | Extremo | 127.825  | -1008.61  | -2.393 | -14.4845 | 0.8943  | -3922.826 |
| 3508 | 0   | Extremo | 131.815  | -994.824  | -3.673 | -39.9642 | -2.3235 | -4189.354 |
| 3508 | 0.5 | Extremo | 131.815  | -973.127  | -3.673 | -39.9642 | -0.4869 | -3697.366 |
| 3508 | 1   | Extremo | 131.815  | -951.429  | -3.673 | -39.9642 | 1.3497  | -3216.227 |
| 3509 | 0   | Extremo | 103.843  | -935.276  | -2.187 | -16.0765 | -1.3615 | -3920.555 |
| 3509 | 0.5 | Extremo | 103.843  | -913.578  | -2.187 | -16.0765 | -0.2681 | -3458.342 |
| 3509 | 1   | Extremo | 103.843  | -891.881  | -2.187 | -16.0765 | 0.8253  | -3006.977 |
| 3509 | 0   | Extremo | 107.905  | -878.285  | -3.373 | -42.1276 | -2.1194 | -3213.437 |
| 3509 | 0.5 | Extremo | 107.905  | -856.588  | -3.373 | -42.1276 | -0.433  | -2779.719 |
| 3509 | 1   | Extremo | 107.905  | -834.89   | -3.373 | -42.1276 | 1.2535  | -2356.849 |
| 3510 | 0   | Extremo | 83.028   | -821.215  | -2.017 | -18.7631 | -1.2484 | -3001.494 |
| 3510 | 0.5 | Extremo | 83.028   | -799.518  | -2.017 | -18.7631 | -0.2401 | -2596.311 |
| 3510 | 1   | Extremo | 83.028   | -777.82   | -2.017 | -18.7631 | 0.7682  | -2201.976 |
| 3510 | 0   | Extremo | 87.154   | -763.708  | -3.139 | -45.247  | -1.9589 | -2351.333 |
| 3510 | 0.5 | Extremo | 87.154   | -742.011  | -3.139 | -45.247  | -0.3894 | -1974.904 |
| 3510 | 1   | Extremo | 87.154   | -720.313  | -3.139 | -45.247  | 1.1801  | -1609.323 |
| 3511 | 0   | Extremo | 65.55    | -706.629  | -1.865 | -21.5745 | -1.1692 | -2191.668 |
| 3511 | 0.5 | Extremo | 65.55    | -684.932  | -1.865 | -21.5745 | -0.2369 | -1843.778 |
| 3511 | 1   | Extremo | 65.55    | -663.234  | -1.865 | -21.5745 | 0.6954  | -1506.737 |
| 3511 | 0   | Extremo | 69.728   | -648.912  | -2.936 | -48.1519 | -1.854  | -1600.142 |
| 3511 | 0.5 | Extremo | 69.728   | -627.214  | -2.936 | -48.1519 | -0.386  | -1281.111 |
| 3511 | 1   | Extremo | 69.728   | -605.517  | -2.936 | -48.1519 | 1.082   | -972.928  |
| 3512 | 0   | Extremo | 52.121   | -602.645  | -1.692 | -21.8474 | -1.0227 | -1496.471 |
| 3512 | 0.5 | Extremo | 52.121   | -582.523  | -1.692 | -21.8474 | -0.1765 | -1200.179 |
| 3512 | 1   | Extremo | 52.121   | -562.4    | -1.692 | -21.8474 | 0.6697  | -913.9482 |
| 3512 | 0   | Extremo | 56.334   | -545.5    | -2.706 | -46.176  | -1.6436 | -964.3191 |
| 3512 | 0.5 | Extremo | 56.334   | -525.378  | -2.706 | -46.176  | -0.2907 | -696.5995 |
| 3512 | 1   | Extremo | 56.334   | -505.255  | -2.706 | -46.176  | 1.0621  | -438.9411 |
| 3513 | 0   | Extremo | 41.349   | -500.318  | -1.589 | -24.2798 | -0.9462 | -907.3986 |
| 3513 | 0.5 | Extremo | 41.349   | -480.196  | -1.589 | -24.2798 | -0.1516 | -662.2702 |
| 3513 | 1   | Extremo | 41.349   | -460.073  | -1.589 | -24.2798 | 0.6431  | -427.203  |
| 3513 | 0   | Extremo | 45.578   | -444.258  | -2.572 | -49.1205 | -1.5366 | -433.1545 |
| 3513 | 0.5 | Extremo | 45.578   | -424.135  | -2.572 | -49.1205 | -0.2506 | -216.0562 |
| 3513 | 1   | Extremo | 45.578   | -404.013  | -2.572 | -49.1205 | 1.0355  | -9.0192   |
| 3514 | 0   | Extremo | 32.695   | -396.242  | -1.513 | -27.3727 | -0.8878 | -424.0276 |
| 3514 | 0.5 | Extremo | 32.695   | -376.119  | -1.513 | -27.3727 | -0.1311 | -230.9374 |

|      |     |         |        |          |        |          |         |          |
|------|-----|---------|--------|----------|--------|----------|---------|----------|
| 3514 | 1   | Extremo | 32.695 | -355.997 | -1.513 | -27.3727 | 0.6256  | -47.9084 |
| 3514 | 0   | Extremo | 36.92  | -341.357 | -2.477 | -53.0036 | -1.4565 | -5.7337  |
| 3514 | 0.5 | Extremo | 36.92  | -321.234 | -2.477 | -53.0036 | -0.2181 | 159.9141 |
| 3514 | 1   | Extremo | 36.92  | -301.112 | -2.477 | -53.0036 | 1.0204  | 315.5007 |
| 3515 | 0   | Extremo | 25.709 | -292.376 | -1.454 | -31.0341 | -0.8413 | -46.2296 |
| 3515 | 0.5 | Extremo | 25.709 | -272.254 | -1.454 | -31.0341 | -0.1142 | 94.9278  |
| 3515 | 1   | Extremo | 25.709 | -252.131 | -1.454 | -31.0341 | 0.6129  | 226.024  |
| 3515 | 0   | Extremo | 29.901 | -238.186 | -2.404 | -57.3459 | -1.3932 | 317.2798 |
| 3515 | 0.5 | Extremo | 29.901 | -218.064 | -2.404 | -57.3459 | -0.1913 | 431.3422 |
| 3515 | 1   | Extremo | 29.901 | -197.941 | -2.404 | -57.3459 | 1.0106  | 535.3434 |
| 3516 | 0   | Extremo | 20.02  | -190.435 | -1.399 | -34.8082 | -0.8137 | 226.2117 |
| 3516 | 0.5 | Extremo | 20.02  | -170.313 | -1.399 | -34.8082 | -0.1143 | 316.3987 |
| 3516 | 1   | Extremo | 20.02  | -150.19  | -1.399 | -34.8082 | 0.5852  | 396.5245 |
| 3516 | 0   | Extremo | 24.14  | -136.818 | -2.332 | -61.4009 | -1.3588 | 534.9054 |
| 3516 | 0.5 | Extremo | 24.14  | -116.695 | -2.332 | -61.4009 | -0.1927 | 598.2837 |
| 3516 | 1   | Extremo | 24.14  | -96.573  | -2.332 | -61.4009 | 0.9735  | 651.6008 |
| 3517 | 0   | Extremo | 15.617 | -100.047 | -1.329 | -35.5205 | -0.7394 | 394.5157 |
| 3517 | 0.5 | Extremo | 15.617 | -81.162  | -1.329 | -35.5205 | -0.0747 | 439.818  |
| 3517 | 1   | Extremo | 15.617 | -62.277  | -1.329 | -35.5205 | 0.59    | 475.6779 |
| 3517 | 0   | Extremo | 19.613 | -47.151  | -2.235 | -59.9594 | -1.2442 | 648.4762 |
| 3517 | 0.5 | Extremo | 19.613 | -28.266  | -2.235 | -59.9594 | -0.127  | 667.3306 |
| 3517 | 1   | Extremo | 19.613 | -9.381   | -2.235 | -59.9594 | 0.9903  | 676.7425 |
| 3518 | 0   | Extremo | 11.974 | -14.466  | -1.292 | -39.6024 | -0.7022 | 470.5744 |
| 3518 | 0.5 | Extremo | 11.974 | 4.419    | -1.292 | -39.6024 | -0.0563 | 473.0864 |
| 3518 | 1   | Extremo | 11.974 | 23.304   | -1.292 | -39.6024 | 0.5896  | 466.1558 |
| 3518 | 0   | Extremo | 15.746 | 37.349   | -2.184 | -64.1842 | -1.1883 | 670.6469 |
| 3518 | 0.5 | Extremo | 15.746 | 56.234   | -2.184 | -64.1842 | -0.0962 | 647.2509 |
| 3518 | 1   | Extremo | 15.746 | 75.119   | -2.184 | -64.1842 | 0.9958  | 614.4124 |
| 3519 | 0   | Extremo | 8.855  | 64.486   | -1.266 | -43.1036 | -0.6686 | 454.8002 |
| 3519 | 0.5 | Extremo | 8.855  | 83.371   | -1.266 | -43.1036 | -0.0355 | 417.8362 |
| 3519 | 1   | Extremo | 8.855  | 102.256  | -1.266 | -43.1036 | 0.5976  | 371.4297 |
| 3519 | 0   | Extremo | 12.248 | 114.41   | -2.151 | -67.7153 | -1.1365 | 601.7829 |
| 3519 | 0.5 | Extremo | 12.248 | 133.295  | -2.151 | -67.7153 | -0.0609 | 539.8569 |
| 3519 | 1   | Extremo | 12.248 | 152.18   | -2.151 | -67.7153 | 1.0146  | 468.4883 |
| 3520 | 0   | Extremo | 6.082  | 118.846  | -1.242 | -44.1154 | -0.6125 | 348.3446 |
| 3520 | 0.5 | Extremo | 6.082  | 137.731  | -1.242 | -44.1154 | 0.0086  | 284.2004 |
| 3520 | 1   | Extremo | 6.082  | 156.616  | -1.242 | -44.1154 | 0.6296  | 210.6136 |
| 3520 | 0   | Extremo | 8.872  | 164.13   | -2.118 | -67.8828 | -1.0437 | 442.8554 |
| 3520 | 0.5 | Extremo | 8.872  | 183.015  | -2.118 | -67.8828 | 0.0152  | 356.0693 |
| 3520 | 1   | Extremo | 8.872  | 201.9    | -2.118 | -67.8828 | 1.0742  | 259.8407 |
| 3521 | 0   | Extremo | 3.575  | 109.575  | -1.103 | -40.0766 | -0.4446 | 177.0038 |
| 3521 | 0.5 | Extremo | 3.575  | 128.46   | -1.103 | -40.0766 | 0.1067  | 117.4949 |
| 3521 | 1   | Extremo | 3.575  | 147.345  | -1.103 | -40.0766 | 0.658   | 48.5435  |
| 3521 | 0   | Extremo | 5.495  | 142.736  | -1.879 | -61.0476 | -0.7544 | 222.4062 |
| 3521 | 0.5 | Extremo | 5.495  | 161.621  | -1.879 | -61.0476 | 0.1852  | 146.3169 |
| 3521 | 1   | Extremo | 5.495  | 180.506  | -1.879 | -61.0476 | 1.1248  | 60.7851  |
| 3522 | 0   | Extremo | 1.443  | 27.171   | -0.308 | -27.5358 | -0.034  | 36.4642  |
| 3522 | 0.5 | Extremo | 1.443  | 46.056   | -0.308 | -27.5358 | 0.12    | 18.1575  |
| 3522 | 1   | Extremo | 1.443  | 64.941   | -0.308 | -27.5358 | 0.274   | -9.5917  |
| 3522 | 0   | Extremo | 2.36   | 39.635   | -0.499 | -41.8396 | -0.0438 | 47.518   |
| 3522 | 0.5 | Extremo | 2.36   | 58.52    | -0.499 | -41.8396 | 0.2056  | 22.9791  |
| 3522 | 1   | Extremo | 2.36   | 77.405   | -0.499 | -41.8396 | 0.455   | -11.0023 |
| 3523 | 0   | Extremo | 0.241  | -10.744  | 0.24   | 18.0315  | 0.1436  | -8.0185  |
| 3523 | 0.5 | Extremo | 0.241  | 6.678    | 0.24   | 18.0315  | 0.0235  | -7.0019  |
| 3523 |     |         |        |          |        |          |         |          |



|      |     |         |        |          |        |          |         |           |
|------|-----|---------|--------|----------|--------|----------|---------|-----------|
| 3526 | 1   | Extremo | 0.95   | -8.685   | 0.259  | -3.5196  | -0.1259 | 256.8032  |
| 3526 | 0   | Extremo | -2.858 | -43.509  | -0.236 | -3.5191  | -0.1389 | 230.6519  |
| 3526 | 0.5 | Extremo | -2.858 | -26.086  | -0.236 | -3.5191  | -0.0208 | 248.0508  |
| 3526 | 1   | Extremo | -2.858 | -8.664   | -0.236 | -3.5191  | 0.0973  | 256.7383  |
| 3527 | 0   | Extremo | 0.949  | 28.901   | 0.239  | -1.395   | 0.1151  | 259.869   |
| 3527 | 0.5 | Extremo | 0.949  | 46.324   | 0.239  | -1.395   | -0.0043 | 241.0627  |
| 3527 | 1   | Extremo | 0.949  | 63.746   | 0.239  | -1.395   | -0.1238 | 213.5451  |
| 3527 | 0   | Extremo | -2.918 | 28.923   | -0.176 | -1.3948  | -0.0934 | 259.8039  |
| 3527 | 0.5 | Extremo | -2.918 | 46.346   | -0.176 | -1.3948  | -0.0055 | 240.9868  |
| 3527 | 1   | Extremo | -2.918 | 63.768   | -0.176 | -1.3948  | 0.0824  | 213.4584  |
| 3528 | 0   | Extremo | 0.93   | 102.209  | 0.233  | -0.887   | 0.1065  | 213.6028  |
| 3528 | 0.5 | Extremo | 0.93   | 119.632  | 0.233  | -0.887   | -0.0102 | 158.1426  |
| 3528 | 1   | Extremo | 0.93   | 137.054  | 0.233  | -0.887   | -0.1269 | 93.9712   |
| 3528 | 0   | Extremo | -2.933 | 102.231  | -0.156 | -0.8868  | -0.0724 | 213.5159  |
| 3528 | 0.5 | Extremo | -2.933 | 119.653  | -0.156 | -0.8868  | 0.0053  | 158.0449  |
| 3528 | 1   | Extremo | -2.933 | 137.076  | -0.156 | -0.8868  | 0.0831  | 93.8627   |
| 3529 | 0   | Extremo | 0.909  | 174.85   | 0.239  | 2.5657   | 0.1039  | 90.9556   |
| 3529 | 0.5 | Extremo | 0.909  | 192.272  | 0.239  | 2.5657   | -0.0156 | -0.8249   |
| 3529 | 1   | Extremo | 0.909  | 209.695  | 0.239  | 2.5657   | -0.1351 | -101.3167 |
| 3529 | 0   | Extremo | -2.945 | 174.871  | -0.166 | 2.5664   | -0.0674 | 90.8468   |
| 3529 | 0.5 | Extremo | -2.945 | 192.294  | -0.166 | 2.5664   | 0.0155  | -0.9445   |
| 3529 | 1   | Extremo | -2.945 | 209.716  | -0.166 | 2.5664   | 0.0984  | -101.447  |
| 3530 | 0   | Extremo | 0.899  | 244.609  | 0.257  | 15.4324  | 0.1074  | -108.3949 |
| 3530 | 0.5 | Extremo | 0.899  | 262.031  | 0.257  | 15.4324  | -0.0211 | -235.0548 |
| 3530 | 1   | Extremo | 0.899  | 279.454  | 0.257  | 15.4324  | -0.1497 | -370.426  |
| 3530 | 0   | Extremo | -2.994 | 244.63   | -0.21  | 15.4342  | -0.0768 | -108.5256 |
| 3530 | 0.5 | Extremo | -2.994 | 262.052  | -0.21  | 15.4342  | 0.0282  | -235.1963 |
| 3530 | 1   | Extremo | -2.994 | 279.475  | -0.21  | 15.4342  | 0.1332  | -370.5781 |
| 3531 | 0   | Extremo | 0.925  | 298.046  | 0.293  | 44.113   | 0.1213  | -386.6373 |
| 3531 | 0.5 | Extremo | 0.925  | 315.468  | 0.293  | 44.113   | -0.0253 | -540.0158 |
| 3531 | 1   | Extremo | 0.925  | 332.891  | 0.293  | 44.113   | -0.1719 | -702.1055 |
| 3531 | 0   | Extremo | -3.151 | 298.066  | -0.303 | 44.1171  | -0.1035 | -386.7905 |
| 3531 | 0.5 | Extremo | -3.151 | 315.488  | -0.303 | 44.1171  | 0.0482  | -540.1791 |
| 3531 | 1   | Extremo | -3.151 | 332.911  | -0.303 | 44.1171  | 0.1999  | -702.2789 |
| 3532 | 0   | Extremo | 1.042  | 236.008  | 0.36   | 68.078   | 0.164   | -742.8873 |
| 3532 | 0.5 | Extremo | 1.042  | 253.43   | 0.36   | 68.078   | -0.016  | -865.2469 |
| 3532 | 1   | Extremo | 1.042  | 270.853  | 0.36   | 68.078   | -0.1959 | -996.3178 |
| 3532 | 0   | Extremo | -3.59  | 236.018  | -0.449 | 68.0835  | -0.1547 | -743.0637 |
| 3532 | 0.5 | Extremo | -3.59  | 253.44   | -0.449 | 68.0835  | 0.0699  | -865.4282 |
| 3532 | 1   | Extremo | -3.59  | 270.863  | -0.449 | 68.0835  | 0.2944  | -996.504  |
| 3533 | 0   | Extremo | 1.425  | -353.58  | 0.564  | -54.4238 | 0.3099  | -995.9517 |
| 3533 | 0.5 | Extremo | 1.425  | -336.158 | 0.564  | -54.4238 | 0.0277  | -823.5171 |
| 3533 | 1   | Extremo | 1.425  | -318.735 | 0.564  | -54.4238 | -0.2545 | -659.7938 |
| 3533 | 0   | Extremo | -4.76  | -353.624 | -0.508 | -54.4291 | -0.3147 | -996.1379 |
| 3533 | 0.5 | Extremo | -4.76  | -336.201 | -0.508 | -54.4291 | -0.0607 | -823.6816 |
| 3533 | 1   | Extremo | -4.76  | -318.779 | -0.508 | -54.4291 | 0.1932  | -659.9365 |
| 3534 | 0   | Extremo | 1.551  | -415.547 | 0.53   | -30.6143 | 0.257   | -618.2282 |
| 3534 | 0.5 | Extremo | 1.551  | -398.125 | 0.53   | -30.6143 | -0.0078 | -414.8102 |
| 3534 | 1   | Extremo | 1.551  | -380.702 | 0.53   | -30.6143 | -0.2726 | -220.1035 |
| 3534 | 0   | Extremo | -5.203 | -415.601 | -0.37  | -30.6181 | -0.2113 | -618.3678 |
| 3534 | 0.5 | Extremo | -5.203 | -398.179 | -0.37  | -30.6181 | -0.0265 | -414.9229 |
| 3534 | 1   | Extremo | -5.203 | -380.756 | -0.37  | -30.6181 | 0.1584  | -220.1892 |
| 3535 | 0   | Extremo | 1.565  | -361.95  | 0.498  | -2.3056  | 0.2239  | -202.9383 |
| 3535 | 0.5 | Extremo | 1.565  | -344.527 | 0.498  | -2.3056  | -0.0251 | -26.319   |
| 3535 | 1   | Extremo | 1.565  | -327.105 | 0.498  | -2.3056  | -0.2741 | 141.589   |
| 3535 | 0   | Extremo | -5.358 | -362.005 | -0.274 | -2.3071  | -0.1405 | -203.0229 |
| 3535 | 0.5 | Extremo | -5.358 | -344.582 | -0.274 | -2.3071  | -0.0037 | -26.3761  |
| 3535 | 1   | Extremo | -5.358 | -327.16  | -0.274 | -2.3071  | 0.1331  | 141.5595  |
| 3536 | 0   | Extremo | 1.536  | -291.884 | 0.481  | 9.8092   | 0.2061  | 149.9587  |
| 3536 | 0.5 | Extremo | 1.536  | -274.461 | 0.481  | 9.8092   | -0.0346 | 291.5451  |
| 3536 | 1   | Extremo | 1.536  | -257.039 | 0.481  | 9.8092   | -0.2753 | 424.4202  |
| 3536 | 0   | Extremo | -5.401 | -291.939 | -0.222 | 9.8088   | -0.1025 | 149.9297  |
| 3536 | 0.5 | Extremo | -5.401 | -274.517 | -0.222 | 9.8088   | 0.0083  | 291.5436  |
| 3536 | 1   | Extremo | -5.401 | -257.094 | -0.222 | 9.8088   | 0.1191  | 424.4464  |
| 3537 | 0   | Extremo | 1.49   | -218.64  | 0.473  | 11.7414  | 0.1951  | 429.3205  |
| 3537 | 0.5 | Extremo | 1.49   | -201.218 | 0.473  | 11.7414  | -0.0417 | 534.2851  |
| 3537 | 1   | Extremo | 1.49   | -183.795 | 0.473  | 11.7414  | -0.2784 | 630.5384  |
| 3537 | 0   | Extremo | -5.4   | -218.696 | -0.194 | 11.7415  | -0.0815 | 429.347   |
| 3537 | 0.5 | Extremo | -5.4   | -201.273 | -0.194 | 11.7415  | 0.0155  | 534.3392  |
| 3537 | 1   | Extremo | -5.4   | -183.851 | -0.194 | 11.7415  | 0.1126  | 630.6201  |
| 3538 | 0   | Extremo | 1.436  | -144.106 | 0.47   | 9.0607   | 0.1871  | 633.3348  |
| 3538 | 0.5 | Extremo | 1.436  | -126.683 | 0.47   | 9.0607   | -0.0478 | 701.032   |

|      |     |         |        |          |        |          |         |           |
|------|-----|---------|--------|----------|--------|----------|---------|-----------|
| 3538 | 1   | Extremo | 1.436  | -109.261 | 0.47   | 9.0607   | -0.2827 | 760.0179  |
| 3538 | 0   | Extremo | -5.382 | -144.161 | -0.18  | 9.061    | -0.0695 | 633.4168  |
| 3538 | 0.5 | Extremo | -5.382 | -126.738 | -0.18  | 9.061    | 0.0205  | 701.1416  |
| 3538 | 1   | Extremo | -5.382 | -109.316 | -0.18  | 9.061    | 0.1104  | 760.1552  |
| 3539 | 0   | Extremo | 1.379  | -69.043  | 0.469  | 4.5018   | 0.1809  | 761.3904  |
| 3539 | 0.5 | Extremo | 1.379  | -51.621  | 0.469  | 4.5018   | -0.0535 | 791.5563  |
| 3539 | 1   | Extremo | 1.379  | -34.198  | 0.469  | 4.5018   | -0.2879 | 813.011   |
| 3539 | 0   | Extremo | -5.358 | -69.098  | -0.173 | 4.5021   | -0.0624 | 761.5279  |
| 3539 | 0.5 | Extremo | -5.358 | -51.676  | -0.173 | 4.5021   | 0.0243  | 791.7214  |
| 3539 | 1   | Extremo | -5.358 | -34.253  | -0.173 | 4.5021   | 0.1109  | 813.2037  |
| 3540 | 0   | Extremo | 1.32   | 6.178    | 0.469  | -0.6988  | 0.1757  | 813.3389  |
| 3540 | 0.5 | Extremo | 1.32   | 23.601   | 0.469  | -0.6988  | -0.0591 | 805.8942  |
| 3540 | 1   | Extremo | 1.32   | 41.023   | 0.469  | -0.6988  | -0.2938 | 789.7383  |
| 3540 | 0   | Extremo | -5.331 | 6.123    | -0.172 | -0.6985  | -0.0584 | 813.5318  |
| 3540 | 0.5 | Extremo | -5.331 | 23.545   | -0.172 | -0.6985  | 0.0276  | 806.1148  |
| 3540 | 1   | Extremo | -5.331 | 40.968   | -0.172 | -0.6985  | 0.1135  | 789.9865  |
| 3541 | 0   | Extremo | 1.259  | 81.377   | 0.472  | -5.8293  | 0.1713  | 789.1219  |
| 3541 | 0.5 | Extremo | 1.259  | 98.799   | 0.472  | -5.8293  | -0.0646 | 744.078   |
| 3541 | 1   | Extremo | 1.259  | 116.222  | 0.472  | -5.8293  | -0.3006 | 690.3229  |
| 3541 | 0   | Extremo | -5.305 | 81.321   | -0.175 | -5.8291  | -0.0565 | 789.3704  |
| 3541 | 0.5 | Extremo | -5.305 | 98.744   | -0.175 | -5.8291  | 0.0309  | 744.3541  |
| 3541 | 1   | Extremo | -5.305 | 116.166  | -0.175 | -5.8291  | 0.1182  | 690.6266  |
| 3542 | 0   | Extremo | 1.198  | 156.357  | 0.476  | -10.1342 | 0.1677  | 688.5899  |
| 3542 | 0.5 | Extremo | 1.198  | 173.779  | 0.476  | -10.1342 | -0.0704 | 606.056   |
| 3542 | 1   | Extremo | 1.198  | 191.202  | 0.476  | -10.1342 | -0.3085 | 514.8108  |
| 3542 | 0   | Extremo | -5.28  | 156.301  | -0.183 | -10.1343 | -0.0567 | 688.8939  |
| 3542 | 0.5 | Extremo | -5.28  | 173.724  | -0.183 | -10.1343 | 0.0347  | 606.3876  |
| 3542 | 1   | Extremo | -5.28  | 191.146  | -0.183 | -10.1343 | 0.126   | 515.1701  |
| 3543 | 0   | Extremo | 1.138  | 230.691  | 0.484  | -12.2072 | 0.1653  | 511.4871  |
| 3543 | 0.5 | Extremo | 1.138  | 248.113  | 0.484  | -12.2072 | -0.0766 | 391.7862  |
| 3543 | 1   | Extremo | 1.138  | 265.536  | 0.484  | -12.2072 | -0.3185 | 263.3741  |
| 3543 | 0   | Extremo | -5.263 | 230.635  | -0.198 | -12.208  | -0.0596 | 511.8469  |
| 3543 | 0.5 | Extremo | -5.263 | 248.058  | -0.198 | -12.208  | 0.0397  | 392.1736  |
| 3543 | 1   | Extremo | -5.263 | 265.48   | -0.198 | -12.208  | 0.1389  | 263.7891  |
| 3544 | 0   | Extremo | 1.082  | 303.477  | 0.497  | -8.8812  | 0.165   | 257.6469  |
| 3544 | 0.5 | Extremo | 1.082  | 320.9    | 0.497  | -8.8812  | -0.0833 | 101.5527  |
| 3544 | 1   | Extremo | 1.082  | 338.322  | 0.497  | -8.8812  | -0.3317 | -63.2527  |
| 3544 | 0   | Extremo | -5.263 | 303.422  | -0.228 | -8.8838  | -0.067  | 258.0626  |
| 3544 | 0.5 | Extremo | -5.263 | 320.845  | -0.228 | -8.8838  | 0.0468  | 101.996   |
| 3544 | 1   | Extremo | -5.263 | 338.267  | -0.228 | -8.8838  | 0.1607  | -62.782   |
| 3545 | 0   | Extremo | 1.039  | 372.486  | 0.519  | 6.3167   | 0.169   | -72.9807  |
| 3545 | 0.5 | Extremo | 1.039  | 389.909  | 0.519  | 6.3167   | -0.0906 | -263.5794 |
| 3545 | 1   | Extremo | 1.039  | 407.331  | 0.519  | 6.3167   | -0.3502 | -462.8893 |
| 3545 | 0   | Extremo | -5.307 | 372.432  | -0.282 | 6.3102   | -0.0825 | -72.5085  |
| 3545 | 0.5 | Extremo | -5.307 | 389.854  | -0.282 | 6.3102   | 0.0583  | -263.08   |
| 3545 | 1   | Extremo | -5.307 | 407.277  | -0.282 | 6.3102   | 0.1991  | -462.3628 |
| 3546 | 0   | Extremo | 1.032  | 422.286  | 0.558  | 40.3988  | 0.1838  | -482.7582 |
| 3546 | 0.5 | Extremo | 1.032  | 439.708  | 0.558  | 40.3988  | -0.0953 | -698.2566 |
| 3546 | 1   | Extremo | 1.032  | 457.131  | 0.558  | 40.3988  | -0.3743 | -922.4662 |
| 3546 | 0   | Extremo | -5.462 | 422.235  | -0.38  | 40.3849  | -0.1113 | -482.2281 |
| 3546 | 0.5 | Extremo | -5.462 | 439.658  | -0.38  | 40.3849  | 0.0786  | -697.7013 |
| 3546 | 1   | Extremo | -5.462 | 457.08   | -0.38  | 40.3849  | 0.2684  | -921.8858 |
| 3547 | 0   | Extremo | 1.112  | 338.387  | 0.631  | 69.509   | 0.2343  | -970.3982 |
| 3547 | 0.5 | Extremo | 1.112  | 355.81   | 0.631  | 69.509   | -0.0812 | -1143.947 |
| 3547 | 1   | Extremo | 1.112  | 373.232  | 0.631  | 69.509   | -0.3967 | -1326.208 |
| 3547 | 0   | Extremo | -5.901 | 338.371  | -0.526 | 69.4903  | -0.1597 | -969.8075 |
| 3547 | 0.5 | Extremo | -5.901 | 355.794  | -0.526 | 69.4903  | 0.1031  | -1143.349 |



|      |     |         |        |          |        |          |         |           |
|------|-----|---------|--------|----------|--------|----------|---------|-----------|
| 3550 | 1   | Extremo | 1.53   | -354.238 | 0.846  | -7.0939  | -0.5331 | -127.8062 |
| 3550 | 0   | Extremo | -7.665 | -388.882 | -0.322 | -7.089   | -0.134  | -499.2321 |
| 3550 | 0.5 | Extremo | -7.665 | -371.46  | -0.322 | -7.089   | 0.0271  | -309.1467 |
| 3550 | 1   | Extremo | -7.665 | -354.037 | -0.322 | -7.089   | 0.1881  | -127.7725 |
| 3551 | 0   | Extremo | 1.462  | -320.077 | 0.83   | 8.1099   | 0.2916  | -118.1126 |
| 3551 | 0.5 | Extremo | 1.462  | -302.655 | 0.83   | 8.1099   | -0.1236 | 37.5704   |
| 3551 | 1   | Extremo | 1.462  | -285.232 | 0.83   | 8.1099   | -0.5388 | 184.5422  |
| 3551 | 0   | Extremo | -7.706 | -319.876 | -0.269 | 8.1109   | -0.0952 | -118.0805 |
| 3551 | 0.5 | Extremo | -7.706 | -302.454 | -0.269 | 8.1109   | 0.0393  | 37.502    |
| 3551 | 1   | Extremo | -7.706 | -285.031 | -0.269 | 8.1109   | 0.1739  | 184.3734  |
| 3552 | 0   | Extremo | 1.376  | -247.298 | 0.823  | 11.4466  | 0.2769  | 190.2292  |
| 3552 | 0.5 | Extremo | 1.376  | -229.875 | 0.823  | 11.4466  | -0.1345 | 309.5224  |
| 3552 | 1   | Extremo | 1.376  | -212.453 | 0.823  | 11.4466  | -0.5458 | 420.1043  |
| 3552 | 0   | Extremo | -7.703 | -247.096 | -0.241 | 11.4459  | -0.0734 | 190.0593  |
| 3552 | 0.5 | Extremo | -7.703 | -229.674 | -0.241 | 11.4459  | 0.047   | 309.2519  |
| 3552 | 1   | Extremo | -7.703 | -212.251 | -0.241 | 11.4459  | 0.1674  | 419.7333  |
| 3553 | 0   | Extremo | 1.282  | -172.975 | 0.819  | 9.3927   | 0.2654  | 423.3778  |
| 3553 | 0.5 | Extremo | 1.282  | -155.553 | 0.819  | 9.3927   | -0.1444 | 505.5097  |
| 3553 | 1   | Extremo | 1.282  | -138.13  | 0.819  | 9.3927   | -0.5541 | 578.9304  |
| 3553 | 0   | Extremo | -7.683 | -172.774 | -0.226 | 9.3914   | -0.0604 | 423.006   |
| 3553 | 0.5 | Extremo | -7.683 | -155.351 | -0.226 | 9.3914   | 0.0525  | 505.0373  |
| 3553 | 1   | Extremo | -7.683 | -137.929 | -0.226 | 9.3914   | 0.1654  | 578.3574  |
| 3554 | 0   | Extremo | 1.184  | -98.014  | 0.819  | 5.1225   | 0.2555  | 580.5966  |
| 3554 | 0.5 | Extremo | 1.184  | -80.592  | 0.819  | 5.1225   | -0.1538 | 625.248   |
| 3554 | 1   | Extremo | 1.184  | -63.169  | 0.819  | 5.1225   | -0.5632 | 661.1882  |
| 3554 | 0   | Extremo | -7.656 | -97.813  | -0.219 | 5.1211   | -0.0526 | 580.0229  |
| 3554 | 0.5 | Extremo | -7.656 | -80.391  | -0.219 | 5.1211   | 0.0567  | 624.5738  |
| 3554 | 1   | Extremo | -7.656 | -62.968  | -0.219 | 5.1211   | 0.1661  | 660.4134  |
| 3555 | 0   | Extremo | 1.083  | -22.847  | 0.82   | 0.0563   | 0.2467  | 661.7092  |
| 3555 | 0.5 | Extremo | 1.083  | -5.424   | 0.82   | 0.0563   | -0.1631 | 668.777   |
| 3555 | 1   | Extremo | 1.083  | 11.998   | 0.82   | 0.0563   | -0.5729 | 667.1336  |
| 3555 | 0   | Extremo | -7.626 | -22.646  | -0.217 | 0.0551   | -0.0477 | 660.9336  |
| 3555 | 0.5 | Extremo | -7.626 | -5.223   | -0.217 | 0.0551   | 0.0605  | 667.9009  |
| 3555 | 1   | Extremo | -7.626 | 12.199   | -0.217 | 0.0551   | 0.1688  | 666.157   |
| 3556 | 0   | Extremo | 0.98   | 52.322   | 0.822  | -5.0207  | 0.2386  | 666.6601  |
| 3556 | 0.5 | Extremo | 0.98   | 69.744   | 0.822  | -5.0207  | -0.1725 | 636.1435  |
| 3556 | 1   | Extremo | 0.98   | 87.167   | 0.822  | -5.0207  | -0.5836 | 596.9157  |
| 3556 | 0   | Extremo | -7.596 | 52.523   | -0.219 | -5.0214  | -0.0451 | 665.6826  |
| 3556 | 0.5 | Extremo | -7.596 | 69.945   | -0.219 | -5.0214  | 0.0643  | 635.0655  |
| 3556 | 1   | Extremo | -7.596 | 87.368   | -0.219 | -5.0214  | 0.1738  | 595.7373  |
| 3557 | 0   | Extremo | 0.877  | 127.289  | 0.827  | -9.3309  | 0.2315  | 595.3078  |
| 3557 | 0.5 | Extremo | 0.877  | 144.711  | 0.827  | -9.3309  | -0.182  | 527.3077  |
| 3557 | 1   | Extremo | 0.877  | 162.134  | 0.827  | -9.3309  | -0.5955 | 450.5964  |
| 3557 | 0   | Extremo | -7.568 | 127.49   | -0.226 | -9.3304  | -0.0446 | 594.128   |
| 3557 | 0.5 | Extremo | -7.568 | 144.912  | -0.226 | -9.3304  | 0.0686  | 526.0275  |
| 3557 | 1   | Extremo | -7.568 | 162.335  | -0.226 | -9.3304  | 0.1818  | 449.2158  |
| 3558 | 0   | Extremo | 0.774  | 201.628  | 0.835  | -11.4829 | 0.2256  | 447.4056  |
| 3558 | 0.5 | Extremo | 0.774  | 219.05   | 0.835  | -11.4829 | -0.1919 | 342.2361  |
| 3558 | 1   | Extremo | 0.774  | 236.473  | 0.835  | -11.4829 | -0.6094 | 228.3553  |
| 3558 | 0   | Extremo | -7.547 | 201.828  | -0.242 | -11.4797 | -0.0468 | 446.023   |
| 3558 | 0.5 | Extremo | -7.547 | 219.251  | -0.242 | -11.4797 | 0.074   | 340.7533  |
| 3558 | 1   | Extremo | -7.547 | 236.673  | -0.242 | -11.4797 | 0.1949  | 226.7722  |
| 3559 | 0   | Extremo | 0.674  | 274.447  | 0.848  | -8.3798  | 0.2218  | 222.7944  |
| 3559 | 0.5 | Extremo | 0.674  | 291.87   | 0.848  | -8.3798  | -0.2024 | 81.2153   |
| 3559 | 1   | Extremo | 0.674  | 309.292  | 0.848  | -8.3798  | -0.6266 | -69.0751  |
| 3559 | 0   | Extremo | -7.543 | 274.647  | -0.27  | -8.3702  | -0.0535 | 221.2082  |
| 3559 | 0.5 | Extremo | -7.543 | 292.069  | -0.27  | -8.3702  | 0.0817  | 79.5291   |
| 3559 | 1   | Extremo | -7.543 | 309.492  | -0.27  | -8.3702  | 0.217   | -70.8612  |
| 3560 | 0   | Extremo | 0.587  | 343.552  | 0.872  | 6.2906   | 0.2227  | -78.5594  |
| 3560 | 0.5 | Extremo | 0.587  | 360.974  | 0.872  | 6.2906   | -0.2131 | -254.691  |
| 3560 | 1   | Extremo | 0.587  | 378.397  | 0.872  | 6.2906   | -0.6489 | -439.5339 |
| 3560 | 0   | Extremo | -7.583 | 343.75   | -0.324 | 6.3151   | -0.0682 | -80.3508  |
| 3560 | 0.5 | Extremo | -7.583 | 361.172  | -0.324 | 6.3151   | 0.0938  | -256.5813 |
| 3560 | 1   | Extremo | -7.583 | 378.595  | -0.324 | 6.3151   | 0.2558  | -441.523  |
| 3561 | 0   | Extremo | 0.534  | 393.925  | 0.911  | 39.3756  | 0.2359  | -458.8939 |
| 3561 | 0.5 | Extremo | 0.534  | 411.347  | 0.911  | 39.3756  | -0.2198 | -660.2118 |
| 3561 | 1   | Extremo | 0.534  | 428.77   | 0.911  | 39.3756  | -0.6755 | -870.2409 |
| 3561 | 0   | Extremo | -7.735 | 394.107  | -0.421 | 39.4279  | -0.0955 | -460.8962 |
| 3561 | 0.5 | Extremo | -7.735 | 411.53   | -0.421 | 39.4279  | 0.1152  | -662.3053 |
| 3561 | 1   | Extremo | -7.735 | 428.952  | -0.421 | 39.4279  | 0.326   | -872.4257 |
| 3562 | 0   | Extremo | 0.566  | 314.464  | 0.99   | 67.7617  | 0.2922  | -916.8228 |
| 3562 | 0.5 | Extremo | 0.566  | 331.886  | 0.99   | 67.7617  | -0.2026 | -1078.41  |

|      |     |         |        |          |        |          |         |           |
|------|-----|---------|--------|----------|--------|----------|---------|-----------|
| 3562 | 1   | Extremo | 0.566  | 349.309  | 0.99   | 67.7617  | -0.6974 | -1248.709 |
| 3562 | 0   | Extremo | -8.173 | 314.517  | -0.565 | 67.8324  | -0.1395 | -919.0459 |
| 3562 | 0.5 | Extremo | -8.173 | 331.94   | -0.565 | 67.8324  | 0.1431  | -1080.66  |
| 3562 | 1   | Extremo | -8.173 | 349.362  | -0.565 | 67.8324  | 0.4257  | -1250.986 |
| 3563 | 0   | Extremo | 0.866  | -356.365 | 1.331  | -67.6637 | 0.4994  | -1248.706 |
| 3563 | 0.5 | Extremo | 0.866  | -338.943 | 1.331  | -67.6637 | -0.1663 | -1074.878 |
| 3563 | 1   | Extremo | 0.866  | -321.52  | 1.331  | -67.6637 | -0.8321 | -909.7626 |
| 3563 | 0   | Extremo | -9.34  | -356.98  | -0.571 | -67.7272 | -0.2728 | -1250.982 |
| 3563 | 0.5 | Extremo | -9.34  | -339.557 | -0.571 | -67.7272 | 0.0129  | -1076.848 |
| 3563 | 1   | Extremo | -9.34  | -322.135 | -0.571 | -67.7272 | 0.2986  | -911.4246 |
| 3564 | 0   | Extremo | 0.913  | -435.826 | 1.307  | -39.2779 | 0.4293  | -863.1732 |
| 3564 | 0.5 | Extremo | 0.913  | -418.403 | 1.307  | -39.2779 | -0.2243 | -649.616  |
| 3564 | 1   | Extremo | 0.913  | -400.981 | 1.307  | -39.2779 | -0.878  | -444.77   |
| 3564 | 0   | Extremo | -9.778 | -436.569 | -0.429 | -39.3231 | -0.1722 | -864.7962 |
| 3564 | 0.5 | Extremo | -9.778 | -419.147 | -0.429 | -39.3231 | 0.0421  | -650.8672 |
| 3564 | 1   | Extremo | -9.778 | -401.724 | -0.429 | -39.3231 | 0.2564  | -445.6495 |
| 3565 | 0   | Extremo | 0.84   | -385.453 | 1.278  | -6.1938  | 0.3852  | -425.4019 |
| 3565 | 0.5 | Extremo | 0.84   | -368.03  | 1.278  | -6.1938  | -0.2536 | -237.0312 |
| 3565 | 1   | Extremo | 0.84   | -350.608 | 1.278  | -6.1938  | -0.8924 | -57.3717  |
| 3565 | 0   | Extremo | -9.929 | -386.211 | -0.331 | -6.2113  | -0.1017 | -426.2677 |
| 3565 | 0.5 | Extremo | -9.929 | -368.789 | -0.331 | -6.2113  | 0.0639  | -237.5177 |
| 3565 | 1   | Extremo | -9.929 | -351.366 | -0.331 | -6.2113  | 0.2296  | -57.4789  |
| 3566 | 0   | Extremo | 0.722  | -316.347 | 1.263  | 8.475    | 0.3591  | -47.8784  |
| 3566 | 0.5 | Extremo | 0.722  | -298.924 | 1.263  | 8.475    | -0.2722 | 105.9394  |
| 3566 | 1   | Extremo | 0.722  | -281.502 | 1.263  | 8.475    | -0.9034 | 251.0459  |
| 3566 | 0   | Extremo | -9.969 | -317.107 | -0.278 | 8.4722   | -0.0628 | -47.9795  |
| 3566 | 0.5 | Extremo | -9.969 | -299.685 | -0.278 | 8.4722   | 0.0762  | 106.2186  |
| 3566 | 1   | Extremo | -9.969 | -282.262 | -0.278 | 8.4722   | 0.2152  | 251.7054  |
| 3567 | 0   | Extremo | 0.585  | -243.526 | 1.256  | 11.5751  | 0.3401  | 256.6174  |
| 3567 | 0.5 | Extremo | 0.585  | -226.104 | 1.256  | 11.5751  | -0.2877 | 374.0249  |
| 3567 | 1   | Extremo | 0.585  | -208.681 | 1.256  | 11.5751  | -0.9155 | 482.7211  |
| 3567 | 0   | Extremo | -9.964 | -244.287 | -0.249 | 11.5786  | -0.0407 | 257.2809  |
| 3567 | 0.5 | Extremo | -9.964 | -226.865 | -0.249 | 11.5786  | 0.0839  | 375.069   |
| 3567 | 1   | Extremo | -9.964 | -209.442 | -0.249 | 11.5786  | 0.2086  | 484.1458  |
| 3568 | 0   | Extremo | 0.439  | -169.185 | 1.253  | 9.4182   | 0.3241  | 485.925   |
| 3568 | 0.5 | Extremo | 0.439  | -151.762 | 1.253  | 9.4182   | -0.3023 | 566.1619  |
| 3568 | 1   | Extremo | 0.439  | -134.34  | 1.253  | 9.4182   | -0.9287 | 637.6875  |
| 3568 | 0   | Extremo | -9.943 | -169.946 | -0.234 | 9.424    | -0.0276 | 487.3527  |
| 3568 | 0.5 | Extremo | -9.943 | -152.524 | -0.234 | 9.424    | 0.0895  | 567.9703  |
| 3568 | 1   | Extremo | -9.943 | -135.101 | -0.234 | 9.424    | 0.2065  | 639.8766  |
| 3569 | 0   | Extremo | 0.289  | -94.215  | 1.252  | 5.0995   | 0.3098  | 639.3127  |
| 3569 | 0.5 | Extremo | 0.289  | -76.792  | 1.252  | 5.0995   | -0.3164 | 682.0644  |
| 3569 | 1   | Extremo | 0.289  | -59.37   | 1.252  | 5.0995   | -0.9426 | 716.1049  |
| 3569 | 0   | Extremo | -9.914 | -94.976  | -0.227 | 5.1058   | -0.0195 | 641.5044  |
| 3569 | 0.5 | Extremo | -9.914 | -77.553  | -0.227 | 5.1058   | 0.0938  | 684.6368  |
| 3569 | 1   | Extremo | -9.914 | -60.131  | -0.227 | 5.1058   | 0.2071  | 719.0579  |
| 3570 | 0   | Extremo | 0.136  | -19.041  | 1.254  | 0.0071   | 0.2965  | 716.6025  |
| 3570 | 0.5 | Extremo | 0.136  | -1.619   | 1.254  | 0.0071   | -0.3304 | 721.7675  |
| 3570 | 1   | Extremo | 0.136  | 15.804   | 1.254  | 0.0071   | -0.9572 | 718.2213  |
| 3570 | 0   | Extremo | -9.883 | -19.802  | -0.224 | 0.0128   | -0.0145 | 719.5583  |
| 3570 | 0.5 | Extremo | -9.883 | -2.38    | -0.224 | 0.0128   | 0.0977  | 725.1038  |
| 3570 | 1   | Extremo | -9.883 | 15.043   | -0.224 | 0.0128   | 0.2099  | 721.9381  |
| 3571 | 0   | Extremo | -0.02  | 56.132   | 1.257  | -5.0881  | 0.284   | 717.7361  |
| 3571 | 0.5 | Extremo | -0.02  | 73.555   | 1.257  | -5.0881  | -0.3444 | 685.3144  |
| 3571 | 1   | Extremo | -0.02  | 90.977   | 1.257  | -5.0881  | -0.9727 | 644.1814  |
| 3571 | 0   | Extremo | -9.852 | 55.371   | -0.227 | -5.0845  | -0.0117 | 721.4563  |
| 3571 | 0.5 | Extremo | -9.852 | 72.794   | -0.227 | -5.0845  | 0.1016  | 689.415   |



|      |     |         |         |          |        |          |         |           |
|------|-----|---------|---------|----------|--------|----------|---------|-----------|
| 3574 | 1   | Extremo | -0.486  | 313.117  | 1.284  | -8.5633  | -1.0305 | -33.2402  |
| 3574 | 0   | Extremo | -9.799  | 277.517  | -0.277 | -8.6001  | -0.0194 | 268.4792  |
| 3574 | 0.5 | Extremo | -9.799  | 294.94   | -0.277 | -8.6001  | 0.1192  | 125.3649  |
| 3574 | 1   | Extremo | -9.799  | 312.362  | -0.277 | -8.6001  | 0.2579  | -26.4607  |
| 3575 | 0   | Extremo | -0.627  | 347.394  | 1.308  | 5.9585   | 0.2508  | -42.6803  |
| 3575 | 0.5 | Extremo | -0.627  | 364.817  | 1.308  | 5.9585   | -0.4034 | -220.7331 |
| 3575 | 1   | Extremo | -0.627  | 382.239  | 1.308  | 5.9585   | -1.0575 | -407.4971 |
| 3575 | 0   | Extremo | -9.839  | 346.648  | -0.33  | 5.8643   | -0.0336 | -35.8795  |
| 3575 | 0.5 | Extremo | -9.839  | 364.071  | -0.33  | 5.8643   | 0.1315  | -213.5593 |
| 3575 | 1   | Extremo | -9.839  | 381.493  | -0.33  | 5.8643   | 0.2967  | -399.9503 |
| 3576 | 0   | Extremo | -0.735  | 397.915  | 1.349  | 38.7666  | 0.2613  | -426.7336 |
| 3576 | 0.5 | Extremo | -0.735  | 415.338  | 1.349  | 38.7666  | -0.4132 | -630.0468 |
| 3576 | 1   | Extremo | -0.735  | 432.76   | 1.349  | 38.7666  | -1.0877 | -842.0713 |
| 3576 | 0   | Extremo | -9.991  | 397.229  | -0.427 | 38.5649  | -0.0598 | -419.1359 |
| 3576 | 0.5 | Extremo | -9.991  | 414.652  | -0.427 | 38.5649  | 0.1539  | -622.1061 |
| 3576 | 1   | Extremo | -9.991  | 432.074  | -0.427 | 38.5649  | 0.3676  | -833.7876 |
| 3577 | 0   | Extremo | -0.761  | 319.768  | 1.432  | 66.9788  | 0.3211  | -888.2689 |
| 3577 | 0.5 | Extremo | -0.761  | 337.191  | 1.432  | 66.9788  | -0.3948 | -1052.509 |
| 3577 | 1   | Extremo | -0.761  | 354.613  | 1.432  | 66.9788  | -1.1107 | -1225.46  |
| 3577 | 0   | Extremo | -10.431 | 319.573  | -0.569 | 66.7035  | -0.0994 | -879.8395 |
| 3577 | 0.5 | Extremo | -10.431 | 336.996  | -0.569 | 66.7035  | 0.185   | -1043.982 |
| 3577 | 1   | Extremo | -10.431 | 354.418  | -0.569 | 66.7035  | 0.4694  | -1216.835 |
| 3578 | 0   | Extremo | -0.518  | -344.216 | 1.831  | -67.0493 | 0.552   | -1225.464 |
| 3578 | 0.5 | Extremo | -0.518  | -326.793 | 1.831  | -67.0493 | -0.3636 | -1057.712 |
| 3578 | 1   | Extremo | -0.518  | -309.371 | 1.831  | -67.0493 | -1.2793 | -898.6713 |
| 3578 | 0   | Extremo | -11.6   | -341.89  | -0.544 | -66.8243 | -0.2175 | -1216.841 |
| 3578 | 0.5 | Extremo | -11.6   | -324.467 | -0.544 | -66.8243 | 0.0546  | -1050.252 |
| 3578 | 1   | Extremo | -11.6   | -307.045 | -0.544 | -66.8243 | 0.3267  | -892.3741 |
| 3579 | 0   | Extremo | -0.526  | -422.363 | 1.812  | -38.8365 | 0.473   | -852.4834 |
| 3579 | 0.5 | Extremo | -0.526  | -404.94  | 1.812  | -38.8365 | -0.433  | -645.6575 |
| 3579 | 1   | Extremo | -0.526  | -387.518 | 1.812  | -38.8365 | -1.339  | -447.5429 |
| 3579 | 0   | Extremo | -12.038 | -419.546 | -0.399 | -38.685  | -0.1191 | -846.3346 |
| 3579 | 0.5 | Extremo | -12.038 | -402.124 | -0.399 | -38.685  | 0.0803  | -640.9172 |
| 3579 | 1   | Extremo | -12.038 | -384.701 | -0.399 | -38.685  | 0.2796  | -444.2111 |
| 3580 | 0   | Extremo | -0.657  | -371.843 | 1.783  | -6.0272  | 0.4223  | -428.317  |
| 3580 | 0.5 | Extremo | -0.657  | -354.42  | 1.783  | -6.0272  | -0.4693 | -246.7512 |
| 3580 | 1   | Extremo | -0.657  | -336.998 | 1.783  | -6.0272  | -1.3609 | -73.8967  |
| 3580 | 0   | Extremo | -12.191 | -368.966 | -0.301 | -5.9828  | -0.0493 | -425.0387 |
| 3580 | 0.5 | Extremo | -12.191 | -351.543 | -0.301 | -5.9828  | 0.101   | -244.9114 |
| 3580 | 1   | Extremo | -12.191 | -334.121 | -0.301 | -5.9828  | 0.2513  | -73.4953  |
| 3581 | 0   | Extremo | -0.834  | -302.722 | 1.769  | 8.4968   | 0.3911  | -64.4684  |
| 3581 | 0.5 | Extremo | -0.834  | -285.299 | 1.769  | 8.4968   | -0.4935 | 82.5369   |
| 3581 | 1   | Extremo | -0.834  | -267.877 | 1.769  | 8.4968   | -1.3781 | 220.831   |
| 3581 | 0   | Extremo | -12.233 | -299.836 | -0.247 | 8.4843   | -0.0106 | -64.0913  |
| 3581 | 0.5 | Extremo | -12.233 | -282.414 | -0.247 | 8.4843   | 0.1127  | 81.4713   |
| 3581 | 1   | Extremo | -12.233 | -264.991 | -0.247 | 8.4843   | 0.2361  | 218.3227  |
| 3582 | 0   | Extremo | -1.029  | -229.897 | 1.763  | 11.5375  | 0.367   | 226.3569  |
| 3582 | 0.5 | Extremo | -1.029  | -212.475 | 1.763  | 11.5375  | -0.5146 | 336.9499  |
| 3582 | 1   | Extremo | -1.029  | -195.052 | 1.763  | 11.5375  | -1.3962 | 438.8318  |
| 3582 | 0   | Extremo | -12.23  | -227.009 | -0.217 | 11.501   | 0.0114  | 223.8325  |
| 3582 | 0.5 | Extremo | -12.23  | -209.587 | -0.217 | 11.501   | 0.1201  | 332.9814  |
| 3582 | 1   | Extremo | -12.23  | -192.164 | -0.217 | 11.501   | 0.2288  | 433.4191  |
| 3583 | 0   | Extremo | -1.234  | -155.557 | 1.761  | 9.361    | 0.346   | 441.9974  |
| 3583 | 0.5 | Extremo | -1.234  | -138.134 | 1.761  | 9.361    | -0.5346 | 515.4201  |
| 3583 | 1   | Extremo | -1.234  | -120.712 | 1.761  | 9.361    | -1.4153 | 580.1316  |
| 3583 | 0   | Extremo | -12.211 | -152.668 | -0.202 | 9.3155   | 0.0245  | 436.5723  |
| 3583 | 0.5 | Extremo | -12.211 | -135.245 | -0.202 | 9.3155   | 0.1253  | 508.5506  |
| 3583 | 1   | Extremo | -12.211 | -117.823 | -0.202 | 9.3155   | 0.2261  | 571.8177  |
| 3584 | 0   | Extremo | -1.443  | -80.589  | 1.762  | 5.0429   | 0.3267  | 581.7193  |
| 3584 | 0.5 | Extremo | -1.443  | -63.167  | 1.762  | 5.0429   | -0.5543 | 617.6584  |
| 3584 | 1   | Extremo | -1.443  | -45.744  | 1.762  | 5.0429   | -1.4352 | 644.8861  |
| 3584 | 0   | Extremo | -12.184 | -77.701  | -0.193 | 4.9957   | 0.0326  | 573.3943  |
| 3584 | 0.5 | Extremo | -12.184 | -60.279  | -0.193 | 4.9957   | 0.1293  | 607.8892  |
| 3584 | 1   | Extremo | -12.184 | -42.856  | -0.193 | 4.9957   | 0.226   | 633.673   |
| 3585 | 0   | Extremo | -1.655  | -5.42    | 1.764  | -0.0328  | 0.3085  | 645.3403  |
| 3585 | 0.5 | Extremo | -1.655  | 12.003   | 1.764  | -0.0328  | -0.5737 | 643.6946  |
| 3585 | 1   | Extremo | -1.655  | 29.425   | 1.764  | -0.0328  | -1.4559 | 633.3376  |
| 3585 | 0   | Extremo | -12.154 | -2.533   | -0.19  | -0.0765  | 0.0376  | 634.115   |
| 3585 | 0.5 | Extremo | -12.154 | 14.889   | -0.19  | -0.0765  | 0.1328  | 631.0262  |
| 3585 | 1   | Extremo | -12.154 | 32.312   | -0.19  | -0.0765  | 0.228   | 619.226   |
| 3586 | 0   | Extremo | -1.868  | 69.75    | 1.769  | -5.0886  | 0.2911  | 632.7946  |
| 3586 | 0.5 | Extremo | -1.868  | 87.172   | 1.769  | -5.0886  | -0.5932 | 593.564   |

|      |     |         |         |          |        |          |         |           |
|------|-----|---------|---------|----------|--------|----------|---------|-----------|
| 3586 | 1   | Extremo | -1.868  | 104.595  | 1.769  | -5.0886  | -1.4776 | 545.6222  |
| 3586 | 0   | Extremo | -12.124 | 72.633   | -0.192 | -5.1224  | 0.0405  | 618.6673  |
| 3586 | 0.5 | Extremo | -12.124 | 90.055   | -0.192 | -5.1224  | 0.1363  | 577.9952  |
| 3586 | 1   | Extremo | -12.124 | 107.478  | -0.192 | -5.1224  | 0.232   | 528.6118  |
| 3587 | 0   | Extremo | -2.082  | 144.716  | 1.775  | -9.3325  | 0.2747  | 543.9268  |
| 3587 | 0.5 | Extremo | -2.082  | 162.139  | 1.775  | -9.3325  | -0.613  | 467.2132  |
| 3587 | 1   | Extremo | -2.082  | 179.561  | 1.775  | -9.3325  | -1.5007 | 381.7883  |
| 3587 | 0   | Extremo | -12.096 | 147.593  | -0.198 | -9.3445  | 0.0414  | 526.8932  |
| 3587 | 0.5 | Extremo | -12.096 | 165.016  | -0.198 | -9.3445  | 0.1402  | 448.741   |
| 3587 | 1   | Extremo | -12.096 | 182.438  | -0.198 | -9.3445  | 0.239   | 361.8775  |
| 3588 | 0   | Extremo | -2.294  | 219.048  | 1.786  | -11.3224 | 0.2598  | 378.4723  |
| 3588 | 0.5 | Extremo | -2.294  | 236.47   | 1.786  | -11.3224 | -0.6331 | 264.5929  |
| 3588 | 1   | Extremo | -2.294  | 253.893  | 1.786  | -11.3224 | -1.5261 | 142.0023  |
| 3588 | 0   | Extremo | -12.074 | 221.912  | -0.211 | -11.2864 | 0.0398  | 358.5247  |
| 3588 | 0.5 | Extremo | -12.074 | 239.335  | -0.211 | -11.2864 | 0.1453  | 243.2128  |
| 3588 | 1   | Extremo | -12.074 | 256.757  | -0.211 | -11.2864 | 0.2509  | 119.1898  |
| 3589 | 0   | Extremo | -2.502  | 291.844  | 1.803  | -7.825   | 0.2474  | 136.2517  |
| 3589 | 0.5 | Extremo | -2.502  | 309.267  | 1.803  | -7.825   | -0.6538 | -14.0259  |
| 3589 | 1   | Extremo | -2.502  | 326.689  | 1.803  | -7.825   | -1.5551 | -173.0149 |
| 3589 | 0   | Extremo | -12.068 | 294.682  | -0.238 | -7.6797  | 0.0338  | 113.3796  |
| 3589 | 0.5 | Extremo | -12.068 | 312.104  | -0.238 | -7.6797  | 0.1527  | -38.3169  |
| 3589 | 1   | Extremo | -12.068 | 329.527  | -0.238 | -7.6797  | 0.2715  | -198.7247 |
| 3590 | 0   | Extremo | -2.697  | 360.872  | 1.83   | 7.7653   | 0.2405  | -182.8206 |
| 3590 | 0.5 | Extremo | -2.697  | 378.294  | 1.83   | 7.7653   | -0.6744 | -367.6122 |
| 3590 | 1   | Extremo | -2.697  | 395.717  | 1.83   | 7.7653   | -1.5892 | -561.115  |
| 3590 | 0   | Extremo | -12.105 | 363.646  | -0.288 | 8.1549   | 0.0205  | -208.631  |
| 3590 | 0.5 | Extremo | -12.105 | 381.068  | -0.288 | 8.1549   | 0.1647  | -394.8095 |
| 3590 | 1   | Extremo | -12.105 | 398.491  | -0.288 | 8.1549   | 0.3089  | -589.6992 |
| 3591 | 0   | Extremo | -2.857  | 410.344  | 1.874  | 42.5773  | 0.2483  | -581.297  |
| 3591 | 0.5 | Extremo | -2.857  | 427.766  | 1.874  | 42.5773  | -0.6889 | -790.8246 |
| 3591 | 1   | Extremo | -2.857  | 445.189  | 1.874  | 42.5773  | -1.6261 | -1009.064 |
| 3591 | 0   | Extremo | -12.253 | 412.838  | -0.383 | 43.4235  | -0.0038 | -610.0981 |
| 3591 | 0.5 | Extremo | -12.253 | 430.26   | -0.383 | 43.4235  | 0.1875  | -820.8725 |
| 3591 | 1   | Extremo | -12.253 | 447.683  | -0.383 | 43.4235  | 0.3787  | -1040.358 |
| 3592 | 0   | Extremo | -2.933  | 322.478  | 1.965  | 71.9921  | 0.3103  | -1058.155 |
| 3592 | 0.5 | Extremo | -2.933  | 339.901  | 1.965  | 71.9921  | -0.6721 | -1223.749 |
| 3592 | 1   | Extremo | -2.933  | 357.323  | 1.965  | 71.9921  | -1.6546 | -1398.055 |
| 3592 | 0   | Extremo | -12.687 | 323.088  | -0.518 | 73.2122  | -0.0373 | -1090.008 |
| 3592 | 0.5 | Extremo | -12.687 | 340.511  | -0.518 | 73.2122  | 0.2217  | -1255.907 |
| 3592 | 1   | Extremo | -12.687 | 357.933  | -0.518 | 73.2122  | 0.4806  | -1430.519 |
| 3593 | 0   | Extremo | -2.736  | -392.523 | 2.41   | -72.5829 | 0.5578  | -1398.051 |
| 3593 | 0.5 | Extremo | -2.736  | -375.101 | 2.41   | -72.5829 | -0.6472 | -1206.145 |
| 3593 | 1   | Extremo | -2.736  | -357.678 | 2.41   | -72.5829 | -1.8522 | -1022.95  |
| 3593 | 0   | Extremo | -13.847 | -401.192 | -0.454 | -73.0536 | -0.1366 | -1430.507 |
| 3593 | 0.5 | Extremo | -13.847 | -383.77  | -0.454 | -73.0536 | 0.0903  | -1234.266 |
| 3593 | 1   | Extremo | -13.847 | -366.347 | -0.454 | -73.0536 | 0.3171  | -1046.737 |
| 3594 | 0   | Extremo | -2.784  | -480.39  | 2.401  | -43.1673 | 0.4735  | -973.8513 |
| 3594 | 0.5 | Extremo | -2.784  | -462.967 | 2.401  | -43.1673 | -0.7272 | -738.0121 |
| 3594 | 1   | Extremo | -2.784  | -445.545 | 2.401  | -43.1673 | -1.9279 | -510.8841 |
| 3594 | 0   | Extremo | -14.271 | -490.942 | -0.3   | -43.264  | -0.039  | -997.0646 |
| 3594 | 0.5 | Extremo | -14.271 | -473.52  | -0.3   | -43.264  | 0.1111  | -755.9492 |
| 3594 | 1   | Extremo | -14.271 | -456.097 | -0.3   | -43.264  | 0.2612  | -523.545  |
| 3595 | 0   | Extremo | -2.949  | -430.919 | 2.383  | -8.3538  | 0.4202  | -490.6955 |
| 3595 | 0.5 | Extremo | -2.949  | -413.497 | 2.383  | -8.3538  | -0.7712 | -279.5916 |
| 3595 | 1   | Extremo | -2.949  | -396.074 | 2.383  | -8.3538  | -1.9626 | -77.1989  |
| 3595 | 0   | Extremo | -14.405 | -441.751 | -0.195 | -7.9934  | 0.0321  | -503.125  |
| 3595 |     |         |         |          |        |          |         |           |





|      |     |         |         |          |        |          |         |           |
|------|-----|---------|---------|----------|--------|----------|---------|-----------|
| 3598 | 1   | Extremo | -3.578  | -179.939 | 2.41   | 8.7605   | -2.0631 | 755.1817  |
| 3598 | 0   | Extremo | -14.317 | -225.712 | -0.063 | 9.5214   | 0.1175  | 578.2751  |
| 3598 | 0.5 | Extremo | -14.317 | -208.29  | -0.063 | 9.5214   | 0.1489  | 686.7757  |
| 3598 | 1   | Extremo | -14.317 | -190.867 | -0.063 | 9.5214   | 0.1803  | 786.565   |
| 3599 | 0   | Extremo | -3.778  | -139.841 | 2.436  | 4.5308   | 0.3325  | 756.8541  |
| 3599 | 0.5 | Extremo | -3.778  | -122.418 | 2.436  | 4.5308   | -0.8855 | 822.4187  |
| 3599 | 1   | Extremo | -3.778  | -104.996 | 2.436  | 4.5308   | -2.1036 | 879.2721  |
| 3599 | 0   | Extremo | -14.23  | -150.766 | -0.038 | 5.3078   | 0.132   | 788.2721  |
| 3599 | 0.5 | Extremo | -14.23  | -133.344 | -0.038 | 5.3078   | 0.1509  | 859.2995  |
| 3599 | 1   | Extremo | -14.23  | -115.921 | -0.038 | 5.3078   | 0.1697  | 921.6156  |
| 3600 | 0   | Extremo | -3.962  | -64.716  | 2.471  | -0.5031  | 0.3224  | 879.7694  |
| 3600 | 0.5 | Extremo | -3.962  | -47.293  | 2.471  | -0.5031  | -0.9133 | 907.7715  |
| 3600 | 1   | Extremo | -3.962  | -29.871  | 2.471  | -0.5031  | -2.149  | 927.0624  |
| 3600 | 0   | Extremo | -14.121 | -75.626  | -0.013 | 0.2687   | 0.1453  | 922.1413  |
| 3600 | 0.5 | Extremo | -14.121 | -58.204  | -0.013 | 0.2687   | 0.152   | 955.5988  |
| 3600 | 1   | Extremo | -14.121 | -40.781  | -0.013 | 0.2687   | 0.1586  | 980.345   |
| 3601 | 0   | Extremo | -4.124  | 10.372   | 2.518  | -5.5499  | 0.3172  | 926.5272  |
| 3601 | 0.5 | Extremo | -4.124  | 27.794   | 2.518  | -5.5499  | -0.9417 | 916.9858  |
| 3601 | 1   | Extremo | -4.124  | 45.217   | 2.518  | -5.5499  | -2.2006 | 898.733   |
| 3601 | 0   | Extremo | -13.987 | -0.506   | 0.012  | -4.8112  | 0.1589  | 979.84    |
| 3601 | 0.5 | Extremo | -13.987 | 16.916   | 0.012  | -4.8112  | 0.1526  | 975.7374  |
| 3601 | 1   | Extremo | -13.987 | 34.339   | 0.012  | -4.8112  | 0.1464  | 962.9236  |
| 3602 | 0   | Extremo | -4.258  | 85.204   | 2.578  | -9.8474  | 0.318   | 897.011   |
| 3602 | 0.5 | Extremo | -4.258  | 102.627  | 2.578  | -9.8474  | -0.9712 | 850.0534  |
| 3602 | 1   | Extremo | -4.258  | 120.049  | 2.578  | -9.8474  | -2.2605 | 794.3845  |
| 3602 | 0   | Extremo | -13.826 | 74.391   | 0.04   | -9.1953  | 0.1734  | 961.2469  |
| 3602 | 0.5 | Extremo | -13.826 | 91.814   | 0.04   | -9.1953  | 0.1532  | 919.6958  |
| 3602 | 1   | Extremo | -13.826 | 109.236  | 0.04   | -9.1953  | 0.133   | 869.4334  |
| 3603 | 0   | Extremo | -4.358  | 159.364  | 2.658  | -12.0833 | 0.327   | 790.9966  |
| 3603 | 0.5 | Extremo | -4.358  | 176.786  | 2.658  | -12.0833 | -1.0022 | 706.9591  |
| 3603 | 1   | Extremo | -4.358  | 194.209  | 2.658  | -12.0833 | -2.3313 | 614.2104  |
| 3603 | 0   | Extremo | -13.633 | 148.677  | 0.07   | -11.6337 | 0.1893  | 866.133   |
| 3603 | 0.5 | Extremo | -13.633 | 166.099  | 0.07   | -11.6337 | 0.1543  | 787.439   |
| 3603 | 1   | Extremo | -13.633 | 183.522  | 0.07   | -11.6337 | 0.1192  | 700.0338  |
| 3604 | 0   | Extremo | -4.413  | 232.009  | 2.764  | -9.4336  | 0.3471  | 608.2839  |
| 3604 | 0.5 | Extremo | -4.413  | 249.432  | 2.764  | -9.4336  | -1.0351 | 487.9237  |
| 3604 | 1   | Extremo | -4.413  | 266.854  | 2.764  | -9.4336  | -2.4173 | 358.8523  |
| 3604 | 0   | Extremo | -13.408 | 221.575  | 0.099  | -9.4455  | 0.206   | 694.2904  |
| 3604 | 0.5 | Extremo | -13.408 | 238.997  | 0.099  | -9.4455  | 0.1567  | 579.1475  |
| 3604 | 1   | Extremo | -13.408 | 256.42   | 0.099  | -9.4455  | 0.1074  | 455.2934  |
| 3605 | 0   | Extremo | -4.405  | 301.131  | 2.907  | 3.6859   | 0.3835  | 348.7082  |
| 3605 | 0.5 | Extremo | -4.405  | 318.553  | 2.907  | 3.6859   | -1.0701 | 193.7874  |
| 3605 | 1   | Extremo | -4.405  | 335.976  | 2.907  | 3.6859   | -2.5237 | 30.1552   |
| 3605 | 0   | Extremo | -13.162 | 291.206  | 0.119  | 2.6525   | 0.2227  | 445.5135  |
| 3605 | 0.5 | Extremo | -13.162 | 308.629  | 0.119  | 2.6525   | 0.163   | 295.5549  |
| 3605 | 1   | Extremo | -13.162 | 326.051  | 0.119  | 2.6525   | 0.1034  | 136.885   |
| 3606 | 0   | Extremo | -4.302  | 354.402  | 3.103  | 33.1411  | 0.448   | 10.4848   |
| 3606 | 0.5 | Extremo | -4.302  | 371.824  | 3.103  | 33.1411  | -1.1036 | -171.0716 |
| 3606 | 1   | Extremo | -4.302  | 389.247  | 3.103  | 33.1411  | -2.6553 | -361.3393 |
| 3606 | 0   | Extremo | -12.945 | 345.393  | 0.121  | 30.0099  | 0.2399  | 117.8336  |
| 3606 | 0.5 | Extremo | -12.945 | 362.816  | 0.121  | 30.0099  | 0.1797  | -59.2185  |
| 3606 | 1   | Extremo | -12.945 | 380.238  | 0.121  | 30.0099  | 0.1194  | -244.9819 |
| 3607 | 0   | Extremo | -4.03   | 305.475  | 3.401  | 59.4602  | 0.5779  | -403.9915 |
| 3607 | 0.5 | Extremo | -4.03   | 322.898  | 3.401  | 59.4602  | -1.1227 | -561.0846 |
| 3607 | 1   | Extremo | -4.03   | 340.32   | 3.401  | 59.4602  | -2.8234 | -726.889  |
| 3607 | 0   | Extremo | -12.899 | 297.473  | 0.122  | 52.5916  | 0.268   | -286.8406 |
| 3607 | 0.5 | Extremo | -12.899 | 314.896  | 0.122  | 52.5916  | 0.2068  | -439.9329 |
| 3607 | 1   | Extremo | -12.899 | 332.318  | 0.122  | 52.5916  | 0.1455  | -601.7364 |
| 3608 | 0   | Extremo | -3.349  | -189.769 | 4.188  | -46.1514 | 0.8615  | -730.4827 |
| 3608 | 0.5 | Extremo | -3.349  | -170.884 | 4.188  | -46.1514 | -1.2326 | -640.3192 |
| 3608 | 1   | Extremo | -3.349  | -151.999 | 4.188  | -46.1514 | -3.3266 | -559.5982 |
| 3608 | 0   | Extremo | -13.403 | -198.772 | 0.404  | -58.821  | 0.2577  | -604.3999 |
| 3608 | 0.5 | Extremo | -13.403 | -179.887 | 0.404  | -58.821  | 0.0556  | -509.7352 |
| 3608 | 1   | Extremo | -13.403 | -161.002 | 0.404  | -58.821  | -0.1465 | -424.5129 |
| 3609 | 0   | Extremo | -2.698  | -255.987 | 4.426  | -12.7141 | 0.9156  | -520.286  |
| 3609 | 0.5 | Extremo | -2.698  | -237.102 | 4.426  | -12.7141 | -1.2975 | -397.0135 |
| 3609 | 1   | Extremo | -2.698  | -218.217 | 4.426  | -12.7141 | -3.5106 | -283.1835 |
| 3609 | 0   | Extremo | -13.015 | -261.786 | 0.815  | -27.6298 | 0.4683  | -385.711  |
| 3609 | 0.5 | Extremo | -13.015 | -242.901 | 0.815  | -27.6298 | 0.0606  | -259.5392 |
| 3609 | 1   | Extremo | -13.015 | -224.016 | 0.815  | -27.6298 | -0.3471 | -142.81   |
| 3610 | 0   | Extremo | -1.934  | -201.922 | 4.684  | 15.0062  | 0.965   | -262.5423 |
| 3610 | 0.5 | Extremo | -1.934  | -183.037 | 4.684  | 15.0062  | -1.3769 | -166.3023 |

|      |     |         |         |          |        |         |          |           |
|------|-----|---------|---------|----------|--------|---------|----------|-----------|
| 3610 | 1   | Extremo | -1.934  | -164.152 | 4.684  | 15.0062 | -3.7187  | -79.5048  |
| 3610 | 0   | Extremo | -12.074 | -205.25  | 1.231  | -1.0418 | 0.6731   | -123.5841 |
| 3610 | 0.5 | Extremo | -12.074 | -186.365 | 1.231  | -1.0418 | 0.0575   | -25.6804  |
| 3610 | 1   | Extremo | -12.074 | -167.48  | 1.231  | -1.0418 | -0.5581  | 62.7807   |
| 3611 | 0   | Extremo | -0.899  | -125.268 | 5.056  | 27.4753 | 1.0768   | -67.9185  |
| 3611 | 0.5 | Extremo | -0.899  | -106.383 | 5.056  | 27.4753 | -1.4514  | -10.0057  |
| 3611 | 1   | Extremo | -0.899  | -87.498  | 5.056  | 27.4753 | -3.9795  | 38.4645   |
| 3611 | 0   | Extremo | -10.692 | -127.576 | 1.677  | 10.7382 | 0.8794   | 72.9925   |
| 3611 | 0.5 | Extremo | -10.692 | -108.691 | 1.677  | 10.7382 | 0.041    | 132.0591  |
| 3611 | 1   | Extremo | -10.692 | -89.806  | 1.677  | 10.7382 | -0.7974  | 181.6833  |
| 3612 | 0   | Extremo | 0.517   | -42.656  | 5.569  | 30.9365 | 1.2543   | 45.013    |
| 3612 | 0.5 | Extremo | 0.517   | -23.771  | 5.569  | 30.9365 | -1.5302  | 61.6196   |
| 3612 | 1   | Extremo | 0.517   | -4.886   | 5.569  | 30.9365 | -4.3148  | 68.7837   |
| 3612 | 0   | Extremo | -8.856  | -44.962  | 2.197  | 13.6705 | 1.1141   | 187.2168  |
| 3612 | 0.5 | Extremo | -8.856  | -26.077  | 2.197  | 13.6705 | 0.0158   | 204.9763  |
| 3612 | 1   | Extremo | -8.856  | -7.192   | 2.197  | 13.6705 | -1.0825  | 213.2934  |
| 3613 | 0   | Extremo | 2.434   | 42.238   | 6.27   | 30.743  | 1.5045   | 71.6159   |
| 3613 | 0.5 | Extremo | 2.434   | 61.123   | 6.27   | 30.743  | -1.6303  | 45.7757   |
| 3613 | 1   | Extremo | 2.434   | 80.008   | 6.27   | 30.743  | -4.7652  | 10.4931   |
| 3613 | 0   | Extremo | -6.479  | 39.51    | 2.853  | 12.7972 | 1.4083   | 215.7291  |
| 3613 | 0.5 | Extremo | -6.479  | 58.395   | 2.853  | 12.7972 | -0.0182  | 191.2528  |
| 3613 | 1   | Extremo | -6.479  | 77.28    | 2.853  | 12.7972 | -1.4448  | 157.3341  |
| 3614 | 0   | Extremo | 5.026   | 128.257  | 7.318  | 32.2795 | 1.7936   | 10.354    |
| 3614 | 0.5 | Extremo | 5.026   | 148.38   | 7.318  | 32.2795 | -1.8654  | -58.8053  |
| 3614 | 1   | Extremo | 5.026   | 168.502  | 7.318  | 32.2795 | -5.5244  | -138.0258 |
| 3614 | 0   | Extremo | -3.409  | 125.814  | 3.815  | 12.527  | 1.7839   | 157.5732  |
| 3614 | 0.5 | Extremo | -3.409  | 145.937  | 3.815  | 12.527  | -0.1235  | 89.6353   |
| 3614 | 1   | Extremo | -3.409  | 166.059  | 3.815  | 12.527  | -2.0309  | 11.6363   |
| 3615 | 0   | Extremo | 8.604   | 227.607  | 8.437  | 27.9186 | 2.2997   | -139.7287 |
| 3615 | 0.5 | Extremo | 8.604   | 247.73   | 8.437  | 27.9186 | -1.9186  | -258.5629 |
| 3615 | 1   | Extremo | 8.604   | 267.852  | 8.437  | 27.9186 | -6.137   | -387.4583 |
| 3615 | 0   | Extremo | 0.711   | 225.855  | 4.933  | 8.7362  | 2.3072   | 9.5818    |
| 3615 | 0.5 | Extremo | 0.711   | 245.978  | 4.933  | 8.7362  | -0.1594  | -108.3764 |
| 3615 | 1   | Extremo | 0.711   | 266.1    | 4.933  | 8.7362  | -2.626   | -236.3958 |
| 3616 | 0   | Extremo | 13.269  | 328.475  | 9.784  | 23.7166 | 2.834    | -389.4792 |
| 3616 | 0.5 | Extremo | 13.269  | 348.598  | 9.784  | 23.7166 | -2.0578  | -558.7474 |
| 3616 | 1   | Extremo | 13.269  | 368.72   | 9.784  | 23.7166 | -6.9497  | -738.0769 |
| 3616 | 0   | Extremo | 5.931   | 326.919  | 6.267  | 5.0858  | 2.8816   | -239.1719 |
| 3616 | 0.5 | Extremo | 5.931   | 347.041  | 6.267  | 5.0858  | -0.2519  | -407.6619 |
| 3616 | 1   | Extremo | 5.931   | 367.164  | 6.267  | 5.0858  | -3.3855  | -586.2131 |
| 3617 | 0   | Extremo | 19.34   | 431.949  | 11.51  | 22.2784 | 3.5371   | -741.1705 |
| 3617 | 0.5 | Extremo | 19.34   | 452.072  | 11.51  | 22.2784 | -2.218   | -962.1756 |
| 3617 | 1   | Extremo | 19.34   | 472.194  | 11.51  | 22.2784 | -7.9731  | -1193.242 |
| 3617 | 0   | Extremo | 12.574  | 430.021  | 7.936  | 3.8256  | 3.6097   | -590.0146 |
| 3617 | 0.5 | Extremo | 12.574  | 450.143  | 7.936  | 3.8256  | -0.3583  | -810.0555 |
| 3617 | 1   | Extremo | 12.574  | 470.266  | 7.936  | 3.8256  | -4.3263  | -1040.158 |
| 3618 | 0   | Extremo | 27.239  | 537.965  | 13.798 | 25.4268 | 4.4843   | -1201.552 |
| 3618 | 0.5 | Extremo | 27.239  | 558.088  | 13.798 | 25.4268 | -2.4147  | -1475.565 |
| 3618 | 1   | Extremo | 27.239  | 578.21   | 13.798 | 25.4268 | -9.3136  | -1759.639 |
| 3618 | 0   | Extremo | 21.065  | 535.472  | 10.115 | 6.6367  | 4.578    | -1048.724 |
| 3618 | 0.5 | Extremo | 21.065  | 555.594  | 10.115 | 6.6367  | -0.4795  | -1321.491 |
| 3618 | 1   | Extremo | 21.065  | 575.717  | 10.115 | 6.6367  | -5.5369  | -1604.319 |
| 3619 | 0   | Extremo | 37.582  | 639.144  | 17.229 | 28.9529 | 5.6587   | -1778.079 |
| 3619 | 0.5 | Extremo | 37.582  | 660.841  | 17.229 | 28.9529 | -2.9557  | -2103.075 |
| 3619 | 1   | Extremo | 37.582  | 682.539  | 17.229 | 28.9529 | -11.5702 | -2438.92  |
| 3619 | 0   | Extremo | 32.014  | 636.929  | 13.391 | 8.274   | 5.8351   | -1622.345 |



|      |     |         |           |           |          |          |           |           |
|------|-----|---------|-----------|-----------|----------|----------|-----------|-----------|
| 3622 | 1   | Extremo | 94.172    | 1010.043  | 30.404   | 5.7467   | -18.8456  | -5103.51  |
| 3622 | 0   | Extremo | 90.875    | 965.535   | 26.3     | -13.4811 | 11.7314   | -3956.58  |
| 3622 | 0.5 | Extremo | 90.875    | 987.232   | 26.3     | -13.4811 | -1.4188   | -4444.771 |
| 3622 | 1   | Extremo | 90.875    | 1008.93   | 26.3     | -13.4811 | -14.569   | -4943.812 |
| 3623 | 0   | Extremo | 126.196   | 1087.725  | 36.342   | 9.1739   | 14.3537   | -5111.73  |
| 3623 | 0.5 | Extremo | 126.196   | 1109.423  | 36.342   | 9.1739   | -3.8173   | -5661.017 |
| 3623 | 1   | Extremo | 126.196   | 1131.12   | 36.342   | 9.1739   | -21.9883  | -6221.152 |
| 3623 | 0   | Extremo | 123.84    | 1086.345  | 32.006   | -10.0442 | 14.4723   | -4952.729 |
| 3623 | 0.5 | Extremo | 123.84    | 1108.042  | 32.006   | -10.0442 | -1.5306   | -5501.326 |
| 3623 | 1   | Extremo | 123.84    | 1129.74   | 32.006   | -10.0442 | -17.5334  | -6060.772 |
| 3624 | 0   | Extremo | 170.097   | 1215.334  | 42.947   | 22.3692  | 17.7228   | -6241.28  |
| 3624 | 0.5 | Extremo | 170.097   | 1237.031  | 42.947   | 22.3692  | -3.7508   | -6854.371 |
| 3624 | 1   | Extremo | 170.097   | 1258.729  | 42.947   | 22.3692  | -25.2243  | -7478.311 |
| 3624 | 0   | Extremo | 168.881   | 1213.712  | 38.276   | 2.7271   | 17.7555   | -6081.265 |
| 3624 | 0.5 | Extremo | 168.881   | 1235.409  | 38.276   | 2.7271   | -1.3825   | -6693.546 |
| 3624 | 1   | Extremo | 168.881   | 1257.107  | 38.276   | 2.7271   | -20.5205  | -7316.675 |
| 3625 | 0   | Extremo | 233.028   | 1328.082  | 50.094   | 28.3861  | 21.2202   | -7520.675 |
| 3625 | 0.5 | Extremo | 233.028   | 1351.13   | 50.094   | 28.3861  | -3.8268   | -8190.478 |
| 3625 | 1   | Extremo | 233.028   | 1374.177  | 50.094   | 28.3861  | -28.8738  | -8871.805 |
| 3625 | 0   | Extremo | 233.232   | 1326.979  | 44.972   | 6.9412   | 21.19     | -7358.929 |
| 3625 | 0.5 | Extremo | 233.232   | 1350.026  | 44.972   | 6.9412   | -1.2959   | -8028.18  |
| 3625 | 1   | Extremo | 233.232   | 1373.074  | 44.972   | 6.9412   | -23.7818  | -8708.955 |
| 3626 | 0   | Extremo | 331.854   | 1430.127  | 53.286   | 12.2362  | 25.095    | -8900.522 |
| 3626 | 0.5 | Extremo | 331.854   | 1453.175  | 53.286   | 12.2362  | -1.5479   | -9621.348 |
| 3626 | 1   | Extremo | 331.854   | 1476.222  | 53.286   | 12.2362  | -28.1907  | -10353.7  |
| 3626 | 0   | Extremo | 334.005   | 1430.171  | 47.743   | -9.4595  | 24.867    | -8737.981 |
| 3626 | 0.5 | Extremo | 334.005   | 1453.218  | 47.743   | -9.4595  | 0.9955    | -9458.828 |
| 3626 | 1   | Extremo | 334.005   | 1476.266  | 47.743   | -9.4595  | -22.876   | -10191.2  |
| 3627 | 0   | Extremo | 490.246   | 1534.987  | 45.095   | 6.0036   | 24.6193   | -10363.71 |
| 3627 | 0.5 | Extremo | 490.246   | 1558.035  | 45.095   | 6.0036   | 2.0718    | -11136.96 |
| 3627 | 1   | Extremo | 490.246   | 1581.082  | 45.095   | 6.0036   | -20.4757  | -11921.74 |
| 3627 | 0   | Extremo | 494.881   | 1536.759  | 39.052   | -16.5069 | 24.1874   | -10201.53 |
| 3627 | 0.5 | Extremo | 494.881   | 1559.807  | 39.052   | -16.5069 | 4.6615    | -10975.68 |
| 3627 | 1   | Extremo | 494.881   | 1582.854  | 39.052   | -16.5069 | -14.8644  | -11761.34 |
| 3628 | 0   | Extremo | 765.318   | 1672.439  | -6.26    | 18.9466  | 12.8113   | -11913.79 |
| 3628 | 0.5 | Extremo | 765.318   | 1695.486  | -6.26    | 18.9466  | 15.9415   | -12755.77 |
| 3628 | 1   | Extremo | 765.318   | 1718.534  | -6.26    | 18.9466  | 19.0717   | -13609.28 |
| 3628 | 0   | Extremo | 773.02    | 1677.747  | -12.864  | -5.6415  | 12.2076   | -11753.43 |
| 3628 | 0.5 | Extremo | 773.02    | 1700.795  | -12.864  | -5.6415  | 18.6395   | -12598.07 |
| 3628 | 1   | Extremo | 773.02    | 1723.842  | -12.864  | -5.6415  | 25.0715   | -13454.23 |
| 3629 | 0   | Extremo | 1271.616  | 1948.342  | -264.001 | 81.5472  | 11.6985   | -13591.33 |
| 3629 | 0.5 | Extremo | 1271.616  | 1971.389  | -264.001 | 81.5472  | 143.6988  | -14571.27 |
| 3629 | 1   | Extremo | 1271.616  | 1994.437  | -264.001 | 81.5472  | 275.6991  | -15562.72 |
| 3629 | 0   | Extremo | 1282.504  | 1961.268  | -270.989 | 52.5512  | 11.4042   | -13436.48 |
| 3629 | 0.5 | Extremo | 1282.504  | 1984.316  | -270.989 | 52.5512  | 146.8985  | -14422.88 |
| 3629 | 1   | Extremo | 1282.504  | 2007.363  | -270.989 | 52.5512  | 282.3929  | -15420.8  |
| 3631 | 0   | Extremo | -6808.02  | -2694.875 | -307.543 | 22.3563  | -328.5785 | -16723.11 |
| 3631 | 0.5 | Extremo | -6808.02  | -2671.828 | -307.543 | 22.3563  | -174.8069 | -15381.44 |
| 3631 | 1   | Extremo | -6808.02  | -2648.78  | -307.543 | 22.3563  | -21.0353  | -14051.28 |
| 3631 | 0   | Extremo | -6773.492 | -2651.589 | -309.806 | -23.4232 | -328.0628 | -16602.76 |
| 3631 | 0.5 | Extremo | -6773.492 | -2628.541 | -309.806 | -23.4232 | -173.16   | -15282.73 |
| 3631 | 1   | Extremo | -6773.492 | -2605.494 | -309.806 | -23.4232 | -18.2573  | -13974.22 |
| 3632 | 0   | Extremo | -6263.72  | -2295.622 | -11.378  | 100.5299 | -25.995   | -14041.06 |
| 3632 | 0.5 | Extremo | -6263.72  | -2272.575 | -11.378  | 100.5299 | -20.3063  | -12899.01 |
| 3632 | 1   | Extremo | -6263.72  | -2249.527 | -11.378  | 100.5299 | -14.6175  | -11768.48 |
| 3632 | 0   | Extremo | -6226.739 | -2251.712 | -13.773  | 50.6987  | -25.8803  | -13967.56 |
| 3632 | 0.5 | Extremo | -6226.739 | -2228.664 | -13.773  | 50.6987  | -18.9937  | -12847.47 |
| 3632 | 1   | Extremo | -6226.739 | -2205.617 | -13.773  | 50.6987  | -12.1072  | -11738.9  |
| 3633 | 0   | Extremo | -5963.017 | -2124.977 | 50.257   | 123.0228 | 21.3392   | -11769.98 |
| 3633 | 0.5 | Extremo | -5963.017 | -2101.929 | 50.257   | 123.0228 | -3.7892   | -10713.25 |
| 3633 | 1   | Extremo | -5963.017 | -2078.882 | 50.257   | 123.0228 | -28.9176  | -9668.051 |
| 3633 | 0   | Extremo | -5923.82  | -2079.495 | 48.457   | 69.9769  | 21.7035   | -11743.39 |
| 3633 | 0.5 | Extremo | -5923.82  | -2056.447 | 48.457   | 69.9769  | -2.5248   | -10709.41 |
| 3633 | 1   | Extremo | -5923.82  | -2033.4   | 48.457   | 69.9769  | -26.7531  | -9686.946 |
| 3634 | 0   | Extremo | -5783.246 | -2011.387 | 63.192   | 124.1779 | 31.7269   | -9648.445 |
| 3634 | 0.5 | Extremo | -5783.246 | -1988.339 | 63.192   | 124.1779 | 0.1309    | -8648.513 |
| 3634 | 1   | Extremo | -5783.246 | -1965.292 | 63.192   | 124.1779 | -31.4651  | -7660.106 |
| 3634 | 0   | Extremo | -5742.483 | -1964.905 | 62.009   | 68.7964  | 32.3707   | -9670.349 |
| 3634 | 0.5 | Extremo | -5742.483 | -1941.857 | 62.009   | 68.7964  | 1.3661    | -8693.658 |
| 3634 | 1   | Extremo | -5742.483 | -1918.81  | 62.009   | 68.7964  | -29.6385  | -7728.492 |
| 3635 | 0   | Extremo | -5663.473 | -1901.996 | 62.557   | 114.485  | 34.3599   | -7621.397 |
| 3635 | 0.5 | Extremo | -5663.473 | -1878.948 | 62.557   | 114.485  | 3.0814    | -6676.161 |

|      |     |         |           |           |        |          |          |           |
|------|-----|---------|-----------|-----------|--------|----------|----------|-----------|
| 3635 | 1   | Extremo | -5663.473 | -1855.901 | 62.557 | 114.485  | -28.197  | -5742.449 |
| 3635 | 0   | Extremo | -5621.745 | -1855.533 | 61.917 | 57.716   | 35.2393  | -7692.588 |
| 3635 | 0.5 | Extremo | -5621.745 | -1832.486 | 61.917 | 57.716   | 4.2809   | -6770.583 |
| 3635 | 1   | Extremo | -5621.745 | -1809.438 | 61.917 | 57.716   | -26.6776 | -5860.102 |
| 3636 | 0   | Extremo | -5581.356 | -1781.874 | 57.169 | 113.5459 | 32.7752  | -5695.95  |
| 3636 | 0.5 | Extremo | -5581.356 | -1760.176 | 57.169 | 113.5459 | 4.1906   | -4810.437 |
| 3636 | 1   | Extremo | -5581.356 | -1738.479 | 57.169 | 113.5459 | -24.394  | -3935.773 |
| 3636 | 0   | Extremo | -5539.134 | -1736.073 | 56.937 | 59.9436  | 33.824   | -5815.419 |
| 3636 | 0.5 | Extremo | -5539.134 | -1714.376 | 56.937 | 59.9436  | 5.3554   | -4952.807 |
| 3636 | 1   | Extremo | -5539.134 | -1692.678 | 56.937 | 59.9436  | -23.1132 | -4101.043 |
| 3637 | 0   | Extremo | -5515.629 | -1655.741 | 52.846 | 124.8793 | 31.0022  | -3906.617 |
| 3637 | 0.5 | Extremo | -5515.629 | -1634.043 | 52.846 | 124.8793 | 4.5794   | -3084.171 |
| 3637 | 1   | Extremo | -5515.629 | -1612.346 | 52.846 | 124.8793 | -21.8434 | -2272.573 |
| 3637 | 0   | Extremo | -5473.252 | -1609.63  | 52.879 | 70.9573  | 32.163   | -4073.975 |
| 3637 | 0.5 | Extremo | -5473.252 | -1587.933 | 52.879 | 70.9573  | 5.7233   | -3274.584 |
| 3637 | 1   | Extremo | -5473.252 | -1566.235 | 52.879 | 70.9573  | -20.7164 | -2486.042 |
| 3638 | 0   | Extremo | -5460.378 | -1534.725 | 48.49  | 128.5421 | 28.391   | -2250.599 |
| 3638 | 0.5 | Extremo | -5460.378 | -1513.028 | 48.49  | 128.5421 | 4.1462   | -1488.661 |
| 3638 | 1   | Extremo | -5460.378 | -1491.33  | 48.49  | 128.5421 | -20.0986 | -737.5719 |
| 3638 | 0   | Extremo | -5418.054 | -1488.224 | 48.731 | 73.8577  | 29.6483  | -2466.571 |
| 3638 | 0.5 | Extremo | -5418.054 | -1466.526 | 48.731 | 73.8577  | 5.283    | -1727.883 |
| 3638 | 1   | Extremo | -5418.054 | -1444.829 | 48.731 | 73.8577  | -19.0824 | -1000.044 |
| 3639 | 0   | Extremo | -5411.708 | -1415.985 | 45.067 | 127.9932 | 25.9817  | -714.3838 |
| 3639 | 0.5 | Extremo | -5411.708 | -1394.288 | 45.067 | 127.9932 | 3.4483   | -11.8156  |
| 3639 | 1   | Extremo | -5411.708 | -1372.59  | 45.067 | 127.9932 | -19.0851 | 679.9038  |
| 3639 | 0   | Extremo | -5369.574 | -1369.61  | 45.473 | 72.2696  | 27.317   | -979.6717 |
| 3639 | 0.5 | Extremo | -5369.574 | -1347.913 | 45.473 | 72.2696  | 4.5805   | -300.291  |
| 3639 | 1   | Extremo | -5369.574 | -1326.215 | 45.473 | 72.2696  | -18.156  | 368.2409  |
| 3640 | 0   | Extremo | -5366.83  | -1291.068 | 42.401 | 129.8895 | 24.0017  | 705.0504  |
| 3640 | 0.5 | Extremo | -5366.83  | -1269.371 | 42.401 | 129.8895 | 2.8014   | 1345.1602 |
| 3640 | 1   | Extremo | -5366.83  | -1247.673 | 42.401 | 129.8895 | -18.3989 | 1974.4212 |
| 3640 | 0   | Extremo | -5324.981 | -1245.904 | 42.943 | 72.5139  | 25.3975  | 390.5669  |
| 3640 | 0.5 | Extremo | -5324.981 | -1224.206 | 42.943 | 72.5139  | 3.9262   | 1008.0945 |
| 3640 | 1   | Extremo | -5324.981 | -1202.509 | 42.943 | 72.5139  | -17.545  | 1614.7733 |
| 3641 | 0   | Extremo | -5324.647 | -1156.981 | 38.736 | 136.5704 | 22.6734  | 1993.8371 |
| 3641 | 0.5 | Extremo | -5324.647 | -1135.283 | 38.736 | 136.5704 | 3.3054   | 2566.9031 |
| 3641 | 1   | Extremo | -5324.647 | -1113.586 | 38.736 | 136.5704 | -16.0626 | 3129.1204 |
| 3641 | 0   | Extremo | -5283.135 | -1114.259 | 39.396 | 77.5398  | 24.1131  | 1632.3417 |
| 3641 | 0.5 | Extremo | -5283.135 | -1092.561 | 39.396 | 77.5398  | 4.4153   | 2184.0466 |
| 3641 | 1   | Extremo | -5283.135 | -1070.864 | 39.396 | 77.5398  | -15.2824 | 2724.9028 |
| 3642 | 0   | Extremo | -5289.132 | -1044.974 | 34.691 | 127.3109 | 21.2538  | 3130.4585 |
| 3642 | 0.5 | Extremo | -5289.132 | -1024.852 | 34.691 | 127.3109 | 3.9082   | 3647.9152 |
| 3642 | 1   | Extremo | -5289.132 | -1004.729 | 34.691 | 127.3109 | -13.4375 | 4155.3105 |
| 3642 | 0   | Extremo | -5247.927 | -1003.7   | 35.389 | 73.4414  | 22.6531  | 2726.5927 |
| 3642 | 0.5 | Extremo | -5247.927 | -983.577  | 35.389 | 73.4414  | 4.9588   | 3223.412  |
| 3642 | 1   | Extremo | -5247.927 | -963.455  | 35.389 | 73.4414  | -12.7356 | 3710.17   |
| 3643 | 0   | Extremo | -5254     | -949.594  | 32.975 | 118.668  | 20.5509  | 4166.8274 |
| 3643 | 0.5 | Extremo | -5254     | -929.472  | 32.975 | 118.668  | 4.0634   | 4636.5939 |
| 3643 | 1   | Extremo | -5254     | -909.349  | 32.    |          |          |           |



|      |     |         |           |          |         |           |         |           |
|------|-----|---------|-----------|----------|---------|-----------|---------|-----------|
| 3647 | 1   | Extremo | -5139.239 | -455.302 | 20.832  | 133.3608  | -5.9949 | 7668.0836 |
| 3647 | 0   | Extremo | -5098.688 | -459.36  | 21.328  | 83.4283   | 16.0172 | 6580.2921 |
| 3647 | 0.5 | Extremo | -5098.688 | -440.475 | 21.328  | 83.4283   | 5.3532  | 6805.2507 |
| 3647 | 1   | Extremo | -5098.688 | -421.59  | 21.328  | 83.4283   | -5.3109 | 7020.7667 |
| 3648 | 0   | Extremo | -5119.402 | -431.744 | 17.677  | 104.6098  | 13.5536 | 7660.3062 |
| 3648 | 0.5 | Extremo | -5119.402 | -412.859 | 17.677  | 104.6098  | 4.7151  | 7871.4568 |
| 3648 | 1   | Extremo | -5119.402 | -393.974 | 17.677  | 104.6098  | -4.1234 | 8073.165  |
| 3648 | 0   | Extremo | -5078.429 | -398.437 | 18.028  | 60.1713   | 14.6359 | 7010.6841 |
| 3648 | 0.5 | Extremo | -5078.429 | -379.552 | 18.028  | 60.1713   | 5.6217  | 7205.1811 |
| 3648 | 1   | Extremo | -5078.429 | -360.667 | 18.028  | 60.1713   | -3.3924 | 7390.2357 |
| 3649 | 0   | Extremo | -5103.88  | -362.601 | 13.706  | 81.6581   | 11.404  | 8083.6789 |
| 3649 | 0.5 | Extremo | -5103.88  | -343.716 | 13.706  | 81.6581   | 4.5509  | 8260.2582 |
| 3649 | 1   | Extremo | -5103.88  | -324.831 | 13.706  | 81.6581   | -2.3022 | 8427.395  |
| 3649 | 0   | Extremo | -5062.076 | -332.448 | 13.912  | 44.5463   | 12.3965 | 7395.5663 |
| 3649 | 0.5 | Extremo | -5062.076 | -313.563 | 13.912  | 44.5463   | 5.4407  | 7557.0692 |
| 3649 | 1   | Extremo | -5062.076 | -294.678 | 13.912  | 44.5463   | -1.5151 | 7709.1296 |
| 3650 | 0   | Extremo | -5093.388 | -277.324 | 9.62    | 61.8681   | 9.1927  | 8442.3412 |
| 3650 | 0.5 | Extremo | -5093.388 | -258.439 | 9.62    | 61.8681   | 4.383   | 8576.2819 |
| 3650 | 1   | Extremo | -5093.388 | -239.554 | 9.62    | 61.8681   | -0.4268 | 8700.78   |
| 3650 | 0   | Extremo | -5050.215 | -256.013 | 9.711   | 36.375    | 10.0952 | 7717.0609 |
| 3650 | 0.5 | Extremo | -5050.215 | -237.128 | 9.711   | 36.375    | 5.2396  | 7840.3463 |
| 3650 | 1   | Extremo | -5050.215 | -218.243 | 9.711   | 36.375    | 0.3841  | 7954.1893 |
| 3651 | 0   | Extremo | -5087.747 | -176.765 | 5.667   | 37.8461   | 7.1978  | 8714.2407 |
| 3651 | 0.5 | Extremo | -5087.747 | -157.88  | 5.667   | 37.8461   | 4.3641  | 8797.9021 |
| 3651 | 1   | Extremo | -5087.747 | -138.995 | 5.667   | 37.8461   | 1.5304  | 8872.1209 |
| 3651 | 0   | Extremo | -5042.635 | -173.517 | 5.759   | 31.4124   | 7.9845  | 7960.1691 |
| 3651 | 0.5 | Extremo | -5042.635 | -154.632 | 5.759   | 31.4124   | 5.1052  | 8042.2064 |
| 3651 | 1   | Extremo | -5042.635 | -135.747 | 5.759   | 31.4124   | 2.2259  | 8114.8012 |
| 3652 | 0   | Extremo | -5086.295 | -63.085  | 1.89    | 5.3533    | 5.5518  | 8878.7777 |
| 3652 | 0.5 | Extremo | -5086.295 | -44.2    | 1.89    | 5.3533    | 4.6067  | 8905.599  |
| 3652 | 1   | Extremo | -5086.295 | -25.315  | 1.89    | 5.3533    | 3.6617  | 8922.9778 |
| 3652 | 0   | Extremo | -5038.976 | -88.516  | 2.035   | 27.3557   | 6.056   | 8118.0283 |
| 3652 | 0.5 | Extremo | -5038.976 | -69.631  | 2.035   | 27.3557   | 5.0385  | 8157.565  |
| 3652 | 1   | Extremo | -5038.976 | -50.746  | 2.035   | 27.3557   | 4.0209  | 8187.6592 |
| 3653 | 0   | Extremo | -5088.576 | 51.313   | -1.74   | -27.0006  | 4.0439  | 8919.3809 |
| 3653 | 0.5 | Extremo | -5088.576 | 70.198   | -1.74   | -27.0006  | 4.914   | 8889.0031 |
| 3653 | 1   | Extremo | -5088.576 | 89.083   | -1.74   | -27.0006  | 5.784   | 8849.1828 |
| 3653 | 0   | Extremo | -5039.01  | -2.878   | -1.603  | 23.4382   | 4.2344  | 8188.1734 |
| 3653 | 0.5 | Extremo | -5039.01  | 16.007   | -1.603  | 23.4382   | 5.036   | 8184.891  |
| 3653 | 1   | Extremo | -5039.01  | 34.892   | -1.603  | 23.4382   | 5.8377  | 8172.1661 |
| 3654 | 0   | Extremo | -5094.362 | 154.666  | -5.512  | -50.1049  | 2.3365  | 8838.8522 |
| 3654 | 0.5 | Extremo | -5094.362 | 173.551  | -5.512  | -50.1049  | 5.0925  | 8756.7982 |
| 3654 | 1   | Extremo | -5094.362 | 192.436  | -5.512  | -50.1049  | 7.8485  | 8665.3016 |
| 3654 | 0   | Extremo | -5042.738 | 82.094   | -5.329  | 19.3338   | 2.4336  | 8169.9334 |
| 3654 | 0.5 | Extremo | -5042.738 | 100.979  | -5.329  | 19.3338   | 5.0979  | 8124.1652 |
| 3654 | 1   | Extremo | -5042.738 | 119.864  | -5.329  | 19.3338   | 7.7621  | 8068.9545 |
| 3655 | 0   | Extremo | -5103.588 | 246.671  | -9.628  | -66.5157  | 0.4424  | 8652.6203 |
| 3655 | 0.5 | Extremo | -5103.588 | 265.556  | -9.628  | -66.5157  | 5.2565  | 8524.5633 |
| 3655 | 1   | Extremo | -5103.588 | 284.441  | -9.628  | -66.5157  | 10.0706 | 8387.0639 |
| 3655 | 0   | Extremo | -5050.387 | 164.458  | -9.284  | 14.1971   | 0.5852  | 8063.8708 |
| 3655 | 0.5 | Extremo | -5050.387 | 183.343  | -9.284  | 14.1971   | 5.2275  | 7976.9206 |
| 3655 | 1   | Extremo | -5050.387 | 202.228  | -9.284  | 14.1971   | 9.8697  | 7880.5279 |
| 3656 | 0   | Extremo | -5116.656 | 327.365  | -14.021 | -81.4358  | -1.5423 | 8373.8157 |
| 3656 | 0.5 | Extremo | -5116.656 | 346.25   | -14.021 | -81.4358  | 5.4684  | 8205.4117 |
| 3656 | 1   | Extremo | -5116.656 | 365.135  | -14.021 | -81.4358  | 12.4791 | 8027.5652 |
| 3656 | 0   | Extremo | -5062.318 | 240.446  | -13.491 | 5.5198    | -1.3216 | 7873.3702 |
| 3656 | 0.5 | Extremo | -5062.318 | 259.331  | -13.491 | 5.5198    | 5.4238  | 7748.4259 |
| 3656 | 1   | Extremo | -5062.318 | 278.216  | -13.491 | 5.5198    | 12.1691 | 7614.0391 |
| 3657 | 0   | Extremo | -5133.899 | 394.265  | -18.319 | -101.4192 | -3.5035 | 8018.5183 |
| 3657 | 0.5 | Extremo | -5133.899 | 413.15   | -18.319 | -101.4192 | 5.6562  | 7816.6645 |
| 3657 | 1   | Extremo | -5133.899 | 432.035  | -18.319 | -101.4192 | 14.8158 | 7605.3682 |
| 3657 | 0   | Extremo | -5078.742 | 305.288  | -17.615 | -11.2522  | -3.2076 | 7609.5287 |
| 3657 | 0.5 | Extremo | -5078.742 | 324.173  | -17.615 | -11.2522  | 5.6     | 7452.1635 |
| 3657 | 1   | Extremo | -5078.742 | 343.058  | -17.615 | -11.2522  | 14.4076 | 7285.3558 |
| 3658 | 0   | Extremo | -5154.838 | 454.52   | -21.772 | -128.3227 | -5.4966 | 7614.1128 |
| 3658 | 0.5 | Extremo | -5154.838 | 473.405  | -21.772 | -128.3227 | 5.3893  | 7382.1317 |
| 3658 | 1   | Extremo | -5154.838 | 492.29   | -21.772 | -128.3227 | 16.2752 | 7140.7081 |
| 3658 | 0   | Extremo | -5099.074 | 364.213  | -20.925 | -35.8949  | -5.1366 | 7296.9892 |
| 3658 | 0.5 | Extremo | -5099.074 | 383.098  | -20.925 | -35.8949  | 5.3259  | 7110.1614 |
| 3658 | 1   | Extremo | -5099.074 | 401.983  | -20.925 | -35.8949  | 15.7884 | 6913.8912 |
| 3659 | 0   | Extremo | -5177.7   | 545.68   | -26.052 | -141.4147 | -8.4578 | 7177.584  |
| 3659 | 0.5 | Extremo | -5177.7   | 565.802  | -26.052 | -141.4147 | 4.5683  | 6899.7134 |

|      |     |         |           |          |         |           |          |           |
|------|-----|---------|-----------|----------|---------|-----------|----------|-----------|
| 3659 | 1   | Extremo | -5177.7   | 585.925  | -26.052 | -141.4147 | 17.5944  | 6611.7815 |
| 3659 | 0   | Extremo | -5121.481 | 452.063  | -25.07  | -39.9962  | -8.0407  | 6952.3794 |
| 3659 | 0.5 | Extremo | -5121.481 | 472.185  | -25.07  | -39.9962  | 4.4943   | 6721.3175 |
| 3659 | 1   | Extremo | -5121.481 | 492.308  | -25.07  | -39.9962  | 17.0294  | 6480.1943 |
| 3660 | 0   | Extremo | -5206.431 | 681.64   | -29.81  | -119.5509 | -10.7348 | 6614.7908 |
| 3660 | 0.5 | Extremo | -5206.431 | 701.763  | -29.81  | -119.5509 | 4.17     | 6268.9401 |
| 3660 | 1   | Extremo | -5206.431 | 721.885  | -29.81  | -119.5509 | 19.0747  | 5913.0282 |
| 3660 | 0   | Extremo | -5149.797 | 585.05   | -28.723 | -19.3173  | -10.2607 | 6486.7088 |
| 3660 | 0.5 | Extremo | -5149.797 | 605.172  | -28.723 | -19.3173  | 4.1007   | 6189.1534 |
| 3660 | 1   | Extremo | -5149.797 | 625.295  | -28.723 | -19.3173  | 18.462   | 5881.5366 |
| 3661 | 0   | Extremo | -5237.709 | 803.678  | -32.304 | -109.36   | -11.5011 | 5894.9054 |
| 3661 | 0.5 | Extremo | -5237.709 | 823.801  | -32.304 | -109.36   | 4.651    | 5488.0357 |
| 3661 | 1   | Extremo | -5237.709 | 843.923  | -32.304 | -109.36   | 20.8031  | 5071.1048 |
| 3661 | 0   | Extremo | -5180.716 | 705.659  | -31.148 | -11.3566  | -11.006  | 5867.1543 |
| 3661 | 0.5 | Extremo | -5180.716 | 725.781  | -31.148 | -11.3566  | 4.5682   | 5509.2943 |
| 3661 | 1   | Extremo | -5180.716 | 745.904  | -31.148 | -11.3566  | 20.1424  | 5141.373  |
| 3662 | 0   | Extremo | -5271.12  | 906.721  | -34.554 | -111.7253 | -12.1376 | 5051.4261 |
| 3662 | 0.5 | Extremo | -5271.12  | 926.843  | -34.554 | -111.7253 | 5.1394   | 4593.0352 |
| 3662 | 1   | Extremo | -5271.12  | 946.966  | -34.554 | -111.7253 | 22.4163  | 4124.583  |
| 3662 | 0   | Extremo | -5213.805 | 807.66   | -33.348 | -16.074   | -11.633  | 5125.1011 |
| 3662 | 0.5 | Extremo | -5213.805 | 827.782  | -33.348 | -16.074   | 5.0412   | 4716.2407 |
| 3662 | 1   | Extremo | -5213.805 | 847.905  | -33.348 | -16.074   | 21.7154  | 4297.319  |
| 3663 | 0   | Extremo | -5306.309 | 1002.155 | -36.372 | -120.2213 | -13.1662 | 4113.2901 |
| 3663 | 0.5 | Extremo | -5306.309 | 1022.277 | -36.372 | -120.2213 | 5.0199   | 3607.1821 |
| 3663 | 1   | Extremo | -5306.309 | 1042.4   | -36.372 | -120.2213 | 23.206   | 3091.0128 |
| 3663 | 0   | Extremo | -5248.695 | 901.203  | -35.135 | -26.3176  | -12.6567 | 4289.5881 |
| 3663 | 0.5 | Extremo | -5248.695 | 921.326  | -35.135 | -26.3176  | 4.9106   | 3833.9558 |
| 3663 | 1   | Extremo | -5248.695 | 941.448  | -35.135 | -26.3176  | 22.4779  | 3368.2623 |
| 3664 | 0   | Extremo | -5341.847 | 1110.83  | -40.501 | -128.7494 | -15.7601 | 3089.7014 |
| 3664 | 0.5 | Extremo | -5341.847 | 1132.528 | -40.501 | -128.7494 | 4.4904   | 2528.8619 |
| 3664 | 1   | Extremo | -5341.847 | 1154.225 | -40.501 | -128.7494 | 24.7409  | 1957.1736 |
| 3664 | 0   | Extremo | -5283.96  | 1006.94  | -39.212 | -26.3828  | -15.2465 | 3371.7822 |
| 3664 | 0.5 | Extremo | -5283.96  | 1028.638 | -39.212 | -26.3828  | 4.3597   | 2862.8878 |
| 3664 | 1   | Extremo | -5283.96  | 1050.335 | -39.212 | -26.3828  | 23.9658  | 2343.1446 |
| 3665 | 0   | Extremo | -5384.048 | 1244.674 | -44.164 | -122.2233 | -18.0869 | 1938.0076 |
| 3665 | 0.5 | Extremo | -5384.048 | 1266.371 | -44.164 | -122.2233 | 3.9953   | 1310.2463 |
| 3665 | 1   | Extremo | -5384.048 | 1288.069 | -44.164 | -122.2233 | 26.0774  | 671.6362  |
| 3665 | 0   | Extremo | -5325.845 | 1140.575 | -42.859 | -19.9077  | -17.5556 | 2329.4108 |
| 3665 | 0.5 | Extremo | -5325.845 | 1162.273 | -42.859 | -19.9077  | 3.8739   | 1753.6989 |
| 3665 | 1   | Extremo | -5325.845 | 1183.97  | -42.859 | -19.9077  | 25.3035  | 1167.1382 |
| 3666 | 0   | Extremo | -5428.974 | 1369.494 | -46.807 | -120.5231 | -18.7372 | 646.8306  |
| 3666 | 0.5 | Extremo | -5428.974 | 1391.192 | -46.807 | -120.5231 | 4.6662   | -43.3408  |
| 3666 | 1   | Extremo | -5428.974 | 1412.889 | -46.807 | -120.5231 | 28.0696  | -744.3609 |
| 3666 | 0   | Extremo | -5370.437 | 1266.294 | -45.519 | -19.8027  | -18.2289 | 1146.8531 |
| 3666 | 0.5 | Extremo | -5370.437 | 1287.992 | -45.519 | -19.8027  | 4.5307   | 508.2817  |
| 3666 | 1   | Extremo | -5370.437 | 1309.689 | -45.519 | -19.8027  | 27.2904  | -141.1384 |
| 3667 | 0   | Extremo | -5477.763 | 1488.264 | -50.203 | -121.2184 | -19.7134 | -767.209  |
| 3667 | 0.5 | Extremo | -5477.763 | 1509.961 | -50.203 | -121.2184 | 5.3882   | -1516.765 |
| 3667 | 1   | Extremo | -5477.763 | 1531.659 | -50.203 | -121.2184 | 30.4897  | -277.17   |



|      |     |         |           |           |         |           |           |           |
|------|-----|---------|-----------|-----------|---------|-----------|-----------|-----------|
| 3671 | 1   | Extremo | -5803.241 | 2008.765  | -64.456 | -117.1876 | 33.7099   | -9662.553 |
| 3671 | 0   | Extremo | -5741.006 | 1868.34   | -63.86  | -31.121   | -30.5984  | -6631.742 |
| 3671 | 0.5 | Extremo | -5741.006 | 1891.388  | -63.86  | -31.121   | 1.3314    | -7571.674 |
| 3671 | 1   | Extremo | -5741.006 | 1914.435  | -63.86  | -31.121   | 33.2612   | -8523.129 |
| 3672 | 0   | Extremo | -5985.044 | 2076.73   | -51.1   | -116.7383 | -27.9982  | -9681.614 |
| 3672 | 0.5 | Extremo | -5985.044 | 2099.778  | -51.1   | -116.7383 | -2.4481   | -10725.74 |
| 3672 | 1   | Extremo | -5985.044 | 2122.825  | -51.1   | -116.7383 | 23.102    | -11781.39 |
| 3672 | 0   | Extremo | -5920.56  | 1994.035  | -51.138 | -42.6982  | -28.1127  | -8534.517 |
| 3672 | 0.5 | Extremo | -5920.56  | 2017.083  | -51.138 | -42.6982  | -2.5437   | -9537.297 |
| 3672 | 1   | Extremo | -5920.56  | 2040.13   | -51.138 | -42.6982  | 23.0254   | -10551.6  |
| 3673 | 0   | Extremo | -6289.103 | 2248.192  | 11.401  | -95.3055  | -13.3893  | -11779.12 |
| 3673 | 0.5 | Extremo | -6289.103 | 2271.24   | 11.401  | -95.3055  | -19.09    | -12908.97 |
| 3673 | 1   | Extremo | -6289.103 | 2294.287  | 11.401  | -95.3055  | -24.7907  | -14050.36 |
| 3673 | 0   | Extremo | -6220.643 | 2178.974  | 9.983   | -40.4056  | -13.8993  | -10542.71 |
| 3673 | 0.5 | Extremo | -6220.643 | 2202.022  | 9.983   | -40.4056  | -18.8907  | -11637.96 |
| 3673 | 1   | Extremo | -6220.643 | 2225.069  | 9.983   | -40.4056  | -23.8821  | -12744.74 |
| 3674 | 0   | Extremo | -6838.927 | 2648.971  | 310.282 | -18.4899  | -19.7374  | -14059.01 |
| 3674 | 0.5 | Extremo | -6838.927 | 2672.019  | 310.282 | -18.4899  | -174.8786 | -15389.26 |
| 3674 | 1   | Extremo | -6838.927 | 2695.066  | 310.282 | -18.4899  | -330.0199 | -16731.03 |
| 3674 | 0   | Extremo | -6763.134 | 2588.215  | 304.899 | 8.7695    | -20.1094  | -12745.67 |
| 3674 | 0.5 | Extremo | -6763.134 | 2611.262  | 304.899 | 8.7695    | -172.5592 | -14045.54 |
| 3674 | 1   | Extremo | -6763.134 | 2634.31   | 304.899 | 8.7695    | -325.0089 | -15356.93 |
| 3676 | 0   | Extremo | 1305.499  | -2031.531 | 270.561 | -85.1597  | 283.1412  | -15612.26 |
| 3676 | 0.5 | Extremo | 1305.499  | -2008.484 | 270.561 | -85.1597  | 147.8606  | -14602.26 |
| 3676 | 1   | Extremo | 1305.499  | -1985.436 | 270.561 | -85.1597  | 12.5801   | -13603.78 |
| 3676 | 0   | Extremo | 1286.009  | -1992.992 | 264.382 | -91.2689  | 277.7162  | -14466.21 |
| 3676 | 0.5 | Extremo | 1286.009  | -1969.944 | 264.382 | -91.2689  | 145.5253  | -13475.47 |
| 3676 | 1   | Extremo | 1286.009  | -1946.897 | 264.382 | -91.2689  | 13.3343   | -12496.26 |
| 3677 | 0   | Extremo | 793.289   | -1749.631 | 9.891   | -23.1079  | 23.2084   | -13622.23 |
| 3677 | 0.5 | Extremo | 793.289   | -1726.583 | 9.891   | -23.1079  | 18.2628   | -12753.17 |
| 3677 | 1   | Extremo | 793.289   | -1703.536 | 9.891   | -23.1079  | 13.3172   | -11895.64 |
| 3677 | 0   | Extremo | 781.716   | -1703.253 | 6.801   | -37.8991  | 21.0816   | -12520.97 |
| 3677 | 0.5 | Extremo | 781.716   | -1680.206 | 6.801   | -37.8991  | 17.681    | -11675.11 |
| 3677 | 1   | Extremo | 781.716   | -1657.158 | 6.801   | -37.8991  | 14.2804   | -10840.77 |
| 3678 | 0   | Extremo | 514.285   | -1610.181 | -42.239 | -10.8014  | -16.9687  | -11904.06 |
| 3678 | 0.5 | Extremo | 514.285   | -1587.133 | -42.239 | -10.8014  | 4.1509    | -11104.73 |
| 3678 | 1   | Extremo | 514.285   | -1564.086 | -42.239 | -10.8014  | 25.2705   | -10316.92 |
| 3678 | 0   | Extremo | 507.607   | -1559.534 | -44.329 | -30.6675  | -18.3531  | -10852.81 |
| 3678 | 0.5 | Extremo | 507.607   | -1536.487 | -44.329 | -30.6675  | 3.8113    | -10078.8  |
| 3678 | 1   | Extremo | 507.607   | -1513.439 | -44.329 | -30.6675  | 25.9757   | -9316.319 |
| 3679 | 0   | Extremo | 353.196   | -1504.442 | -50.722 | -17.4108  | -24.9031  | -10307.02 |
| 3679 | 0.5 | Extremo | 353.196   | -1481.394 | -50.722 | -17.4108  | 0.458     | -9560.563 |
| 3679 | 1   | Extremo | 353.196   | -1458.347 | -50.722 | -17.4108  | 25.8191   | -8825.628 |
| 3679 | 0   | Extremo | 349.59    | -1449.96  | -52.343 | -39.7846  | -25.9875  | -9309.363 |
| 3679 | 0.5 | Extremo | 349.59    | -1426.912 | -52.343 | -39.7846  | 0.1841    | -8590.145 |
| 3679 | 1   | Extremo | 349.59    | -1403.865 | -52.343 | -39.7846  | 26.3557   | -7882.451 |
| 3680 | 0   | Extremo | 252.404   | -1401.762 | -47.669 | -33.6089  | -25.6954  | -8796.957 |
| 3680 | 0.5 | Extremo | 252.404   | -1378.714 | -47.669 | -33.6089  | -1.8612   | -8101.838 |
| 3680 | 1   | Extremo | 252.404   | -1355.667 | -47.669 | -33.6089  | 21.9731   | -7418.243 |
| 3680 | 0   | Extremo | 250.815   | -1344.056 | -49.017 | -56.2761  | -26.6191  | -7857.576 |
| 3680 | 0.5 | Extremo | 250.815   | -1321.009 | -49.017 | -56.2761  | -2.1105   | -7191.309 |
| 3680 | 1   | Extremo | 250.815   | -1297.961 | -49.017 | -56.2761  | 22.398    | -6536.567 |
| 3681 | 0   | Extremo | 188.065   | -1286.091 | -40.667 | -27.2929  | -22.2273  | -7376.096 |
| 3681 | 0.5 | Extremo | 188.065   | -1263.043 | -40.667 | -27.2929  | -1.8936   | -6738.475 |
| 3681 | 1   | Extremo | 188.065   | -1240.096 | -40.667 | -27.2929  | 18.4401   | -6111.703 |
| 3681 | 0   | Extremo | 187.779   | -1228.597 | -41.831 | -49.7089  | -23.0124  | -6499.345 |
| 3681 | 0.5 | Extremo | 187.779   | -1206.899 | -41.831 | -49.7089  | -2.0971   | -5890.471 |
| 3681 | 1   | Extremo | 187.779   | -1185.202 | -41.831 | -49.7089  | 18.8181   | -5292.446 |
| 3682 | 0   | Extremo | 143.026   | -1158.474 | -34.174 | -14.3691  | -19.1025  | -6091.494 |
| 3682 | 0.5 | Extremo | 143.026   | -1136.777 | -34.174 | -14.3691  | -2.0156   | -5517.682 |
| 3682 | 1   | Extremo | 143.026   | -1115.079 | -34.174 | -14.3691  | 15.0713   | -4954.718 |
| 3682 | 0   | Extremo | 143.654   | -1102.854 | -35.232 | -39.196   | -19.8127  | -5274.552 |
| 3682 | 0.5 | Extremo | 143.654   | -1081.157 | -35.232 | -39.196   | -2.1966   | -4728.549 |
| 3682 | 1   | Extremo | 143.654   | -1059.459 | -35.232 | -39.196   | 15.4194   | -4193.395 |
| 3683 | 0   | Extremo | 110.046   | -1037.272 | -28.298 | -11.1604  | -16.027   | -4946.17  |
| 3683 | 0.5 | Extremo | 110.046   | -1015.574 | -28.298 | -11.1604  | -1.878    | -4432.959 |
| 3683 | 1   | Extremo | 110.046   | -993.877  | -28.298 | -11.1604  | 12.2709   | -3930.596 |
| 3683 | 0   | Extremo | 111.342   | -982.699  | -29.293 | -37.457   | -16.6885  | -4185.716 |
| 3683 | 0.5 | Extremo | 111.342   | -961.001  | -29.293 | -37.457   | -2.042    | -3699.791 |
| 3683 | 1   | Extremo | 111.342   | -939.304  | -29.293 | -37.457   | 12.6045   | -3224.715 |
| 3684 | 0   | Extremo | 85.162    | -924.393  | -23.194 | -15.336   | -13.2115  | -3923.581 |
| 3684 | 0.5 | Extremo | 85.162    | -902.695  | -23.194 | -15.336   | -1.6143   | -3466.809 |

|      |     |         |        |          |         |          |          |           |
|------|-----|---------|--------|----------|---------|----------|----------|-----------|
| 3684 | 1   | Extremo | 85.162 | -880.998 | -23.194 | -15.336  | 9.9828   | -3020.886 |
| 3684 | 0   | Extremo | 86.967 | -869.57  | -24.152 | -42.1201 | -13.8399 | -3218.3   |
| 3684 | 0.5 | Extremo | 86.967 | -847.873 | -24.152 | -42.1201 | -1.7637  | -2788.939 |
| 3684 | 1   | Extremo | 86.967 | -826.175 | -24.152 | -42.1201 | 10.3124  | -2370.427 |
| 3685 | 0   | Extremo | 66.025 | -815.814 | -18.883 | -23.6464 | -10.7789 | -3010.949 |
| 3685 | 0.5 | Extremo | 66.025 | -794.116 | -18.883 | -23.6464 | -1.3376  | -2608.466 |
| 3685 | 1   | Extremo | 66.025 | -772.419 | -18.883 | -23.6464 | 8.1037   | -2216.833 |
| 3685 | 0   | Extremo | 68.232 | -759.613 | -19.82  | -50.0423 | -11.3853 | -2361.585 |
| 3685 | 0.5 | Extremo | 68.232 | -737.916 | -19.82  | -50.0423 | -1.4753  | -1987.202 |
| 3685 | 1   | Extremo | 68.232 | -716.218 | -19.82  | -50.0423 | 8.4347   | -1623.669 |
| 3686 | 0   | Extremo | 51.088 | -706.962 | -15.104 | -33.2074 | -8.8206  | -2201.265 |
| 3686 | 0.5 | Extremo | 51.088 | -685.265 | -15.104 | -33.2074 | -1.2685  | -1853.208 |
| 3686 | 1   | Extremo | 51.088 | -663.567 | -15.104 | -33.2074 | 6.2836   | -1516     |
| 3686 | 0   | Extremo | 53.624 | -649.194 | -16.026 | -58.1929 | -9.4201  | -1610.748 |
| 3686 | 0.5 | Extremo | 53.624 | -627.497 | -16.026 | -58.1929 | -1.407   | -1291.576 |
| 3686 | 1   | Extremo | 53.624 | -605.799 | -16.026 | -58.1929 | 6.606    | -983.2517 |
| 3687 | 0   | Extremo | 40.094 | -602.455 | -11.736 | -29.1685 | -6.7013  | -1498.818 |
| 3687 | 0.5 | Extremo | 40.094 | -582.332 | -11.736 | -29.1685 | -0.8331  | -1202.621 |
| 3687 | 1   | Extremo | 40.094 | -562.21  | -11.736 | -29.1685 | 5.0352   | -916.4854 |
| 3687 | 0   | Extremo | 42.888 | -545.902 | -12.632 | -52.3154 | -7.257   | -970.0589 |
| 3687 | 0.5 | Extremo | 42.888 | -525.779 | -12.632 | -52.3154 | -0.941   | -702.1386 |
| 3687 | 1   | Extremo | 42.888 | -505.657 | -12.632 | -52.3154 | 5.375    | -444.2796 |
| 3688 | 0   | Extremo | 31.541 | -497.01  | -9.521  | -26.6718 | -5.4471  | -908.3996 |
| 3688 | 0.5 | Extremo | 31.541 | -476.887 | -9.521  | -26.6718 | -0.6865  | -664.9254 |
| 3688 | 1   | Extremo | 31.541 | -456.765 | -9.521  | -26.6718 | 4.0741   | -431.5126 |
| 3688 | 0   | Extremo | 34.552 | -442.788 | -10.409 | -51.6636 | -5.9843  | -437.8934 |
| 3688 | 0.5 | Extremo | 34.552 | -422.666 | -10.409 | -51.6636 | -0.78    | -221.5299 |
| 3688 | 1   | Extremo | 34.552 | -402.543 | -10.409 | -51.6636 | 4.4244   | -15.2276  |
| 3689 | 0   | Extremo | 24.816 | -393.513 | -7.843  | -28.2853 | -4.4784  | -428.0295 |
| 3689 | 0.5 | Extremo | 24.816 | -373.39  | -7.843  | -28.2853 | -0.5571  | -236.3036 |
| 3689 | 1   | Extremo | 24.816 | -353.268 | -7.843  | -28.2853 | 3.3642   | -54.6391  |
| 3689 | 0   | Extremo | 28.016 | -340.556 | -8.73   | -54.4285 | -5.0029  | -12.3414  |
| 3689 | 0.5 | Extremo | 28.016 | -320.434 | -8.73   | -54.4285 | -0.6381  | 152.9062  |
| 3689 | 1   | Extremo | 28.016 | -300.311 | -8.73   | -54.4285 | 3.7268   | 308.0925  |
| 3690 | 0   | Extremo | 19.486 | -291.554 | -6.522  | -31.7697 | -3.7041  | -52.4269  |
| 3690 | 0.5 | Extremo | 19.486 | -271.432 | -6.522  | -31.7697 | -0.4431  | 88.3195   |
| 3690 | 1   | Extremo | 19.486 | -251.309 | -6.522  | -31.7697 | 2.8179   | 219.0048  |
| 3690 | 0   | Extremo | 22.853 | -238.695 | -7.415  | -58.0626 | -4.2203  | 309.5314  |
| 3690 | 0.5 | Extremo | 22.853 | -218.572 | -7.415  | -58.0626 | -0.5128  | 423.8481  |
| 3690 | 1   | Extremo | 22.853 | -198.45  | -7.415  | -58.0626 | 3.1946   | 528.1036  |
| 3691 | 0   | Extremo | 15.217 | -190.532 | -5.428  | -34.4958 | -3.1171  | 219.5469  |
| 3691 | 0.5 | Extremo | 15.217 | -170.41  | -5.428  | -34.4958 | -0.4031  | 309.7824  |
| 3691 | 1   | Extremo | 15.217 | -150.287 | -5.428  | -34.4958 | 2.3109   | 389.9565  |
| 3691 | 0   | Extremo | 18.73  | -137.565 | -6.33   | -60.0319 | -3.6362  | 526.8384  |
| 3691 | 0.5 | Extremo | 18.73  | -117.443 | -6.33   | -60.0319 | -0.471   | 590.5903  |
| 3691 | 1   | Extremo | 18.73  | -97.32   | -6.33   | -60.0319 | 2.6942   | 644.281   |
| 3692 | 0   | Extremo | 11.959 | -102.361 | -4.478  | -32.2915 | -2.4863  | 387.1125  |
| 3692 | 0.5 | Extremo | 11.959 | -82.239  | -4.478  | -32.2915 | -0.2472  | 433.5717  |
| 3692 | 1   | Extremo | 11.959 | -62.117  | -4.478  | -32.2915 | 1.9918   | 470.5884  |
| 3692 | 0   | Extremo | 15.586 | -50.836  | -5.388  | -55.6606 | -2.9788  | 638.8059  |
| 3692 | 0.5 | Extremo | 15.586 | -31.951  | -5.388  | -55.6606 | -0.2849  | 65        |



|      |     |         |        |          |        |          |           |           |
|------|-----|---------|--------|----------|--------|----------|-----------|-----------|
| 3696 | 1   | Extremo | 3.182  | 193.246  | -3.055 | -7.2132  | 1.7573    | 17.3613   |
| 3696 | 0   | Extremo | 5.95   | 190.407  | -4.534 | -24.1334 | -1.8229   | 241.9607  |
| 3696 | 0.5 | Extremo | 5.95   | 209.292  | -4.534 | -24.1334 | 0.4441    | 142.036   |
| 3696 | 1   | Extremo | 5.95   | 228.177  | -4.534 | -24.1334 | 2.7112    | 32.6687   |
| 3697 | 0   | Extremo | 1.083  | -6.111   | -1.697 | -34.329  | -0.5869   | 7.2424    |
| 3697 | 0.5 | Extremo | 1.083  | 12.774   | -1.697 | -34.329  | 0.2614    | 5.5767    |
| 3697 | 1   | Extremo | 1.083  | 31.659   | -1.697 | -34.329  | 1.1097    | -5.5315   |
| 3697 | 0   | Extremo | 1.967  | 5.46     | -2.625 | -48.5744 | -0.9595   | 19.821    |
| 3697 | 0.5 | Extremo | 1.967  | 24.345   | -2.625 | -48.5744 | 0.3532    | 12.3695   |
| 3697 | 1   | Extremo | 1.967  | 43.23    | -2.625 | -48.5744 | 1.6659    | -4.5244   |
| 3698 | 0   | Extremo | -0.76  | 158.424  | -0.017 | -1.0162  | 0.0172    | 42.5971   |
| 3698 | 0.5 | Extremo | -0.76  | 175.846  | -0.017 | -1.0162  | 0.0255    | -40.9703  |
| 3698 | 1   | Extremo | -0.76  | 193.269  | -0.017 | -1.0162  | 0.0338    | -133.249  |
| 3698 | 0   | Extremo | 2.059  | 158.414  | -0.037 | -1.0162  | -0.0271   | 42.5941   |
| 3698 | 0.5 | Extremo | 2.059  | 175.836  | -0.037 | -1.0162  | -0.0084   | -40.9684  |
| 3698 | 1   | Extremo | 2.059  | 193.259  | -0.037 | -1.0162  | 0.0103    | -133.2422 |
| 3699 | 0   | Extremo | 2.219  | -321.671 | 0.212  | -2.4541  | 0.1273    | -131.2111 |
| 3699 | 0.5 | Extremo | 2.219  | -304.248 | 0.212  | -2.4541  | 0.0214    | 25.2687   |
| 3699 | 1   | Extremo | 2.219  | -286.826 | 0.212  | -2.4541  | -0.0845   | 173.0371  |
| 3699 | 0   | Extremo | -6.354 | -321.639 | -0.098 | -2.454   | -0.0472   | -131.2042 |
| 3699 | 0.5 | Extremo | -6.354 | -304.216 | -0.098 | -2.454   | 0.0018    | 25.2595   |
| 3699 | 1   | Extremo | -6.354 | -286.794 | -0.098 | -2.454   | 0.0508    | 173.012   |
| 3700 | 0   | Extremo | 1.574  | -132.543 | 0.161  | -2.8664  | 0.0763    | 137.5438  |
| 3700 | 0.5 | Extremo | 1.574  | -115.12  | 0.161  | -2.8664  | -0.0043   | 199.4597  |
| 3700 | 1   | Extremo | 1.574  | -97.698  | 0.161  | -2.8664  | -0.0848   | 252.6642  |
| 3700 | 0   | Extremo | -4.654 | -132.52  | -0.044 | -2.8662  | -0.0114   | 137.5216  |
| 3700 | 0.5 | Extremo | -4.654 | -115.097 | -0.044 | -2.8662  | 0.0108    | 199.426   |
| 3700 | 1   | Extremo | -4.654 | -97.675  | -0.044 | -2.8662  | 0.033     | 252.6191  |
| 3701 | 0   | Extremo | 1.214  | -43.11   | 0.157  | -2.1882  | 0.0722    | 239.9892  |
| 3701 | 0.5 | Extremo | 1.214  | -25.688  | 0.157  | -2.1882  | -0.0065   | 257.1887  |
| 3701 | 1   | Extremo | 1.214  | -8.265   | 0.157  | -2.1882  | -0.0851   | 265.6769  |
| 3701 | 0   | Extremo | -3.761 | -43.089  | -0.033 | -2.188   | -0.0087   | 239.9451  |
| 3701 | 0.5 | Extremo | -3.761 | -25.666  | -0.033 | -2.188   | 0.0079    | 257.1339  |
| 3701 | 1   | Extremo | -3.761 | -8.244   | -0.033 | -2.188   | 0.0246    | 265.6113  |
| 3702 | 0   | Extremo | 0.987  | 29.062   | 0.158  | -1.4681  | 0.0704    | 262.8559  |
| 3702 | 0.5 | Extremo | 0.987  | 46.484   | 0.158  | -1.4681  | -0.0084   | 243.9694  |
| 3702 | 1   | Extremo | 0.987  | 63.907   | 0.158  | -1.4681  | -0.0872   | 216.3717  |
| 3702 | 0   | Extremo | -3.248 | 29.083   | -0.033 | -1.4679  | -0.0093   | 262.7906  |
| 3702 | 0.5 | Extremo | -3.248 | 46.506   | -0.033 | -1.4679  | 0.0071    | 243.8934  |
| 3702 | 1   | Extremo | -3.248 | 63.928   | -0.033 | -1.4679  | 0.0236    | 216.2851  |
| 3703 | 0   | Extremo | 0.814  | 99.131   | 0.159  | -0.5245  | 0.0688    | 215.7134  |
| 3703 | 0.5 | Extremo | 0.814  | 116.553  | 0.159  | -0.5245  | -0.0105   | 161.7923  |
| 3703 | 1   | Extremo | 0.814  | 133.976  | 0.159  | -0.5245  | -0.0899   | 99.16     |
| 3703 | 0   | Extremo | -2.895 | 99.152   | -0.036 | -0.5242  | -0.0099   | 215.6268  |
| 3703 | 0.5 | Extremo | -2.895 | 116.575  | -0.036 | -0.5242  | 0.0078    | 161.695   |
| 3703 | 1   | Extremo | -2.895 | 133.997  | -0.036 | -0.5242  | 0.0256    | 99.052    |
| 3704 | 0   | Extremo | 0.647  | 168.063  | 0.16   | 1.7406   | 0.0676    | 100.2421  |
| 3704 | 0.5 | Extremo | 0.647  | 185.485  | 0.16   | 1.7406   | -0.0125   | 11.855    |
| 3704 | 1   | Extremo | 0.647  | 202.908  | 0.16   | 1.7406   | -0.0926   | -85.2433  |
| 3704 | 0   | Extremo | -2.566 | 168.084  | -0.04  | 1.7412   | -0.0111   | 100.1343  |
| 3704 | 0.5 | Extremo | -2.566 | 185.507  | -0.04  | 1.7412   | 0.0087    | 11.7366   |
| 3704 | 1   | Extremo | -2.566 | 202.929  | -0.04  | 1.7412   | 0.0285    | -85.3723  |
| 3705 | 0   | Extremo | 0.441  | 241.258  | 0.163  | 5.8418   | 0.0676    | -74.5051  |
| 3705 | 0.5 | Extremo | 0.441  | 258.68   | 0.163  | 5.8418   | -0.0138   | -199.4895 |
| 3705 | 1   | Extremo | 0.441  | 276.103  | 0.163  | 5.8418   | -0.0952   | -333.1851 |
| 3705 | 0   | Extremo | -2.135 | 241.279  | -0.046 | 5.8427   | -0.0139   | -74.6331  |
| 3705 | 0.5 | Extremo | -2.135 | 258.701  | -0.046 | 5.8427   | 0.0089    | -199.6281 |
| 3705 | 1   | Extremo | -2.135 | 276.124  | -0.046 | 5.8427   | 0.0317    | -333.3345 |
| 3706 | 0   | Extremo | 0.126  | 371.149  | 0.167  | 9.6781   | 0.07      | -286.1902 |
| 3706 | 0.5 | Extremo | 0.126  | 388.571  | 0.167  | 9.6781   | -0.0134   | -476.1203 |
| 3706 | 1   | Extremo | 0.126  | 405.994  | 0.167  | 9.6781   | -0.0967   | -674.7616 |
| 3706 | 0   | Extremo | -1.417 | 371.175  | -0.056 | 9.6791   | -0.0199   | -286.3355 |
| 3706 | 0.5 | Extremo | -1.417 | 388.598  | -0.056 | 9.6791   | 0.0081    | -476.2788 |
| 3706 | 1   | Extremo | -1.417 | 406.02   | -0.056 | 9.6791   | 0.0361    | -674.9334 |
| 3707 | 0   | Extremo | -0.425 | 830.396  | 0.125  | 8.7397   | 0.078     | -549.55   |
| 3707 | 0.5 | Extremo | -0.425 | 847.818  | 0.125  | 8.7397   | 0.0153    | -969.1034 |
| 3707 | 1   | Extremo | -0.425 | 865.241  | 0.125  | 8.7397   | -0.0474   | -1397.368 |
| 3707 | 0   | Extremo | -0.059 | 830.454  | -0.059 | 8.7403   | -0.0284   | -549.7113 |
| 3707 | 0.5 | Extremo | -0.059 | 847.877  | -0.059 | 8.7403   | 0.0009327 | -969.294  |
| 3707 | 1   | Extremo | -0.059 | 865.299  | -0.059 | 8.7403   | 0.0302    | -1397.588 |
| 3708 | 0   | Extremo | 2.337  | -946.377 | 0.435  | 4.4602   | 0.2281    | -1396.356 |
| 3708 | 0.5 | Extremo | 2.337  | -928.955 | 0.435  | 4.4602   | 0.0104    | -927.5228 |

|      |     |         |        |          |          |         |         |           |
|------|-----|---------|--------|----------|----------|---------|---------|-----------|
| 3708 | 1   | Extremo | 2.337  | -911.532 | 0.435    | 4.4602  | -0.2072 | -467.4012 |
| 3708 | 0   | Extremo | -7.982 | -946.469 | -0.151   | 4.4599  | -0.0696 | -1396.576 |
| 3708 | 0.5 | Extremo | -7.982 | -929.047 | -0.151   | 4.4599  | 0.0059  | -927.6266 |
| 3708 | 1   | Extremo | -7.982 | -911.624 | -0.151   | 4.4599  | 0.0813  | -467.5288 |
| 3709 | 0   | Extremo | 1.774  | -487.006 | 0.384    | 3.2624  | 0.1661  | -590.5622 |
| 3709 | 0.5 | Extremo | 1.774  | -469.584 | 0.384    | 3.2624  | -0.0259 | -351.4147 |
| 3709 | 1   | Extremo | 1.774  | -452.161 | 0.384    | 3.2624  | -0.218  | -120.9286 |
| 3709 | 0   | Extremo | -6.634 | -487.066 | -0.126   | 3.2617  | -0.0455 | -590.7001 |
| 3709 | 0.5 | Extremo | -6.634 | -469.644 | -0.126   | 3.2617  | 0.0175  | -351.5226 |
| 3709 | 1   | Extremo | -6.634 | -452.221 | -0.126   | 3.2617  | 0.0804  | -121.0564 |
| 3710 | 0   | Extremo | 1.437  | -356.819 | 0.382    | 6.5006  | 0.1585  | -165.8438 |
| 3710 | 0.5 | Extremo | 1.437  | -339.396 | 0.382    | 6.5006  | -0.0327 | 8.21      |
| 3710 | 1   | Extremo | 1.437  | -322.974 | 0.382    | 6.5006  | -0.2239 | 173.5526  |
| 3710 | 0   | Extremo | -5.941 | -356.874 | -0.121   | 6.5001  | -0.0416 | -165.9256 |
| 3710 | 0.5 | Extremo | -5.941 | -339.451 | -0.121   | 6.5001  | 0.0187  | 8.1558    |
| 3710 | 1   | Extremo | -5.941 | -322.029 | -0.121   | 6.5001  | 0.0789  | 173.5259  |
| 3711 | 0   | Extremo | 1.209  | -283.037 | 0.383    | 9.4858  | 0.1532  | 165.0656  |
| 3711 | 0.5 | Extremo | 1.209  | -265.614 | 0.383    | 9.4858  | -0.0381 | 302.2283  |
| 3711 | 1   | Extremo | 1.209  | -248.192 | 0.383    | 9.4858  | -0.2295 | 430.6798  |
| 3711 | 0   | Extremo | -5.564 | -283.091 | -0.12    | 9.4855  | -0.0399 | 165.038   |
| 3711 | 0.5 | Extremo | -5.564 | -265.669 | -0.12    | 9.4855  | 0.0199  | 302.2281  |
| 3711 | 1   | Extremo | -5.564 | -248.246 | -0.12    | 9.4855  | 0.0796  | 430.7069  |
| 3712 | 0   | Extremo | 1.033  | -212.981 | 0.383    | 9.8139  | 0.1481  | 431.9145  |
| 3712 | 0.5 | Extremo | 1.033  | -195.558 | 0.383    | 9.8139  | -0.0434 | 534.0493  |
| 3712 | 1   | Extremo | 1.033  | -178.136 | 0.383    | 9.8139  | -0.2348 | 627.4728  |
| 3712 | 0   | Extremo | -5.342 | -213.036 | -0.12    | 9.814   | -0.0382 | 431.9417  |
| 3712 | 0.5 | Extremo | -5.342 | -195.613 | -0.12    | 9.814   | 0.0216  | 534.1039  |
| 3712 | 1   | Extremo | -5.342 | -178.191 | -0.12    | 9.814   | 0.0814  | 627.5549  |
| 3713 | 0   | Extremo | 0.882  | -140.998 | 0.383    | 7.6226  | 0.1431  | 629.9603  |
| 3713 | 0.5 | Extremo | 0.882  | -123.576 | 0.383    | 7.6226  | -0.0485 | 696.1036  |
| 3713 | 1   | Extremo | 0.882  | -106.153 | 0.383    | 7.6226  | -0.2401 | 753.5358  |
| 3713 | 0   | Extremo | -5.197 | -141.053 | -0.12    | 7.6228  | -0.0365 | 630.0425  |
| 3713 | 0.5 | Extremo | -5.197 | -123.631 | -0.12    | 7.6228  | 0.0236  | 696.2134  |
| 3713 | 1   | Extremo | -5.197 | -106.208 | -0.12    | 7.6228  | 0.0836  | 753.6731  |
| 3714 | 0   | Extremo | 0.743  | -67.757  | 0.384    | 3.8561  | 0.1381  | 755.1962  |
| 3714 | 0.5 | Extremo | 0.743  | -50.335  | 0.384    | 3.8561  | -0.0536 | 784.7191  |
| 3714 | 1   | Extremo | 0.743  | -32.912  | 0.384    | 3.8561  | -0.2454 | 805.5308  |
| 3714 | 0   | Extremo | -5.089 | -67.812  | -0.121   | 3.8563  | -0.0348 | 755.3337  |
| 3714 | 0.5 | Extremo | -5.089 | -50.39   | -0.121   | 3.8563  | 0.0256  | 784.8842  |
| 3714 | 1   | Extremo | -5.089 | -32.967  | -0.121   | 3.8563  | 0.086   | 805.7234  |
| 3715 | 0   | Extremo | 0.608  | 5.962    | 0.384    | -0.5811 | 0.1332  | 805.9495  |
| 3715 | 0.5 | Extremo | 0.608  | 23.385   | 0.384    | -0.5811 | -0.0587 | 798.6127  |
| 3715 | 1   | Extremo | 0.608  | 40.807   | 0.384    | -0.5811 | -0.2507 | 782.5647  |
| 3715 | 0   | Extremo | -4.997 | 5.907    | -0.121   | -0.5809 | -0.0332 | 806.1424  |
| 3715 | 0.5 | Extremo | -4.997 | 23.33    | -0.121   | -0.5809 | 0.0276  | 798.8332  |
| 3715 | 1   | Extremo | -4.997 | 40.752   | -0.121   | -0.5809 | 0.0883  | 782.8126  |
| 3716 | 0   | Extremo | 0.471  | 79.618   | 0.384    | -4.92   | 0.1284  | 781.6798  |
| 3716 | 0.5 | Extremo | 0.471  | 97.04    | 0.384    | -4.92   | -0.0638 | 737.5154  |
| 3716 | 1   | Extremo | 0.471  | 114.463  | 0.384    | -4.92   | -0.2559 | 684.6397  |
| 3716 | 0   | Extremo | -4.904 | 79.563   | -0.122   | -4.92   | -0.0316 | 781.928   |
| 3716 | 0.5 | Extremo | -4.904 | 96.985   | -0.122   | -4.92   | 0.0296  | 737.7911  |
| 3716 | 1   | Extremo | -4.904 | 114.408  | -0.122   | -4.92   | 0.0908  | 684.9429  |
| 3717 | 0   | Extremo | 0.327  | 152.634  | 0.385    | -8.3559 | 0.1236  | 682.5016  |
| 3717 | 0.5 | Extremo | 0.327  | 170.057  | 0.385    | -8.3559 | -0.0688 | 601.8289  |
| 3717 | 1   | Extremo | 0.327  | 187.479  | 0.385    | -8.3559 | -0.2612 | 512.4449  |
| 3717 | 0   | Extremo | -4.797 | 152.579  | -0.123   | -8.3563 | -0.0301 | 682.8051  |
| 3717 | 0.5 | Extremo | -4.797 | 170.002  | -0.123   | -8.3563 | 0.0316  | 602.1597  |
| 3717 | 1   | Extremo | -4.797 | 187.424  | -0.123</ |         |         |           |



|      |     |         |        |           |        |         |         |            |
|------|-----|---------|--------|-----------|--------|---------|---------|------------|
| 3720 | 1   | Extremo | -0.273 | 401.559   | 0.388  | -3.7378 | -0.2761 | -418.1874  |
| 3720 | 0   | Extremo | -4.052 | 366.659   | -0.13  | -3.741  | -0.0287 | -33.5886   |
| 3720 | 0.5 | Extremo | -4.052 | 384.082   | -0.13  | -3.741  | 0.0362  | -221.2738  |
| 3720 | 1   | Extremo | -4.052 | 401.504   | -0.13  | -3.741  | 0.101   | -417.6702  |
| 3721 | 0   | Extremo | -0.644 | 505.158   | 0.391  | 1.3417  | 0.112   | -365.9163  |
| 3721 | 0.5 | Extremo | -0.644 | 522.58    | 0.391  | 1.3417  | -0.0836 | -622.8508  |
| 3721 | 1   | Extremo | -0.644 | 540.003   | 0.391  | 1.3417  | -0.2792 | -888.4967  |
| 3721 | 0   | Extremo | -3.359 | 505.086   | -0.138 | 1.338   | -0.0324 | -365.4126  |
| 3721 | 0.5 | Extremo | -3.359 | 522.509   | -0.138 | 1.338   | 0.0364  | -622.3114  |
| 3721 | 1   | Extremo | -3.359 | 539.931   | -0.138 | 1.338   | 0.1052  | -887.9215  |
| 3722 | 0   | Extremo | -1.259 | 1023.785  | 0.333  | 1.3894  | 0.1193  | -745.5094  |
| 3722 | 0.5 | Extremo | -1.259 | 1041.208  | 0.333  | 1.3894  | -0.047  | -1261.758  |
| 3722 | 1   | Extremo | -1.259 | 1058.63   | 0.333  | 1.3894  | -0.2133 | -1786.717  |
| 3722 | 0   | Extremo | -2.01  | 1023.606  | -0.143 | 1.3873  | -0.0379 | -744.969   |
| 3722 | 0.5 | Extremo | -2.01  | 1041.029  | -0.143 | 1.3873  | 0.0339  | -1261.128  |
| 3722 | 1   | Extremo | -2.01  | 1058.451  | -0.143 | 1.3873  | 0.1056  | -1785.998  |
| 3723 | 0   | Extremo | 1.432  | -1040.496 | 0.748  | -2.1665 | 0.3189  | -1786.789  |
| 3723 | 0.5 | Extremo | 1.432  | -1023.074 | 0.748  | -2.1665 | -0.0552 | -1270.896  |
| 3723 | 1   | Extremo | 1.432  | -1005.651 | 0.748  | -2.1665 | -0.4292 | -1763.715  |
| 3723 | 0   | Extremo | -9.937 | -1040.172 | -0.194 | -2.1659 | -0.0577 | -1786.07   |
| 3723 | 0.5 | Extremo | -9.937 | -1022.75  | -0.194 | -2.1659 | 0.0395  | -1270.34   |
| 3723 | 1   | Extremo | -9.937 | -1005.327 | -0.194 | -2.1659 | 0.1367  | -1763.3204 |
| 3724 | 0   | Extremo | 0.793  | -521.871  | 0.68   | -2.1162 | 0.2339  | -906.8464  |
| 3724 | 0.5 | Extremo | 0.793  | -504.448  | 0.68   | -2.1162 | -0.106  | -650.2668  |
| 3724 | 1   | Extremo | 0.793  | -487.026  | 0.68   | -2.1162 | -0.446  | -402.3984  |
| 3724 | 0   | Extremo | -8.586 | -521.653  | -0.173 | -2.1141 | -0.0389 | -906.4178  |
| 3724 | 0.5 | Extremo | -8.586 | -504.231  | -0.173 | -2.1141 | 0.0477  | -649.9466  |
| 3724 | 1   | Extremo | -8.586 | -486.808  | -0.173 | -2.1141 | 0.1343  | -402.1868  |
| 3725 | 0   | Extremo | 0.377  | -383.429  | 0.678  | 2.9691  | 0.2215  | -454.8148  |
| 3725 | 0.5 | Extremo | 0.377  | -366.007  | 0.678  | 2.9691  | -0.1173 | -267.4557  |
| 3725 | 1   | Extremo | 0.377  | -348.584  | 0.678  | 2.9691  | -0.4562 | -88.8079   |
| 3725 | 0   | Extremo | -7.887 | -383.229  | -0.166 | 2.9708  | -0.0338 | -454.5902  |
| 3725 | 0.5 | Extremo | -7.887 | -365.807  | -0.166 | 2.9708  | 0.0491  | -267.3312  |
| 3725 | 1   | Extremo | -7.887 | -348.384  | -0.166 | 2.9708  | 0.132   | -88.7835   |
| 3726 | 0   | Extremo | 0.067  | -310.039  | 0.677  | 7.6402  | 0.212   | -99.0112   |
| 3726 | 0.5 | Extremo | 0.067  | -292.617  | 0.677  | 7.6402  | -0.1268 | 51.6529    |
| 3726 | 1   | Extremo | 0.067  | -275.194  | 0.677  | 7.6402  | -0.4655 | -193.6056  |
| 3726 | 0   | Extremo | -7.502 | -309.84   | -0.163 | 7.6408  | -0.0308 | -98.9839   |
| 3726 | 0.5 | Extremo | -7.502 | -292.418  | -0.163 | 7.6408  | 0.0507  | 51.5805    |
| 3726 | 1   | Extremo | -7.502 | -274.995  | -0.163 | 7.6408  | 0.1323  | -193.4336  |
| 3727 | 0   | Extremo | -0.194 | -240.86   | 0.677  | 9.1396  | 0.2027  | 194.7856   |
| 3727 | 0.5 | Extremo | -0.194 | -223.438  | 0.677  | 9.1396  | -0.1359 | 310.8601   |
| 3727 | 1   | Extremo | -0.194 | -206.015  | 0.677  | 9.1396  | -0.4745 | 418.2234   |
| 3727 | 0   | Extremo | -7.272 | -240.66   | -0.162 | 9.1393  | -0.0279 | 194.6134   |
| 3727 | 0.5 | Extremo | -7.272 | -223.238  | -0.162 | 9.1393  | 0.053   | 310.588    |
| 3727 | 1   | Extremo | -7.272 | -205.815  | -0.162 | 9.1393  | 0.1339  | 417.8514   |
| 3728 | 0   | Extremo | -0.43  | -169.387  | 0.677  | 7.6505  | 0.1937  | 420.9962   |
| 3728 | 0.5 | Extremo | -0.43  | -151.964  | 0.677  | 7.6505  | -0.1449 | 501.3339   |
| 3728 | 1   | Extremo | -0.43  | -134.542  | 0.677  | 7.6505  | -0.4834 | 572.9604   |
| 3728 | 0   | Extremo | -7.118 | -169.186  | -0.161 | 7.6497  | -0.0251 | 420.6233   |
| 3728 | 0.5 | Extremo | -7.118 | -151.764  | -0.161 | 7.6497  | 0.0555  | 500.861    |
| 3728 | 1   | Extremo | -7.118 | -134.341  | -0.161 | 7.6497  | 0.136   | 572.3873   |
| 3729 | 0   | Extremo | -0.655 | -96.406   | 0.677  | 4.2732  | 0.1848  | 574.9301   |
| 3729 | 0.5 | Extremo | -0.655 | -78.983   | 0.677  | 4.2732  | -0.1538 | 618.7775   |
| 3729 | 1   | Extremo | -0.655 | -61.561   | 0.677  | 4.2732  | -0.4923 | 653.9136   |
| 3729 | 0   | Extremo | -7.001 | -96.206   | -0.161 | 4.2722  | -0.0223 | 574.3561   |
| 3729 | 0.5 | Extremo | -7.001 | -78.783   | -0.161 | 4.2722  | 0.058   | 618.1033   |
| 3729 | 1   | Extremo | -7.001 | -61.361   | -0.161 | 4.2722  | 0.1383  | 653.1393   |
| 3730 | 0   | Extremo | -0.877 | -22.817   | 0.677  | 0.0388  | 0.176   | 654.6129   |
| 3730 | 0.5 | Extremo | -0.877 | -5.394    | 0.677  | 0.0388  | -0.1626 | 661.6657   |
| 3730 | 1   | Extremo | -0.877 | 12.028    | 0.677  | 0.0388  | -0.5013 | 660.0072   |
| 3730 | 0   | Extremo | -6.899 | -22.617   | -0.161 | 0.0381  | -0.0198 | 653.8375   |
| 3730 | 0.5 | Extremo | -6.899 | -5.194    | -0.161 | 0.0381  | 0.0605  | 660.7902   |
| 3730 | 1   | Extremo | -6.899 | 12.228    | -0.161 | 0.0381  | 0.1408  | 659.0317   |
| 3731 | 0   | Extremo | -1.101 | 50.779    | 0.678  | -4.2097 | 0.1673  | 659.3767   |
| 3731 | 0.5 | Extremo | -1.101 | 68.202    | 0.678  | -4.2097 | -0.1714 | 629.6313   |
| 3731 | 1   | Extremo | -1.101 | 85.624    | 0.678  | -4.2097 | -0.5102 | 591.1747   |
| 3731 | 0   | Extremo | -6.797 | 50.979    | -0.161 | -4.2096 | -0.0174 | 658.4      |
| 3731 | 0.5 | Extremo | -6.797 | 68.402    | -0.161 | -4.2096 | 0.063   | 628.5548   |
| 3731 | 1   | Extremo | -6.797 | 85.824    | -0.161 | -4.2096 | 0.1434  | 589.9983   |
| 3732 | 0   | Extremo | -1.333 | 123.786   | 0.678  | -7.6338 | 0.1587  | 589.2723   |
| 3732 | 0.5 | Extremo | -1.333 | 141.208   | 0.678  | -7.6338 | -0.1802 | 523.0239   |

|        |     |         |         |           |        |         |           |           |
|--------|-----|---------|---------|-----------|--------|---------|-----------|-----------|
| 3732   | 1   | Extremo | -1.333  | 158.631   | 0.678  | -7.6338 | -0.5191   | 448.0642  |
| 3732   | 0   | Extremo | -6.68   | 123.985   | -0.161 | -7.6323 | -0.0151   | 588.0947  |
| 3732   | 0.5 | Extremo | -6.68   | 141.407   | -0.161 | -7.6323 | 0.0655    | 521.7467  |
| 3732   | 1   | Extremo | -6.68   | 158.83    | -0.161 | -7.6323 | 0.1461    | 446.6875  |
| 3733   | 0   | Extremo | -1.581  | 195.317   | 0.678  | -9.2156 | 0.1503    | 445.3431  |
| 3733   | 0.5 | Extremo | -1.581  | 212.74    | 0.678  | -9.2156 | -0.1889   | 343.3289  |
| 3733   | 1   | Extremo | -1.581  | 230.162   | 0.678  | -9.2156 | -0.528    | 232.6035  |
| 3733   | 0   | Extremo | -6.525  | 195.515   | -0.162 | -9.2117 | -0.013    | 443.9658  |
| 3733   | 0.5 | Extremo | -6.525  | 212.937   | -0.162 | -9.2117 | 0.068     | 341.8527  |
| 3733   | 1   | Extremo | -6.525  | 230.36    | -0.162 | -9.2117 | 0.149     | 231.0284  |
| 3734   | 0   | Extremo | -1.861  | 264.594   | 0.679  | -7.868  | 0.1424    | 231.3882  |
| 3734   | 0.5 | Extremo | -1.861  | 282.017   | 0.679  | -7.868  | -0.1971   | 94.7355   |
| 3734   | 1   | Extremo | -1.861  | 299.439   | 0.679  | -7.868  | -0.5366   | -50.6285  |
| 3734   | 0   | Extremo | -6.293  | 264.79    | -0.163 | -7.8603 | -0.0115   | 229.8152  |
| 3734   | 0.5 | Extremo | -6.293  | 282.212   | -0.163 | -7.8603 | 0.0702    | 93.0648   |
| 3734   | 1   | Extremo | -6.293  | 299.635   | -0.163 | -7.8603 | 0.1519    | -52.3969  |
| 3735   | 0   | Extremo | -2.202  | 337.911   | 0.681  | -3.3896 | 0.1361    | -40.8346  |
| 3735   | 0.5 | Extremo | -2.202  | 355.334   | 0.681  | -3.3896 | -0.2044   | -214.1458 |
| 3735   | 1   | Extremo | -2.202  | 372.756   | 0.681  | -3.3896 | -0.545    | -396.1682 |
| 3735   | 0   | Extremo | -5.906  | 338.11    | -0.166 | -3.3773 | -0.0115   | -42.5899  |
| 3735   | 0.5 | Extremo | -5.906  | 355.532   | -0.166 | -3.3773 | 0.0717    | -216.0004 |
| 3735   | 1   | Extremo | -5.906  | 372.955   | -0.166 | -3.3773 | 0.1549    | -398.1222 |
| 3736   | 0   | Extremo | -2.665  | 474.289   | 0.684  | 1.5656  | 0.1331    | -345.4353 |
| 3736   | 0.5 | Extremo | -2.665  | 491.711   | 0.684  | 1.5656  | -0.209    | -586.9353 |
| 3736   | 1   | Extremo | -2.665  | 509.134   | 0.684  | 1.5656  | -0.5511   | -837.1465 |
| 3736   | 0   | Extremo | -5.204  | 474.551   | -0.174 | 1.5796  | -0.0143   | -347.3382 |
| 3736   | 0.5 | Extremo | -5.204  | 491.973   | -0.174 | 1.5796  | 0.0727    | -588.9691 |
| 3736   | 1   | Extremo | -5.204  | 509.396   | -0.174 | 1.5796  | 0.1596    | -839.3113 |
| 3737   | 0   | Extremo | -3.376  | 979.506   | 0.61   | 1.7097  | 0.139     | -698.379  |
| 3737   | 0.5 | Extremo | -3.376  | 996.929   | 0.61   | 1.7097  | -0.1661   | -1192.488 |
| 3737   | 1   | Extremo | -3.376  | 1014.351  | 0.61   | 1.7097  | -0.4711   | -1695.308 |
| 3737   | 0   | Extremo | -3.847  | 980.169   | -0.186 | 1.7182  | -0.0182   | -700.4134 |
| 3737   | 0.5 | Extremo | -3.847  | 997.592   | -0.186 | 1.7182  | 0.0748    | -1194.854 |
| 3737   | 1   | Extremo | -3.847  | 1015.014  | -0.186 | 1.7182  | 0.1678    | -1698.005 |
| 3738   | 0   | Extremo | -0.783  | -1021.381 | 1.126  | -1.6131 | 0.3847    | -1695.291 |
| 3738   | 0.5 | Extremo | -0.783  | -1003.959 | 1.126  | -1.6131 | -0.1784   | -1188.956 |
| 3738   | 1   | Extremo | -0.783  | -986.536  | 1.126  | -1.6131 | -0.7415   | -691.3327 |
| 3738   | 0   | Extremo | -11.773 | -1022.603 | -0.195 | -1.6146 | -0.017    | -1697.987 |
| 3738   | 0.5 | Extremo | -11.773 | -1005.18  | -0.195 | -1.6146 | 0.0807    | -1191.042 |
| 3738   | 1   | Extremo | -11.773 | -987.758  | -0.195 | -1.6146 | 0.1784    | -692.8069 |
| 3739   | 0   | Extremo | -1.523  | -516.163  | 1.043  | -1.4697 | 0.2772    | -830.0668 |
| 3739   | 0.5 | Extremo | -1.523  | -498.741  | 1.043  | -1.4697 | -0.2441   | -576.3408 |
| 3739   | 1   | Extremo | -1.523  | -481.318  | 1.043  | -1.4697 | -0.7654   | -331.3261 |
| 3739   | 0   | Extremo | -10.415 | -516.984  | -0.18  | -1.4768 | -0.0054   | -831.6688 |
| 3739   | 0.5 | Extremo | -10.415 | -499.561  | -0.18  | -1.4768 | 0.0848    | -577.5325 |
| 3739   | 1   | Extremo | -10.415 | -482.139  | -0.18  | -1.4768 | 0.175     | -332.1074 |
| 3740   | 0   | Extremo | -2.042  | -379.785  | 1.04   | 3.4839  | 0.2594    | -382.0254 |
| 3740   | 0.5 | Extremo | -2.042  | -362.362  | 1.04   | 3.4839  | -0.2608   | -196.4885 |
| 3740   | 1   | Extremo | -2.042  | -344.94   | 1.04   | 3.4839  | -0.781    | -19.663   |
| 3740   | 0   | Extremo | -9.712  | -380.542  | -0.173 | 3.4785  | -0.000427 | -382.8551 |
| 3740   | 0.5 | Extremo | -9.712  | -363.12   | -0.173 | 3.4785  | 0.086     | -196.9395 |
| 3740   | 1   | Extremo | -9.712  | -345.697  | -0.173 | 3.4785  | 0.1725    | -19.7352  |
| 3741   | 0   | Extremo | -2.458  | -306.467  | 1.04   | 7.9595  | 0.2451    | -29.4226  |
| 3741   | 0.5 | Extremo | -2.458  | -289.044  | 1.04   | 7.9595  | -0.2751   | 119.4552  |
| 3741   | 1   | Extremo | -2.458  | -271.622  | 1.04   | 7.9595  | -0.7953   | 259.6217  |
| 3741   | 0   | Extremo | -9.324  | -307.221  | -0.17  | 7.9583  | 0.0027    | -29.5054  |
| 3741   | 0.5 | Extremo | -9.324  | -289.798  | -0.17  | 7.9583  | 0.0877    | 119.7495  |
| 3741</ |     |         |         |           |        |         |           |           |



|      |     |         |         |           |        |         |         |           |
|------|-----|---------|---------|-----------|--------|---------|---------|-----------|
| 3744 | 1   | Extremo | -3.501  | -57.796   | 1.04   | 4.2745  | -0.8364 | 708.7838  |
| 3744 | 0   | Extremo | -8.815  | -93.398   | -0.167 | 4.279   | 0.0115  | 635.7588  |
| 3744 | 0.5 | Extremo | -8.815  | -75.976   | -0.167 | 4.279   | 0.0951  | 678.1024  |
| 3744 | 1   | Extremo | -8.815  | -58.553   | -0.167 | 4.279   | 0.1788  | 711.7347  |
| 3745 | 0   | Extremo | -3.831  | -19.034   | 1.04   | 0.0027  | 0.1904  | 709.4554  |
| 3745 | 0.5 | Extremo | -3.831  | -1.612    | 1.04   | 0.0027  | -0.3298 | 714.6168  |
| 3745 | 1   | Extremo | -3.831  | 15.811    | 1.04   | 0.0027  | -0.85   | 711.067   |
| 3745 | 0   | Extremo | -8.711  | -19.791   | -0.167 | 0.0062  | 0.0141  | 712.4106  |
| 3745 | 0.5 | Extremo | -8.711  | -2.369    | -0.167 | 0.0062  | 0.0977  | 717.9506  |
| 3745 | 1   | Extremo | -8.711  | 15.054    | -0.167 | 0.0062  | 0.1813  | 714.7794  |
| 3746 | 0   | Extremo | -4.164  | 54.574    | 1.041  | -4.2724 | 0.1771  | 710.4122  |
| 3746 | 0.5 | Extremo | -4.164  | 71.996    | 1.041  | -4.2724 | -0.3433 | 678.7696  |
| 3746 | 1   | Extremo | -4.164  | 89.419    | 1.041  | -4.2724 | -0.8636 | 638.4157  |
| 3746 | 0   | Extremo | -8.607  | 53.818    | -0.167 | -4.2719 | 0.0167  | 714.1292  |
| 3746 | 0.5 | Extremo | -8.607  | 71.241    | -0.167 | -4.2719 | 0.1003  | 682.8645  |
| 3746 | 1   | Extremo | -8.607  | 88.663    | -0.167 | -4.2719 | 0.1839  | 642.8886  |
| 3747 | 0   | Extremo | -4.505  | 127.591   | 1.041  | -7.7215 | 0.1639  | 636.4911  |
| 3747 | 0.5 | Extremo | -4.505  | 145.014   | 1.041  | -7.7215 | -0.3567 | 568.3398  |
| 3747 | 1   | Extremo | -4.505  | 162.436   | 1.041  | -7.7215 | -0.8772 | 491.4773  |
| 3747 | 0   | Extremo | -8.488  | 126.838   | -0.168 | -7.7266 | 0.0191  | 640.9684  |
| 3747 | 0.5 | Extremo | -8.488  | 144.261   | -0.168 | -7.7266 | 0.1029  | 573.1937  |
| 3747 | 1   | Extremo | -8.488  | 161.683   | -0.168 | -7.7266 | 0.1867  | 642.8886  |
| 3748 | 0   | Extremo | -4.863  | 199.139   | 1.042  | -9.3337 | 0.1509  | 488.7303  |
| 3748 | 0.5 | Extremo | -4.863  | 216.561   | 1.042  | -9.3337 | -0.37   | 384.8054  |
| 3748 | 1   | Extremo | -4.863  | 233.984   | 1.042  | -9.3337 | -0.8908 | 272.1692  |
| 3748 | 0   | Extremo | -8.332  | 198.391   | -0.168 | -9.3487 | 0.0213  | 493.9634  |
| 3748 | 0.5 | Extremo | -8.332  | 215.814   | -0.168 | -9.3487 | 0.1055  | 390.4121  |
| 3748 | 1   | Extremo | -8.332  | 233.236   | -0.168 | -9.3487 | 0.1896  | 278.1496  |
| 3749 | 0   | Extremo | -5.253  | 268.438   | 1.042  | -8.0259 | 0.1385  | 270.9016  |
| 3749 | 0.5 | Extremo | -5.253  | 285.86    | 1.042  | -8.0259 | -0.3828 | 132.3271  |
| 3749 | 1   | Extremo | -5.253  | 303.283   | 1.042  | -8.0259 | -0.904  | -14.9586  |
| 3749 | 0   | Extremo | -8.099  | 267.7     | -0.17  | -8.0564 | 0.023   | 276.8747  |
| 3749 | 0.5 | Extremo | -8.099  | 285.122   | -0.17  | -8.0564 | 0.1078  | 138.6691  |
| 3749 | 1   | Extremo | -8.099  | 302.545   | -0.17  | -8.0564 | 0.1926  | -8.2477   |
| 3750 | 0   | Extremo | -5.706  | 341.716   | 1.045  | -3.5895 | 0.1278  | -5.3316   |
| 3750 | 0.5 | Extremo | -5.706  | 359.139   | 1.045  | -3.5895 | -0.3946 | -180.5454 |
| 3750 | 1   | Extremo | -5.706  | 376.561   | 1.045  | -3.5895 | -0.917  | -364.4705 |
| 3750 | 0   | Extremo | -7.712  | 340.968   | -0.172 | -3.6386 | 0.0233  | 1.33      |
| 3750 | 0.5 | Extremo | -7.712  | 358.39    | -0.172 | -3.6386 | 0.1095  | -173.5095 |
| 3750 | 1   | Extremo | -7.712  | 375.813   | -0.172 | -3.6386 | 0.1957  | -357.0603 |
| 3751 | 0   | Extremo | -6.281  | 477.438   | 1.048  | 1.3549  | 0.1209  | -314.2919 |
| 3751 | 0.5 | Extremo | -6.281  | 494.861   | 1.048  | 1.3549  | -0.4032 | -557.3668 |
| 3751 | 1   | Extremo | -6.281  | 512.283   | 1.048  | 1.3549  | -0.9273 | -809.1529 |
| 3751 | 0   | Extremo | -7.009  | 476.454   | -0.18  | 1.2961  | 0.021   | -307.0736 |
| 3751 | 0.5 | Extremo | -7.009  | 493.877   | -0.18  | 1.2961  | 0.1109  | -549.6564 |
| 3751 | 1   | Extremo | -7.009  | 511.299   | -0.18  | 1.2961  | 0.2008  | -800.9505 |
| 3752 | 0   | Extremo | -7.107  | 978.524   | 0.961  | 1.5686  | 0.1243  | -671.7527 |
| 3752 | 0.5 | Extremo | -7.107  | 995.947   | 0.961  | 1.5686  | -0.3562 | -1165.371 |
| 3752 | 1   | Extremo | -7.107  | 1013.369  | 0.961  | 1.5686  | -0.8368 | -1667.7   |
| 3752 | 0   | Extremo | -5.653  | 976.031   | -0.199 | 1.5269  | 0.0183  | -664.0418 |
| 3752 | 0.5 | Extremo | -5.653  | 993.453   | -0.199 | 1.5269  | 0.1178  | -1156.413 |
| 3752 | 1   | Extremo | -5.653  | 1010.876  | -0.199 | 1.5269  | 0.2172  | -1657.495 |
| 3753 | 0   | Extremo | -4.634  | -1003.005 | 1.564  | -1.637  | 0.4084  | -1667.72  |
| 3753 | 0.5 | Extremo | -4.634  | -985.582  | 1.564  | -1.637  | -0.3736 | -1170.574 |
| 3753 | 1   | Extremo | -4.634  | -968.16   | 1.564  | -1.637  | -1.1557 | -682.1382 |
| 3753 | 0   | Extremo | -13.587 | -998.39   | -0.162 | -1.6452 | 0.0427  | -1657.522 |
| 3753 | 0.5 | Extremo | -13.587 | -980.968  | -0.162 | -1.6452 | 0.1235  | -1162.683 |
| 3753 | 1   | Extremo | -13.587 | -963.545  | -0.162 | -1.6452 | 0.2044  | -676.5544 |
| 3754 | 0   | Extremo | -5.494  | -501.919  | 1.467  | -1.4224 | 0.2802  | -819.5795 |
| 3754 | 0.5 | Extremo | -5.494  | -484.496  | 1.467  | -1.4224 | -0.4535 | -572.9757 |
| 3754 | 1   | Extremo | -5.494  | -467.074  | 1.467  | -1.4224 | -1.1873 | -335.0832 |
| 3754 | 0   | Extremo | -12.233 | -498.814  | -0.154 | -1.4132 | 0.0459  | -813.5166 |
| 3754 | 0.5 | Extremo | -12.233 | -481.391  | -0.154 | -1.4132 | 0.1226  | -568.4653 |
| 3754 | 1   | Extremo | -12.233 | -463.969  | -0.154 | -1.4132 | 0.1994  | -332.1252 |
| 3755 | 0   | Extremo | -6.135  | -366.198  | 1.466  | 3.5241  | 0.2566  | -385.3032 |
| 3755 | 0.5 | Extremo | -6.135  | -348.775  | 1.466  | 3.5241  | -0.4763 | -206.5601 |
| 3755 | 1   | Extremo | -6.135  | -331.353  | 1.466  | 3.5241  | -1.2092 | -36.5282  |
| 3755 | 0   | Extremo | -11.534 | -363.328  | -0.146 | 3.5242  | 0.0503  | -382.1658 |
| 3755 | 0.5 | Extremo | -11.534 | -345.906  | -0.146 | 3.5242  | 0.1231  | -204.8573 |
| 3755 | 1   | Extremo | -11.534 | -328.483  | -0.146 | 3.5242  | 0.196   | -36.26    |
| 3756 | 0   | Extremo | -6.675  | -292.92   | 1.466  | 7.9643  | 0.2369  | -46.1973  |
| 3756 | 0.5 | Extremo | -6.675  | -275.497  | 1.466  | 7.9643  | -0.4963 | 95.9071   |

|      |     |         |         |          |        |         |         |           |
|------|-----|---------|---------|----------|--------|---------|---------|-----------|
| 3756 | 1   | Extremo | -6.675  | -258.075 | 1.466  | 7.9643  | -1.2296 | 229.3002  |
| 3756 | 0   | Extremo | -11.152 | -290.062 | -0.142 | 7.9467  | 0.0532  | -45.8924  |
| 3756 | 0.5 | Extremo | -11.152 | -272.64  | -0.142 | 7.9467  | 0.1243  | 94.783    |
| 3756 | 1   | Extremo | -11.152 | -255.217 | -0.142 | 7.9467  | 0.1954  | 226.7472  |
| 3757 | 0   | Extremo | -7.166  | -223.623 | 1.467  | 9.2783  | 0.2177  | 230.5249  |
| 3757 | 0.5 | Extremo | -7.166  | -206.201 | 1.467  | 9.2783  | -0.5158 | 337.9809  |
| 3757 | 1   | Extremo | -7.166  | -188.778 | 1.467  | 9.2783  | -1.2492 | 436.7256  |
| 3757 | 0   | Extremo | -10.925 | -220.757 | -0.14  | 9.247   | 0.056   | 227.9661  |
| 3757 | 0.5 | Extremo | -10.925 | -203.334 | -0.14  | 9.247   | 0.1262  | 333.9888  |
| 3757 | 1   | Extremo | -10.925 | -185.912 | -0.14  | 9.247   | 0.1963  | 431.3002  |
| 3758 | 0   | Extremo | -7.634  | -152.079 | 1.468  | 7.6765  | 0.1988  | 439.428   |
| 3758 | 0.5 | Extremo | -7.634  | -134.657 | 1.468  | 7.6765  | -0.535  | 511.1121  |
| 3758 | 1   | Extremo | -7.634  | -117.234 | 1.468  | 7.6765  | -1.2688 | 574.0849  |
| 3758 | 0   | Extremo | -10.776 | -149.208 | -0.139 | 7.6381  | 0.0589  | 433.9865  |
| 3758 | 0.5 | Extremo | -10.776 | -131.786 | -0.139 | 7.6381  | 0.1283  | 504.2351  |
| 3758 | 1   | Extremo | -10.776 | -114.363 | -0.139 | 7.6381  | 0.1978  | 565.7724  |
| 3759 | 0   | Extremo | -8.093  | -79.068  | 1.469  | 4.2444  | 0.1802  | 575.963   |
| 3759 | 0.5 | Extremo | -8.093  | -61.645  | 1.469  | 4.2444  | -0.5541 | 611.1413  |
| 3759 | 1   | Extremo | -8.093  | -44.223  | 1.469  | 4.2444  | -1.2885 | 637.6084  |
| 3759 | 0   | Extremo | -10.663 | -76.197  | -0.138 | 4.2055  | 0.0617  | 567.6317  |
| 3759 | 0.5 | Extremo | -10.663 | -58.774  | -0.138 | 4.2055  | 0.1305  | 601.3745  |
| 3759 | 1   | Extremo | -10.663 | -41.352  | -0.138 | 4.2055  | 0.1994  | 626.406   |
| 3760 | 0   | Extremo | -8.549  | -5.47    | 1.47   | -0.0023 | 0.1619  | 638.2138  |
| 3760 | 0.5 | Extremo | -8.549  | 11.953   | 1.47   | -0.0023 | -0.5732 | 636.593   |
| 3760 | 1   | Extremo | -8.549  | 29.375   | 1.47   | -0.0023 | -1.3083 | 626.2609  |
| 3760 | 0   | Extremo | -10.566 | -2.602   | -0.136 | -0.0353 | 0.0645  | 626.9913  |
| 3760 | 0.5 | Extremo | -10.566 | 14.821   | -0.136 | -0.0353 | 0.1327  | 623.9366  |
| 3760 | 1   | Extremo | -10.566 | 32.243   | -0.136 | -0.0353 | 0.201   | 612.1707  |
| 3761 | 0   | Extremo | -9.008  | 68.12    | 1.472  | -4.2252 | 0.1438  | 625.5375  |
| 3761 | 0.5 | Extremo | -9.008  | 85.542   | 1.472  | -4.2252 | -0.5922 | 587.1221  |
| 3761 | 1   | Extremo | -9.008  | 102.965  | 1.472  | -4.2252 | -1.3283 | 539.9955  |
| 3761 | 0   | Extremo | -10.469 | 70.979   | -0.135 | -4.2437 | 0.0672  | 611.4256  |
| 3761 | 0.5 | Extremo | -10.469 | 88.402   | -0.135 | -4.2437 | 0.1349  | 571.5804  |
| 3761 | 1   | Extremo | -10.469 | 105.824  | -0.135 | -4.2437 | 0.2026  | 523.024   |
| 3762 | 0   | Extremo | -9.475  | 141.097  | 1.475  | -7.5782 | 0.126   | 538.0067  |
| 3762 | 0.5 | Extremo | -9.475  | 158.519  | 1.475  | -7.5782 | -0.6112 | 463.1026  |
| 3762 | 1   | Extremo | -9.475  | 175.942  | 1.475  | -7.5782 | -1.3485 | 379.4872  |
| 3762 | 0   | Extremo | -10.357 | 143.94   | -0.134 | -7.5686 | 0.07    | 521.0123  |
| 3762 | 0.5 | Extremo | -10.357 | 161.362  | -0.134 | -7.5686 | 0.1371  | 444.6868  |
| 3762 | 1   | Extremo | -10.357 | 178.785  | -0.134 | -7.5686 | 0.2041  | 359.65    |
| 3763 | 0   | Extremo | -9.959  | 212.559  | 1.478  | -9.026  | 0.1087  | 376.7178  |
| 3763 | 0.5 | Extremo | -9.959  | 229.982  | 1.478  | -9.026  | -0.6301 | 266.0826  |
| 3763 | 1   | Extremo | -9.959  | 247.404  | 1.478  | -9.026  | -1.3689 | 146.7361  |
| 3763 | 0   | Extremo | -10.208 | 215.369  | -0.133 | -8.9661 | 0.0728  | 356.8619  |
| 3763 | 0.5 | Extremo | -10.208 | 232.791  | -0.133 | -8.9661 | 0.1392  | 244.822   |
| 3763 | 1   | Extremo | -10.208 | 250.214  | -0.133 | -8.9661 | 0.2056  | 124.0709  |
| 3764 | 0   | Extremo | -10.476 | 281.726  | 1.482  | -7.4726 | 0.0923  | 145.6547  |
| 3764 | 0.5 | Extremo | -10.476 | 299.149  | 1.482  | -7.4726 | -0.6486 | 0.436     |
| 3764 | 1   | Extremo | -10.476 | 316.571  | 1.482  | -7.4726 | -1.3895 | -153.494  |
| 3764 | 0   | Extremo | -9.982  | 284.479  | -0.131 | -7.3308 | 0.0753  | 123.0039  |
| 3764 | 0.5 | Extremo | -9.982  | 301.901  | -0.131 | -7.3308 | 0.141   | -23.5912  |
| 3764 | 1   | Extremo | -9.982  | 319.324  | -0.131 | -7.3308 | 0.2067  | -178.8975 |
| 3765 | 0   | Extremo | -11.054 | 355.33   | 1.488  | -2.7773 | 0.0782  | -142.8202 |
| 3765 | 0.5 | Extremo | -11.054 | 372.753  | 1.488  | -2.7773 | -0.666  | -324.8408 |
| 3765 | 1   | Extremo | -11.054 | 390.175  | 1.488  | -2.7773 | -1.4102 | -515.5727 |
| 3765 | 0   | Extremo | -9.601  | 358.085  | -0.131 | -2.5242 | 0.0768  | -168.0581 |
| 3765 | 0.5 | Extremo | -9.601  | 375.508  | -0.131 | -2.5242 | 0.1422  | -351.4563 |



|      |     |         |         |           |          |         |         |           |
|------|-----|---------|---------|-----------|----------|---------|---------|-----------|
| 3768 | 1   | Extremo | -10.371 | -1063.161 | 2.079    | -2.3773 | -1.6963 | -792.2908 |
| 3768 | 0   | Extremo | -15.505 | -1114.958 | -0.059   | -2.0119 | 0.1303  | -1910.874 |
| 3768 | 0.5 | Extremo | -15.505 | -1097.536 | -0.059   | -2.0119 | 0.1597  | -1357.751 |
| 3768 | 1   | Extremo | -15.505 | -1080.113 | -0.059   | -2.0119 | 0.189   | -813.3382 |
| 3769 | 0   | Extremo | -11.359 | -566.012  | 1.984    | -2.7642 | 0.2429  | -939.645  |
| 3769 | 0.5 | Extremo | -11.359 | -548.59   | 1.984    | -2.7642 | -0.7494 | -660.9244 |
| 3769 | 1   | Extremo | -11.359 | -531.167  | 1.984    | -2.7642 | -1.7416 | -391.0551 |
| 3769 | 0   | Extremo | -14.158 | -577.539  | -0.05    | -2.3693 | 0.1268  | -962.3805 |
| 3769 | 0.5 | Extremo | -14.158 | -560.117  | -0.05    | -2.3693 | 0.1519  | -677.9666 |
| 3769 | 1   | Extremo | -14.158 | -542.694  | -0.05    | -2.3693 | 0.177   | -402.2639 |
| 3770 | 0   | Extremo | -12.13  | -425.345  | 1.997    | 2.1952  | 0.2187  | -445.1317 |
| 3770 | 0.5 | Extremo | -12.13  | -407.922  | 1.997    | 2.1952  | -0.7796 | -236.8149 |
| 3770 | 1   | Extremo | -12.13  | -390.5    | 1.997    | 2.1952  | -1.7779 | -37.2094  |
| 3770 | 0   | Extremo | -13.466 | -436.068  | -0.031   | 2.6939  | 0.1347  | -456.9236 |
| 3770 | 0.5 | Extremo | -13.466 | -418.645  | -0.031   | 2.6939  | 0.1504  | -243.2453 |
| 3770 | 1   | Extremo | -13.466 | -401.223  | -0.031   | 2.6939  | 0.1661  | -39.2782  |
| 3771 | 0   | Extremo | -12.798 | -351.745  | 2.015    | 6.8976  | 0.2005  | -47.8433  |
| 3771 | 0.5 | Extremo | -12.798 | -334.323  | 2.015    | 6.8976  | -0.8069 | 123.6738  |
| 3771 | 1   | Extremo | -12.798 | -316.9    | 2.015    | 6.8976  | -1.8144 | 286.4796  |
| 3771 | 0   | Extremo | -13.09  | -362.463  | -0.014   | 7.508   | 0.1425  | -48.9725  |
| 3771 | 0.5 | Extremo | -13.09  | -345.041  | -0.014   | 7.508   | 0.1496  | 127.9034  |
| 3771 | 1   | Extremo | -13.09  | -327.618  | -0.014   | 7.508   | 0.1567  | 296.0681  |
| 3772 | 0   | Extremo | -13.418 | -282.587  | 2.038    | 8.4635  | 0.1849  | 287.5971  |
| 3772 | 0.5 | Extremo | -13.418 | -265.164  | 2.038    | 8.4635  | -0.834  | 424.5348  |
| 3772 | 1   | Extremo | -13.418 | -247.742  | 2.038    | 8.4635  | -1.8528 | 552.7613  |
| 3772 | 0   | Extremo | -12.866 | -293.355  | 0.005018 | 9.1552  | 0.1519  | 297.2772  |
| 3772 | 0.5 | Extremo | -12.866 | -275.933  | 0.005018 | 9.1552  | 0.1493  | 439.5991  |
| 3772 | 1   | Extremo | -12.866 | -258.51   | 0.005018 | 9.1552  | 0.1468  | 572.2098  |
| 3773 | 0   | Extremo | -14.013 | -211.14   | 2.067    | 7.0374  | 0.1722  | 555.5597  |
| 3773 | 0.5 | Extremo | -14.013 | -193.718  | 2.067    | 7.0374  | -0.8612 | 656.7747  |
| 3773 | 1   | Extremo | -14.013 | -176.295  | 2.067    | 7.0374  | -1.8945 | 749.2774  |
| 3773 | 0   | Extremo | -12.716 | -221.93   | 0.028    | 7.776   | 0.1633  | 576.1349  |
| 3773 | 0.5 | Extremo | -12.716 | -204.508  | 0.028    | 7.776   | 0.149   | 682.7443  |
| 3773 | 1   | Extremo | -12.716 | -187.085  | 0.028    | 7.776   | 0.1348  | 780.6425  |
| 3774 | 0   | Extremo | -14.596 | -138.193  | 2.104    | 3.7219  | 0.1631  | 751.2823  |
| 3774 | 0.5 | Extremo | -14.596 | -120.77   | 2.104    | 3.7219  | -0.8887 | 816.023   |
| 3774 | 1   | Extremo | -14.596 | -103.348  | 2.104    | 3.7219  | -1.9405 | 872.0525  |
| 3774 | 0   | Extremo | -12.598 | -148.975  | 0.058    | 4.4778  | 0.1771  | 782.7822  |
| 3774 | 0.5 | Extremo | -12.598 | -131.553  | 0.058    | 4.4778  | 0.1484  | 852.9143  |
| 3774 | 1   | Extremo | -12.598 | -114.13   | 0.058    | 4.4778  | 0.1196  | 914.3352  |
| 3775 | 0   | Extremo | -15.174 | -64.66    | 2.15     | -0.4368 | 0.1584  | 872.7673  |
| 3775 | 0.5 | Extremo | -15.174 | -47.237   | 2.15     | -0.4368 | -0.9168 | 900.7414  |
| 3775 | 1   | Extremo | -15.174 | -29.815   | 2.15     | -0.4368 | -1.9919 | 920.0043  |
| 3775 | 0   | Extremo | -12.489 | -75.403   | 0.094    | 0.3064  | 0.1941  | 915.1919  |
| 3775 | 0.5 | Extremo | -12.489 | -57.981   | 0.094    | 0.3064  | 0.1471  | 948.538   |
| 3775 | 1   | Extremo | -12.489 | -40.558   | 0.094    | 0.3064  | 0.1002  | 973.1728  |
| 3776 | 0   | Extremo | -15.752 | 8.836     | 2.209    | -4.5744 | 0.1591  | 919.341   |
| 3776 | 0.5 | Extremo | -15.752 | 26.258    | 2.209    | -4.5744 | -0.9456 | 910.5675  |
| 3776 | 1   | Extremo | -15.752 | 43.681    | 2.209    | -4.5744 | -2.0503 | 893.0828  |
| 3776 | 0   | Extremo | -12.372 | -1.819    | 0.14     | -3.8879 | 0.2151  | 972.6664  |
| 3776 | 0.5 | Extremo | -12.372 | 15.603    | 0.14     | -3.8879 | 0.1453  | 969.2203  |
| 3776 | 1   | Extremo | -12.372 | 33.026    | 0.14     | -3.8879 | 0.0754  | 957.063   |
| 3777 | 0   | Extremo | -16.336 | 81.667    | 2.284    | -7.8158 | 0.1668  | 891.0382  |
| 3777 | 0.5 | Extremo | -16.336 | 99.09     | 2.284    | -7.8158 | -0.9751 | 845.8488  |
| 3777 | 1   | Extremo | -16.336 | 116.512   | 2.284    | -7.8158 | -2.1171 | 791.9482  |
| 3777 | 0   | Extremo | -12.23  | 71.193    | 0.197    | -7.2675 | 0.2411  | 955.2052  |
| 3777 | 0.5 | Extremo | -12.23  | 88.616    | 0.197    | -7.2675 | 0.1426  | 915.2529  |
| 3777 | 1   | Extremo | -12.23  | 106.038   | 0.197    | -7.2675 | 0.044   | 866.5893  |
| 3778 | 0   | Extremo | -16.936 | 152.931   | 2.377    | -9.0469 | 0.1831  | 788.8016  |
| 3778 | 0.5 | Extremo | -16.936 | 170.354   | 2.377    | -9.0469 | -1.0056 | 707.9804  |
| 3778 | 1   | Extremo | -16.936 | 187.776   | 2.377    | -9.0469 | -2.1943 | 618.4479  |
| 3778 | 0   | Extremo | -12.04  | 142.809   | 0.269    | -8.7986 | 0.2735  | 863.6801  |
| 3778 | 0.5 | Extremo | -12.04  | 140.231   | 0.269    | -8.7986 | 0.1389  | 787.9201  |
| 3778 | 1   | Extremo | -12.04  | 177.654   | 0.269    | -8.7986 | 0.0043  | 703.4487  |
| 3779 | 0   | Extremo | -17.573 | 221.802   | 2.495    | -6.8682 | 0.2105  | 615.9246  |
| 3779 | 0.5 | Extremo | -17.573 | 239.225   | 2.495    | -6.8682 | -1.0368 | 500.6677  |
| 3779 | 1   | Extremo | -17.573 | 256.647   | 2.495    | -6.8682 | -2.2841 | 376.6996  |
| 3779 | 0   | Extremo | -11.761 | 212.328   | 0.36     | -7.2411 | 0.3139  | 701.2292  |
| 3779 | 0.5 | Extremo | -11.761 | 229.751   | 0.36     | -7.2411 | 0.1341  | 590.7094  |
| 3779 | 1   | Extremo | -11.761 | 247.173   | 0.36     | -7.2411 | -0.0458 | 471.4784  |
| 3780 | 0   | Extremo | -18.285 | 293.397   | 2.642    | -0.1122 | 0.2524  | 382.0597  |
| 3780 | 0.5 | Extremo | -18.285 | 310.819   | 2.642    | -0.1122 | -1.0685 | 231.0056  |

|      |     |         |         |          |       |         |         |           |
|------|-----|---------|---------|----------|-------|---------|---------|-----------|
| 3780 | 1   | Extremo | -18.285 | 328.242  | 2.642 | -0.1122 | -2.3894 | 71.2402   |
| 3780 | 0   | Extremo | -11.319 | 284.983  | 0.473 | -1.7218 | 0.3646  | 477.1873  |
| 3780 | 0.5 | Extremo | -11.319 | 302.405  | 0.473 | -1.7218 | 0.128   | 330.3403  |
| 3780 | 1   | Extremo | -11.319 | 319.828  | 0.473 | -1.7218 | -0.1086 | 174.7821  |
| 3781 | 0   | Extremo | -19.158 | 415.011  | 2.824 | 10.9047 | 0.3121  | 106.7021  |
| 3781 | 0.5 | Extremo | -19.158 | 432.433  | 2.824 | 10.9047 | -1.0999 | -105.159  |
| 3781 | 1   | Extremo | -19.158 | 449.856  | 2.824 | 10.9047 | -2.5119 | -325.7313 |
| 3781 | 0   | Extremo | -10.563 | 407.996  | 0.614 | 6.9533  | 0.4293  | 210.5911  |
| 3781 | 0.5 | Extremo | -10.563 | 425.418  | 0.614 | 6.9533  | 0.1221  | 2.2376    |
| 3781 | 1   | Extremo | -10.563 | 442.841  | 0.614 | 6.9533  | -0.185  | -214.8272 |
| 3782 | 0   | Extremo | -20.373 | 820.597  | 2.959 | 23.5661 | 0.3934  | -230.8472 |
| 3782 | 0.5 | Extremo | -20.373 | 838.019  | 2.959 | 23.5661 | -1.0859 | -645.5012 |
| 3782 | 1   | Extremo | -20.373 | 855.442  | 2.959 | 23.5661 | -2.5652 | -1068.866 |
| 3782 | 0   | Extremo | -9.188  | 815.555  | 0.775 | 15.6081 | 0.5192  | -119.1923 |
| 3782 | 0.5 | Extremo | -9.188  | 832.978  | 0.775 | 15.6081 | 0.1317  | -531.3254 |
| 3782 | 1   | Extremo | -9.188  | 850.4    | 0.775 | 15.6081 | -0.2558 | -952.1698 |
| 3783 | 0   | Extremo | -18.539 | -764.473 | 4.085 | 26.3005 | 0.7352  | -1120.909 |
| 3783 | 0.5 | Extremo | -18.539 | -745.588 | 4.085 | 26.3005 | -1.3075 | -743.3938 |
| 3783 | 1   | Extremo | -18.539 | -726.703 | 4.085 | 26.3005 | -3.3503 | -325.3211 |
| 3783 | 0   | Extremo | -17.249 | -778.698 | 1.29  | 14.0199 | 0.7183  | -1000.395 |
| 3783 | 0.5 | Extremo | -17.249 | -759.813 | 1.29  | 14.0199 | 0.0735  | -615.7671 |
| 3783 | 1   | Extremo | -17.249 | -740.928 | 1.29  | 14.0199 | -0.5713 | -240.5819 |
| 3784 | 0   | Extremo | -19.92  | -327.992 | 4.406 | 17.8921 | 0.8113  | -491.2581 |
| 3784 | 0.5 | Extremo | -19.92  | -309.107 | 4.406 | 17.8921 | -1.3917 | -331.9835 |
| 3784 | 1   | Extremo | -19.92  | -290.222 | 4.406 | 17.8921 | -3.5946 | -182.1515 |
| 3784 | 0   | Extremo | -15.637 | -335.412 | 1.712 | 4.2513  | 0.904   | -359.001  |
| 3784 | 0.5 | Extremo | -15.637 | -316.527 | 1.712 | 4.2513  | 0.0482  | -196.0162 |
| 3784 | 1   | Extremo | -15.637 | -297.642 | 1.712 | 4.2513  | -0.8077 | -42.4739  |
| 3785 | 0   | Extremo | -20.872 | -194.063 | 4.921 | 19.9071 | 1.0037  | -217.4797 |
| 3785 | 0.5 | Extremo | -20.872 | -175.178 | 4.921 | 19.9071 | -1.457  | -125.1696 |
| 3785 | 1   | Extremo | -20.872 | -156.293 | 4.921 | 19.9071 | -3.9176 | -42.3019  |
| 3785 | 0   | Extremo | -14.61  | -199.041 | 2.236 | 5.0324  | 1.1319  | -80.8287  |
| 3785 | 0.5 | Extremo | -14.61  | -180.156 | 2.236 | 5.0324  | 0.0138  | 13.9706   |
| 3785 | 1   | Extremo | -14.61  | -161.271 | 2.236 | 5.0324  | -1.1043 | 99.3273   |
| 3786 | 0   | Extremo | -21.569 | -112.287 | 5.565 | 25.0751 | 1.2474  | -44.2139  |
| 3786 | 0.5 | Extremo | -21.569 | -93.402  | 5.565 | 25.0751 | -1.535  | 7.2083    |
| 3786 | 1   | Extremo | -21.569 | -74.517  | 5.565 | 25.0751 | -4.3174 | 49.1881   |
| 3786 | 0   | Extremo | -13.802 | -116.324 | 2.878 | 9.2057  | 1.4099  | 94.5527   |
| 3786 | 0.5 | Extremo | -13.802 | -97.439  | 2.878 | 9.2057  | -0.0292 | 147.9936  |
| 3786 | 1   | Extremo | -13.802 | -78.554  | 2.878 | 9.2057  | -1.4682 | 191.992   |
| 3787 | 0   | Extremo | -22.106 | -33.828  | 6.377 | 28.5411 | 1.5647  | 54.4993   |
| 3787 | 0.5 | Extremo | -22.106 | -14.943  | 6.377 | 28.5411 | -1.6236 | 66.6919   |
| 3787 | 1   | Extremo | -22.106 | 3.942    | 6.377 | 28.5411 | -4.8119 | 69.4421   |
| 3787 | 0   | Extremo | -13.032 | -37.825  | 3.681 | 11.7915 | 1.7613  | 194.547   |
| 3787 | 0.5 | Extremo | -13.032 | -18.94   | 3.681 | 11.7915 | -0.079  | 208.7382  |
| 3787 | 1   | Extremo | -13.032 | -0.055   | 3.681 | 11.7915 | -1.9193 | 213.487   |
| 3788 | 0   | Extremo | -22.569 | 47.209   | 7.428 | 30.46   | 1.9776  | 73.4283   |
| 3788 | 0.5 | Extremo | -22.569 | 66.094   | 7.428 | 30.46   | -1.7367 | 45.1023   |
| 3788 | 1   | Extremo | -22.569 | 84.979   | 7.428 | 30.46   | -5.4509 | 7.3339    |
| 3788 | 0   | Extremo | -12.216 | 41.841   | 4.713 | 12.3564 | 2.2191  | 215.2605  |
| 3788 | 0.5 | Extremo | -12.216 | 60.726   | 4.713 | 12.3564 | -0.1372 | 189.6187  |
| 3788 | 1   | Extremo | -12.216 | 79.611   | 4.713 | 12.3564 | -2.4935 | 154.5344  |
| 3789 | 0   | Extremo | -23.134 | 129.846  | 9.091 | 35.6584 | 2.4524  | 6.3628    |
| 3789 | 0.5 | Extremo | -23.134 | 149.968  | 9.091 | 35.6584 | -2.093  | -63.5908  |
| 3789 | 1   | Extremo | -23.134 | 170.091  | 9.091 | 35.6584 | -6.6383 | -143.6056 |
| 3789 | 0   | Extremo | -11.378 | 125.223  | 6.313 | 15.5689 |         |           |





|      |     |         |         |          |         |          |           |           |
|------|-----|---------|---------|----------|---------|----------|-----------|-----------|
| 3792 | 1   | Extremo | -22.069 | 448.006  | 16.128  | 22.6617  | -10.6556  | -1173.077 |
| 3792 | 0   | Extremo | -6.346  | 404.256  | 13.293  | 4.4038   | 5.8982    | -595.0329 |
| 3792 | 0.5 | Extremo | -6.346  | 424.379  | 13.293  | 4.4038   | -0.7481   | -802.1917 |
| 3792 | 1   | Extremo | -6.346  | 444.501  | 13.293  | 4.4038   | -7.3945   | -1019.412 |
| 3793 | 0   | Extremo | -20.696 | 518.955  | 19.862  | 32.5655  | 7.0582    | -1193.112 |
| 3793 | 0.5 | Extremo | -20.696 | 539.077  | 19.862  | 32.5655  | -2.8727   | -1457.62  |
| 3793 | 1   | Extremo | -20.696 | 559.2    | 19.862  | 32.5655  | -12.8037  | -1732.189 |
| 3793 | 0   | Extremo | -3.537  | 513.668  | 16.986  | 13.4273  | 7.527     | -1041.99  |
| 3793 | 0.5 | Extremo | -3.537  | 533.791  | 16.986  | 13.4273  | -0.9659   | -1303.855 |
| 3793 | 1   | Extremo | -3.537  | 553.913  | 16.986  | 13.4273  | -9.4588   | -1575.781 |
| 3794 | 0   | Extremo | -18.981 | 622.734  | 25.815  | 43.5132  | 9.0897    | -1810.63  |
| 3794 | 0.5 | Extremo | -18.981 | 644.432  | 25.815  | 43.5132  | -3.8179   | -2127.422 |
| 3794 | 1   | Extremo | -18.981 | 666.129  | 25.815  | 43.5132  | -16.7255  | -2455.062 |
| 3794 | 0   | Extremo | -0.107  | 618.076  | 22.845  | 22.3361  | 9.7171    | -1652.42  |
| 3794 | 0.5 | Extremo | -0.107  | 639.773  | 22.845  | 22.3361  | -1.7056   | -1966.882 |
| 3794 | 1   | Extremo | -0.107  | 661.471  | 22.845  | 22.3361  | -13.1283  | -2292.194 |
| 3795 | 0   | Extremo | -15.437 | 708.579  | 32.674  | 22.4906  | 12.2737   | -2500.692 |
| 3795 | 0.5 | Extremo | -15.437 | 730.276  | 32.674  | 22.4906  | -4.0632   | -2860.406 |
| 3795 | 1   | Extremo | -15.437 | 751.974  | 32.674  | 22.4906  | -20.4002  | -3230.969 |
| 3795 | 0   | Extremo | 5.115   | 705.534  | 29.655  | 2.5322   | 12.888    | -2341.304 |
| 3795 | 0.5 | Extremo | 5.115   | 727.231  | 29.655  | 2.5322   | -1.9396   | -2699.495 |
| 3795 | 1   | Extremo | 5.115   | 748.929  | 29.655  | 2.5322   | -16.7672  | -3068.535 |
| 3796 | 0   | Extremo | -9.362  | 802.675  | 40.993  | 8.8059   | 15.7563   | -3273.921 |
| 3796 | 0.5 | Extremo | -9.362  | 824.372  | 40.993  | 8.8059   | -4.7402   | -3680.683 |
| 3796 | 1   | Extremo | -9.362  | 846.07   | 40.993  | 8.8059   | -25.2368  | -4098.293 |
| 3796 | 0   | Extremo | 12.792  | 799.692  | 37.91   | -10.4928 | 16.3706   | -3115.398 |
| 3796 | 0.5 | Extremo | 12.792  | 821.39   | 37.91   | -10.4928 | -2.5844   | -3520.668 |
| 3796 | 1   | Extremo | 12.792  | 843.087  | 37.91   | -10.4928 | -21.5394  | -3936.788 |
| 3797 | 0   | Extremo | 0.59    | 899.704  | 51.657  | 1.7996   | 20.2124   | -4145.186 |
| 3797 | 0.5 | Extremo | 0.59    | 921.402  | 51.657  | 1.7996   | -5.6158   | -4600.462 |
| 3797 | 1   | Extremo | 0.59    | 943.099  | 51.657  | 1.7996   | -31.4441  | -5066.588 |
| 3797 | 0   | Extremo | 24.379  | 896.445  | 48.493  | -17.2611 | 20.823    | -3987.4   |
| 3797 | 0.5 | Extremo | 24.379  | 918.143  | 48.493  | -17.2611 | -3.4237   | -4441.048 |
| 3797 | 1   | Extremo | 24.379  | 939.84   | 48.493  | -17.2611 | -27.6704  | -4905.543 |
| 3798 | 0   | Extremo | 16.854  | 1006.487 | 65.619  | 6.1154   | 26.0969   | -5116.272 |
| 3798 | 0.5 | Extremo | 16.854  | 1028.184 | 65.619  | 6.1154   | -6.7125   | -5624.94  |
| 3798 | 1   | Extremo | 16.854  | 1049.882 | 65.619  | 6.1154   | -39.5219  | -6144.456 |
| 3798 | 0   | Extremo | 42.406  | 1002.85  | 62.356  | -13.0498 | 26.6953   | -4958.843 |
| 3798 | 0.5 | Extremo | 42.406  | 1024.547 | 62.356  | -13.0498 | -4.4829   | -5465.692 |
| 3798 | 1   | Extremo | 42.406  | 1046.245 | 62.356  | -13.0498 | -35.6611  | -5983.39  |
| 3799 | 0   | Extremo | 43.787  | 1153.02  | 84.474  | 34.7603  | 34.0837   | -6212.725 |
| 3799 | 0.5 | Extremo | 43.787  | 1174.718 | 84.474  | 34.7603  | -8.1534   | -6794.659 |
| 3799 | 1   | Extremo | 43.787  | 1196.415 | 84.474  | 34.7603  | -50.3905  | -7387.442 |
| 3799 | 0   | Extremo | 71.353  | 1148.526 | 81.087  | 14.7974  | 34.6747   | -6054.882 |
| 3799 | 0.5 | Extremo | 71.353  | 1170.224 | 81.087  | 14.7974  | -5.8688   | -6634.569 |
| 3799 | 1   | Extremo | 71.353  | 1191.921 | 81.087  | 14.7974  | -46.4123  | -7225.106 |
| 3800 | 0   | Extremo | 88.866  | 1269.282 | 114.641 | 48.837   | 45.1434   | -7607.361 |
| 3800 | 0.5 | Extremo | 88.866  | 1292.33  | 114.641 | 48.837   | -12.1769  | -8247.764 |
| 3800 | 1   | Extremo | 88.866  | 1315.377 | 114.641 | 48.837   | -69.4972  | -8899.691 |
| 3800 | 0   | Extremo | 118.872 | 1265.834 | 111.076 | 26.909   | 45.8339   | -7445.273 |
| 3800 | 0.5 | Extremo | 118.872 | 1288.882 | 111.076 | 26.909   | -9.7042   | -8083.952 |
| 3800 | 1   | Extremo | 118.872 | 1311.929 | 111.076 | 26.909   | -65.2422  | -8734.155 |
| 3801 | 0   | Extremo | 173.383 | 1328.68  | 154.11  | 9.2733   | 61.6325   | -9000.002 |
| 3801 | 0.5 | Extremo | 173.383 | 1351.727 | 154.11  | 9.2733   | -15.4223  | -9670.103 |
| 3801 | 1   | Extremo | 173.383 | 1374.775 | 154.11  | 9.2733   | -92.4772  | -10351.73 |
| 3801 | 0   | Extremo | 205.908 | 1327.28  | 150.374 | -12.6852 | 62.2257   | -8838.781 |
| 3801 | 0.5 | Extremo | 205.908 | 1350.327 | 150.374 | -12.6852 | -12.9611  | -9508.183 |
| 3801 | 1   | Extremo | 205.908 | 1373.375 | 150.374 | -12.6852 | -88.148   | -10189.11 |
| 3802 | 0   | Extremo | 326.868 | 1425.851 | 210.424 | -13.83   | 81.9068   | -10433.71 |
| 3802 | 0.5 | Extremo | 326.868 | 1448.898 | 210.424 | -13.83   | -23.305   | -11152.4  |
| 3802 | 1   | Extremo | 326.868 | 1471.946 | 210.424 | -13.83   | -128.5169 | -11882.61 |
| 3802 | 0   | Extremo | 361.906 | 1426.079 | 206.503 | -36.8333 | 82.4257   | -10275.9  |
| 3802 | 0.5 | Extremo | 361.906 | 1449.126 | 206.503 | -36.8333 | -20.8257  | -10994.71 |
| 3802 | 1   | Extremo | 361.906 | 1472.174 | 206.503 | -36.8333 | -124.0772 | -11725.03 |
| 3803 | 0   | Extremo | 609.435 | 1566.989 | 306.876 | -35.744  | 107.9804  | -11952.61 |
| 3803 | 0.5 | Extremo | 609.435 | 1590.037 | 306.876 | -35.744  | -45.4577  | -12741.87 |
| 3803 | 1   | Extremo | 609.435 | 1613.084 | 306.876 | -35.744  | -198.8957 | -13542.65 |
| 3803 | 0   | Extremo | 646.968 | 1569.137 | 302.782 | -61.1196 | 108.5175  | -11800.17 |
| 3803 | 0.5 | Extremo | 646.968 | 1592.185 | 302.782 | -61.1196 | -42.8737  | -12590.5  |
| 3803 | 1   | Extremo | 646.968 | 1615.232 | 302.782 | -61.1196 | -194.2648 | -13392.36 |
| 3804 | 0   | Extremo | 1119.04 | 1849.742 | 563.152 | -73.409  | 104.4922  | -13586.03 |
| 3804 | 0.5 | Extremo | 1119.04 | 1872.789 | 563.152 | -73.409  | -177.0837 | -14516.66 |

|      |     |         |           |           |         |           |           |           |
|------|-----|---------|-----------|-----------|---------|-----------|-----------|-----------|
| 3804 | 1   | Extremo | 1119.04   | 1895.837  | 563.152 | -73.409   | -458.6596 | -15458.82 |
| 3804 | 0   | Extremo | 1158.912  | 1853.149  | 558.633 | -102.8631 | 105.4866  | -13441.12 |
| 3804 | 0.5 | Extremo | 1158.912  | 1876.196  | 558.633 | -102.8631 | -173.8298 | -14373.45 |
| 3804 | 1   | Extremo | 1158.912  | 1899.244  | 558.633 | -102.8631 | -453.1463 | -15317.31 |
| 3806 | 0   | Extremo | -6683.974 | -2515.05  | 621.806 | 212.3565  | 513.3472  | -16527.59 |
| 3806 | 0.5 | Extremo | -6683.974 | -2492.002 | 621.806 | 212.3565  | 202.444   | -15275.83 |
| 3806 | 1   | Extremo | -6683.974 | -2468.955 | 621.806 | 212.3565  | -108.4592 | -14035.59 |
| 3806 | 0   | Extremo | -6631.308 | -2494.202 | 620.378 | 166.8367  | 513.6102  | -16441.37 |
| 3806 | 0.5 | Extremo | -6631.308 | -2471.154 | 620.378 | 166.8367  | 203.4214  | -15200.03 |
| 3806 | 1   | Extremo | -6631.308 | -2448.107 | 620.378 | 166.8367  | -106.7674 | -13970.21 |
| 3807 | 0   | Extremo | -6146.463 | -2140.049 | 330.343 | 172.297   | 210.82    | -13935.77 |
| 3807 | 0.5 | Extremo | -6146.463 | -2117.002 | 330.343 | 172.297   | 45.6485   | -12871.51 |
| 3807 | 1   | Extremo | -6146.463 | -2093.954 | 330.343 | 172.297   | -119.523  | -11818.77 |
| 3807 | 0   | Extremo | -6092.771 | -2112.368 | 329.549 | 123.1413  | 211.8573  | -13882.21 |
| 3807 | 0.5 | Extremo | -6092.771 | -2089.321 | 329.549 | 123.1413  | 47.0827   | -12831.79 |
| 3807 | 1   | Extremo | -6092.771 | -2066.273 | 329.549 | 123.1413  | -117.6919 | -11792.89 |
| 3808 | 0   | Extremo | -5842.67  | -1971.612 | 233.03  | 148.5614  | 137.6342  | -11696.15 |
| 3808 | 0.5 | Extremo | -5842.67  | -1948.565 | 233.03  | 148.5614  | 21.1192   | -10716.1  |
| 3808 | 1   | Extremo | -5842.67  | -1925.517 | 233.03  | 148.5614  | -95.3958  | -9747.584 |
| 3808 | 0   | Extremo | -5787.977 | -1939.539 | 232.447 | 96.1402   | 138.772   | -11683.78 |
| 3808 | 0.5 | Extremo | -5787.977 | -1916.492 | 232.447 | 96.1402   | 22.5484   | -10719.77 |
| 3808 | 1   | Extremo | -5787.977 | -1893.444 | 232.447 | 96.1402   | -93.6753  | -9767.286 |
| 3809 | 0   | Extremo | -5669.187 | -1868.919 | 182.861 | 127.2648  | 103.513   | -9604.208 |
| 3809 | 0.5 | Extremo | -5669.187 | -1845.872 | 182.861 | 127.2648  | 12.0827   | -8675.511 |
| 3809 | 1   | Extremo | -5669.187 | -1822.824 | 182.861 | 127.2648  | -79.3475  | -7758.337 |
| 3809 | 0   | Extremo | -5613.715 | -1834.162 | 182.431 | 72.3932   | 104.6869  | -9638.486 |
| 3809 | 0.5 | Extremo | -5613.715 | -1811.114 | 182.431 | 72.3932   | 13.4711   | -8727.167 |
| 3809 | 1   | Extremo | -5613.715 | -1788.067 | 182.431 | 72.3932   | -77.7446  | -7827.372 |
| 3810 | 0   | Extremo | -5555.503 | -1797.68  | 150.561 | 95.8368   | 83.6646   | -7594.601 |
| 3810 | 0.5 | Extremo | -5555.503 | -1774.632 | 150.561 | 95.8368   | 8.3839    | -6701.523 |
| 3810 | 1   | Extremo | -5555.503 | -1751.585 | 150.561 | 95.8368   | -66.8968  | -5819.969 |
| 3810 | 0   | Extremo | -5499.635 | -1762.5   | 150.271 | 39.0623   | 84.8583   | -7678.59  |
| 3810 | 0.5 | Extremo | -5499.635 | -1739.453 | 150.271 | 39.0623   | 9.7228    | -6803.102 |
| 3810 | 1   | Extremo | -5499.635 | -1716.405 | 150.271 | 39.0623   | -65.4128  | -5939.137 |
| 3811 | 0   | Extremo | -5456.686 | -1668.201 | 121.413 | 103.6702  | 71.6879   | -5580.401 |
| 3811 | 0.5 | Extremo | -5456.686 | -1646.504 | 121.413 | 103.6702  | 10.9816   | -4751.725 |
| 3811 | 1   | Extremo | -5456.686 | -1624.806 | 121.413 | 103.6702  | -49.7246  | -3933.897 |
| 3811 | 0   | Extremo | -5400.995 | -1634.444 | 121.268 | 50.0057   | 72.813    | -5709.251 |
| 3811 | 0.5 | Extremo | -5400.995 | -1612.747 | 121.268 | 50.0057   | 12.1791   | -4897.453 |
| 3811 | 1   | Extremo | -5400.995 | -1591.049 | 121.268 | 50.0057   | -48.4548  | -4096.504 |
| 3812 | 0   | Extremo | -5403.364 | -1533.867 | 101.486 | 125.768   | 59.5259   | -3814.192 |
| 3812 | 0.5 | Extremo | -5403.364 | -1512.17  | 101.486 | 125.768   | 8.7828    | -3052.683 |
| 3812 | 1   | Extremo | -5403.364 | -1490.472 | 101.486 | 125.768   | -41.9603  | -2302.022 |
| 3812 | 0   | Extremo | -5347.718 | -1498.52  | 101.488 | 72.0498   | 60.6995   | -3988.837 |
| 3812 | 0.5 | Extremo | -5347.718 | -1476.822 | 101.488 | 72.0498   | 9.9557    | -3245.002 |
| 3812 | 1   | Extremo | -5347.718 | -1455.125 | 101.488 | 72.0498   | -40.7882  | -2512.015 |
| 3813 | 0   | Extremo | -5371.278 | -1434.658 | 87.789  | 127.6086  | 50.0898   | -2195.203 |
| 3813 | 0.5 | Extremo | -5371.278 | -1412.96  | 87.789  | 127.6086  | 6.1953    | -1483.299 |
| 3813 | 1   | Extremo | -5371.278 | -1391.263 | 87.789  | 127.6086  | -37.6992  | -782.2434 |



|      |     |         |           |          |         |          |          |           |
|------|-----|---------|-----------|----------|---------|----------|----------|-----------|
| 3817 | 1   | Extremo | -5217.297 | -943.651 | 68.788  | 130.853  | -27.0097 | 4108.141  |
| 3817 | 0   | Extremo | -5163.759 | -952.794 | 69.085  | 76.2028  | 42.9352  | 2735.605  |
| 3817 | 0.5 | Extremo | -5163.759 | -932.671 | 69.085  | 76.2028  | 8.3929   | 3206.9711 |
| 3817 | 1   | Extremo | -5163.759 | -912.549 | 69.085  | 76.2028  | -26.1495 | 3668.276  |
| 3818 | 0   | Extremo | -5182.407 | -921.682 | 60.951  | 111.1865 | 36.6671  | 4163.4177 |
| 3818 | 0.5 | Extremo | -5182.407 | -901.56  | 60.951  | 111.1865 | 6.1917   | 4619.2282 |
| 3818 | 1   | Extremo | -5182.407 | -881.437 | 60.951  | 111.1865 | -24.2837 | 5064.9774 |
| 3818 | 0   | Extremo | -5129.449 | -886.152 | 61.312  | 58.9423  | 37.8383  | 3714.1897 |
| 3818 | 0.5 | Extremo | -5129.449 | -866.029 | 61.312  | 58.9423  | 7.1823   | 4152.235  |
| 3818 | 1   | Extremo | -5129.449 | -845.907 | 61.312  | 58.9423  | -23.4737 | 4580.2191 |
| 3819 | 0   | Extremo | -5160.131 | -842.36  | 55.352  | 103.7173 | 31.7632  | 5129.7007 |
| 3819 | 0.5 | Extremo | -5160.131 | -822.238 | 55.352  | 103.7173 | 4.087    | 5545.85   |
| 3819 | 1   | Extremo | -5160.131 | -802.115 | 55.352  | 103.7173 | -23.5892 | 5951.9382 |
| 3819 | 0   | Extremo | -5107.579 | -805.113 | 55.761  | 51.6968  | 32.958   | 4633.7334 |
| 3819 | 0.5 | Extremo | -5107.579 | -784.991 | 55.761  | 51.6968  | 5.0773   | 5031.2594 |
| 3819 | 1   | Extremo | -5107.579 | -764.868 | 55.761  | 51.6968  | -22.8033 | 5418.7242 |
| 3820 | 0   | Extremo | -5139.105 | -737.505 | 52.811  | 116.1083 | 28.4498  | 6018.2679 |
| 3820 | 0.5 | Extremo | -5139.105 | -717.382 | 52.811  | 116.1083 | 2.0442   | 6381.9896 |
| 3820 | 1   | Extremo | -5139.105 | -697.26  | 52.811  | 116.1083 | -24.3614 | 6735.6501 |
| 3820 | 0   | Extremo | -5086.906 | -701.408 | 53.243  | 62.6179  | 29.6556  | 5473.1704 |
| 3820 | 0.5 | Extremo | -5086.906 | -681.286 | 53.243  | 62.6179  | 3.0341   | 5818.8439 |
| 3820 | 1   | Extremo | -5086.906 | -661.163 | 53.243  | 62.6179  | -23.5874 | 6154.4563 |
| 3821 | 0   | Extremo | -5108.112 | -558.79  | 51.214  | 163.4726 | 26.9671  | 6776.5282 |
| 3821 | 0.5 | Extremo | -5108.112 | -538.668 | 51.214  | 163.4726 | 1.3603   | 7050.8926 |
| 3821 | 1   | Extremo | -5108.112 | -518.545 | 51.214  | 163.4726 | -24.2465 | 7315.1958 |
| 3821 | 0   | Extremo | -5056.327 | -531.028 | 51.665  | 106.586  | 28.1699  | 6185.1229 |
| 3821 | 0.5 | Extremo | -5056.327 | -510.906 | 51.665  | 106.586  | 2.3375   | 6445.6065 |
| 3821 | 1   | Extremo | -5056.327 | -490.783 | 51.665  | 106.586  | -23.4948 | 6696.0287 |
| 3822 | 0   | Extremo | -5051.698 | -452.62  | 43.252  | 152.137  | 29.4773  | 7146.0563 |
| 3822 | 0.5 | Extremo | -5051.698 | -433.735 | 43.252  | 152.137  | 7.8512   | 7367.6453 |
| 3822 | 1   | Extremo | -5051.698 | -414.85  | 43.252  | 152.137  | -13.7748 | 7579.7918 |
| 3822 | 0   | Extremo | -5000.529 | -429.762 | 43.758  | 102.4255 | 30.5705  | 6535.6407 |
| 3822 | 0.5 | Extremo | -5000.529 | -410.877 | 43.758  | 102.4255 | 8.6914   | 6745.8006 |
| 3822 | 1   | Extremo | -5000.529 | -391.992 | 43.758  | 102.4255 | -13.1877 | 6946.5179 |
| 3823 | 0   | Extremo | -5025.233 | -436.174 | 33.191  | 99.0247  | 23.8604  | 7594.9806 |
| 3823 | 0.5 | Extremo | -5025.233 | -417.289 | 33.191  | 99.0247  | 7.2651   | 7808.3462 |
| 3823 | 1   | Extremo | -5025.233 | -398.404 | 33.191  | 99.0247  | -9.3301  | 8012.2693 |
| 3823 | 0   | Extremo | -4974.213 | -410.853 | 33.817  | 57.9846  | 24.982   | 6954.1504 |
| 3823 | 0.5 | Extremo | -4974.213 | -391.968 | 33.817  | 57.9846  | 8.0738   | 7154.8557 |
| 3823 | 1   | Extremo | -4974.213 | -373.083 | 33.817  | 57.9846  | -8.8345  | 7346.1184 |
| 3824 | 0   | Extremo | -5012.324 | -361.721 | 23.584  | 70.7829  | 18.0126  | 8044.3608 |
| 3824 | 0.5 | Extremo | -5012.324 | -342.836 | 23.584  | 70.7829  | 6.2208   | 8220.4998 |
| 3824 | 1   | Extremo | -5012.324 | -323.951 | 23.584  | 70.7829  | -5.571   | 8387.1963 |
| 3824 | 0   | Extremo | -4961.163 | -341.28  | 24.376  | 38.873   | 19.1864  | 7368.883  |
| 3824 | 0.5 | Extremo | -4961.163 | -322.395 | 24.376  | 38.873   | 6.9983   | 7534.8019 |
| 3824 | 1   | Extremo | -4961.163 | -303.51  | 24.376  | 38.873   | -5.1898  | 7691.2783 |
| 3825 | 0   | Extremo | -5006.075 | -266.31  | 15.274  | 51.2526  | 13.2252  | 8412.4175 |
| 3825 | 0.5 | Extremo | -5006.075 | -247.425 | 15.274  | 51.2526  | 5.5883   | 8540.8511 |
| 3825 | 1   | Extremo | -5006.075 | -228.54  | 15.274  | 51.2526  | -2.0486  | 8659.8423 |
| 3825 | 0   | Extremo | -4954.585 | -256.207 | 16.301  | 32.0806  | 14.4581  | 7708.1457 |
| 3825 | 0.5 | Extremo | -4954.585 | -237.322 | 16.301  | 32.0806  | 6.3074   | 7831.5277 |
| 3825 | 1   | Extremo | -4954.585 | -218.437 | 16.301  | 32.0806  | -1.8433  | 7945.4673 |
| 3826 | 0   | Extremo | -5003.254 | -165.131 | 8.052   | 29.8862  | 9.351    | 8677.0956 |
| 3826 | 0.5 | Extremo | -5003.254 | -146.246 | 8.052   | 29.8862  | 5.3248   | 8754.9397 |
| 3826 | 1   | Extremo | -5003.254 | -127.361 | 8.052   | 29.8862  | 1.2986   | 8823.3413 |
| 3826 | 0   | Extremo | -4951.357 | -169.987 | 9.383   | 28.9896  | 10.6199  | 7957.0839 |
| 3826 | 0.5 | Extremo | -4951.357 | -151.102 | 9.383   | 28.9896  | 5.9283   | 8037.3561 |
| 3826 | 1   | Extremo | -4951.357 | -132.217 | 9.383   | 28.9896  | 1.2366   | 8108.1858 |
| 3827 | 0   | Extremo | -5002.32  | -62.353  | 1.648   | 4.4603   | 6.1606   | 8831.0681 |
| 3827 | 0.5 | Extremo | -5002.32  | -43.468  | 1.648   | 4.4603   | 5.3364   | 8857.5232 |
| 3827 | 1   | Extremo | -5002.32  | -24.583  | 1.648   | 4.4603   | 4.5122   | 8874.5359 |
| 3827 | 0   | Extremo | -4950.05  | -84.65   | 3.168   | 26.6438  | 7.3441   | 8115.8247 |
| 3827 | 0.5 | Extremo | -4950.05  | -65.765  | 3.168   | 26.6438  | 5.7598   | 8153.4286 |
| 3827 | 1   | Extremo | -4950.05  | -46.88   | 3.168   | 26.6438  | 4.1756   | 8181.59   |
| 3828 | 0   | Extremo | -5002.773 | 40.038   | -4.246  | -20.9241 | 3.3923   | 8871.4615 |
| 3828 | 0.5 | Extremo | -5002.773 | 58.923   | -4.246  | -20.9241 | 5.5156   | 8846.7214 |
| 3828 | 1   | Extremo | -5002.773 | 77.808   | -4.246  | -20.9241 | 7.6388   | 8812.5388 |
| 3828 | 0   | Extremo | -4950.11  | 0.361    | -2.815  | 24.3666  | 4.3499   | 8185.6486 |
| 3828 | 0.5 | Extremo | -4950.11  | 19.246   | -2.815  | 24.3666  | 5.7574   | 8180.7467 |
| 3828 | 1   | Extremo | -4950.11  | 38.131   | -2.815  | 24.3666  | 7.1648   | 8166.4023 |
| 3829 | 0   | Extremo | -5004.676 | 140.292  | -10.269 | -41.5641 | 0.6655   | 8800.3719 |
| 3829 | 0.5 | Extremo | -5004.676 | 159.177  | -10.269 | -41.5641 | 5.8      | 8725.5045 |

|      |     |         |           |         |         |           |          |           |
|------|-----|---------|-----------|---------|---------|-----------|----------|-----------|
| 3829 | 1   | Extremo | -5004.676 | 178.062 | -10.269 | -41.5641  | 10.9345  | 8641.1945 |
| 3829 | 0   | Extremo | -4951.534 | 85.847  | -9.031  | 22.0154   | 1.4052   | 8166.8674 |
| 3829 | 0.5 | Extremo | -4951.534 | 104.732 | -9.031  | 22.0154   | 5.9209   | 8119.2225 |
| 3829 | 1   | Extremo | -4951.534 | 123.617 | -9.031  | 22.0154   | 10.4366  | 8062.1351 |
| 3830 | 0   | Extremo | -5008.497 | 237.056 | -17.082 | -57.1811  | -2.2987  | 8622.4383 |
| 3830 | 0.5 | Extremo | -5008.497 | 255.941 | -17.082 | -57.1811  | 6.2426   | 8499.1893 |
| 3830 | 1   | Extremo | -5008.497 | 274.826 | -17.082 | -57.1811  | 14.7838  | 8366.4977 |
| 3830 | 0   | Extremo | -4954.881 | 172.413 | -15.953 | 18.8403   | -1.6813  | 8058.5634 |
| 3830 | 0.5 | Extremo | -4954.881 | 191.298 | -15.953 | 18.8403   | 6.2952   | 7967.6355 |
| 3830 | 1   | Extremo | -4954.881 | 210.183 | -15.953 | 18.8403   | 14.2717  | 7867.265  |
| 3831 | 0   | Extremo | -5015.608 | 328.596 | -25.148 | -72.0585  | -5.5988  | 8341.5488 |
| 3831 | 0.5 | Extremo | -5015.608 | 347.481 | -25.148 | -72.0585  | 6.9753   | 8172.5293 |
| 3831 | 1   | Extremo | -5015.608 | 366.366 | -25.148 | -72.0585  | 19.5495  | 7994.0674 |
| 3831 | 0   | Extremo | -4961.575 | 257.979 | -24.033 | 11.657    | -5.0354  | 7858.2679 |
| 3831 | 0.5 | Extremo | -4961.575 | 276.864 | -24.033 | 11.657    | 6.9813   | 7724.5573 |
| 3831 | 1   | Extremo | -4961.575 | 295.749 | -24.033 | 11.657    | 18.9979  | 7581.4042 |
| 3832 | 0   | Extremo | -5029.146 | 400.52  | -34.647 | -97.0166  | -9.2376  | 7962.9774 |
| 3832 | 0.5 | Extremo | -5029.146 | 419.405 | -34.647 | -97.0166  | 8.086    | 7757.9964 |
| 3832 | 1   | Extremo | -5029.146 | 438.29  | -34.647 | -97.0166  | 25.4096  | 7543.5728 |
| 3832 | 0   | Extremo | -4974.74  | 327.409 | -33.482 | -8.6914   | -8.689   | 7566.1937 |
| 3832 | 0.5 | Extremo | -4974.74  | 346.294 | -33.482 | -8.6914   | 8.0518   | 7397.7678 |
| 3832 | 1   | Extremo | -4974.74  | 365.179 | -33.482 | -8.6914   | 24.7926  | 7219.8994 |
| 3833 | 0   | Extremo | -5055.99  | 415.843 | -44.682 | -147.7784 | -13.6139 | 7529.4503 |
| 3833 | 0.5 | Extremo | -5055.99  | 434.728 | -44.682 | -147.7784 | 8.7273   | 7316.8076 |
| 3833 | 1   | Extremo | -5055.99  | 453.613 | -44.682 | -147.7784 | 31.0684  | 7094.7224 |
| 3833 | 0   | Extremo | -5001.17  | 343.032 | -43.434 | -55.6348  | -13.0534 | 7220.4572 |
| 3833 | 0.5 | Extremo | -5001.17  | 361.917 | -43.434 | -55.6348  | 8.6638   | 7044.2201 |
| 3833 | 1   | Extremo | -5001.17  | 380.802 | -43.434 | -55.6348  | 30.3809  | 6858.5406 |
| 3834 | 0   | Extremo | -5112.546 | 518.363 | -52.694 | -157.4331 | -24.0257 | 7263.6201 |
| 3834 | 0.5 | Extremo | -5112.546 | 538.485 | -52.694 | -157.4331 | 2.3212   | 6999.4081 |
| 3834 | 1   | Extremo | -5112.546 | 558.608 | -52.694 | -157.4331 | 28.668   | 6725.135  |
| 3834 | 0   | Extremo | -5057.084 | 438.818 | -51.351 | -56.1049  | -23.3774 | 7036.2089 |
| 3834 | 0.5 | Extremo | -5057.084 | 458.94  | -51.351 | -56.1049  | 2.2979   | 6811.7694 |
| 3834 | 1   | Extremo | -5057.084 | 479.063 | -51.351 | -56.1049  | 27.9732  | 6577.2686 |
| 3835 | 0   | Extremo | -5143.524 | 695.898 | -54.301 | -109.7146 | -24.1181 | 6685.5999 |
| 3835 | 0.5 | Extremo | -5143.524 | 716.02  | -54.301 | -109.7146 | 3.0324   | 6332.6204 |
| 3835 | 1   | Extremo | -5143.524 | 736.143 | -54.301 | -109.7146 | 30.1829  | 5969.5797 |
| 3835 | 0   | Extremo | -5087.775 | 613.029 | -52.948 | -10.2069  | -23.4798 | 6557.9613 |
| 3835 | 0.5 | Extremo | -5087.775 | 633.152 | -52.948 | -10.2069  | 2.9943   | 6246.4159 |
| 3835 | 1   | Extremo | -5087.775 | 653.274 | -52.948 | -10.2069  | 29.4683  | 5924.8093 |
| 3836 | 0   | Extremo | -5164.414 | 800.407 | -56.862 | -97.1205  | -23.3227 | 5904.6913 |
| 3836 | 0.5 | Extremo | -5164.414 | 820.53  | -56.862 | -97.1205  | 5.1085   | 5499.4569 |
| 3836 | 1   | Extremo | -5164.414 | 840.652 | -56.862 | -97.1205  | 33.5397  | 5084.1613 |
| 3836 | 0   | Extremo | -5108.545 | 718.624 | -55.49  | 0.5399    | -22.711  | 5880.134  |
| 3836 | 0.5 | Extremo | -5108.545 | 738.746 | -55.49  | 0.5399    | 5.0341   | 5515.7916 |
| 3836 | 1   | Extremo | -5108.545 | 758.869 | -55.49  | 0.5399    | 32.7292  | 5141.3879 |
| 3837 | 0   | Extremo | -5186.456 | 879.769 | -62.494 | -104.4005 | -24.0004 | 5020.7968 |
| 3837 | 0.5 | Extremo | -5186.456 | 899.892 | -62.494 | -104.4005 | 7.2465   | 4575.8815 |
| 3837 | 1   | Extremo | -5186.456 | 920.014 | -62.494 | -104.4005 |          |           |



|      |     |         |           |           |          |           |           |           |
|------|-----|---------|-----------|-----------|----------|-----------|-----------|-----------|
| 3841 | 1   | Extremo | -5350.18  | 1341.522  | -81.912  | -114.5873 | 45.9516   | -705.8399 |
| 3841 | 0   | Extremo | -5293.248 | 1216.267  | -80.385  | -13.8081  | -35.3395  | 1120.4095 |
| 3841 | 0.5 | Extremo | -5293.248 | 1237.965  | -80.385  | -13.8081  | 4.8532    | 506.8515  |
| 3841 | 1   | Extremo | -5293.248 | 1259.662  | -80.385  | -13.8081  | 45.046    | -117.5552 |
| 3842 | 0   | Extremo | -5373.527 | 1389.402  | -89.551  | -120.3475 | -37.3092  | -811.5841 |
| 3842 | 0.5 | Extremo | -5373.527 | 1411.099  | -89.551  | -120.3475 | 7.4665    | -1511.709 |
| 3842 | 1   | Extremo | -5373.527 | 1432.797  | -89.551  | -120.3475 | 52.2423   | -2222.683 |
| 3842 | 0   | Extremo | -5316.516 | 1310.385  | -88.001  | -21.7051  | -36.715   | -199.6418 |
| 3842 | 0.5 | Extremo | -5316.516 | 1332.082  | -88.001  | -21.7051  | 7.2854    | -860.2586 |
| 3842 | 1   | Extremo | -5316.516 | 1353.78   | -88.001  | -21.7051  | 51.2857   | -1531.724 |
| 3843 | 0   | Extremo | -5405.428 | 1488.844  | -103.328 | -118.6244 | -41.5714  | -2327.969 |
| 3843 | 0.5 | Extremo | -5405.428 | 1510.541  | -103.328 | -118.6244 | 10.0924   | -3077.815 |
| 3843 | 1   | Extremo | -5405.428 | 1532.239  | -103.328 | -118.6244 | 61.7562   | -3838.51  |
| 3843 | 0   | Extremo | -5348.2   | 1412.016  | -101.706 | -23.9119  | -40.9843  | -1614.422 |
| 3843 | 0.5 | Extremo | -5348.2   | 1433.714  | -101.706 | -23.9119  | 9.8686    | -2325.854 |
| 3843 | 1   | Extremo | -5348.2   | 1455.411  | -101.706 | -23.9119  | 60.7216   | -3048.136 |
| 3844 | 0   | Extremo | -5458.711 | 1623.513  | -123.373 | -96.5973  | -49.3435  | -3956.785 |
| 3844 | 0.5 | Extremo | -5458.711 | 1645.21   | -123.373 | -96.5973  | 12.343    | -4773.966 |
| 3844 | 1   | Extremo | -5458.711 | 1666.908  | -123.373 | -96.5973  | 74.0294   | -5601.925 |
| 3844 | 0   | Extremo | -5400.966 | 1544.701  | -121.641 | -8.9025   | -48.7444  | -3143.244 |
| 3844 | 0.5 | Extremo | -5400.966 | 1566.399  | -121.641 | -8.9025   | 12.0761   | -3921.019 |
| 3844 | 1   | Extremo | -5400.966 | 1588.096  | -121.641 | -8.9025   | 72.8967   | -4709.642 |
| 3845 | 0   | Extremo | -5557.706 | 1750.309  | -152.744 | -88.4781  | -66.5032  | -5840.576 |
| 3845 | 0.5 | Extremo | -5557.706 | 1773.357  | -152.744 | -88.4781  | 9.8686    | -6721.492 |
| 3845 | 1   | Extremo | -5557.706 | 1796.404  | -152.744 | -88.4781  | 86.2404   | -7613.933 |
| 3845 | 0   | Extremo | -5498.851 | 1671.804  | -150.841 | -0.0293   | -65.8236  | -4909.086 |
| 3845 | 0.5 | Extremo | -5498.851 | 1694.851  | -150.841 | -0.0293   | 9.597     | -5750.75  |
| 3845 | 1   | Extremo | -5498.851 | 1717.899  | -150.841 | -0.0293   | 85.0175   | -6603.937 |
| 3846 | 0   | Extremo | -5672.111 | 1821.841  | -185.299 | -120.4615 | -79.019   | -7775.969 |
| 3846 | 0.5 | Extremo | -5672.111 | 1844.888  | -185.299 | -120.4615 | 13.6305   | -8692.652 |
| 3846 | 1   | Extremo | -5672.111 | 1867.936  | -185.299 | -120.4615 | 106.28    | -9620.858 |
| 3846 | 0   | Extremo | -5611.8   | 1755.247  | -183.26  | -37.1404  | -78.3301  | -6739.549 |
| 3846 | 0.5 | Extremo | -5611.8   | 1778.295  | -183.26  | -37.1404  | 13.2998   | -7622.934 |
| 3846 | 1   | Extremo | -5611.8   | 1801.342  | -183.26  | -37.1404  | 104.9296  | -8517.843 |
| 3847 | 0   | Extremo | -5847.184 | 1925.251  | -235.88  | -142.5986 | -95.1622  | -9762.627 |
| 3847 | 0.5 | Extremo | -5847.184 | 1948.298  | -235.88  | -142.5986 | 22.7776   | -10731.01 |
| 3847 | 1   | Extremo | -5847.184 | 1971.346  | -235.88  | -142.5986 | 140.7173  | -11710.92 |
| 3847 | 0   | Extremo | -5784.505 | 1868.373  | -233.566 | -71.0312  | -94.4413  | -8638.275 |
| 3847 | 0.5 | Extremo | -5784.505 | 1891.421  | -233.566 | -71.0312  | 22.3417   | -9578.224 |
| 3847 | 1   | Extremo | -5784.505 | 1914.468  | -233.566 | -71.0312  | 139.1246  | -10529.7  |
| 3848 | 0   | Extremo | -6154.042 | 2094.722  | -333.985 | -167.6886 | -119.4574 | -11832.1  |
| 3848 | 0.5 | Extremo | -6154.042 | 2117.77   | -333.985 | -167.6886 | 47.535    | -12885.22 |
| 3848 | 1   | Extremo | -6154.042 | 2140.817  | -333.985 | -167.6886 | 214.5274  | -13949.87 |
| 3848 | 0   | Extremo | -6087.196 | 2044.691  | -330.852 | -113.3623 | -118.5637 | -10634.28 |
| 3848 | 0.5 | Extremo | -6087.196 | 2067.738  | -330.852 | -113.3623 | 46.862    | -11662.39 |
| 3848 | 1   | Extremo | -6087.196 | 2090.786  | -330.852 | -113.3623 | 212.2878  | -12702.02 |
| 3849 | 0   | Extremo | -6697.084 | 2471.373  | -627.728 | -209.8565 | -108.4019 | -14048    |
| 3849 | 0.5 | Extremo | -6697.084 | 2494.421  | -627.728 | -209.8565 | 205.4621  | -15289.45 |
| 3849 | 1   | Extremo | -6697.084 | 2517.468  | -627.728 | -209.8565 | 519.3261  | -16542.62 |
| 3849 | 0   | Extremo | -6623.043 | 2419.509  | -621.264 | -176.5373 | -107.5408 | -12787.39 |
| 3849 | 0.5 | Extremo | -6623.043 | 2442.557  | -621.264 | -176.5373 | 203.0911  | -14002.91 |
| 3849 | 1   | Extremo | -6623.043 | 2465.604  | -621.264 | -176.5373 | 513.7231  | -15229.95 |
| 3851 | 0   | Extremo | 1176.898  | -1933.038 | -566.006 | 72.6851   | -459.1807 | -15512.97 |
| 3851 | 0.5 | Extremo | 1176.898  | -1909.991 | -566.006 | 72.6851   | -176.1779 | -14552.21 |
| 3851 | 1   | Extremo | 1176.898  | -1886.943 | -566.006 | 72.6851   | 106.8248  | -13602.98 |
| 3851 | 0   | Extremo | 1156.921  | -1903.323 | -560.691 | 69.8033   | -454.8579 | -14398.37 |
| 3851 | 0.5 | Extremo | 1156.921  | -1880.276 | -560.691 | 69.8033   | -174.5125 | -13452.47 |
| 3851 | 1   | Extremo | 1156.921  | -1857.228 | -560.691 | 69.8033   | 105.8329  | -12518.1  |
| 3852 | 0   | Extremo | 660.804   | -1644.684 | -307.515 | 32.8512   | -197.5279 | -13559.14 |
| 3852 | 0.5 | Extremo | 660.804   | -1621.636 | -307.515 | 32.8512   | -43.7706  | -12742.56 |
| 3852 | 1   | Extremo | 660.804   | -1598.589 | -307.515 | 32.8512   | 109.9867  | -11937.5  |
| 3852 | 0   | Extremo | 648.044   | -1609.134 | -305.556 | 20.4409   | -196.3127 | -12480.98 |
| 3852 | 0.5 | Extremo | 648.044   | -1586.086 | -305.556 | 20.4409   | -43.5346  | -11682.18 |
| 3852 | 1   | Extremo | 648.044   | -1563.039 | -305.556 | 20.4409   | 109.2434  | -10894.9  |
| 3853 | 0   | Extremo | 374.014   | -1501.395 | -210.25  | 9.5168    | -126.624  | -11866.94 |
| 3853 | 0.5 | Extremo | 374.014   | -1478.347 | -210.25  | 9.5168    | -21.4991  | -11122.01 |
| 3853 | 1   | Extremo | 374.014   | -1455.3   | -210.25  | 9.5168    | 83.6258   | -10388.6  |
| 3853 | 0   | Extremo | 365.756   | -1462.204 | -209.399 | -9.0846   | -126.168  | -10831.14 |
| 3853 | 0.5 | Extremo | 365.756   | -1439.157 | -209.399 | -9.0846   | -21.4687  | -10105.8  |
| 3853 | 1   | Extremo | 365.756   | -1416.109 | -209.399 | -9.0846   | 83.2306   | -9391.984 |
| 3854 | 0   | Extremo | 217.566   | -1403.246 | -153.518 | -14.3155  | -90.3225  | -10305.82 |
| 3854 | 0.5 | Extremo | 217.566   | -1380.199 | -153.518 | -14.3155  | -13.5635  | -9609.962 |

|      |     |         |         |           |          |          |          |           |
|------|-----|---------|---------|-----------|----------|----------|----------|-----------|
| 3854 | 1   | Extremo | 217.566 | -1357.151 | -153.518 | -14.3155 | 63.1955  | -8925.625 |
| 3854 | 0   | Extremo | 212.18  | -1360.317 | -153.201 | -35.8019 | -90.2146 | -9316.418 |
| 3854 | 0.5 | Extremo | 212.18  | -1337.27  | -153.201 | -35.8019 | -13.614  | -8642.021 |
| 3854 | 1   | Extremo | 212.18  | -1314.222 | -153.201 | -35.8019 | 62.9865  | -7979.148 |
| 3855 | 0   | Extremo | 130.674 | -1342.776 | -113.781 | -53.9134 | -67.1819 | -8824.613 |
| 3855 | 0.5 | Extremo | 130.674 | -1319.728 | -113.781 | -53.9134 | -10.2912 | -8158.987 |
| 3855 | 1   | Extremo | 130.674 | -1296.681 | -113.781 | -53.9134 | 46.5925  | -7504.885 |
| 3855 | 0   | Extremo | 127.235 | -1292.711 | -113.796 | -74.3649 | -67.2916 | -7887.696 |
| 3855 | 0.5 | Extremo | 127.235 | -1269.664 | -113.796 | -74.3649 | -10.3933 | -7247.103 |
| 3855 | 1   | Extremo | 127.235 | -1246.616 | -113.796 | -74.3649 | 46.5049  | -6618.033 |
| 3856 | 0   | Extremo | 83.49   | -1223.336 | -83.422  | -39.4929 | -48.1004 | -7286.177 |
| 3856 | 0.5 | Extremo | 83.49   | -1201.639 | -83.422  | -39.4929 | -6.3895  | -6679.933 |
| 3856 | 1   | Extremo | 83.49   | -1179.941 | -83.422  | -39.4929 | 35.3213  | -6084.538 |
| 3856 | 0   | Extremo | 81.374  | -1173.697 | -83.668  | -60.2871 | -48.3409 | -6423.529 |
| 3856 | 0.5 | Extremo | 81.374  | -1152     | -83.668  | -60.2871 | -6.5068  | -5842.105 |
| 3856 | 1   | Extremo | 81.374  | -1130.302 | -83.668  | -60.2871 | 35.3273  | -5271.529 |
| 3857 | 0   | Extremo | 54.987  | -1077.228 | -64.448  | -11.405  | -37.1947 | -6015.758 |
| 3857 | 0.5 | Extremo | 54.987  | -1055.531 | -64.448  | -11.405  | -4.9708  | -5482.568 |
| 3857 | 1   | Extremo | 54.987  | -1033.833 | -64.448  | -11.405  | 27.253   | -4960.227 |
| 3857 | 0   | Extremo | 53.849  | -1032.055 | -64.825  | -36.5829 | -37.5062 | -5210.837 |
| 3857 | 0.5 | Extremo | 53.849  | -1010.357 | -64.825  | -36.5829 | -5.0935  | -4700.234 |
| 3857 | 1   | Extremo | 53.849  | -988.66   | -64.825  | -36.5829 | 27.192   | -4200.48  |
| 3858 | 0   | Extremo | 37.435  | -970.583  | -50.406  | -7.4561  | -29.0852 | -4909.805 |
| 3858 | 0.5 | Extremo | 37.435  | -948.886  | -50.406  | -7.4561  | -3.8822  | -4429.937 |
| 3858 | 1   | Extremo | 37.435  | -927.188  | -50.406  | -7.4561  | 21.3208  | -3960.919 |
| 3858 | 0   | Extremo | 37.056  | -925.716  | -50.874  | -34.4705 | -29.4437 | -4156.823 |
| 3858 | 0.5 | Extremo | 37.056  | -904.018  | -50.874  | -34.4705 | -4.0067  | -3699.39  |
| 3858 | 1   | Extremo | 37.056  | -882.321  | -50.874  | -34.4705 | 21.4303  | -3252.805 |
| 3859 | 0   | Extremo | 26.323  | -873.618  | -39.698  | -14.6001 | -22.8634 | -3913.192 |
| 3859 | 0.5 | Extremo | 26.323  | -851.92   | -39.698  | -14.6001 | -3.0145  | -3481.807 |
| 3859 | 1   | Extremo | 26.323  | -830.223  | -39.698  | -14.6001 | 16.8343  | -3061.271 |
| 3859 | 0   | Extremo | 26.56   | -828.06   | -40.232  | -42.0463 | -23.2532 | -3212.192 |
| 3859 | 0.5 | Extremo | 26.56   | -806.362  | -40.232  | -42.0463 | -3.1374  | -2803.586 |
| 3859 | 1   | Extremo | 26.56   | -784.665  | -40.232  | -42.0463 | 16.9785  | -2405.83  |
| 3860 | 0   | Extremo | 19.099  | -779.028  | -31.362  | -27.8767 | -18.0247 | -3017.292 |
| 3860 | 0.5 | Extremo | 19.099  | -757.33   | -31.362  | -27.8767 | -2.3437  | -2633.203 |
| 3860 | 1   | Extremo | 19.099  | -735.633  | -31.362  | -27.8767 | 13.3373  | -2252.962 |
| 3860 | 0   | Extremo | 19.862  | -731.754  | -31.946  | -54.4673 | -18.4367 | -2369.066 |
| 3860 | 0.5 | Extremo | 19.862  | -710.056  | -31.946  | -54.4673 | -2.4637  | -2008.613 |
| 3860 | 1   | Extremo | 19.862  | -688.359  | -31.946  | -54.4673 | 13.5092  | -1659.01  |
| 3861 | 0   | Extremo | 14.287  | -690.411  | -24.498  | -47.1959 | -14.3531 | -2214.062 |
| 3861 | 0.5 | Extremo | 14.287  | -668.713  | -24.498  | -47.1959 | -2.1043  | -1874.281 |
| 3861 | 1   | Extremo | 14.287  | -647.016  | -24.498  | -47.1959 | 10.1445  | -1545.349 |
| 3861 | 0   | Extremo | 15.515  | -637.757  | -25.122  | -70.5128 | -14.7886 | -1622.271 |
| 3861 | 0.5 | Extremo | 15.515  | -616.06   | -25.122  | -70.5128 | -2.2275  | -1308.817 |
| 3861 | 1   | Extremo | 15.515  | -594.362  | -25.122  | -70.5128 | 10.3336  | -1006.211 |
| 3862 | 0   | Extremo | 11.133  | -583.118  | -18.55   | -35.6636 | -10.5982 | -1473.76  |
| 3862 | 0.5 | Extremo | 11.133  | -562.996  | -18.55   | -35.6636 | -1.3234  | -1187.231 |
| 3862 | 1   | Extremo | 11.133  | -542.     |          |          |          |           |



|      |     |         |        |          |        |          |         |           |
|------|-----|---------|--------|----------|--------|----------|---------|-----------|
| 3866 | 1   | Extremo | 4.619  | -151.711 | -7.926 | -36.2318 | 3.3593  | 391.7375  |
| 3866 | 0   | Extremo | 7.673  | -143.343 | -8.618 | -60.5782 | -4.9809 | 526.5255  |
| 3866 | 0.5 | Extremo | 7.673  | -123.222 | -8.618 | -60.5782 | -0.6719 | 593.1663  |
| 3866 | 1   | Extremo | 7.673  | -103.098 | -8.618 | -60.5782 | 3.6371  | 649.7459  |
| 3867 | 0   | Extremo | 4.023  | -106.397 | -6.343 | -30.2061 | -3.5404 | 382.0429  |
| 3867 | 0.5 | Extremo | 4.023  | -87.512  | -6.343 | -30.2061 | -0.3688 | 430.5202  |
| 3867 | 1   | Extremo | 4.023  | -68.627  | -6.343 | -30.2061 | 2.8028  | 469.5555  |
| 3867 | 0   | Extremo | 7.472  | -60.24   | -7.031 | -52.4522 | -3.9337 | 627.9723  |
| 3867 | 0.5 | Extremo | 7.472  | -41.355  | -7.031 | -52.4522 | -0.4182 | 653.3711  |
| 3867 | 1   | Extremo | 7.472  | -22.47   | -7.031 | -52.4522 | 3.0973  | 669.3274  |
| 3868 | 0   | Extremo | 3.598  | -28.744  | -5.393 | -30.2036 | -2.9725 | 465.1093  |
| 3868 | 0.5 | Extremo | 3.598  | -9.859   | -5.393 | -30.2036 | -0.276  | 474.7602  |
| 3868 | 1   | Extremo | 3.598  | 9.026    | -5.393 | -30.2036 | 2.4205  | 474.9687  |
| 3868 | 0   | Extremo | 7.582  | 13.974   | -6.084 | -53.2443 | -3.355  | 659.797   |
| 3868 | 0.5 | Extremo | 7.582  | 32.859   | -6.084 | -53.2443 | -0.3128 | 648.089   |
| 3868 | 1   | Extremo | 7.582  | 51.744   | -6.084 | -53.2443 | 2.7293  | 626.9384  |
| 3869 | 0   | Extremo | 3.421  | 52.282   | -4.707 | -27.5093 | -2.5312 | 471.2115  |
| 3869 | 0.5 | Extremo | 3.421  | 71.167   | -4.707 | -27.5093 | -0.1779 | 440.3493  |
| 3869 | 1   | Extremo | 3.421  | 90.052   | -4.707 | -27.5093 | 2.1754  | 400.0445  |
| 3869 | 0   | Extremo | 8.208  | 93.62    | -5.404 | -49.5375 | -2.9056 | 618.7445  |
| 3869 | 0.5 | Extremo | 8.208  | 112.505  | -5.404 | -49.5375 | -0.2038 | 567.2131  |
| 3869 | 1   | Extremo | 8.208  | 131.39   | -5.404 | -49.5375 | 2.4979  | 506.2392  |
| 3870 | 0   | Extremo | 3.588  | 152.366  | -4.199 | -22.9798 | -2.1505 | 404.6881  |
| 3870 | 0.5 | Extremo | 3.588  | 171.251  | -4.199 | -22.9798 | -0.0513 | 323.784   |
| 3870 | 1   | Extremo | 3.588  | 190.136  | -4.199 | -22.9798 | 2.048   | 233.4374  |
| 3870 | 0   | Extremo | 9.71   | 193.64   | -4.916 | -42.5216 | -2.5229 | 506.9915  |
| 3870 | 0.5 | Extremo | 9.71   | 212.525  | -4.916 | -42.5216 | -0.0647 | 405.4502  |
| 3870 | 1   | Extremo | 9.71   | 231.41   | -4.916 | -42.5216 | 2.3936  | 294.4664  |
| 3871 | 0   | Extremo | 4.35   | 358.258  | -3.92  | -19.8531 | -1.711  | 260.445   |
| 3871 | 0.5 | Extremo | 4.35   | 377.143  | -3.92  | -19.8531 | 0.2489  | 76.5947   |
| 3871 | 1   | Extremo | 4.35   | 396.028  | -3.92  | -19.8531 | 2.2089  | -116.6981 |
| 3871 | 0   | Extremo | 12.892 | 406.335  | -4.84  | -35.9242 | -2.0771 | 319.241   |
| 3871 | 0.5 | Extremo | 12.892 | 425.22   | -4.84  | -35.9242 | 0.3428  | 111.3524  |
| 3871 | 1   | Extremo | 12.892 | 444.105  | -4.84  | -35.9242 | 2.7628  | -105.9787 |
| 3872 | 0   | Extremo | -1.245 | -183.621 | -1.694 | -16.8642 | -0.4535 | -124.2046 |
| 3872 | 0.5 | Extremo | -1.245 | -164.736 | -1.694 | -16.8642 | 0.3935  | -37.1155  |
| 3872 | 1   | Extremo | -1.245 | -145.851 | -1.694 | -16.8642 | 1.2404  | 40.5312   |
| 3872 | 0   | Extremo | -3.902 | -184.079 | -1.67  | -27.9151 | -0.3321 | -118.2428 |
| 3872 | 0.5 | Extremo | -3.902 | -165.194 | -1.67  | -27.9151 | 0.5028  | -30.9247  |
| 3872 | 1   | Extremo | -3.902 | -146.309 | -1.67  | -27.9151 | 1.3376  | 46.9509   |
| 3873 | 0   | Extremo | 0.313  | 64.116   | 0.335  | 21.1226  | 0.0473  | -110.911  |
| 3873 | 0.5 | Extremo | 0.313  | 75.366   | 0.335  | 21.1226  | -0.1203 | -145.7813 |
| 3873 | 1   | Extremo | 0.313  | 86.616   | 0.335  | 21.1226  | -0.2878 | -186.2766 |
| 3873 | 0   | Extremo | -0.824 | 64.112   | -0.945 | 21.1211  | -0.1735 | -110.9091 |
| 3873 | 0.5 | Extremo | -0.824 | 75.362   | -0.945 | 21.1211  | 0.2991  | -145.7777 |
| 3873 | 1   | Extremo | -0.824 | 86.612   | -0.945 | 21.1211  | -0.7718 | -186.2714 |
| 3874 | 0   | Extremo | 0.329  | -71.808  | -0.425 | -21.4746 | -0.305  | -187.2928 |
| 3874 | 0.5 | Extremo | 0.329  | -60.558  | -0.425 | -21.4746 | -0.0925 | -154.2013 |
| 3874 | 1   | Extremo | 0.329  | -49.308  | -0.425 | -21.4746 | 0.12    | -126.7348 |
| 3874 | 0   | Extremo | -0.787 | -71.801  | 1.114  | -21.473  | 0.7988  | -187.2875 |
| 3874 | 0.5 | Extremo | -0.787 | -60.551  | 1.114  | -21.473  | 0.242   | -154.1993 |
| 3874 | 1   | Extremo | -0.787 | -49.301  | 1.114  | -21.473  | -0.3148 | -126.736  |
| 3875 | 0   | Extremo | 0.089  | -38.564  | -0.184 | -13.4561 | -0.0236 | -108.7033 |
| 3875 | 0.5 | Extremo | 0.089  | -27.314  | -0.184 | -13.4561 | 0.0684  | -92.234   |
| 3875 | 1   | Extremo | 0.089  | -16.064  | -0.184 | -13.4561 | 0.1603  | -81.3897  |
| 3875 | 0   | Extremo | -0.189 | -38.56   | 0.386  | -13.4553 | -0.0065 | -108.7058 |
| 3875 | 0.5 | Extremo | -0.189 | -27.31   | 0.386  | -13.4553 | -0.1995 | -92.2381  |
| 3875 | 1   | Extremo | -0.189 | -16.06   | 0.386  | -13.4553 | -0.3926 | -81.3955  |
| 3876 | 0   | Extremo | 0.036  | 32.566   | 0.072  | -0.3942  | 0.1108  | -75.0849  |
| 3876 | 0.5 | Extremo | 0.036  | 43.816   | 0.072  | -0.3942  | 0.0748  | -94.1806  |
| 3876 | 1   | Extremo | 0.036  | 55.066   | 0.072  | -0.3942  | 0.0387  | -118.9013 |
| 3876 | 0   | Extremo | -0.166 | 32.564   | -0.334 | -0.3945  | -0.371  | -75.0909  |
| 3876 | 0.5 | Extremo | -0.166 | 43.814   | -0.334 | -0.3945  | -0.2038 | -94.1852  |
| 3876 | 1   | Extremo | -0.166 | 55.064   | -0.334 | -0.3945  | -0.0366 | -118.9046 |
| 3877 | 0   | Extremo | 0.211  | 63.806   | 0.36   | 10.2393  | 0.103   | -125.3074 |
| 3877 | 0.5 | Extremo | 0.211  | 75.056   | 0.36   | 10.2393  | -0.0771 | -160.0231 |
| 3877 | 1   | Extremo | 0.211  | 86.306   | 0.36   | 10.2393  | -0.2572 | -200.3638 |
| 3877 | 0   | Extremo | -0.739 | 63.8     | -1.098 | 10.2382  | -0.3129 | -125.3099 |
| 3877 | 0.5 | Extremo | -0.739 | 75.05    | -1.098 | 10.2382  | 0.2362  | -160.0224 |
| 3877 | 1   | Extremo | -0.739 | 86.3     | -1.098 | 10.2382  | 0.7854  | -200.36   |
| 3878 | 0   | Extremo | 0.27   | -83.367  | -0.318 | -28.0019 | -0.2556 | -188.739  |
| 3878 | 0.5 | Extremo | 0.27   | -72.117  | -0.318 | -28.0019 | -0.0967 | -149.8678 |

|      |     |         |           |          |          |          |         |           |
|------|-----|---------|-----------|----------|----------|----------|---------|-----------|
| 3878 | 1   | Extremo | 0.27      | -60.867  | -0.318   | -28.0019 | 0.0623  | -116.6217 |
| 3878 | 0   | Extremo | -0.814    | -83.366  | 0.905    | -28.0006 | 0.7622  | -188.7354 |
| 3878 | 0.5 | Extremo | -0.814    | -72.116  | 0.905    | -28.0006 | 0.3096  | -149.8652 |
| 3878 | 1   | Extremo | -0.814    | -60.866  | 0.905    | -28.0006 | -0.143  | -116.6199 |
| 3879 | 0   | Extremo | -0.199    | 233.994  | 0.523    | 2.6428   | 0.1526  | -58.8169  |
| 3879 | 0.5 | Extremo | -0.199    | 245.244  | 0.523    | 2.6428   | -0.1091 | -178.6262 |
| 3879 | 1   | Extremo | -0.199    | 256.494  | 0.523    | 2.6428   | -0.3708 | -304.0606 |
| 3879 | 0   | Extremo | 0.062     | 233.978  | -1.626   | 2.6427   | -0.5344 | -58.8193  |
| 3879 | 0.5 | Extremo | 0.062     | 245.228  | -1.626   | 2.6427   | 0.2784  | -178.6206 |
| 3879 | 1   | Extremo | 0.062     | 256.478  | -1.626   | 2.6427   | 1.0913  | -304.047  |
| 3880 | 0   | Extremo | 0.264     | -249.612 | -0.739   | 0.6049   | -0.4643 | -305.4986 |
| 3880 | 0.5 | Extremo | 0.264     | -238.362 | -0.739   | 0.6049   | -0.0946 | -183.5053 |
| 3880 | 1   | Extremo | 0.264     | -227.112 | -0.739   | 0.6049   | 0.2751  | -67.137   |
| 3880 | 0   | Extremo | -0.196    | -249.592 | 1.816    | 0.6047   | 1.1488  | -305.4848 |
| 3880 | 0.5 | Extremo | -0.196    | -238.342 | 1.816    | 0.6047   | 0.2407  | -183.5014 |
| 3880 | 1   | Extremo | -0.196    | -227.092 | 1.816    | 0.6047   | -0.6674 | -67.1431  |
| 3881 | 0   | Extremo | 0.136     | -61.979  | -0.255   | -4.4215  | -0.0596 | -102.3699 |
| 3881 | 0.5 | Extremo | 0.136     | -50.729  | -0.255   | -4.4215  | 0.0678  | -74.193   |
| 3881 | 1   | Extremo | 0.136     | -39.479  | -0.255   | -4.4215  | 0.1953  | -51.6411  |
| 3881 | 0   | Extremo | -0.221    | -61.974  | 0.413    | -4.4215  | 0.0067  | -102.3732 |
| 3881 | 0.5 | Extremo | -0.221    | -50.724  | 0.413    | -4.4215  | -0.1996 | -74.1987  |
| 3881 | 1   | Extremo | -0.221    | -39.474  | 0.413    | -4.4215  | -0.4058 | -51.6493  |
| 3882 | 0   | Extremo | -0.006553 | 44.954   | -0.00365 | -11.7799 | 0.0737  | -49.336   |
| 3882 | 0.5 | Extremo | -0.006553 | 56.204   | -0.00365 | -11.7799 | 0.0755  | -74.6253  |
| 3882 | 1   | Extremo | -0.006553 | 67.454   | -0.00365 | -11.7799 | 0.0773  | -105.5397 |
| 3882 | 0   | Extremo | -0.156    | 44.95    | -0.295   | -11.7796 | -0.3518 | -49.344   |
| 3882 | 0.5 | Extremo | -0.156    | 56.2     | -0.295   | -11.7796 | -0.2044 | -74.6314  |
| 3882 | 1   | Extremo | -0.156    | 67.45    | -0.295   | -11.7796 | -0.0569 | -105.5438 |
| 3883 | 0   | Extremo | -0.207    | 241.058  | 0.52     | -15.9766 | 0.1869  | -64.4216  |
| 3883 | 0.5 | Extremo | -0.207    | 252.308  | 0.52     | -15.9766 | -0.0729 | -187.763  |
| 3883 | 1   | Extremo | -0.207    | 263.558  | 0.52     | -15.9766 | -0.3328 | -316.7293 |
| 3883 | 0   | Extremo | 0.02      | 241.04   | -1.734   | -15.9761 | -0.635  | -64.4283  |
| 3883 | 0.5 | Extremo | 0.02      | 252.29   | -1.734   | -15.9761 | 0.232   | -187.7607 |
| 3883 | 1   | Extremo | 0.02      | 263.54   | -1.734   | -15.9761 | 1.099   | -316.7181 |
| 3884 | 0   | Extremo | 0.214     | -249.037 | -0.628   | -16.8056 | -0.411  | -309.2468 |
| 3884 | 0.5 | Extremo | 0.214     | -237.787 | -0.628   | -16.8056 | -0.0969 | -187.5405 |
| 3884 | 1   | Extremo | 0.214     | -226.537 | -0.628   | -16.8056 | 0.2172  | -71.4593  |
| 3884 | 0   | Extremo | -0.128    | -249.025 | 1.637    | -16.8048 | 1.1159  | -309.236  |
| 3884 | 0.5 | Extremo | -0.128    | -237.775 | 1.637    | -16.8048 | 0.2975  | -187.5358 |
| 3884 | 1   | Extremo | -0.128    | -226.525 | 1.637    | -16.8048 | -0.5208 | -71.4606  |
| 3885 | 0   | Extremo | -0.081    | 66.951   | 0.158    | -14.5944 | 0.0134  | -111.8079 |
| 3885 | 0.5 | Extremo | -0.081    | 78.201   | 0.158    | -14.5944 | -0.0656 | -148.0957 |
| 3885 | 1   | Extremo | -0.081    | 89.451   | 0.158    | -14.5944 | -0.1446 | -190.0085 |
| 3885 | 0   | Extremo | 0.188     | 66.947   | -0.767   | -14.5932 | -0.223  | -111.8067 |
| 3885 | 0.5 | Extremo | 0.188     | 78.197   | -0.767   | -14.5932 | 0.1605  | -148.0928 |
| 3885 | 1   | Extremo | 0.188     | 89.447   | -0.767   | -14.5932 | 0.544   | -190.004  |
| 3886 | 0   | Extremo | -0.03     | -64.832  | -0.486   | 20.8989  | -0.3054 | -190.4208 |
| 3886 | 0.5 | Extremo | -0.03     | -53.582  | -0.486   | 20.8989  | -0.0622 | -160.8172 |
| 3886 | 1   | Extremo | -0.03     | -42.332  | -0.486   | 20.8989  | 0.181   | -136.8385 |
| 3886 | 0   | Extremo | 0.134     | -64.826  | 0.933    | 20.8972  | 0.6063  | -190.4162 |
| 3886 | 0.5 | Extremo | 0.134     | -53.576  | 0.933    | 20.8972  | 0.1398  | -160.8155 |
| 3886 | 1   | Extremo | 0.134     | -42.326  | 0.933    | 20.8972  | -0.3266 | -136.8398 |
| 3887 | 0   | Extremo | 0.035     | -38.177  | -0.309   | 4.527    | -0.1206 | -130.1787 |
| 3887 | 0.5 | Extremo | 0.035     | -26.927  | -0.309   | 4.527    | 0.0341  | -113.9029 |
| 3887 | 1   | Extremo | 0.035     | -15.677  | -0.309   | 4.527    | 0.1888  | -103.2521 |
| 3887 | 0   | Extremo | -0.075    | -38.174  | 0.397    | 4.5262   | 0.0905  | -130.1804 |
| 3887 | 0.5 | Extremo | -0.075    | -26.924  | 0.397    | 4.5262   | -0.1081 | -113.906  |
|      |     |         |           |          |          |          |         |           |



|      |     |         |           |         |        |          |         |           |
|------|-----|---------|-----------|---------|--------|----------|---------|-----------|
| 3890 | 1   | Extremo | -0.047    | -70.856 | -0.414 | -5.0276  | 0.1513  | -111.854  |
| 3890 | 0   | Extremo | 0.171     | -93.354 | 0.862  | -5.0272  | 0.6044  | -193.9568 |
| 3890 | 0.5 | Extremo | 0.171     | -82.104 | 0.862  | -5.0272  | 0.1732  | -150.0923 |
| 3890 | 1   | Extremo | 0.171     | -70.854 | 0.862  | -5.0272  | -0.2579 | -111.8528 |
| 3891 | 0   | Extremo | -0.053    | 26.365  | 0.015  | -3.6922  | -0.0394 | -112.1218 |
| 3891 | 0.5 | Extremo | -0.053    | 37.615  | 0.015  | -3.6922  | -0.0468 | -128.1167 |
| 3891 | 1   | Extremo | -0.053    | 48.865  | 0.015  | -3.6922  | -0.0543 | -149.7365 |
| 3891 | 0   | Extremo | 0.154     | 26.365  | -0.388 | -3.6919  | -0.096  | -112.1209 |
| 3891 | 0.5 | Extremo | 0.154     | 37.615  | -0.388 | -3.6919  | 0.0978  | -128.1156 |
| 3891 | 1   | Extremo | 0.154     | 48.865  | -0.388 | -3.6919  | 0.2915  | -149.7354 |
| 3892 | 0   | Extremo | -0.049    | -5.723  | -0.345 | 8.9828   | -0.2113 | -149.0583 |
| 3892 | 0.5 | Extremo | -0.049    | 5.527   | -0.345 | 8.9828   | -0.0387 | -149.0093 |
| 3892 | 1   | Extremo | -0.049    | 16.777  | -0.345 | 8.9828   | 0.134   | -154.5852 |
| 3892 | 0   | Extremo | 0.143     | -5.722  | 0.506  | 8.982    | 0.3332  | -149.0572 |
| 3892 | 0.5 | Extremo | 0.143     | 5.528   | 0.506  | 8.982    | 0.0803  | -149.0088 |
| 3892 | 1   | Extremo | 0.143     | 16.778  | 0.506  | 8.982    | -0.1725 | -154.5855 |
| 3893 | 0   | Extremo | -0.00518  | -15.19  | -0.298 | 1.5194   | -0.1317 | -147.5633 |
| 3893 | 0.5 | Extremo | -0.00518  | -3.94   | -0.298 | 1.5194   | 0.0172  | -142.7806 |
| 3893 | 1   | Extremo | -0.00518  | 7.31    | -0.298 | 1.5194   | 0.1662  | -143.6229 |
| 3893 | 0   | Extremo | 0.016     | -15.189 | 0.315  | 1.5189   | 0.099   | -147.5641 |
| 3893 | 0.5 | Extremo | 0.016     | -3.939  | 0.315  | 1.5189   | -0.0584 | -142.7819 |
| 3893 | 1   | Extremo | 0.016     | 7.311   | 0.315  | 1.5189   | -0.2159 | -143.6247 |
| 3894 | 0   | Extremo | -0.006761 | -10.396 | -0.144 | -15.7426 | -0.0456 | -146.3667 |
| 3894 | 0.5 | Extremo | -0.006761 | 0.854   | -0.144 | -15.7426 | 0.0262  | -143.9813 |
| 3894 | 1   | Extremo | -0.006761 | 12.104  | -0.144 | -15.7426 | 0.098   | -147.2208 |
| 3894 | 0   | Extremo | 0.016     | -10.396 | -0.118 | -15.7419 | -0.1216 | -146.3686 |
| 3894 | 0.5 | Extremo | 0.016     | 0.854   | -0.118 | -15.7419 | -0.0626 | -143.9828 |
| 3894 | 1   | Extremo | 0.016     | 12.104  | -0.118 | -15.7419 | -0.0036 | -147.2221 |
| 3895 | 0   | Extremo | -0.052    | -22.551 | -0.044 | -23.4298 | -0.037  | -159.9364 |
| 3895 | 0.5 | Extremo | -0.052    | -11.301 | -0.044 | -23.4298 | -0.0152 | -151.4732 |
| 3895 | 1   | Extremo | -0.052    | -0.051  | -0.044 | -23.4298 | 0.0066  | -148.635  |
| 3895 | 0   | Extremo | 0.142     | -22.553 | -0.338 | -23.4284 | -0.0974 | -159.9371 |
| 3895 | 0.5 | Extremo | 0.142     | -11.303 | -0.338 | -23.4284 | 0.0716  | -151.4733 |
| 3895 | 1   | Extremo | 0.142     | -0.053  | -0.338 | -23.4284 | 0.2406  | -148.6345 |
| 3896 | 0   | Extremo | -0.056    | -60.911 | -0.295 | -10.7644 | -0.1751 | -154.9764 |
| 3896 | 0.5 | Extremo | -0.056    | -49.661 | -0.295 | -10.7644 | -0.0276 | -127.3332 |
| 3896 | 1   | Extremo | -0.056    | -38.411 | -0.295 | -10.7644 | 0.1199  | -105.315  |
| 3896 | 0   | Extremo | 0.154     | -60.912 | 0.505  | -10.7632 | 0.354   | -154.9758 |
| 3896 | 0.5 | Extremo | 0.154     | -49.662 | 0.505  | -10.7632 | 0.1017  | -127.3326 |
| 3896 | 1   | Extremo | 0.154     | -38.412 | 0.505  | -10.7632 | -0.1506 | -105.3143 |
| 3897 | 0   | Extremo | -0.033    | 22.918  | -0.05  | 0.2574   | -0.0614 | -106.6551 |
| 3897 | 0.5 | Extremo | -0.033    | 34.168  | -0.05  | 0.2574   | -0.0365 | -120.9266 |
| 3897 | 1   | Extremo | -0.033    | 45.418  | -0.05  | 0.2574   | -0.0115 | -140.8231 |
| 3897 | 0   | Extremo | 0.099     | 22.918  | -0.208 | 0.2572   | -0.0378 | -106.6547 |
| 3897 | 0.5 | Extremo | 0.099     | 34.168  | -0.208 | 0.2572   | 0.0663  | -120.9263 |
| 3897 | 1   | Extremo | 0.099     | 45.418  | -0.208 | 0.2572   | 0.1704  | -140.8228 |
| 3898 | 0   | Extremo | -0.033    | 8.091   | -0.277 | 3.0783   | -0.1671 | -140.1029 |
| 3898 | 0.5 | Extremo | -0.033    | 19.341  | -0.277 | 3.0783   | -0.0285 | -146.961  |
| 3898 | 1   | Extremo | -0.033    | 30.591  | -0.277 | 3.0783   | 0.1101  | -159.4441 |
| 3898 | 0   | Extremo | 0.098     | 8.091   | 0.305  | 3.078    | 0.2042  | -140.1027 |
| 3898 | 0.5 | Extremo | 0.098     | 19.341  | 0.305  | 3.078    | 0.0516  | -146.9609 |
| 3898 | 1   | Extremo | 0.098     | 30.591  | 0.305  | 3.078    | -0.101  | -159.4441 |
| 3899 | 0   | Extremo | -0.013    | -6.996  | -0.278 | 0.0125   | -0.131  | -157.3194 |
| 3899 | 0.5 | Extremo | -0.013    | 4.254   | -0.278 | 0.0125   | 0.0082  | -156.634  |
| 3899 | 1   | Extremo | -0.013    | 15.504  | -0.278 | 0.0125   | 0.1475  | -161.5736 |
| 3899 | 0   | Extremo | 0.038     | -6.996  | 0.245  | 0.0124   | 0.0897  | -157.3197 |
| 3899 | 0.5 | Extremo | 0.038     | 4.254   | 0.245  | 0.0124   | -0.033  | -156.6344 |
| 3899 | 1   | Extremo | 0.038     | 15.504  | 0.245  | 0.0124   | -0.1557 | -161.5741 |
| 3900 | 0   | Extremo | -0.014    | -21.294 | -0.174 | -7.0569  | -0.0702 | -165.6736 |
| 3900 | 0.5 | Extremo | -0.014    | -10.044 | -0.174 | -7.0569  | 0.017   | -157.8393 |
| 3900 | 1   | Extremo | -0.014    | 1.206   | -0.174 | -7.0569  | 0.1043  | -155.63   |
| 3900 | 0   | Extremo | 0.038     | -21.294 | -0.045 | -7.0564  | -0.0594 | -165.6742 |
| 3900 | 0.5 | Extremo | 0.038     | -10.044 | -0.045 | -7.0564  | -0.0368 | -157.8398 |
| 3900 | 1   | Extremo | 0.038     | 1.206   | -0.045 | -7.0564  | -0.0142 | -155.6304 |
| 3901 | 0   | Extremo | -0.037    | -39.526 | -0.119 | -9.9443  | -0.0645 | -165.9473 |
| 3901 | 0.5 | Extremo | -0.037    | -28.276 | -0.119 | -9.9443  | -0.0052 | -148.9968 |
| 3901 | 1   | Extremo | -0.037    | -17.026 | -0.119 | -9.9443  | 0.0541  | -137.6712 |
| 3901 | 0   | Extremo | 0.099     | -39.526 | -0.133 | -9.9434  | -0.0232 | -165.9475 |
| 3901 | 0.5 | Extremo | 0.099     | -28.276 | -0.133 | -9.9434  | 0.0433  | -148.9969 |
| 3901 | 1   | Extremo | 0.099     | -17.026 | -0.133 | -9.9434  | 0.1097  | -137.6712 |
| 3902 | 0   | Extremo | -0.038    | -59.55  | -0.236 | -5.889   | -0.1321 | -146.356  |
| 3902 | 0.5 | Extremo | -0.038    | -48.3   | -0.236 | -5.889   | -0.0143 | -119.3935 |

|      |     |         |           |         |           |         |           |           |
|------|-----|---------|-----------|---------|-----------|---------|-----------|-----------|
| 3902 | 1   | Extremo | -0.038    | -37.05  | -0.236    | -5.889  | 0.1035    | -98.056   |
| 3902 | 0   | Extremo | 0.101     | -59.55  | 0.334     | -5.8876 | 0.2331    | -146.3559 |
| 3902 | 0.5 | Extremo | 0.101     | -48.3   | 0.334     | -5.8876 | 0.066     | -119.3934 |
| 3902 | 1   | Extremo | 0.101     | -37.05  | 0.334     | -5.8876 | -0.1011   | -98.0558  |
| 3903 | 0   | Extremo | -0.015    | 23.801  | -0.077    | 0.5307  | -0.0702   | -104.6151 |
| 3903 | 0.5 | Extremo | -0.015    | 35.051  | -0.077    | 0.5307  | -0.0317   | -119.3281 |
| 3903 | 1   | Extremo | -0.015    | 46.301  | -0.077    | 0.5307  | 0.0068    | -139.6662 |
| 3903 | 0   | Extremo | 0.05      | 23.801  | -0.13     | 0.5304  | -0.0134   | -104.615  |
| 3903 | 0.5 | Extremo | 0.05      | 35.051  | -0.13     | 0.5304  | 0.0517    | -119.328  |
| 3903 | 1   | Extremo | 0.05      | 46.301  | -0.13     | 0.5304  | 0.1168    | -139.6661 |
| 3904 | 0   | Extremo | -0.016    | 11.077  | -0.25     | 1.1889  | -0.1493   | -138.7226 |
| 3904 | 0.5 | Extremo | -0.016    | 22.327  | -0.25     | 1.1889  | -0.0245   | -147.0735 |
| 3904 | 1   | Extremo | -0.016    | 33.577  | -0.25     | 1.1889  | 0.1003    | -161.0494 |
| 3904 | 0   | Extremo | 0.053     | 11.077  | 0.223     | 1.1886  | 0.1503    | -138.7224 |
| 3904 | 0.5 | Extremo | 0.053     | 22.327  | 0.223     | 1.1886  | 0.039     | -147.0733 |
| 3904 | 1   | Extremo | 0.053     | 33.577  | 0.223     | 1.1886  | -0.0724   | -161.0493 |
| 3905 | 0   | Extremo | -0.01     | -4.886  | -0.268    | 1.1312  | -0.13     | -160.5415 |
| 3905 | 0.5 | Extremo | -0.01     | 6.364   | -0.268    | 1.1312  | 0.0039    | -160.9111 |
| 3905 | 1   | Extremo | -0.01     | 17.614  | -0.268    | 1.1312  | 0.1379    | -166.9056 |
| 3905 | 0   | Extremo | 0.033     | -4.886  | 0.207     | 1.1312  | 0.0824    | -160.5413 |
| 3905 | 0.5 | Extremo | 0.033     | 6.364   | 0.207     | 1.1312  | -0.0213   | -160.9109 |
| 3905 | 1   | Extremo | 0.033     | 17.614  | 0.207     | 1.1312  | -0.1251   | -166.9055 |
| 3906 | 0   | Extremo | -0.013    | -23.929 | -0.191    | 0.6063  | -0.0826   | -171.2844 |
| 3906 | 0.5 | Extremo | -0.013    | -12.679 | -0.191    | 0.6063  | 0.0131    | -162.1324 |
| 3906 | 1   | Extremo | -0.013    | -1.429  | -0.191    | 0.6063  | 0.1088    | -158.6053 |
| 3906 | 0   | Extremo | 0.034     | -23.929 | -0.005351 | 0.6067  | -0.0278   | -171.2842 |
| 3906 | 0.5 | Extremo | 0.034     | -12.679 | -0.005351 | 0.6067  | -0.0251   | -162.1322 |
| 3906 | 1   | Extremo | 0.034     | -1.429  | -0.005351 | 0.6067  | -0.0224   | -158.6051 |
| 3907 | 0   | Extremo | -0.022    | -43.121 | -0.15     | 0.7449  | -0.0751   | -167.7797 |
| 3907 | 0.5 | Extremo | -0.022    | -31.871 | -0.15     | 0.7449  | -0.000185 | -149.0319 |
| 3907 | 1   | Extremo | -0.022    | -20.621 | -0.15     | 0.7449  | 0.0748    | -135.9091 |
| 3907 | 0   | Extremo | 0.055     | -43.121 | -0.048    | 0.7457  | 0.0063    | -167.7795 |
| 3907 | 0.5 | Extremo | 0.055     | -31.871 | -0.048    | 0.7457  | 0.0303    | -149.0317 |
| 3907 | 1   | Extremo | 0.055     | -20.621 | -0.048    | 0.7457  | 0.0543    | -135.9089 |
| 3908 | 0   | Extremo | -0.021    | -60.582 | -0.209    | 3.3287  | -0.1123   | -145.2063 |
| 3908 | 0.5 | Extremo | -0.021    | -49.332 | -0.209    | 3.3287  | -0.008    | -117.7279 |
| 3908 | 1   | Extremo | -0.021    | -38.082 | -0.209    | 3.3287  | 0.0963    | -95.8746  |
| 3908 | 0   | Extremo | 0.053     | -60.582 | 0.259     | 3.3301  | 0.1789    | -145.2062 |
| 3908 | 0.5 | Extremo | 0.053     | -49.332 | 0.259     | 3.3301  | 0.0492    | -117.7278 |
| 3908 | 1   | Extremo | 0.053     | -38.082 | 0.259     | 3.3301  | -0.0805   | -95.8745  |
| 3909 | 0   | Extremo | 0.0009045 | 22.592  | -0.081    | -0.1013 | -0.0715   | -106.6242 |
| 3909 | 0.5 | Extremo | 0.0009045 | 33.842  | -0.081    | -0.1013 | -0.031    | -120.7326 |
| 3909 | 1   | Extremo | 0.0009045 | 45.092  | -0.081    | -0.1013 | 0.0095    | -140.466  |
| 3909 | 0   | Extremo | 0.007349  | 22.592  | -0.116    | -0.1017 | -0.0096   | -106.6244 |
| 3909 | 0.5 | Extremo | 0.007349  | 33.842  | -0.116    | -0.1017 | 0.0483    | -120.7327 |
| 3909 | 1   | Extremo | 0.007349  | 45.092  | -0.116    | -0.1017 | 0.1062    | -140.466  |
| 3910 | 0   | Extremo | -0.00061  | 11.005  | -0.248    | -1.1834 | -0.148    | -138.2009 |
| 3910 | 0.5 | Extremo | -0.00061  | 22.255  | -0.248    | -1.1834 | -0.0242   | -146.5158 |
| 3910 | 1   | Extremo | -0.00061  | 33.505  | -0.248    | -1.1834 | 0.0996    | -160.4557 |
| 3910 | 0   | Extremo | 0.011     | 11.005  | 0.213     | -1.1839 | 0.1429    | -138.2006 |
| 3910 | 0.5 | Extremo | 0.011     | 22.255  | 0.213     | -1.1839 | 0.0365    | -146.5155 |
| 3910 | 1   | Extremo | 0.011     | 33.505  | 0.213     | -1.1839 | -0.0699   | -160.4553 |
| 3911 | 0   | Extremo | -0.006215 | -4.291  | -0.269    | 1.8322  | -0.1312   | -157.0029 |
| 3911 | 0.5 | Extremo | -0.006215 | 6.959   | -0.269    | 1.8322  | 0.0031    | -157.67   |
| 3911 | 1   | Extremo | -0.006215 | 18.209  | -0.269    | 1.8322  | 0.1373    | -163.9621 |
| 3911 | 0   | Extremo | 0.022     | -4.291  | 0.2       | 1.832   | 0.0806    | -157.0021 |
| 3911 | 0.5 | Extremo | 0.022     | 6.959   | 0.2       | 1.832   | -0.0195   | -157.6692 |
| 3911 | 1   | Extremo | 0.022     | 18.209  | 0.2       | 1.832   | -0.1196   |           |



|      |     |         |           |         |        |          |           |           |
|------|-----|---------|-----------|---------|--------|----------|-----------|-----------|
| 3914 | 1   | Extremo | -0.006751 | -36.729 | -0.202 | 13.1809  | 0.0951    | -98.159   |
| 3914 | 0   | Extremo | 0.011     | -59.228 | 0.245  | 13.1825  | 0.1671    | -146.1375 |
| 3914 | 0.5 | Extremo | 0.011     | -47.978 | 0.245  | 13.1825  | 0.0448    | -119.3358 |
| 3914 | 1   | Extremo | 0.011     | -36.728 | 0.245  | 13.1825  | -0.0775   | -98.159   |
| 3915 | 0   | Extremo | 0.017     | 19.521  | -0.064 | 1.3128   | -0.0659   | -116.4673 |
| 3915 | 0.5 | Extremo | 0.017     | 30.771  | -0.064 | 1.3128   | -0.034    | -129.0402 |
| 3915 | 1   | Extremo | 0.017     | 42.021  | -0.064 | 1.3128   | -0.0022   | -147.2381 |
| 3915 | 0   | Extremo | -0.036    | 19.52   | -0.161 | 1.3126   | -0.0254   | -116.4685 |
| 3915 | 0.5 | Extremo | -0.036    | 30.77   | -0.161 | 1.3126   | 0.0552    | -129.0411 |
| 3915 | 1   | Extremo | -0.036    | 42.02   | -0.161 | 1.3126   | 0.1357    | -147.2388 |
| 3916 | 0   | Extremo | 0.015     | 3.671   | -0.27  | -9.4254  | -0.1625   | -143.137  |
| 3916 | 0.5 | Extremo | 0.015     | 14.921  | -0.27  | -9.4254  | -0.0273   | -147.7851 |
| 3916 | 1   | Extremo | 0.015     | 26.171  | -0.27  | -9.4254  | 0.1078    | -158.0583 |
| 3916 | 0   | Extremo | -0.03     | 3.67    | 0.27   | -9.4266  | 0.1781    | -143.1373 |
| 3916 | 0.5 | Extremo | -0.03     | 14.92   | 0.27   | -9.4266  | 0.0433    | -147.785  |
| 3916 | 1   | Extremo | -0.03     | 26.17   | 0.27   | -9.4266  | -0.0916   | -158.0577 |
| 3917 | 0   | Extremo | -0.003347 | -8.743  | -0.28  | -2.3472  | -0.1347   | -145.1916 |
| 3917 | 0.5 | Extremo | -0.003347 | 2.507   | -0.28  | -2.3472  | 0.0054    | -143.6328 |
| 3917 | 1   | Extremo | -0.003347 | 13.757  | -0.28  | -2.3472  | 0.1456    | -147.699  |
| 3917 | 0   | Extremo | 0.014     | -8.743  | 0.221  | -2.348   | 0.0836    | -145.19   |
| 3917 | 0.5 | Extremo | 0.014     | 2.507   | 0.221  | -2.348   | -0.0269   | -143.6308 |
| 3917 | 1   | Extremo | 0.014     | 13.757  | 0.221  | -2.348   | -0.1374   | -147.6966 |
| 3918 | 0   | Extremo | -0.006971 | -13.813 | -0.196 | 17.8397  | -0.0824   | -149.0508 |
| 3918 | 0.5 | Extremo | -0.006971 | -2.563  | -0.196 | 17.8397  | 0.0158    | -144.9566 |
| 3918 | 1   | Extremo | -0.006971 | 8.687   | -0.196 | 17.8397  | 0.1139    | -146.4875 |
| 3918 | 0   | Extremo | 0.016     | -13.813 | -0.012 | 17.8405  | -0.037    | -149.0483 |
| 3918 | 0.5 | Extremo | 0.016     | -2.563  | -0.012 | 17.8405  | -0.0312   | -144.9543 |
| 3918 | 1   | Extremo | 0.016     | 8.687   | -0.012 | 17.8405  | -0.0253   | -146.4853 |
| 3919 | 0   | Extremo | 0.00552   | -30.462 | -0.138 | 26.209   | -0.069    | -162.7587 |
| 3919 | 0.5 | Extremo | 0.00552   | -19.212 | -0.138 | 26.209   | 6.148E-05 | -150.3402 |
| 3919 | 1   | Extremo | 0.00552   | -7.962  | -0.138 | 26.209   | 0.0691    | -143.5467 |
| 3919 | 0   | Extremo | -0.026    | -30.461 | -0.091 | 26.2108  | -0.0125   | -162.7575 |
| 3919 | 0.5 | Extremo | -0.026    | -19.211 | -0.091 | 26.2108  | 0.0332    | -150.3394 |
| 3919 | 1   | Extremo | -0.026    | -7.961  | -0.091 | 26.2108  | 0.0788    | -143.5463 |
| 3920 | 0   | Extremo | 0.007322  | -55.085 | -0.216 | 20.2181  | -0.1156   | -152.3668 |
| 3920 | 0.5 | Extremo | 0.007322  | -43.835 | -0.216 | 20.2181  | -0.0079   | -127.6369 |
| 3920 | 1   | Extremo | 0.007322  | -32.585 | -0.216 | 20.2181  | 0.0999    | -108.532  |
| 3920 | 0   | Extremo | -0.032    | -55.084 | 0.286  | 20.2198  | 0.1948    | -152.3668 |
| 3920 | 0.5 | Extremo | -0.032    | -43.834 | 0.286  | 20.2198  | 0.0517    | -127.6372 |
| 3920 | 1   | Extremo | -0.032    | -32.584 | 0.286  | 20.2198  | -0.0914   | -108.5326 |
| 3921 | 0   | Extremo | 0.035     | 33.204  | -0.016 | 14.4521  | -0.051    | -138.7807 |
| 3921 | 0.5 | Extremo | 0.035     | 44.454  | -0.016 | 14.4521  | -0.0429   | -158.1953 |
| 3921 | 1   | Extremo | 0.035     | 55.704  | -0.016 | 14.4521  | -0.0348   | -183.2349 |
| 3921 | 0   | Extremo | -0.083    | 33.205  | -0.294 | 14.4531  | -0.071    | -138.7839 |
| 3921 | 0.5 | Extremo | -0.083    | 44.455  | -0.294 | 14.4531  | 0.076     | -158.1988 |
| 3921 | 1   | Extremo | -0.083    | 55.705  | -0.294 | 14.4531  | 0.2231    | -183.2386 |
| 3922 | 0   | Extremo | 0.031     | -39.342 | -0.331 | -32.5428 | -0.2001   | -179.3986 |
| 3922 | 0.5 | Extremo | 0.031     | -28.092 | -0.331 | -32.5428 | -0.0347   | -162.5399 |
| 3922 | 1   | Extremo | 0.031     | -16.842 | -0.331 | -32.5428 | 0.1307    | -151.3063 |
| 3922 | 0   | Extremo | -0.073    | -39.347 | 0.424  | -32.5459 | 0.2746    | -179.4022 |
| 3922 | 0.5 | Extremo | -0.073    | -28.097 | 0.424  | -32.5459 | 0.0626    | -162.5413 |
| 3922 | 1   | Extremo | -0.073    | -16.847 | 0.424  | -32.5459 | -0.1495   | -151.3054 |
| 3923 | 0   | Extremo | -0.005127 | -35.434 | -0.305 | -16.3315 | -0.1403   | -122.6257 |
| 3923 | 0.5 | Extremo | -0.005127 | -24.184 | -0.305 | -16.3315 | 0.0123    | -107.721  |
| 3923 | 1   | Extremo | -0.005127 | -12.934 | -0.305 | -16.3315 | 0.1648    | -98.4414  |
| 3923 | 0   | Extremo | 0.02      | -35.438 | 0.267  | -16.3336 | 0.0873    | -122.6226 |
| 3923 | 0.5 | Extremo | 0.02      | -24.188 | 0.267  | -16.3336 | -0.0463   | -107.7163 |
| 3923 | 1   | Extremo | 0.02      | -12.938 | 0.267  | -16.3336 | -0.1798   | -98.435   |
| 3924 | 0   | Extremo | -0.011    | 18.525  | -0.191 | 31.1814  | -0.0728   | -95.8379  |
| 3924 | 0.5 | Extremo | -0.011    | 29.775  | -0.191 | 31.1814  | 0.0228    | -107.9128 |
| 3924 | 1   | Extremo | -0.011    | 41.025  | -0.191 | 31.1814  | 0.1184    | -125.6127 |
| 3924 | 0   | Extremo | 0.023     | 18.527  | -0.05  | 31.1831  | -0.0759   | -95.8314  |
| 3924 | 0.5 | Extremo | 0.023     | 29.777  | -0.05  | 31.1831  | -0.0509   | -107.9074 |
| 3924 | 1   | Extremo | 0.023     | 41.027  | -0.05  | 31.1831  | -0.026    | -125.6084 |
| 3925 | 0   | Extremo | 0.019     | 20.709  | -0.09  | 50.9003  | -0.0509   | -150.0984 |
| 3925 | 0.5 | Extremo | 0.019     | 31.959  | -0.09  | 50.9003  | -0.006    | -163.2656 |
| 3925 | 1   | Extremo | 0.019     | 43.209  | -0.09  | 50.9003  | 0.039     | -182.0578 |
| 3925 | 0   | Extremo | -0.067    | 20.714  | -0.242 | 50.9037  | -0.0696   | -150.0959 |
| 3925 | 0.5 | Extremo | -0.067    | 31.964  | -0.242 | 50.9037  | 0.0515    | -163.2652 |
| 3925 | 1   | Extremo | -0.067    | 43.214  | -0.242 | 50.9037  | 0.1727    | -182.0596 |
| 3926 | 0   | Extremo | 0.023     | -60.853 | -0.259 | 13.5833  | -0.144    | -184.0941 |
| 3926 | 0.5 | Extremo | 0.023     | -49.603 | -0.259 | 13.5833  | -0.0143   | -156.4799 |

|      |     |         |           |          |          |          |         |           |
|------|-----|---------|-----------|----------|----------|----------|---------|-----------|
| 3926 | 1   | Extremo | 0.023     | -38.353  | -0.259   | 13.5833  | 0.1154  | -134.4907 |
| 3926 | 0   | Extremo | -0.078    | -60.853  | 0.413    | 13.5842  | 0.2797  | -184.0961 |
| 3926 | 0.5 | Extremo | -0.078    | -49.603  | 0.413    | 13.5842  | 0.0735  | -156.482  |
| 3926 | 1   | Extremo | -0.078    | -38.353  | 0.413    | 13.5842  | -0.1328 | -134.493  |
| 3927 | 0   | Extremo | 0.023     | 171.099  | 0.083    | 51.1367  | -0.0235 | -144.8181 |
| 3927 | 0.5 | Extremo | 0.023     | 182.349  | 0.083    | 51.1367  | -0.0648 | -233.1801 |
| 3927 | 1   | Extremo | 0.023     | 193.599  | 0.083    | 51.1367  | -0.1061 | -327.1672 |
| 3927 | 0   | Extremo | -0.104    | 171.111  | -0.595   | 51.1409  | -0.1754 | -144.8219 |
| 3927 | 0.5 | Extremo | -0.104    | 182.361  | -0.595   | 51.1409  | 0.1221  | -233.1899 |
| 3927 | 1   | Extremo | -0.104    | 193.611  | -0.595   | 51.1409  | 0.4196  | -327.1829 |
| 3928 | 0   | Extremo | 0.064     | -230.803 | -0.468   | -74.0749 | -0.2808 | -328.1055 |
| 3928 | 0.5 | Extremo | 0.064     | -219.553 | -0.468   | -74.0749 | -0.0466 | -215.5167 |
| 3928 | 1   | Extremo | 0.064     | -208.303 | -0.468   | -74.0749 | 0.1875  | -108.553  |
| 3928 | 0   | Extremo | -0.101    | -230.823 | 0.763    | -74.0811 | 0.4841  | -328.1217 |
| 3928 | 0.5 | Extremo | -0.101    | -219.573 | 0.763    | -74.0811 | 0.1026  | -215.5228 |
| 3928 | 1   | Extremo | -0.101    | -208.323 | 0.763    | -74.0811 | -0.2789 | -108.5489 |
| 3929 | 0   | Extremo | -0.002401 | -111.42  | -0.351   | -33.2932 | -0.1484 | -84.588   |
| 3929 | 0.5 | Extremo | -0.002401 | -100.17  | -0.351   | -33.2932 | 0.0272  | -31.6905  |
| 3929 | 1   | Extremo | -0.002401 | -88.92   | -0.351   | -33.2932 | 0.2028  | 15.5819   |
| 3929 | 0   | Extremo | 0.044     | -111.43  | 0.324    | -33.2963 | 0.0757  | -84.5825  |
| 3929 | 0.5 | Extremo | 0.044     | -100.18  | 0.324    | -33.2963 | -0.0862 | -31.6801  |
| 3929 | 1   | Extremo | 0.044     | -88.93   | 0.324    | -33.2963 | -0.2481 | 15.5923   |
| 3930 | 0   | Extremo | -0.035    | 98.841   | -0.204   | 38.0274  | -0.0657 | 23.0395   |
| 3930 | 0.5 | Extremo | -0.035    | 110.091  | -0.204   | 38.0274  | 0.0362  | -29.1934  |
| 3930 | 1   | Extremo | -0.035    | 121.341  | -0.204   | 38.0274  | 0.138   | -87.0513  |
| 3930 | 0   | Extremo | 0.055     | 98.848   | -0.087   | 38.0298  | -0.1344 | 23.0549   |
| 3930 | 0.5 | Extremo | 0.055     | 110.098  | -0.087   | 38.0298  | -0.0908 | -29.1818  |
| 3930 | 1   | Extremo | 0.055     | 121.348  | -0.087   | 38.0298  | -0.0472 | -87.0435  |
| 3931 | 0   | Extremo | -0.001976 | 224.666  | 0.009817 | 83.5448  | -0.0178 | -95.583   |
| 3931 | 0.5 | Extremo | -0.001976 | 235.916  | 0.009817 | 83.5448  | -0.0228 | -210.7285 |
| 3931 | 1   | Extremo | -0.001976 | 247.166  | 0.009817 | 83.5448  | -0.0277 | -331.499  |
| 3931 | 0   | Extremo | -0.08     | 224.685  | -0.571   | 83.5507  | -0.1933 | -95.5762  |
| 3931 | 0.5 | Extremo | -0.08     | 235.935  | -0.571   | 83.5507  | 0.0923  | -210.7311 |
| 3931 | 1   | Extremo | -0.08     | 247.185  | -0.571   | 83.5507  | 0.3778  | -331.511  |
| 3932 | 0   | Extremo | 0.053     | -166.859 | -0.37    | -26.1449 | -0.2108 | -314.8403 |
| 3932 | 0.5 | Extremo | 0.053     | -155.609 | -0.37    | -26.1449 | -0.0258 | -234.2231 |
| 3932 | 1   | Extremo | 0.053     | -144.359 | -0.37    | -26.1449 | 0.1591  | -159.2309 |
| 3932 | 0   | Extremo | -0.111    | -166.867 | 0.707    | -26.147  | 0.4734  | -314.8514 |
| 3932 | 0.5 | Extremo | -0.111    | -155.617 | 0.707    | -26.147  | 0.1198  | -234.2306 |
| 3932 | 1   | Extremo | -0.111    | -144.367 | 0.707    | -26.147  | -0.2339 | -159.2348 |
| 3933 | 0   | Extremo | -0.271    | 727.603  | 0.247    | -5.5559  | 0.0329  | 22.2586   |
| 3933 | 0.5 | Extremo | -0.271    | 738.853  | 0.247    | -5.5559  | -0.0906 | -344.3557 |
| 3933 | 1   | Extremo | -0.271    | 750.103  | 0.247    | -5.5559  | -0.2142 | -716.5949 |
| 3933 | 0   | Extremo | 0.093     | 727.661  | -1.271   | -5.556   | -0.4409 | 22.2684   |
| 3933 | 0.5 | Extremo | 0.093     | 738.911  | -1.271   | -5.556   | 0.1947  | -344.3746 |
| 3933 | 1   | Extremo | 0.093     | 750.161  | -1.271   | -5.556   | 0.8302  | -716.6425 |
| 3934 | 0   | Extremo | 0.283     | -833.761 | -0.823   | -6.5682  | -0.4896 | -720.8744 |
| 3934 | 0.5 | Extremo | 0.283     | -822.511 | -0.823   | -6.5682  | -0.0779 | -306.8064 |
| 3934 | 1   | Extremo | 0.283     | -811.261 | -0.823   | -6.5682  | 0.3338  | 101.6366  |
| 3934 | 0   | Extremo | -0.066    | -833.83  | 1.517    | -6.5684  | 0.93    | -720.9228 |
| 3934 | 0.5 | Extremo | -0.066    | -822.58  | 1.517    | -6.5684  | 0.1715  | -306.8201 |
| 3934 | 1   | Extremo | -0.066    | -811.33  | 1.517    | -6.5684  | -0.587  | 101.6576  |
| 3935 | 0   | Extremo | 0.079     | -186.828 | -0.441   | -6.9343  | -0.172  | -20.8653  |
| 3935 | 0.5 | Extremo | 0.079     | -175.578 | -0.441   | -6.9343  | 0.0484  | 69.7361   |
| 3935 | 1   | Extremo | 0.079     | -164.328 | -0.441   | -6.9343  | 0.2688  | 154.7124  |
| 3935 | 0   | Extremo | -0.007171 | -186.844 | 0.347    | -6.9345  | 0.0221  | -20.855   |
| 3935 | 0.5 | Extremo | -0.007171 | -1       |          |          |         |           |



|      |     |         |           |          |        |          |         |           |
|------|-----|---------|-----------|----------|--------|----------|---------|-----------|
| 3938 | 1   | Extremo | 0.247     | -643.76  | -0.694 | -7.7676  | 0.2913  | -34.3718  |
| 3938 | 0   | Extremo | -0.057    | -666.303 | 1.417  | -7.7684  | 0.908   | -689.4199 |
| 3938 | 0.5 | Extremo | -0.057    | -655.053 | 1.417  | -7.7684  | 0.1996  | -359.0808 |
| 3938 | 1   | Extremo | -0.057    | -643.803 | 1.417  | -7.7684  | -0.5088 | -34.3667  |
| 3939 | 0   | Extremo | -0.067    | 171.152  | -0.095 | -62.1255 | -0.1107 | -145.2402 |
| 3939 | 0.5 | Extremo | -0.067    | 182.402  | -0.095 | -62.1255 | -0.0635 | -233.6287 |
| 3939 | 1   | Extremo | -0.067    | 193.652  | -0.095 | -62.1255 | -0.0162 | -327.6423 |
| 3939 | 0   | Extremo | 0.146     | 171.164  | -0.533 | -62.1298 | -0.1473 | -145.244  |
| 3939 | 0.5 | Extremo | 0.146     | 182.414  | -0.533 | -62.1298 | 0.1191  | -233.6385 |
| 3939 | 1   | Extremo | 0.146     | 193.664  | -0.533 | -62.1298 | 0.3856  | -327.658  |
| 3940 | 0   | Extremo | -0.016    | -230.874 | -0.658 | 61.0355  | -0.3895 | -328.8401 |
| 3940 | 0.5 | Extremo | -0.016    | -219.624 | -0.658 | 61.0355  | -0.0606 | -216.2156 |
| 3940 | 1   | Extremo | -0.016    | -208.374 | -0.658 | 61.0355  | 0.2682  | -109.2161 |
| 3940 | 0   | Extremo | 0.121     | -230.894 | 0.815  | 61.0414  | 0.5124  | -328.8562 |
| 3940 | 0.5 | Extremo | 0.121     | -219.644 | 0.815  | 61.0414  | 0.1049  | -216.2217 |
| 3940 | 1   | Extremo | 0.121     | -208.394 | 0.815  | 61.0414  | -0.3026 | -109.2121 |
| 3941 | 0   | Extremo | 0.019     | -111.562 | -0.531 | 19.4699  | -0.2433 | -85.4066  |
| 3941 | 0.5 | Extremo | 0.019     | -100.312 | -0.531 | 19.4699  | 0.0222  | -32.438   |
| 3941 | 1   | Extremo | 0.019     | -89.062  | -0.531 | 19.4699  | 0.2878  | 14.9055   |
| 3941 | 0   | Extremo | -0.017    | -111.572 | 0.372  | 19.4727  | 0.1019  | -85.4011  |
| 3941 | 0.5 | Extremo | -0.017    | -100.322 | 0.372  | 19.4727  | -0.0841 | -32.4276  |
| 3941 | 1   | Extremo | -0.017    | -89.072  | 0.372  | 19.4727  | -0.2702 | -14.9209  |
| 3942 | 0   | Extremo | -0.013    | 98.69    | -0.387 | -52.4009 | -0.1522 | 22.3208   |
| 3942 | 0.5 | Extremo | -0.013    | 109.94   | -0.387 | -52.4009 | 0.0412  | -29.8366  |
| 3942 | 1   | Extremo | -0.013    | 121.19   | -0.387 | -52.4009 | 0.2347  | -87.6189  |
| 3942 | 0   | Extremo | -0.008295 | 98.697   | -0.029 | -52.4036 | -0.1063 | 22.3362   |
| 3942 | 0.5 | Extremo | -0.008295 | 109.947  | -0.029 | -52.4036 | -0.0917 | -29.8249  |
| 3942 | 1   | Extremo | -0.008295 | 121.197  | -0.029 | -52.4036 | -0.0772 | -87.6111  |
| 3943 | 0   | Extremo | -0.078    | 224.53   | -0.181 | -98.3923 | -0.0977 | -96.097   |
| 3943 | 0.5 | Extremo | -0.078    | 235.78   | -0.181 | -98.3923 | -0.007  | -211.1748 |
| 3943 | 1   | Extremo | -0.078    | 247.03   | -0.181 | -98.3923 | 0.0837  | -331.8775 |
| 3943 | 0   | Extremo | 0.138     | 224.549  | -0.512 | -98.3986 | -0.1702 | -96.0902  |
| 3943 | 0.5 | Extremo | 0.138     | 235.799  | -0.512 | -98.3986 | 0.0857  | -211.1773 |
| 3943 | 1   | Extremo | 0.138     | 247.049  | -0.512 | -98.3986 | 0.3416  | -331.8895 |
| 3944 | 0   | Extremo | -0.033    | -166.972 | -0.534 | 10.5551  | -0.2955 | -315.1021 |
| 3944 | 0.5 | Extremo | -0.033    | -155.722 | -0.534 | 10.5551  | -0.0286 | -234.4285 |
| 3944 | 1   | Extremo | -0.033    | -144.472 | -0.534 | 10.5551  | 0.2383  | -159.3798 |
| 3944 | 0   | Extremo | 0.136     | -166.98  | 0.744  | 10.5557  | 0.4893  | -315.1132 |
| 3944 | 0.5 | Extremo | 0.136     | -155.73  | 0.744  | 10.5557  | 0.1173  | -234.4359 |
| 3944 | 1   | Extremo | 0.136     | -144.48  | 0.744  | 10.5557  | -0.2547 | -159.3836 |
| 3945 | 0   | Extremo | -0.037    | 33.32    | -0.218 | -25.0368 | -0.1616 | -139.7148 |
| 3945 | 0.5 | Extremo | -0.037    | 44.57    | -0.218 | -25.0368 | -0.0524 | -159.1872 |
| 3945 | 1   | Extremo | -0.037    | 55.82    | -0.218 | -25.0368 | 0.0568  | -184.2846 |
| 3945 | 0   | Extremo | 0.118     | 33.32    | -0.212 | -25.0379 | -0.033  | -139.718  |
| 3945 | 0.5 | Extremo | 0.118     | 44.57    | -0.212 | -25.0379 | 0.0731  | -159.1907 |
| 3945 | 1   | Extremo | 0.118     | 55.82    | -0.212 | -25.0379 | 0.1792  | -184.2883 |
| 3946 | 0   | Extremo | -0.036    | -39.522  | -0.555 | 19.8285  | -0.3198 | -181.0464 |
| 3946 | 0.5 | Extremo | -0.036    | -28.272  | -0.555 | 19.8285  | -0.0425 | -164.0976 |
| 3946 | 1   | Extremo | -0.036    | -17.022  | -0.555 | 19.8285  | 0.2348  | -152.7739 |
| 3946 | 0   | Extremo | 0.112     | -39.527  | 0.481  | 19.8313  | 0.3013  | -181.0499 |
| 3946 | 0.5 | Extremo | 0.112     | -28.277  | 0.481  | 19.8313  | 0.061   | -164.099  |
| 3946 | 1   | Extremo | 0.112     | -17.027  | 0.481  | 19.8313  | -0.1794 | -152.773  |
| 3947 | 0   | Extremo | -0.003949 | -35.775  | -0.54  | 2.6633   | -0.2617 | -124.4652 |
| 3947 | 0.5 | Extremo | -0.003949 | -24.525  | -0.54  | 2.6633   | 0.0085  | -109.3903 |
| 3947 | 1   | Extremo | -0.003949 | -13.275  | -0.54  | 2.6633   | 0.2788  | -99.9403  |
| 3947 | 0   | Extremo | 0.016     | -35.778  | 0.326  | 2.665    | 0.1195  | -124.4621 |
| 3947 | 0.5 | Extremo | 0.016     | -24.528  | 0.326  | 2.665    | -0.0434 | -109.3855 |
| 3947 | 1   | Extremo | 0.016     | -13.278  | 0.326  | 2.665    | -0.2064 | -99.934   |
| 3948 | 0   | Extremo | -0.008175 | 18.186   | -0.434 | -45.5678 | -0.1911 | -97.4411  |
| 3948 | 0.5 | Extremo | -0.008175 | 29.436   | -0.434 | -45.5678 | 0.0259  | -109.3464 |
| 3948 | 1   | Extremo | -0.008175 | 40.686   | -0.434 | -45.5678 | 0.2429  | -126.8768 |
| 3948 | 0   | Extremo | 0.017     | 18.188   | 0.032  | -45.5697 | -0.0342 | -97.4345  |
| 3948 | 0.5 | Extremo | 0.017     | 29.438   | 0.032  | -45.5697 | -0.0502 | -109.341  |
| 3948 | 1   | Extremo | 0.017     | 40.688   | 0.032  | -45.5697 | -0.0662 | -126.8725 |
| 3949 | 0   | Extremo | -0.044    | 20.413   | -0.318 | -65.8849 | -0.1539 | -151.2361 |
| 3949 | 0.5 | Extremo | -0.044    | 31.663   | -0.318 | -65.8849 | 0.0051  | -164.2552 |
| 3949 | 1   | Extremo | -0.044    | 42.913   | -0.318 | -65.8849 | 0.164   | -182.8923 |
| 3949 | 0   | Extremo | 0.113     | 20.418   | -0.166 | -65.8887 | -0.0392 | -151.2336 |
| 3949 | 0.5 | Extremo | 0.113     | 31.668   | -0.166 | -65.8887 | 0.0439  | -164.2549 |
| 3949 | 1   | Extremo | 0.113     | 42.918   | -0.166 | -65.8887 | 0.1271  | -182.9011 |
| 3950 | 0   | Extremo | -0.046    | -61.107  | -0.435 | -29.3503 | -0.2227 | -184.6692 |
| 3950 | 0.5 | Extremo | -0.046    | -49.857  | -0.435 | -29.3503 | -0.0052 | -156.9282 |

|      |     |         |           |         |          |          |           |           |
|------|-----|---------|-----------|---------|----------|----------|-----------|-----------|
| 3950 | 1   | Extremo | -0.046    | -38.607 | -0.435   | -29.3503 | 0.2122    | -134.8122 |
| 3950 | 0   | Extremo | 0.119     | -61.107 | 0.44     | -29.3527 | 0.2838    | -184.6712 |
| 3950 | 0.5 | Extremo | 0.119     | -49.857 | 0.44     | -29.3527 | 0.0638    | -156.9304 |
| 3950 | 1   | Extremo | 0.119     | -38.607 | 0.44     | -29.3527 | -0.1562   | -134.8145 |
| 3951 | 0   | Extremo | -0.024    | 19.748  | -0.273   | -11.1024 | -0.1815   | -118.0683 |
| 3951 | 0.5 | Extremo | -0.024    | 30.998  | -0.273   | -11.1024 | -0.045    | -130.755  |
| 3951 | 1   | Extremo | -0.024    | 42.248  | -0.273   | -11.1024 | 0.0916    | -149.0667 |
| 3951 | 0   | Extremo | 0.08      | 19.748  | -0.06    | -11.1023 | 0.0186    | -118.0695 |
| 3951 | 0.5 | Extremo | 0.08      | 30.998  | -0.06    | -11.1023 | 0.0485    | -130.7559 |
| 3951 | 1   | Extremo | 0.08      | 42.248  | -0.06    | -11.1023 | 0.0785    | -149.0673 |
| 3952 | 0   | Extremo | -0.025    | 3.311   | -0.501   | -2.6154  | -0.2856   | -146.0816 |
| 3952 | 0.5 | Extremo | -0.025    | 14.561  | -0.501   | -2.6154  | -0.0349   | -150.5496 |
| 3952 | 1   | Extremo | -0.025    | 25.811  | -0.501   | -2.6154  | 0.2158    | -160.6427 |
| 3952 | 0   | Extremo | 0.079     | 3.31    | 0.317    | -2.6145  | 0.1973    | -146.0819 |
| 3952 | 0.5 | Extremo | 0.079     | 14.56   | 0.317    | -2.6145  | 0.0386    | -150.5495 |
| 3952 | 1   | Extremo | 0.079     | 25.81   | 0.317    | -2.6145  | -0.1201   | -160.6421 |
| 3953 | 0   | Extremo | -0.008122 | -9.41   | -0.53    | -10.9851 | -0.2644   | -148.5279 |
| 3953 | 0.5 | Extremo | -0.008122 | 1.84    | -0.53    | -10.9851 | 0.0007646 | -146.6355 |
| 3953 | 1   | Extremo | -0.008122 | 13.09   | -0.53    | -10.9851 | 0.2659    | -150.3682 |
| 3953 | 0   | Extremo | 0.027     | -9.41   | 0.274    | -10.9847 | 0.1156    | -148.5262 |
| 3953 | 0.5 | Extremo | 0.027     | 1.84    | 0.274    | -10.9847 | -0.0217   | -146.6335 |
| 3953 | 1   | Extremo | 0.027     | 13.09   | 0.274    | -10.9847 | -0.1589   | -150.3658 |
| 3954 | 0   | Extremo | -0.011    | -14.425 | -0.461   | -32.2544 | -0.2125   | -151.9353 |
| 3954 | 0.5 | Extremo | -0.011    | -3.175  | -0.461   | -32.2544 | 0.0182    | -147.5354 |
| 3954 | 1   | Extremo | -0.011    | 8.075   | -0.461   | -32.2544 | 0.2489    | -148.7605 |
| 3954 | 0   | Extremo | 0.027     | -14.424 | 0.087    | -32.2556 | 0.0154    | -151.9328 |
| 3954 | 0.5 | Extremo | 0.027     | -3.174  | 0.087    | -32.2556 | -0.0282   | -147.5331 |
| 3954 | 1   | Extremo | 0.027     | 8.076   | 0.087    | -32.2556 | -0.0717   | -148.7583 |
| 3955 | 0   | Extremo | -0.031    | -30.985 | -0.381   | -41.4786 | -0.1774   | -164.7685 |
| 3955 | 0.5 | Extremo | -0.031    | -19.735 | -0.381   | -41.4786 | 0.0132    | -152.0887 |
| 3955 | 1   | Extremo | -0.031    | -8.485  | -0.381   | -41.4786 | 0.2037    | -145.0339 |
| 3955 | 0   | Extremo | 0.08      | -30.984 | 0.001127 | -41.4808 | 0.0223    | -164.7672 |
| 3955 | 0.5 | Extremo | 0.08      | -19.734 | 0.001127 | -41.4808 | 0.0217    | -152.0878 |
| 3955 | 1   | Extremo | 0.08      | -8.484  | 0.001127 | -41.4808 | 0.0212    | -145.0334 |
| 3956 | 0   | Extremo | -0.032    | -55.559 | -0.384   | -36.3285 | -0.186    | -153.3606 |
| 3956 | 0.5 | Extremo | -0.032    | -44.309 | -0.384   | -36.3285 | 0.0058    | -128.3935 |
| 3956 | 1   | Extremo | -0.032    | -33.059 | -0.384   | -36.3285 | 0.1977    | -109.0515 |
| 3956 | 0   | Extremo | 0.082     | -55.558 | 0.295    | -36.3316 | 0.1829    | -153.3605 |
| 3956 | 0.5 | Extremo | 0.082     | -44.308 | 0.295    | -36.3316 | 0.0356    | -128.3938 |
| 3956 | 1   | Extremo | 0.082     | -33.058 | 0.295    | -36.3316 | -0.1117   | -109.0521 |
| 3957 | 0   | Extremo | -0.015    | 23.127  | -0.299   | -8.3248  | -0.1902   | -108.9781 |
| 3957 | 0.5 | Extremo | -0.015    | 34.377  | -0.299   | -8.3248  | -0.0408   | -123.354  |
| 3957 | 1   | Extremo | -0.015    | 45.627  | -0.299   | -8.3248  | 0.1087    | -143.3549 |
| 3957 | 0   | Extremo | 0.052     | 23.127  | 0.015    | -8.3246  | 0.0425    | -108.9784 |
| 3957 | 0.5 | Extremo | 0.052     | 34.377  | 0.015    | -8.3246  | 0.035     | -123.3542 |
| 3957 | 1   | Extremo | 0.052     | 45.627  | 0.015    | -8.3246  | 0.0276    | -143.3549 |
| 3958 | 0   | Extremo | -0.015    | 10.416  | -0.475   | -9.5595  | -0.2689   | -143.0267 |
| 3958 | 0.5 | Extremo | -0.015    | 21.666  | -0.475   | -9.5595  | -0.0314   | -151.0472 |
| 3958 | 1   | Extremo | -0.015    | 32.916  | -0.475   | -9.5595  | 0.2061    | -164.6927 |
| 3958 | 0   | Extremo | 0.052     | 10.416  | 0.237    | -9.5593  | 0.1454    | -143.0264 |
| 3958 | 0.5 | Extremo | 0.052     | 21.666  | 0.237    | -9.5593  | 0.027     | -151.0469 |
| 3958 | 1   | Extremo | 0.052     | 32.916  | 0.237    | -9.5593  | -0.0914   | -164.6923 |
| 3959 | 0   | Extremo | -0.00737  | -5.483  | -0.521   | -14.4598 | -0.2643   | -162.7605 |
| 3959 | 0.5 | Extremo | -0.00737  | 5.767   | -0.521   | -14.4598 | -0.0037   | -162.8317 |
| 3959 | 1   | Extremo | -0.00737  | 17.017  | -0.521   | -14.4598 | 0.2569    | -168.5279 |
| 3959 | 0   | Extremo | 0.024     | -5.483  | 0.238    | -14.4599 | 0.1092    | -162.7596 |
| 3959 | 0.5 | Extremo | 0.024     | 5.767   | 0        |          |           |           |



|      |     |         |           |         |        |          |           |           |
|------|-----|---------|-----------|---------|--------|----------|-----------|-----------|
| 3962 | 1   | Extremo | -0.022    | -37.643 | -0.358 | -29.8608 | 0.1907    | -98.7897  |
| 3962 | 0   | Extremo | 0.054     | -60.143 | 0.223  | -29.8638 | 0.1315    | -147.6826 |
| 3962 | 0.5 | Extremo | 0.054     | -48.893 | 0.223  | -29.8638 | 0.0199    | -120.4236 |
| 3962 | 1   | Extremo | 0.054     | -37.643 | 0.223  | -29.8638 | -0.0917   | -98.7897  |
| 3963 | 0   | Extremo | -0.008797 | 25.196  | -0.311 | -6.9188  | -0.1942   | -107.2835 |
| 3963 | 0.5 | Extremo | -0.008797 | 36.446  | -0.311 | -6.9188  | -0.0385   | -122.694  |
| 3963 | 1   | Extremo | -0.008797 | 47.696  | -0.311 | -6.9188  | 0.1172    | -143.7295 |
| 3963 | 0   | Extremo | 0.032     | 25.196  | 0.052  | -6.9187  | 0.0535    | -107.2835 |
| 3963 | 0.5 | Extremo | 0.032     | 36.446  | 0.052  | -6.9187  | 0.0275    | -122.694  |
| 3963 | 1   | Extremo | 0.032     | 47.696  | 0.052  | -6.9187  | 0.0015    | -143.7295 |
| 3964 | 0   | Extremo | -0.009077 | 10.558  | -0.462 | -9.4062  | -0.2607   | -145.9209 |
| 3964 | 0.5 | Extremo | -0.009077 | 21.808  | -0.462 | -9.4062  | -0.0297   | -154.0125 |
| 3964 | 1   | Extremo | -0.009077 | 33.058  | -0.462 | -9.4062  | 0.2013    | -167.7291 |
| 3964 | 0   | Extremo | 0.033     | 10.558  | 0.197  | -9.4064  | 0.1194    | -145.9207 |
| 3964 | 0.5 | Extremo | 0.033     | 21.808  | 0.197  | -9.4064  | 0.0209    | -154.0123 |
| 3964 | 1   | Extremo | 0.033     | 33.058  | 0.197  | -9.4064  | -0.0776   | -167.7289 |
| 3965 | 0   | Extremo | -0.00546  | -6.632  | -0.516 | -12.2027 | -0.2642   | -170.4098 |
| 3965 | 0.5 | Extremo | -0.00546  | 4.618   | -0.516 | -12.2027 | -0.0063   | -169.9066 |
| 3965 | 1   | Extremo | -0.00546  | 15.868  | -0.516 | -12.2027 | 0.2517    | -175.0283 |
| 3965 | 0   | Extremo | 0.018     | -6.632  | 0.215  | -12.203  | 0.1044    | -170.4094 |
| 3965 | 0.5 | Extremo | 0.018     | 4.618   | 0.215  | -12.203  | -0.003    | -169.9062 |
| 3965 | 1   | Extremo | 0.018     | 15.868  | 0.215  | -12.203  | -0.1104   | -175.0279 |
| 3966 | 0   | Extremo | -0.007606 | -26.08  | -0.49  | -15.4468 | -0.2329   | -180.2757 |
| 3966 | 0.5 | Extremo | -0.007606 | -14.83  | -0.49  | -15.4468 | 0.0121    | -170.0482 |
| 3966 | 1   | Extremo | -0.007606 | -3.58   | -0.49  | -15.4468 | -0.57     | -165.4458 |
| 3966 | 0   | Extremo | 0.019     | -26.08  | 0.15   | -15.4475 | 0.0653    | -180.2753 |
| 3966 | 0.5 | Extremo | 0.019     | -14.83  | 0.15   | -15.4475 | -0.0095   | -170.0478 |
| 3966 | 1   | Extremo | 0.019     | -3.58   | 0.15   | -15.4475 | -0.0843   | -165.4454 |
| 3967 | 0   | Extremo | -0.014    | -45.205 | -0.428 | -17.8226 | -0.1933   | -173.1876 |
| 3967 | 0.5 | Extremo | -0.014    | -33.955 | -0.428 | -17.8226 | 0.0207    | -153.3974 |
| 3967 | 1   | Extremo | -0.014    | -22.705 | -0.428 | -17.8226 | 0.2346    | -139.2322 |
| 3967 | 0   | Extremo | 0.034     | -45.205 | 0.125  | -17.8238 | 0.0662    | -173.1873 |
| 3967 | 0.5 | Extremo | 0.034     | -33.955 | 0.125  | -17.8238 | 0.0035    | -153.3971 |
| 3967 | 1   | Extremo | 0.034     | -22.705 | 0.125  | -17.8238 | -0.0592   | -139.2319 |
| 3968 | 0   | Extremo | -0.014    | -62.5   | -0.344 | -20.7489 | -0.1567   | -147.2549 |
| 3968 | 0.5 | Extremo | -0.014    | -51.25  | -0.344 | -20.7489 | 0.0154    | -118.8174 |
| 3968 | 1   | Extremo | -0.014    | -40     | -0.344 | -20.7489 | 0.1876    | -96.0049  |
| 3968 | 0   | Extremo | 0.034     | -62.5   | 0.188  | -20.7517 | 0.1048    | -147.2548 |
| 3968 | 0.5 | Extremo | 0.034     | -51.25  | 0.188  | -20.7517 | 0.011     | -118.8173 |
| 3968 | 1   | Extremo | 0.034     | -40     | 0.188  | -20.7517 | -0.0827   | -96.0048  |
| 3969 | 0   | Extremo | -0.004052 | 25.753  | -0.317 | -4.5424  | -0.196    | -107.714  |
| 3969 | 0.5 | Extremo | -0.004052 | 37.003  | -0.317 | -4.5424  | -0.0374   | -123.4032 |
| 3969 | 1   | Extremo | -0.004052 | 48.253  | -0.317 | -4.5424  | 0.1211    | -144.7173 |
| 3969 | 0   | Extremo | 0.018     | 25.753  | 0.07   | -4.5424  | 0.0586    | -107.7141 |
| 3969 | 0.5 | Extremo | 0.018     | 37.003  | 0.07   | -4.5424  | 0.0235    | -123.4032 |
| 3969 | 1   | Extremo | 0.018     | 48.253  | 0.07   | -4.5424  | -0.0117   | -144.7173 |
| 3970 | 0   | Extremo | -0.004391 | 9.857   | -0.456 | -6.2028  | -0.2571   | -148.4838 |
| 3970 | 0.5 | Extremo | -0.004391 | 21.107  | -0.456 | -6.2028  | -0.029    | -156.225  |
| 3970 | 1   | Extremo | -0.004391 | 32.357  | -0.456 | -6.2028  | 0.1991    | -169.5912 |
| 3970 | 0   | Extremo | 0.019     | 9.857   | 0.178  | -6.2031  | 0.1067    | -148.4838 |
| 3970 | 0.5 | Extremo | 0.019     | 21.107  | 0.178  | -6.2031  | 0.0178    | -156.225  |
| 3970 | 1   | Extremo | 0.019     | 32.357  | 0.178  | -6.2031  | -0.0712   | -169.5912 |
| 3971 | 0   | Extremo | -0.003338 | -7.86   | -0.514 | -7.5753  | -0.2645   | -174.1502 |
| 3971 | 0.5 | Extremo | -0.003338 | 3.39    | -0.514 | -7.5753  | -0.0076   | -173.0326 |
| 3971 | 1   | Extremo | -0.003338 | 14.64   | -0.514 | -7.5753  | 0.2492    | -177.5401 |
| 3971 | 0   | Extremo | 0.012     | -7.86   | 0.202  | -7.5757  | 0.1017    | -174.1501 |
| 3971 | 0.5 | Extremo | 0.012     | 3.39    | 0.202  | -7.5757  | 0.0004733 | -173.0326 |
| 3971 | 1   | Extremo | 0.012     | 14.64   | 0.202  | -7.5757  | -0.1007   | -177.54   |
| 3972 | 0   | Extremo | -0.005252 | -26.879 | -0.497 | -8.8543  | -0.2374   | -183.3783 |
| 3972 | 0.5 | Extremo | -0.005252 | -15.629 | -0.497 | -8.8543  | 0.011     | -172.7511 |
| 3972 | 1   | Extremo | -0.005252 | -4.379  | -0.497 | -8.8543  | 0.2595    | -167.7489 |
| 3972 | 0   | Extremo | 0.013     | -26.879 | 0.163  | -8.855   | 0.0755    | -183.3782 |
| 3972 | 0.5 | Extremo | 0.013     | -15.629 | 0.163  | -8.855   | -0.0061   | -172.751  |
| 3972 | 1   | Extremo | 0.013     | -4.379  | 0.163  | -8.855   | -0.0877   | -167.7488 |
| 3973 | 0   | Extremo | -0.009078 | -45.815 | -0.436 | -9.9287  | -0.1957   | -174.7181 |
| 3973 | 0.5 | Extremo | -0.009078 | -34.565 | -0.436 | -9.9287  | 0.0222    | -154.6232 |
| 3973 | 1   | Extremo | -0.009078 | -23.315 | -0.436 | -9.9287  | 0.2402    | -140.1533 |
| 3973 | 0   | Extremo | 0.02      | -45.815 | 0.146  | -9.9298  | 0.0729    | -174.718  |
| 3973 | 0.5 | Extremo | 0.02      | -34.565 | 0.146  | -9.9298  | 0.0001453 | -154.6231 |
| 3973 | 1   | Extremo | 0.02      | -23.315 | 0.146  | -9.9298  | -0.0726   | -140.1532 |
| 3974 | 0   | Extremo | -0.008996 | -63.307 | -0.337 | -11.6308 | -0.1512   | -147.5672 |
| 3974 | 0.5 | Extremo | -0.008996 | -52.057 | -0.337 | -11.6308 | 0.0175    | -118.7262 |

|      |     |         |           |         |        |          |         |           |
|------|-----|---------|-----------|---------|--------|----------|---------|-----------|
| 3974 | 1   | Extremo | -0.008996 | -40.807 | -0.337 | -11.6308 | 0.1862  | -95.5102  |
| 3974 | 0   | Extremo | 0.02      | -63.307 | 0.17   | -11.6336 | 0.091   | -147.5672 |
| 3974 | 0.5 | Extremo | 0.02      | -52.057 | 0.17   | -11.6336 | 0.0061  | -118.7262 |
| 3974 | 1   | Extremo | 0.02      | -40.807 | 0.17   | -11.6336 | -0.0788 | -95.5102  |
| 3975 | 0   | Extremo | -0.000104 | 25.834  | -0.319 | -1.3399  | -0.1967 | -108.1549 |
| 3975 | 0.5 | Extremo | -0.000104 | 37.084  | -0.319 | -1.3399  | -0.0371 | -123.8845 |
| 3975 | 1   | Extremo | -0.000104 | 48.334  | -0.319 | -1.3399  | 0.1225  | -145.239  |
| 3975 | 0   | Extremo | 0.00675   | 25.834  | 0.078  | -1.3399  | 0.0608  | -108.155  |
| 3975 | 0.5 | Extremo | 0.00675   | 37.084  | 0.078  | -1.3399  | 0.0217  | -123.8846 |
| 3975 | 1   | Extremo | 0.00675   | 48.334  | 0.078  | -1.3399  | -0.0174 | -145.2391 |
| 3976 | 0   | Extremo | -0.000488 | 9.46    | -0.454 | -1.7586  | -0.2561 | -149.6761 |
| 3976 | 0.5 | Extremo | -0.000488 | 20.71   | -0.454 | -1.7586  | -0.0289 | -157.2184 |
| 3976 | 1   | Extremo | -0.000488 | 31.96   | -0.454 | -1.7586  | 0.1984  | -170.3857 |
| 3976 | 0   | Extremo | 0.007481  | 9.46    | 0.171  | -1.7589  | 0.1017  | -149.6763 |
| 3976 | 0.5 | Extremo | 0.007481  | 20.71   | 0.171  | -1.7589  | 0.0165  | -157.2186 |
| 3976 | 1   | Extremo | 0.007481  | 31.96   | 0.171  | -1.7589  | -0.0688 | -170.3858 |
| 3977 | 0   | Extremo | -0.001205 | -8.417  | -0.514 | -2.0865  | -0.2652 | -175.5863 |
| 3977 | 0.5 | Extremo | -0.001205 | 2.833   | -0.514 | -2.0865  | -0.0083 | -174.1905 |
| 3977 | 1   | Extremo | -0.001205 | 14.083  | -0.514 | -2.0865  | 0.2486  | -178.4197 |
| 3977 | 0   | Extremo | 0.006003  | -8.417  | 0.197  | -2.087   | 0.1005  | -175.5865 |
| 3977 | 0.5 | Extremo | 0.006003  | 2.833   | 0.197  | -2.087   | 0.0019  | -174.1907 |
| 3977 | 1   | Extremo | 0.006003  | 14.083  | 0.197  | -2.087   | -0.0967 | -178.4199 |
| 3978 | 0   | Extremo | -0.003057 | -27.161 | -0.501 | -2.3708  | -0.2398 | -184.4821 |
| 3978 | 0.5 | Extremo | -0.003057 | -15.911 | -0.501 | -2.3708  | 0.0107  | -173.7141 |
| 3978 | 1   | Extremo | -0.003057 | -4.661  | -0.501 | -2.3708  | 0.2612  | -168.571  |
| 3978 | 0   | Extremo | 0.006431  | -27.161 | 0.169  | -2.3714  | 0.08    | -184.4823 |
| 3978 | 0.5 | Extremo | 0.006431  | -15.911 | 0.169  | -2.3714  | -0.0047 | -173.7143 |
| 3978 | 1   | Extremo | 0.006431  | -4.661  | 0.169  | -2.3714  | -0.0894 | -168.5712 |
| 3979 | 0   | Extremo | -0.005004 | -45.965 | -0.44  | -2.5901  | -0.1967 | -175.3346 |
| 3979 | 0.5 | Extremo | -0.005004 | -34.715 | -0.44  | -2.5901  | 0.0231  | -155.1648 |
| 3979 | 1   | Extremo | -0.005004 | -23.465 | -0.44  | -2.5901  | 0.2429  | -140.6199 |
| 3979 | 0   | Extremo | 0.008562  | -45.965 | 0.154  | -2.5912  | 0.0755  | -175.3347 |
| 3979 | 0.5 | Extremo | 0.008562  | -34.715 | 0.154  | -2.5912  | -0.0014 | -155.1649 |
| 3979 | 1   | Extremo | 0.008562  | -23.465 | 0.154  | -2.5912  | -0.0782 | -140.6201 |
| 3980 | 0   | Extremo | -0.004853 | -63.532 | -0.334 | -2.7623  | -0.1484 | -147.7729 |
| 3980 | 0.5 | Extremo | -0.004853 | -52.282 | -0.334 | -2.7623  | 0.0186  | -118.8192 |
| 3980 | 1   | Extremo | -0.004853 | -41.032 | -0.334 | -2.7623  | 0.1856  | -95.4906  |
| 3980 | 0   | Extremo | 0.007905  | -63.532 | 0.162  | -2.765   | 0.0849  | -147.773  |
| 3980 | 0.5 | Extremo | 0.007905  | -52.282 | 0.162  | -2.765   | 0.0038  | -118.8193 |
| 3980 | 1   | Extremo | 0.007905  | -41.032 | 0.162  | -2.765   | -0.0772 | -95.4906  |
| 3981 | 0   | Extremo | 0.003725  | 25.842  | -0.319 | 2.0894   | -0.1969 | -108.0282 |
| 3981 | 0.5 | Extremo | 0.003725  | 37.092  | -0.319 | 2.0894   | -0.0374 | -123.7616 |
| 3981 | 1   | Extremo | 0.003725  | 48.342  | -0.319 | 2.0894   | 0.122   | -145.12   |
| 3981 | 0   | Extremo | -0.003554 | 25.842  | 0.079  | 2.0896   | 0.0612  | -108.0284 |
| 3981 | 0.5 | Extremo | -0.003554 | 37.092  | 0.079  | 2.0896   | 0.0217  | -123.7618 |
| 3981 | 1   | Extremo | -0.003554 | 48.342  | 0.079  | 2.0896   | -0.0178 | -145.1203 |
| 3982 | 0   | Extremo | 0.003298  | 9.532   | -0.456 | 2.9744   | -0.2571 | -149.4589 |
| 3982 | 0.5 | Extremo | 0.003298  | 20.782  | -0.456 | 2.9744   | -0.0292 | -157.0372 |
| 3982 | 1   | Extremo | 0.003298  | 32.032  | -0.456 | 2.9744   | 0.1986  | -170.2405 |
| 3982 | 0   | Extremo | -0.002705 | 9.532   | 0.171  | 2.9742   | 0.1021  | -149.4593 |
| 3982 | 0.5 | Extremo | -0.002705 | 20.782  | 0.171  | 2.9742   | 0.0164  | -157.0376 |
| 3982 | 1   | Extremo | -0.002705 | 32.032  | 0.171  | 2.9742   | -0.0692 | -170.2408 |
| 3983 | 0   | Extremo | 0.0009497 | -8.322  | -0.516 | 3.5907   | -0.2665 | -175.3709 |
| 3983 | 0.5 | Extremo | 0.0009497 | 2.928   | -0.516 | 3.5907   | -0.0084 | -174.0225 |
| 3983 | 1   | Extremo | 0.0009497 | 14.178  | -0.516 | 3.5907   | 0.2497  | -178.299  |
| 3983 | 0   | Extremo | 0.0001384 | -8.322  | 0.198  | 3.5904   | 0.1008  |           |





|      |     |         |           |         |        |         |           |           |
|------|-----|---------|-----------|---------|--------|---------|-----------|-----------|
| 3986 | 1   | Extremo | -0.001257 | -41.008 | -0.333 | 6.0192  | 0.1855    | -95.4909  |
| 3986 | 0   | Extremo | -0.002719 | -63.508 | 0.161  | 6.0164  | 0.0841    | -147.7495 |
| 3986 | 0.5 | Extremo | -0.002719 | -52.258 | 0.161  | 6.0164  | 0.0036    | -118.8078 |
| 3986 | 1   | Extremo | -0.002719 | -41.008 | 0.161  | 6.0164  | -0.0768   | -95.491   |
| 3987 | 0   | Extremo | 0.008065  | 25.764  | -0.316 | 5.102   | -0.1964   | -107.3296 |
| 3987 | 0.5 | Extremo | 0.008065  | 37.014  | -0.316 | 5.102   | -0.0385   | -123.0241 |
| 3987 | 1   | Extremo | 0.008065  | 48.264  | -0.316 | 5.102   | 0.1195    | -144.3436 |
| 3987 | 0   | Extremo | -0.015    | 25.764  | 0.073  | 5.1024  | 0.0598    | -107.3299 |
| 3987 | 0.5 | Extremo | -0.015    | 37.014  | 0.073  | 5.1024  | 0.0234    | -123.0244 |
| 3987 | 1   | Extremo | -0.015    | 48.264  | 0.073  | 5.1024  | -0.013    | -144.344  |
| 3988 | 0   | Extremo | 0.007591  | 10.092  | -0.46  | 7.2401  | -0.2601   | -147.7795 |
| 3988 | 0.5 | Extremo | 0.007591  | 21.342  | -0.46  | 7.2401  | -0.0301   | -155.6382 |
| 3988 | 1   | Extremo | 0.007591  | 32.592  | -0.46  | 7.2401  | 0.1998    | -169.1218 |
| 3988 | 0   | Extremo | -0.014    | 10.092  | 0.18   | 7.2402  | 0.1079    | -147.7803 |
| 3988 | 0.5 | Extremo | -0.014    | 21.342  | 0.18   | 7.2402  | 0.0177    | -155.6389 |
| 3988 | 1   | Extremo | -0.014    | 32.592  | 0.18   | 7.2402  | -0.0725   | -169.1225 |
| 3989 | 0   | Extremo | 0.003186  | -7.543  | -0.521 | 8.9731  | -0.2685   | -173.4267 |
| 3989 | 0.5 | Extremo | 0.003186  | 3.707   | -0.521 | 8.9731  | -0.008    | -172.4678 |
| 3989 | 1   | Extremo | 0.003186  | 14.957  | -0.521 | 8.9731  | 0.2524    | -177.134  |
| 3989 | 0   | Extremo | -0.005648 | -7.543  | 0.204  | 8.9729  | 0.1024    | -173.4277 |
| 3989 | 0.5 | Extremo | -0.005648 | 3.707   | 0.204  | 8.9729  | 0.0002227 | -172.4688 |
| 3989 | 1   | Extremo | -0.005648 | 14.957  | 0.204  | 8.9729  | -0.102    | -177.1349 |
| 3990 | 0   | Extremo | 0.000875  | -26.648 | -0.504 | 10.5624 | -0.24     | -182.8663 |
| 3990 | 0.5 | Extremo | 0.000875  | -15.398 | -0.504 | 10.5624 | 0.0117    | -172.3548 |
| 3990 | 1   | Extremo | 0.000875  | -4.148  | -0.504 | 10.5624 | 0.2635    | -167.4684 |
| 3990 | 0   | Extremo | -0.005267 | -26.648 | 0.164  | 10.5617 | 0.0755    | -182.8672 |
| 3990 | 0.5 | Extremo | -0.005267 | -15.398 | 0.164  | 10.5617 | -0.0066   | -172.3558 |
| 3990 | 1   | Extremo | -0.005267 | -4.148  | 0.164  | 10.5617 | -0.0886   | -167.4694 |
| 3991 | 0   | Extremo | 0.002028  | -45.676 | -0.438 | 11.9877 | -0.1954   | -174.4586 |
| 3991 | 0.5 | Extremo | 0.002028  | -34.426 | -0.438 | 11.9877 | 0.0236    | -154.4332 |
| 3991 | 1   | Extremo | 0.002028  | -23.176 | -0.438 | 11.9877 | 0.2426    | -140.0328 |
| 3991 | 0   | Extremo | -0.013    | -45.676 | 0.144  | 11.9864 | 0.0717    | -174.4594 |
| 3991 | 0.5 | Extremo | -0.013    | -34.426 | 0.144  | 11.9864 | -0.000482 | -154.434  |
| 3991 | 1   | Extremo | -0.013    | -23.176 | 0.144  | 11.9864 | -0.0727   | -140.0335 |
| 3992 | 0   | Extremo | 0.002368  | -63.218 | -0.334 | 14.9115 | -0.1483   | -147.4964 |
| 3992 | 0.5 | Extremo | 0.002368  | -51.968 | -0.334 | 14.9115 | 0.0188    | -118.6998 |
| 3992 | 1   | Extremo | 0.002368  | -40.718 | -0.334 | 14.9115 | 0.1858    | -95.5281  |
| 3992 | 0   | Extremo | -0.014    | -63.218 | 0.166  | 14.9085 | 0.0887    | -147.4968 |
| 3992 | 0.5 | Extremo | -0.014    | -51.968 | 0.166  | 14.9085 | 0.0055    | -118.7001 |
| 3992 | 1   | Extremo | -0.014    | -40.718 | 0.166  | 14.9085 | -0.0777   | -95.5284  |
| 3993 | 0   | Extremo | 0.014     | 25.135  | -0.309 | 7.0572  | -0.1948   | -106.6893 |
| 3993 | 0.5 | Extremo | 0.014     | 36.385  | -0.309 | 7.0572  | -0.0403   | -122.0692 |
| 3993 | 1   | Extremo | 0.014     | 47.635  | -0.309 | 7.0572  | 0.1141    | -143.0742 |
| 3993 | 0   | Extremo | -0.028    | 25.135  | 0.056  | 7.058   | 0.0556    | -106.6895 |
| 3993 | 0.5 | Extremo | -0.028    | 36.385  | 0.056  | 7.058   | 0.0275    | -122.0696 |
| 3993 | 1   | Extremo | -0.028    | 47.635  | 0.056  | 7.058   | -0.000648 | -143.0747 |
| 3994 | 0   | Extremo | 0.013     | 10.986  | -0.469 | 9.9877  | -0.266    | -144.5966 |
| 3994 | 0.5 | Extremo | 0.013     | 22.236  | -0.469 | 9.9877  | -0.0317   | -152.9023 |
| 3994 | 1   | Extremo | 0.013     | 33.486  | -0.469 | 9.9877  | 0.2026    | -166.833  |
| 3994 | 0   | Extremo | -0.027    | 10.986  | 0.201  | 9.9883  | 0.1214    | -144.5978 |
| 3994 | 0.5 | Extremo | -0.027    | 22.236  | 0.201  | 9.9883  | 0.0208    | -152.9035 |
| 3994 | 1   | Extremo | -0.027    | 33.486  | 0.201  | 9.9883  | -0.0798   | -166.8341 |
| 3995 | 0   | Extremo | 0.005527  | -6.003  | -0.529 | 13.3114 | -0.2713   | -168.906  |
| 3995 | 0.5 | Extremo | 0.005527  | 5.247   | -0.529 | 13.3114 | -0.007    | -168.7172 |
| 3995 | 1   | Extremo | 0.005527  | 16.497  | -0.529 | 13.3114 | 0.2574    | -174.1535 |
| 3995 | 0   | Extremo | -0.011    | -6.003  | 0.218  | 13.3115 | 0.1058    | -168.9078 |
| 3995 | 0.5 | Extremo | -0.011    | 5.247   | 0.218  | 13.3115 | -0.0034   | -168.719  |
| 3995 | 1   | Extremo | -0.011    | 16.497  | 0.218  | 13.3115 | -0.1126   | -174.1551 |
| 3996 | 0   | Extremo | 0.002631  | -25.612 | -0.502 | 17.1247 | -0.2376   | -179.1697 |
| 3996 | 0.5 | Extremo | 0.002631  | -14.362 | -0.502 | 17.1247 | 0.0133    | -169.176  |
| 3996 | 1   | Extremo | 0.002631  | -3.112  | -0.502 | 17.1247 | 0.2642    | -164.8073 |
| 3996 | 0   | Extremo | -0.011    | -25.612 | 0.151  | 17.1239 | 0.0654    | -179.1716 |
| 3996 | 0.5 | Extremo | -0.011    | -14.362 | 0.151  | 17.1239 | -0.0103   | -169.1779 |
| 3996 | 1   | Extremo | -0.011    | -3.112  | 0.151  | 17.1239 | -0.0859   | -164.8092 |
| 3997 | 0   | Extremo | 0.006138  | -44.901 | -0.432 | 19.978  | -0.1928   | -172.6686 |
| 3997 | 0.5 | Extremo | 0.006138  | -33.651 | -0.432 | 19.978  | 0.0231    | -153.0307 |
| 3997 | 1   | Extremo | 0.006138  | -22.401 | -0.432 | 19.978  | 0.239     | -139.0179 |
| 3997 | 0   | Extremo | -0.026    | -44.901 | 0.123  | 19.9763 | 0.0641    | -172.67   |
| 3997 | 0.5 | Extremo | -0.026    | -33.651 | 0.123  | 19.9763 | 0.0024    | -153.0321 |
| 3997 | 1   | Extremo | -0.026    | -22.401 | 0.123  | 19.9763 | -0.0593   | -139.0193 |
| 3998 | 0   | Extremo | 0.006639  | -62.266 | -0.338 | 24.0787 | -0.1515   | -147.157  |
| 3998 | 0.5 | Extremo | 0.006639  | -51.016 | -0.338 | 24.0787 | 0.0177    | -118.8366 |

|      |     |         |          |         |        |         |           |           |
|------|-----|---------|----------|---------|--------|---------|-----------|-----------|
| 3998 | 1   | Extremo | 0.006639 | -39.766 | -0.338 | 24.0787 | 0.1869    | -96.1412  |
| 3998 | 0   | Extremo | -0.028   | -62.266 | 0.182  | 24.0753 | 0.1008    | -147.1577 |
| 3998 | 0.5 | Extremo | -0.028   | -51.016 | 0.182  | 24.0753 | 0.0099    | -118.8371 |
| 3998 | 1   | Extremo | -0.028   | -39.766 | 0.182  | 24.0753 | -0.0809   | -96.1415  |
| 3999 | 0   | Extremo | 0.021    | 22.761  | -0.295 | 7.806   | -0.1911   | -108.5189 |
| 3999 | 0.5 | Extremo | 0.021    | 34.011  | -0.295 | 7.806   | -0.0436   | -122.7117 |
| 3999 | 1   | Extremo | 0.021    | 45.261  | -0.295 | 7.806   | 0.1039    | -142.5295 |
| 3999 | 0   | Extremo | -0.047   | 22.762  | 0.021  | 7.8072  | 0.0453    | -108.5182 |
| 3999 | 0.5 | Extremo | -0.047   | 34.012  | 0.021  | 7.8072  | 0.0349    | -122.7115 |
| 3999 | 1   | Extremo | -0.047   | 45.262  | 0.021  | 7.8072  | 0.0245    | -142.5297 |
| 4000 | 0   | Extremo | 0.021    | 10.916  | -0.485 | 9.1371  | -0.2773   | -141.0492 |
| 4000 | 0.5 | Extremo | 0.021    | 22.166  | -0.485 | 9.1371  | -0.0346   | -149.3195 |
| 4000 | 1   | Extremo | 0.021    | 33.416  | -0.485 | 9.1371  | 0.208     | -163.2149 |
| 4000 | 0   | Extremo | -0.046   | 10.916  | 0.243  | 9.1388  | 0.1483    | -141.0504 |
| 4000 | 0.5 | Extremo | -0.046   | 22.166  | 0.243  | 9.1388  | 0.0269    | -149.3209 |
| 4000 | 1   | Extremo | -0.046   | 33.416  | 0.243  | 9.1388  | -0.0946   | -163.2164 |
| 4001 | 0   | Extremo | 0.007705 | -4.526  | -0.541 | 14.8643 | -0.2755   | -159.8889 |
| 4001 | 0.5 | Extremo | 0.007705 | 6.724   | -0.541 | 14.8643 | -0.0048   | -160.4385 |
| 4001 | 1   | Extremo | 0.007705 | 17.974  | -0.541 | 14.8643 | 0.2658    | -166.613  |
| 4001 | 0   | Extremo | -0.016   | -4.526  | 0.243  | 14.8652 | 0.1113    | -159.8922 |
| 4001 | 0.5 | Extremo | -0.016   | 6.724   | 0.243  | 14.8652 | -0.0101   | -160.4418 |
| 4001 | 1   | Extremo | -0.016   | 17.974  | 0.243  | 14.8652 | -0.1316   | -166.6164 |
| 4002 | 0   | Extremo | 0.004006 | -22.665 | -0.498 | 24.4367 | -0.2327   | -170.1406 |
| 4002 | 0.5 | Extremo | 0.004006 | -11.415 | -0.498 | 24.4367 | 0.0161    | -161.6204 |
| 4002 | 1   | Extremo | 0.004006 | -0.165  | -0.498 | 24.4367 | 0.2648    | -158.7252 |
| 4002 | 0   | Extremo | -0.016   | -22.665 | 0.128  | 24.4356 | 0.0469    | -170.1443 |
| 4002 | 0.5 | Extremo | -0.016   | -11.415 | 0.128  | 24.4356 | -0.0173   | -161.6241 |
| 4002 | 1   | Extremo | -0.016   | -0.165  | 0.128  | 24.4356 | -0.0815   | -158.729  |
| 4003 | 0   | Extremo | 0.012    | -41.838 | -0.419 | 29.8675 | -0.1876   | -169.3072 |
| 4003 | 0.5 | Extremo | 0.012    | -30.588 | -0.419 | 29.8675 | 0.0218    | -151.2008 |
| 4003 | 1   | Extremo | 0.012    | -19.338 | -0.419 | 29.8675 | 0.2311    | -138.7194 |
| 4003 | 0   | Extremo | -0.044   | -41.838 | 0.081  | 29.8647 | 0.0489    | -169.3097 |
| 4003 | 0.5 | Extremo | -0.044   | -30.588 | 0.081  | 29.8647 | 0.0082    | -151.2031 |
| 4003 | 1   | Extremo | -0.044   | -19.338 | 0.081  | 29.8647 | -0.0325   | -138.7215 |
| 4004 | 0   | Extremo | 0.012    | -59.525 | -0.349 | 33.198  | -0.159    | -147.7223 |
| 4004 | 0.5 | Extremo | 0.012    | -48.275 | -0.349 | 33.198  | 0.0153    | -120.7724 |
| 4004 | 1   | Extremo | 0.012    | -37.025 | -0.349 | 33.198  | 0.1896    | -99.4474  |
| 4004 | 0   | Extremo | -0.046   | -59.526 | 0.215  | 33.194  | 0.1255    | -147.7233 |
| 4004 | 0.5 | Extremo | -0.046   | -48.276 | 0.215  | 33.194  | 0.0183    | -120.7729 |
| 4004 | 1   | Extremo | -0.046   | -37.026 | 0.215  | 33.194  | -0.089    | -99.4475  |
| 4005 | 0   | Extremo | 0.033    | 18.871  | -0.268 | 10.0501 | -0.1831   | -118.8932 |
| 4005 | 0.5 | Extremo | 0.033    | 30.121  | -0.268 | 10.0501 | -0.0492   | -131.1411 |
| 4005 | 1   | Extremo | 0.033    | 41.371  | -0.268 | 10.0501 | 0.0846    | -149.014  |
| 4005 | 0   | Extremo | -0.075   | 18.873  | -0.052 | 10.051  | 0.0224    | -118.8894 |
| 4005 | 0.5 | Extremo | -0.075   | 30.123  | -0.052 | 10.051  | 0.0483    | -131.1382 |
| 4005 | 1   | Extremo | -0.075   | 41.373  | -0.052 | 10.051  | 0.0742    | -149.012  |
| 4006 | 0   | Extremo | 0.031    | 2.82    | -0.518 | -0.0058 | -0.2987   | -144.3538 |
| 4006 | 0.5 | Extremo | 0.031    | 14.07   | -0.518 | -0.0058 | -0.0397   | -148.5761 |
| 4006 | 1   | Extremo | 0.031    | 25.32   | -0.518 | -0.0058 | 0.2194    | -158.4235 |
| 4006 | 0   | Extremo | -0.071   | 2.822   | 0.326  | -0.0014 | 0.2013    | -144.353  |
| 4006 | 0.5 | Extremo | -0.071   | 14.072  | 0.326  | -0.0014 | 0.0384    | -148.5767 |
| 4006 | 1   | Extremo | -0.071   | 25.322  | 0.326  | -0.0014 | -0.1244   | -158.4255 |
| 4007 | 0   | Extremo | 0.008319 | -8.844  | -0.561 | 9.7222  | -0.2814   | -143.2256 |
| 4007 | 0.5 | Extremo | 0.008319 | 2.406   | -0.561 | 9.7222  | -0.000872 | -141.6159 |
| 4007 | 1   | Extremo | 0.008319 | 13.656  | -0.561 | 9.7222  | 0.2796    | -145.6312 |
| 4007 | 0   | Extremo | -0.017   | -8.842  | 0.282  | 9.7252  | 0.1187    | -143.2315 |



|      |     |         |           |          |           |          |         |           |
|------|-----|---------|-----------|----------|-----------|----------|---------|-----------|
| 4010 | 1   | Extremo | 0.02      | -31.714  | -0.371    | 39.1715  | 0.1964  | -111.4806 |
| 4010 | 0   | Extremo | -0.073    | -54.216  | 0.283     | 39.1671  | 0.1745  | -154.4449 |
| 4010 | 0.5 | Extremo | -0.073    | -42.966  | 0.283     | 39.1671  | 0.0331  | -130.1493 |
| 4010 | 1   | Extremo | -0.073    | -31.716  | 0.283     | 39.1671  | -0.1082 | -111.4787 |
| 4011 | 0   | Extremo | 0.047     | 34.547   | -0.215    | 25.0851  | -0.1674 | -143.7911 |
| 4011 | 0.5 | Extremo | 0.047     | 45.797   | -0.215    | 25.0851  | -0.06   | -163.8769 |
| 4011 | 1   | Extremo | 0.047     | 57.047   | -0.215    | 25.0851  | 0.0473  | -189.5878 |
| 4011 | 0   | Extremo | -0.111    | 34.545   | -0.201    | 25.0821  | -0.0273 | -143.7806 |
| 4011 | 0.5 | Extremo | -0.111    | 45.795   | -0.201    | 25.0821  | 0.0731  | -163.8655 |
| 4011 | 1   | Extremo | -0.111    | 57.045   | -0.201    | 25.0821  | 0.1735  | -189.5754 |
| 4012 | 0   | Extremo | 0.044     | -46.553  | -0.585    | -27.186  | -0.3408 | -184.5083 |
| 4012 | 0.5 | Extremo | 0.044     | -35.303  | -0.585    | -27.186  | -0.0482 | -164.0445 |
| 4012 | 1   | Extremo | 0.044     | -24.053  | -0.585    | -27.186  | 0.2444  | -149.2057 |
| 4012 | 0   | Extremo | -0.103    | -46.538  | 0.493     | -27.1754 | 0.3069  | -184.4964 |
| 4012 | 0.5 | Extremo | -0.103    | -35.288  | 0.493     | -27.1754 | 0.0606  | -164.0401 |
| 4012 | 1   | Extremo | -0.103    | -24.038  | 0.493     | -27.1754 | -0.1858 | -149.2088 |
| 4013 | 0   | Extremo | 0.004696  | -39.007  | -0.593    | -7.3172  | -0.2895 | -115.1236 |
| 4013 | 0.5 | Extremo | 0.004696  | -27.757  | -0.593    | -7.3172  | 0.0068  | -98.4326  |
| 4013 | 1   | Extremo | 0.004696  | -16.507  | -0.593    | -7.3172  | 0.3032  | -87.3667  |
| 4013 | 0   | Extremo | -0.005047 | -38.996  | 0.338     | -7.3101  | 0.1246  | -115.134  |
| 4013 | 0.5 | Extremo | -0.005047 | -27.746  | 0.338     | -7.3101  | -0.0442 | -98.4485  |
| 4013 | 1   | Extremo | -0.005047 | -16.496  | 0.338     | -7.3101  | -0.213  | -87.388   |
| 4014 | 0   | Extremo | -0.002252 | 26.433   | -0.484    | 48.4834  | -0.2132 | -83.1163  |
| 4014 | 0.5 | Extremo | -0.002252 | 37.683   | -0.484    | 48.4834  | 0.0288  | -99.1453  |
| 4014 | 1   | Extremo | -0.002252 | 48.933   | -0.484    | 48.4834  | 0.2708  | -120.7993 |
| 4014 | 0   | Extremo | -0.003246 | 26.425   | 0.041     | 48.4784  | -0.0313 | -83.1384  |
| 4014 | 0.5 | Extremo | -0.003246 | 37.675   | 0.041     | 48.4784  | -0.0519 | -99.1636  |
| 4014 | 1   | Extremo | -0.003246 | 48.925   | 0.041     | 48.4784  | -0.0725 | -120.8138 |
| 4015 | 0   | Extremo | 0.028     | 31.594   | -0.341    | 71.8594  | -0.1587 | -147.636  |
| 4015 | 0.5 | Extremo | 0.028     | 42.844   | -0.341    | 71.8594  | 0.0117  | -166.2453 |
| 4015 | 1   | Extremo | 0.028     | 54.094   | -0.341    | 71.8594  | 0.1822  | -190.4796 |
| 4015 | 0   | Extremo | -0.099    | 31.579   | -0.167    | 71.8487  | -0.0428 | -147.6445 |
| 4015 | 0.5 | Extremo | -0.099    | 42.829   | -0.167    | 71.8487  | 0.0409  | -166.2466 |
| 4015 | 1   | Extremo | -0.099    | 54.079   | -0.167    | 71.8487  | 0.1245  | -190.4738 |
| 4016 | 0   | Extremo | 0.032     | -60.707  | -0.421    | 29.4104  | -0.2071 | -191.0135 |
| 4016 | 0.5 | Extremo | 0.032     | -49.457  | -0.421    | 29.4104  | 0.0032  | -163.4726 |
| 4016 | 1   | Extremo | 0.032     | -38.207  | -0.421    | 29.4104  | 0.2134  | -141.5567 |
| 4016 | 0   | Extremo | -0.107    | -60.708  | 0.425     | 29.4084  | 0.2724  | -191.007  |
| 4016 | 0.5 | Extremo | -0.107    | -49.458  | 0.425     | 29.4084  | 0.06    | -163.4656 |
| 4016 | 1   | Extremo | -0.107    | -38.208  | 0.425     | 29.4084  | -0.1524 | -141.5492 |
| 4017 | 0   | Extremo | 0.024     | 193.742  | -0.116    | 66.7876  | -0.1429 | -150.145  |
| 4017 | 0.5 | Extremo | 0.024     | 204.992  | -0.116    | 66.7876  | -0.0849 | -249.8287 |
| 4017 | 1   | Extremo | 0.024     | 216.242  | -0.116    | 66.7876  | -0.027  | -355.1375 |
| 4017 | 0   | Extremo | -0.127    | 193.703  | -0.513    | 66.7737  | -0.1354 | -150.1323 |
| 4017 | 0.5 | Extremo | -0.127    | 204.953  | -0.513    | 66.7737  | 0.1211  | -249.7962 |
| 4017 | 1   | Extremo | -0.127    | 216.203  | -0.513    | 66.7737  | 0.3776  | -355.0852 |
| 4018 | 0   | Extremo | 0.083     | -267.54  | -0.731    | -76.1997 | -0.4255 | -355.0897 |
| 4018 | 0.5 | Extremo | 0.083     | -256.29  | -0.731    | -76.1997 | -0.0598 | -224.1324 |
| 4018 | 1   | Extremo | 0.083     | -245.04  | -0.731    | -76.1997 | 0.3058  | -98.8001  |
| 4018 | 0   | Extremo | -0.121    | -267.472 | 0.836     | -76.1788 | 0.5206  | -355.0359 |
| 4018 | 0.5 | Extremo | -0.121    | -256.222 | 0.836     | -76.1788 | 0.1027  | -224.1122 |
| 4018 | 1   | Extremo | -0.121    | -244.972 | 0.836     | -76.1788 | -0.3152 | -98.8136  |
| 4019 | 0   | Extremo | 0.01      | -126.296 | -0.651    | -28.2677 | -0.3028 | -69.6899  |
| 4019 | 0.5 | Extremo | 0.01      | -115.046 | -0.651    | -28.2677 | 0.0225  | -9.3543   |
| 4019 | 1   | Extremo | 0.01      | -103.796 | -0.651    | -28.2677 | 0.3478  | 45.3563   |
| 4019 | 0   | Extremo | 0.025     | -126.263 | 0.397     | -28.2571 | 0.1129  | -69.7083  |
| 4019 | 0.5 | Extremo | 0.025     | -115.013 | 0.397     | -28.2571 | -0.0854 | -9.3891   |
| 4019 | 1   | Extremo | 0.025     | -103.763 | 0.397     | -28.2571 | -0.2836 | 45.305    |
| 4020 | 0   | Extremo | -0.034    | 120.232  | -0.504    | 54.8458  | -0.2097 | 55.6757   |
| 4020 | 0.5 | Extremo | -0.034    | 131.482  | -0.504    | 54.8458  | 0.0423  | -7.2525   |
| 4020 | 1   | Extremo | -0.034    | 142.732  | -0.504    | 54.8458  | 0.2942  | -75.8058  |
| 4020 | 0   | Extremo | 0.031     | 120.206  | -0.006155 | 54.8383  | -0.0963 | 55.6243   |
| 4020 | 0.5 | Extremo | 0.031     | 131.456  | -0.006155 | 54.8383  | -0.0932 | -7.2914   |
| 4020 | 1   | Extremo | 0.031     | 142.706  | -0.006155 | 54.8383  | -0.0901 | -75.832   |
| 4021 | 0   | Extremo | -0.004809 | 268.828  | -0.245    | 108.0012 | -0.129  | -83.93    |
| 4021 | 0.5 | Extremo | -0.004809 | 280.078  | -0.245    | 108.0012 | -0.0067 | -221.1564 |
| 4021 | 1   | Extremo | -0.004809 | 291.328  | -0.245    | 108.0012 | 0.1155  | -364.0078 |
| 4021 | 0   | Extremo | -0.108    | 268.765  | -0.505    | 107.9822 | -0.1695 | -83.9528  |
| 4021 | 0.5 | Extremo | -0.108    | 280.015  | -0.505    | 107.9822 | 0.0832  | -221.1479 |
| 4021 | 1   | Extremo | -0.108    | 291.265  | -0.505    | 107.9822 | 0.3359  | -363.9652 |
| 4022 | 0   | Extremo | 0.066     | -183.818 | -0.538    | -18.7468 | -0.2766 | -342.8153 |
| 4022 | 0.5 | Extremo | 0.066     | -172.568 | -0.538    | -18.7468 | -0.0078 | -253.719  |

|      |     |         |           |          |          |          |         |           |
|------|-----|---------|-----------|----------|----------|----------|---------|-----------|
| 4022 | 1   | Extremo | 0.066     | -161.318 | -0.538   | -18.7468 | 0.2609  | -170.2476 |
| 4022 | 0   | Extremo | -0.13     | -183.794 | 0.729    | -18.739  | 0.4745  | -342.7785 |
| 4022 | 0.5 | Extremo | -0.13     | -172.544 | 0.729    | -18.739  | 0.1102  | -253.6941 |
| 4022 | 1   | Extremo | -0.13     | -161.294 | 0.729    | -18.739  | -0.2541 | -170.2348 |
| 4023 | 0   | Extremo | -0.356    | 836.5    | 0.021    | 0.305    | -0.1007 | 43.2011   |
| 4023 | 0.5 | Extremo | -0.356    | 847.75   | 0.021    | 0.305    | -0.1113 | -377.8613 |
| 4023 | 1   | Extremo | -0.356    | 859      | 0.021    | 0.305    | -0.1219 | -804.5487 |
| 4023 | 0   | Extremo | 0.044     | 836.308  | -1.207   | 0.3054   | -0.4081 | 43.1684   |
| 4023 | 0.5 | Extremo | 0.044     | 847.558  | -1.207   | 0.3054   | 0.1954  | -377.7983 |
| 4023 | 1   | Extremo | 0.044     | 858.808  | -1.207   | 0.3054   | 0.799   | -804.3899 |
| 4024 | 0   | Extremo | 0.389     | -963.971 | -1.12    | 0.3769   | -0.6541 | -808.1046 |
| 4024 | 0.5 | Extremo | 0.389     | -952.721 | -1.12    | 0.3769   | -0.094  | -328.9317 |
| 4024 | 1   | Extremo | 0.389     | -941.471 | -1.12    | 0.3769   | 0.4661  | 144.6162  |
| 4024 | 0   | Extremo | -0.047    | -963.739 | 1.581    | 0.3776   | 0.9624  | -807.9431 |
| 4024 | 0.5 | Extremo | -0.047    | -952.489 | 1.581    | 0.3776   | 0.1719  | -328.8861 |
| 4024 | 1   | Extremo | -0.047    | -941.239 | 1.581    | 0.3776   | -0.6186 | 144.546   |
| 4025 | 0   | Extremo | 0.114     | -213.258 | -0.772   | 0.3912   | -0.3431 | 4.8163    |
| 4025 | 0.5 | Extremo | 0.114     | -202.008 | -0.772   | 0.3912   | 0.0431  | 108.633   |
| 4025 | 1   | Extremo | 0.114     | -190.758 | -0.772   | 0.3912   | 0.4294  | 206.8246  |
| 4025 | 0   | Extremo | -0.013    | -213.205 | 0.412    | 0.392    | 0.0543  | 4.782     |
| 4025 | 0.5 | Extremo | -0.013    | -201.955 | 0.412    | 0.392    | -0.1516 | 108.5718  |
| 4025 | 1   | Extremo | -0.013    | -190.705 | 0.412    | 0.392    | 0.392   | 206.7366  |
| 4026 | 0   | Extremo | -0.124    | 209.152  | -0.626   | 0.4007   | -0.2436 | 220.4032  |
| 4026 | 0.5 | Extremo | -0.124    | 220.402  | -0.626   | 0.4007   | 0.0694  | 113.015   |
| 4026 | 1   | Extremo | -0.124    | 231.652  | -0.626   | 0.4007   | 0.3823  | 0.0017    |
| 4026 | 0   | Extremo | 0.016     | 209.108  | 0.009666 | 0.4015   | -0.1558 | 220.3168  |
| 4026 | 0.5 | Extremo | 0.016     | 220.358  | 0.009666 | 0.4015   | -0.1606 | 112.9502  |
| 4026 | 1   | Extremo | 0.016     | 231.608  | 0.009666 | 0.4015   | -0.1654 | -0.0414   |
| 4027 | 0   | Extremo | -0.401    | 976.564  | -0.116   | 0.4374   | -0.0782 | 169.9242  |
| 4027 | 0.5 | Extremo | -0.401    | 987.814  | -0.116   | 0.4374   | -0.0204 | -321.1701 |
| 4027 | 1   | Extremo | -0.401    | 999.064  | -0.116   | 0.4374   | 0.0375  | -817.8895 |
| 4027 | 0   | Extremo | 0.05      | 976.357  | -1.221   | 0.4387   | -0.4611 | 169.849   |
| 4027 | 0.5 | Extremo | 0.05      | 987.607  | -1.221   | 0.4387   | 0.1496  | -321.1419 |
| 4027 | 1   | Extremo | 0.05      | 998.857  | -1.221   | 0.4387   | 0.7603  | -817.7578 |
| 4028 | 0   | Extremo | 0.339     | -764.171 | -0.893   | 0.6593   | -0.4856 | -777.9873 |
| 4028 | 0.5 | Extremo | 0.339     | -752.921 | -0.893   | 0.6593   | -0.0391 | -398.7143 |
| 4028 | 1   | Extremo | 0.339     | -741.671 | -0.893   | 0.6593   | 0.4074  | -25.0664  |
| 4028 | 0   | Extremo | -0.041    | -764.029 | 1.435    | 0.6626   | 0.9093  | -777.862  |
| 4028 | 0.5 | Extremo | -0.041    | -752.779 | 1.435    | 0.6626   | 0.192   | -398.6602 |
| 4028 | 1   | Extremo | -0.041    | -741.529 | 1.435    | 0.6626   | -0.5253 | -25.0833  |
| 4029 | 0   | Extremo | -0.069    | 193.742  | -0.349   | -66.1789 | -0.2588 | -150.1404 |
| 4029 | 0.5 | Extremo | -0.069    | 204.992  | -0.349   | -66.1789 | -0.0845 | -249.8239 |
| 4029 | 1   | Extremo | -0.069    | 216.242  | -0.349   | -66.1789 | 0.0898  | -355.1323 |
| 4029 | 0   | Extremo | 0.133     | 193.702  | -0.484   | -66.1642 | -0.1211 | -150.1277 |
| 4029 | 0.5 | Extremo | 0.133     | 204.952  | -0.484   | -66.1642 | 0.121   | -249.7913 |
| 4029 | 1   | Extremo | 0.133     | 216.202  | -0.484   | -66.1642 | 0.3632  | -355.08   |
| 4030 | 0   | Extremo | -0.000402 | -267.539 | -0.987   | 76.9526  | -0.5733 | -355.082  |
| 4030 | 0.5 | Extremo | -0.000402 | -256.289 | -0.987   | 76.9526  | -0.0796 | -224.125  |
| 4030 | 1   | Extremo | -0.000402 | -245.039 | -0.987   | 76.9526  | 0.4141  | -98.7931  |
| 4030 | 0   | Extremo | 0.112     | -267.472 | 0.867    | 76.9331  | 0.5388  | -355.0281 |
| 4030 | 0.5 | Extremo | 0.112     | -256.222 | 0.867    | 76.9331  | 0.1051  | -224.1048 |
| 4030 | 1   | Extremo | 0.112     | -244.972 | 0.867    | 76.9331  | -0.3286 | -98.8066  |
| 4031 | 0   | Extremo | 0.029     | -126.295 | -0.894   | 29.0498  | -0.431  | -69.6815  |
| 4031 | 0.5 | Extremo | 0.029     | -115.045 | -0.894   | 29.0498  | 0.0162  | -9.3467   |
| 4031 | 1   | Extremo | 0.029     | -103.795 | -0.894   | 29.0498  | 0.4634  | 45.363    |
| 4031 | 0   | Extremo | -0.029    | -126.262 | 0.426    | 29.0407  | 0.1286  | -69.6999  |
|      |     |         |           |          |          |          |         |           |



|      |     |         |           |          |        |          |           |           |
|------|-----|---------|-----------|----------|--------|----------|-----------|-----------|
| 4034 | 1   | Extremo | -0.024    | -161.317 | -0.764 | 20.0657  | 0.3685    | -170.2467 |
| 4034 | 0   | Extremo | 0.126     | -183.793 | 0.756  | 20.0645  | 0.4888    | -342.7764 |
| 4034 | 0.5 | Extremo | 0.126     | -172.543 | 0.756  | 20.0645  | 0.1108    | -253.6926 |
| 4034 | 1   | Extremo | 0.126     | -161.293 | 0.756  | 20.0645  | -0.2671   | -170.2338 |
| 4035 | 0   | Extremo | -0.032    | 34.544   | -0.475 | -24.4806 | -0.3131   | -143.7806 |
| 4035 | 0.5 | Extremo | -0.032    | 45.794   | -0.475 | -24.4806 | -0.0758   | -163.8659 |
| 4035 | 1   | Extremo | -0.032    | 57.044   | -0.475 | -24.4806 | 0.1615    | -189.5761 |
| 4035 | 0   | Extremo | 0.11      | 34.544   | -0.168 | -24.4767 | -0.0091   | -143.7701 |
| 4035 | 0.5 | Extremo | 0.11      | 45.794   | -0.168 | -24.4767 | 0.075     | -163.8544 |
| 4035 | 1   | Extremo | 0.11      | 57.044   | -0.168 | -24.4767 | 0.1592    | -189.5637 |
| 4036 | 0   | Extremo | -0.03     | -46.551  | -0.891 | 27.9358  | -0.5059   | -184.4908 |
| 4036 | 0.5 | Extremo | -0.03     | -35.301  | -0.891 | 27.9358  | -0.0607   | -164.028  |
| 4036 | 1   | Extremo | -0.03     | -24.051  | -0.891 | 27.9358  | 0.3846    | -149.1902 |
| 4036 | 0   | Extremo | 0.102     | -46.536  | 0.531  | 27.9267  | 0.3273    | -184.4788 |
| 4036 | 0.5 | Extremo | 0.102     | -35.286  | 0.531  | 27.9267  | 0.062     | -164.0234 |
| 4036 | 1   | Extremo | 0.102     | -24.036  | 0.531  | 27.9267  | -0.2033   | -149.1931 |
| 4037 | 0   | Extremo | 0.0006822 | -39.003  | -0.914 | 8.0979   | -0.4541   | -115.1048 |
| 4037 | 0.5 | Extremo | 0.0006822 | -27.753  | -0.914 | 8.0979   | 0.0028    | -98.4159  |
| 4037 | 1   | Extremo | 0.0006822 | -16.503  | -0.914 | 8.0979   | 0.4597    | -87.3519  |
| 4037 | 0   | Extremo | 0.005565  | -38.992  | 0.377  | 8.0925   | 0.1448    | -115.1151 |
| 4037 | 0.5 | Extremo | 0.005565  | -27.742  | 0.377  | 8.0925   | -0.0438   | -98.4316  |
| 4037 | 1   | Extremo | 0.005565  | -16.492  | 0.377  | 8.0925   | -0.2324   | -87.3731  |
| 4038 | 0   | Extremo | -0.005102 | 26.438   | -0.804 | -47.6819 | -0.3682   | -83.1008  |
| 4038 | 0.5 | Extremo | -0.005102 | 37.688   | -0.804 | -47.6819 | 0.0338    | -99.1321  |
| 4038 | 1   | Extremo | -0.005102 | 48.938   | -0.804 | -47.6819 | 0.4358    | -120.7884 |
| 4038 | 0   | Extremo | 0.005329  | 26.43    | 0.08   | -47.675  | -0.0126   | -83.1228  |
| 4038 | 0.5 | Extremo | 0.005329  | 37.68    | 0.08   | -47.675  | -0.0527   | -99.1503  |
| 4038 | 1   | Extremo | 0.005329  | 48.93    | 0.08   | -47.675  | -0.0928   | -120.8029 |
| 4039 | 0   | Extremo | -0.042    | 31.598   | -0.642 | -70.9832 | -0.2967   | -147.626  |
| 4039 | 0.5 | Extremo | -0.042    | 42.848   | -0.642 | -70.9832 | 0.0242    | -166.2374 |
| 4039 | 1   | Extremo | -0.042    | 54.098   | -0.642 | -70.9832 | 0.3451    | -190.4737 |
| 4039 | 0   | Extremo | 0.102     | 31.583   | -0.131 | -70.9701 | -0.0262   | -147.6344 |
| 4039 | 0.5 | Extremo | 0.102     | 42.833   | -0.131 | -70.9701 | 0.0393    | -166.2386 |
| 4039 | 1   | Extremo | 0.102     | 54.083   | -0.131 | -70.9701 | 0.1047    | -190.4678 |
| 4040 | 0   | Extremo | -0.044    | -60.704  | -0.669 | -28.0904 | -0.3228   | -191.0091 |
| 4040 | 0.5 | Extremo | -0.044    | -49.454  | -0.669 | -28.0904 | 0.0115    | -163.4695 |
| 4040 | 1   | Extremo | -0.044    | -38.204  | -0.669 | -28.0904 | 0.3458    | -141.5549 |
| 4040 | 0   | Extremo | 0.109     | -60.705  | 0.454  | -28.0818 | 0.2861    | -191.0025 |
| 4040 | 0.5 | Extremo | 0.109     | -49.455  | 0.454  | -28.0818 | 0.0589    | -163.4625 |
| 4040 | 1   | Extremo | 0.109     | -38.205  | 0.454  | -28.0818 | -0.1683   | -141.5474 |
| 4041 | 0   | Extremo | -0.02     | 18.869   | -0.528 | -9.4537  | -0.3333   | -118.874  |
| 4041 | 0.5 | Extremo | -0.02     | 30.119   | -0.528 | -9.4537  | -0.069    | -131.1209 |
| 4041 | 1   | Extremo | -0.02     | 41.369   | -0.528 | -9.4537  | 0.1952    | -148.9929 |
| 4041 | 0   | Extremo | 0.074     | 18.871   | -0.019 | -9.4538  | 0.0413    | -118.8701 |
| 4041 | 0.5 | Extremo | 0.074     | 30.121   | -0.019 | -9.4538  | 0.0507    | -131.118  |
| 4041 | 1   | Extremo | 0.074     | 41.371   | -0.019 | -9.4538  | 0.0601    | -148.9909 |
| 4042 | 0   | Extremo | -0.02     | 2.824    | -0.839 | 0.7496   | -0.4729   | -144.3219 |
| 4042 | 0.5 | Extremo | -0.02     | 14.074   | -0.839 | 0.7496   | -0.0534   | -148.5463 |
| 4042 | 1   | Extremo | -0.02     | 25.324   | -0.839 | 0.7496   | 0.3662    | -158.3958 |
| 4042 | 0   | Extremo | 0.071     | 2.827    | 0.366  | 0.7466   | 0.223     | -144.3209 |
| 4042 | 0.5 | Extremo | 0.071     | 14.077   | 0.366  | 0.7466   | 0.04      | -148.5468 |
| 4042 | 1   | Extremo | 0.071     | 25.327   | 0.366  | 0.7466   | -0.1429   | -158.3976 |
| 4043 | 0   | Extremo | -0.00445  | -8.836   | -0.907 | -8.944   | -0.4585   | -143.1919 |
| 4043 | 0.5 | Extremo | -0.00445  | 2.414    | -0.907 | -8.944   | -0.005    | -141.5863 |
| 4043 | 1   | Extremo | -0.00445  | 13.664   | -0.907 | -8.944   | 0.4484    | -145.6056 |
| 4043 | 0   | Extremo | 0.018     | -8.834   | 0.325  | -8.9454  | 0.1404    | -143.1976 |
| 4043 | 0.5 | Extremo | 0.018     | 2.416    | 0.325  | -8.9454  | -0.0219   | -141.5931 |
| 4043 | 1   | Extremo | 0.018     | 13.666   | 0.325  | -8.9454  | -0.1843   | -145.6136 |
| 4044 | 0   | Extremo | -0.008056 | -11.728  | -0.834 | -33.5336 | -0.3911   | -146.2406 |
| 4044 | 0.5 | Extremo | -0.008056 | -0.478   | -0.834 | -33.5336 | 0.026     | -143.189  |
| 4044 | 1   | Extremo | -0.008056 | 10.772   | -0.834 | -33.5336 | 0.4432    | -145.7624 |
| 4044 | 0   | Extremo | 0.018     | -11.729  | 0.134  | -33.5295 | 0.0364    | -146.2491 |
| 4044 | 0.5 | Extremo | 0.018     | -0.479   | 0.134  | -33.5295 | -0.0305   | -143.197  |
| 4044 | 1   | Extremo | 0.018     | 10.771   | 0.134  | -33.5295 | -0.0973   | -145.7698 |
| 4045 | 0   | Extremo | -0.03     | -28.207  | -0.707 | -44.0619 | -0.3213   | -163.0777 |
| 4045 | 0.5 | Extremo | -0.03     | -16.957  | -0.707 | -44.0619 | 0.0323    | -151.7868 |
| 4045 | 1   | Extremo | -0.03     | -5.707   | -0.707 | -44.0619 | 0.3858    | -146.121  |
| 4045 | 0   | Extremo | 0.071     | -28.209  | 0.036  | -44.0543 | 0.0357    | -163.0819 |
| 4045 | 0.5 | Extremo | 0.071     | -16.959  | 0.036  | -44.0543 | 0.0176    | -151.7898 |
| 4045 | 1   | Extremo | 0.071     | -5.709   | 0.036  | -44.0543 | -0.000587 | -146.1226 |
| 4046 | 0   | Extremo | -0.031    | -54.21   | -0.618 | -37.8497 | -0.2864   | -154.4375 |
| 4046 | 0.5 | Extremo | -0.031    | -42.96   | -0.618 | -37.8497 | 0.0228    | -130.1453 |

|      |     |         |           |         |        |          |         |           |
|------|-----|---------|-----------|---------|--------|----------|---------|-----------|
| 4046 | 1   | Extremo | -0.031    | -31.71  | -0.618 | -37.8497 | 0.3321  | -111.478  |
| 4046 | 0   | Extremo | 0.075     | -54.212 | 0.312  | -37.8387 | 0.1875  | -154.4376 |
| 4046 | 0.5 | Extremo | 0.075     | -42.962 | 0.312  | -37.8387 | 0.0316  | -130.1443 |
| 4046 | 1   | Extremo | 0.075     | -31.712 | 0.312  | -37.8387 | -0.1244 | -111.476  |
| 4047 | 0   | Extremo | -0.012    | 22.758  | -0.553 | -7.224   | -0.3417 | -108.4853 |
| 4047 | 0.5 | Extremo | -0.012    | 34.008  | -0.553 | -7.224   | -0.0652 | -122.677  |
| 4047 | 1   | Extremo | -0.012    | 45.258  | -0.553 | -7.224   | 0.2114  | -142.4937 |
| 4047 | 0   | Extremo | 0.047     | 22.759  | 0.054  | -7.2246  | 0.0645  | -108.4845 |
| 4047 | 0.5 | Extremo | 0.047     | 34.009  | 0.054  | -7.2246  | 0.0375  | -122.6766 |
| 4047 | 1   | Extremo | 0.047     | 45.259  | 0.054  | -7.2246  | 0.0105  | -142.4937 |
| 4048 | 0   | Extremo | -0.012    | 10.924  | -0.813 | -8.4039  | -0.4568 | -140.9943 |
| 4048 | 0.5 | Extremo | -0.012    | 22.174  | -0.813 | -8.4039  | -0.0502 | -149.2689 |
| 4048 | 1   | Extremo | -0.012    | 33.424  | -0.813 | -8.4039  | 0.3564  | -163.1686 |
| 4048 | 0   | Extremo | 0.046     | 10.925  | 0.284  | -8.4043  | 0.1707  | -140.9952 |
| 4048 | 0.5 | Extremo | 0.046     | 22.175  | 0.284  | -8.4043  | 0.0286  | -149.2701 |
| 4048 | 1   | Extremo | 0.046     | 33.425  | 0.284  | -8.4043  | -0.1135 | -163.1699 |
| 4049 | 0   | Extremo | -0.004384 | -4.51   | -0.899 | -14.0909 | -0.4592 | -159.832  |
| 4049 | 0.5 | Extremo | -0.004384 | 6.74    | -0.899 | -14.0909 | -0.0096 | -160.3893 |
| 4049 | 1   | Extremo | -0.004384 | 17.99   | -0.899 | -14.0909 | 0.44    | -166.5716 |
| 4049 | 0   | Extremo | 0.018     | -4.51   | 0.287  | -14.0903 | 0.1338  | -159.8349 |
| 4049 | 0.5 | Extremo | 0.018     | 6.74    | 0.287  | -14.0903 | -0.0098 | -160.3923 |
| 4049 | 1   | Extremo | 0.018     | 17.99   | 0.287  | -14.0903 | -0.1533 | -166.5747 |
| 4050 | 0   | Extremo | -0.007717 | -22.649 | -0.853 | -23.6353 | -0.4045 | -170.0957 |
| 4050 | 0.5 | Extremo | -0.007717 | -11.399 | -0.853 | -23.6353 | 0.022   | -161.5839 |
| 4050 | 1   | Extremo | -0.007717 | -0.149  | -0.853 | -23.6353 | 0.4486  | -158.6971 |
| 4050 | 0   | Extremo | 0.018     | -22.649 | 0.172  | -23.6324 | 0.0675  | -170.0991 |
| 4050 | 0.5 | Extremo | 0.018     | -11.399 | 0.172  | -23.6324 | -0.0182 | -161.5873 |
| 4050 | 1   | Extremo | 0.018     | -0.149  | 0.172  | -23.6324 | -0.104  | -158.7006 |
| 4051 | 0   | Extremo | -0.02     | -41.824 | -0.739 | -28.9877 | -0.3324 | -169.2801 |
| 4051 | 0.5 | Extremo | -0.02     | -30.574 | -0.739 | -28.9877 | 0.0371  | -151.1805 |
| 4051 | 1   | Extremo | -0.02     | -19.324 | -0.739 | -28.9877 | 0.4067  | -138.7059 |
| 4051 | 0   | Extremo | 0.047     | -41.825 | 0.119  | -28.9825 | 0.0659  | -169.2824 |
| 4051 | 0.5 | Extremo | 0.047     | -30.575 | 0.119  | -28.9825 | 0.0061  | -151.1826 |
| 4051 | 1   | Extremo | 0.047     | -19.325 | 0.119  | -28.9825 | -0.0536 | -138.7078 |
| 4052 | 0   | Extremo | -0.021    | -59.517 | -0.593 | -31.8738 | -0.2675 | -147.7116 |
| 4052 | 0.5 | Extremo | -0.021    | -48.267 | -0.593 | -31.8738 | 0.0289  | -120.7654 |
| 4052 | 1   | Extremo | -0.021    | -37.017 | -0.593 | -31.8738 | 0.3253  | -99.4442  |
| 4052 | 0   | Extremo | 0.048     | -59.518 | 0.243  | -31.8631 | 0.1379  | -147.7125 |
| 4052 | 0.5 | Extremo | 0.048     | -48.268 | 0.243  | -31.8631 | 0.0165  | -120.7658 |
| 4052 | 1   | Extremo | 0.048     | -37.018 | 0.243  | -31.8631 | -0.105  | -99.4442  |
| 4053 | 0   | Extremo | -0.006477 | 25.133  | -0.565 | -6.5006  | -0.3454 | -106.6316 |
| 4053 | 0.5 | Extremo | -0.006477 | 36.383  | -0.565 | -6.5006  | -0.0632 | -122.0105 |
| 4053 | 1   | Extremo | -0.006477 | 47.633  | -0.565 | -6.5006  | 0.2191  | -143.0144 |
| 4053 | 0   | Extremo | 0.029     | 25.133  | 0.09   | -6.5008  | 0.0749  | -106.6316 |
| 4053 | 0.5 | Extremo | 0.029     | 36.383  | 0.09   | -6.5008  | 0.0302  | -122.0106 |
| 4053 | 1   | Extremo | 0.029     | 47.633  | 0.09   | -6.5008  | -0.0146 | -143.0147 |
| 4054 | 0   | Extremo | -0.006365 | 11.004  | -0.801 | -9.2735  | -0.4491 | -144.5035 |
| 4054 | 0.5 | Extremo | -0.006365 | 22.254  | -0.801 | -9.2735  | -0.0488 | -152.8181 |
| 4054 | 1   | Extremo | -0.006365 | 33.504  | -0.801 | -9.2735  | 0.3515  | -166.7577 |
| 4054 | 0   | Extremo | 0.028     | 11.004  | 0.243  | -9.2728  | 0.1443  | -144.5042 |
| 4054 | 0.5 | Extremo | 0.028     | 22.254  | 0.243  | -9.2728  | 0.0227  | -152.8188 |
| 4054 | 1   | Extremo | 0.028     | 33.504  | 0.243  | -9.2728  | -0.099  | -166.7583 |
| 4055 | 0   | Extremo | -0.003076 | -5.973  | -0.895 | -12.547  | -0.4597 | -168.8115 |
| 4055 | 0.5 | Extremo | -0.003076 | 5.277   | -0.895 | -12.547  | -0.0123 | -168.6373 |
| 4055 | 1   | Extremo | -0.003076 | 16.527  | -0.895 | -12.547  | 0.4351  | -174.0882 |
| 4055 | 0   | Extremo | 0.013     | -5.973  | 0.264  | -12.5455 | 0.1288  | -168.8128 |
| 4055 | 0.5 | Extremo | 0.013     | 5.277   | 0.2    |          |         |           |



|      |     |         |           |         |        |          |           |           |
|------|-----|---------|-----------|---------|--------|----------|-----------|-----------|
| 4058 | 1   | Extremo | -0.014    | -39.754 | -0.58  | -22.7514 | 0.3223    | -96.1379  |
| 4058 | 0   | Extremo | 0.03      | -62.254 | 0.209  | -22.7412 | 0.1125    | -147.1423 |
| 4058 | 0.5 | Extremo | 0.03      | -51.004 | 0.209  | -22.7412 | 0.0079    | -118.8277 |
| 4058 | 1   | Extremo | 0.03      | -39.754 | 0.209  | -22.7412 | -0.0966   | -96.1381  |
| 4059 | 0   | Extremo | -0.002201 | 25.764  | -0.57  | -4.5894  | -0.347    | -107.2311 |
| 4059 | 0.5 | Extremo | -0.002201 | 37.014  | -0.57  | -4.5894  | -0.0622   | -122.9253 |
| 4059 | 1   | Extremo | -0.002201 | 48.264  | -0.57  | -4.5894  | 0.2225    | -144.2446 |
| 4059 | 0   | Extremo | 0.015     | 25.764  | 0.106  | -4.5894  | 0.0794    | -107.231  |
| 4059 | 0.5 | Extremo | 0.015     | 37.014  | 0.106  | -4.5894  | 0.0262    | -122.9253 |
| 4059 | 1   | Extremo | 0.015     | 48.264  | 0.106  | -4.5894  | -0.027    | -144.2445 |
| 4060 | 0   | Extremo | -0.002224 | 10.128  | -0.795 | -6.5592  | -0.4457   | -147.6219 |
| 4060 | 0.5 | Extremo | -0.002224 | 21.378  | -0.795 | -6.5592  | -0.0483   | -155.4984 |
| 4060 | 1   | Extremo | -0.002224 | 32.628  | -0.795 | -6.5592  | 0.2225    | -168.9999 |
| 4060 | 0   | Extremo | 0.015     | 10.128  | 0.223  | -6.5582  | 0.1313    | -147.622  |
| 4060 | 0.5 | Extremo | 0.015     | 21.378  | 0.223  | -6.5582  | 0.0197    | -155.4984 |
| 4060 | 1   | Extremo | 0.015     | 32.628  | 0.223  | -6.5582  | -0.092    | -168.9998 |
| 4061 | 0   | Extremo | -0.001431 | -7.488  | -0.893 | -8.2253  | -0.4604   | -173.2701 |
| 4061 | 0.5 | Extremo | -0.001431 | 3.762   | -0.893 | -8.2253  | -0.0138   | -172.3386 |
| 4061 | 1   | Extremo | -0.001431 | 15.012  | -0.893 | -8.2253  | 0.4328    | -172.0321 |
| 4061 | 0   | Extremo | 0.007743  | -7.488  | 0.251  | -8.2236  | 0.1259    | -173.2702 |
| 4061 | 0.5 | Extremo | 0.007743  | 3.762   | 0.251  | -8.2236  | 0.0005443 | -172.3387 |
| 4061 | 1   | Extremo | 0.007743  | 15.012  | 0.251  | -8.2236  | -0.1248   | -172.0322 |
| 4062 | 0   | Extremo | -0.003927 | -26.594 | -0.873 | -9.7668  | -0.4176   | -182.7502 |
| 4062 | 0.5 | Extremo | -0.003927 | -15.344 | -0.873 | -9.7668  | 0.0189    | -172.2657 |
| 4062 | 1   | Extremo | -0.003927 | -4.094  | -0.873 | -9.7668  | 0.4554    | -167.4062 |
| 4062 | 0   | Extremo | 0.007967  | -26.594 | 0.209  | -9.7643  | 0.0965    | -182.7504 |
| 4062 | 0.5 | Extremo | 0.007967  | -15.344 | 0.209  | -9.7643  | -0.0078   | -172.2659 |
| 4062 | 1   | Extremo | 0.007967  | -4.094  | 0.209  | -9.7643  | -0.1122   | -167.4065 |
| 4063 | 0   | Extremo | -0.008325 | -45.636 | -0.764 | -11.1038 | -0.3405   | -174.3947 |
| 4063 | 0.5 | Extremo | -0.008325 | -34.386 | -0.764 | -11.1038 | 0.0416    | -154.3891 |
| 4063 | 1   | Extremo | -0.008325 | -23.136 | -0.764 | -11.1038 | 0.4237    | -140.0084 |
| 4063 | 0   | Extremo | 0.016     | -45.636 | 0.182  | -11.0998 | 0.0882    | -174.3949 |
| 4063 | 0.5 | Extremo | 0.016     | -34.386 | 0.182  | -11.0998 | -0.003    | -154.3893 |
| 4063 | 1   | Extremo | 0.016     | -23.136 | 0.182  | -11.0998 | -0.0942   | -140.0087 |
| 4064 | 0   | Extremo | -0.008625 | -63.199 | -0.573 | -13.5808 | -0.2519   | -147.4751 |
| 4064 | 0.5 | Extremo | -0.008625 | -51.949 | -0.573 | -13.5808 | 0.0346    | -118.688  |
| 4064 | 1   | Extremo | -0.008625 | -40.699 | -0.573 | -13.5808 | 0.3211    | -95.5258  |
| 4064 | 0   | Extremo | 0.016     | -63.199 | 0.193  | -13.5708 | 0.0998    | -147.4752 |
| 4064 | 0.5 | Extremo | 0.016     | -51.949 | 0.193  | -13.5708 | 0.0033    | -118.6881 |
| 4064 | 1   | Extremo | 0.016     | -40.699 | 0.193  | -13.5708 | -0.0932   | -95.5259  |
| 4065 | 0   | Extremo | 0.001432  | 25.846  | -0.571 | -1.6541  | -0.3476   | -107.8607 |
| 4065 | 0.5 | Extremo | 0.001432  | 37.096  | -0.571 | -1.6541  | -0.0621   | -123.5964 |
| 4065 | 1   | Extremo | 0.001432  | 48.346  | -0.571 | -1.6541  | 0.2235    | -144.957  |
| 4065 | 0   | Extremo | 0.004724  | 25.846  | 0.113  | -1.6542  | 0.0811    | -107.8603 |
| 4065 | 0.5 | Extremo | 0.004724  | 37.096  | 0.113  | -1.6542  | 0.0245    | -123.5959 |
| 4065 | 1   | Extremo | 0.004724  | 48.346  | 0.113  | -1.6542  | -0.0321   | -144.9565 |
| 4066 | 0   | Extremo | 0.001298  | 9.602   | -0.793 | -2.3533  | -0.4449   | -149.1914 |
| 4066 | 0.5 | Extremo | 0.001298  | 20.852  | -0.793 | -2.3533  | -0.0483   | -156.805  |
| 4066 | 1   | Extremo | 0.001298  | 32.102  | -0.793 | -2.3533  | 0.3483    | -170.0436 |
| 4066 | 0   | Extremo | 0.004624  | 9.602   | 0.215  | -2.3524  | 0.126     | -149.1907 |
| 4066 | 0.5 | Extremo | 0.004624  | 20.852  | 0.215  | -2.3524  | 0.0184    | -156.8043 |
| 4066 | 1   | Extremo | 0.004624  | 32.102  | 0.215  | -2.3524  | -0.0892   | -170.0429 |
| 4067 | 0   | Extremo | 0.0003415 | -8.22   | -0.894 | -2.8743  | -0.4616   | -175.1098 |
| 4067 | 0.5 | Extremo | 0.0003415 | 3.03    | -0.894 | -2.8743  | -0.0145   | -173.8122 |
| 4067 | 1   | Extremo | 0.0003415 | 14.28   | -0.894 | -2.8743  | 0.4325    | -178.1397 |
| 4067 | 0   | Extremo | 0.002561  | -8.22   | 0.245  | -2.8726  | 0.1246    | -175.1089 |
| 4067 | 0.5 | Extremo | 0.002561  | 3.03    | 0.245  | -2.8726  | 0.0021    | -173.8114 |
| 4067 | 1   | Extremo | 0.002561  | 14.28   | 0.245  | -2.8726  | -0.1205   | -178.139  |
| 4068 | 0   | Extremo | -0.002036 | -26.996 | -0.878 | -3.3174  | -0.4203   | -184.1435 |
| 4068 | 0.5 | Extremo | -0.002036 | -15.746 | -0.878 | -3.3174  | 0.0186    | -173.4583 |
| 4068 | 1   | Extremo | -0.002036 | -4.496  | -0.878 | -3.3174  | 0.4576    | -168.398  |
| 4068 | 0   | Extremo | 0.00274   | -26.995 | 0.215  | -3.3149  | 0.1011    | -184.1427 |
| 4068 | 0.5 | Extremo | 0.00274   | -15.745 | 0.215  | -3.3149  | -0.0063   | -173.4575 |
| 4068 | 1   | Extremo | 0.00274   | -4.495  | 0.215  | -3.3149  | -0.1137   | -168.3973 |
| 4069 | 0   | Extremo | -0.004493 | -45.857 | -0.768 | -3.7403  | -0.3416   | -175.1577 |
| 4069 | 0.5 | Extremo | -0.004493 | -34.607 | -0.768 | -3.7403  | 0.0426    | -155.0418 |
| 4069 | 1   | Extremo | -0.004493 | -23.357 | -0.768 | -3.7403  | 0.4267    | -140.5509 |
| 4069 | 0   | Extremo | 0.005103  | -45.857 | 0.191  | -3.7363  | 0.0912    | -175.1571 |
| 4069 | 0.5 | Extremo | 0.005103  | -34.607 | 0.191  | -3.7363  | -0.0043   | -155.0412 |
| 4069 | 1   | Extremo | 0.005103  | -23.357 | 0.191  | -3.7363  | -0.0998   | -140.5503 |
| 4070 | 0   | Extremo | -0.004663 | -63.478 | -0.57  | -4.6846  | -0.2491   | -147.7199 |
| 4070 | 0.5 | Extremo | -0.004663 | -52.228 | -0.57  | -4.6846  | 0.0358    | -118.7933 |

|      |     |         |           |         |        |         |         |           |
|------|-----|---------|-----------|---------|--------|---------|---------|-----------|
| 4070 | 1   | Extremo | -0.004663 | -40.978 | -0.57  | -4.6846 | 0.3207  | -95.4916  |
| 4070 | 0   | Extremo | 0.005276  | -63.478 | 0.186  | -4.6746 | 0.0945  | -147.7196 |
| 4070 | 0.5 | Extremo | 0.005276  | -52.228 | 0.186  | -4.6746 | 0.0013  | -118.793  |
| 4070 | 1   | Extremo | 0.005276  | -40.978 | 0.186  | -4.6746 | -0.092  | -95.4913  |
| 4071 | 0   | Extremo | 0.005071  | 25.847  | -0.57  | 1.6385  | -0.3477 | -107.8756 |
| 4071 | 0.5 | Extremo | 0.005071  | 37.097  | -0.57  | 1.6385  | -0.0626 | -123.6118 |
| 4071 | 1   | Extremo | 0.005071  | 48.347  | -0.57  | 1.6385  | 0.2226  | -144.9731 |
| 4071 | 0   | Extremo | -0.005063 | 25.847  | 0.113  | 1.6379  | 0.0811  | -107.8747 |
| 4071 | 0.5 | Extremo | -0.005063 | 37.097  | 0.113  | 1.6379  | 0.0245  | -123.6109 |
| 4071 | 1   | Extremo | -0.005063 | 48.347  | 0.113  | 1.6379  | -0.0321 | -144.9721 |
| 4072 | 0   | Extremo | 0.00484   | 9.596   | -0.794 | 2.269   | -0.446  | -149.2215 |
| 4072 | 0.5 | Extremo | 0.00484   | 20.846  | -0.794 | 2.269   | -0.0488 | -156.8321 |
| 4072 | 1   | Extremo | 0.00484   | 32.096  | -0.794 | 2.269   | 0.3484  | -170.0677 |
| 4072 | 0   | Extremo | -0.004894 | 9.596   | 0.215  | 2.2696  | 0.1261  | -149.2198 |
| 4072 | 0.5 | Extremo | -0.004894 | 20.846  | 0.215  | 2.2696  | 0.0184  | -156.8305 |
| 4072 | 1   | Extremo | -0.004894 | 32.096  | 0.215  | 2.2696  | -0.0892 | -170.0661 |
| 4073 | 0   | Extremo | 0.002232  | -8.228  | -0.897 | 2.7425  | -0.4632 | -175.1447 |
| 4073 | 0.5 | Extremo | 0.002232  | 3.022   | -0.897 | 2.7425  | -0.0148 | -173.8434 |
| 4073 | 1   | Extremo | 0.002232  | 14.272  | -0.897 | 2.7425  | 0.4337  | -178.1671 |
| 4073 | 0   | Extremo | -0.00257  | -8.227  | 0.245  | 2.744   | 0.1247  | -175.1426 |
| 4073 | 0.5 | Extremo | -0.00257  | 3.023   | 0.245  | 2.744   | 0.0021  | -173.8415 |
| 4073 | 1   | Extremo | -0.00257  | 14.273  | 0.245  | 2.744   | -0.1206 | -178.1653 |
| 4074 | 0   | Extremo | -0.000266 | -26.999 | -0.881 | 3.1361  | -0.4215 | -184.1747 |
| 4074 | 0.5 | Extremo | -0.000266 | -15.749 | -0.881 | 3.1361  | 0.0189  | -173.4878 |
| 4074 | 1   | Extremo | -0.000266 | -4.499  | -0.881 | 3.1361  | 0.4592  | -168.4258 |
| 4074 | 0   | Extremo | -0.002436 | -26.999 | 0.215  | 3.1386  | 0.1011  | -184.1728 |
| 4074 | 0.5 | Extremo | -0.002436 | -15.749 | 0.215  | 3.1386  | -0.0063 | -173.4859 |
| 4074 | 1   | Extremo | -0.002436 | -4.499  | 0.215  | 3.1386  | -0.1138 | -168.424  |
| 4075 | 0   | Extremo | -0.001213 | -45.859 | -0.769 | 3.4761  | -0.3416 | -175.1815 |
| 4075 | 0.5 | Extremo | -0.001213 | -34.609 | -0.769 | 3.4761  | 0.0431  | -155.0647 |
| 4075 | 1   | Extremo | -0.001213 | -23.359 | -0.769 | 3.4761  | 0.4278  | -140.5729 |
| 4075 | 0   | Extremo | -0.004614 | -45.859 | 0.191  | 3.4803  | 0.0911  | -175.18   |
| 4075 | 0.5 | Extremo | -0.004614 | -34.609 | 0.191  | 3.4803  | -0.0044 | -155.0632 |
| 4075 | 1   | Extremo | -0.004614 | -23.359 | 0.191  | 3.4803  | -0.0999 | -140.5715 |
| 4076 | 0   | Extremo | -0.001249 | -63.483 | -0.569 | 4.1025  | -0.2482 | -147.733  |
| 4076 | 0.5 | Extremo | -0.001249 | -52.233 | -0.569 | 4.1025  | 0.0363  | -118.804  |
| 4076 | 1   | Extremo | -0.001249 | -40.983 | -0.569 | 4.1025  | 0.3207  | -95.5001  |
| 4076 | 0   | Extremo | -0.004821 | -63.483 | 0.186  | 4.1129  | 0.0944  | -147.7321 |
| 4076 | 0.5 | Extremo | -0.004821 | -52.233 | 0.186  | 4.1129  | 0.0012  | -118.8033 |
| 4076 | 1   | Extremo | -0.004821 | -40.983 | 0.186  | 4.1129  | -0.092  | -95.4995  |
| 4077 | 0   | Extremo | 0.009332  | 25.771  | -0.567 | 4.5995  | -0.3471 | -107.2725 |
| 4077 | 0.5 | Extremo | 0.009332  | 37.021  | -0.567 | 4.5995  | -0.0637 | -122.9703 |
| 4077 | 1   | Extremo | 0.009332  | 48.271  | -0.567 | 4.5995  | 0.2197  | -144.293  |
| 4077 | 0   | Extremo | -0.016    | 25.77   | 0.106  | 4.5981  | 0.0795  | -107.2713 |
| 4077 | 0.5 | Extremo | -0.016    | 37.02   | 0.106  | 4.5981  | 0.0263  | -122.9689 |
| 4077 | 1   | Extremo | -0.016    | 48.27   | 0.106  | 4.5981  | -0.0269 | -144.2915 |
| 4078 | 0   | Extremo | 0.009011  | 10.109  | -0.799 | 6.502   | -0.4492 | -147.7171 |
| 4078 | 0.5 | Extremo | 0.009011  | 21.359  | -0.799 | 6.502   | -0.0498 | -155.5843 |
| 4078 | 1   | Extremo | 0.009011  | 32.609  | -0.799 | 6.502   | 0.3495  | -169.0765 |
| 4078 | 0   | Extremo | -0.015    | 10.11   | 0.224  | 6.5016  | 0.1316  | -147.7142 |
| 4078 | 0.5 | Extremo | -0.015    | 21.36   | 0.224  | 6.5016  | 0.0197  | -155.5815 |
| 4078 | 1   | Extremo | -0.015    | 32.61   | 0.224  | 6.5016  | -0.0921 | -169.0739 |
| 4079 | 0   | Extremo | 0.004289  | -7.513  | -0.902 | 8.1099  | -0.4655 | -173.3866 |
| 4079 | 0.5 | Extremo | 0.004289  | 3.737   | -0.902 | 8.1099  | -0.0144 | -172.4428 |
| 4079 | 1   | Extremo | 0.004289  | 14.987  | -0.902 | 8.1099  | 0.4367  | -177.1    |



|      |     |         |          |         |        |         |           |           |
|------|-----|---------|----------|---------|--------|---------|-----------|-----------|
| 4082 | 1   | Extremo | 0.002182 | -40.716 | -0.57  | 12.9813 | 0.3211    | -95.5511  |
| 4082 | 0   | Extremo | -0.016   | -63.216 | 0.193  | 12.9924 | 0.0996    | -147.5156 |
| 4082 | 0.5 | Extremo | -0.016   | -51.966 | 0.193  | 12.9924 | 0.0032    | -118.7202 |
| 4082 | 1   | Extremo | -0.016   | -40.716 | 0.193  | 12.9924 | -0.0932   | -95.5499  |
| 4083 | 0   | Extremo | 0.015    | 25.164  | -0.559 | 6.5654  | -0.3454   | -106.6764 |
| 4083 | 0.5 | Extremo | 0.015    | 36.414  | -0.559 | 6.5654  | -0.0657   | -122.0709 |
| 4083 | 1   | Extremo | 0.015    | 47.664  | -0.559 | 6.5654  | 0.214     | -143.0904 |
| 4083 | 0   | Extremo | -0.029   | 25.163  | 0.089  | 6.5624  | 0.075     | -106.6755 |
| 4083 | 0.5 | Extremo | -0.029   | 36.413  | 0.089  | 6.5624  | 0.0303    | -122.0695 |
| 4083 | 1   | Extremo | -0.029   | 47.663  | 0.089  | 6.5624  | -0.0143   | -143.0884 |
| 4084 | 0   | Extremo | 0.015    | 10.977  | -0.808 | 9.2865  | -0.4554   | -144.6722 |
| 4084 | 0.5 | Extremo | 0.015    | 22.227  | -0.808 | 9.2865  | -0.0516   | -152.9734 |
| 4084 | 1   | Extremo | 0.015    | 33.477  | -0.808 | 9.2865  | 0.3522    | -166.8996 |
| 4084 | 0   | Extremo | -0.028   | 10.978  | 0.244  | 9.2841  | 0.1448    | -144.6678 |
| 4084 | 0.5 | Extremo | -0.028   | 22.228  | 0.244  | 9.2841  | 0.0228    | -152.9691 |
| 4084 | 1   | Extremo | -0.028   | 33.478  | 0.244  | 9.2841  | -0.0992   | -166.8955 |
| 4085 | 0   | Extremo | 0.006527 | -6.017  | -0.911 | 12.4773 | -0.4688   | -169.0516 |
| 4085 | 0.5 | Extremo | 0.006527 | 5.233   | -0.911 | 12.4773 | -0.0135   | -168.8558 |
| 4085 | 1   | Extremo | 0.006527 | 16.483  | -0.911 | 12.4773 | 0.4419    | -174.285  |
| 4085 | 0   | Extremo | -0.013   | -6.016  | 0.265  | 12.4769 | 0.1294    | -169.0448 |
| 4085 | 0.5 | Extremo | -0.013   | 5.234   | 0.265  | 12.4769 | -0.003    | -168.8493 |
| 4085 | 1   | Extremo | -0.013   | 16.484  | 0.265  | 12.4769 | -0.1354   | -174.2788 |
| 4086 | 0   | Extremo | 0.002949 | -25.596 | -0.881 | 16.135  | -0.4191   | -179.3227 |
| 4086 | 0.5 | Extremo | 0.002949 | -14.346 | -0.881 | 16.135  | 0.0213    | -169.3372 |
| 4086 | 1   | Extremo | 0.002949 | -3.096  | -0.881 | 16.135  | 0.4617    | -164.9768 |
| 4086 | 0   | Extremo | -0.013   | -25.596 | 0.196  | 16.1379 | 0.0866    | -179.3158 |
| 4086 | 0.5 | Extremo | -0.013   | -14.346 | 0.196  | 16.1379 | -0.0115   | -169.3303 |
| 4086 | 1   | Extremo | -0.013   | -3.096  | 0.196  | 16.1379 | -0.1096   | -164.9697 |
| 4087 | 0   | Extremo | 0.005901 | -44.89  | -0.762 | 18.7733 | -0.3381   | -172.7861 |
| 4087 | 0.5 | Extremo | 0.005901 | -33.64  | -0.762 | 18.7733 | 0.0428    | -153.1538 |
| 4087 | 1   | Extremo | 0.005901 | -22.39  | -0.762 | 18.7733 | 0.4237    | -139.1464 |
| 4087 | 0   | Extremo | -0.028   | -44.89  | 0.162  | 18.7797 | 0.0808    | -172.7808 |
| 4087 | 0.5 | Extremo | -0.028   | -33.64  | 0.162  | 18.7797 | -8.94E-05 | -153.1485 |
| 4087 | 1   | Extremo | -0.028   | -22.39  | 0.162  | 18.7797 | -0.081    | -139.1412 |
| 4088 | 0   | Extremo | 0.00623  | -62.299 | -0.574 | 22.1117 | -0.2522   | -147.2187 |
| 4088 | 0.5 | Extremo | 0.00623  | -51.049 | -0.574 | 22.1117 | 0.035     | -118.8817 |
| 4088 | 1   | Extremo | 0.00623  | -39.799 | -0.574 | 22.1117 | 0.3223    | -96.1697  |
| 4088 | 0   | Extremo | -0.029   | -62.298 | 0.209  | 22.1243 | 0.1121    | -147.2159 |
| 4088 | 0.5 | Extremo | -0.029   | -51.048 | 0.209  | 22.1243 | 0.0078    | -118.8796 |
| 4088 | 1   | Extremo | -0.029   | -39.798 | 0.209  | 22.1243 | -0.0966   | -96.1682  |
| 4089 | 0   | Extremo | 0.023    | 22.866  | -0.545 | 7.3609  | -0.3416   | -108.437  |
| 4089 | 0.5 | Extremo | 0.023    | 34.116  | -0.545 | 7.3609  | -0.0691   | -122.6826 |
| 4089 | 1   | Extremo | 0.023    | 45.366  | -0.545 | 7.3609  | 0.2033    | -142.5532 |
| 4089 | 0   | Extremo | -0.048   | 22.863  | 0.054  | 7.3563  | 0.0645    | -108.4394 |
| 4089 | 0.5 | Extremo | -0.048   | 34.113  | 0.054  | 7.3563  | 0.0378    | -122.6833 |
| 4089 | 1   | Extremo | -0.048   | 45.363  | 0.054  | 7.3563  | 0.011     | -142.5523 |
| 4090 | 0   | Extremo | 0.022    | 10.934  | -0.825 | 8.5761  | -0.467    | -141.2056 |
| 4090 | 0.5 | Extremo | 0.022    | 22.184  | -0.825 | 8.5761  | -0.0547   | -149.4853 |
| 4090 | 1   | Extremo | 0.022    | 33.434  | -0.825 | 8.5761  | 0.3577    | -163.3899 |
| 4090 | 0   | Extremo | -0.046   | 10.933  | 0.285  | 8.5695  | 0.1715    | -141.2008 |
| 4090 | 0.5 | Extremo | -0.046   | 22.183  | 0.285  | 8.5695  | 0.0289    | -149.4799 |
| 4090 | 1   | Extremo | -0.046   | 33.433  | 0.285  | 8.5695  | -0.1137   | -163.384  |
| 4091 | 0   | Extremo | 0.00866  | -4.54   | -0.924 | 14.1371 | -0.4736   | -160.2869 |
| 4091 | 0.5 | Extremo | 0.00866  | 6.71    | -0.924 | 14.1371 | -0.0114   | -160.8294 |
| 4091 | 1   | Extremo | 0.00866  | 17.96   | -0.924 | 14.1371 | 0.4507    | -166.9269 |
| 4091 | 0   | Extremo | -0.018   | -4.54   | 0.289  | 14.1335 | 0.1347    | -160.2745 |
| 4091 | 0.5 | Extremo | -0.018   | 6.71    | 0.289  | 14.1335 | -0.0097   | -160.8168 |
| 4091 | 1   | Extremo | -0.018   | 17.96   | 0.289  | 14.1335 | -0.1541   | -166.9842 |
| 4092 | 0   | Extremo | 0.004127 | -22.691 | -0.877 | 23.4063 | -0.4146   | -170.5769 |
| 4092 | 0.5 | Extremo | 0.004127 | -11.441 | -0.877 | 23.4063 | 0.0241    | -162.044  |
| 4092 | 1   | Extremo | 0.004127 | -0.191  | -0.877 | 23.4063 | 0.4628    | -159.1361 |
| 4092 | 0   | Extremo | -0.017   | -22.691 | 0.173  | 23.4106 | 0.0681    | -170.5628 |
| 4092 | 0.5 | Extremo | -0.017   | -11.441 | 0.173  | 23.4106 | -0.0184   | -162.0299 |
| 4092 | 1   | Extremo | -0.017   | -0.191  | 0.173  | 23.4106 | -0.1049   | -159.1221 |
| 4093 | 0   | Extremo | 0.011    | -41.892 | -0.749 | 28.5501 | -0.333    | -169.5708 |
| 4093 | 0.5 | Extremo | 0.011    | -30.642 | -0.749 | 28.5501 | 0.0416    | -151.4372 |
| 4093 | 1   | Extremo | 0.011    | -19.392 | -0.749 | 28.5501 | 0.4162    | -138.9287 |
| 4093 | 0   | Extremo | -0.046   | -41.891 | 0.12   | 28.5602 | 0.0658    | -169.5615 |
| 4093 | 0.5 | Extremo | -0.046   | -30.641 | 0.12   | 28.5602 | 0.0058    | -151.4286 |
| 4093 | 1   | Extremo | -0.046   | -19.391 | 0.12   | 28.5602 | -0.0541   | -138.9207 |
| 4094 | 0   | Extremo | 0.012    | -59.639 | -0.585 | 31.1732 | -0.2595   | -147.8098 |
| 4094 | 0.5 | Extremo | 0.012    | -48.389 | -0.585 | 31.1732 | 0.0328    | -120.8028 |

|      |     |         |           |         |        |          |           |           |
|------|-----|---------|-----------|---------|--------|----------|-----------|-----------|
| 4094 | 1   | Extremo | 0.012     | -37.139 | -0.585 | 31.1732  | 0.3251    | -99.4209  |
| 4094 | 0   | Extremo | -0.048    | -59.635 | 0.242  | 31.188   | 0.1373    | -147.8061 |
| 4094 | 0.5 | Extremo | -0.048    | -48.385 | 0.242  | 31.188   | 0.0162    | -120.8009 |
| 4094 | 1   | Extremo | -0.048    | -37.135 | 0.242  | 31.188   | -0.1049   | -99.4207  |
| 4095 | 0   | Extremo | 0.034     | 19.096  | -0.517 | 9.5818   | -0.3335   | -118.456  |
| 4095 | 0.5 | Extremo | 0.034     | 30.346  | -0.517 | 9.5818   | -0.075    | -130.8164 |
| 4095 | 1   | Extremo | 0.034     | 41.596  | -0.517 | 9.5818   | 0.1836    | -148.8018 |
| 4095 | 0   | Extremo | -0.075    | 19.089  | -0.019 | 9.5783   | 0.0414    | -118.4701 |
| 4095 | 0.5 | Extremo | -0.075    | 30.339  | -0.019 | 9.5783   | 0.0511    | -130.827  |
| 4095 | 1   | Extremo | -0.075    | 41.589  | -0.019 | 9.5783   | 0.0608    | -148.809  |
| 4096 | 0   | Extremo | 0.032     | 3.124   | -0.858 | -0.212   | -0.4891   | -144.3234 |
| 4096 | 0.5 | Extremo | 0.032     | 14.374  | -0.858 | -0.212   | -0.06     | -148.6978 |
| 4096 | 1   | Extremo | 0.032     | 25.624  | -0.858 | -0.212   | 0.3691    | -158.6273 |
| 4096 | 0   | Extremo | -0.072    | 3.114   | 0.367  | -0.2287  | 0.2241    | -144.3261 |
| 4096 | 0.5 | Extremo | -0.072    | 14.364  | 0.367  | -0.2287  | 0.0404    | -148.6954 |
| 4096 | 1   | Extremo | -0.072    | 25.614  | 0.367  | -0.2287  | -0.1433   | -158.6897 |
| 4097 | 0   | Extremo | 0.00922   | -8.636  | -0.945 | 9.2723   | -0.4803   | -144.0268 |
| 4097 | 0.5 | Extremo | 0.00922   | 2.614   | -0.945 | 9.2723   | -0.0076   | -142.5213 |
| 4097 | 1   | Extremo | 0.00922   | 13.864  | -0.945 | 9.2723   | 0.4652    | -146.6408 |
| 4097 | 0   | Extremo | -0.018    | -8.644  | 0.327  | 9.2609   | 0.1418    | -144.0045 |
| 4097 | 0.5 | Extremo | -0.018    | 2.606   | 0.327  | 9.2609   | -0.0218   | -142.4949 |
| 4097 | 1   | Extremo | -0.018    | 13.856  | 0.327  | 9.2609   | -0.1855   | -146.6102 |
| 4098 | 0   | Extremo | 0.003885  | -11.971 | -0.872 | 33.1691  | -0.4069   | -147.3779 |
| 4098 | 0.5 | Extremo | 0.003885  | -0.721  | -0.872 | 33.1691  | 0.0289    | -144.2051 |
| 4098 | 1   | Extremo | 0.003885  | 10.529  | -0.872 | 33.1691  | 0.4647    | -146.6574 |
| 4098 | 0   | Extremo | -0.018    | -11.966 | 0.136  | 33.1778  | 0.0372    | -147.345  |
| 4098 | 0.5 | Extremo | -0.018    | -0.716  | 0.136  | 33.1778  | -0.0307   | -144.1746 |
| 4098 | 1   | Extremo | -0.018    | 10.534  | 0.136  | 33.1778  | -0.0987   | -146.6292 |
| 4099 | 0   | Extremo | 0.019     | -28.599 | -0.724 | 43.3338  | -0.3231   | -163.5976 |
| 4099 | 0.5 | Extremo | 0.019     | -17.349 | -0.724 | 43.3338  | 0.0388    | -152.1108 |
| 4099 | 1   | Extremo | 0.019     | -6.099  | -0.724 | 43.3338  | 0.4007    | -146.249  |
| 4099 | 0   | Extremo | -0.07     | -28.588 | 0.037  | 43.353   | 0.0356    | -163.5812 |
| 4099 | 0.5 | Extremo | -0.07     | -17.338 | 0.037  | 43.353   | 0.0171    | -152.0995 |
| 4099 | 1   | Extremo | -0.07     | -6.088  | 0.037  | 43.353   | -0.0014   | -146.2427 |
| 4100 | 0   | Extremo | 0.019     | -54.48  | -0.607 | 37.1387  | -0.2748   | -154.409  |
| 4100 | 0.5 | Extremo | 0.019     | -43.23  | -0.607 | 37.1387  | 0.0286    | -129.9817 |
| 4100 | 1   | Extremo | 0.019     | -31.98  | -0.607 | 37.1387  | 0.3319    | -111.1793 |
| 4100 | 0   | Extremo | -0.074    | -54.472 | 0.311  | 37.1547  | 0.1867    | -154.4085 |
| 4100 | 0.5 | Extremo | -0.074    | -43.222 | 0.311  | 37.1547  | 0.0312    | -129.985  |
| 4100 | 1   | Extremo | -0.074    | -31.972 | 0.311  | 37.1547  | -0.1243   | -111.1865 |
| 4101 | 0   | Extremo | 0.049     | 34.301  | -0.464 | 24.1666  | -0.3184   | -142.5483 |
| 4101 | 0.5 | Extremo | 0.049     | 45.551  | -0.464 | 24.1666  | -0.0863   | -162.5111 |
| 4101 | 1   | Extremo | 0.049     | 56.801  | -0.464 | 24.1666  | 0.1458    | -188.0989 |
| 4101 | 0   | Extremo | -0.111    | 34.308  | -0.169 | 24.1777  | -0.0086   | -142.5874 |
| 4101 | 0.5 | Extremo | -0.111    | 45.558  | -0.169 | 24.1777  | 0.0757    | -162.5538 |
| 4101 | 1   | Extremo | -0.111    | 56.808  | -0.169 | 24.1777  | 0.1601    | -188.1452 |
| 4102 | 0   | Extremo | 0.045     | -44.732 | -0.927 | -26.5664 | -0.5322   | -183.1438 |
| 4102 | 0.5 | Extremo | 0.045     | -33.482 | -0.927 | -26.5664 | -0.0687   | -163.5903 |
| 4102 | 1   | Extremo | 0.045     | -22.232 | -0.927 | -26.5664 | 0.3949    | -149.6618 |
| 4102 | 0   | Extremo | -0.103    | -44.788 | 0.533  | -26.6063 | 0.3293    | -183.1882 |
| 4102 | 0.5 | Extremo | -0.103    | -33.538 | 0.533  | -26.6063 | 0.0625    | -163.6068 |
| 4102 | 1   | Extremo | -0.103    | -22.288 | 0.533  | -26.6063 | -0.2042   | -149.6503 |
| 4103 | 0   | Extremo | 0.005682  | -37.76  | -0.98  | -7.2064  | -0.4899   | -116.5768 |
| 4103 | 0.5 | Extremo | 0.005682  | -26.51  | -0.98  | -7.2064  | 0.0001237 | -100.5095 |
| 4103 | 1   | Extremo | 0.005682  | -15.26  | -0.98  | -7.2064  | 0.4902    | -90.0672  |
| 4103 | 0   | Extremo | -0.005636 | -37.8   | 0.382  | -7.2332  | 0.1471    | -116.5375 |
| 4103 | 0.5 | Extremo | -0.005636 | -26.55  | 0.382  | -7.233   |           |           |



|      |     |         |           |          |        |          |         |           |
|------|-----|---------|-----------|----------|--------|----------|---------|-----------|
| 4106 | 1   | Extremo | 0.031     | -38.316  | -0.656 | 27.7432  | 0.3494  | -140.507  |
| 4106 | 0   | Extremo | -0.109    | -60.812  | 0.453  | 27.7501  | 0.2851  | -190.0974 |
| 4106 | 0.5 | Extremo | -0.109    | -49.562  | 0.453  | 27.7501  | 0.0583  | -162.5038 |
| 4106 | 1   | Extremo | -0.109    | -38.312  | 0.453  | 27.7501  | -0.1684 | -140.5352 |
| 4107 | 0   | Extremo | 0.019     | 188.748  | -0.369 | 64.5714  | -0.2974 | -148.6554 |
| 4107 | 0.5 | Extremo | 0.019     | 199.998  | -0.369 | 64.5714  | -0.1131 | -245.8419 |
| 4107 | 1   | Extremo | 0.019     | 211.248  | -0.369 | 64.5714  | 0.0711  | -348.6535 |
| 4107 | 0   | Extremo | -0.129    | 188.897  | -0.483 | 64.623   | -0.1185 | -148.7027 |
| 4107 | 0.5 | Extremo | -0.129    | 200.147  | -0.483 | 64.623   | 0.1229  | -245.9636 |
| 4107 | 1   | Extremo | -0.129    | 211.397  | -0.483 | 64.623   | 0.3643  | -348.8494 |
| 4108 | 0   | Extremo | 0.093     | -259.125 | -1.079 | -74.1961 | -0.619  | -348.5093 |
| 4108 | 0.5 | Extremo | 0.093     | -247.875 | -1.079 | -74.1961 | -0.0794 | -221.7596 |
| 4108 | 1   | Extremo | 0.093     | -236.625 | -1.079 | -74.1961 | 0.4601  | -100.6348 |
| 4108 | 0   | Extremo | -0.117    | -259.377 | 0.874  | -74.2748 | 0.5422  | -348.7108 |
| 4108 | 0.5 | Extremo | -0.117    | -248.127 | 0.874  | -74.2748 | 0.1051  | -221.8348 |
| 4108 | 1   | Extremo | -0.117    | -236.877 | 0.874  | -74.2748 | -0.332  | -100.5838 |
| 4109 | 0   | Extremo | 0.015     | -122.319 | -1.047 | -27.6143 | -0.5075 | -72.2486  |
| 4109 | 0.5 | Extremo | 0.015     | -111.069 | -1.047 | -27.6143 | 0.0161  | -13.9016  |
| 4109 | 1   | Extremo | 0.015     | -99.819  | -1.047 | -27.6143 | 0.5398  | 38.8203   |
| 4109 | 0   | Extremo | 0.026     | -122.442 | 0.437  | -27.6546 | 0.1336  | -72.1793  |
| 4109 | 0.5 | Extremo | 0.026     | -111.192 | 0.437  | -27.6546 | -0.0848 | -13.7706  |
| 4109 | 1   | Extremo | 0.026     | -99.942  | 0.437  | -27.6546 | -0.3031 | 39.013    |
| 4110 | 0   | Extremo | -0.04     | 116.732  | -0.897 | 53.1432  | -0.3986 | 49.0013   |
| 4110 | 0.5 | Extremo | -0.04     | 127.982  | -0.897 | 53.1432  | 0.0501  | -12.1774  |
| 4110 | 1   | Extremo | -0.04     | 139.232  | -0.897 | 53.1432  | 0.4989  | -78.981   |
| 4110 | 0   | Extremo | 0.028     | 116.828  | 0.033  | 53.171   | -0.0779 | 49.1946   |
| 4110 | 0.5 | Extremo | 0.028     | 128.078  | 0.033  | 53.171   | -0.0943 | -12.0317  |
| 4110 | 1   | Extremo | 0.028     | 139.328  | 0.033  | 53.171   | -0.1108 | -78.883   |
| 4111 | 0   | Extremo | -0.015    | 260.561  | -0.583 | 104.7263 | -0.279  | -86.7748  |
| 4111 | 0.5 | Extremo | -0.015    | 271.811  | -0.583 | 104.7263 | 0.0124  | -219.8676 |
| 4111 | 1   | Extremo | -0.015    | 283.061  | -0.583 | 104.7263 | 0.3039  | -358.5853 |
| 4111 | 0   | Extremo | -0.113    | 260.796  | -0.47  | 104.7973 | -0.1542 | -86.6894  |
| 4111 | 0.5 | Extremo | -0.113    | 272.046  | -0.47  | 104.7973 | 0.0808  | -219.8999 |
| 4111 | 1   | Extremo | -0.113    | 283.296  | -0.47  | 104.7973 | 0.3158  | -358.7353 |
| 4112 | 0   | Extremo | 0.071     | -180.659 | -0.776 | -19.0736 | -0.3762 | -337.8877 |
| 4112 | 0.5 | Extremo | 0.071     | -169.409 | -0.776 | -19.0736 | 0.0119  | -250.3709 |
| 4112 | 1   | Extremo | 0.071     | -158.159 | -0.776 | -19.0736 | 0.4     | -168.479  |
| 4112 | 0   | Extremo | -0.129    | -180.749 | 0.757  | -19.1033 | 0.4876  | -338.0261 |
| 4112 | 0.5 | Extremo | -0.129    | -169.499 | 0.757  | -19.1033 | 0.1093  | -250.4643 |
| 4112 | 1   | Extremo | -0.129    | -158.249 | 0.757  | -19.1033 | -0.2691 | -168.5274 |
| 4113 | 0   | Extremo | -0.443    | 812.383  | -0.26  | -0.0291  | -0.2693 | 38.9624   |
| 4113 | 0.5 | Extremo | -0.443    | 823.633  | -0.26  | -0.0291  | -0.1395 | -370.0414 |
| 4113 | 1   | Extremo | -0.443    | 834.883  | -0.26  | -0.0291  | -0.0096 | -784.6702 |
| 4113 | 0   | Extremo | 0.008029  | 813.101  | -1.189 | -0.0311  | -0.3972 | 39.0852   |
| 4113 | 0.5 | Extremo | 0.008029  | 824.351  | -1.189 | -0.0311  | 0.1973  | -370.2775 |
| 4113 | 1   | Extremo | 0.008029  | 835.601  | -1.189 | -0.0311  | 0.7919  | -785.2653 |
| 4114 | 0   | Extremo | 0.484     | -934.855 | -1.499 | -0.0457  | -0.8654 | -787.993  |
| 4114 | 0.5 | Extremo | 0.484     | -923.605 | -1.499 | -0.0457  | -0.116  | -323.378  |
| 4114 | 1   | Extremo | 0.484     | -912.355 | -1.499 | -0.0457  | 0.6334  | 135.6119  |
| 4114 | 0   | Extremo | -0.008784 | -935.723 | 1.607  | -0.0491  | 0.9767  | -788.5981 |
| 4114 | 0.5 | Extremo | -0.008784 | -924.473 | 1.607  | -0.0491  | 0.1734  | -323.5489 |
| 4114 | 1   | Extremo | -0.008784 | -913.223 | 1.607  | -0.0491  | -0.63   | 135.8754  |
| 4115 | 0   | Extremo | 0.142     | -206.681 | -1.199 | -0.0494  | -0.5634 | 0.1865    |
| 4115 | 0.5 | Extremo | 0.142     | -195.431 | -1.199 | -0.0494  | 0.0359  | 100.7143  |
| 4115 | 1   | Extremo | 0.142     | -184.181 | -1.199 | -0.0494  | 0.6352  | 195.617   |
| 4115 | 0   | Extremo | -0.002583 | -206.881 | 0.44   | -0.053   | 0.0685  | 0.3158    |
| 4115 | 0.5 | Extremo | -0.002583 | -195.631 | 0.44   | -0.053   | -0.1513 | 100.944   |
| 4115 | 1   | Extremo | -0.002583 | -184.381 | 0.44   | -0.053   | -0.3711 | 195.9472  |
| 4116 | 0   | Extremo | -0.154    | 203.289  | -1.049 | -0.0531  | -0.4464 | 209.1939  |
| 4116 | 0.5 | Extremo | -0.154    | 214.539  | -1.049 | -0.0531  | 0.0781  | 104.7369  |
| 4116 | 1   | Extremo | -0.154    | 225.789  | -1.049 | -0.0531  | 0.6026  | -5.3451   |
| 4116 | 0   | Extremo | 0.002791  | 203.452  | 0.037  | -0.057   | -0.1431 | 209.5184  |
| 4116 | 0.5 | Extremo | 0.002791  | 214.702  | 0.037  | -0.057   | -0.1614 | 104.9799  |
| 4116 | 1   | Extremo | 0.002791  | 225.952  | 0.037  | -0.057   | -0.1797 | -5.1835   |
| 4117 | 0   | Extremo | -0.498    | 949.37   | -0.485 | -0.0694  | -0.2411 | 160.2217  |
| 4117 | 0.5 | Extremo | -0.498    | 960.62   | -0.485 | -0.0694  | 0.0012  | -317.2757 |
| 4117 | 1   | Extremo | -0.498    | 971.87   | -0.485 | -0.0694  | 0.2435  | -800.3981 |
| 4117 | 0   | Extremo | 0.009031  | 950.148  | -1.199 | -0.0746  | -0.4513 | 160.5044  |
| 4117 | 0.5 | Extremo | 0.009031  | 961.398  | -1.199 | -0.0746  | 0.1482  | -317.3821 |
| 4117 | 1   | Extremo | 0.009031  | 972.648  | -1.199 | -0.0746  | 0.7478  | -800.8936 |
| 4118 | 0   | Extremo | 0.422     | -745.513 | -1.16  | -0.1687  | -0.5999 | -761.4607 |
| 4118 | 0.5 | Extremo | 0.422     | -734.263 | -1.16  | -0.1687  | -0.0201 | -391.5165 |

|      |     |         |           |          |        |           |         |           |
|------|-----|---------|-----------|----------|--------|-----------|---------|-----------|
| 4118 | 1   | Extremo | 0.422     | -723.013 | -1.16  | -0.1687   | 0.5597  | -27.1972  |
| 4118 | 0   | Extremo | -0.007659 | -746.048 | 1.452  | -0.1818   | 0.9169  | -761.9315 |
| 4118 | 0.5 | Extremo | -0.007659 | -734.798 | 1.452  | -0.1818   | 0.1908  | -391.7201 |
| 4118 | 1   | Extremo | -0.007659 | -723.548 | 1.452  | -0.1818   | -0.5353 | -27.1336  |
| 4119 | 0   | Extremo | -0.074    | 188.748  | -0.658 | -64.6292  | -0.4414 | -148.6566 |
| 4119 | 0.5 | Extremo | -0.074    | 199.998  | -0.658 | -64.6292  | -0.1126 | -245.8433 |
| 4119 | 1   | Extremo | -0.074    | 211.248  | -0.658 | -64.6292  | 0.2162  | -348.655  |
| 4119 | 0   | Extremo | 0.13      | 188.897  | -0.478 | -64.6848  | -0.1159 | -148.704  |
| 4119 | 0.5 | Extremo | 0.13      | 200.147  | -0.478 | -64.6848  | 0.1229  | -245.965  |
| 4119 | 1   | Extremo | 0.13      | 211.397  | -0.478 | -64.6848  | 0.3617  | -348.851  |
| 4120 | 0   | Extremo | 0.009757  | -259.125 | -1.397 | 74.1049   | -0.8025 | -348.5115 |
| 4120 | 0.5 | Extremo | 0.009757  | -247.875 | -1.397 | 74.1049   | -0.104  | -221.7618 |
| 4120 | 1   | Extremo | 0.009757  | -236.625 | -1.397 | 74.1049   | 0.5946  | -100.637  |
| 4120 | 0   | Extremo | 0.115     | -259.377 | 0.88   | 74.177    | 0.5455  | -348.7132 |
| 4120 | 0.5 | Extremo | 0.115     | -248.127 | 0.88   | 74.177    | 0.1055  | -221.8372 |
| 4120 | 1   | Extremo | 0.115     | -236.877 | 0.88   | 74.177    | -0.3344 | -100.5862 |
| 4121 | 0   | Extremo | 0.034     | -122.319 | -1.35  | 27.5155   | -0.6668 | -72.2513  |
| 4121 | 0.5 | Extremo | 0.034     | -111.069 | -1.35  | 27.5155   | 0.0082  | -13.9042  |
| 4121 | 1   | Extremo | 0.034     | -99.819  | -1.35  | 27.5155   | 0.6833  | 38.8179   |
| 4121 | 0   | Extremo | -0.027    | -122.443 | 0.442  | 27.5487   | 0.1364  | -72.1821  |
| 4121 | 0.5 | Extremo | -0.027    | -111.193 | 0.442  | 27.5487   | -0.0846 | -13.7733  |
| 4121 | 1   | Extremo | -0.027    | -99.943  | 0.442  | 27.5487   | -0.3057 | 39.0105   |
| 4122 | 0   | Extremo | -0.02     | 116.732  | -1.2   | -53.2494  | -0.5411 | 48.9988   |
| 4122 | 0.5 | Extremo | -0.02     | 127.982  | -1.2   | -53.2494  | 0.059   | -12.1797  |
| 4122 | 1   | Extremo | -0.02     | 139.232  | -1.2   | -53.2494  | 0.659   | -78.9831  |
| 4122 | 0   | Extremo | -0.027    | 116.827  | 0.038  | -53.285   | -0.0753 | 49.1919   |
| 4122 | 0.5 | Extremo | -0.027    | 128.077  | 0.038  | -53.285   | -0.0945 | -12.0342  |
| 4122 | 1   | Extremo | -0.027    | 139.327  | 0.038  | -53.285   | -0.1137 | -78.8853  |
| 4123 | 0   | Extremo | -0.095    | 260.56   | -0.9   | -104.8653 | -0.4124 | -86.7767  |
| 4123 | 0.5 | Extremo | -0.095    | 271.81   | -0.9   | -104.8653 | 0.0374  | -219.8693 |
| 4123 | 1   | Extremo | -0.095    | 283.06   | -0.9   | -104.8653 | 0.4872  | -358.5868 |
| 4123 | 0   | Extremo | 0.115     | 260.795  | -0.464 | -104.9467 | -0.1518 | -86.6915  |
| 4123 | 0.5 | Extremo | 0.115     | 272.045  | -0.464 | -104.9467 | 0.0804  | -219.9017 |
| 4123 | 1   | Extremo | 0.115     | 283.295  | -0.464 | -104.9467 | 0.3125  | -358.7369 |
| 4124 | 0   | Extremo | -0.019    | -180.659 | -1.057 | 18.736    | -0.5235 | -337.8887 |
| 4124 | 0.5 | Extremo | -0.019    | -169.409 | -1.057 | 18.736    | 0.0051  | -250.3717 |
| 4124 | 1   | Extremo | -0.019    | -158.159 | -1.057 | 18.736    | 0.5337  | -168.4796 |
| 4124 | 0   | Extremo | 0.128     | -180.749 | 0.762  | 18.7395   | 0.4903  | -338.0272 |
| 4124 | 0.5 | Extremo | 0.128     | -169.499 | 0.762  | 18.7395   | 0.1094  | -250.4651 |
| 4124 | 1   | Extremo | 0.128     | -158.249 | 0.762  | 18.7395   | -0.2715 | -168.528  |
| 4125 | 0   | Extremo | -0.03     | 34.301   | -0.787 | -24.2233  | -0.4992 | -142.551  |
| 4125 | 0.5 | Extremo | -0.03     | 45.551   | -0.787 | -24.2233  | -0.1058 | -162.5141 |
| 4125 | 1   | Extremo | -0.03     | 56.801   | -0.787 | -24.2233  | 0.2875  | -188.1023 |
| 4125 | 0   | Extremo | 0.11      | 34.308   | -0.163 | -24.2383  | -0.0054 | -142.5903 |
| 4125 | 0.5 | Extremo | 0.11      | 45.558   | -0.163 | -24.2383  | 0.0761  | -162.5571 |
| 4125 | 1   | Extremo | 0.11      | 56.808   | -0.163 | -24.2383  | 0.1575  | -188.1488 |
| 4126 | 0   | Extremo | -0.028    | -44.732  | -1.306 | 26.476    | -0.7373 | -183.1487 |
| 4126 | 0.5 | Extremo | -0.028    | -33.482  | -1.306 | 26.476    | -0.0842 | -163.5952 |
| 4126 | 1   | Extremo | -0.028    | -22.232  | -1.306 | 26.476    | 0.5689  | -149.6667 |
| 4126 | 0   | Extremo | 0.103     | -44.788  | 0.54   | 26.5094   | 0.333   | -183.1935 |
| 4126 | 0.5 | Extremo | 0.103     | -33.538  | 0.54   | 26.5094   | 0.0628  | -163.6121 |
| 4126 | 1   | Extremo | 0.103     | -22.288  | 0.54   | 26.5094   | -0.2074 | -149.6556 |
| 4127 | 0   | Extremo | 0.001477  | -37.76   | -1.379 | 7.108     | -0.6943 | -116.5826 |
| 4127 | 0.5 | Extremo | 0.001477  | -26.51   | -1.379 | 7.108     | -0.0049 | -100.515  |
| 4127 | 1   | Extremo | 0.001477  | -15.26   | -1.379 | 7.108     | 0.6845  | -90.0725  |
| 4127 | 0   | Extremo | 0.005491  | -37.801  | 0.389  | 7.1276    | 0.1508  | -116.5437 |
| 4127 | 0   |         |           |          |        |           |         |           |



|      |     |         |           |         |        |          |         |           |
|------|-----|---------|-----------|---------|--------|----------|---------|-----------|
| 4130 | 1   | Extremo | -0.046    | -38.316 | -0.965 | -28.0815 | 0.514   | -140.5084 |
| 4130 | 0   | Extremo | 0.109     | -60.813 | 0.459  | -28.1147 | 0.2877  | -190.0998 |
| 4130 | 0.5 | Extremo | 0.109     | -49.563 | 0.459  | -28.1147 | 0.0581  | -162.5057 |
| 4130 | 1   | Extremo | 0.109     | -38.313 | 0.459  | -28.1147 | -0.1714 | -140.5367 |
| 4131 | 0   | Extremo | -0.019    | 19.097  | -0.841 | -9.6364  | -0.5199 | -118.4608 |
| 4131 | 0.5 | Extremo | -0.019    | 30.347  | -0.841 | -9.6364  | -0.0996 | -130.8217 |
| 4131 | 1   | Extremo | -0.019    | 41.597  | -0.841 | -9.6364  | 0.3207  | -148.8077 |
| 4131 | 0   | Extremo | 0.074     | 19.09   | -0.013 | -9.6366  | 0.0448  | -118.4753 |
| 4131 | 0.5 | Extremo | 0.074     | 30.34   | -0.013 | -9.6366  | 0.0516  | -130.8328 |
| 4131 | 1   | Extremo | 0.074     | 41.59   | -0.013 | -9.6366  | 0.0583  | -148.8153 |
| 4132 | 0   | Extremo | -0.019    | 3.124   | -1.257 | 0.1233   | -0.7054 | -144.3321 |
| 4132 | 0.5 | Extremo | -0.019    | 14.374  | -1.257 | 0.1233   | -0.077  | -148.7065 |
| 4132 | 1   | Extremo | -0.019    | 25.624  | -1.257 | 0.1233   | 0.5513  | -158.7059 |
| 4132 | 0   | Extremo | 0.071     | 3.114   | 0.375  | 0.1336   | 0.2281  | -144.3355 |
| 4132 | 0.5 | Extremo | 0.071     | 14.364  | 0.375  | 0.1336   | 0.0407  | -148.7047 |
| 4132 | 1   | Extremo | 0.071     | 25.614  | 0.375  | 0.1336   | -0.1466 | -148.699  |
| 4133 | 0   | Extremo | -0.003871 | -8.637  | -1.375 | -9.37    | -0.7002 | -144.0371 |
| 4133 | 0.5 | Extremo | -0.003871 | 2.613   | -1.375 | -9.37    | -0.0128 | -142.5311 |
| 4133 | 1   | Extremo | -0.003871 | 13.863  | -1.375 | -9.37    | 0.6747  | -146.6501 |
| 4133 | 0   | Extremo | 0.018     | -8.645  | 0.335  | -9.3657  | 0.1458  | -144.0155 |
| 4133 | 0.5 | Extremo | 0.018     | 2.605   | 0.335  | -9.3657  | -0.0217 | -142.5054 |
| 4133 | 1   | Extremo | 0.018     | 13.855  | 0.335  | -9.3657  | -0.1893 | -146.6202 |
| 4134 | 0   | Extremo | -0.008455 | -11.972 | -1.299 | -33.2757 | -0.6142 | -147.3874 |
| 4134 | 0.5 | Extremo | -0.008455 | -0.722  | -1.299 | -33.2757 | 0.0353  | -144.2139 |
| 4134 | 1   | Extremo | -0.008455 | 10.528  | -1.299 | -33.2757 | 0.6848  | -146.6655 |
| 4134 | 0   | Extremo | 0.018     | -11.967 | 0.144  | -33.2922 | 0.041   | -147.3553 |
| 4134 | 0.5 | Extremo | 0.018     | -0.717  | 0.144  | -33.2922 | -0.0309 | -144.1841 |
| 4134 | 1   | Extremo | 0.018     | 10.533  | 0.144  | -33.2922 | -0.1027 | -146.6379 |
| 4135 | 0   | Extremo | -0.031    | -28.6   | -1.115 | -43.4743 | -0.5019 | -163.6049 |
| 4135 | 0.5 | Extremo | -0.031    | -17.35  | -1.115 | -43.4743 | 0.0555  | -152.1172 |
| 4135 | 1   | Extremo | -0.031    | -6.1    | -1.115 | -43.4743 | 0.613   | -146.2546 |
| 4135 | 0   | Extremo | 0.071     | -28.59  | 0.044  | -43.5041 | 0.0389  | -163.589  |
| 4135 | 0.5 | Extremo | 0.071     | -17.34  | 0.044  | -43.5041 | 0.0168  | -152.1064 |
| 4135 | 1   | Extremo | 0.071     | -6.09   | 0.044  | -43.5041 | -0.0052 | -146.2488 |
| 4136 | 0   | Extremo | -0.033    | -54.481 | -0.914 | -37.4782 | -0.4139 | -154.4129 |
| 4136 | 0.5 | Extremo | -0.033    | -43.231 | -0.914 | -37.4782 | 0.0433  | -129.9848 |
| 4136 | 1   | Extremo | -0.033    | -31.981 | -0.914 | -37.4782 | 0.5006  | -111.1816 |
| 4136 | 0   | Extremo | 0.074     | -54.474 | 0.317  | -37.5206 | 0.1892  | -154.4126 |
| 4136 | 0.5 | Extremo | 0.074     | -43.224 | 0.317  | -37.5206 | 0.0309  | -129.9884 |
| 4136 | 1   | Extremo | 0.074     | -31.974 | 0.317  | -37.5206 | -0.1274 | -111.1891 |
| 4137 | 0   | Extremo | -0.011    | 22.868  | -0.865 | -7.4118  | -0.5284 | -108.445  |
| 4137 | 0.5 | Extremo | -0.011    | 34.118  | -0.865 | -7.4118  | -0.0959 | -122.6914 |
| 4137 | 1   | Extremo | -0.011    | 45.368  | -0.865 | -7.4118  | 0.3365  | -142.5629 |
| 4137 | 0   | Extremo | 0.048     | 22.865  | 0.059  | -7.4106  | 0.0679  | -108.4481 |
| 4137 | 0.5 | Extremo | 0.048     | 34.115  | 0.059  | -7.4106  | 0.0382  | -122.6929 |
| 4137 | 1   | Extremo | 0.048     | 45.365  | 0.059  | -7.4106  | 0.0086  | -142.5627 |
| 4138 | 0   | Extremo | -0.011    | 10.934  | -1.232 | -8.662   | -0.6899 | -141.2201 |
| 4138 | 0.5 | Extremo | -0.011    | 22.184  | -1.232 | -8.662   | -0.0741 | -149.4995 |
| 4138 | 1   | Extremo | -0.011    | 33.434  | -1.232 | -8.662   | 0.5417  | -163.404  |
| 4138 | 0   | Extremo | 0.046     | 10.933  | 0.293  | -8.6615  | 0.1755  | -141.2164 |
| 4138 | 0.5 | Extremo | 0.046     | 22.183  | 0.293  | -8.6615  | 0.0292  | -149.4953 |
| 4138 | 1   | Extremo | 0.046     | 33.433  | 0.293  | -8.6615  | -0.117  | -163.3991 |
| 4139 | 0   | Extremo | -0.003899 | -4.542  | -1.369 | -14.2335 | -0.7018 | -160.3038 |
| 4139 | 0.5 | Extremo | -0.003899 | 6.708   | -1.369 | -14.2335 | -0.0175 | -160.8454 |
| 4139 | 1   | Extremo | -0.003899 | 17.958  | -1.369 | -14.2335 | 0.6668  | -167.0119 |
| 4139 | 0   | Extremo | 0.017     | -4.542  | 0.297  | -14.2369 | 0.1388  | -160.2927 |
| 4139 | 0.5 | Extremo | 0.017     | 6.708   | 0.297  | -14.2369 | -0.0096 | -160.8341 |
| 4139 | 1   | Extremo | 0.017     | 17.958  | 0.297  | -14.2369 | -0.158  | -167.0004 |
| 4140 | 0   | Extremo | -0.008084 | -22.693 | -1.319 | -23.5132 | -0.6282 | -170.5926 |
| 4140 | 0.5 | Extremo | -0.008084 | -11.443 | -1.319 | -23.5132 | 0.0314  | -162.0584 |
| 4140 | 1   | Extremo | -0.008084 | -0.193  | -1.319 | -23.5132 | 0.6911  | -159.1493 |
| 4140 | 0   | Extremo | 0.017     | -22.694 | 0.181  | -23.5253 | 0.072   | -170.5798 |
| 4140 | 0.5 | Extremo | 0.017     | -11.444 | 0.181  | -23.5253 | -0.0185 | -162.0455 |
| 4140 | 1   | Extremo | 0.017     | -0.194  | 0.181  | -23.5253 | -0.109  | -159.1363 |
| 4141 | 0   | Extremo | -0.021    | -41.895 | -1.148 | -28.6923 | -0.5132 | -169.5827 |
| 4141 | 0.5 | Extremo | -0.021    | -30.645 | -1.148 | -28.6923 | 0.0606  | -151.4477 |
| 4141 | 1   | Extremo | -0.021    | -19.395 | -1.148 | -28.6923 | 0.6345  | -138.9378 |
| 4141 | 0   | Extremo | 0.046     | -41.894 | 0.127  | -28.713  | 0.0691  | -169.5743 |
| 4141 | 0.5 | Extremo | 0.046     | -30.644 | 0.127  | -28.713  | 0.0055  | -151.4399 |
| 4141 | 1   | Extremo | 0.046     | -19.394 | 0.127  | -28.713  | -0.058  | -138.9306 |
| 4142 | 0   | Extremo | -0.022    | -59.641 | -0.888 | -31.5148 | -0.3946 | -147.8162 |
| 4142 | 0.5 | Extremo | -0.022    | -48.391 | -0.888 | -31.5148 | 0.0496  | -120.8079 |

|      |     |         |           |         |        |          |           |           |
|------|-----|---------|-----------|---------|--------|----------|-----------|-----------|
| 4142 | 1   | Extremo | -0.022    | -37.141 | -0.888 | -31.5148 | 0.4939    | -99.4247  |
| 4142 | 0   | Extremo | 0.048     | -59.638 | 0.248  | -31.5563 | 0.1398    | -147.813  |
| 4142 | 0.5 | Extremo | 0.048     | -48.388 | 0.248  | -31.5563 | 0.0159    | -120.8064 |
| 4142 | 1   | Extremo | 0.048     | -37.138 | 0.248  | -31.5563 | -0.108    | -99.4248  |
| 4143 | 0   | Extremo | -0.005584 | 25.166  | -0.876 | -6.6101  | -0.5321   | -106.6895 |
| 4143 | 0.5 | Extremo | -0.005584 | 36.416  | -0.876 | -6.6101  | -0.0941   | -122.0851 |
| 4143 | 1   | Extremo | -0.005584 | 47.666  | -0.876 | -6.6101  | 0.344     | -143.1057 |
| 4143 | 0   | Extremo | 0.029     | 25.165  | 0.025  | -6.6102  | 0.0783    | -106.6897 |
| 4143 | 0.5 | Extremo | 0.029     | 36.415  | 0.025  | -6.6102  | 0.0308    | -122.0848 |
| 4143 | 1   | Extremo | 0.029     | 47.665  | 0.025  | -6.6102  | -0.0167   | -143.105  |
| 4144 | 0   | Extremo | -0.005505 | 10.976  | -1.219 | -9.3674  | -0.6826   | -144.6957 |
| 4144 | 0.5 | Extremo | -0.005505 | 22.226  | -1.219 | -9.3674  | -0.0729   | -152.9963 |
| 4144 | 1   | Extremo | -0.005505 | 33.476  | -1.219 | -9.3674  | 0.5368    | -166.9219 |
| 4144 | 0   | Extremo | 0.028     | 10.976  | 0.251  | -9.3709  | 0.1489    | -144.6931 |
| 4144 | 0.5 | Extremo | 0.028     | 22.226  | 0.251  | -9.3709  | 0.0232    | -152.9938 |
| 4144 | 1   | Extremo | 0.028     | 33.476  | 0.251  | -9.3709  | -0.1025   | -166.9196 |
| 4145 | 0   | Extremo | -0.002718 | -6.02   | -1.365 | -12.5714 | -0.7028   | -169.0789 |
| 4145 | 0.5 | Extremo | -0.002718 | 5.23    | -1.365 | -12.5714 | -0.0202   | -168.8814 |
| 4145 | 1   | Extremo | -0.002718 | 16.48   | -1.365 | -12.5714 | 0.6624    | -174.3089 |
| 4145 | 0   | Extremo | 0.013     | -6.02   | 0.273  | -12.5778 | 0.1337    | -169.0742 |
| 4145 | 0.5 | Extremo | 0.013     | 5.23    | 0.273  | -12.5778 | -0.0029   | -168.8769 |
| 4145 | 1   | Extremo | 0.013     | 16.48   | 0.273  | -12.5778 | -0.1394   | -174.3046 |
| 4146 | 0   | Extremo | -0.006248 | -25.6   | -1.332 | -16.2423 | -0.6368   | -179.3479 |
| 4146 | 0.5 | Extremo | -0.006248 | -14.35  | -1.332 | -16.2423 | 0.0294    | -169.3603 |
| 4146 | 1   | Extremo | -0.006248 | -3.1    | -1.332 | -16.2423 | 0.6956    | -164.9978 |
| 4146 | 0   | Extremo | 0.013     | -25.601 | 0.204  | -16.2531 | 0.0905    | -179.343  |
| 4146 | 0.5 | Extremo | 0.013     | -14.351 | 0.204  | -16.2531 | -0.0117   | -169.3552 |
| 4146 | 1   | Extremo | 0.013     | -3.101  | 0.204  | -16.2531 | -0.1139   | -164.9924 |
| 4147 | 0   | Extremo | -0.014    | -44.894 | -1.165 | -18.9181 | -0.5187   | -172.8051 |
| 4147 | 0.5 | Extremo | -0.014    | -33.644 | -1.165 | -18.9181 | 0.0636    | -153.1707 |
| 4147 | 1   | Extremo | -0.014    | -22.394 | -1.165 | -18.9181 | 0.6459    | -139.1612 |
| 4147 | 0   | Extremo | 0.028     | -44.894 | 0.169  | -18.9353 | 0.0841    | -172.8014 |
| 4147 | 0.5 | Extremo | 0.028     | -33.644 | 0.169  | -18.9353 | -0.000458 | -153.1668 |
| 4147 | 1   | Extremo | 0.028     | -22.394 | 0.169  | -18.9353 | -0.085    | -139.1572 |
| 4148 | 0   | Extremo | -0.015    | -62.303 | -0.875 | -22.4569 | -0.3842   | -147.2289 |
| 4148 | 0.5 | Extremo | -0.015    | -51.053 | -0.875 | -22.4569 | 0.0533    | -118.8899 |
| 4148 | 1   | Extremo | -0.015    | -39.803 | -0.875 | -22.4569 | 0.4908    | -96.1759  |
| 4148 | 0   | Extremo | 0.029     | -62.302 | 0.214  | -22.4963 | 0.1145    | -147.227  |
| 4148 | 0.5 | Extremo | 0.029     | -51.052 | 0.214  | -22.4963 | 0.0075    | -118.8885 |
| 4148 | 1   | Extremo | 0.029     | -39.802 | 0.214  | -22.4963 | -0.0996   | -96.175   |
| 4149 | 0   | Extremo | -0.001482 | 25.774  | -0.881 | -4.634   | -0.5337   | -107.2937 |
| 4149 | 0.5 | Extremo | -0.001482 | 37.024  | -0.881 | -4.634   | -0.0933   | -122.993  |
| 4149 | 1   | Extremo | -0.001482 | 48.274  | -0.881 | -4.634   | 0.3471    | -144.3173 |
| 4149 | 0   | Extremo | 0.016     | 25.774  | 0.112  | -4.6348  | 0.0828    | -107.2941 |
| 4149 | 0.5 | Extremo | 0.016     | 37.024  | 0.112  | -4.6348  | 0.0268    | -122.9933 |
| 4149 | 1   | Extremo | 0.016     | 48.274  | 0.112  | -4.6348  | -0.0292   | -144.3176 |
| 4150 | 0   | Extremo | -0.001552 | 10.107  | -1.214 | -6.5747  | -0.6795   | -147.755  |
| 4150 | 0.5 | Extremo | -0.001552 | 21.357  | -1.214 | -6.5747  | -0.0725   | -155.6208 |
| 4150 | 1   | Extremo | -0.001552 | 32.607  | -1.214 | -6.5747  | 0.5345    | -169.1116 |
| 4150 | 0   | Extremo | 0.015     | 10.107  | 0.231  | -6.5795  | 0.1357    | -147.755  |
| 4150 | 0.5 | Extremo | 0.015     | 21.357  | 0.231  | -6.5795  | 0.0202    | -155.6209 |
| 4150 | 1   | Extremo | 0.015     | 32.607  | 0.231  | -6.5795  | -0.0954   | -169.1117 |
| 4151 | 0   | Extremo | -0.001175 | -7.519  | -1.364 | -8.1999  | -0.704    | -173.4303 |
| 4151 | 0.5 | Extremo | -0.001175 | 3.731   | -1.364 | -8.1999  | -0.0218   | -172.4834 |
| 4151 | 1   | Extremo | -0.001175 | 14.981  | -1.364 | -8.1999  | 0.6605    | -177.1615 |
| 4151 | 0   | Extremo | 0.007677  | -7.519  | 0.26   | -8.2074  | 0.1306    | -173.4299 |
| 4151 | 0.5 | Extremo | 0.007677  | 3.731   | 0      |          |           |           |



|      |     |         |           |         |        |          |           |           |
|------|-----|---------|-----------|---------|--------|----------|-----------|-----------|
| 4154 | 1   | Extremo | -0.009324 | -40.722 | -0.868 | -13.3323 | 0.4896    | -95.5614  |
| 4154 | 0   | Extremo | 0.016     | -63.222 | 0.198  | -13.3708 | 0.102     | -147.5334 |
| 4154 | 0.5 | Extremo | 0.016     | -51.972 | 0.198  | -13.3708 | 0.0029    | -118.7347 |
| 4154 | 1   | Extremo | 0.016     | -40.722 | 0.198  | -13.3708 | -0.0962   | -95.5611  |
| 4155 | 0   | Extremo | 0.002048  | 25.852  | -0.882 | -1.6559  | -0.5343   | -107.9093 |
| 4155 | 0.5 | Extremo | 0.002048  | 37.102  | -0.882 | -1.6559  | -0.0932   | -123.6476 |
| 4155 | 1   | Extremo | 0.002048  | 48.352  | -0.882 | -1.6559  | 0.3479    | -145.0108 |
| 4155 | 0   | Extremo | 0.004922  | 25.852  | 0.119  | -1.6562  | 0.0845    | -107.911  |
| 4155 | 0.5 | Extremo | 0.004922  | 37.102  | 0.119  | -1.6562  | 0.0251    | -123.6494 |
| 4155 | 1   | Extremo | 0.004922  | 48.352  | 0.119  | -1.6562  | -0.0343   | -145.0128 |
| 4156 | 0   | Extremo | 0.001855  | 9.59    | -1.213 | -2.3275  | -0.6789   | -149.2826 |
| 4156 | 0.5 | Extremo | 0.001855  | 20.84   | -1.213 | -2.3275  | -0.0726   | -156.89   |
| 4156 | 1   | Extremo | 0.001855  | 32.09   | -1.213 | -2.3275  | 0.5336    | -170.1224 |
| 4156 | 0   | Extremo | 0.004752  | 9.59    | 0.223  | -2.3321  | 0.1303    | -149.2856 |
| 4156 | 0.5 | Extremo | 0.004752  | 20.84   | 0.223  | -2.3321  | 0.0189    | -156.8929 |
| 4156 | 1   | Extremo | 0.004752  | 32.09   | 0.223  | -2.3321  | -0.0925   | -170.1252 |
| 4157 | 0   | Extremo | 0.0005249 | -8.238  | -1.366 | -2.8251  | -0.7055   | -175.2148 |
| 4157 | 0.5 | Extremo | 0.0005249 | 3.012   | -1.366 | -2.8251  | -0.0225   | -173.9081 |
| 4157 | 1   | Extremo | 0.0005249 | 14.262  | -1.366 | -2.8251  | 0.6604    | -178.2263 |
| 4157 | 0   | Extremo | 0.002488  | -8.239  | 0.254  | -2.8325  | 0.1291    | -175.2183 |
| 4157 | 0.5 | Extremo | 0.002488  | 3.011   | 0.254  | -2.8325  | 0.0022    | -173.9113 |
| 4157 | 1   | Extremo | 0.002488  | 14.261  | 0.254  | -2.8325  | -0.1246   | -178.2293 |
| 4158 | 0   | Extremo | -0.002346 | -27.009 | -1.346 | -3.2437  | -0.645    | -184.2391 |
| 4158 | 0.5 | Extremo | -0.002346 | -15.759 | -1.346 | -3.2437  | 0.0287    | -173.5473 |
| 4158 | 1   | Extremo | -0.002346 | -4.509  | -1.346 | -3.2437  | 0.7014    | -168.4804 |
| 4158 | 0   | Extremo | 0.002436  | -27.009 | 0.223  | -3.2542  | 0.1052    | -184.2423 |
| 4158 | 0.5 | Extremo | 0.002436  | -15.759 | 0.223  | -3.2542  | -0.0065   | -173.5501 |
| 4158 | 1   | Extremo | 0.002436  | -4.509  | 0.223  | -3.2542  | -0.1182   | -168.483  |
| 4159 | 0   | Extremo | -0.005137 | -45.867 | -1.178 | -3.6318  | -0.5224   | -175.2309 |
| 4159 | 0.5 | Extremo | -0.005137 | -34.617 | -1.178 | -3.6318  | 0.0665    | -155.1098 |
| 4159 | 1   | Extremo | -0.005137 | -23.367 | -1.178 | -3.6318  | 0.6554    | -140.6137 |
| 4159 | 0   | Extremo | 0.004671  | -45.868 | 0.198  | -3.6478  | 0.0944    | -175.2333 |
| 4159 | 0.5 | Extremo | 0.004671  | -34.618 | 0.198  | -3.6478  | -0.0048   | -155.1119 |
| 4159 | 1   | Extremo | 0.004671  | -23.368 | 0.198  | -3.6478  | -0.104    | -140.6156 |
| 4160 | 0   | Extremo | -0.005305 | -63.492 | -0.865 | -4.4637  | -0.3754   | -147.76   |
| 4160 | 0.5 | Extremo | -0.005305 | -52.242 | -0.865 | -4.4637  | 0.0569    | -118.8263 |
| 4160 | 1   | Extremo | -0.005305 | -40.992 | -0.865 | -4.4637  | 0.4892    | -95.5175  |
| 4160 | 0   | Extremo | 0.004889  | -63.493 | 0.192  | -4.5022  | 0.0968    | -147.7613 |
| 4160 | 0.5 | Extremo | 0.004889  | -52.243 | 0.192  | -4.5022  | 0.0008664 | -118.8273 |
| 4160 | 1   | Extremo | 0.004889  | -40.993 | 0.192  | -4.5022  | -0.0951   | -95.5184  |
| 4161 | 0   | Extremo | 0.005646  | 25.852  | -0.881 | 1.6658   | -0.5344   | -107.9124 |
| 4161 | 0.5 | Extremo | 0.005646  | 37.102  | -0.881 | 1.6658   | -0.0938   | -123.6509 |
| 4161 | 1   | Extremo | 0.005646  | 48.352  | -0.881 | 1.6658   | 0.3468    | -145.0145 |
| 4161 | 0   | Extremo | -0.004867 | 25.853  | 0.119  | 1.6672   | 0.0845    | -107.9159 |
| 4161 | 0.5 | Extremo | -0.004867 | 37.103  | 0.119  | 1.6672   | 0.0251    | -123.6547 |
| 4161 | 1   | Extremo | -0.004867 | 48.353  | 0.119  | 1.6672   | -0.0343   | -145.0184 |
| 4162 | 0   | Extremo | 0.005346  | 9.589   | -1.214 | 2.3205   | -0.6803   | -149.2897 |
| 4162 | 0.5 | Extremo | 0.005346  | 20.839  | -1.214 | 2.3205   | -0.0733   | -156.8967 |
| 4162 | 1   | Extremo | 0.005346  | 32.089  | -1.214 | 2.3205   | 0.5338    | -170.1287 |
| 4162 | 0   | Extremo | -0.00477  | 9.588   | 0.223  | 2.3174   | 0.1302    | -149.2965 |
| 4162 | 0.5 | Extremo | -0.00477  | 20.838  | 0.223  | 2.3174   | 0.0189    | -156.9031 |
| 4162 | 1   | Extremo | -0.00477  | 32.088  | 0.223  | 2.3174   | -0.0925   | -170.1346 |
| 4163 | 0   | Extremo | 0.002367  | -8.239  | -1.369 | 2.8057   | -0.7074   | -175.2239 |
| 4163 | 0.5 | Extremo | 0.002367  | 3.011   | -1.369 | 2.8057   | -0.0228   | -173.9167 |
| 4163 | 1   | Extremo | 0.002367  | 14.261  | -1.369 | 2.8057   | 0.6619    | -178.2345 |
| 4163 | 0   | Extremo | -0.002649 | -8.241  | 0.254  | 2.7992   | 0.1291    | -175.2319 |
| 4163 | 0.5 | Extremo | -0.002649 | 3.009   | 0.254  | 2.7992   | 0.0022    | -173.9241 |
| 4163 | 1   | Extremo | -0.002649 | 14.259  | 0.254  | 2.7992   | -0.1246   | -178.2413 |
| 4164 | 0   | Extremo | -0.000608 | -27.008 | -1.35  | 3.2098   | -0.6464   | -184.2482 |
| 4164 | 0.5 | Extremo | -0.000608 | -15.758 | -1.35  | 3.2098   | 0.0285    | -173.5565 |
| 4164 | 1   | Extremo | -0.000608 | -4.508  | -1.35  | 3.2098   | 0.7033    | -168.4897 |
| 4164 | 0   | Extremo | -0.002751 | -27.009 | 0.223  | 3.1993   | 0.1051    | -184.2557 |
| 4164 | 0.5 | Extremo | -0.002751 | -15.759 | 0.223  | 3.1993   | -0.0065   | -173.5636 |
| 4164 | 1   | Extremo | -0.002751 | -4.509  | 0.223  | 3.1993   | -0.1181   | -168.4965 |
| 4165 | 0   | Extremo | -0.001868 | -45.867 | -1.179 | 3.5717   | -0.5225   | -175.2386 |
| 4165 | 0.5 | Extremo | -0.001868 | -34.617 | -1.179 | 3.5717   | 0.0671    | -155.1177 |
| 4165 | 1   | Extremo | -0.001868 | -23.367 | -1.179 | 3.5717   | 0.6567    | -140.6218 |
| 4165 | 0   | Extremo | -0.005064 | -45.867 | 0.198  | 3.5549   | 0.0945    | -175.2445 |
| 4165 | 0.5 | Extremo | -0.005064 | -34.617 | 0.198  | 3.5549   | -0.0048   | -155.1233 |
| 4165 | 1   | Extremo | -0.005064 | -23.367 | 0.198  | 3.5549   | -0.104    | -140.6271 |
| 4166 | 0   | Extremo | -0.001891 | -63.494 | -0.864 | 4.3051   | -0.3743   | -147.7647 |
| 4166 | 0.5 | Extremo | -0.001891 | -52.244 | -0.864 | 4.3051   | 0.0574    | -118.8303 |

|      |     |         |           |         |        |         |           |           |
|------|-----|---------|-----------|---------|--------|---------|-----------|-----------|
| 4166 | 1   | Extremo | -0.001891 | -40.994 | -0.864 | 4.3051  | 0.4892    | -95.521   |
| 4166 | 0   | Extremo | -0.005225 | -63.495 | 0.192  | 4.2654  | 0.0968    | -147.768  |
| 4166 | 0.5 | Extremo | -0.005225 | -52.245 | 0.192  | 4.2654  | 0.0008854 | -118.8331 |
| 4166 | 1   | Extremo | -0.005225 | -40.995 | 0.192  | 4.2654  | -0.0951   | -95.5232  |
| 4167 | 0   | Extremo | 0.009924  | 25.777  | -0.878 | 4.65    | -0.5338   | -107.3014 |
| 4167 | 0.5 | Extremo | 0.009924  | 37.027  | -0.878 | 4.65    | -0.095    | -123.0022 |
| 4167 | 1   | Extremo | 0.009924  | 48.277  | -0.878 | 4.65    | 0.3438    | -144.328  |
| 4167 | 0   | Extremo | -0.015    | 25.778  | 0.112  | 4.6551  | 0.0828    | -107.3066 |
| 4167 | 0.5 | Extremo | -0.015    | 37.028  | 0.112  | 4.6551  | 0.0268    | -123.008  |
| 4167 | 1   | Extremo | -0.015    | 48.278  | 0.112  | 4.6551  | -0.0292   | -144.3343 |
| 4168 | 0   | Extremo | 0.009522  | 10.104  | -1.219 | 6.5746  | -0.6837   | -147.7771 |
| 4168 | 0.5 | Extremo | 0.009522  | 21.354  | -1.219 | 6.5746  | -0.0744   | -155.6418 |
| 4168 | 1   | Extremo | 0.009522  | 32.604  | -1.219 | 6.5746  | 0.535     | -169.1315 |
| 4168 | 0   | Extremo | -0.015    | 10.103  | 0.231  | 6.5752  | 0.1356    | -147.789  |
| 4168 | 0.5 | Extremo | -0.015    | 21.353  | 0.231  | 6.5752  | 0.0201    | -155.6529 |
| 4168 | 1   | Extremo | -0.015    | 32.603  | 0.231  | 6.5752  | -0.0954   | -169.1417 |
| 4169 | 0   | Extremo | 0.004396  | -7.521  | -1.375 | 8.1848  | -0.7101   | -173.4606 |
| 4169 | 0.5 | Extremo | 0.004396  | 3.729   | -1.375 | 8.1848  | -0.0225   | -172.5123 |
| 4169 | 1   | Extremo | 0.004396  | 14.979  | -1.375 | 8.1848  | 0.6651    | -177.1891 |
| 4169 | 0   | Extremo | -0.007842 | -7.524  | 0.259  | 8.1804  | 0.1304    | -173.4755 |
| 4169 | 0.5 | Extremo | -0.007842 | 3.726   | 0.259  | 8.1804  | 0.0006963 | -172.5261 |
| 4169 | 1   | Extremo | -0.007842 | 14.976  | 0.259  | 8.1804  | -0.129    | -177.2016 |
| 4170 | 0   | Extremo | 0.001002  | -26.608 | -1.351 | 9.6576  | -0.6463   | -182.926  |
| 4170 | 0.5 | Extremo | 0.001002  | -15.358 | -1.351 | 9.6576  | 0.0294    | -172.4346 |
| 4170 | 1   | Extremo | 0.001002  | -4.108  | -1.351 | 9.6576  | 0.705     | -167.5681 |
| 4170 | 0   | Extremo | -0.007988 | -26.609 | 0.217  | 9.647   | 0.1006    | -182.9401 |
| 4170 | 0.5 | Extremo | -0.007988 | -15.359 | 0.217  | 9.647   | -0.008    | -172.4483 |
| 4170 | 1   | Extremo | -0.007988 | -4.109  | 0.217  | 9.647   | -0.1166   | -167.5814 |
| 4171 | 0   | Extremo | 0.001331  | -45.646 | -1.178 | 10.9081 | -0.5214   | -174.5299 |
| 4171 | 0.5 | Extremo | 0.001331  | -34.396 | -1.178 | 10.9081 | 0.0673    | -154.5194 |
| 4171 | 1   | Extremo | 0.001331  | -23.146 | -1.178 | 10.9081 | 0.6561    | -140.1339 |
| 4171 | 0   | Extremo | -0.016    | -45.646 | 0.19   | 10.889  | 0.0915    | -174.541  |
| 4171 | 0.5 | Extremo | -0.016    | -34.396 | 0.19   | 10.889  | -0.0034   | -154.5302 |
| 4171 | 1   | Extremo | -0.016    | -23.146 | 0.19   | 10.889  | -0.0983   | -140.1445 |
| 4172 | 0   | Extremo | 0.001485  | -63.227 | -0.864 | 13.1672 | -0.3749   | -147.549  |
| 4172 | 0.5 | Extremo | 0.001485  | -51.977 | -0.864 | 13.1672 | 0.0573    | -118.748  |
| 4172 | 1   | Extremo | 0.001485  | -40.727 | -0.864 | 13.1672 | 0.4896    | -95.5719  |
| 4172 | 0   | Extremo | -0.016    | -63.229 | 0.198  | 13.1247 | 0.1022    | -147.5552 |
| 4172 | 0.5 | Extremo | -0.016    | -51.979 | 0.198  | 13.1247 | 0.0029    | -118.753  |
| 4172 | 1   | Extremo | -0.016    | -40.729 | 0.198  | 13.1247 | -0.0963   | -95.5759  |
| 4173 | 0   | Extremo | 0.016     | 25.177  | -0.87  | 6.6385  | -0.5322   | -106.6935 |
| 4173 | 0.5 | Extremo | 0.016     | 36.427  | -0.87  | 6.6385  | -0.0972   | -122.0947 |
| 4173 | 1   | Extremo | 0.016     | 47.677  | -0.87  | 6.6385  | 0.3379    | -143.1208 |
| 4173 | 0   | Extremo | -0.029    | 25.181  | 0.095  | 6.6496  | 0.0782    | -106.6977 |
| 4173 | 0.5 | Extremo | -0.029    | 36.431  | 0.095  | 6.6496  | 0.0308    | -122.1009 |
| 4173 | 1   | Extremo | -0.029    | 47.681  | 0.095  | 6.6496  | -0.0167   | -143.129  |
| 4174 | 0   | Extremo | 0.015     | 10.975  | -1.228 | 9.3854  | -0.6902   | -144.733  |
| 4174 | 0.5 | Extremo | 0.015     | 22.225  | -1.228 | 9.3854  | -0.0763   | -153.033  |
| 4174 | 1   | Extremo | 0.015     | 33.475  | -1.228 | 9.3854  | 0.5377    | -166.9581 |
| 4174 | 0   | Extremo | -0.028    | 10.973  | 0.251  | 9.3939  | 0.1487    | -144.7511 |
| 4174 | 0.5 | Extremo | -0.028    | 22.223  | 0.251  | 9.3939  | 0.0231    | -153.0502 |
| 4174 | 1   | Extremo | -0.028    | 33.473  | 0.251  | 9.3939  | -0.1024   | -166.9742 |
| 4175 | 0   | Extremo | 0.006627  | -6.023  | -1.384 | 12.5682 | -0.7138   | -169.141  |
| 4175 | 0.5 | Extremo | 0.006627  | 5.227   | -1.384 | 12.5682 | -0.0216   | -168.9419 |
| 4175 | 1   | Extremo | 0.006627  | 16.477  | -1.384 | 12.5682 | 0.6706    | -1        |





|      |     |         |          |         |        |         |         |           |
|------|-----|---------|----------|---------|--------|---------|---------|-----------|
| 4178 | 1   | Extremo | 0.005417 | -39.816 | -0.869 | 22.2767 | 0.4907  | -96.1917  |
| 4178 | 0   | Extremo | -0.03    | -62.321 | 0.215  | 22.2288 | 0.1148  | -147.2677 |
| 4178 | 0.5 | Extremo | -0.03    | -51.071 | 0.215  | 22.2288 | 0.0076  | -118.9196 |
| 4178 | 1   | Extremo | -0.03    | -39.821 | 0.215  | 22.2288 | -0.0997 | -96.1966  |
| 4179 | 0   | Extremo | 0.024    | 22.903  | -0.855 | 7.454   | -0.5284 | -108.4134 |
| 4179 | 0.5 | Extremo | 0.024    | 34.153  | -0.855 | 7.454   | -0.1007 | -122.6776 |
| 4179 | 1   | Extremo | 0.024    | 45.403  | -0.855 | 7.454   | 0.327   | -142.5667 |
| 4179 | 0   | Extremo | -0.047   | 22.916  | 0.059  | 7.4723  | 0.0678  | -108.4058 |
| 4179 | 0.5 | Extremo | -0.047   | 34.166  | 0.059  | 7.4723  | 0.0381  | -122.6762 |
| 4179 | 1   | Extremo | -0.047   | 45.416  | 0.059  | 7.4723  | 0.0085  | -142.5717 |
| 4180 | 0   | Extremo | 0.023    | 10.949  | -1.245 | 8.7217  | -0.7022 | -141.259  |
| 4180 | 0.5 | Extremo | 0.023    | 22.199  | -1.245 | 8.7217  | -0.0795 | -149.5461 |
| 4180 | 1   | Extremo | 0.023    | 33.449  | -1.245 | 8.7217  | 0.5433  | -163.4583 |
| 4180 | 0   | Extremo | -0.046   | 10.952  | 0.292  | 8.7472  | 0.1752  | -141.2794 |
| 4180 | 0.5 | Extremo | -0.046   | 22.202  | 0.292  | 8.7472  | 0.0291  | -149.5681 |
| 4180 | 1   | Extremo | -0.046   | 33.452  | 0.292  | 8.7472  | -0.1169 | -163.4819 |
| 4181 | 0   | Extremo | 0.00876  | -4.532  | -1.399 | 14.2614 | -0.719  | -160.4214 |
| 4181 | 0.5 | Extremo | 0.00876  | 6.718   | -1.399 | 14.2614 | -0.0196 | -160.968  |
| 4181 | 1   | Extremo | 0.00876  | 17.968  | -1.399 | 14.2614 | 0.6798  | -167.1396 |
| 4181 | 0   | Extremo | -0.018   | -4.532  | 0.296  | 14.2745 | 0.1384  | -160.47   |
| 4181 | 0.5 | Extremo | -0.018   | 6.718   | 0.296  | 14.2745 | -0.0096 | -161.0164 |
| 4181 | 1   | Extremo | -0.018   | 17.968  | 0.296  | 14.2745 | -0.1577 | -167.1878 |
| 4182 | 0   | Extremo | 0.003512 | -22.688 | -1.348 | 23.4597 | -0.6403 | -170.7324 |
| 4182 | 0.5 | Extremo | 0.003512 | -11.438 | -1.348 | 23.4597 | 0.0339  | -162.2011 |
| 4182 | 1   | Extremo | 0.003512 | -0.188  | -1.348 | 23.4597 | 0.7081  | -159.2948 |
| 4182 | 0   | Extremo | -0.018   | -22.689 | 0.18   | 23.4431 | 0.0717  | -170.7862 |
| 4182 | 0.5 | Extremo | -0.018   | -11.439 | 0.18   | 23.4431 | -0.0184 | -162.2539 |
| 4182 | 1   | Extremo | -0.018   | -0.189  | 0.18   | 23.4431 | -0.1086 | -159.3467 |
| 4183 | 0   | Extremo | 0.01     | -41.904 | -1.16  | 28.5719 | -0.5138 | -169.6782 |
| 4183 | 0.5 | Extremo | 0.01     | -30.654 | -1.16  | 28.5719 | 0.066   | -151.5387 |
| 4183 | 1   | Extremo | 0.01     | -19.404 | -1.16  | 28.5719 | 0.6458  | -139.0243 |
| 4183 | 0   | Extremo | -0.047   | -41.91  | 0.127  | 28.5336 | 0.0692  | -169.7126 |
| 4183 | 0.5 | Extremo | -0.047   | -30.66  | 0.127  | 28.5336 | 0.0057  | -151.5702 |
| 4183 | 1   | Extremo | -0.047   | -19.41  | 0.127  | 28.5336 | -0.0578 | -139.0528 |
| 4184 | 0   | Extremo | 0.011    | -59.677 | -0.878 | 31.3102 | -0.3848 | -147.8562 |
| 4184 | 0.5 | Extremo | 0.011    | -48.427 | -0.878 | 31.3102 | 0.0543  | -120.8304 |
| 4184 | 1   | Extremo | 0.011    | -37.177 | -0.878 | 31.3102 | 0.4934  | -99.4296  |
| 4184 | 0   | Extremo | -0.048   | -59.69  | 0.248  | 31.2544 | 0.1403  | -147.8692 |
| 4184 | 0.5 | Extremo | -0.048   | -48.44  | 0.248  | 31.2544 | 0.0161  | -120.8367 |
| 4184 | 1   | Extremo | -0.048   | -37.19  | 0.248  | 31.2544 | -0.1081 | -99.4291  |
| 4185 | 0   | Extremo | 0.036    | 19.169  | -0.827 | 9.6619  | -0.5204 | -118.3065 |
| 4185 | 0.5 | Extremo | 0.036    | 30.419  | -0.827 | 9.6619  | -0.1067 | -130.7036 |
| 4185 | 1   | Extremo | 0.036    | 41.669  | -0.827 | 9.6619  | 0.307   | -148.7256 |
| 4185 | 0   | Extremo | -0.074   | 19.195  | -0.014 | 9.6772  | 0.0446  | -118.2556 |
| 4185 | 0.5 | Extremo | -0.074   | 30.445  | -0.014 | 9.6772  | 0.0514  | -130.6657 |
| 4185 | 1   | Extremo | -0.074   | 41.695  | -0.014 | 9.6772  | 0.0582  | -148.7007 |
| 4186 | 0   | Extremo | 0.033    | 3.235   | -1.28  | 0.0349  | -0.7249 | -144.2892 |
| 4186 | 0.5 | Extremo | 0.033    | 14.485  | -1.28  | 0.0349  | -0.085  | -148.7194 |
| 4186 | 1   | Extremo | 0.033    | 25.735  | -1.28  | 0.0349  | 0.5549  | -158.7746 |
| 4186 | 0   | Extremo | -0.071   | 3.272   | 0.374  | 0.0995  | 0.2275  | -144.283  |
| 4186 | 0.5 | Extremo | -0.071   | 14.522  | 0.374  | 0.0995  | 0.0406  | -148.7316 |
| 4186 | 1   | Extremo | -0.071   | 25.772  | 0.374  | 0.0995  | -0.1464 | -158.8051 |
| 4187 | 0   | Extremo | 0.009272 | -8.542  | -1.421 | 9.4749  | -0.7264 | -144.2528 |
| 4187 | 0.5 | Extremo | 0.009272 | 2.708   | -1.421 | 9.4749  | -0.0157 | -142.7945 |
| 4187 | 1   | Extremo | 0.009272 | 13.958  | -1.421 | 9.4749  | 0.6949  | -146.9611 |
| 4187 | 0   | Extremo | -0.018   | -8.514  | 0.334  | 9.5183  | 0.1452  | -144.3407 |
| 4187 | 0.5 | Extremo | -0.018   | 2.736   | 0.334  | 9.5183  | -0.0218 | -142.8963 |
| 4187 | 1   | Extremo | -0.018   | 13.986  | 0.334  | 9.5183  | -0.1887 | -147.0769 |
| 4188 | 0   | Extremo | 0.003133 | -12.009 | -1.344 | 33.175  | -0.633  | -147.7189 |
| 4188 | 0.5 | Extremo | 0.003133 | -0.759  | -1.344 | 33.175  | 0.0389  | -144.5269 |
| 4188 | 1   | Extremo | 0.003133 | 10.491  | -1.344 | 33.175  | 0.7107  | -146.9599 |
| 4188 | 0   | Extremo | -0.018   | -12.03  | 0.143  | 33.1423 | 0.0405  | -147.8444 |
| 4188 | 0.5 | Extremo | -0.018   | -0.78   | 0.143  | 33.1423 | -0.0307 | -144.6418 |
| 4188 | 1   | Extremo | -0.018   | 10.47   | 0.143  | 33.1423 | -0.102  | -147.0642 |
| 4189 | 0   | Extremo | 0.017    | -28.696 | -1.135 | 43.258  | -0.5039 | -163.7762 |
| 4189 | 0.5 | Extremo | 0.017    | -17.446 | -1.135 | 43.258  | 0.0634  | -152.2404 |
| 4189 | 1   | Extremo | 0.017    | -6.196  | -1.135 | 43.258  | 0.6307  | -146.3297 |
| 4189 | 0   | Extremo | -0.071   | -28.737 | 0.044  | 43.1858 | 0.039   | -163.8369 |
| 4189 | 0.5 | Extremo | -0.071   | -17.487 | 0.044  | 43.1858 | 0.0171  | -152.2811 |
| 4189 | 1   | Extremo | -0.071   | -6.237  | 0.044  | 43.1858 | -0.0048 | -146.3502 |
| 4190 | 0   | Extremo | 0.018    | -54.56  | -0.9   | 37.2586 | -0.3998 | -154.4244 |
| 4190 | 0.5 | Extremo | 0.018    | -43.31  | -0.9   | 37.2586 | 0.0502  | -129.9567 |

|      |     |         |           |          |        |          |         |           |
|------|-----|---------|-----------|----------|--------|----------|---------|-----------|
| 4190 | 1   | Extremo | 0.018     | -32.06   | -0.9   | 37.2586  | 0.5003  | -111.114  |
| 4190 | 0   | Extremo | -0.075    | -54.59   | 0.317  | 37.1996  | 0.1899  | -154.4247 |
| 4190 | 0.5 | Extremo | -0.075    | -43.34   | 0.317  | 37.1996  | 0.0312  | -129.9421 |
| 4190 | 1   | Extremo | -0.075    | -32.09   | 0.317  | 37.1996  | -0.1276 | -111.0845 |
| 4191 | 0   | Extremo | 0.05      | 34.228   | -0.775 | 24.0914  | -0.5059 | -142.1365 |
| 4191 | 0.5 | Extremo | 0.05      | 45.478   | -0.775 | 24.0914  | -0.1185 | -162.0632 |
| 4191 | 1   | Extremo | 0.05      | 56.728   | -0.775 | 24.0914  | 0.2689  | -187.6149 |
| 4191 | 0   | Extremo | -0.11     | 34.201   | -0.163 | 24.0537  | -0.0058 | -141.9924 |
| 4191 | 0.5 | Extremo | -0.11     | 45.451   | -0.163 | 24.0537  | 0.0758  | -161.9055 |
| 4191 | 1   | Extremo | -0.11     | 56.701   | -0.163 | 24.0537  | 0.1575  | -187.4437 |
| 4192 | 0   | Extremo | 0.046     | -44.149  | -1.35  | -26.0871 | -0.7689 | -182.6705 |
| 4192 | 0.5 | Extremo | 0.046     | -32.899  | -1.35  | -26.0871 | -0.0937 | -163.4087 |
| 4192 | 1   | Extremo | 0.046     | -21.649  | -1.35  | -26.0871 | 0.5815  | -149.7719 |
| 4192 | 0   | Extremo | -0.103    | -43.94   | 0.539  | -25.9329 | 0.3322  | -182.509  |
| 4192 | 0.5 | Extremo | -0.103    | -32.69   | 0.539  | -25.9329 | 0.0627  | -163.3514 |
| 4192 | 1   | Extremo | -0.103    | -21.44   | 0.539  | -25.9329 | -0.2069 | -149.8188 |
| 4193 | 0   | Extremo | 0.005764  | -37.324  | -1.458 | -6.8507  | -0.7373 | -116.9637 |
| 4193 | 0.5 | Extremo | 0.005764  | -26.074  | -1.458 | -6.8507  | -0.0081 | -101.114  |
| 4193 | 1   | Extremo | 0.005764  | -14.824  | -1.458 | -6.8507  | 0.7212  | -90.8893  |
| 4193 | 0   | Extremo | -0.005742 | -37.176  | 0.387  | -6.7473  | 0.1497  | -117.1181 |
| 4193 | 0.5 | Extremo | -0.005742 | -25.926  | 0.387  | -6.7473  | -0.0437 | -101.3426 |
| 4193 | 1   | Extremo | -0.005742 | -14.676  | 0.387  | -6.7473  | -0.2371 | -91.1921  |
| 4194 | 0   | Extremo | -0.003991 | 25.041   | -1.343 | 46.9034  | -0.6245 | -86.8143  |
| 4194 | 0.5 | Extremo | -0.003991 | 36.291   | -1.343 | 46.9034  | 0.0469  | -102.1472 |
| 4194 | 1   | Extremo | -0.003991 | 47.541   | -1.343 | 46.9034  | 0.7183  | -123.1051 |
| 4194 | 0   | Extremo | -0.005314 | 24.926   | 0.089  | 46.8336  | -0.0083 | -87.1304  |
| 4194 | 0.5 | Extremo | -0.005314 | 36.176   | 0.089  | 46.8336  | -0.0529 | -102.4061 |
| 4194 | 1   | Extremo | -0.005314 | 47.426   | 0.089  | 46.8336  | -0.0976 | -123.3067 |
| 4195 | 0   | Extremo | 0.025     | 29.109   | -1.086 | 69.2926  | -0.4864 | -148.9931 |
| 4195 | 0.5 | Extremo | 0.025     | 40.359   | -1.086 | 69.2926  | 0.0566  | -166.36   |
| 4195 | 1   | Extremo | 0.025     | 51.609   | -1.086 | 69.2926  | 0.5995  | -189.352  |
| 4195 | 0   | Extremo | -0.102    | 28.899   | -0.124 | 69.1434  | -0.023  | -149.1119 |
| 4195 | 0.5 | Extremo | -0.102    | 40.149   | -0.124 | 69.1434  | 0.0388  | -166.374  |
| 4195 | 1   | Extremo | -0.102    | 51.399   | -0.124 | 69.1434  | 0.1006  | -189.2611 |
| 4196 | 0   | Extremo | 0.029     | -60.852  | -0.95  | 27.9479  | -0.4316 | -189.8343 |
| 4196 | 0.5 | Extremo | 0.029     | -49.602  | -0.95  | 27.9479  | 0.0432  | -162.2209 |
| 4196 | 1   | Extremo | 0.029     | -38.352  | -0.95  | 27.9479  | 0.5181  | -140.2325 |
| 4196 | 0   | Extremo | -0.11     | -60.865  | 0.46   | 27.9256  | 0.2887  | -189.7368 |
| 4196 | 0.5 | Extremo | -0.11     | -49.615  | 0.46   | 27.9256  | 0.0585  | -162.117  |
| 4196 | 1   | Extremo | -0.11     | -38.365  | 0.46   | 27.9256  | -0.1716 | -140.1222 |
| 4197 | 0   | Extremo | 0.014     | 187.221  | -0.682 | 64.0711  | -0.4881 | -148.1557 |
| 4197 | 0.5 | Extremo | 0.014     | 198.471  | -0.682 | 64.0711  | -0.147  | -244.5785 |
| 4197 | 1   | Extremo | 0.014     | 209.721  | -0.682 | 64.0711  | 0.1941  | -346.6264 |
| 4197 | 0   | Extremo | -0.132    | 186.66   | -0.479 | 63.8834  | -0.1175 | -147.9816 |
| 4197 | 0.5 | Extremo | -0.132    | 197.91   | -0.479 | 63.8834  | 0.1222  | -244.1243 |
| 4197 | 1   | Extremo | -0.132    | 209.16   | -0.479 | 63.8834  | 0.3618  | -345.892  |
| 4198 | 0   | Extremo | 0.101     | -256.52  | -1.508 | -73.3291 | -0.8575 | -346.4128 |
| 4198 | 0.5 | Extremo | 0.101     | -245.27  | -1.508 | -73.3291 | -0.1037 | -220.9651 |
| 4198 | 1   | Extremo | 0.101     | -234.02  | -1.508 | -73.3291 | 0.6501  | -101.1425 |
| 4198 | 0   | Extremo | -0.113    | -255.571 | 0.877  | -73.0252 | 0.5442  | -345.6612 |
| 4198 | 0.5 | Extremo | -0.113    | -244.321 | 0.877  | -73.0252 | 0.1057  | -220.6881 |
| 4198 | 1   | Extremo | -0.113    | -233.071 | 0.877  | -73.0252 | -0.3329 | -101.34   |
| 4199 | 0   | Extremo | 0.018     | -121.028 | -1.534 | -27.1314 | -0.7587 | -72.9303  |
| 4199 | 0.5 | Extremo | 0.018     | -109.778 | -1.534 | -27.1314 | 0.0082  | -15.2287  |
| 4199 | 1   | Extremo | 0.018     | -98.528  | -1.534 | -27.1314 | 0.7751  | 36.8479   |
| 4199 | 0   | Extremo | 0.028     | -120.57  | 0.437  | -26.9733 | 0.1341  | -73.2014  |
| 4199 | 0.5 | Extremo | 0.028     | -109.32  | 0.437  | -26.9733 | -0.0846 | -         |



|      |     |         |          |          |        |           |          |           |
|------|-----|---------|----------|----------|--------|-----------|----------|-----------|
| 4202 | 1   | Extremo | 0.075    | -157.251 | -1.072 | -18.5092  | 0.5713   | -168.0028 |
| 4202 | 0   | Extremo | -0.127   | -179.406 | 0.763  | -18.3892  | 0.4917   | -335.9707 |
| 4202 | 0.5 | Extremo | -0.127   | -168.156 | 0.763  | -18.3892  | 0.1103   | -249.0802 |
| 4202 | 1   | Extremo | -0.127   | -156.906 | 0.763  | -18.3892  | -0.2711  | -167.8147 |
| 4203 | 0   | Extremo | -0.517   | 805.004  | -0.598 | 0.0106    | -0.4723  | 37.7161   |
| 4203 | 0.5 | Extremo | -0.517   | 816.254  | -0.598 | 0.0106    | -0.1732  | -367.5986 |
| 4203 | 1   | Extremo | -0.517   | 827.504  | -0.598 | 0.0106    | 0.1258   | -778.5383 |
| 4203 | 0   | Extremo | -0.032   | 802.298  | -1.199 | 0.0284    | -0.4029  | 37.2486   |
| 4203 | 0.5 | Extremo | -0.032   | 813.548  | -1.199 | 0.0284    | 0.1967   | -366.713  |
| 4203 | 1   | Extremo | -0.032   | 824.798  | -1.199 | 0.0284    | 0.7962   | -776.2996 |
| 4204 | 0   | Extremo | 0.564    | -925.92  | -1.954 | 0.0312    | -1.1193  | -781.7439 |
| 4204 | 0.5 | Extremo | 0.564    | -914.67  | -1.954 | 0.0312    | -0.1423  | -321.5963 |
| 4204 | 1   | Extremo | 0.564    | -903.42  | -1.954 | 0.0312    | 0.8347   | 132.9263  |
| 4204 | 0   | Extremo | 0.034    | -922.649 | 1.596  | 0.0551    | 0.9708   | -779.4716 |
| 4204 | 0.5 | Extremo | 0.034    | -911.399 | 1.596  | 0.0551    | 0.1729   | -320.9598 |
| 4204 | 1   | Extremo | 0.034    | -900.149 | 1.596  | 0.0551    | -0.625   | 131.927   |
| 4205 | 0   | Extremo | 0.165    | -204.592 | -1.711 | 0.036     | -0.828   | -1.1018   |
| 4205 | 0.5 | Extremo | 0.165    | -193.342 | -1.711 | 0.036     | 0.0274   | 98.3814   |
| 4205 | 1   | Extremo | 0.165    | -182.092 | -1.711 | 0.036     | 0.8827   | 192.2397  |
| 4205 | 0   | Extremo | 0.009502 | -203.841 | 0.427  | 0.0612    | 0.0619   | -1.6008   |
| 4205 | 0.5 | Extremo | 0.009502 | -192.591 | 0.427  | 0.0612    | -0.1515  | 97.5073   |
| 4205 | 1   | Extremo | 0.009502 | -181.341 | 0.427  | 0.0612    | -0.3649  | 190.9903  |
| 4206 | 0   | Extremo | -0.181   | 201.67   | -1.557 | 0.0413    | -0.6896  | 205.9024  |
| 4206 | 0.5 | Extremo | -0.181   | 212.92   | -1.557 | 0.0413    | 0.0888   | 102.2549  |
| 4206 | 1   | Extremo | -0.181   | 224.17   | -1.557 | 0.0413    | 0.8672   | -7.0175   |
| 4206 | 0   | Extremo | -0.012   | 201.04   | 0.024  | 0.0677    | -0.1491  | 204.6667  |
| 4206 | 0.5 | Extremo | -0.012   | 212.29   | 0.024  | 0.0677    | -0.1611  | 101.3342  |
| 4206 | 1   | Extremo | -0.012   | 223.54   | 0.024  | 0.0677    | -0.1732  | -7.6234   |
| 4207 | 0   | Extremo | -0.583   | 941.52   | -0.927 | 0.0662    | -0.4362  | 157.3464  |
| 4207 | 0.5 | Extremo | -0.583   | 952.77   | -0.927 | 0.0662    | 0.0271   | -316.2262 |
| 4207 | 1   | Extremo | -0.583   | 964.02   | -0.927 | 0.0662    | 0.4905   | -795.4237 |
| 4207 | 0   | Extremo | -0.036   | 938.544  | -1.211 | 0.0973    | -0.4563  | 156.2726  |
| 4207 | 0.5 | Extremo | -0.036   | 949.794  | -1.211 | 0.0973    | 0.1492   | -315.812  |
| 4207 | 1   | Extremo | -0.036   | 961.044  | -1.211 | 0.0973    | 0.7546   | -793.5215 |
| 4208 | 0   | Extremo | 0.492    | -740.118 | -1.479 | 0.2173    | -0.737   | -756.7208 |
| 4208 | 0.5 | Extremo | 0.492    | -728.868 | -1.479 | 0.2173    | 0.0027   | -389.474  |
| 4208 | 1   | Extremo | 0.492    | -717.618 | -1.479 | 0.2173    | 0.7424   | -27.8523  |
| 4208 | 0   | Extremo | 0.03     | -738.075 | 1.447  | 0.277     | 0.915    | -754.9171 |
| 4208 | 0.5 | Extremo | 0.03     | -726.825 | 1.447  | 0.277     | 0.1917   | -388.692  |
| 4208 | 1   | Extremo | 0.03     | -715.575 | 1.447  | 0.277     | -0.5316  | -28.0919  |
| 4209 | 0   | Extremo | -0.079   | 187.22   | -1.02  | -64.0503  | -0.6565  | -148.1541 |
| 4209 | 0.5 | Extremo | -0.079   | 198.47   | -1.02  | -64.0503  | -0.1463  | -244.5767 |
| 4209 | 1   | Extremo | -0.079   | 209.72   | -1.02  | -64.0503  | 0.3639   | -346.6244 |
| 4209 | 0   | Extremo | 0.128    | 186.66   | -0.5   | -63.8271  | -0.128   | -147.9796 |
| 4209 | 0.5 | Extremo | 0.128    | 197.91   | -0.5   | -63.8271  | 0.1222   | -244.122  |
| 4209 | 1   | Extremo | 0.128    | 209.16   | -0.5   | -63.8271  | 0.3724   | -345.8895 |
| 4210 | 0   | Extremo | 0.018    | -256.52  | -1.879 | 73.3911   | -1.072   | -346.4098 |
| 4210 | 0.5 | Extremo | 0.018    | -245.27  | -1.879 | 73.3911   | -0.1323  | -220.9621 |
| 4210 | 1   | Extremo | 0.018    | -234.02  | -1.879 | 73.3911   | 0.8074   | -101.1394 |
| 4210 | 0   | Extremo | 0.119    | -255.571 | 0.854  | 73.135    | 0.5309   | -345.6575 |
| 4210 | 0.5 | Extremo | 0.119    | -244.321 | 0.854  | 73.135    | 0.104    | -220.6843 |
| 4210 | 1   | Extremo | 0.119    | -233.071 | 0.854  | 73.135    | -0.323   | -101.3361 |
| 4211 | 0   | Extremo | 0.037    | -121.028 | -1.888 | 27.2032   | -0.9448  | -72.9266  |
| 4211 | 0.5 | Extremo | 0.037    | -109.778 | -1.888 | 27.2032   | -0.00092 | -15.2251  |
| 4211 | 1   | Extremo | 0.037    | -98.528  | -1.888 | 27.2032   | 0.9429   | 36.8514   |
| 4211 | 0   | Extremo | -0.026   | -120.57  | 0.416  | 27.0956   | 0.1227   | -73.1969  |
| 4211 | 0.5 | Extremo | -0.026   | -109.32  | 0.416  | 27.0956   | -0.0851  | -15.7245  |
| 4211 | 1   | Extremo | -0.026   | -98.07   | 0.416  | 27.0956   | -0.2929  | 36.1229   |
| 4212 | 0   | Extremo | -0.026   | 115.795  | -1.733 | -52.8551  | -0.7962  | 47.0425   |
| 4212 | 0.5 | Extremo | -0.026   | 127.045  | -1.733 | -52.8551  | 0.0704   | -13.6673  |
| 4212 | 1   | Extremo | -0.026   | 138.295  | -1.733 | -52.8551  | 0.937    | -80.0022  |
| 4212 | 0   | Extremo | -0.031   | 115.423  | 0.012  | -52.7018  | -0.0876  | 46.3069   |
| 4212 | 0.5 | Extremo | -0.031   | 126.673  | 0.012  | -52.7018  | -0.0937  | -14.2173  |
| 4212 | 1   | Extremo | -0.031   | 137.923  | 0.012  | -52.7018  | -0.0999  | -80.3665  |
| 4213 | 0   | Extremo | -0.106   | 258.193  | -1.369 | -103.9748 | -0.6188  | -87.6535  |
| 4213 | 0.5 | Extremo | -0.106   | 269.443  | -1.369 | -103.9748 | 0.0655   | -219.5626 |
| 4213 | 1   | Extremo | -0.106   | 280.693  | -1.369 | -103.9748 | 0.7498   | -357.0968 |
| 4213 | 0   | Extremo | 0.11     | 257.292  | -0.489 | -103.6479 | -0.1623  | -87.9741  |
| 4213 | 0.5 | Extremo | 0.11     | 268.542  | -0.489 | -103.6479 | 0.0824   | -219.4324 |
| 4213 | 1   | Extremo | 0.11     | 279.792  | -0.489 | -103.6479 | 0.327    | -356.5157 |
| 4214 | 0   | Extremo | -0.015   | -179.75  | -1.4   | 18.9441   | -0.6724  | -336.5022 |
| 4214 | 0.5 | Extremo | -0.015   | -168.5   | -1.4   | 18.9441   | 0.0274   | -249.4395 |

|      |     |         |           |          |        |          |           |           |
|------|-----|---------|-----------|----------|--------|----------|-----------|-----------|
| 4214 | 1   | Extremo | -0.015    | -157.25  | -1.4   | 18.9441  | 0.7272    | -168.0018 |
| 4214 | 0   | Extremo | 0.13      | -179.405 | 0.743  | 18.9436  | 0.4814    | -335.9688 |
| 4214 | 0.5 | Extremo | 0.13      | -168.155 | 0.743  | 18.9436  | 0.1099    | -249.0787 |
| 4214 | 1   | Extremo | 0.13      | -156.905 | 0.743  | 18.9436  | -0.2617   | -167.8136 |
| 4215 | 0   | Extremo | -0.03     | 34.227   | -1.153 | -24.0721 | -0.7175   | -142.133  |
| 4215 | 0.5 | Extremo | -0.03     | 45.477   | -1.153 | -24.0721 | -0.1413   | -162.0592 |
| 4215 | 1   | Extremo | -0.03     | 56.727   | -1.153 | -24.0721 | 0.435     | -187.6104 |
| 4215 | 0   | Extremo | 0.111     | 34.2     | -0.187 | -23.9993 | -0.0192   | -141.9879 |
| 4215 | 0.5 | Extremo | 0.111     | 45.45    | -0.187 | -23.9993 | 0.0744    | -161.9005 |
| 4215 | 1   | Extremo | 0.111     | 56.7     | -0.187 | -23.9993 | 0.1681    | -187.4381 |
| 4216 | 0   | Extremo | -0.028    | -44.149  | -1.794 | 26.1479  | -1.0088   | -182.6639 |
| 4216 | 0.5 | Extremo | -0.028    | -32.899  | -1.794 | 26.1479  | -0.1118   | -163.4019 |
| 4216 | 1   | Extremo | -0.028    | -21.649  | -1.794 | 26.1479  | 0.7853    | -149.765  |
| 4216 | 0   | Extremo | 0.103     | -43.94   | 0.511  | 26.0413  | 0.3172    | -182.5007 |
| 4216 | 0.5 | Extremo | 0.103     | -32.69   | 0.511  | 26.0413  | 0.0616    | -163.343  |
| 4216 | 1   | Extremo | 0.103     | -21.44   | 0.511  | 26.0413  | -0.1939   | -149.8103 |
| 4217 | 0   | Extremo | 0.0007691 | -37.324  | -1.925 | 6.922    | -0.9761   | -116.9556 |
| 4217 | 0.5 | Extremo | 0.0007691 | -26.074  | -1.925 | 6.922    | -0.0138   | -101.1061 |
| 4217 | 1   | Extremo | 0.0007691 | -14.824  | -1.925 | 6.922    | 0.9485    | -90.8816  |
| 4217 | 0   | Extremo | 0.004736  | -37.175  | 0.358  | 6.8689   | 0.135     | -117.1081 |
| 4217 | 0.5 | Extremo | 0.004736  | -25.925  | 0.358  | 6.8689   | -0.0439   | -101.3329 |
| 4217 | 1   | Extremo | 0.004736  | -14.675  | 0.358  | 6.8689   | -0.2228   | -91.1827  |
| 4218 | 0   | Extremo | -0.007955 | 25.042   | -1.807 | -46.8204 | -0.8492   | -86.8064  |
| 4218 | 0.5 | Extremo | -0.007955 | 36.292   | -1.807 | -46.8204 | 0.0543    | -102.1397 |
| 4218 | 1   | Extremo | -0.007955 | 47.542   | -1.807 | -46.8204 | 0.9577    | -123.098  |
| 4218 | 0   | Extremo | 0.003162  | 24.927   | 0.061  | -46.6978 | -0.0218   | -87.1208  |
| 4218 | 0.5 | Extremo | 0.003162  | 36.177   | 0.061  | -46.6978 | -0.0523   | -102.397  |
| 4218 | 1   | Extremo | 0.003162  | 47.427   | 0.061  | -46.6978 | -0.0829   | -123.2983 |
| 4219 | 0   | Extremo | -0.046    | 29.11    | -1.522 | -69.1591 | -0.6862   | -148.9869 |
| 4219 | 0.5 | Extremo | -0.046    | 40.36    | -1.522 | -69.1591 | 0.0748    | -166.3543 |
| 4219 | 1   | Extremo | -0.046    | 51.61    | -1.522 | -69.1591 | 0.8357    | -189.3468 |
| 4219 | 0   | Extremo | 0.099     | 28.901   | -0.15  | -68.9476 | -0.0348   | -149.1044 |
| 4219 | 0.5 | Extremo | 0.099     | 40.151   | -0.15  | -68.9476 | 0.04      | -166.3673 |
| 4219 | 1   | Extremo | 0.099     | 51.401   | -0.15  | -68.9476 | 0.1149    | -189.2551 |
| 4220 | 0   | Extremo | -0.048    | -60.851  | -1.309 | -27.5119 | -0.599    | -189.8308 |
| 4220 | 0.5 | Extremo | -0.048    | -49.601  | -1.309 | -27.5119 | 0.0554    | -162.218  |
| 4220 | 1   | Extremo | -0.048    | -38.351  | -1.309 | -27.5119 | 0.7099    | -140.2302 |
| 4220 | 0   | Extremo | 0.108     | -60.863  | 0.439  | -27.3699 | 0.2789    | -189.7326 |
| 4220 | 0.5 | Extremo | 0.108     | -49.613  | 0.439  | -27.3699 | 0.0593    | -162.1136 |
| 4220 | 1   | Extremo | 0.108     | -38.363  | 0.439  | -27.3699 | -0.1602   | -140.1196 |
| 4221 | 0   | Extremo | -0.018    | 19.167   | -1.207 | -9.6453  | -0.739    | -118.3003 |
| 4221 | 0.5 | Extremo | -0.018    | 30.417   | -1.207 | -9.6453  | -0.1355   | -130.6965 |
| 4221 | 1   | Extremo | -0.018    | 41.667   | -1.207 | -9.6453  | 0.4681    | -148.7178 |
| 4221 | 0   | Extremo | 0.074     | 19.193   | -0.038 | -9.6263  | 0.0306    | -118.2477 |
| 4221 | 0.5 | Extremo | 0.074     | 30.443   | -0.038 | -9.6263  | 0.0497    | -130.6568 |
| 4221 | 1   | Extremo | 0.074     | 41.693   | -0.038 | -9.6263  | 0.0688    | -148.6909 |
| 4222 | 0   | Extremo | -0.019    | 3.235    | -1.747 | 0.0237   | -0.9781   | -144.2776 |
| 4222 | 0.5 | Extremo | -0.019    | 14.485   | -1.747 | 0.0237   | -0.1047   | -148.7076 |
| 4222 | 1   | Extremo | -0.019    | 25.735   | -1.747 | 0.0237   | 0.7686    | -158.7626 |
| 4222 | 0   | Extremo | 0.071     | 3.272    | 0.344  | 0.0061   | 0.2115    | -144.2684 |
| 4222 | 0.5 | Extremo | 0.071     | 14.522   | 0.344  | 0.0061   | 0.0395    | -148.7168 |
| 4222 | 1   | Extremo | 0.071     | 25.772   | 0.344  | 0.0061   | -0.1326   | -158.7903 |
| 4223 | 0   | Extremo | -0.005106 | -8.541   | -1.923 | -9.4046  | -0.9833   | -144.2386 |
| 4223 | 0.5 | Extremo | -0.005106 | 2.709    | -1.923 | -9.4046  | -0.0216   | -142.7806 |
| 4223 | 1   | Extremo | -0.005106 | 13.959   | -1.923 | -9.4046  | 0.9402    | -146.9476 |
| 4223 | 0   | Extremo | 0.017     | -8.513   | 0.303  | -9.3979  | 0.1294    | -144.3231 |
| 4223 | 0.5 | Extremo | 0.017     | 2.737    | 0.303  | -9.3979  | -0.0219</ |           |



|      |     |         |           |         |        |          |         |           |
|------|-----|---------|-----------|---------|--------|----------|---------|-----------|
| 4226 | 1   | Extremo | -0.035    | -32.058 | -1.258 | -36.8205 | 0.6966  | -111.11   |
| 4226 | 0   | Extremo | 0.073     | -54.588 | 0.297  | -36.6415 | 0.1807  | -154.4175 |
| 4226 | 0.5 | Extremo | 0.073     | -43.338 | 0.297  | -36.6415 | 0.0323  | -129.9362 |
| 4226 | 1   | Extremo | 0.073     | -32.088 | 0.297  | -36.6415 | -0.1161 | -111.0799 |
| 4227 | 0   | Extremo | -0.011    | 22.901  | -1.232 | -7.4422  | -0.7478 | -108.4033 |
| 4227 | 0.5 | Extremo | -0.011    | 34.151  | -1.232 | -7.4422  | -0.132  | -122.6661 |
| 4227 | 1   | Extremo | -0.011    | 45.401  | -1.232 | -7.4422  | 0.4839  | -142.554  |
| 4227 | 0   | Extremo | 0.047     | 22.913  | 0.034  | -7.4275  | 0.0534  | -108.3927 |
| 4227 | 0.5 | Extremo | 0.047     | 34.163  | 0.034  | -7.4275  | 0.0363  | -122.6617 |
| 4227 | 1   | Extremo | 0.047     | 45.413  | 0.034  | -7.4275  | 0.0191  | -142.5556 |
| 4228 | 0   | Extremo | -0.012    | 10.949  | -1.723 | -8.6669  | -0.9634 | -141.2399 |
| 4228 | 0.5 | Extremo | -0.012    | 22.199  | -1.723 | -8.6669  | -0.1019 | -149.5269 |
| 4228 | 1   | Extremo | -0.012    | 33.449  | -1.723 | -8.6669  | 0.7595  | -163.4388 |
| 4228 | 0   | Extremo | 0.045     | 10.952  | 0.261  | -8.6465  | 0.1585  | -141.2553 |
| 4228 | 0.5 | Extremo | 0.045     | 22.202  | 0.261  | -8.6465  | 0.0279  | -149.544  |
| 4228 | 1   | Extremo | 0.045     | 33.452  | 0.261  | -8.6465  | -0.1026 | -163.4377 |
| 4229 | 0   | Extremo | -0.005655 | -4.531  | -1.919 | -14.1928 | -0.9856 | -160.3981 |
| 4229 | 0.5 | Extremo | -0.005655 | 6.719   | -1.919 | -14.1928 | -0.0262 | -160.9454 |
| 4229 | 1   | Extremo | -0.005655 | 17.969  | -1.919 | -14.1928 | 0.9331  | -167.1176 |
| 4229 | 0   | Extremo | 0.016     | -4.53   | 0.263  | -14.1563 | 0.122   | -160.4411 |
| 4229 | 0.5 | Extremo | 0.016     | 6.72    | 0.263  | -14.1563 | -0.0097 | -160.9886 |
| 4229 | 1   | Extremo | 0.016     | 17.97   | 0.263  | -14.1563 | -0.1415 | -167.1612 |
| 4230 | 0   | Extremo | -0.011    | -22.685 | -1.864 | -23.3756 | -0.889  | -170.7096 |
| 4230 | 0.5 | Extremo | -0.011    | -11.435 | -1.864 | -23.3756 | 0.0429  | -162.1795 |
| 4230 | 1   | Extremo | -0.011    | -0.185  | -1.864 | -23.3756 | 0.9748  | -159.2744 |
| 4230 | 0   | Extremo | 0.015     | -22.686 | 0.149  | -23.3061 | 0.057   | -170.7584 |
| 4230 | 0.5 | Extremo | 0.015     | -11.436 | 0.149  | -23.3061 | -0.0176 | -162.228  |
| 4230 | 1   | Extremo | 0.015     | -0.186  | 0.149  | -23.3061 | -0.0922 | -159.3225 |
| 4231 | 0   | Extremo | -0.024    | -41.901 | -1.623 | -28.434  | -0.723  | -169.66   |
| 4231 | 0.5 | Extremo | -0.024    | -30.651 | -1.623 | -28.434  | 0.0885  | -151.5221 |
| 4231 | 1   | Extremo | -0.024    | -19.401 | -1.623 | -28.434  | 0.9     | -139.0091 |
| 4231 | 0   | Extremo | 0.044     | -41.906 | 0.1    | -28.3327 | 0.0573  | -169.691  |
| 4231 | 0.5 | Extremo | 0.044     | -30.656 | 0.1    | -28.3327 | 0.0073  | -151.5506 |
| 4231 | 1   | Extremo | 0.044     | -19.406 | 0.1    | -28.3327 | -0.0427 | -139.0353 |
| 4232 | 0   | Extremo | -0.024    | -59.673 | -1.231 | -30.8684 | -0.5413 | -147.8459 |
| 4232 | 0.5 | Extremo | -0.024    | -48.423 | -1.231 | -30.8684 | 0.0741  | -120.8219 |
| 4232 | 1   | Extremo | -0.024    | -37.173 | -1.231 | -30.8684 | 0.6895  | -99.4229  |
| 4232 | 0   | Extremo | 0.046     | -59.686 | 0.229  | -30.6921 | 0.1317  | -147.8573 |
| 4232 | 0.5 | Extremo | 0.046     | -48.436 | 0.229  | -30.6921 | 0.0174  | -120.8269 |
| 4232 | 1   | Extremo | 0.046     | -37.186 | 0.229  | -30.6921 | -0.0969 | -99.4215  |
| 4233 | 0   | Extremo | -0.006301 | 25.173  | -1.243 | -6.6345  | -0.7518 | -106.6774 |
| 4233 | 0.5 | Extremo | -0.006301 | 36.423  | -1.243 | -6.6345  | -0.1302 | -122.0766 |
| 4233 | 1   | Extremo | -0.006301 | 47.673  | -1.243 | -6.6345  | 0.4914  | -143.1009 |
| 4233 | 0   | Extremo | 0.028     | 25.177  | 0.07   | -6.6149  | 0.0635  | -106.6768 |
| 4233 | 0.5 | Extremo | 0.028     | 36.427  | 0.07   | -6.6149  | 0.0288  | -122.0776 |
| 4233 | 1   | Extremo | 0.028     | 47.677  | 0.07   | -6.6149  | -0.006  | -143.1035 |
| 4234 | 0   | Extremo | -0.007013 | 10.975  | -1.712 | -9.337   | -0.9566 | -144.7027 |
| 4234 | 0.5 | Extremo | -0.007013 | 22.225  | -1.712 | -9.337   | -0.1008 | -153.0025 |
| 4234 | 1   | Extremo | -0.007013 | 33.475  | -1.712 | -9.337   | 0.7551  | -166.9274 |
| 4234 | 0   | Extremo | 0.027     | 10.974  | 0.219  | -9.3012  | 0.1315  | -144.7124 |
| 4234 | 0.5 | Extremo | 0.027     | 22.224  | 0.219  | -9.3012  | 0.0219  | -153.0117 |
| 4234 | 1   | Extremo | 0.027     | 33.474  | 0.219  | -9.3012  | -0.0877 | -166.936  |
| 4235 | 0   | Extremo | -0.005152 | -6.021  | -1.916 | -12.5026 | -0.9871 | -169.1039 |
| 4235 | 0.5 | Extremo | -0.005152 | 5.229   | -1.916 | -12.5026 | -0.0289 | -168.9059 |
| 4235 | 1   | Extremo | -0.005152 | 16.479  | -1.916 | -12.5026 | 0.9293  | -174.3329 |
| 4235 | 0   | Extremo | 0.011     | -6.023  | 0.239  | -12.4544 | 0.1166  | -169.1215 |
| 4235 | 0.5 | Extremo | 0.011     | 5.227   | 0.239  | -12.4544 | -0.0029 | -168.9227 |
| 4235 | 1   | Extremo | 0.011     | 16.477  | 0.239  | -12.4544 | -0.1224 | -174.3489 |
| 4236 | 0   | Extremo | -0.009316 | -25.591 | -1.878 | -16.1187 | -0.8977 | -179.3766 |
| 4236 | 0.5 | Extremo | -0.009316 | -14.341 | -1.878 | -16.1187 | 0.0411  | -169.3935 |
| 4236 | 1   | Extremo | -0.009316 | -3.091  | -1.878 | -16.1187 | 0.9798  | -165.0353 |
| 4236 | 0   | Extremo | 0.01      | -25.59  | 0.172  | -16.054  | 0.0756  | -179.395  |
| 4236 | 0.5 | Extremo | 0.01      | -14.34  | 0.172  | -16.054  | -0.0106 | -169.4127 |
| 4236 | 1   | Extremo | 0.01      | -3.09   | 0.172  | -16.054  | -0.0967 | -165.0554 |
| 4237 | 0   | Extremo | -0.017    | -44.887 | -1.64  | -18.6946 | -0.7281 | -172.8278 |
| 4237 | 0.5 | Extremo | -0.017    | -33.637 | -1.64  | -18.6946 | 0.0918  | -153.1966 |
| 4237 | 1   | Extremo | -0.017    | -22.387 | -1.64  | -18.6946 | 0.9116  | -139.1905 |
| 4237 | 0   | Extremo | 0.026     | -44.886 | 0.142  | -18.6064 | 0.0726  | -172.8419 |
| 4237 | 0.5 | Extremo | 0.026     | -33.636 | 0.142  | -18.6064 | 0.0015  | -153.2113 |
| 4237 | 1   | Extremo | 0.026     | -22.386 | 0.142  | -18.6064 | -0.0697 | -139.2058 |
| 4238 | 0   | Extremo | -0.017    | -62.31  | -1.216 | -21.8287 | -0.5301 | -147.2407 |
| 4238 | 0.5 | Extremo | -0.017    | -51.06  | -1.216 | -21.8287 | 0.078   | -118.8981 |

|      |     |         |           |         |        |          |           |           |
|------|-----|---------|-----------|---------|--------|----------|-----------|-----------|
| 4238 | 1   | Extremo | -0.017    | -39.81  | -1.216 | -21.8287 | 0.6862    | -96.1805  |
| 4238 | 0   | Extremo | 0.028     | -62.314 | 0.196  | -21.6596 | 0.1069    | -147.2482 |
| 4238 | 0.5 | Extremo | 0.028     | -51.064 | 0.196  | -21.6596 | 0.0091    | -118.9036 |
| 4238 | 1   | Extremo | 0.028     | -39.814 | 0.196  | -21.6596 | -0.0888   | -96.184   |
| 4239 | 0   | Extremo | -0.00275  | 25.771  | -1.249 | -4.6587  | -0.7539   | -107.2763 |
| 4239 | 0.5 | Extremo | -0.00275  | 37.021  | -1.249 | -4.6587  | -0.1295   | -122.9742 |
| 4239 | 1   | Extremo | -0.00275  | 48.271  | -1.249 | -4.6587  | 0.4949    | -144.2972 |
| 4239 | 0   | Extremo | 0.014     | 25.771  | 0.086  | -4.6368  | 0.0677    | -107.2732 |
| 4239 | 0.5 | Extremo | 0.014     | 37.021  | 0.086  | -4.6368  | 0.0247    | -122.9715 |
| 4239 | 1   | Extremo | 0.014     | 48.271  | 0.086  | -4.6368  | -0.0182   | -144.2947 |
| 4240 | 0   | Extremo | -0.003824 | 10.104  | -1.707 | -6.5368  | -0.9542   | -147.7293 |
| 4240 | 0.5 | Extremo | -0.003824 | 21.354  | -1.707 | -6.5368  | -0.1004   | -155.594  |
| 4240 | 1   | Extremo | -0.003824 | 32.604  | -1.707 | -6.5368  | 0.7533    | -169.0838 |
| 4240 | 0   | Extremo | 0.013     | 10.105  | 0.198  | -6.4961  | 0.1179    | -147.7273 |
| 4240 | 0.5 | Extremo | 0.013     | 21.355  | 0.198  | -6.4961  | 0.0188    | -155.5922 |
| 4240 | 1   | Extremo | 0.013     | 32.605  | 0.198  | -6.4961  | -0.0802   | -169.0821 |
| 4241 | 0   | Extremo | -0.004426 | -7.518  | -1.917 | -8.1245  | -0.9887   | -173.4019 |
| 4241 | 0.5 | Extremo | -0.004426 | 3.732   | -1.917 | -8.1245  | -0.0303   | -172.4554 |
| 4241 | 1   | Extremo | -0.004426 | 14.982  | -1.917 | -8.1245  | 0.928     | -177.1339 |
| 4241 | 0   | Extremo | 0.005022  | -7.517  | 0.225  | -8.0727  | 0.1132    | -173.4018 |
| 4241 | 0.5 | Extremo | 0.005022  | 3.733   | 0.225  | -8.0727  | 0.0007523 | -172.4559 |
| 4241 | 1   | Extremo | 0.005022  | 14.983  | 0.225  | -8.0727  | -0.1117   | -177.1349 |
| 4242 | 0   | Extremo | -0.008015 | -26.603 | -1.886 | -9.5716  | -0.9028   | -182.8679 |
| 4242 | 0.5 | Extremo | -0.008015 | -15.353 | -1.886 | -9.5716  | 0.0404    | -172.3787 |
| 4242 | 1   | Extremo | -0.008015 | -4.103  | -1.886 | -9.5716  | 0.9835    | -167.5144 |
| 4242 | 0   | Extremo | 0.004713  | -26.601 | 0.185  | -9.5081  | 0.0859    | -182.8692 |
| 4242 | 0.5 | Extremo | 0.004713  | -15.351 | 0.185  | -9.5081  | -0.0068   | -172.3814 |
| 4242 | 1   | Extremo | 0.004713  | -4.101  | 0.185  | -9.5081  | -0.0995   | -167.5186 |
| 4243 | 0   | Extremo | -0.013    | -45.64  | -1.648 | -10.7584 | -0.7302   | -174.4822 |
| 4243 | 0.5 | Extremo | -0.013    | -34.39  | -1.648 | -10.7584 | 0.0938    | -154.4747 |
| 4243 | 1   | Extremo | -0.013    | -23.14  | -1.648 | -10.7584 | 0.9178    | -140.0921 |
| 4243 | 0   | Extremo | 0.013     | -45.638 | 0.164  | -10.6748 | 0.0804    | -174.4846 |
| 4243 | 0.5 | Extremo | 0.013     | -34.388 | 0.164  | -10.6748 | -0.0014   | -154.4783 |
| 4243 | 1   | Extremo | 0.013     | -23.138 | 0.164  | -10.6748 | -0.0832   | -140.097  |
| 4244 | 0   | Extremo | -0.012    | -63.218 | -1.208 | -12.7089 | -0.5236   | -147.5213 |
| 4244 | 0.5 | Extremo | -0.012    | -51.968 | -1.208 | -12.7089 | 0.0804    | -118.7246 |
| 4244 | 1   | Extremo | -0.012    | -40.718 | -1.208 | -12.7089 | 0.6845    | -95.5529  |
| 4244 | 0   | Extremo | 0.014     | -63.219 | 0.181  | -12.5438 | 0.0949    | -147.5233 |
| 4244 | 0.5 | Extremo | 0.014     | -51.969 | 0.181  | -12.5438 | 0.0046    | -118.7265 |
| 4244 | 1   | Extremo | 0.014     | -40.719 | 0.181  | -12.5438 | -0.0858   | -95.5547  |
| 4245 | 0   | Extremo | 0.000182  | 25.844  | -1.251 | -1.6953  | -0.7552   | -107.8739 |
| 4245 | 0.5 | Extremo | 0.000182  | 37.094  | -1.251 | -1.6953  | -0.1295   | -123.6084 |
| 4245 | 1   | Extremo | 0.000182  | 48.344  | -1.251 | -1.6953  | 0.4961    | -144.9679 |
| 4245 | 0   | Extremo | 0.003281  | 25.844  | 0.092  | -1.6762  | 0.0688    | -107.8639 |
| 4245 | 0.5 | Extremo | 0.003281  | 37.094  | 0.092  | -1.6762  | 0.023     | -123.5983 |
| 4245 | 1   | Extremo | 0.003281  | 48.344  | 0.092  | -1.6762  | -0.0229   | -144.9577 |
| 4246 | 0   | Extremo | -0.001283 | 9.591   | -1.707 | -2.3007  | -0.9543   | -149.2146 |
| 4246 | 0.5 | Extremo | -0.001283 | 20.841  | -1.707 | -2.3007  | -0.1005   | -156.8225 |
| 4246 | 1   | Extremo | -0.001283 | 32.091  | -1.707 | -2.3007  | 0.7532    | -170.0553 |
| 4246 | 0   | Extremo | 0.002112  | 9.594   | 0.189  | -2.2616  | 0.112     | -149.1985 |
| 4246 | 0.5 | Extremo | 0.002112  | 20.844  | 0.189  | -2.2616  | 0.0176    | -156.8079 |
| 4246 | 1   | Extremo | 0.002112  | 32.094  | 0.189  | -2.2616  | -0.0768   | -170.0424 |
| 4247 | 0   | Extremo | -0.00372  | -8.234  | -1.919 | -2.7549  | -0.9905   | -175.131  |
| 4247 | 0.5 | Extremo | -0.00372  | 3.016   | -1.919 | -2.7549  | -0.031    | -173.8266 |
| 4247 | 1   | Extremo | -0.00372  | 14.266  | -1.919 | -2.7549  | 0.9286    | -178.1472 |
| 4247 | 0   | Extremo | -0.000948 | -8.229  | 0.218  | -2.7036  | 0.1116    | -175.1146 |
| 4247 | 0.5 | Extremo |           |         |        |          |           |           |



|      |     |         |           |         |        |         |           |           |
|------|-----|---------|-----------|---------|--------|---------|-----------|-----------|
| 4250 | 1   | Extremo | -0.008378 | -40.98  | -1.203 | -3.8283 | 0.6835    | -95.4881  |
| 4250 | 0   | Extremo | 0.002587  | -63.478 | 0.175  | -3.6639 | 0.0904    | -147.7152 |
| 4250 | 0.5 | Extremo | 0.002587  | -52.228 | 0.175  | -3.6639 | 0.0027    | -118.7886 |
| 4250 | 1   | Extremo | 0.002587  | -40.978 | 0.175  | -3.6639 | -0.085    | -95.487   |
| 4251 | 0   | Extremo | 0.003095  | 25.839  | -1.252 | 1.592   | -0.756    | -107.8538 |
| 4251 | 0.5 | Extremo | 0.003095  | 37.089  | -1.252 | 1.592   | -0.1301   | -123.5857 |
| 4251 | 1   | Extremo | 0.003095  | 48.339  | -1.252 | 1.592   | 0.4957    | -144.9427 |
| 4251 | 0   | Extremo | -0.007051 | 25.838  | 0.091  | 1.6016  | 0.0682    | -107.8339 |
| 4251 | 0.5 | Extremo | -0.007051 | 37.088  | 0.091  | 1.6016  | 0.0229    | -123.5656 |
| 4251 | 1   | Extremo | -0.007051 | 48.338  | 0.091  | 1.6016  | -0.0223   | -144.9223 |
| 4252 | 0   | Extremo | 0.001183  | 9.595   | -1.711 | 2.3153  | -0.9564   | -149.1656 |
| 4252 | 0.5 | Extremo | 0.001183  | 20.845  | -1.711 | 2.3153  | -0.1011   | -156.7755 |
| 4252 | 1   | Extremo | 0.001183  | 32.095  | -1.711 | 2.3153  | 0.7542    | -170.0103 |
| 4252 | 0   | Extremo | -0.008219 | 9.602   | 0.187  | 2.3466  | 0.1114    | -149.1307 |
| 4252 | 0.5 | Extremo | -0.008219 | 20.852  | 0.187  | 2.3466  | 0.0177    | -156.7445 |
| 4252 | 1   | Extremo | -0.008219 | 32.102  | 0.187  | 2.3466  | -0.0761   | -169.9832 |
| 4253 | 0   | Extremo | -0.003107 | -8.23   | -1.924 | 2.8583  | -0.9928   | -175.0661 |
| 4253 | 0.5 | Extremo | -0.003107 | 3.02    | -1.924 | 2.8583  | -0.031    | -173.7636 |
| 4253 | 1   | Extremo | -0.003107 | 14.27   | -1.924 | 2.8583  | 0.9308    | -178.0862 |
| 4253 | 0   | Extremo | -0.00706  | -8.219  | 0.218  | 2.9053  | 0.1114    | -175.029  |
| 4253 | 0.5 | Extremo | -0.00706  | 3.031   | 0.218  | 2.9053  | 0.0026    | -173.7321 |
| 4253 | 1   | Extremo | -0.00706  | 14.281  | 0.218  | 2.9053  | -0.1062   | -178.0601 |
| 4254 | 0   | Extremo | -0.006558 | -27.009 | -1.895 | 3.334   | -0.9067   | -184.0883 |
| 4254 | 0.5 | Extremo | -0.006558 | -15.759 | -1.895 | 3.334   | 0.041     | -173.3265 |
| 4254 | 1   | Extremo | -0.006558 | -4.509  | -1.895 | 3.334   | 0.9886    | -168.3297 |
| 4254 | 0   | Extremo | -0.00744  | -27     | 0.191  | 3.3961  | 0.0908    | -184.0583 |
| 4254 | 0.5 | Extremo | -0.00744  | -15.75  | 0.191  | 3.3961  | -0.0048   | -173.3709 |
| 4254 | 1   | Extremo | -0.00744  | -4.5    | 0.191  | 3.3961  | -0.1004   | -168.3085 |
| 4255 | 0   | Extremo | -0.00719  | -45.864 | -1.652 | 3.8182  | -0.7299   | -175.1017 |
| 4255 | 0.5 | Extremo | -0.00719  | -34.614 | -1.652 | 3.8182  | 0.096     | -154.982  |
| 4255 | 1   | Extremo | -0.00719  | -23.364 | -1.652 | 3.8182  | 0.9219    | -140.4873 |
| 4255 | 0   | Extremo | -0.009187 | -45.859 | 0.174  | 3.9027  | 0.0846    | -175.082  |
| 4255 | 0.5 | Extremo | -0.009187 | -34.609 | 0.174  | 3.9027  | -0.0023   | -154.9653 |
| 4255 | 1   | Extremo | -0.009187 | -23.359 | 0.174  | 3.9027  | -0.0893   | -140.4735 |
| 4256 | 0   | Extremo | -0.005638 | -63.471 | -1.2   | 4.9741  | -0.5175   | -147.6819 |
| 4256 | 0.5 | Extremo | -0.005638 | -52.221 | -1.2   | 4.9741  | 0.0826    | -118.7589 |
| 4256 | 1   | Extremo | -0.005638 | -40.971 | -1.2   | 4.9741  | 0.6828    | -95.4608  |
| 4256 | 0   | Extremo | -0.00809  | -63.466 | 0.177  | 5.1411  | 0.0913    | -147.6728 |
| 4256 | 0.5 | Extremo | -0.00809  | -52.216 | 0.177  | 5.1411  | 0.0028    | -118.7521 |
| 4256 | 1   | Extremo | -0.00809  | -40.966 | 0.177  | 5.1411  | -0.0856   | -95.4564  |
| 4257 | 0   | Extremo | 0.006561  | 25.747  | -1.25  | 4.5138  | -0.7564   | -107.2277 |
| 4257 | 0.5 | Extremo | 0.006561  | 36.997  | -1.25  | 4.5138  | -0.1314   | -122.9136 |
| 4257 | 1   | Extremo | 0.006561  | 48.247  | -1.25  | 4.5138  | 0.4936    | -144.2244 |
| 4257 | 0   | Extremo | -0.018    | 25.745  | 0.082  | 4.5045  | 0.0657    | -107.1959 |
| 4257 | 0.5 | Extremo | -0.018    | 36.995  | 0.082  | 4.5045  | 0.0247    | -122.8808 |
| 4257 | 1   | Extremo | -0.018    | 48.245  | 0.082  | 4.5045  | -0.0164   | -144.1906 |
| 4258 | 0   | Extremo | 0.004116  | 10.114  | -1.717 | 6.5026  | -0.9607   | -147.5775 |
| 4258 | 0.5 | Extremo | 0.004116  | 21.364  | -1.717 | 6.5026  | -0.1021   | -155.4471 |
| 4258 | 1   | Extremo | 0.004116  | 32.614  | -1.717 | 6.5026  | 0.7565    | -168.9418 |
| 4258 | 0   | Extremo | -0.02     | 10.129  | 0.194  | 6.5162  | 0.1161    | -147.5156 |
| 4258 | 0.5 | Extremo | -0.02     | 21.379  | 0.194  | 6.5162  | 0.019     | -155.3926 |
| 4258 | 1   | Extremo | -0.02     | 32.629  | 0.194  | 6.5162  | -0.0781   | -168.8947 |
| 4259 | 0   | Extremo | -0.002617 | -7.507  | -1.931 | 8.1979  | -0.9958   | -173.1857 |
| 4259 | 0.5 | Extremo | -0.002617 | 3.743   | -1.931 | 8.1979  | -0.0304   | -172.2448 |
| 4259 | 1   | Extremo | -0.002617 | 14.993  | -1.931 | 8.1979  | 0.935     | -176.9288 |
| 4259 | 0   | Extremo | -0.013    | -7.486  | 0.222  | 8.2348  | 0.1125    | -173.1168 |
| 4259 | 0.5 | Extremo | -0.013    | 3.764   | 0.222  | 8.2348  | 0.0013    | -172.1862 |
| 4259 | 1   | Extremo | -0.013    | 15.014  | 0.222  | 8.2348  | -0.1099   | -176.8806 |
| 4260 | 0   | Extremo | -0.00653  | -26.625 | -1.897 | 9.7907  | -0.9062   | -182.6428 |
| 4260 | 0.5 | Extremo | -0.00653  | -15.375 | -1.897 | 9.7907  | 0.0422    | -172.1429 |
| 4260 | 1   | Extremo | -0.00653  | -4.125  | -1.897 | 9.7907  | 0.9906    | -167.2679 |
| 4260 | 0   | Extremo | -0.014    | -26.611 | 0.185  | 9.8518  | 0.0867    | -182.5866 |
| 4260 | 0.5 | Extremo | -0.014    | -15.361 | 0.185  | 9.8518  | -0.006    | -172.0936 |
| 4260 | 1   | Extremo | -0.014    | -4.111  | 0.185  | 9.8518  | -0.0987   | -167.2256 |
| 4261 | 0   | Extremo | -0.005337 | -45.656 | -1.649 | 11.2098 | -0.7278   | -174.2863 |
| 4261 | 0.5 | Extremo | -0.005337 | -34.406 | -1.649 | 11.2098 | 0.0965    | -154.271  |
| 4261 | 1   | Extremo | -0.005337 | -23.156 | -1.649 | 11.2098 | 0.9208    | -139.8806 |
| 4261 | 0   | Extremo | -0.021    | -45.647 | 0.166  | 11.2999 | 0.0825    | -174.2495 |
| 4261 | 0.5 | Extremo | -0.021    | -34.397 | 0.166  | 11.2999 | -0.000771 | -154.2387 |
| 4261 | 1   | Extremo | -0.021    | -23.147 | 0.166  | 11.2999 | 0.084     | -139.8528 |
| 4262 | 0   | Extremo | -0.003174 | -63.184 | -1.199 | 13.9057 | -0.5168   | -147.4022 |
| 4262 | 0.5 | Extremo | -0.003174 | -51.934 | -1.199 | 13.9057 | 0.0828    | -118.6228 |

|      |     |         |           |         |        |         |         |           |
|------|-----|---------|-----------|---------|--------|---------|---------|-----------|
| 4262 | 1   | Extremo | -0.003174 | -40.684 | -1.199 | 13.9057 | 0.6823  | -95.4685  |
| 4262 | 0   | Extremo | -0.02     | -63.174 | 0.185  | 14.0795 | 0.0976  | -147.3855 |
| 4262 | 0.5 | Extremo | -0.02     | -51.924 | 0.185  | 14.0795 | 0.005   | -118.6108 |
| 4262 | 1   | Extremo | -0.02     | -40.674 | 0.185  | 14.0795 | -0.0875 | -95.4611  |
| 4263 | 0   | Extremo | 0.011     | 25.087  | -1.245 | 6.4051  | -0.7561 | -106.6664 |
| 4263 | 0.5 | Extremo | 0.011     | 36.337  | -1.245 | 6.4051  | -0.1336 | -122.0223 |
| 4263 | 1   | Extremo | 0.011     | 47.587  | -1.245 | 6.4051  | 0.4889  | -143.0031 |
| 4263 | 0   | Extremo | -0.033    | 25.076  | 0.063  | 6.3633  | 0.0602  | -106.6282 |
| 4263 | 0.5 | Extremo | -0.033    | 36.326  | 0.063  | 6.3633  | 0.0286  | -121.9787 |
| 4263 | 1   | Extremo | -0.033    | 47.576  | 0.063  | 6.3633  | -0.003  | -142.9543 |
| 4264 | 0   | Extremo | 0.008158  | 10.969  | -1.729 | 9.1745  | -0.9683 | -144.4509 |
| 4264 | 0.5 | Extremo | 0.008158  | 22.219  | -1.729 | 9.1745  | -0.1038 | -152.7482 |
| 4264 | 1   | Extremo | 0.008158  | 33.469  | -1.729 | 9.1745  | 0.7606  | -166.6704 |
| 4264 | 0   | Extremo | -0.034    | 10.992  | 0.212  | 9.1515  | 0.1284  | -144.3518 |
| 4264 | 0.5 | Extremo | -0.034    | 22.242  | 0.212  | 9.1515  | 0.0222  | -152.6604 |
| 4264 | 1   | Extremo | -0.034    | 33.492  | 0.212  | 9.1515  | -0.084  | -166.5941 |
| 4265 | 0   | Extremo | -0.002324 | -6.017  | -1.942 | 12.4904 | -0.9999 | -168.6603 |
| 4265 | 0.5 | Extremo | -0.002324 | 5.233   | -1.942 | 12.4904 | -0.0291 | -168.4643 |
| 4265 | 1   | Extremo | -0.002324 | 16.483  | -1.942 | 12.4904 | 0.9417  | -173.8932 |
| 4265 | 0   | Extremo | -0.02     | -5.982  | 0.234  | 12.5042 | 0.1153  | -168.536  |
| 4265 | 0.5 | Extremo | -0.02     | 5.268   | 0.234  | 12.5042 | -0.0019 | -168.3576 |
| 4265 | 1   | Extremo | -0.02     | 16.518  | 0.234  | 12.5042 | -0.1192 | -173.8042 |
| 4266 | 0   | Extremo | -0.007109 | -25.649 | -1.896 | 16.3694 | -0.9038 | -178.8946 |
| 4266 | 0.5 | Extremo | -0.007109 | -14.399 | -1.896 | 16.3694 | 0.0444  | -168.8825 |
| 4266 | 1   | Extremo | -0.007109 | -3.149  | -1.896 | 16.3694 | 0.9925  | -164.4953 |
| 4266 | 0   | Extremo | -0.021    | -25.627 | 0.172  | 16.4314 | 0.0769  | -178.7897 |
| 4266 | 0.5 | Extremo | -0.021    | -14.377 | 0.172  | 16.4314 | -0.0092 | -168.7888 |
| 4266 | 1   | Extremo | -0.021    | -3.127  | 0.172  | 16.4314 | -0.0954 | -164.4129 |
| 4267 | 0   | Extremo | -0.003386 | -44.915 | -1.641 | 19.2664 | -0.7239 | -172.4308 |
| 4267 | 0.5 | Extremo | -0.003386 | -33.665 | -1.641 | 19.2664 | 0.0967  | -152.7859 |
| 4267 | 1   | Extremo | -0.003386 | -22.415 | -1.641 | 19.2664 | 0.9172  | -138.7659 |
| 4267 | 0   | Extremo | -0.035    | -44.899 | 0.147  | 19.3717 | 0.0762  | -172.3662 |
| 4267 | 0.5 | Extremo | -0.035    | -33.649 | 0.147  | 19.3717 | 0.0026  | -152.7293 |
| 4267 | 1   | Extremo | -0.035    | -22.399 | 0.147  | 19.3717 | -0.071  | -138.7174 |
| 4268 | 0   | Extremo | -0.000443 | -62.216 | -1.2   | 23.1443 | -0.518  | -147.0163 |
| 4268 | 0.5 | Extremo | -0.000443 | -50.966 | -1.2   | 23.1443 | 0.0821  | -118.721  |
| 4268 | 1   | Extremo | -0.000443 | -39.716 | -1.2   | 23.1443 | 0.6823  | -95.4506  |
| 4268 | 0   | Extremo | -0.034    | -62.195 | 0.204  | 23.3311 | 0.1116  | -146.9905 |
| 4268 | 0.5 | Extremo | -0.034    | -50.945 | 0.204  | 23.3311 | 0.0099  | -118.7057 |
| 4268 | 1   | Extremo | -0.034    | -39.695 | 0.204  | 23.3311 | -0.0919 | -96.0459  |
| 4269 | 0   | Extremo | 0.018     | 22.631  | -1.233 | 7.1248  | -0.7539 | -108.6712 |
| 4269 | 0.5 | Extremo | 0.018     | 33.881  | -1.233 | 7.1248  | -0.1372 | -122.799  |
| 4269 | 1   | Extremo | 0.018     | 45.131  | -1.233 | 7.1248  | 0.4795  | -142.5518 |
| 4269 | 0   | Extremo | -0.052    | 22.59   | 0.025  | 7.0385  | 0.0485  | -108.6612 |
| 4269 | 0.5 | Extremo | -0.052    | 33.84   | 0.025  | 7.0385  | 0.036   | -122.7687 |
| 4269 | 1   | Extremo | -0.052    | 45.09   | 0.025  | 7.0385  | 0.0235  | -142.5012 |
| 4270 | 0   | Extremo | 0.014     | 10.809  | -1.75  | 8.2062  | -0.9817 | -140.9984 |
| 4270 | 0.5 | Extremo | 0.014     | 22.059  | -1.75  | 8.2062  | -0.1069 | -149.2152 |
| 4270 | 1   | Extremo | 0.014     | 33.309  | -1.75  | 8.2062  | 0.768   | -163.0571 |
| 4270 | 0   | Extremo | -0.053    | 10.825  | 0.251  | 8.1055  | 0.1538  | -140.8658 |
| 4270 | 0.5 | Extremo | -0.053    | 22.075  | 0.251  | 8.1055  | 0.0284  | -149.0907 |
| 4270 | 1   | Extremo | -0.053    | 33.325  | 0.251  | 8.1055  | -0.0971 | -162.9405 |
| 4271 | 0   | Extremo | -0.002646 | -4.643  | -1.958 | 13.9567 | -1.0055 | -159.5597 |
| 4271 | 0.5 | Extremo | -0.002646 | 6.607   | -1.958 | 13.9567 | -0.0266 | -160.0507 |
| 4271 | 1   | Extremo | -0.002646 | 17.857  | -1.958 | 13.9567 | 0.9523  | -166.1668 |
| 4271 | 0   | Extremo | -0.027    | -4.6    | 0.257  | 13.9157 | 0.12    | -159      |



|      |     |         |           |         |        |          |         |           |
|------|-----|---------|-----------|---------|--------|----------|---------|-----------|
| 4274 | 1   | Extremo | 0.003218  | -36.914 | -1.207 | 32.378   | 0.6836  | -99.362   |
| 4274 | 0   | Extremo | -0.054    | -59.36  | 0.24   | 32.5814  | 0.1387  | -147.5    |
| 4274 | 0.5 | Extremo | -0.054    | -48.11  | 0.24   | 32.5814  | 0.0186  | -120.6323 |
| 4274 | 1   | Extremo | -0.054    | -36.86  | 0.24   | 32.5814  | -0.1014 | -99.3895  |
| 4275 | 0   | Extremo | 0.029     | 18.622  | -1.21  | 9.4798   | -0.748  | -119.5026 |
| 4275 | 0.5 | Extremo | 0.029     | 29.872  | -1.21  | 9.4798   | -0.1433 | -131.626  |
| 4275 | 1   | Extremo | 0.029     | 41.122  | -1.21  | 9.4798   | 0.4615  | -149.3744 |
| 4275 | 0   | Extremo | -0.08     | 18.533  | -0.051 | 9.3732   | 0.0236  | -119.6288 |
| 4275 | 0.5 | Extremo | -0.08     | 29.783  | -0.051 | 9.3732   | 0.0492  | -131.7079 |
| 4275 | 1   | Extremo | -0.08     | 41.033  | -0.051 | 9.3732   | 0.0748  | -149.412  |
| 4276 | 0   | Extremo | 0.022     | 2.363   | -1.788 | -1.194   | -1.0062 | -144.679  |
| 4276 | 0.5 | Extremo | 0.022     | 13.613  | -1.788 | -1.194   | -0.1121 | -148.673  |
| 4276 | 1   | Extremo | 0.022     | 24.863  | -1.788 | -1.194   | 0.782   | -158.292  |
| 4276 | 0   | Extremo | -0.081    | 2.272   | 0.33   | -1.4662  | 0.2048  | -144.6054 |
| 4276 | 0.5 | Extremo | -0.081    | 13.522  | 0.33   | -1.4662  | 0.04    | -148.5539 |
| 4276 | 1   | Extremo | -0.081    | 24.772  | 0.33   | -1.4662  | -0.1248 | -158.1273 |
| 4277 | 0   | Extremo | -0.005291 | -9.32   | -1.983 | 8.6117   | -1.0136 | -142.7017 |
| 4277 | 0.5 | Extremo | -0.005291 | 1.93    | -1.983 | 8.6117   | -0.0222 | -140.8543 |
| 4277 | 1   | Extremo | -0.005291 | 13.18   | -1.983 | 8.6117   | 0.9693  | -144.6319 |
| 4277 | 0   | Extremo | -0.03     | -9.347  | 0.293  | 8.4401   | 0.1263  | -142.2928 |
| 4277 | 0.5 | Extremo | -0.03     | 1.903   | 0.293  | 8.4401   | -0.02   | -140.4317 |
| 4277 | 1   | Extremo | -0.03     | 13.153  | 0.293  | 8.4401   | -0.1663 | -144.1957 |
| 4278 | 0   | Extremo | -0.012    | -11.804 | -1.889 | 33.8226  | -0.8907 | -145.2585 |
| 4278 | 0.5 | Extremo | -0.012    | -0.554  | -1.889 | 33.8226  | 0.0536  | -142.1689 |
| 4278 | 1   | Extremo | -0.012    | 10.696  | -1.889 | 33.8226  | 0.9979  | -144.7043 |
| 4278 | 0   | Extremo | -0.03     | -11.646 | 0.112  | 33.9425  | 0.0284  | -144.7633 |
| 4278 | 0.5 | Extremo | -0.03     | -0.396  | 0.112  | 33.9425  | -0.0273 | -141.753  |
| 4278 | 1   | Extremo | -0.03     | 10.854  | 0.112  | 33.9425  | -0.0831 | -144.3677 |
| 4279 | 0   | Extremo | 0.003969  | -28.022 | -1.598 | 44.7273  | -0.705  | -162.4585 |
| 4279 | 0.5 | Extremo | 0.003969  | -16.772 | -1.598 | 44.7273  | 0.0941  | -151.2599 |
| 4279 | 1   | Extremo | 0.003969  | -5.522  | -1.598 | 44.7273  | 0.8932  | -145.6863 |
| 4279 | 0   | Extremo | -0.082    | -27.824 | 0.026  | 44.9816  | 0.034   | -162.2621 |
| 4279 | 0.5 | Extremo | -0.082    | -16.574 | 0.026  | 44.9816  | 0.0209  | -151.1627 |
| 4279 | 1   | Extremo | -0.082    | -5.324  | 0.026  | 44.9816  | 0.0079  | -145.6883 |
| 4280 | 0   | Extremo | 0.008555  | -53.974 | -1.224 | 38.4659  | -0.5353 | -154.2906 |
| 4280 | 0.5 | Extremo | 0.008555  | -42.724 | -1.224 | 38.4659  | 0.0767  | -130.1162 |
| 4280 | 1   | Extremo | 0.008555  | -31.474 | -1.224 | 38.4659  | 0.6886  | -111.5667 |
| 4280 | 0   | Extremo | -0.082    | -53.857 | 0.313  | 38.6555  | 0.1905  | -154.3324 |
| 4280 | 0.5 | Extremo | -0.082    | -42.607 | 0.313  | 38.6555  | 0.0341  | -130.2164 |
| 4280 | 1   | Extremo | -0.082    | -31.357 | 0.313  | 38.6555  | -0.1224 | -111.7253 |
| 4281 | 0   | Extremo | 0.041     | 34.766  | -1.162 | 25.1232  | -0.7364 | -145.2982 |
| 4281 | 0.5 | Extremo | 0.041     | 46.016  | -1.162 | 25.1232  | -0.1553 | -165.494  |
| 4281 | 1   | Extremo | 0.041     | 57.266  | -1.162 | 25.1232  | 0.4259  | -191.3147 |
| 4281 | 0   | Extremo | -0.118    | 34.869  | -0.205 | 25.1607  | -0.0292 | -145.7396 |
| 4281 | 0.5 | Extremo | -0.118    | 46.119  | -0.205 | 25.1607  | 0.0735  | -165.9866 |
| 4281 | 1   | Extremo | -0.118    | 57.369  | -0.205 | 25.1607  | 0.1762  | -191.8586 |
| 4282 | 0   | Extremo | 0.032     | -48.558 | -1.865 | -28.9954 | -1.0528 | -186.359  |
| 4282 | 0.5 | Extremo | 0.032     | -37.308 | -1.865 | -28.9954 | -0.1205 | -164.8924 |
| 4282 | 1   | Extremo | 0.032     | -26.058 | -1.865 | -28.9954 | 0.8118  | -149.0507 |
| 4282 | 0   | Extremo | -0.115    | -49.258 | 0.49   | -29.6458 | 0.3076  | -186.7996 |
| 4282 | 0.5 | Extremo | -0.115    | -38.008 | 0.49   | -29.6458 | 0.0625  | -164.9831 |
| 4282 | 1   | Extremo | -0.115    | -26.758 | 0.49   | -29.6458 | -0.1827 | -148.7916 |
| 4283 | 0   | Extremo | -0.013    | -40.685 | -2.024 | -8.8134  | -1.0257 | -114.2388 |
| 4283 | 0.5 | Extremo | -0.013    | -29.435 | -2.024 | -8.8134  | -0.0136 | -96.7087  |
| 4283 | 1   | Extremo | -0.013    | -18.185 | -2.024 | -8.8134  | 0.9985  | -84.8035  |
| 4283 | 0   | Extremo | -0.021    | -41.105 | 0.343  | -9.247   | 0.13    | -113.523  |
| 4283 | 0.5 | Extremo | -0.021    | -29.855 | 0.343  | -9.247   | -0.0412 | -95.783   |
| 4283 | 1   | Extremo | -0.021    | -18.605 | 0.343  | -9.247   | -0.2125 | -83.668   |
| 4284 | 0   | Extremo | -0.024    | 26.917  | -1.888 | 48.3846  | -0.8815 | -80.6086  |
| 4284 | 0.5 | Extremo | -0.024    | 38.167  | -1.888 | 48.3846  | 0.0626  | -96.8796  |
| 4284 | 1   | Extremo | -0.024    | 49.417  | -1.888 | 48.3846  | 1.0066  | -118.7757 |
| 4284 | 0   | Extremo | -0.021    | 27.494  | 0.058  | 48.6115  | -0.0198 | -79.3715  |
| 4284 | 0.5 | Extremo | -0.021    | 38.744  | 0.058  | 48.6115  | -0.0488 | -95.9311  |
| 4284 | 1   | Extremo | -0.021    | 49.994  | 0.058  | 48.6115  | -0.0778 | -118.1156 |
| 4285 | 0   | Extremo | 0.007966  | 33.032  | -1.546 | 72.3976  | -0.685  | -146.4518 |
| 4285 | 0.5 | Extremo | 0.007966  | 44.282  | -1.546 | 72.3976  | 0.088   | -165.7803 |
| 4285 | 1   | Extremo | 0.007966  | 55.532  | -1.546 | 72.3976  | 0.861   | -190.7338 |
| 4285 | 0   | Extremo | -0.116    | 33.917  | -0.139 | 72.9088  | -0.0261 | -146.0577 |
| 4285 | 0.5 | Extremo | -0.116    | 45.167  | -0.139 | 72.9088  | 0.0432  | -165.8287 |
| 4285 | 1   | Extremo | -0.116    | 56.417  | -0.139 | 72.9088  | 0.1126  | -191.2247 |
| 4286 | 0   | Extremo | 0.017     | -60.583 | -1.268 | 28.5657  | -0.5638 | -191.5332 |
| 4286 | 0.5 | Extremo | 0.017     | -49.333 | -1.268 | 28.5657  | 0.0703  | -164.0542 |

|      |     |         |           |           |           |          |         |           |
|------|-----|---------|-----------|-----------|-----------|----------|---------|-----------|
| 4286 | 1   | Extremo | 0.017     | -38.083   | -1.268    | 28.5657  | 0.7044  | -142.2002 |
| 4286 | 0   | Extremo | -0.119    | -60.539   | 0.46      | 28.5676  | 0.2921  | -191.9863 |
| 4286 | 0.5 | Extremo | -0.119    | -49.289   | 0.46      | 28.5676  | 0.062   | -164.5294 |
| 4286 | 1   | Extremo | -0.119    | -38.039   | 0.46      | 28.5676  | -0.1681 | -142.6975 |
| 4287 | 0   | Extremo | -0.001889 | 198.624   | -1.079    | 68.3421  | -0.7242 | -151.9816 |
| 4287 | 0.5 | Extremo | -0.001889 | 209.874   | -1.079    | 68.3421  | -0.1849 | -254.1062 |
| 4287 | 1   | Extremo | -0.001889 | 221.124   | -1.079    | 68.3421  | 0.3545  | -361.8558 |
| 4287 | 0   | Extremo | -0.146    | 200.662   | -0.529    | 68.8578  | -0.1454 | -152.5111 |
| 4287 | 0.5 | Extremo | -0.146    | 211.912   | -0.529    | 68.8578  | 0.119   | -255.6546 |
| 4287 | 1   | Extremo | -0.146    | 223.162   | -0.529    | 68.8578  | 0.3834  | -364.4232 |
| 4288 | 0   | Extremo | 0.088     | -276.025  | -2.031    | -79.0552 | -1.145  | -362.2443 |
| 4288 | 0.5 | Extremo | 0.088     | -264.775  | -2.031    | -79.0552 | -0.1293 | -227.0444 |
| 4288 | 1   | Extremo | 0.088     | -253.525  | -2.031    | -79.0552 | 0.8863  | -97.4694  |
| 4288 | 0   | Extremo | -0.124    | -279.413  | 0.821     | -80.3323 | 0.517   | -364.7826 |
| 4288 | 0.5 | Extremo | -0.124    | -268.163  | 0.821     | -80.3323 | 0.1065  | -227.8888 |
| 4288 | 1   | Extremo | -0.124    | -256.913  | 0.821     | -80.3323 | -0.3039 | -96.6201  |
| 4289 | 0   | Extremo | -0.002763 | -130.814  | -2.108    | -29.9641 | -1.0501 | -68.0545  |
| 4289 | 0.5 | Extremo | -0.002763 | -119.564  | -2.108    | -29.9641 | 0.0039  | -5.46     |
| 4289 | 1   | Extremo | -0.002763 | -108.314  | -2.108    | -29.9641 | 1.0579  | 51.5096   |
| 4289 | 0   | Extremo | 0.011     | -132.318  | 0.387     | -30.6829 | 0.1121  | -66.8314  |
| 4289 | 0.5 | Extremo | 0.011     | -121.068  | 0.387     | -30.6829 | -0.0811 | -3.4848   |
| 4289 | 1   | Extremo | 0.011     | -109.818  | 0.387     | -30.6829 | -0.2744 | 54.2369   |
| 4290 | 0   | Extremo | -0.073    | 122.533   | -1.929    | 55.2536  | -0.8878 | 61.521    |
| 4290 | 0.5 | Extremo | -0.073    | 133.783   | -1.929    | 55.2536  | 0.0767  | -2.558    |
| 4290 | 1   | Extremo | -0.073    | 145.033   | -1.929    | 55.2536  | 1.0412  | -72.2619  |
| 4290 | 0   | Extremo | 0.002751  | 124.175   | -0.000672 | 55.5191  | -0.09   | 64.3886   |
| 4290 | 0.5 | Extremo | 0.002751  | 135.425   | -0.000672 | 55.5191  | -0.0896 | -0.5112   |
| 4290 | 1   | Extremo | 0.002751  | 146.675   | -0.000672 | 55.5191  | -0.0893 | -71.0361  |
| 4291 | 0   | Extremo | -0.052    | 275.552   | -1.457    | 109.6839 | -0.6604 | -81.0612  |
| 4291 | 0.5 | Extremo | -0.052    | 286.802   | -1.457    | 109.6839 | 0.068   | -221.6495 |
| 4291 | 1   | Extremo | -0.052    | 298.052   | -1.457    | 109.6839 | 0.7963  | -367.8628 |
| 4291 | 0   | Extremo | -0.141    | 279.186   | -0.481    | 110.5745 | -0.1554 | -79.9055  |
| 4291 | 0.5 | Extremo | -0.141    | 290.436   | -0.481    | 110.5745 | 0.0851  | -222.3108 |
| 4291 | 1   | Extremo | -0.141    | 301.686   | -0.481    | 110.5745 | 0.3256  | -370.3411 |
| 4292 | 0   | Extremo | 0.064     | -186.415  | -1.386    | -20.4825 | -0.629  | -346.5983 |
| 4292 | 0.5 | Extremo | 0.064     | -175.165  | -1.386    | -20.4825 | 0.0638  | -256.2033 |
| 4292 | 1   | Extremo | 0.064     | -163.915  | -1.386    | -20.4825 | 0.7567  | -171.4334 |
| 4292 | 0   | Extremo | -0.135    | -187.795  | 0.767     | -21.1044 | 0.4986  | -348.7996 |
| 4292 | 0.5 | Extremo | -0.135    | -176.545  | 0.767     | -21.1044 | 0.115   | -257.7145 |
| 4292 | 1   | Extremo | -0.135    | -165.295  | 0.767     | -21.1044 | -0.2685 | -172.2545 |
| 4293 | 0   | Extremo | -0.585    | 860.091   | -1.021    | 0.3201   | -0.7213 | 46.9297   |
| 4293 | 0.5 | Extremo | -0.585    | 871.341   | -1.021    | 0.3201   | -0.2109 | -385.9283 |
| 4293 | 1   | Extremo | -0.585    | 882.591   | -1.021    | 0.3201   | 0.2994  | -824.4112 |
| 4293 | 0   | Extremo | -0.092    | 869.935   | -1.271    | 0.0072   | -0.4419 | 48.7437   |
| 4293 | 0.5 | Extremo | -0.092    | 881.185   | -1.271    | 0.0072   | 0.1938  | -389.0362 |
| 4293 | 1   | Extremo | -0.092    | 892.435   | -1.271    | 0.0072   | 0.8295  | -832.441  |
| 4294 | 0   | Extremo | 0.596     | -992.686  | -2.504    | 0.2984   | -1.4203 | -828.5784 |
| 4294 | 0.5 | Extremo | 0.596     | -981.436  | -2.504    | 0.2984   | -0.1686 | -335.0478 |
| 4294 | 1   | Extremo | 0.596     | -970.186  | -2.504    | 0.2984   | 1.0832  | -152.8578 |
| 4294 | 0   | Extremo | 0.064     | -1004.529 | 1.518     | -0.0668  | 0.9322  | -836.6283 |
| 4294 | 0.5 | Extremo | 0.064     | -993.279  | 1.518     | -0.0668  | 0.1732  | -337.1762 |
| 4294 | 1   | Extremo | 0.064     | -982.029  | 1.518     | -0.0668  | -0.5857 | -156.6509 |
| 4295 | 0   | Extremo | 0.151     | -220.34   | -2.306    | 0.2942   | -1.1292 | 8.2828    |
| 4295 | 0.5 | Extremo | 0.151     | -209.09   | -2.306    | 0.2942   | 0.0239  | 115.6402  |
| 4295 | 1   | Extremo | 0.151     | -197.84   | -2.306    | 0.2942   | 1.1771  | 217.3726  |
| 4295 | 0   | Extremo | -0.000336 | -222.903  | 0.358     | -0.0785  | 0.0315  | 10.3851   |
| 4295 | 0.5 | Extremo | -0.000336 |           |           |          |         |           |



|      |     |         |           |          |           |           |         |           |
|------|-----|---------|-----------|----------|-----------|-----------|---------|-----------|
| 4298 | 1   | Extremo | 0.523     | -757.282 | -1.802    | -0.3732   | 0.9322  | -22.9503  |
| 4298 | 0   | Extremo | 0.06      | -787.894 | 1.444     | -0.8281   | 0.9187  | -798.7263 |
| 4298 | 0.5 | Extremo | 0.06      | -776.644 | 1.444     | -0.8281   | 0.1966  | -407.5919 |
| 4298 | 1   | Extremo | 0.06      | -765.394 | 1.444     | -0.8281   | -0.5255 | -22.0826  |
| 4299 | 0   | Extremo | -0.103    | 198.624  | -1.47     | -67.7027  | -0.9191 | -151.9782 |
| 4299 | 0.5 | Extremo | -0.103    | 209.874  | -1.47     | -67.7027  | -0.184  | -254.1026 |
| 4299 | 1   | Extremo | -0.103    | 221.124  | -1.47     | -67.7027  | 0.5511  | -361.852  |
| 4299 | 0   | Extremo | 0.107     | 200.661  | -0.596    | -68.8443  | -0.1784 | -152.5074 |
| 4299 | 0.5 | Extremo | 0.107     | 211.911  | -0.596    | -68.8443  | 0.1195  | -255.6502 |
| 4299 | 1   | Extremo | 0.107     | 223.161  | -0.596    | -68.8443  | 0.4175  | -364.4181 |
| 4300 | 0   | Extremo | -0.007665 | -276.024 | -2.458    | 79.6515   | -1.3881 | -362.2389 |
| 4300 | 0.5 | Extremo | -0.007665 | -264.774 | -2.458    | 79.6515   | -0.1591 | -227.0392 |
| 4300 | 1   | Extremo | -0.007665 | -253.524 | -2.458    | 79.6515   | 1.0698  | -97.4645  |
| 4300 | 0   | Extremo | 0.099     | -279.414 | 0.752     | 80.198    | 0.4796  | -364.7755 |
| 4300 | 0.5 | Extremo | 0.099     | -268.164 | 0.752     | 80.198    | 0.1039  | -227.8812 |
| 4300 | 1   | Extremo | 0.099     | -256.914 | 0.752     | 80.198    | -0.2719 | -96.6119  |
| 4301 | 0   | Extremo | 0.001003  | -130.813 | -2.506    | 30.5524   | -1.2559 | -68.049   |
| 4301 | 0.5 | Extremo | 0.001003  | -119.563 | -2.506    | 30.5524   | -0.0031 | -5.455    |
| 4301 | 1   | Extremo | 0.001003  | -108.313 | -2.506    | 30.5524   | 1.2498  | 51.514    |
| 4301 | 0   | Extremo | -0.055    | -132.319 | 0.328     | 30.5257   | 0.0842  | -66.8223  |
| 4301 | 0.5 | Extremo | -0.055    | -121.069 | 0.328     | 30.5257   | -0.0799 | -3.4754   |
| 4301 | 1   | Extremo | -0.055    | -109.819 | 0.328     | 30.5257   | 0.244   | 54.2465   |
| 4302 | 0   | Extremo | -0.069    | 122.534  | -2.313    | -54.6916  | -1.0651 | 61.5254   |
| 4302 | 0.5 | Extremo | -0.069    | 133.784  | -2.313    | -54.6916  | 0.0916  | -2.5543   |
| 4302 | 1   | Extremo | -0.069    | 145.034  | -2.313    | -54.6916  | 1.2483  | -72.2589  |
| 4302 | 0   | Extremo | -0.065    | 124.175  | -0.049    | -55.7053  | -0.1098 | 64.3979   |
| 4302 | 0.5 | Extremo | -0.065    | 135.425  | -0.049    | -55.7053  | -0.0854 | -0.502    |
| 4302 | 1   | Extremo | -0.065    | 146.675  | -0.049    | -55.7053  | -0.0611 | -71.0269  |
| 4303 | 0   | Extremo | -0.147    | 275.553  | -1.847    | -109.2992 | -0.8212 | -81.0586  |
| 4303 | 0.5 | Extremo | -0.147    | 286.803  | -1.847    | -109.2992 | 0.1025  | -221.6475 |
| 4303 | 1   | Extremo | -0.147    | 298.053  | -1.847    | -109.2992 | 1.0263  | -367.8614 |
| 4303 | 0   | Extremo | 0.078     | 279.186  | -0.523    | -110.9573 | -0.1705 | -79.8978  |
| 4303 | 0.5 | Extremo | 0.078     | 290.436  | -0.523    | -110.9573 | 0.0912  | -222.3035 |
| 4303 | 1   | Extremo | 0.078     | 301.686  | -0.523    | -110.9573 | 0.3529  | -370.3342 |
| 4304 | 0   | Extremo | -0.035    | -186.414 | -1.726    | 19.7362   | -0.8061 | -346.5973 |
| 4304 | 0.5 | Extremo | -0.035    | -175.164 | -1.726    | 19.7362   | 0.0567  | -256.2027 |
| 4304 | 1   | Extremo | -0.035    | -163.914 | -1.726    | 19.7362   | 0.9196  | -171.4331 |
| 4304 | 0   | Extremo | 0.115     | -187.794 | 0.734     | 19.4492   | 0.4818  | -348.7951 |
| 4304 | 0.5 | Extremo | 0.115     | -176.544 | 0.734     | 19.4492   | 0.1149  | -257.7108 |
| 4304 | 1   | Extremo | 0.115     | -165.294 | 0.734     | 19.4492   | -0.252  | -172.2515 |
| 4305 | 0   | Extremo | -0.055    | 34.766   | -1.618    | -24.4866  | -0.989  | -145.2904 |
| 4305 | 0.5 | Extremo | -0.055    | 46.016   | -1.618    | -24.4866  | -0.18   | -165.4857 |
| 4305 | 1   | Extremo | -0.055    | 57.266   | -1.618    | -24.4866  | 0.629   | -191.3061 |
| 4305 | 0   | Extremo | 0.089     | 34.866   | -0.296    | -25.1504  | -0.0768 | -145.7314 |
| 4305 | 0.5 | Extremo | 0.089     | 46.116   | -0.296    | -25.1504  | 0.071   | -165.9768 |
| 4305 | 1   | Extremo | 0.089     | 57.366   | -0.296    | -25.1504  | 0.2188  | -191.8473 |
| 4306 | 0   | Extremo | -0.067    | -48.557  | -2.389    | 29.59     | -1.3314 | -186.3466 |
| 4306 | 0.5 | Extremo | -0.067    | -37.307  | -2.389    | 29.59     | -0.137  | -164.8807 |
| 4306 | 1   | Extremo | -0.067    | -26.057  | -2.389    | 29.59     | 1.0574  | -149.0397 |
| 4306 | 0   | Extremo | 0.07      | -49.26   | 0.396     | 29.5093   | 0.2611  | -186.784  |
| 4306 | 0.5 | Extremo | 0.07      | -38.01   | 0.396     | 29.5093   | 0.0631  | -164.9663 |
| 4306 | 1   | Extremo | 0.07      | -26.76   | 0.396     | 29.5093   | -0.1349 | -148.7736 |
| 4307 | 0   | Extremo | -0.048    | -40.682  | -2.554    | 9.4014    | -1.2907 | -114.2262 |
| 4307 | 0.5 | Extremo | -0.048    | -29.432  | -2.554    | 9.4014    | -0.0135 | -96.6975  |
| 4307 | 1   | Extremo | -0.048    | -18.182  | -2.554    | 9.4014    | 1.2636  | -84.7938  |
| 4307 | 0   | Extremo | -0.035    | -41.106  | 0.262     | 9.0893    | 0.0942  | -113.503  |
| 4307 | 0.5 | Extremo | -0.035    | -29.856  | 0.262     | 9.0893    | -0.0367 | -95.7624  |
| 4307 | 1   | Extremo | -0.035    | -18.606  | 0.262     | 9.0893    | -0.1676 | -83.6469  |
| 4308 | 0   | Extremo | -0.059    | 26.921   | -2.39     | -47.8222  | -1.1171 | -80.5989  |
| 4308 | 0.5 | Extremo | -0.059    | 38.171   | -2.39     | -47.8222  | 0.0777  | -96.8717  |
| 4308 | 1   | Extremo | -0.059    | 49.421   | -2.39     | -47.8222  | 1.2726  | -118.7695 |
| 4308 | 0   | Extremo | -0.037    | 27.494   | -0.001276 | -48.7964  | -0.043  | -79.3511  |
| 4308 | 0.5 | Extremo | -0.037    | 38.744   | -0.001276 | -48.7964  | -0.0423 | -95.9108  |
| 4308 | 1   | Extremo | -0.037    | 49.994   | -0.001276 | -48.7964  | -0.0417 | -118.0955 |
| 4309 | 0   | Extremo | -0.091    | 33.035   | -1.993    | -72.0123  | -0.8836 | -146.4464 |
| 4309 | 0.5 | Extremo | -0.091    | 44.285   | -1.993    | -72.0123  | 0.1131  | -165.7764 |
| 4309 | 1   | Extremo | -0.091    | 55.535   | -1.993    | -72.0123  | 1.1098  | -190.7314 |
| 4309 | 0   | Extremo | 0.066     | 33.919   | -0.177    | -73.2887  | -0.039  | -146.0408 |
| 4309 | 0.5 | Extremo | 0.066     | 45.169   | -0.177    | -73.2887  | 0.0495  | -165.8128 |
| 4309 | 1   | Extremo | 0.066     | 56.419   | -0.177    | -73.2887  | 0.138   | -191.2097 |
| 4310 | 0   | Extremo | -0.079    | -60.581  | -1.622    | -29.3116  | -0.7238 | -191.5313 |
| 4310 | 0.5 | Extremo | -0.079    | -49.331  | -1.622    | -29.3116  | 0.087   | -164.0532 |

|      |     |         |          |         |           |          |         |             |
|------|-----|---------|----------|---------|-----------|----------|---------|-------------|
| 4310 | 1   | Extremo | -0.079   | -38.081 | -1.622    | -29.3116 | 0.8977  | -142.2      |
| 4310 | 0   | Extremo | 0.085    | -60.536 | 0.439     | -30.2194 | 0.2854  | -191.9765   |
| 4310 | 0.5 | Extremo | 0.085    | -49.286 | 0.439     | -30.2194 | 0.0659  | -164.5212   |
| 4310 | 1   | Extremo | 0.085    | -38.036 | 0.439     | -30.2194 | -0.1536 | -142.6909   |
| 4311 | 0   | Extremo | -0.051   | 18.621  | -1.69     | -8.8487  | -1.0194 | -119.4876   |
| 4311 | 0.5 | Extremo | -0.051   | 29.871  | -1.69     | -8.8487  | -0.1744 | -131.6104   |
| 4311 | 1   | Extremo | -0.051   | 41.121  | -1.69     | -8.8487  | 0.6705  | -149.3582   |
| 4311 | 0   | Extremo | 0.047    | 18.528  | -0.161    | -9.3687  | -0.034  | -119.6144   |
| 4311 | 0.5 | Extremo | 0.047    | 29.778  | -0.161    | -9.3687  | 0.0464  | -131.6907   |
| 4311 | 1   | Extremo | 0.047    | 41.028  | -0.161    | -9.3687  | 0.1267  | -149.392    |
| 4312 | 0   | Extremo | -0.069   | 2.366   | -2.359    | 1.7852   | -1.3079 | -144.6558   |
| 4312 | 0.5 | Extremo | -0.069   | 13.616  | -2.359    | 1.7852   | -0.1286 | -148.6514   |
| 4312 | 1   | Extremo | -0.069   | 24.866  | -2.359    | 1.7852   | 1.0507  | -158.272    |
| 4312 | 0   | Extremo | 0.029    | 2.268   | 0.216     | 1.3256   | 0.1503  | -144.5779   |
| 4312 | 0.5 | Extremo | 0.029    | 13.518  | 0.216     | 1.3256   | 0.0423  | -148.5243   |
| 4312 | 1   | Extremo | 0.029    | 24.768  | 0.216     | 1.3256   | -0.0657 | -158.0956   |
| 4313 | 0   | Extremo | -0.068   | -9.314  | -2.563    | -8.0245  | -1.3001 | -142.6787   |
| 4313 | 0.5 | Extremo | -0.068   | 1.936   | -2.563    | -8.0245  | -0.0186 | -140.8344   |
| 4313 | 1   | Extremo | -0.068   | 13.186  | -2.563    | -8.0245  | 1.263   | -144.6151   |
| 4313 | 0   | Extremo | -0.033   | -9.349  | 0.2       | -8.5986  | 0.0878  | -142.2577   |
| 4313 | 0.5 | Extremo | -0.033   | 1.901   | 0.2       | -8.5986  | -0.0124 | -140.3957   |
| 4313 | 1   | Extremo | -0.033   | 13.151  | 0.2       | -8.5986  | -0.1126 | -144.1587   |
| 4314 | 0   | Extremo | -0.076   | -11.797 | -2.424    | -33.2594 | -1.1386 | -145.2418   |
| 4314 | 0.5 | Extremo | -0.076   | -0.547  | -2.424    | -33.2594 | 0.0732  | -142.1558   |
| 4314 | 1   | Extremo | -0.076   | 10.703  | -2.424    | -33.2594 | 1.285   | -144.6947   |
| 4314 | 0   | Extremo | -0.035   | -11.645 | 0.053     | -34.1246 | 0.0088  | -144.7278   |
| 4314 | 0.5 | Extremo | -0.035   | -0.395  | 0.053     | -34.1246 | -0.0177 | -141.7178   |
| 4314 | 1   | Extremo | -0.035   | 10.855  | 0.053     | -34.1246 | -0.0442 | -144.3328   |
| 4315 | 0   | Extremo | -0.09    | -28.016 | -2.049    | -44.3411 | -0.9004 | -162.45     |
| 4315 | 0.5 | Extremo | -0.09    | -16.766 | -2.049    | -44.3411 | 0.1239  | -151.2544   |
| 4315 | 1   | Extremo | -0.09    | -5.516  | -2.049    | -44.3411 | 1.1483  | -145.6839   |
| 4315 | 0   | Extremo | 0.026    | -27.82  | 0.0004932 | -45.356  | 0.0298  | -162.2329   |
| 4315 | 0.5 | Extremo | 0.026    | -16.57  | 0.0004932 | -45.356  | 0.0295  | -151.1353   |
| 4315 | 1   | Extremo | 0.026    | -5.32   | 0.0004932 | -45.356  | 0.0293  | -145.6627   |
| 4316 | 0   | Extremo | -0.074   | -53.971 | -1.552    | -39.2116 | -0.6749 | -154.2883   |
| 4316 | 0.5 | Extremo | -0.074   | -42.721 | -1.552    | -39.2116 | 0.1009  | -130.1154   |
| 4316 | 1   | Extremo | -0.074   | -31.471 | -1.552    | -39.2116 | 0.8767  | -111.5674   |
| 4316 | 0   | Extremo | 0.044    | -53.851 | 0.311     | -40.3011 | 0.1953  | -154.3156   |
| 4316 | 0.5 | Extremo | 0.044    | -42.601 | 0.311     | -40.3011 | 0.04    | -130.2023   |
| 4316 | 1   | Extremo | 0.044    | -31.351 | 0.311     | -40.3011 | -0.1154 | -111.7141   |
| 4317 | 0   | Extremo | -0.052   | 22.629  | -1.736    | -6.5038  | -1.0391 | -108.6441   |
| 4317 | 0.5 | Extremo | -0.052   | 33.879  | -1.736    | -6.5038  | -0.1709 | -122.7711   |
| 4317 | 1   | Extremo | -0.052   | 45.129  | -1.736    | -6.5038  | 0.6973  | -142.5231   |
| 4317 | 0   | Extremo | 0.011    | 22.581  | -0.106    | -7.0438  | -0.0196 | -108.6374   |
| 4317 | 0.5 | Extremo | 0.011    | 33.831  | -0.106    | -7.0438  | 0.0334  | -122.7402   |
| 4317 | 1   | Extremo | 0.011    | 45.081  | -0.106    | -7.0438  | 0.0864  | -142.4679   |
| 4318 | 0   | Extremo | -0.075   | 10.815  | -2.356    | -7.6213  | -1.302  | -140.9572   |
| 4318 | 0.5 | Extremo | -0.075   | 22.065  | -2.356    | -7.6213  | -0.1242 | -149.1774   |
| 4318 | 1   | Extremo | -0.075   | 33.315  | -2.356    | -7.6213  | 1.0537  | -163.0225   |
| 4318 | 0   | Extremo | -0.00811 | 10.818  | 0.118     | -8.2529  | 0.0913  | -140.8207   |
| 4318 | 0.5 | Extremo | -0.00811 | 22.068  | 0.118     | -8.2529  | 0.0325  | -149.042    |
| 4318 | 1   | Extremo | -0.00811 | 33.318  | 0.118     | -8.2529  | -0.0264 | -162.8883   |
| 4319 | 0   | Extremo | -0.085   | -4.63   | -2.57     | -13.371  | -1.3046 | -159.5201   |
| 4319 | 0.5 | Extremo | -0.085   | 6.62    | -2.57     | -13.371  | -0.0198 | -160.0174   |
| 4319 | 1   | Extremo | -0.085   | 17.87   | -2.57     | -13.371  | 1.265   | -166.1398   |
| 4319 | 0   | Extremo | -0.048   | -4.603  | 0.155     | -14.0752 | 0.08    | -159.2765   |
| 4319 | 0.5 | Extremo | -0.048   | 6.647   | 0.155     | -14.0752 | 0.0027  | -159.7876</ |



|      |     |         |          |         |        |          |           |           |
|------|-----|---------|----------|---------|--------|----------|-----------|-----------|
| 4322 | 1   | Extremo | -0.074   | -36.909 | -1.501 | -33.1245 | 0.8597    | -99.3656  |
| 4322 | 0   | Extremo | 0.009896 | -59.351 | 0.26   | -34.2169 | 0.1565    | -147.4732 |
| 4322 | 0.5 | Extremo | 0.009896 | -48.101 | 0.26   | -34.2169 | 0.0263    | -120.6102 |
| 4322 | 1   | Extremo | 0.009896 | -36.851 | 0.26   | -34.2169 | -0.1039   | -99.3722  |
| 4323 | 0   | Extremo | -0.059   | 25.085  | -1.776 | -5.8019  | -1.057    | -106.6176 |
| 4323 | 0.5 | Extremo | -0.059   | 36.335  | -1.776 | -5.8019  | -0.1691   | -121.9725 |
| 4323 | 1   | Extremo | -0.059   | 47.585  | -1.776 | -5.8019  | 0.7188    | -142.9524 |
| 4323 | 0   | Extremo | -0.018   | 25.061  | -0.094 | -6.3841  | -0.0202   | -106.5895 |
| 4323 | 0.5 | Extremo | -0.018   | 36.311  | -0.094 | -6.3841  | 0.0266    | -121.9323 |
| 4323 | 1   | Extremo | -0.018   | 47.561  | -0.094 | -6.3841  | 0.0734    | -142.9001 |
| 4324 | 0   | Extremo | -0.088   | 10.983  | -2.371 | -8.6003  | -1.3062   | -144.3785 |
| 4324 | 0.5 | Extremo | -0.088   | 22.233  | -2.371 | -8.6003  | -0.1209   | -152.6826 |
| 4324 | 1   | Extremo | -0.088   | 33.483  | -2.371 | -8.6003  | 1.0645    | -166.6118 |
| 4324 | 0   | Extremo | -0.042   | 10.981  | 0.057  | -9.3092  | 0.0569    | -144.2793 |
| 4324 | 0.5 | Extremo | -0.042   | 22.231  | 0.057  | -9.3092  | 0.0287    | -152.5821 |
| 4324 | 1   | Extremo | -0.042   | 33.481  | 0.057  | -9.3092  | 0.0003817 | -166.5099 |
| 4325 | 0   | Extremo | -0.106   | -5.992  | -2.581 | -11.9072 | -1.3088   | -168.5931 |
| 4325 | 0.5 | Extremo | -0.106   | 5.258   | -2.581 | -11.9072 | -0.0181   | -168.4098 |
| 4325 | 1   | Extremo | -0.106   | 16.508  | -2.581 | -11.9072 | 1.2725    | -173.8515 |
| 4325 | 0   | Extremo | -0.071   | -5.986  | 0.123  | -12.6649 | 0.0744    | -168.4448 |
| 4325 | 0.5 | Extremo | -0.071   | 5.264   | 0.123  | -12.6649 | 0.0132    | -168.2642 |
| 4325 | 1   | Extremo | -0.071   | 16.514  | 0.123  | -12.6649 | -0.0481   | -173.7086 |
| 4326 | 0   | Extremo | -0.115   | -25.62  | -2.45  | -15.804  | -1.1484   | -178.8524 |
| 4326 | 0.5 | Extremo | -0.115   | -14.37  | -2.45  | -15.804  | 0.0769    | -168.8549 |
| 4326 | 1   | Extremo | -0.115   | -3.12   | -2.45  | -15.804  | 1.3021    | -164.4824 |
| 4326 | 0   | Extremo | -0.072   | -25.623 | 0.125  | -16.6008 | 0.071     | -178.6991 |
| 4326 | 0.5 | Extremo | -0.072   | -14.373 | 0.125  | -16.6008 | 0.0085    | -168.7002 |
| 4326 | 1   | Extremo | -0.072   | -3.123  | 0.125  | -16.6008 | -0.054    | -164.3264 |
| 4327 | 0   | Extremo | -0.109   | -44.891 | -2.059 | -18.8804 | -0.8897   | -172.4171 |
| 4327 | 0.5 | Extremo | -0.109   | -33.641 | -2.059 | -18.8804 | 0.1397    | -152.7839 |
| 4327 | 1   | Extremo | -0.109   | -22.391 | -2.059 | -18.8804 | 1.169     | -138.7757 |
| 4327 | 0   | Extremo | -0.043   | -44.887 | 0.159  | -19.7228 | 0.0966    | -172.2939 |
| 4327 | 0.5 | Extremo | -0.043   | -33.637 | 0.159  | -19.7228 | 0.0171    | -152.663  |
| 4327 | 1   | Extremo | -0.043   | -22.387 | 0.159  | -19.7228 | -0.0625   | -138.6571 |
| 4328 | 0   | Extremo | -0.08    | -62.207 | -1.455 | -23.8951 | -0.6118   | -147.0189 |
| 4328 | 0.5 | Extremo | -0.08    | -50.957 | -1.455 | -23.8951 | 0.1159    | -118.7277 |
| 4328 | 1   | Extremo | -0.08    | -39.707 | -1.455 | -23.8951 | 0.8435    | -96.0615  |
| 4328 | 0   | Extremo | -0.019   | -62.179 | 0.25   | -24.9517 | 0.1447    | -146.9498 |
| 4328 | 0.5 | Extremo | -0.019   | -50.929 | 0.25   | -24.9517 | 0.0195    | -118.6726 |
| 4328 | 1   | Extremo | -0.019   | -39.679 | 0.25   | -24.9517 | -0.1057   | -96.0204  |
| 4329 | 0   | Extremo | -0.07    | 25.745  | -1.816 | -3.9418  | -1.0765   | -107.1394 |
| 4329 | 0.5 | Extremo | -0.07    | 36.995  | -1.816 | -3.9418  | -0.1682   | -122.8244 |
| 4329 | 1   | Extremo | -0.07    | 48.245  | -1.816 | -3.9418  | 0.74      | -144.1344 |
| 4329 | 0   | Extremo | -0.045   | 25.719  | -0.106 | -4.549   | -0.0297   | -107.1329 |
| 4329 | 0.5 | Extremo | -0.045   | 36.969  | -0.106 | -4.549   | 0.0234    | -122.805  |
| 4329 | 1   | Extremo | -0.045   | 48.219  | -0.106 | -4.549   | 0.0766    | -144.1021 |
| 4330 | 0   | Extremo | -0.107   | 10.142  | -2.399 | -5.9467  | -1.3176   | -147.4499 |
| 4330 | 0.5 | Extremo | -0.107   | 21.392  | -2.399 | -5.9467  | -0.1179   | -155.3336 |
| 4330 | 1   | Extremo | -0.107   | 32.642  | -2.399 | -5.9467  | 1.0819    | -168.8423 |
| 4330 | 0   | Extremo | -0.074   | 10.11   | 0.011  | -6.6888  | 0.0343    | -147.4002 |
| 4330 | 0.5 | Extremo | -0.074   | 21.36   | 0.011  | -6.6888  | 0.0285    | -155.2675 |
| 4330 | 1   | Extremo | -0.074   | 32.61   | 0.011  | -6.6888  | 0.0228    | -168.7598 |
| 4331 | 0   | Extremo | -0.133   | -7.456  | -2.599 | -7.6191  | -1.3137   | -173.0721 |
| 4331 | 0.5 | Extremo | -0.133   | 3.794   | -2.599 | -7.6191  | -0.014    | -172.1567 |
| 4331 | 1   | Extremo | -0.133   | 15.044  | -2.599 | -7.6191  | 1.2856    | -176.8663 |
| 4331 | 0   | Extremo | -0.099   | -7.492  | 0.099  | -8.3959  | 0.0711    | -172.9734 |
| 4331 | 0.5 | Extremo | -0.099   | 3.758   | 0.099  | -8.3959  | 0.0215    | -172.0399 |
| 4331 | 1   | Extremo | -0.099   | 15.008  | 0.099  | -8.3959  | -0.0281   | -176.7314 |
| 4332 | 0   | Extremo | -0.142   | -26.566 | -2.454 | -9.2253  | -1.1441   | -182.5782 |
| 4332 | 0.5 | Extremo | -0.142   | -15.316 | -2.454 | -9.2253  | 0.0827    | -172.1079 |
| 4332 | 1   | Extremo | -0.142   | -4.066  | -2.454 | -9.2253  | 1.3094    | -167.2625 |
| 4332 | 0   | Extremo | -0.099   | -26.6   | 0.147  | -10.0085 | 0.0905    | -182.4463 |
| 4332 | 0.5 | Extremo | -0.099   | -15.35  | 0.147  | -10.0085 | 0.017     | -171.9587 |
| 4332 | 1   | Extremo | -0.099   | -4.1    | 0.147  | -10.0085 | -0.0565   | -167.0961 |
| 4333 | 0   | Extremo | -0.129   | -45.609 | -2.039 | -10.8298 | -0.8725   | -174.2746 |
| 4333 | 0.5 | Extremo | -0.129   | -34.359 | -2.039 | -10.8298 | 0.1468    | -154.2825 |
| 4333 | 1   | Extremo | -0.129   | -23.109 | -2.039 | -10.8298 | 1.1661    | -139.9153 |
| 4333 | 0   | Extremo | -0.075   | -45.624 | 0.204  | -11.6305 | 0.1193    | -174.1407 |
| 4333 | 0.5 | Extremo | -0.075   | -34.374 | 0.204  | -11.6305 | 0.0173    | -154.1414 |
| 4333 | 1   | Extremo | -0.075   | -23.124 | 0.204  | -11.6305 | -0.0847   | -139.7671 |
| 4334 | 0   | Extremo | -0.092   | -63.17  | -1.408 | -14.6693 | -0.5824   | -147.4159 |
| 4334 | 0.5 | Extremo | -0.092   | -51.92  | -1.408 | -14.6693 | 0.1216    | -118.6434 |

|      |     |         |        |         |        |          |          |           |
|------|-----|---------|--------|---------|--------|----------|----------|-----------|
| 4334 | 1   | Extremo | -0.092 | -40.67  | -1.408 | -14.6693 | 0.8256   | -95.496   |
| 4334 | 0   | Extremo | -0.045 | -63.15  | 0.264  | -15.6795 | 0.149    | -147.3258 |
| 4334 | 0.5 | Extremo | -0.045 | -51.9   | 0.264  | -15.6795 | 0.017    | -118.5632 |
| 4334 | 1   | Extremo | -0.045 | -40.65  | 0.264  | -15.6795 | -0.115   | -95.4255  |
| 4335 | 0   | Extremo | -0.085 | 25.84   | -1.863 | -1.0747  | -1.0997  | -107.691  |
| 4335 | 0.5 | Extremo | -0.085 | 37.09   | -1.863 | -1.0747  | -0.1681  | -123.4234 |
| 4335 | 1   | Extremo | -0.085 | 48.34   | -1.863 | -1.0747  | 0.7636   | -144.7808 |
| 4335 | 0   | Extremo | -0.073 | 25.797  | -0.137 | -1.6817  | -0.0457  | -107.7285 |
| 4335 | 0.5 | Extremo | -0.073 | 37.047  | -0.137 | -1.6817  | 0.0229   | -123.4395 |
| 4335 | 1   | Extremo | -0.073 | 48.297  | -0.137 | -1.6817  | 0.0914   | -144.7756 |
| 4336 | 0   | Extremo | -0.132 | 9.652   | -2.441 | -1.7895  | -1.3353  | -148.9396 |
| 4336 | 0.5 | Extremo | -0.132 | 20.902  | -2.441 | -1.7895  | -0.1147  | -156.5779 |
| 4336 | 1   | Extremo | -0.132 | 32.152  | -2.441 | -1.7895  | 1.1059   | -169.8413 |
| 4336 | 0   | Extremo | -0.109 | 9.57    | -0.028 | -2.5384  | 0.0169   | -148.947  |
| 4336 | 0.5 | Extremo | -0.109 | 20.82   | -0.028 | -2.5384  | 0.031    | -156.5444 |
| 4336 | 1   | Extremo | -0.109 | 32.07   | -0.028 | -2.5384  | 0.0451   | -169.7669 |
| 4337 | 0   | Extremo | -0.167 | -8.128  | -2.625 | -2.2868  | -1.3201  | -174.8752 |
| 4337 | 0.5 | Extremo | -0.167 | 3.122   | -2.625 | -2.2868  | -0.0077  | -173.6235 |
| 4337 | 1   | Extremo | -0.167 | 14.372  | -2.625 | -2.2868  | 1.3047   | -177.9969 |
| 4337 | 0   | Extremo | -0.133 | -8.225  | 0.081  | -3.0641  | 0.0695   | -174.806  |
| 4337 | 0.5 | Extremo | -0.133 | 3.025   | 0.081  | -3.0641  | 0.0291   | -173.5061 |
| 4337 | 1   | Extremo | -0.133 | 14.275  | 0.081  | -3.0641  | -0.0114  | -177.8311 |
| 4338 | 0   | Extremo | -0.178 | -26.889 | -2.452 | -2.7729  | -1.1351  | -183.9926 |
| 4338 | 0.5 | Extremo | -0.178 | -15.639 | -2.452 | -2.7729  | 0.091    | -173.3605 |
| 4338 | 1   | Extremo | -0.178 | -4.389  | -2.452 | -2.7729  | 1.3172   | -168.3533 |
| 4338 | 0   | Extremo | -0.134 | -26.972 | 0.165  | -3.5334  | 0.1069   | -183.845  |
| 4338 | 0.5 | Extremo | -0.134 | -15.722 | 0.165  | -3.5334  | 0.0247   | -173.1713 |
| 4338 | 1   | Extremo | -0.134 | -4.472  | 0.165  | -3.5334  | -0.0576  | -168.1225 |
| 4339 | 0   | Extremo | -0.158 | -45.772 | -2.006 | -3.4582  | -0.8483  | -175.1032 |
| 4339 | 0.5 | Extremo | -0.158 | -34.522 | -2.006 | -3.4582  | 0.1547   | -155.0295 |
| 4339 | 1   | Extremo | -0.158 | -23.272 | -2.006 | -3.4582  | 1.1577   | -140.5809 |
| 4339 | 0   | Extremo | -0.109 | -45.812 | 0.243  | -4.2065  | 0.1418   | -174.9224 |
| 4339 | 0.5 | Extremo | -0.109 | -34.562 | 0.243  | -4.2065  | 0.0201   | -154.8289 |
| 4339 | 1   | Extremo | -0.109 | -23.312 | 0.243  | -4.2065  | -0.1015  | -140.3604 |
| 4340 | 0   | Extremo | -0.11  | -63.449 | -1.353 | -5.7708  | -0.5492  | -147.7219 |
| 4340 | 0.5 | Extremo | -0.11  | -52.199 | -1.353 | -5.7708  | 0.1272   | -118.8099 |
| 4340 | 1   | Extremo | -0.11  | -40.949 | -1.353 | -5.7708  | 0.8037   | -95.5228  |
| 4340 | 0   | Extremo | -0.072 | -63.428 | 0.295  | -6.7159  | 0.1651   | -147.5883 |
| 4340 | 0.5 | Extremo | -0.072 | -52.178 | 0.295  | -6.7159  | 0.0176   | -118.6866 |
| 4340 | 1   | Extremo | -0.072 | -40.928 | 0.295  | -6.7159  | -0.1298  | -95.4099  |
| 4341 | 0   | Extremo | -0.105 | 25.859  | -1.919 | 2.1167   | -1.1281  | -107.5618 |
| 4341 | 0.5 | Extremo | -0.105 | 37.109  | -1.919 | 2.1167   | -0.1684  | -123.304  |
| 4341 | 1   | Extremo | -0.105 | 48.359  | -1.919 | 2.1167   | 0.7912   | -144.6712 |
| 4341 | 0   | Extremo | -0.104 | 25.783  | -0.185 | 1.5447   | -0.0679  | -107.6747 |
| 4341 | 0.5 | Extremo | -0.104 | 37.033  | -0.185 | 1.5447   | 0.0245   | -123.3787 |
| 4341 | 1   | Extremo | -0.104 | 48.283  | -0.185 | 1.5447   | 0.1168   | -144.7078 |
| 4342 | 0   | Extremo | -0.164 | 9.709   | -2.497 | 2.78     | -1.3599  | -148.8088 |
| 4342 | 0.5 | Extremo | -0.164 | 20.959  | -2.497 | 2.78     | -0.1112  | -156.4759 |
| 4342 | 1   | Extremo | -0.164 | 32.209  | -2.497 | 2.78     | 1.1375   | -169.7679 |
| 4342 | 0   | Extremo | -0.15  | 9.544   | -0.068 | 2.0511   | 0.0019   | -148.9021 |
| 4342 | 0.5 | Extremo | -0.15  | 20.794  | -0.068 | 2.0511   | 0.0358   | -156.4865 |
| 4342 | 1   | Extremo | -0.15  | 32.044  | -0.068 | 2.0511   | 0.0697   | -169.6959 |
| 4343 | 0   | Extremo | -0.21  | -8.033  | -2.659 | 3.3152   | -1.3287  | -174.8147 |
| 4343 | 0.5 | Extremo | -0.21  | 3.217   | -2.659 | 3.3152   | 0.000948 | -173.6107 |
| 4343 | 1   | Extremo | -0.21  | 14.467  | -2.659 | 3.3152   | 1.3306   | -178.0316 |
| 4343 | 0   | Extremo | -0.175 | -8.231  | 0.065  | 2.556    | 0.0695   | -174.7758 |
| 4343 | 0.5 | Extremo | -0.175 | 3.019   | 0.065  | 2.556    | 0.0368   | -173.4726 |
| 4343 | 1   | Extremo | -0.175 | 14.269  | 0.065  | 2.556    | 0.0041   | -177.7945 |
| 4344 |     |         |        |         |        |          |          |           |



|      |     |         |        |         |        |         |         |           |
|------|-----|---------|--------|---------|--------|---------|---------|-----------|
| 4346 | 1   | Extremo | -0.136 | -40.949 | -1.285 | 2.9541  | 0.7761  | -95.6147  |
| 4346 | 0   | Extremo | -0.104 | -63.422 | 0.342  | 2.1123  | 0.1919  | -147.5994 |
| 4346 | 0.5 | Extremo | -0.104 | -52.172 | 0.342  | 2.1123  | 0.021   | -118.701  |
| 4346 | 1   | Extremo | -0.104 | -40.922 | 0.342  | 2.1123  | -0.1498 | -95.4276  |
| 4347 | 0   | Extremo | -0.131 | 25.853  | -1.987 | 4.9073  | -1.1629 | -106.6356 |
| 4347 | 0.5 | Extremo | -0.131 | 37.103  | -1.987 | 4.9073  | -0.1694 | -122.3744 |
| 4347 | 1   | Extremo | -0.131 | 48.353  | -1.987 | 4.9073  | 0.8241  | -143.7383 |
| 4347 | 0   | Extremo | -0.142 | 25.715  | -0.251 | 4.4294  | -0.0974 | -106.8845 |
| 4347 | 0.5 | Extremo | -0.142 | 36.965  | -0.251 | 4.4294  | 0.0283  | -122.5547 |
| 4347 | 1   | Extremo | -0.142 | 48.215  | -0.251 | 4.4294  | 0.154   | -143.85   |
| 4348 | 0   | Extremo | -0.205 | 10.366  | -2.571 | 6.9519  | -1.393  | -146.9797 |
| 4348 | 0.5 | Extremo | -0.205 | 21.616  | -2.571 | 6.9519  | -0.1074 | -154.9751 |
| 4348 | 1   | Extremo | -0.205 | 32.866  | -2.571 | 6.9519  | 1.1782  | -168.5956 |
| 4348 | 0   | Extremo | -0.2   | 10.048  | -0.11  | 6.2872  | -0.0116 | -147.2295 |
| 4348 | 0.5 | Extremo | -0.2   | 21.298  | -0.11  | 6.2872  | 0.0432  | -155.066  |
| 4348 | 1   | Extremo | -0.2   | 32.548  | -0.11  | 6.2872  | 0.098   | -168.5275 |
| 4349 | 0   | Extremo | -0.266 | -7.121  | -2.706 | 8.674   | -1.3405 | -172.8931 |
| 4349 | 0.5 | Extremo | -0.266 | 4.129   | -2.706 | 8.674   | 0.0124  | -172.145  |
| 4349 | 1   | Extremo | -0.266 | 15.379  | -2.706 | 8.674   | 1.3652  | -177.0218 |
| 4349 | 0   | Extremo | -0.227 | -7.504  | 0.052  | 7.9638  | 0.0709  | -172.9116 |
| 4349 | 0.5 | Extremo | -0.227 | 3.746   | 0.052  | 7.9638  | 0.045   | -171.9721 |
| 4349 | 1   | Extremo | -0.227 | 14.996  | 0.052  | 7.9638  | 0.0192  | -176.6575 |
| 4350 | 0   | Extremo | -0.285 | -26.131 | -2.441 | 10.0583 | -1.1032 | -182.7157 |
| 4350 | 0.5 | Extremo | -0.285 | -14.881 | -2.441 | 10.0583 | 0.1173  | -172.4629 |
| 4350 | 1   | Extremo | -0.285 | -3.631  | -2.441 | 10.0583 | 1.3377  | -167.8351 |
| 4350 | 0   | Extremo | -0.227 | -26.447 | 0.193  | 9.4217  | 0.1373  | -182.4389 |
| 4350 | 0.5 | Extremo | -0.227 | -15.197 | 0.193  | 9.4217  | 0.0406  | -172.0277 |
| 4350 | 1   | Extremo | -0.227 | -3.947  | 0.193  | 9.4217  | -0.0561 | -167.2415 |
| 4351 | 0   | Extremo | -0.249 | -45.305 | -1.899 | 10.9165 | -0.7737 | -174.6258 |
| 4351 | 0.5 | Extremo | -0.249 | -34.055 | -1.899 | 10.9165 | 0.176   | -154.7858 |
| 4351 | 1   | Extremo | -0.249 | -22.805 | -1.899 | 10.9165 | 1.1257  | -140.5708 |
| 4351 | 0   | Extremo | -0.199 | -45.461 | 0.323  | 10.396  | 0.1944  | -174.1833 |
| 4351 | 0.5 | Extremo | -0.199 | -34.211 | 0.323  | 10.396  | 0.0329  | -154.2655 |
| 4351 | 1   | Extremo | -0.199 | -22.961 | 0.323  | 10.396  | -0.1285 | -139.9726 |
| 4352 | 0   | Extremo | -0.17  | -63.195 | -1.201 | 11.6653 | -0.4597 | -147.7203 |
| 4352 | 0.5 | Extremo | -0.17  | -51.945 | -1.201 | 11.6653 | 0.1406  | -118.9355 |
| 4352 | 1   | Extremo | -0.17  | -40.695 | -1.201 | 11.6653 | 0.7409  | -95.7757  |
| 4352 | 0   | Extremo | -0.141 | -63.155 | 0.407  | 10.9967 | 0.2307  | -147.3654 |
| 4352 | 0.5 | Extremo | -0.141 | -51.905 | 0.407  | 10.9967 | 0.0274  | -118.6005 |
| 4352 | 1   | Extremo | -0.141 | -40.655 | 0.407  | 10.9967 | -0.1759 | -95.4606  |
| 4353 | 0   | Extremo | -0.163 | 25.521  | -2.068 | 6.5383  | -1.205  | -105.2332 |
| 4353 | 0.5 | Extremo | -0.163 | 36.771  | -2.068 | 6.5383  | -0.1712 | -120.8064 |
| 4353 | 1   | Extremo | -0.163 | 48.021  | -2.068 | 6.5383  | 0.8626  | -142.0046 |
| 4353 | 0   | Extremo | -0.191 | 25.274  | -0.343 | 6.2659  | -0.1365 | -105.7302 |
| 4353 | 0.5 | Extremo | -0.191 | 36.524  | -0.343 | 6.2659  | 0.0351  | -121.1798 |
| 4353 | 1   | Extremo | -0.191 | 47.774  | -0.343 | 6.2659  | 0.2068  | -142.2545 |
| 4354 | 0   | Extremo | -0.256 | 11.603  | -2.668 | 9.6849  | -1.4375 | -143.2357 |
| 4354 | 0.5 | Extremo | -0.256 | 22.853  | -2.668 | 9.6849  | -0.1035 | -151.8496 |
| 4354 | 1   | Extremo | -0.256 | 34.103  | -2.668 | 9.6849  | 1.2306  | -166.0885 |
| 4354 | 0   | Extremo | -0.263 | 11.004  | -0.153 | 9.1751  | -0.0227 | -143.7856 |
| 4354 | 0.5 | Extremo | -0.263 | 22.254  | -0.153 | 9.1751  | 0.0538  | -152.1    |
| 4354 | 1   | Extremo | -0.263 | 33.504  | -0.153 | 9.1751  | 0.1303  | -166.0395 |
| 4355 | 0   | Extremo | -0.336 | -5.212  | -2.768 | 13.0727 | -1.3568 | -168.3243 |
| 4355 | 0.5 | Extremo | -0.336 | 6.038   | -2.768 | 13.0727 | 0.0272  | -168.5309 |
| 4355 | 1   | Extremo | -0.336 | 17.288  | -2.768 | 13.0727 | 1.4111  | -174.3624 |
| 4355 | 0   | Extremo | -0.292 | -5.937  | 0.04   | 12.4754 | 0.074   | -168.4778 |
| 4355 | 0.5 | Extremo | -0.292 | 5.313   | 0.04   | 12.4754 | 0.0539  | -168.3219 |
| 4355 | 1   | Extremo | -0.292 | 16.563  | 0.04   | 12.4754 | 0.0338  | -173.791  |
| 4356 | 0   | Extremo | -0.362 | -24.69  | -2.432 | 16.4366 | -1.079  | -179.3183 |
| 4356 | 0.5 | Extremo | -0.362 | -13.44  | -2.432 | 16.4366 | 0.137   | -169.7859 |
| 4356 | 1   | Extremo | -0.362 | -2.19   | -2.432 | 16.4366 | 1.3529  | -165.8784 |
| 4356 | 0   | Extremo | -0.292 | -25.277 | 0.206  | 15.9462 | 0.1522  | -178.9216 |
| 4356 | 0.5 | Extremo | -0.292 | -14.027 | 0.206  | 15.9462 | 0.0494  | -169.0956 |
| 4356 | 1   | Extremo | -0.292 | -2.777  | 0.206  | 15.9462 | -0.0535 | -164.8946 |
| 4357 | 0   | Extremo | -0.315 | -44.345 | -1.819 | 18.4879 | -0.7186 | -173.2047 |
| 4357 | 0.5 | Extremo | -0.315 | -33.095 | -1.819 | 18.4879 | 0.191   | -153.8447 |
| 4357 | 1   | Extremo | -0.315 | -21.845 | -1.819 | 18.4879 | 1.1006  | -140.1098 |
| 4357 | 0   | Extremo | -0.262 | -44.622 | 0.365  | 18.2119 | 0.2262  | -172.4776 |
| 4357 | 0.5 | Extremo | -0.262 | -33.372 | 0.365  | 18.2119 | 0.0438  | -152.979  |
| 4357 | 1   | Extremo | -0.262 | -22.122 | 0.365  | 18.2119 | -0.1386 | -139.1053 |
| 4358 | 0   | Extremo | -0.215 | -62.397 | -1.093 | 20.4527 | -0.3972 | -147.5988 |
| 4358 | 0.5 | Extremo | -0.215 | -51.147 | -1.093 | 20.4527 | 0.1492  | -119.2128 |

|        |     |         |        |         |        |         |         |           |
|--------|-----|---------|--------|---------|--------|---------|---------|-----------|
| 4358   | 1   | Extremo | -0.215 | -39.897 | -1.093 | 20.4527 | 0.6956  | -96.4517  |
| 4358   | 0   | Extremo | -0.189 | -62.335 | 0.495  | 20.0775 | 0.285   | -147.0036 |
| 4358   | 0.5 | Extremo | -0.189 | -51.085 | 0.495  | 20.0775 | 0.0375  | -118.6486 |
| 4358   | 1   | Extremo | -0.189 | -39.835 | 0.495  | 20.0775 | -0.2101 | -95.9186  |
| 4359   | 0   | Extremo | -0.202 | 24.13   | -2.161 | 6.4977  | -1.2548 | -104.8625 |
| 4359   | 0.5 | Extremo | -0.202 | 35.38   | -2.161 | 6.4977  | -0.1744 | -119.74   |
| 4359   | 1   | Extremo | -0.202 | 46.63   | -2.161 | 6.4977  | 0.9061  | -140.2426 |
| 4359   | 0   | Extremo | -0.255 | 23.681  | -0.472 | 6.6428  | -0.1899 | -105.7998 |
| 4359   | 0.5 | Extremo | -0.255 | 34.931  | -0.472 | 6.6428  | 0.0461  | -120.4525 |
| 4359   | 1   | Extremo | -0.255 | 46.181  | -0.472 | 6.6428  | 0.2822  | -140.7303 |
| 4360   | 0   | Extremo | -0.319 | 12.604  | -2.797 | 9.0211  | -1.4987 | -138.0639 |
| 4360   | 0.5 | Extremo | -0.319 | 23.854  | -2.797 | 9.0211  | -0.1    | -147.1783 |
| 4360   | 1   | Extremo | -0.319 | 35.104  | -2.797 | 9.0211  | 1.2986  | -161.9176 |
| 4360   | 0   | Extremo | -0.345 | 11.506  | -0.193 | 8.8624  | -0.0274 | -139.1728 |
| 4360   | 0.5 | Extremo | -0.345 | 22.756  | -0.193 | 8.8624  | 0.0692  | -147.7384 |
| 4360   | 1   | Extremo | -0.345 | 34.006  | -0.193 | 8.8624  | 0.1658  | -161.9289 |
| 4361   | 0   | Extremo | -0.425 | -2.697  | -2.852 | 14.9475 | -1.3798 | -159.2679 |
| 4361   | 0.5 | Extremo | -0.425 | 8.553   | -2.852 | 14.9475 | 0.0463  | -160.7321 |
| 4361   | 1   | Extremo | -0.425 | 19.803  | -2.852 | 14.9475 | 1.4724  | -167.8213 |
| 4361   | 0   | Extremo | -0.374 | -4.047  | 0.032  | 14.6058 | 0.079   | -159.7407 |
| 4361   | 0.5 | Extremo | -0.374 | 7.203   | 0.032  | 14.6058 | 0.063   | -160.5299 |
| 4361   | 1   | Extremo | -0.374 | 18.453  | 0.032  | 14.6058 | 0.047   | -166.944  |
| 4362   | 0   | Extremo | -0.461 | -21.145 | -2.422 | 23.2006 | -1.048  | -171.2223 |
| 4362   | 0.5 | Extremo | -0.461 | -9.895  | -2.422 | 23.2006 | 0.1629  | -163.4623 |
| 4362   | 1   | Extremo | -0.461 | 1.355   | -2.422 | 23.2006 | 1.3739  | -161.3273 |
| 4362   | 0   | Extremo | -0.372 | -22.239 | 0.216  | 22.9663 | 0.1662  | -170.6977 |
| 4362   | 0.5 | Extremo | -0.372 | -10.989 | 0.216  | 22.9663 | 0.0581  | -162.3906 |
| 4362   | 1   | Extremo | -0.372 | 0.261   | 0.216  | 22.9663 | -0.0499 | -159.7085 |
| 4363   | 0   | Extremo | -0.402 | -41.359 | -1.714 | 27.3513 | -0.6465 | -170.5201 |
| 4363   | 0.5 | Extremo | -0.402 | -30.109 | -1.714 | 27.3513 | 0.2104  | -152.6532 |
| 4363   | 1   | Extremo | -0.402 | -18.859 | -1.714 | 27.3513 | 1.0673  | -140.4113 |
| 4363   | 0   | Extremo | -0.343 | -41.839 | 0.403  | 27.4737 | 0.2609  | -169.3146 |
| 4363   | 0.5 | Extremo | -0.343 | -30.589 | 0.403  | 27.4737 | 0.0592  | -151.2074 |
| 4363   | 1   | Extremo | -0.343 | -19.339 | 0.403  | 27.4737 | -0.1425 | -138.7252 |
| 4364   | 0   | Extremo | -0.272 | -60.284 | -0.955 | 28.9811 | -0.318  | -148.3148 |
| 4364   | 0.5 | Extremo | -0.272 | -49.034 | -0.955 | 28.9811 | 0.1596  | -120.9854 |
| 4364   | 1   | Extremo | -0.272 | -37.784 | -0.955 | 28.9811 | 0.6372  | -99.281   |
| 4364   | 0   | Extremo | -0.252 | -60.172 | 0.618  | 29.1054 | 0.3617  | -147.2992 |
| 4364   | 0.5 | Extremo | -0.252 | -48.922 | 0.618  | 29.1054 | 0.0529  | -120.0257 |
| 4364   | 1   | Extremo | -0.252 | -37.672 | 0.618  | 29.1054 | -0.2559 | -98.3772  |
| 4365   | 0   | Extremo | -0.25  | 22.4    | -2.262 | 6.0975  | -1.3107 | -109.45   |
| 4365   | 0.5 | Extremo | -0.25  | 33.65   | -2.262 | 6.0975  | -0.1799 | -123.4625 |
| 4365   | 1   | Extremo | -0.25  | 44.9    | -2.262 | 6.0975  | 0.951   | -143.1    |
| 4365   | 0   | Extremo | -0.341 | 21.55   | -0.66  | 7.056   | -0.2659 | -111.1333 |
| 4365   | 0.5 | Extremo | -0.341 | 32.8    | -0.66  | 7.056   | 0.0639  | -124.7209 |
| 4365   | 1   | Extremo | -0.341 | 44.05   | -0.66  | 7.056   | 0.3937  | -143.9334 |
| 4366   | 0   | Extremo | -0.398 | 8.15    | -2.974 | 0.7375  | -1.5854 | -136.3439 |
| 4366   | 0.5 | Extremo | -0.398 | 19.4    | -2.974 | 0.7375  | -0.0983 | -143.2316 |
| 4366   | 1   | Extremo | -0.398 | 30.65   | -2.974 | 0.7375  | 1.3887  | -155.7443 |
| 4366   | 0   | Extremo | -0.455 | 6.241   | -0.217 | 1.3471  | -0.0167 | -138.4141 |
| 4366   | 0.5 | Extremo | -0.455 | 17.491  | -0.217 | 1.3471  | 0.0918  | -144.347  |
| 4366   | 1   | Extremo | -0.455 | 28.741  | -0.217 | 1.3471  | 0.2004  | -155.9048 |
| 4367   | 0   | Extremo | -0.54  | -3.626  | -2.967 | 10.8815 | -1.4121 | -142.6249 |
| 4367   | 0.5 | Extremo | -0.54  | 7.624   | -2.967 | 10.8815 | 0.0713  | -143.6244 |
| 4367   | 1   | Extremo | -0.54  | 18.874  | -2.967 | 10.8815 | 1.5546  | -150.249  |
| 4367   | 0   | Extremo | -0.475 | -6.046  | 0.028  | 11.127  | 0.0851  | -143.8068 |
| 4367   | 0.5 | Extremo | -0.475 | 5.204   | 0.028  | 11.127  | 0.071   | -143.5964 |
| 4367   | 1   | Extremo | -0.475 | 16.454  | 0.028  | 11.127  | 0.0569  | -149.011  |
| 4368</ |     |         |        |         |        |         |         |           |





|      |     |         |        |          |           |          |         |           |
|------|-----|---------|--------|----------|-----------|----------|---------|-----------|
| 4370 | 1   | Extremo | -0.345 | -34.306  | -0.779    | 34.7735  | 0.5618  | -108.6826 |
| 4370 | 0   | Extremo | -0.336 | -56.492  | 0.793     | 35.7585  | 0.4732  | -152.4102 |
| 4370 | 0.5 | Extremo | -0.336 | -45.242  | 0.793     | 35.7585  | 0.0765  | -126.9769 |
| 4370 | 1   | Extremo | -0.336 | -33.992  | 0.793     | 35.7585  | -0.3201 | -107.1686 |
| 4371 | 0   | Extremo | -0.311 | 37.263   | -2.356    | 12.0075  | -1.3687 | -122.2692 |
| 4371 | 0.5 | Extremo | -0.311 | 48.513   | -2.356    | 12.0075  | -0.1908 | -143.7131 |
| 4371 | 1   | Extremo | -0.311 | 59.763   | -2.356    | 12.0075  | 0.9872  | -170.7821 |
| 4371 | 0   | Extremo | -0.459 | 35.595   | -0.949    | 14.5456  | -0.3809 | -125.1304 |
| 4371 | 0.5 | Extremo | -0.459 | 46.845   | -0.949    | 14.5456  | 0.0936  | -145.7405 |
| 4371 | 1   | Extremo | -0.459 | 58.095   | -0.949    | 14.5456  | 0.568   | -171.9757 |
| 4372 | 0   | Extremo | -0.493 | -27.006  | -3.229    | -23.4544 | -1.7142 | -159.7653 |
| 4372 | 0.5 | Extremo | -0.493 | -15.756  | -3.229    | -23.4544 | -0.0999 | -149.0747 |
| 4372 | 1   | Extremo | -0.493 | -4.506   | -3.229    | -23.4544 | 1.5144  | -144.0092 |
| 4372 | 0   | Extremo | -0.6   | -30.073  | -0.193    | -21.2634 | 0.0301  | -163.3006 |
| 4372 | 0.5 | Extremo | -0.6   | -18.823  | -0.193    | -21.2634 | 0.1269  | -151.0767 |
| 4372 | 1   | Extremo | -0.6   | -7.573   | -0.193    | -21.2634 | 0.2236  | -144.4778 |
| 4373 | 0   | Extremo | -0.689 | -22.932  | -3.125    | -3.7839  | -1.4574 | -114.554  |
| 4373 | 0.5 | Extremo | -0.689 | -11.682  | -3.125    | -3.7839  | 0.105   | -105.9005 |
| 4373 | 1   | Extremo | -0.689 | -0.432   | -3.125    | -3.7839  | 1.6675  | -102.8719 |
| 4373 | 0   | Extremo | -0.602 | -26.915  | 0.024     | -2.2119  | 0.087   | -117.1204 |
| 4373 | 0.5 | Extremo | -0.602 | -15.665  | 0.024     | -2.2119  | 0.0749  | -106.4755 |
| 4373 | 1   | Extremo | -0.602 | -4.415   | 0.024     | -2.2119  | 0.0628  | -101.4556 |
| 4374 | 0   | Extremo | -0.761 | 23.626   | -2.411    | 41.9088  | -0.9632 | -97.3654  |
| 4374 | 0.5 | Extremo | -0.761 | 34.876   | -2.411    | 41.9088  | 0.2425  | -111.9909 |
| 4374 | 1   | Extremo | -0.761 | 46.126   | -2.411    | 41.9088  | 1.4481  | -132.2414 |
| 4374 | 0   | Extremo | -0.598 | 19.498   | 0.229     | 42.9826  | 0.1831  | -97.5923  |
| 4374 | 0.5 | Extremo | -0.598 | 30.748   | 0.229     | 42.9826  | 0.0684  | -110.154  |
| 4374 | 1   | Extremo | -0.598 | 41.998   | 0.229     | 42.9826  | -0.0463 | -128.3407 |
| 4375 | 0   | Extremo | -0.661 | 19.309   | -1.388    | 61.7604  | -0.4278 | -152.1182 |
| 4375 | 0.5 | Extremo | -0.661 | 30.559   | -1.388    | 61.7604  | 0.2663  | -164.5852 |
| 4375 | 1   | Extremo | -0.661 | 41.809   | -1.388    | 61.7604  | 0.9603  | -182.6771 |
| 4375 | 0   | Extremo | -0.59  | 17.063   | 0.399     | 63.1303  | 0.3138  | -149.2005 |
| 4375 | 0.5 | Extremo | -0.59  | 28.313   | 0.399     | 63.1303  | 0.1145  | -160.5446 |
| 4375 | 1   | Extremo | -0.59  | 39.563   | 0.399     | 63.1303  | -0.0848 | -177.5137 |
| 4376 | 0   | Extremo | -0.441 | -65.203  | -0.556    | 28.6593  | -0.0907 | -184.5152 |
| 4376 | 0.5 | Extremo | -0.441 | -53.953  | -0.556    | 28.6593  | 0.1874  | -154.726  |
| 4376 | 1   | Extremo | -0.441 | -42.703  | -0.556    | 28.6593  | 0.4655  | -130.5617 |
| 4376 | 0   | Extremo | -0.45  | -63.797  | 1.059     | 31.0975  | 0.6442  | -180.7944 |
| 4376 | 0.5 | Extremo | -0.45  | -52.547  | 1.059     | 31.0975  | 0.1145  | -151.7086 |
| 4376 | 1   | Extremo | -0.45  | -41.297  | 1.059     | 31.0975  | -0.4152 | -128.2477 |
| 4377 | 0   | Extremo | -0.43  | 158.222  | -2.41     | 28.5865  | -1.4214 | -118.6715 |
| 4377 | 0.5 | Extremo | -0.43  | 169.472  | -2.41     | 28.5865  | -0.2162 | -200.5948 |
| 4377 | 1   | Extremo | -0.43  | 180.722  | -2.41     | 28.5865  | 0.989   | -288.1432 |
| 4377 | 0   | Extremo | -0.606 | 155.575  | -1.43     | 34.4251  | -0.5693 | -122.8858 |
| 4377 | 0.5 | Extremo | -0.606 | 166.825  | -1.43     | 34.4251  | 0.1458  | -203.4857 |
| 4377 | 1   | Extremo | -0.606 | 178.075  | -1.43     | 34.4251  | 0.861   | -289.7106 |
| 4378 | 0   | Extremo | -0.564 | -190.019 | -3.625    | -66.2976 | -1.9164 | -275.4818 |
| 4378 | 0.5 | Extremo | -0.564 | -178.769 | -3.625    | -66.2976 | -0.1036 | -183.2847 |
| 4378 | 1   | Extremo | -0.564 | -167.519 | -3.625    | -66.2976 | 1.7091  | -267.7127 |
| 4378 | 0   | Extremo | -0.767 | -194.64  | -0.055    | -61.2098 | 0.1569  | -281.0558 |
| 4378 | 0.5 | Extremo | -0.767 | -183.39  | -0.055    | -61.2098 | 0.1844  | -186.5485 |
| 4378 | 1   | Extremo | -0.767 | -172.14  | -0.055    | -61.2098 | 0.2118  | -97.6663  |
| 4379 | 0   | Extremo | -0.862 | -83.748  | -3.354    | -23.6454 | -1.5241 | -70.3936  |
| 4379 | 0.5 | Extremo | -0.862 | -72.498  | -3.354    | -23.6454 | 0.153   | -31.3323  |
| 4379 | 1   | Extremo | -0.862 | -61.248  | -3.354    | -23.6454 | 1.8301  | 2.104     |
| 4379 | 0   | Extremo | -0.769 | -89.375  | -0.008864 | -19.3511 | 0.0633  | -75.0846  |
| 4379 | 0.5 | Extremo | -0.769 | -78.125  | -0.008864 | -19.3511 | 0.0677  | -33.2097  |
| 4379 | 1   | Extremo | -0.769 | -66.875  | -0.008864 | -19.3511 | 0.0721  | 3.0402    |
| 4380 | 0   | Extremo | -1.018 | 100.753  | -2.448    | 42.5091  | -0.9234 | 16.4869   |
| 4380 | 0.5 | Extremo | -1.018 | 112.003  | -2.448    | 42.5091  | 0.3006  | -36.7021  |
| 4380 | 1   | Extremo | -1.018 | 123.253  | -2.448    | 42.5091  | 1.5245  | -95.5162  |
| 4380 | 0   | Extremo | -0.779 | 93.213   | 0.246     | 45.6328  | 0.1818  | 13.8282   |
| 4380 | 0.5 | Extremo | -0.779 | 104.463  | 0.246     | 45.6328  | 0.0588  | -35.5906  |
| 4380 | 1   | Extremo | -0.779 | 115.713  | 0.246     | 45.6328  | -0.0641 | -90.6344  |
| 4381 | 0   | Extremo | -0.922 | 210.666  | -1.139    | 89.4834  | -0.2707 | -95.3316  |
| 4381 | 0.5 | Extremo | -0.922 | 221.916  | -1.139    | 89.4834  | 0.2986  | -203.4769 |
| 4381 | 1   | Extremo | -0.922 | 233.166  | -1.139    | 89.4834  | 0.868   | -317.2472 |
| 4381 | 0   | Extremo | -0.781 | 202.896  | 0.248     | 91.5403  | 0.2883  | -92.8501  |
| 4381 | 0.5 | Extremo | -0.781 | 214.146  | 0.248     | 91.5403  | 0.1643  | -197.1104 |
| 4381 | 1   | Extremo | -0.781 | 225.396  | 0.248     | 91.5403  | 0.0404  | -306.9957 |
| 4382 | 0   | Extremo | -0.537 | -169.09  | -0.282    | -1.3961  | 0.0709  | -304.5391 |
| 4382 | 0.5 | Extremo | -0.537 | -157.84  | -0.282    | -1.3961  | 0.2118  | -222.8066 |

|      |     |         |        |          |        |          |         |           |
|------|-----|---------|--------|----------|--------|----------|---------|-----------|
| 4382 | 1   | Extremo | -0.537 | -146.59  | -0.282 | -1.3961  | 0.3526  | -146.6992 |
| 4382 | 0   | Extremo | -0.57  | -162.891 | 1.489  | 2.6606   | 0.9249  | -296.0077 |
| 4382 | 0.5 | Extremo | -0.57  | -151.641 | 1.489  | 2.6606   | 0.1805  | -217.3747 |
| 4382 | 1   | Extremo | -0.57  | -140.391 | 1.489  | 2.6606   | -0.5639 | -144.3667 |
| 4383 | 0   | Extremo | -0.977 | 587.643  | -2.402 | -63.4694 | -1.4302 | 13.8335   |
| 4383 | 0.5 | Extremo | -0.977 | 598.893  | -2.402 | -63.4694 | -0.2291 | -282.8005 |
| 4383 | 1   | Extremo | -0.977 | 610.143  | -2.402 | -63.4694 | 0.9721  | -585.0595 |
| 4383 | 0   | Extremo | -0.708 | 590.403  | -2.335 | -50.0296 | -0.9253 | 12.056    |
| 4383 | 0.5 | Extremo | -0.708 | 601.653  | -2.335 | -50.0296 | 0.2424  | -285.9583 |
| 4383 | 1   | Extremo | -0.708 | 612.903  | -2.335 | -50.0296 | 1.41    | -589.5975 |
| 4384 | 0   | Extremo | -0.205 | -693.262 | -4.376 | -11.4268 | -2.3283 | -582.325  |
| 4384 | 0.5 | Extremo | -0.205 | -682.012 | -4.376 | -11.4268 | -0.1405 | -238.5065 |
| 4384 | 1   | Extremo | -0.205 | -670.762 | -4.376 | -11.4268 | 2.0473  | 99.6871   |
| 4384 | 0   | Extremo | -0.793 | -701.104 | 0.353  | -1.8046  | 0.4359  | -591.1856 |
| 4384 | 0.5 | Extremo | -0.793 | -689.854 | 0.353  | -1.8046  | 0.2595  | -243.4462 |
| 4384 | 1   | Extremo | -0.793 | -678.604 | 0.353  | -1.8046  | 0.083   | 98.6683   |
| 4385 | 0   | Extremo | -0.991 | -140.673 | -3.695 | -7.8331  | -1.6376 | -5.9246   |
| 4385 | 0.5 | Extremo | -0.991 | -129.423 | -3.695 | -7.8331  | 0.2098  | 61.5992   |
| 4385 | 1   | Extremo | -0.991 | -118.173 | -3.695 | -7.8331  | 2.0571  | 123.498   |
| 4385 | 0   | Extremo | -1.074 | -147.514 | -0.151 | 0.8589   | -0.0291 | -12.7442  |
| 4385 | 0.5 | Extremo | -1.074 | -136.264 | -0.151 | 0.8589   | 0.0467  | 58.2001   |
| 4385 | 1   | Extremo | -1.074 | -125.014 | -0.151 | 0.8589   | 0.1224  | 123.5194  |
| 4386 | 0   | Extremo | -1.491 | 164.836  | -2.583 | -11.772  | -0.9115 | 145.6604  |
| 4386 | 0.5 | Extremo | -1.491 | 176.086  | -2.583 | -11.772  | 0.3802  | 60.4301   |
| 4386 | 1   | Extremo | -1.491 | 187.336  | -2.583 | -11.772  | 1.6719  | -30.4251  |
| 4386 | 0   | Extremo | -1.164 | 154.322  | 0.299  | -3.7552  | 0.1892  | 138.952   |
| 4386 | 0.5 | Extremo | -1.164 | 165.572  | 0.299  | -3.7552  | 0.0396  | 58.9784   |
| 4386 | 1   | Extremo | -1.164 | 176.822  | 0.299  | -3.7552  | -0.11   | -26.6203  |
| 4387 | 0   | Extremo | -1.79  | 766.92   | -0.859 | -6.8218  | -0.0666 | 124.6366  |
| 4387 | 0.5 | Extremo | -1.79  | 778.17   | -0.859 | -6.8218  | 0.3629  | -261.6358 |
| 4387 | 1   | Extremo | -1.79  | 789.42   | -0.859 | -6.8218  | 0.7924  | -653.5331 |
| 4387 | 0   | Extremo | -1.089 | 741.607  | -0.252 | -0.3584  | 0.1143  | 119.6265  |
| 4387 | 0.5 | Extremo | -1.089 | 752.857  | -0.252 | -0.3584  | 0.2405  | -253.9896 |
| 4387 | 1   | Extremo | -1.089 | 764.107  | -0.252 | -0.3584  | 0.3667  | -633.2307 |
| 4388 | 0   | Extremo | -0.229 | -591.234 | -0.051 | 55.8224  | 0.2085  | -615.4577 |
| 4388 | 0.5 | Extremo | -0.229 | -579.984 | -0.051 | 55.8224  | 0.2339  | -322.6534 |
| 4388 | 1   | Extremo | -0.229 | -568.734 | -0.051 | 55.8224  | 0.2593  | -35.474   |
| 4388 | 0   | Extremo | -0.455 | -575.389 | 2.221  | 54.5273  | 1.3908  | -599.7444 |
| 4388 | 0.5 | Extremo | -0.455 | -564.139 | 2.221  | 54.5273  | 0.2806  | -314.8626 |
| 4388 | 1   | Extremo | -0.455 | -552.889 | 2.221  | 54.5273  | -0.8297 | -35.6057  |
| 4389 | 0   | Extremo | -0.943 | 142.686  | -3.551 | -71.8412 | -1.9396 | -165.0688 |
| 4389 | 0.5 | Extremo | -0.943 | 155.398  | -3.551 | -71.8412 | -0.164  | -239.5897 |
| 4389 | 1   | Extremo | -0.943 | 168.111  | -3.551 | -71.8412 | 1.6117  | -320.4669 |
| 4389 | 0   | Extremo | -0.711 | 147.415  | -2.335 | -60.5247 | -0.9456 | -166.4593 |
| 4389 | 0.5 | Extremo | -0.711 | 160.127  | -2.335 | -60.5247 | 0.2218  | -243.3448 |
| 4389 | 1   | Extremo | -0.711 | 172.84   | -2.335 | -60.5247 | 1.3891  | -326.5865 |
| 4390 | 0   | Extremo | -1.264 | -230.601 | -4.932 | 44.0957  | -2.5499 | -328.8753 |
| 4390 | 0.5 | Extremo | -1.264 | -217.888 | -4.932 | 44.0957  | -0.0838 | -216.7531 |
| 4390 | 1   | Extremo | -1.264 | -205.176 | -4.932 | 44.0957  | 2.3823  | -110.9872 |
| 4390 | 0   | Extremo | -1.133 | -232.676 | -0.723 | 57.8943  | -0.0861 | -336.3551 |
| 4390 | 0.5 | Extremo | -1.133 | -219.964 | -0.723 | 57.8943  | 0.2753  | -223.1951 |
| 4390 | 1   | Extremo | -1.133 | -207.251 | -0.723 | 57.8943  | 0.6367  | -116.3914 |
| 4391 | 0   | Extremo | -1.502 | -101.188 | -4.281 | 4.7835   | -1.8599 | -77.5498  |
| 4391 | 0.5 | Extremo | -1.502 | -88.475  | -4.281 | 4.7835   | 0.2804  | -30.1341  |
| 4391 | 1   | Extremo | -1.502 | -75.763  | -4.281 | 4.7835   | 2.4207  | 10.9253   |
| 4391 | 0   | Extremo | -1.544 | -106.467 | -0.335 | 19.0924  | 0.022   | -85.2002  |
| 4391 | 0.5 | Extremo | -1.544 | -93.755  | -0.335 |          |         |           |



|      |     |         |        |          |        |          |         |           |
|------|-----|---------|--------|----------|--------|----------|---------|-----------|
| 4394 | 1   | Extremo | -0.853 | -137.032 | 0.197  | 15.5848  | 0.1976  | -185.4017 |
| 4394 | 0   | Extremo | -0.719 | -161.762 | 2.206  | 23.7041  | 1.3897  | -329.6487 |
| 4394 | 0.5 | Extremo | -0.719 | -149.05  | 2.206  | 23.7041  | 0.2866  | -251.9457 |
| 4394 | 1   | Extremo | -0.719 | -136.337 | 2.206  | 23.7041  | -0.8164 | -180.5991 |
| 4395 | 0   | Extremo | -1.105 | 31.938   | -4.244 | -28.1336 | -2.2334 | -136.4007 |
| 4395 | 0.5 | Extremo | -1.105 | 44.651   | -4.244 | -28.1336 | -0.1114 | -155.5478 |
| 4395 | 1   | Extremo | -1.105 | 57.363   | -4.244 | -28.1336 | 2.0107  | -181.0512 |
| 4395 | 0   | Extremo | -0.923 | 33.705   | -2.545 | -16.5064 | -1.0764 | -137.9322 |
| 4395 | 0.5 | Extremo | -0.923 | 46.418   | -2.545 | -16.5064 | 0.196   | -157.963  |
| 4395 | 1   | Extremo | -0.923 | 59.13    | -2.545 | -16.5064 | 1.4685  | -184.3501 |
| 4396 | 0   | Extremo | -1.62  | -38.796  | -5.196 | 7.1946   | -2.5876 | -179.0363 |
| 4396 | 0.5 | Extremo | -1.62  | -26.083  | -5.196 | 7.1946   | 0.0104  | -162.8165 |
| 4396 | 1   | Extremo | -1.62  | -13.371  | -5.196 | 7.1946   | 2.6084  | -152.953  |
| 4396 | 0   | Extremo | -1.447 | -39.471  | -1.518 | 21.8483  | -0.4711 | -183.569  |
| 4396 | 0.5 | Extremo | -1.447 | -26.758  | -1.518 | 21.8483  | 0.2878  | -167.0117 |
| 4396 | 1   | Extremo | -1.447 | -14.046  | -1.518 | 21.8483  | 1.0466  | -156.8108 |
| 4397 | 0   | Extremo | -1.878 | -29.666  | -4.432 | -13.4466 | -1.8671 | -125.2327 |
| 4397 | 0.5 | Extremo | -1.878 | -16.953  | -4.432 | -13.4466 | 0.3489  | -113.5779 |
| 4397 | 1   | Extremo | -1.878 | -4.241   | -4.432 | -13.4466 | 2.565   | -108.2794 |
| 4397 | 0   | Extremo | -1.863 | -32.812  | -0.576 | 2.6225   | 0.0264  | -130.2227 |
| 4397 | 0.5 | Extremo | -1.863 | -20.099  | -0.576 | 2.6225   | 0.3146  | -116.9949 |
| 4397 | 1   | Extremo | -1.863 | -7.387   | -0.576 | 2.6225   | 0.6027  | -110.1233 |
| 4398 | 0   | Extremo | -1.871 | 25.749   | -2.677 | -61.2894 | -0.7962 | -103.7701 |
| 4398 | 0.5 | Extremo | -1.871 | 38.461   | -2.677 | -61.2894 | 0.5425  | -119.8225 |
| 4398 | 1   | Extremo | -1.871 | 51.174   | -2.677 | -61.2894 | 1.8812  | -142.2311 |
| 4398 | 0   | Extremo | -1.881 | 21.212   | 0.556  | -44.4656 | 0.5925  | -106.8504 |
| 4398 | 0.5 | Extremo | -1.881 | 33.924   | 0.556  | -44.4656 | 0.3147  | -120.6343 |
| 4398 | 1   | Extremo | -1.881 | 46.637   | 0.556  | -44.4656 | 0.0368  | -140.7745 |
| 4399 | 0   | Extremo | -1.593 | 25.45    | -0.657 | -80.7794 | 0.1879  | -162.0441 |
| 4399 | 0.5 | Extremo | -1.593 | 38.162   | -0.657 | -80.7794 | 0.5162  | -177.947  |
| 4399 | 1   | Extremo | -1.593 | 50.875   | -0.657 | -80.7794 | 0.8445  | -200.2061 |
| 4399 | 0   | Extremo | -1.49  | 21.58    | 1.469  | -64.487  | 1.0345  | -161.848  |
| 4399 | 0.5 | Extremo | -1.49  | 34.292   | 1.469  | -64.487  | 0.3002  | -175.816  |
| 4399 | 1   | Extremo | -1.49  | 47.005   | 1.469  | -64.487  | -0.4342 | -196.1403 |
| 4400 | 0   | Extremo | -1.085 | -67.385  | 0.717  | -39.0637 | 0.7231  | -193.6081 |
| 4400 | 0.5 | Extremo | -1.085 | -54.673  | 0.717  | -39.0637 | 0.3648  | -163.0937 |
| 4400 | 1   | Extremo | -1.085 | -41.96   | 0.717  | -39.0637 | 0.0065  | -138.9355 |
| 4400 | 0   | Extremo | -0.951 | -68.11   | 2.449  | -26.6752 | 1.5142  | -191.8425 |
| 4400 | 0.5 | Extremo | -0.951 | -55.398  | 2.449  | -26.6752 | 0.2895  | -160.9655 |
| 4400 | 1   | Extremo | -0.951 | -42.685  | 2.449  | -26.6752 | -0.9352 | -136.4448 |
| 4401 | 0   | Extremo | -1.35  | 27.005   | -4.968 | -18.0581 | -2.5456 | -112.2404 |
| 4401 | 0.5 | Extremo | -1.35  | 39.717   | -4.968 | -18.0581 | -0.0614 | -128.921  |
| 4401 | 1   | Extremo | -1.35  | 52.43    | -4.968 | -18.0581 | 2.4227  | -151.9577 |
| 4401 | 0   | Extremo | -1.23  | 27.279   | -3.045 | -5.4262  | -1.3179 | -113.4329 |
| 4401 | 0.5 | Extremo | -1.23  | 39.991   | -3.045 | -5.4262  | 0.2046  | -130.2503 |
| 4401 | 1   | Extremo | -1.23  | 52.704   | -3.045 | -5.4262  | 1.7271  | -153.424  |
| 4402 | 0   | Extremo | -1.994 | 8.424    | -5.666 | -16.1461 | -2.7423 | -146.7898 |
| 4402 | 0.5 | Extremo | -1.994 | 21.137   | -5.666 | -16.1461 | 0.0905  | -154.1799 |
| 4402 | 1   | Extremo | -1.994 | 33.849   | -5.666 | -16.1461 | 2.9234  | -167.9263 |
| 4402 | 0   | Extremo | -1.872 | 7.757    | -2.237 | -0.6515  | -0.7871 | -149.2508 |
| 4402 | 0.5 | Extremo | -1.872 | 20.469   | -2.237 | -0.6515  | 0.3314  | -156.3074 |
| 4402 | 1   | Extremo | -1.872 | 33.182   | -2.237 | -0.6515  | 1.45    | -169.7202 |
| 4403 | 0   | Extremo | -2.366 | -5.035   | -4.63  | -27.7324 | -1.8721 | -155.4572 |
| 4403 | 0.5 | Extremo | -2.366 | 7.677    | -4.63  | -27.7324 | 0.4431  | -156.1176 |
| 4403 | 1   | Extremo | -2.366 | 20.39    | -4.63  | -27.7324 | 2.7582  | -163.1342 |
| 4403 | 0   | Extremo | -2.318 | -6.722   | -0.855 | -10.8633 | 0.0124  | -157.9402 |
| 4403 | 0.5 | Extremo | -2.318 | 5.99     | -0.855 | -10.8633 | 0.4401  | -157.7573 |
| 4403 | 1   | Extremo | -2.318 | 18.703   | -0.855 | -10.8633 | 0.8677  | -163.9306 |
| 4404 | 0   | Extremo | -2.384 | -12.314  | -2.505 | -50.1764 | -0.6168 | -163.7201 |
| 4404 | 0.5 | Extremo | -2.384 | 0.398    | -2.505 | -50.1764 | 0.6356  | -160.7411 |
| 4404 | 1   | Extremo | -2.384 | 13.111   | -2.505 | -50.1764 | 1.888   | -164.1183 |
| 4404 | 0   | Extremo | -2.333 | -14.342  | 0.79   | -32.6417 | 0.8387  | -164.9585 |
| 4404 | 0.5 | Extremo | -2.333 | -1.629   | 0.79   | -32.6417 | 0.4436  | -160.9657 |
| 4404 | 1   | Extremo | -2.333 | 11.083   | 0.79   | -32.6417 | 0.0484  | -163.3292 |
| 4405 | 0   | Extremo | -2.035 | -33.764  | -0.186 | -58.807  | 0.4991  | -177.8775 |
| 4405 | 0.5 | Extremo | -2.035 | -21.052  | -0.186 | -58.807  | 0.5922  | -164.1734 |
| 4405 | 1   | Extremo | -2.035 | -8.339   | -0.186 | -58.807  | 0.6852  | -156.8256 |
| 4405 | 0   | Extremo | -1.909 | -35.118  | 2.163  | -41.7083 | 1.4377  | -177.5114 |
| 4405 | 0.5 | Extremo | -1.909 | -22.405  | 2.163  | -41.7083 | 0.356   | -163.1306 |
| 4405 | 1   | Extremo | -1.909 | -9.693   | 2.163  | -41.7083 | -0.7257 | -155.106  |
| 4406 | 0   | Extremo | -1.38  | -65.267  | 1.395  | -47.3526 | 1.1386  | -162.7928 |
| 4406 | 0.5 | Extremo | -1.38  | -52.554  | 1.395  | -47.3526 | 0.4412  | -133.3376 |

|      |     |         |        |         |        |          |         |           |
|------|-----|---------|--------|---------|--------|----------|---------|-----------|
| 4406 | 1   | Extremo | -1.38  | -39.842 | 1.395  | -47.3526 | -0.2561 | -110.2386 |
| 4406 | 0   | Extremo | -1.253 | -65.47  | 2.967  | -33.433  | 1.8107  | -161.9578 |
| 4406 | 0.5 | Extremo | -1.253 | -52.757 | 2.967  | -33.433  | 0.3274  | -132.4011 |
| 4406 | 1   | Extremo | -1.253 | -40.045 | 2.967  | -33.433  | -1.1559 | -109.2006 |
| 4407 | 0   | Extremo | -1.689 | 32.963  | -5.797 | -20.6029 | -2.9074 | -104.1731 |
| 4407 | 0.5 | Extremo | -1.689 | 45.675  | -5.797 | -20.6029 | -0.009  | -123.8327 |
| 4407 | 1   | Extremo | -1.689 | 58.388  | -5.797 | -20.6029 | 2.8893  | -149.8485 |
| 4407 | 0   | Extremo | -1.621 | 32.174  | -3.779 | -7.1385  | -1.6524 | -105.0941 |
| 4407 | 0.5 | Extremo | -1.621 | 44.887  | -3.779 | -7.1385  | 0.2371  | -124.3594 |
| 4407 | 1   | Extremo | -1.621 | 57.599  | -3.779 | -7.1385  | 2.1266  | -149.9809 |
| 4408 | 0   | Extremo | -2.501 | 17.699  | -6.334 | -25.9141 | -2.9928 | -146.3824 |
| 4408 | 0.5 | Extremo | -2.501 | 30.411  | -6.334 | -25.9141 | 0.1741  | -158.4098 |
| 4408 | 1   | Extremo | -2.501 | 43.124  | -6.334 | -25.9141 | 3.341   | -176.7934 |
| 4408 | 0   | Extremo | -2.423 | 16.87   | -3.009 | -9.6935  | -1.103  | -147.3951 |
| 4408 | 0.5 | Extremo | -2.423 | 29.582  | -3.009 | -9.6935  | 0.4016  | -159.0082 |
| 4408 | 1   | Extremo | -2.423 | 42.295  | -3.009 | -9.6935  | 1.9062  | -176.9775 |
| 4409 | 0   | Extremo | -3.014 | -1.719  | -4.918 | -32.4627 | -1.8929 | -173.3322 |
| 4409 | 0.5 | Extremo | -3.014 | 10.994  | -4.918 | -32.4627 | 0.5662  | -175.6509 |
| 4409 | 1   | Extremo | -3.014 | 23.706  | -4.918 | -32.4627 | 3.0253  | -184.326  |
| 4409 | 0   | Extremo | -2.943 | -2.549  | -1.173 | -15.227  | -0.0053 | -174.0452 |
| 4409 | 0.5 | Extremo | -2.943 | 10.163  | -1.173 | -15.227  | 0.5813  | -175.9487 |
| 4409 | 1   | Extremo | -2.943 | 22.876  | -1.173 | -15.227  | 1.1679  | -184.2084 |
| 4410 | 0   | Extremo | -3.068 | -24.252 | -2.301 | -41.31   | -0.3845 | -187.3923 |
| 4410 | 0.5 | Extremo | -3.068 | -11.539 | -2.301 | -41.31   | 0.7661  | -178.4445 |
| 4410 | 1   | Extremo | -3.068 | 1.173   | -2.301 | -41.31   | 1.9167  | -175.853  |
| 4410 | 0   | Extremo | -2.957 | -24.911 | 1.07   | -23.6808 | 1.1233  | -187.3932 |
| 4410 | 0.5 | Extremo | -2.957 | -12.199 | 1.07   | -23.6808 | 0.5882  | -178.1156 |
| 4410 | 1   | Extremo | -2.957 | 0.514   | 1.07   | -23.6808 | 0.053   | -175.1943 |
| 4411 | 0   | Extremo | -2.633 | -48.4   | 0.44   | -44.7789 | 0.9203  | -185.1533 |
| 4411 | 0.5 | Extremo | -2.633 | -35.687 | 0.44   | -44.7789 | 0.7003  | -164.1315 |
| 4411 | 1   | Extremo | -2.633 | -22.975 | 0.44   | -44.7789 | 0.4802  | -149.4659 |
| 4411 | 0   | Extremo | -2.456 | -48.475 | 2.915  | -27.5378 | 1.8953  | -184.4225 |
| 4411 | 0.5 | Extremo | -2.456 | -35.762 | 2.915  | -27.5378 | 0.4378  | -163.3632 |
| 4411 | 1   | Extremo | -2.456 | -23.05  | 2.915  | -27.5378 | -1.0197 | -148.6602 |
| 4412 | 0   | Extremo | -1.783 | -70.53  | 2.284  | -39.3131 | 1.6804  | -158.0353 |
| 4412 | 0.5 | Extremo | -1.783 | -57.818 | 2.284  | -39.3131 | 0.5387  | -125.9484 |
| 4412 | 1   | Extremo | -1.783 | -45.105 | 2.284  | -39.3131 | -0.6031 | -100.2178 |
| 4412 | 0   | Extremo | -1.638 | -70.013 | 3.701  | -24.9453 | 2.246   | -157.2786 |
| 4412 | 0.5 | Extremo | -1.638 | -57.301 | 3.701  | -24.9453 | 0.3954  | -125.4501 |
| 4412 | 1   | Extremo | -1.638 | -44.588 | 3.701  | -24.9453 | -1.4552 | -99.9778  |
| 4413 | 0   | Extremo | -2.127 | 36.835  | -6.769 | -24.8061 | -3.328  | -102.3279 |
| 4413 | 0.5 | Extremo | -2.127 | 49.548  | -6.769 | -24.8061 | 0.0565  | -123.9236 |
| 4413 | 1   | Extremo | -2.127 | 62.26   | -6.769 | -24.8061 | 3.441   | -151.8754 |
| 4413 | 0   | Extremo | -2.117 | 34.564  | -4.747 | -10.0547 | -2.0777 | -103.3833 |
| 4413 | 0.5 | Extremo | -2.117 | 47.277  | -4.747 | -10.0547 | 0.2959  | -123.8434 |
| 4413 | 1   | Extremo | -2.117 | 59.989  | -4.747 | -10.0547 | 2.6695  | -150.6598 |
| 4414 | 0   | Extremo | -3.178 | 18.993  | -7.232 | -28.7924 | -3.3485 | -149.9566 |
| 4414 | 0.5 | Extremo | -3.178 | 31.705  | -7.232 | -28.7924 | 0.2675  | -162.6312 |
| 4414 | 1   | Extremo | -3.178 | 44.418  | -7.232 | -28.7924 | 3.8834  | -181.662  |
| 4414 | 0   | Extremo | -3.149 | 18.093  | -3.931 | -11.8282 | -1.469  | -150.0949 |
| 4414 | 0.5 | Extremo | -3.149 | 30.805  | -3.931 | -11.8282 | 0.4965  | -162.3195 |
| 4414 | 1   | Extremo | -3.149 | 43.518  | -3.931 | -11.8282 | 2.4619  | -180.9004 |
| 4415 | 0   | Extremo | -3.879 | -2.706  | -5.315 | -31.6245 | -1.9359 | -181.8555 |
| 4415 | 0.5 | Extremo | -3.879 | 10.007  | -5.315 | -31.6245 | 0.7217  | -183.6808 |
| 4415 | 1   | Extremo | -3.879 | 22.719  | -5.315 | -31.6245 | 3.3793  | -191.8624 |
| 4415 | 0   | Extremo | -3.805 | -3.184  | -1.553 | -14.2639 | -0.0289 | -181.7737 |
| 4415 | 0.5 | Extremo | -3.805 | 9.529   | -1.553 | -14.2639 | 0.7477  | -183.3601 |
| 4415 | 1   | Extremo | -3.805 |         |        |          |         |           |



|      |     |         |        |         |         |          |         |           |
|------|-----|---------|--------|---------|---------|----------|---------|-----------|
| 4418 | 1   | Extremo | -2.312 | -47.643 | 3.47    | -27.7691 | -1.0633 | -97.1056  |
| 4418 | 0   | Extremo | -2.132 | -71.391 | 4.651   | -14.0181 | 2.8233  | -156.3491 |
| 4418 | 0.5 | Extremo | -2.132 | -58.678 | 4.651   | -14.0181 | 0.4976  | -123.8318 |
| 4418 | 1   | Extremo | -2.132 | -45.966 | 4.651   | -14.0181 | -1.8281 | -97.6708  |
| 4419 | 0   | Extremo | -2.442 | 41.95   | -7.832  | -29.3814 | -3.7534 | -99.2339  |
| 4419 | 0.5 | Extremo | -2.442 | 54.662  | -7.832  | -29.3814 | 0.1626  | -123.3869 |
| 4419 | 1   | Extremo | -2.442 | 67.375  | -7.832  | -29.3814 | 4.0786  | -153.8961 |
| 4419 | 0   | Extremo | -2.538 | 41.092  | -5.936  | -10.0025 | -2.5551 | -98.8731  |
| 4419 | 0.5 | Extremo | -2.538 | 53.805  | -5.936  | -10.0025 | 0.4127  | -122.5974 |
| 4419 | 1   | Extremo | -2.538 | 66.517  | -5.936  | -10.0025 | 3.3805  | -152.678  |
| 4420 | 0   | Extremo | -4.105 | 22.508  | -8.397  | -28.4103 | -3.8247 | -148.6977 |
| 4420 | 0.5 | Extremo | -4.105 | 35.221  | -8.397  | -28.4103 | 0.3738  | -163.13   |
| 4420 | 1   | Extremo | -4.105 | 47.933  | -8.397  | -28.4103 | 4.5724  | -183.9184 |
| 4420 | 0   | Extremo | -4.139 | 20.905  | -5.097  | -10.9009 | -1.9332 | -149.4655 |
| 4420 | 0.5 | Extremo | -4.139 | 33.618  | -5.097  | -10.9009 | 0.6154  | -163.0963 |
| 4420 | 1   | Extremo | -4.139 | 46.33   | -5.097  | -10.9009 | 3.164   | -183.0835 |
| 4421 | 0   | Extremo | -5.153 | -0.316  | -5.805  | -28.2712 | -1.9864 | -182.3819 |
| 4421 | 0.5 | Extremo | -5.153 | 12.396  | -5.805  | -28.2712 | 0.9161  | -185.4019 |
| 4421 | 1   | Extremo | -5.153 | 25.109  | -5.805  | -28.2712 | 3.8185  | -194.7782 |
| 4421 | 0   | Extremo | -5.1   | -2.204  | -2.027  | -11.14   | -0.0647 | -183.3536 |
| 4421 | 0.5 | Extremo | -5.1   | 10.509  | -2.027  | -11.14   | 0.949   | -185.4298 |
| 4421 | 1   | Extremo | -5.1   | 23.221  | -2.027  | -11.14   | 1.9627  | -193.8622 |
| 4422 | 0   | Extremo | -5.286 | -25.53  | -1.683  | -28.1608 | 0.302   | -195.7627 |
| 4422 | 0.5 | Extremo | -5.286 | -12.818 | -1.683  | -28.1608 | 1.1435  | -186.1757 |
| 4422 | 1   | Extremo | -5.286 | -0.105  | -1.683  | -28.1608 | 1.985   | -182.945  |
| 4422 | 0   | Extremo | -5.131 | -27.326 | 1.834   | -11.3934 | 1.8795  | -196.5736 |
| 4422 | 0.5 | Extremo | -5.131 | -14.614 | 1.834   | -11.3934 | 0.9627  | -186.0885 |
| 4422 | 1   | Extremo | -5.131 | -1.901  | 1.834   | -11.3934 | 0.046   | -181.9597 |
| 4423 | 0   | Extremo | -4.44  | -50.838 | 2.334   | -25.959  | 2.1991  | -186.4087 |
| 4423 | 0.5 | Extremo | -4.44  | -38.125 | 2.334   | -25.959  | 1.0322  | -164.168  |
| 4423 | 1   | Extremo | -4.44  | -25.413 | 2.334   | -25.959  | -0.1347 | -148.2836 |
| 4423 | 0   | Extremo | -4.212 | -52.169 | 4.959   | -10.3649 | 3.1518  | -187.0669 |
| 4423 | 0.5 | Extremo | -4.212 | -39.457 | 4.959   | -10.3649 | 0.6721  | -164.1604 |
| 4423 | 1   | Extremo | -4.212 | -26.744 | 4.959   | -10.3649 | -1.8076 | -147.61   |
| 4424 | 0   | Extremo | -2.793 | -74.638 | 5.103   | -15.3778 | 3.4379  | -155.1144 |
| 4424 | 0.5 | Extremo | -2.793 | -61.925 | 5.103   | -15.3778 | 0.8865  | -120.9737 |
| 4424 | 1   | Extremo | -2.793 | -49.213 | 5.103   | -15.3778 | -1.665  | -93.1893  |
| 4424 | 0   | Extremo | -2.579 | -75.18  | 5.786   | -6.0395  | 3.5563  | -156.1104 |
| 4424 | 0.5 | Extremo | -2.579 | -62.467 | 5.786   | -6.0395  | 0.6631  | -121.6986 |
| 4424 | 1   | Extremo | -2.579 | -49.755 | 5.786   | -6.0395  | -2.23   | -93.643   |
| 4425 | 0   | Extremo | -3.633 | 54.885  | -10.151 | -37.1434 | -4.6984 | -115.5502 |
| 4425 | 0.5 | Extremo | -3.633 | 68.835  | -10.151 | -37.1434 | 0.3769  | -146.4801 |
| 4425 | 1   | Extremo | -3.633 | 82.785  | -10.151 | -37.1434 | 5.4523  | -184.385  |
| 4425 | 0   | Extremo | -3.579 | 57.478  | -8.083  | -20.6755 | -3.4358 | -114.2862 |
| 4425 | 0.5 | Extremo | -3.579 | 71.428  | -8.083  | -20.6755 | 0.6056  | -146.5126 |
| 4425 | 1   | Extremo | -3.579 | 85.378  | -8.083  | -20.6755 | 4.6469  | -185.7141 |
| 4426 | 0   | Extremo | -5.52  | 30.317  | -10.285 | -31.3077 | -4.5047 | -190.5254 |
| 4426 | 0.5 | Extremo | -5.52  | 44.267  | -10.285 | -31.3077 | 0.6378  | -209.1715 |
| 4426 | 1   | Extremo | -5.52  | 58.217  | -10.285 | -31.3077 | 5.7802  | -234.7927 |
| 4426 | 0   | Extremo | -5.454 | 31.198  | -6.858  | -12.0084 | -2.5404 | -190.701  |
| 4426 | 0.5 | Extremo | -5.454 | 45.148  | -6.858  | -12.0084 | 0.8884  | -209.7876 |
| 4426 | 1   | Extremo | -5.454 | 59.098  | -6.858  | -12.0084 | 4.3172  | -235.8491 |
| 4427 | 0   | Extremo | -6.639 | -0.888  | -6.706  | -29.6048 | -2.0439 | -239.1537 |
| 4427 | 0.5 | Extremo | -6.639 | 13.062  | -6.706  | -29.6048 | 1.3092  | -242.1974 |
| 4427 | 1   | Extremo | -6.639 | 27.012  | -6.706  | -29.6048 | 4.6624  | -252.2162 |
| 4427 | 0   | Extremo | -6.572 | -0.698  | -2.738  | -9.9539  | -0.0209 | -239.6399 |
| 4427 | 0.5 | Extremo | -6.572 | 13.252  | -2.738  | -9.9539  | 1.3479  | -242.7786 |
| 4427 | 1   | Extremo | -6.572 | 27.202  | -2.738  | -9.9539  | 2.7167  | -252.8923 |
| 4428 | 0   | Extremo | -6.682 | -34.124 | -1.244  | -28.2627 | 0.9466  | -256.0897 |
| 4428 | 0.5 | Extremo | -6.682 | -20.174 | -1.244  | -28.2627 | 1.5684  | -242.5151 |
| 4428 | 1   | Extremo | -6.682 | -6.224  | -1.244  | -28.2627 | 2.1901  | -235.9156 |
| 4428 | 0   | Extremo | -6.612 | -34.068 | 2.454   | -8.7775  | 2.5976  | -256.6205 |
| 4428 | 0.5 | Extremo | -6.612 | -20.118 | 2.454   | -8.7775  | 1.3707  | -243.0742 |
| 4428 | 1   | Extremo | -6.612 | -6.168  | 2.454   | -8.7775  | 0.1437  | -236.5029 |
| 4429 | 0   | Extremo | -5.601 | -66.961 | 3.965   | -23.7927 | 3.3278  | -239.2137 |
| 4429 | 0.5 | Extremo | -5.601 | -53.011 | 3.965   | -23.7927 | 1.3451  | -209.2204 |
| 4429 | 1   | Extremo | -5.601 | -39.061 | 3.965   | -23.7927 | -0.6377 | -186.2022 |
| 4429 | 0   | Extremo | -5.549 | -67.222 | 6.653   | -5.162   | 4.3111  | -240.061  |
| 4429 | 0.5 | Extremo | -5.549 | -53.272 | 6.653   | -5.162   | 0.9847  | -209.9376 |
| 4429 | 1   | Extremo | -5.549 | -39.322 | 6.653   | -5.162   | -2.3418 | -186.7893 |
| 4430 | 0   | Extremo | -3.684 | -93.752 | 6.959   | -3.9264  | 4.6583  | -187.4999 |
| 4430 | 0.5 | Extremo | -3.684 | -79.802 | 6.959   | -3.9264  | 1.1786  | -144.1116 |

|      |     |         |         |         |         |          |         |           |
|------|-----|---------|---------|---------|---------|----------|---------|-----------|
| 4430 | 1   | Extremo | -3.684  | -65.852 | 6.959   | -3.9264  | -2.3011 | -107.6983 |
| 4430 | 0   | Extremo | -3.63   | -95.227 | 7.974   | 10.8367  | 4.9582  | -188.8115 |
| 4430 | 0.5 | Extremo | -3.63   | -81.277 | 7.974   | 10.8367  | 0.9711  | -144.6853 |
| 4430 | 1   | Extremo | -3.63   | -67.327 | 7.974   | 10.8367  | -3.016  | -107.5341 |
| 4431 | 0   | Extremo | -4.548  | 54.922  | -12.413 | -36.1376 | -5.6309 | -111.8394 |
| 4431 | 0.5 | Extremo | -4.548  | 68.872  | -12.413 | -36.1376 | 0.5758  | -142.7877 |
| 4431 | 1   | Extremo | -4.548  | 82.822  | -12.413 | -36.1376 | 6.7825  | -180.711  |
| 4431 | 0   | Extremo | -4.501  | 55.817  | -10.32  | -21.2065 | -4.3698 | -111.3091 |
| 4431 | 0.5 | Extremo | -4.501  | 69.767  | -10.32  | -21.2065 | 0.7901  | -142.7051 |
| 4431 | 1   | Extremo | -4.501  | 83.717  | -10.32  | -21.2065 | 5.9499  | -181.0761 |
| 4432 | 0   | Extremo | -6.826  | 32.299  | -12.066 | -27.6407 | -5.1438 | -186.3993 |
| 4432 | 0.5 | Extremo | -6.826  | 46.249  | -12.066 | -27.6407 | 0.8893  | -206.0363 |
| 4432 | 1   | Extremo | -6.826  | 60.199  | -12.066 | -27.6407 | 6.9225  | -232.6482 |
| 4432 | 0   | Extremo | -6.761  | 33.108  | -8.68   | -9.4282  | -3.2106 | -186.1279 |
| 4432 | 0.5 | Extremo | -6.761  | 47.058  | -8.68   | -9.4282  | 1.1292  | -206.1693 |
| 4432 | 1   | Extremo | -6.761  | 61.008  | -8.68   | -9.4282  | 5.4689  | -233.1856 |
| 4433 | 0   | Extremo | -8.173  | -0.424  | -7.401  | -25.6198 | -2.0485 | -236.8502 |
| 4433 | 0.5 | Extremo | -8.173  | 13.526  | -7.401  | -25.6198 | 1.6522  | -240.1255 |
| 4433 | 1   | Extremo | -8.173  | 27.476  | -7.401  | -25.6198 | 5.353   | -250.3759 |
| 4433 | 0   | Extremo | -8.095  | 0.189   | -3.459  | -6.6521  | -0.0386 | -236.8361 |
| 4433 | 0.5 | Extremo | -8.095  | 14.139  | -3.459  | -6.6521  | 1.691   | -240.4181 |
| 4433 | 1   | Extremo | -8.095  | 28.089  | -3.459  | -6.6521  | 3.4206  | -250.9752 |
| 4434 | 0   | Extremo | -8.229  | -35.361 | -0.587  | -23.9271 | 1.6225  | -254.1039 |
| 4434 | 0.5 | Extremo | -8.229  | -21.411 | -0.587  | -23.9271 | 1.9162  | -239.9108 |
| 4434 | 1   | Extremo | -8.229  | -7.461  | -0.587  | -23.9271 | 2.2098  | -232.6927 |
| 4434 | 0   | Extremo | -8.139  | -34.891 | 3.08    | -4.8143  | 3.2623  | -254.3079 |
| 4434 | 0.5 | Extremo | -8.139  | -20.941 | 3.08    | -4.8143  | 1.7223  | -240.3497 |
| 4434 | 1   | Extremo | -8.139  | -6.991  | 3.08    | -4.8143  | 0.1822  | -233.3665 |
| 4435 | 0   | Extremo | -6.954  | -68.359 | 5.784   | -19.1675 | 4.4942  | -235.8876 |
| 4435 | 0.5 | Extremo | -6.954  | -54.409 | 5.784   | -19.1675 | 1.602   | -205.1956 |
| 4435 | 1   | Extremo | -6.954  | -40.459 | 5.784   | -19.1675 | -1.2903 | -181.4785 |
| 4435 | 0   | Extremo | -6.868  | -68.221 | 8.409   | -0.5229  | 5.4652  | -236.3528 |
| 4435 | 0.5 | Extremo | -6.868  | -54.271 | 8.409   | -0.5229  | 1.2609  | -205.7296 |
| 4435 | 1   | Extremo | -6.868  | -40.321 | 8.409   | -0.5229  | -2.9434 | -182.0814 |
| 4436 | 0   | Extremo | -4.637  | -91.553 | 9.138   | 3.4462   | 6.0351  | -183.0794 |
| 4436 | 0.5 | Extremo | -4.637  | -77.603 | 9.138   | 3.4462   | 1.4659  | -140.7902 |
| 4436 | 1   | Extremo | -4.637  | -63.653 | 9.138   | 3.4462   | -3.1032 | -105.476  |
| 4436 | 0   | Extremo | -4.561  | -91.934 | 10.226  | 18.6293  | 6.3782  | -183.5975 |
| 4436 | 0.5 | Extremo | -4.561  | -77.984 | 10.226  | 18.6293  | 1.2653  | -141.1182 |
| 4436 | 1   | Extremo | -4.561  | -64.034 | 10.226  | 18.6293  | -3.8475 | -105.614  |
| 4437 | 0   | Extremo | -5.772  | 61.734  | -15.268 | -36.9485 | -6.8219 | -107.7534 |
| 4437 | 0.5 | Extremo | -5.772  | 75.684  | -15.268 | -36.9485 | 0.8121  | -142.1077 |
| 4437 | 1   | Extremo | -5.772  | 89.634  | -15.268 | -36.9485 | 8.4461  | -183.4371 |
| 4437 | 0   | Extremo | -5.755  | 61.26   | -13.172 | -22.3062 | -5.5604 | -107.6492 |
| 4437 | 0.5 | Extremo | -5.755  | 75.21   | -13.172 | -22.3062 | 1.0258  | -141.7665 |
| 4437 | 1   | Extremo | -5.755  | 89.16   | -13.172 | -22.3062 | 7.612   | -182.8589 |
| 4438 | 0   | Extremo | -8.643  | 35.444  | -14.415 | -25.8219 | -6.0153 | -184.605  |
| 4438 | 0.5 | Extremo | -8.643  | 49.394  | -14.415 | -25.8219 | 1.1924  | -205.8147 |
| 4438 | 1   | Extremo | -8.643  | 63.344  | -14.415 | -25.8219 | 8.4001  | -233.9994 |
| 4438 | 0   | Extremo | -8.6    | 35.651  | -11.006 | -8.0262  | -4.068  | -183.9853 |
| 4438 | 0.5 | Extremo | -8.6    | 49.601  | -11.006 | -8.0262  | 1.435   | -205.2981 |
| 4438 | 1   | Extremo | -8.6    | 63.551  | -11.006 | -8.0262  | 6.9381  | -233.5859 |
| 4439 | 0   | Extremo | -10.37  | 0.115   | -8.344  | -22.7283 | -2.0867 | -235.4375 |
| 4439 | 0.5 | Extremo | -10.37  | 14.065  | -8.344  | -22.7283 | 2.0853  | -238.9828 |
| 4439 | 1   | Extremo | -10.37  | 28.015  | -8.344  | -22.7283 | 6.2573  | -249.503  |
| 4439 | 0   | Extremo | -10.269 | 0.694   | -4.363  | -4.2248  | -0.0571 | -234.8461 |
| 4439 | 0.5 | Extremo | -10.269 | 14.644  | -4.363  | -4.2248  | 2.1246  | -238.6805 |
| 4439 | 1   |         |         |         |         |          |         |           |



|      |     |         |         |          |         |           |         |           |
|------|-----|---------|---------|----------|---------|-----------|---------|-----------|
| 4442 | 1   | Extremo | -5.968  | -67.093  | 12.046  | 11.146    | -4.1711 | -103.5368 |
| 4442 | 0   | Extremo | -5.822  | -94.577  | 13.066  | 26.1078   | 8.1715  | -184.4785 |
| 4442 | 0.5 | Extremo | -5.822  | -80.627  | 13.066  | 26.1078   | 1.6386  | -140.6773 |
| 4442 | 1   | Extremo | -5.822  | -66.677  | 13.066  | 26.1078   | -4.8942 | -103.8511 |
| 4443 | 0   | Extremo | -7.383  | 80.729   | -18.834 | -49.9735  | -8.2855 | -97.9607  |
| 4443 | 0.5 | Extremo | -7.383  | 94.679   | -18.834 | -49.9735  | 1.1318  | -141.8127 |
| 4443 | 1   | Extremo | -7.383  | 108.629  | -18.834 | -49.9735  | 10.549  | -192.6397 |
| 4443 | 0   | Extremo | -7.418  | 78.672   | -16.796 | -34.6164  | -7.0433 | -98.3766  |
| 4443 | 0.5 | Extremo | -7.418  | 92.622   | -16.796 | -34.6164  | 1.3547  | -141.2    |
| 4443 | 1   | Extremo | -7.418  | 106.572  | -16.796 | -34.6164  | 9.7528  | -190.9983 |
| 4444 | 0   | Extremo | -11.117 | 37.68    | -17.462 | -29.9389  | -7.1648 | -182.7359 |
| 4444 | 0.5 | Extremo | -11.117 | 51.63    | -17.462 | -29.9389  | 1.5661  | -205.0632 |
| 4444 | 1   | Extremo | -11.117 | 65.58    | -17.462 | -29.9389  | 10.2969 | -234.3655 |
| 4444 | 0   | Extremo | -11.111 | 37.405   | -13.987 | -12.0378  | -5.1687 | -181.9749 |
| 4444 | 0.5 | Extremo | -11.111 | 51.355   | -13.987 | -12.0378  | 1.8249  | -204.1647 |
| 4444 | 1   | Extremo | -11.111 | 65.305   | -13.987 | -12.0378  | 8.8184  | -233.3295 |
| 4445 | 0   | Extremo | -13.405 | -0.192   | -9.563  | -21.6294  | -2.1605 | -231.2172 |
| 4445 | 0.5 | Extremo | -13.405 | 13.758   | -9.563  | -21.6294  | 2.6213  | -234.6089 |
| 4445 | 1   | Extremo | -13.405 | 27.708   | -9.563  | -21.6294  | 7.403   | -244.9757 |
| 4445 | 0   | Extremo | -13.29  | 0.099    | -5.496  | -3.4711   | -0.0859 | -230.5183 |
| 4445 | 0.5 | Extremo | -13.29  | 14.049   | -5.496  | -3.4711   | 2.662   | -234.0551 |
| 4445 | 1   | Extremo | -13.29  | 27.999   | -5.496  | -3.4711   | 5.4099  | -244.5669 |
| 4446 | 0   | Extremo | -13.581 | -34.186  | 1.093   | -14.9552  | 3.4729  | -247.4219 |
| 4446 | 0.5 | Extremo | -13.581 | -20.236  | 1.093   | -14.9552  | 2.9265  | -233.8164 |
| 4446 | 1   | Extremo | -13.581 | -6.286   | 1.093   | -14.9552  | 2.3801  | -227.186  |
| 4446 | 0   | Extremo | -13.349 | -33.789  | 4.875   | 3.0909    | 5.1498  | -246.9099 |
| 4446 | 0.5 | Extremo | -13.349 | -19.839  | 4.875   | 3.0909    | 2.7121  | -233.5029 |
| 4446 | 1   | Extremo | -13.349 | -5.889   | 4.875   | 3.0909    | 0.2744  | -227.0709 |
| 4447 | 0   | Extremo | -11.564 | -70.257  | 10.892  | -4.9128   | 7.8835  | -234.8335 |
| 4447 | 0.5 | Extremo | -11.564 | -56.307  | 10.892  | -4.9128   | 2.4375  | -203.1926 |
| 4447 | 1   | Extremo | -11.564 | -42.357  | 10.892  | -4.9128   | -3.0085 | -178.5266 |
| 4447 | 0   | Extremo | -11.253 | -69.544  | 13.541  | 12.5033   | 8.8103  | -234.2498 |
| 4447 | 0.5 | Extremo | -11.253 | -55.594  | 13.541  | 12.5033   | 2.04    | -202.9653 |
| 4447 | 1   | Extremo | -11.253 | -41.644  | 13.541  | 12.5033   | -4.7303 | -178.6558 |
| 4448 | 0   | Extremo | -7.729  | -108.855 | 15.875  | 27.3249   | 10.3224 | -192.1533 |
| 4448 | 0.5 | Extremo | -7.729  | -94.905  | 15.875  | 27.3249   | 2.3848  | -141.2134 |
| 4448 | 1   | Extremo | -7.729  | -80.955  | 15.875  | 27.3249   | -5.5528 | -97.2486  |
| 4448 | 0   | Extremo | -7.492  | -107.321 | 16.649  | 41.3293   | 10.4639 | -191.3763 |
| 4448 | 0.5 | Extremo | -7.492  | -93.371  | 16.649  | 41.3293   | 2.1393  | -141.2034 |
| 4448 | 1   | Extremo | -7.492  | -79.421  | 16.649  | 41.3293   | -6.1853 | -98.0054  |
| 4449 | 0   | Extremo | -8.607  | 69.926   | -23.111 | -117.5343 | -9.8915 | -97.5071  |
| 4449 | 0.5 | Extremo | -8.607  | 83.876   | -23.111 | -117.5343 | 1.664   | -135.9578 |
| 4449 | 1   | Extremo | -8.607  | 97.826   | -23.111 | -117.5343 | 13.2195 | -181.3835 |
| 4449 | 0   | Extremo | -8.742  | 69.079   | -21.284 | -97.6735  | -8.7237 | -96.8371  |
| 4449 | 0.5 | Extremo | -8.742  | 83.029   | -21.284 | -97.6735  | 1.9183  | -134.8642 |
| 4449 | 1   | Extremo | -8.742  | 96.979   | -21.284 | -97.6735  | 12.5604 | -179.8662 |
| 4450 | 0   | Extremo | -14.56  | 34.292   | -21.396 | -39.0932  | -8.674  | -170.4358 |
| 4450 | 0.5 | Extremo | -14.56  | 48.242   | -21.396 | -39.0932  | 2.0241  | -191.0693 |
| 4450 | 1   | Extremo | -14.56  | 62.192   | -21.396 | -39.0932  | 12.7222 | -218.6778 |
| 4450 | 0   | Extremo | -14.602 | 32.817   | -17.854 | -21.0344  | -6.6155 | -170.9574 |
| 4450 | 0.5 | Extremo | -14.602 | 46.767   | -17.854 | -21.0344  | 2.3113  | -190.8532 |
| 4450 | 1   | Extremo | -14.602 | 60.717   | -17.854 | -21.0344  | 11.2382 | -217.724  |
| 4451 | 0   | Extremo | -17.991 | 1.258    | -11.053 | -20.6538  | -2.2501 | -215.1516 |
| 4451 | 0.5 | Extremo | -17.991 | 15.208   | -11.053 | -20.6538  | 3.2765  | -219.2682 |
| 4451 | 1   | Extremo | -17.991 | 29.158   | -11.053 | -20.6538  | 8.8031  | -230.3598 |
| 4451 | 0   | Extremo | -17.878 | -0.496   | -6.905  | -3.0076   | -0.1339 | -216.0867 |
| 4451 | 0.5 | Extremo | -17.878 | 13.454   | -6.905  | -3.0076   | 3.3188  | -219.3264 |
| 4451 | 1   | Extremo | -17.878 | 27.404   | -6.905  | -3.0076   | 6.7715  | -229.5411 |
| 4452 | 0   | Extremo | -18.249 | -31.145  | 2.27    | -9.8728   | 4.7442  | -231.1701 |
| 4452 | 0.5 | Extremo | -18.249 | -17.195  | 2.27    | -9.8728   | 3.609   | -219.0849 |
| 4452 | 1   | Extremo | -18.249 | -3.245   | 2.27    | -9.8728   | 2.4738  | -213.9746 |
| 4452 | 0   | Extremo | -17.975 | -32.893  | 6.122   | 7.3879    | 6.4401  | -232.1805 |
| 4452 | 0.5 | Extremo | -17.975 | -18.943  | 6.122   | 7.3879    | 3.3792  | -219.2215 |
| 4452 | 1   | Extremo | -17.975 | -4.993   | 6.122   | 7.3879    | 0.3183  | -213.2376 |
| 4453 | 0   | Extremo | -15.203 | -64.365  | 14.601  | 9.0003    | 10.3441 | -219.0639 |
| 4453 | 0.5 | Extremo | -15.203 | -50.415  | 14.601  | 9.0003    | 3.0437  | -190.3692 |
| 4453 | 1   | Extremo | -15.203 | -36.465  | 14.601  | 9.0003    | -4.2567 | -168.6494 |
| 4453 | 0   | Extremo | -14.847 | -65.743  | 17.284  | 25.0687   | 11.2154 | -220.0483 |
| 4453 | 0.5 | Extremo | -14.847 | -51.793  | 17.284  | 25.0687   | 2.5732  | -190.664  |
| 4453 | 1   | Extremo | -14.847 | -37.843  | 17.284  | 25.0687   | -6.0689 | -168.2548 |
| 4454 | 0   | Extremo | -9.175  | -99.765  | 20.894  | 91.7233   | 13.6778 | -180.9937 |
| 4454 | 0.5 | Extremo | -9.175  | -85.815  | 20.894  | 91.7233   | 3.2307  | -134.5986 |

|      |     |         |         |          |         |          |          |           |
|------|-----|---------|---------|----------|---------|----------|----------|-----------|
| 4454 | 1   | Extremo | -9.175  | -71.865  | 20.894  | 91.7233  | -7.2165  | -95.1785  |
| 4454 | 0   | Extremo | -8.878  | -100.421 | 21.048  | 100.9767 | 13.4357  | -182.3065 |
| 4454 | 0.5 | Extremo | -8.878  | -86.471  | 21.048  | 100.9767 | 2.9119   | -135.5835 |
| 4454 | 1   | Extremo | -8.878  | -72.521  | 21.048  | 100.9767 | -7.6119  | -95.8355  |
| 4455 | 0   | Extremo | -12.516 | 46.22    | -31.221 | -82.007  | -12.945  | -127.0829 |
| 4455 | 0.5 | Extremo | -12.516 | 61.745   | -31.221 | -82.007  | 2.6655   | -154.0739 |
| 4455 | 1   | Extremo | -12.516 | 77.27    | -31.221 | -82.007  | 18.2759  | -188.8274 |
| 4455 | 0   | Extremo | -12.454 | 48.893   | -29.15  | -65.305  | -11.6807 | -125.9134 |
| 4455 | 0.5 | Extremo | -12.454 | 64.418   | -29.15  | -65.305  | 2.8944   | -154.2411 |
| 4455 | 1   | Extremo | -12.454 | 79.943   | -29.15  | -65.305  | 17.4694  | -190.3314 |
| 4456 | 0   | Extremo | -19.375 | 34.82    | -27.676 | -36.3767 | -10.7233 | -209.85   |
| 4456 | 0.5 | Extremo | -19.375 | 50.345   | -27.676 | -36.3767 | 3.1148   | -231.1412 |
| 4456 | 1   | Extremo | -19.375 | 65.87    | -27.676 | -36.3767 | 16.9529  | -260.1949 |
| 4456 | 0   | Extremo | -19.264 | 35.88    | -23.929 | -16.1947 | -8.5468  | -210.1354 |
| 4456 | 0.5 | Extremo | -19.264 | 51.405   | -23.929 | -16.1947 | 3.4176   | -231.9566 |
| 4456 | 1   | Extremo | -19.264 | 66.93    | -23.929 | -16.1947 | 15.382   | -261.5403 |
| 4457 | 0   | Extremo | -23.127 | 1.764    | -13.485 | -20.5237 | -2.0655  | -270.6057 |
| 4457 | 0.5 | Extremo | -23.127 | 17.289   | -13.485 | -20.5237 | 4.6769   | -275.3691 |
| 4457 | 1   | Extremo | -23.127 | 32.814   | -13.485 | -20.5237 | 11.4194  | -287.8949 |
| 4457 | 0   | Extremo | -22.969 | 2.083    | -9.032  | 0.0028   | 0.2064   | -271.3576 |
| 4457 | 0.5 | Extremo | -22.969 | 17.608   | -9.032  | 0.0028   | 4.7221   | -276.2802 |
| 4457 | 1   | Extremo | -22.969 | 33.133   | -9.032  | 0.0028   | 9.2379   | -288.9653 |
| 4458 | 0   | Extremo | -23.269 | -37.649  | 3.884   | -10.0482 | 7.0148   | -290.882  |
| 4458 | 0.5 | Extremo | -23.269 | -22.124  | 3.884   | -10.0482 | 5.0729   | -275.9389 |
| 4458 | 1   | Extremo | -23.269 | -6.599   | 3.884   | -10.0482 | 3.1309   | -268.7582 |
| 4458 | 0   | Extremo | -23.069 | -37.566  | 7.987   | 10.2478  | 8.7996   | -291.783  |
| 4458 | 0.5 | Extremo | -23.069 | -22.041  | 7.987   | 10.2478  | 4.8061   | -276.8814 |
| 4458 | 1   | Extremo | -23.069 | -6.516   | 7.987   | 10.2478  | 0.8125   | -269.7423 |
| 4459 | 0   | Extremo | -19.691 | -73.318  | 20.393  | 7.4763   | 14.4817  | -264.6606 |
| 4459 | 0.5 | Extremo | -19.691 | -57.793  | 20.393  | 7.4763   | 4.2852   | -231.8827 |
| 4459 | 1   | Extremo | -19.691 | -42.268  | 20.393  | 7.4763   | -5.9112  | -206.8673 |
| 4459 | 0   | Extremo | -19.516 | -73.6    | 23.112  | 26.7633  | 15.3564  | -265.8343 |
| 4459 | 0.5 | Extremo | -19.516 | -58.075  | 23.112  | 26.7633  | 3.8003   | -232.9156 |
| 4459 | 1   | Extremo | -19.516 | -42.55   | 23.112  | 26.7633  | -7.7557  | -207.7593 |
| 4460 | 0   | Extremo | -12.725 | -90.323  | 28.336  | 65.2602  | 18.785   | -192.7945 |
| 4460 | 0.5 | Extremo | -12.725 | -74.798  | 28.336  | 65.2602  | 4.6169   | -151.5142 |
| 4460 | 1   | Extremo | -12.725 | -59.273  | 28.336  | 65.2602  | -9.5511  | -117.9264 |
| 4460 | 0   | Extremo | -12.575 | -91.752  | 28.869  | 79.8843  | 18.743   | -194.2506 |
| 4460 | 0.5 | Extremo | -12.575 | -76.227  | 28.869  | 79.8843  | 4.3088   | -152.256  |
| 4460 | 1   | Extremo | -12.575 | -60.702  | 28.869  | 79.8843  | -10.1255 | -118.0239 |
| 4461 | 0   | Extremo | -15.726 | 54.51    | -39.716 | -67.2969 | -16.2441 | -117.2873 |
| 4461 | 0.5 | Extremo | -15.726 | 70.035   | -39.716 | -67.2969 | 3.6137   | -148.4236 |
| 4461 | 1   | Extremo | -15.726 | 85.56    | -39.716 | -67.2969 | 23.4715  | -187.3224 |
| 4461 | 0   | Extremo | -15.672 | 55.601   | -37.574 | -52.1754 | -14.956  | -116.8742 |
| 4461 | 0.5 | Extremo | -15.672 | 71.126   | -37.574 | -52.1754 | 3.8312   | -148.5558 |
| 4461 | 1   | Extremo | -15.672 | 86.651   | -37.574 | -52.1754 | 22.6183  | -187.9999 |
| 4462 | 0   | Extremo | -24.046 | 34.859   | -33.641 | -24.3445 | -12.685  | -201.0072 |
| 4462 | 0.5 | Extremo | -24.046 | 50.384   | -33.641 | -24.3445 | 4.1355   | -222.3182 |
| 4462 | 1   | Extremo | -24.046 | 65.909   | -33.641 | -24.3445 | 20.9561  | -251.3917 |
| 4462 | 0   | Extremo | -23.926 | 35.888   | -29.897 | -5.3128  | -10.5195 | -201.0248 |
| 4462 | 0.5 | Extremo | -23.926 | 51.413   | -29.897 | -5.3128  | 4.429    | -222.8499 |
| 4462 | 1   | Extremo | -23.926 | 66.938   | -29.897 | -5.3128  | 19.3775  | -252.4375 |
| 4463 | 0   | Extremo | -28.344 | 1.719    | -15.284 | -14.7791 | -1.868   | -260.04   |
| 4463 | 0.5 | Extremo | -28.344 | 17.244   | -15.284 | -14.7791 | 5.7742   | -264.7807 |
| 4463 | 1   | Extremo | -28.344 | 32.769   | -15.284 | -14.7791 |          |           |



|      |     |         |         |          |         |          |          |           |
|------|-----|---------|---------|----------|---------|----------|----------|-----------|
| 4466 | 1   | Extremo | -16.057 | -64.899  | 36.571  | 60.9926  | -12.3188 | -110.9056 |
| 4466 | 0   | Extremo | -15.832 | -96.452  | 37.177  | 75.9089  | 24.243   | -192.0067 |
| 4466 | 0.5 | Extremo | -15.832 | -80.927  | 37.177  | 75.9089  | 5.6544   | -147.6617 |
| 4466 | 1   | Extremo | -15.832 | -65.402  | 37.177  | 75.9089  | -12.9341 | -111.0792 |
| 4467 | 0   | Extremo | -20.148 | 64.444   | -51.107 | -64.3174 | -20.7084 | -112.9636 |
| 4467 | 0.5 | Extremo | -20.148 | 79.969   | -51.107 | -64.3174 | 4.8451   | -149.0667 |
| 4467 | 1   | Extremo | -20.148 | 95.494   | -51.107 | -64.3174 | 30.3985  | -192.9323 |
| 4467 | 0   | Extremo | -20.122 | 64.646   | -48.918 | -49.5233 | -19.389  | -112.8228 |
| 4467 | 0.5 | Extremo | -20.122 | 80.171   | -48.918 | -49.5233 | 5.0699   | -149.027  |
| 4467 | 1   | Extremo | -20.122 | 95.696   | -48.918 | -49.5233 | 29.5289  | -192.9937 |
| 4468 | 0   | Extremo | -30.812 | 41.859   | -41.155 | -17.4248 | -15.0507 | -199.9385 |
| 4468 | 0.5 | Extremo | -30.812 | 57.384   | -41.155 | -17.4248 | 5.5266   | -224.7492 |
| 4468 | 1   | Extremo | -30.812 | 72.909   | -41.155 | -17.4248 | 26.1039  | -257.3223 |
| 4468 | 0   | Extremo | -30.706 | 42.337   | -37.331 | 1.0896   | -12.8335 | -199.762  |
| 4468 | 0.5 | Extremo | -30.706 | 57.862   | -37.331 | 1.0896   | 5.8321   | -224.812  |
| 4468 | 1   | Extremo | -30.706 | 73.387   | -37.331 | 1.0896   | 24.4977  | -257.6245 |
| 4469 | 0   | Extremo | -35.936 | 3.886    | -17.112 | -10.8691 | -1.4435  | -261.4694 |
| 4469 | 0.5 | Extremo | -35.936 | 19.411   | -17.112 | -10.8691 | 7.1125   | -267.2935 |
| 4469 | 1   | Extremo | -35.936 | 34.936   | -17.112 | -10.8691 | 15.6684  | -280.8801 |
| 4469 | 0   | Extremo | -35.685 | 4.382    | -12.472 | 8.4671   | 0.9243   | -261.4909 |
| 4469 | 0.5 | Extremo | -35.685 | 19.907   | -12.472 | 8.4671   | 7.1602   | -267.5629 |
| 4469 | 1   | Extremo | -35.685 | 35.432   | -12.472 | 8.4671   | 13.396   | -281.3974 |
| 4470 | 0   | Extremo | -36.202 | -37.858  | 6.753   | -9.0441  | 10.9387  | -282.5069 |
| 4470 | 0.5 | Extremo | -36.202 | -22.333  | 6.753   | -9.0441  | 7.562    | -267.4593 |
| 4470 | 1   | Extremo | -36.202 | -6.808   | 6.753   | -9.0441  | 4.1852   | -260.1743 |
| 4470 | 0   | Extremo | -35.786 | -37.492  | 10.989  | 10.4869  | 12.761   | -282.7329 |
| 4470 | 0.5 | Extremo | -35.786 | -21.967  | 10.989  | 10.4869  | 7.2667   | -267.8683 |
| 4470 | 1   | Extremo | -35.786 | -6.442   | 10.989  | 10.4869  | 1.7723   | -260.7662 |
| 4471 | 0   | Extremo | -31.484 | -76.444  | 33.359  | 0.8337   | 23.6011  | -259.4146 |
| 4471 | 0.5 | Extremo | -31.484 | -60.919  | 33.359  | 0.8337   | 6.9215   | -225.0738 |
| 4471 | 1   | Extremo | -31.484 | -45.394  | 33.359  | 0.8337   | -9.7582  | -198.4955 |
| 4471 | 0   | Extremo | -31.003 | -76.301  | 35.934  | 19.8327  | 24.3852  | -259.7431 |
| 4471 | 0.5 | Extremo | -31.003 | -60.776  | 35.934  | 19.8327  | 6.4184   | -225.4737 |
| 4471 | 1   | Extremo | -31.003 | -45.251  | 35.934  | 19.8327  | -11.5483 | -198.9667 |
| 4472 | 0   | Extremo | -20.674 | -101.332 | 47.774  | 64.6365  | 31.6626  | -195.2014 |
| 4472 | 0.5 | Extremo | -20.674 | -85.807  | 47.774  | 64.6365  | 7.7756   | -148.4165 |
| 4472 | 1   | Extremo | -20.674 | -70.282  | 47.774  | 64.6365  | -16.1115 | -109.394  |
| 4472 | 0   | Extremo | -20.305 | -101.42  | 48.269  | 79.408   | 31.559   | -195.4348 |
| 4472 | 0.5 | Extremo | -20.305 | -85.895  | 48.269  | 79.408   | 7.4245   | -148.6061 |
| 4472 | 1   | Extremo | -20.305 | -70.37   | 48.269  | 79.408   | -16.7099 | -109.5398 |
| 4473 | 0   | Extremo | -26.257 | 85.424   | -66.647 | -68.6531 | -26.7995 | -106.5106 |
| 4473 | 0.5 | Extremo | -26.257 | 100.949  | -66.647 | -68.6531 | 6.5241   | -153.1041 |
| 4473 | 1   | Extremo | -26.257 | 116.474  | -66.647 | -68.6531 | 39.8478  | -207.4601 |
| 4473 | 0   | Extremo | -26.263 | 85.002   | -64.447 | -53.8763 | -25.4533 | -106.5409 |
| 4473 | 0.5 | Extremo | -26.263 | 100.527  | -64.447 | -53.8763 | 6.77     | -152.923  |
| 4473 | 1   | Extremo | -26.263 | 116.052  | -64.447 | -53.8763 | 38.9932  | -207.0675 |
| 4474 | 0   | Extremo | -40.22  | 53.087   | -50.384 | -18.9688 | -17.6932 | -203.1443 |
| 4474 | 0.5 | Extremo | -40.22  | 68.612   | -50.384 | -18.9688 | 7.4988   | -233.5691 |
| 4474 | 1   | Extremo | -40.22  | 84.137   | -50.384 | -18.9688 | 32.6909  | -271.7565 |
| 4474 | 0   | Extremo | -40.126 | 53.042   | -46.419 | -0.5768  | -15.3724 | -202.8562 |
| 4474 | 0.5 | Extremo | -40.126 | 68.567   | -46.419 | -0.5768  | 7.837    | -233.2585 |
| 4474 | 1   | Extremo | -40.126 | 84.092   | -46.419 | -0.5768  | 31.0463  | -271.4233 |
| 4475 | 0   | Extremo | -46.158 | 6.455    | -18.361 | -10.749  | -0.5085  | -268.3293 |
| 4475 | 0.5 | Extremo | -46.158 | 21.98    | -18.361 | -10.749  | 8.6718   | -275.4382 |
| 4475 | 1   | Extremo | -46.158 | 37.505   | -18.361 | -10.749  | 17.8521  | -290.3096 |
| 4475 | 0   | Extremo | -45.832 | 6.677    | -13.453 | 8.3405   | 2.0051   | -267.9863 |
| 4475 | 0.5 | Extremo | -45.832 | 22.202   | -13.453 | 8.3405   | 8.7316   | -275.2062 |
| 4475 | 1   | Extremo | -45.832 | 37.727   | -13.453 | 8.3405   | 15.4581  | -290.1886 |
| 4476 | 0   | Extremo | -46.522 | -39.044  | 7.289   | -7.3096  | 12.8168  | -290.4765 |
| 4476 | 0.5 | Extremo | -46.522 | -23.519  | 7.289   | -7.3096  | 9.1723   | -274.8355 |
| 4476 | 1   | Extremo | -46.522 | -7.994   | 7.289   | -7.3096  | 5.5279   | -266.957  |
| 4476 | 0   | Extremo | -45.91  | -38.743  | 11.791  | 11.9119  | 14.733   | -290.1871 |
| 4476 | 0.5 | Extremo | -45.91  | -23.218  | 11.791  | 11.9119  | 8.8373   | -274.6968 |
| 4476 | 1   | Extremo | -45.91  | -7.693   | 11.791  | 11.9119  | 2.9415   | -266.9691 |
| 4477 | 0   | Extremo | -41.147 | -83.726  | 42.032  | 4.0397   | 30.1348  | -270.4484 |
| 4477 | 0.5 | Extremo | -41.147 | -68.201  | 42.032  | 4.0397   | 9.1186   | -232.4667 |
| 4477 | 1   | Extremo | -41.147 | -52.676  | 42.032  | 4.0397   | -11.8976 | -202.2475 |
| 4477 | 0   | Extremo | -40.398 | -83.367  | 44.598  | 22.7357  | 30.8359  | -270.1896 |
| 4477 | 0.5 | Extremo | -40.398 | -67.842  | 44.598  | 22.7357  | 8.537    | -232.3872 |
| 4477 | 1   | Extremo | -40.398 | -52.317  | 44.598  | 22.7357  | -13.7619 | -202.3474 |
| 4478 | 0   | Extremo | -26.986 | -114.342 | 63.14   | 71.305   | 41.8104  | -206.2372 |
| 4478 | 0.5 | Extremo | -26.986 | -98.817  | 63.14   | 71.305   | 10.2407  | -152.9476 |

|      |     |         |         |          |          |           |          |           |
|------|-----|---------|---------|----------|----------|-----------|----------|-----------|
| 4478 | 1   | Extremo | -26.986 | -83.292  | 63.14    | 71.305    | -21.3291 | -107.4205 |
| 4478 | 0   | Extremo | -26.43  | -114.036 | 63.33    | 85.9134   | 41.483   | -206.0463 |
| 4478 | 0.5 | Extremo | -26.43  | -98.511  | 63.33    | 85.9134   | 9.8178   | -152.9095 |
| 4478 | 1   | Extremo | -26.43  | -82.986  | 63.33    | 85.9134   | -21.8474 | -107.5353 |
| 4479 | 0   | Extremo | -34.627 | 131.489  | -88.522  | -103.3823 | -35.3171 | -88.4525  |
| 4479 | 0.5 | Extremo | -34.627 | 147.014  | -88.522  | -103.3823 | 8.944    | -158.0784 |
| 4479 | 1   | Extremo | -34.627 | 162.539  | -88.522  | -103.3823 | 53.2052  | -235.4668 |
| 4479 | 0   | Extremo | -34.684 | 130.137  | -86.373  | -88.0153  | -33.9617 | -88.8255  |
| 4479 | 0.5 | Extremo | -34.684 | 145.662  | -86.373  | -88.0153  | 9.225    | -157.7753 |
| 4479 | 1   | Extremo | -34.684 | 161.187  | -86.373  | -88.0153  | 52.4117  | -234.4876 |
| 4480 | 0   | Extremo | -53.482 | 59.4     | -61.589  | -35.114   | -20.4003 | -206.8219 |
| 4480 | 0.5 | Extremo | -53.482 | 74.925   | -61.589  | -35.114   | 10.3941  | -240.4034 |
| 4480 | 1   | Extremo | -53.482 | 90.45    | -61.589  | -35.114   | 41.1885  | -281.7474 |
| 4480 | 0   | Extremo | -53.414 | 58.906   | -57.427  | -16.5237  | -17.9241 | -206.6405 |
| 4480 | 0.5 | Extremo | -53.414 | 74.431   | -57.427  | -16.5237  | 10.7893  | -239.9746 |
| 4480 | 1   | Extremo | -53.414 | 89.956   | -57.427  | -16.5237  | 39.5027  | -281.0712 |
| 4481 | 0   | Extremo | -60.087 | 6.237    | -17.688  | -14.9866  | 1.4774   | -268.5521 |
| 4481 | 0.5 | Extremo | -60.087 | 21.762   | -17.688  | -14.9866  | 10.3214  | -275.5517 |
| 4481 | 1   | Extremo | -60.087 | 37.287   | -17.688  | -14.9866  | 19.1654  | -290.3139 |
| 4481 | 0   | Extremo | -59.685 | 5.984    | -12.386  | 3.9699    | 4.2138   | -268.2999 |
| 4481 | 0.5 | Extremo | -59.685 | 21.509   | -12.386  | 3.9699    | 10.4067  | -275.173  |
| 4481 | 1   | Extremo | -59.685 | 37.034   | -12.386  | 3.9699    | 16.5996  | -289.8085 |
| 4482 | 0   | Extremo | -60.549 | -37.306  | 5.71     | -3.4475   | 13.7408  | -289.5548 |
| 4482 | 0.5 | Extremo | -60.549 | -21.781  | 5.71     | -3.4475   | 10.886   | -274.7831 |
| 4482 | 1   | Extremo | -60.549 | -6.256   | 5.71     | -3.4475   | 8.0311   | -267.7739 |
| 4482 | 0   | Extremo | -59.706 | -37.443  | 10.659   | 15.4392   | 15.822   | -289.1657 |
| 4482 | 0.5 | Extremo | -59.706 | -21.918  | 10.659   | 15.4392   | 10.4925  | -274.3257 |
| 4482 | 1   | Extremo | -59.706 | -6.393   | 10.659   | 15.4392   | 5.1631   | -267.2481 |
| 4483 | 0   | Extremo | -54.662 | -87.06   | 52.507   | 17.6415   | 38.5651  | -278.3949 |
| 4483 | 0.5 | Extremo | -54.662 | -71.535  | 52.507   | 17.6415   | 12.3118  | -238.7461 |
| 4483 | 1   | Extremo | -54.662 | -56.01   | 52.507   | 17.6415   | -13.9415 | -206.8598 |
| 4483 | 0   | Extremo | -53.584 | -86.811  | 55.089   | 35.853    | 39.138   | -277.756  |
| 4483 | 0.5 | Extremo | -53.584 | -71.286  | 55.089   | 35.853    | 11.5933  | -238.2319 |
| 4483 | 1   | Extremo | -53.584 | -55.761  | 55.089   | 35.853    | -15.9514 | -206.4703 |
| 4484 | 0   | Extremo | -35.554 | -149.47  | 84.813   | 97.6434   | 56.1277  | -230.6002 |
| 4484 | 0.5 | Extremo | -35.554 | -133.945 | 84.813   | 97.6434   | 13.7213  | -159.7463 |
| 4484 | 1   | Extremo | -35.554 | -118.42  | 84.813   | 97.6434   | -28.6851 | -96.6549  |
| 4484 | 0   | Extremo | -34.761 | -148.436 | 84.427   | 111.7286  | 55.397   | -229.8418 |
| 4484 | 0.5 | Extremo | -34.761 | -132.911 | 84.427   | 111.7286  | 13.1836  | -159.5049 |
| 4484 | 1   | Extremo | -34.761 | -117.386 | 84.427   | 111.7286  | -29.0299 | -96.9305  |
| 4485 | 0   | Extremo | -43.263 | 86.621   | -119.989 | -281.7551 | -47.1133 | -98.3622  |
| 4485 | 0.5 | Extremo | -43.263 | 102.146  | -119.989 | -281.7551 | 12.8811  | -145.554  |
| 4485 | 1   | Extremo | -43.263 | 117.671  | -119.989 | -281.7551 | 72.8755  | -200.5083 |
| 4485 | 0   | Extremo | -43.416 | 85.998   | -118.058 | -263.0839 | -45.8051 | -98.1426  |
| 4485 | 0.5 | Extremo | -43.416 | 101.523  | -118.058 | -263.0839 | 13.2237  | -145.0229 |
| 4485 | 1   | Extremo | -43.416 | 117.048  | -118.058 | -263.0839 | 72.2526  | -199.6658 |
| 4486 | 0   | Extremo | -73.429 | 44.804   | -74.91   | -61.8362  | -22.6584 | -186.4316 |
| 4486 | 0.5 | Extremo | -73.429 | 60.329   | -74.91   | -61.8362  | 14.7967  | -212.7151 |
| 4486 | 1   | Extremo | -73.429 | 75.854   | -74.91   | -61.8362  | 52.2519  | -246.7611 |
| 4486 | 0   | Extremo | -73.406 | 43.135   | -70.539  | -42.9167  | -19.9936 | -187.5541 |
| 4486 | 0.5 | Extremo | -73.406 | 58.66    | -70.539  | -42.9167  | 15.2757  | -213.003  |
| 4486 | 1   | Extremo | -73.406 | 74.185   | -70.539  | -42.9167  | 50.545   | -246.2144 |
| 4487 | 0   | Extremo | -80.576 | 6.501    | -11.979  | -19.472   | 5.8074   | -240.7442 |
| 4487 | 0.5 | Extremo | -80.576 | 22.026   | -11      |           |          |           |



|      |     |         |          |          |          |           |           |           |
|------|-----|---------|----------|----------|----------|-----------|-----------|-----------|
| 4490 | 1   | Extremo | -44.394  | -86.493  | 116.158  | 250.9845  | -38.9708  | -100.3273 |
| 4490 | 0   | Extremo | -43.371  | -117.988 | 114.67   | 261.8873  | 75.7126   | -203.0091 |
| 4490 | 0.5 | Extremo | -43.371  | -102.463 | 114.67   | 261.8873  | 18.3774   | -147.8964 |
| 4490 | 1   | Extremo | -43.371  | -86.938  | 114.67   | 261.8873  | -38.9577  | -100.5463 |
| 4491 | 0   | Extremo | -63.176  | 9.85     | -177.626 | -148.5318 | -68.6174  | -136.8093 |
| 4491 | 0.5 | Extremo | -63.176  | 26.725   | -177.626 | -148.5318 | 20.1958   | -145.9532 |
| 4491 | 1   | Extremo | -63.176  | 43.6     | -177.626 | -148.5318 | 109.009   | -163.5346 |
| 4491 | 0   | Extremo | -63.144  | 11.632   | -175.446 | -131.6682 | -67.1712  | -136.7035 |
| 4491 | 0.5 | Extremo | -63.144  | 28.507   | -175.446 | -131.6682 | 20.552    | -146.7383 |
| 4491 | 1   | Extremo | -63.144  | 45.382   | -175.446 | -131.6682 | 108.2752  | -165.2105 |
| 4492 | 0   | Extremo | -102.645 | 30.298   | -93.109  | -48.2212  | -22.1208  | -203.0983 |
| 4492 | 0.5 | Extremo | -102.645 | 47.173   | -93.109  | -48.2212  | 24.4336   | -222.466  |
| 4492 | 1   | Extremo | -102.645 | 64.048   | -93.109  | -48.2212  | 70.9879   | -250.2711 |
| 4492 | 0   | Extremo | -102.441 | 30.032   | -88.41   | -27.0413  | -19.1928  | -204.8047 |
| 4492 | 0.5 | Extremo | -102.441 | 46.907   | -88.41   | -27.0413  | 25.0123   | -224.0393 |
| 4492 | 1   | Extremo | -102.441 | 63.782   | -88.41   | -27.0413  | 69.2173   | -251.7113 |
| 4493 | 0   | Extremo | -105.836 | 8.097    | 5.718    | -19.5041  | 17.0191   | -266.421  |
| 4493 | 0.5 | Extremo | -105.836 | 24.972   | 5.718    | -19.5041  | 14.1602   | -274.6884 |
| 4493 | 1   | Extremo | -105.836 | 41.847   | 5.718    | -19.5041  | 11.3012   | -291.3934 |
| 4493 | 0   | Extremo | -105.213 | 6.685    | 12.363   | 1.9846    | 20.5685   | -268.1121 |
| 4493 | 0.5 | Extremo | -105.213 | 23.56    | 12.363   | 1.9846    | 14.387    | -275.6731 |
| 4493 | 1   | Extremo | -105.213 | 40.435   | 12.363   | 1.9846    | 8.2055    | -291.6716 |
| 4494 | 0   | Extremo | -106.276 | -33.638  | -20.336  | -1.0683   | 4.771     | -292.2204 |
| 4494 | 0.5 | Extremo | -106.276 | -16.763  | -20.336  | -1.0683   | 14.9389   | -279.6203 |
| 4494 | 1   | Extremo | -106.276 | 0.112    | -20.336  | -1.0683   | 25.1067   | -275.4577 |
| 4494 | 0   | Extremo | -104.876 | -35.129  | -13.447  | 20.2385   | 7.6145    | -292.898  |
| 4494 | 0.5 | Extremo | -104.876 | -18.254  | -13.447  | 20.2385   | 14.3381   | -279.5521 |
| 4494 | 1   | Extremo | -104.876 | -1.379   | -13.447  | 20.2385   | 21.0616   | -274.6436 |
| 4495 | 0   | Extremo | -103.601 | -66.283  | 82.106   | 27.7592   | 68.2567   | -261.7008 |
| 4495 | 0.5 | Extremo | -103.601 | -49.408  | 82.106   | 27.7592   | 27.2037   | -232.778  |
| 4495 | 1   | Extremo | -103.601 | -32.533  | 82.106   | 27.7592   | -13.8492  | -212.2927 |
| 4495 | 0   | Extremo | -101.8   | -67.258  | 84.672   | 48.3075   | 68.3256   | -261.6308 |
| 4495 | 0.5 | Extremo | -101.8   | -50.383  | 84.672   | 48.3075   | 25.9897   | -232.2208 |
| 4495 | 1   | Extremo | -101.8   | -33.508  | 84.672   | 48.3075   | -16.3461  | -211.2482 |
| 4496 | 0   | Extremo | -63.571  | -66.868  | 171.374  | 138.7578  | 114.4232  | -176.8482 |
| 4496 | 0.5 | Extremo | -63.571  | -49.993  | 171.374  | 138.7578  | 28.7361   | -147.6329 |
| 4496 | 1   | Extremo | -63.571  | -33.118  | 171.374  | 138.7578  | -56.9509  | -126.8552 |
| 4496 | 0   | Extremo | -62.352  | -67.514  | 169.225  | 153.8723  | 112.421   | -177.0344 |
| 4496 | 0.5 | Extremo | -62.352  | -50.639  | 169.225  | 153.8723  | 27.8084   | -147.4961 |
| 4496 | 1   | Extremo | -62.352  | -33.764  | 169.225  | 153.8723  | -56.8042  | -126.3953 |
| 4497 | 0   | Extremo | -85.276  | 45.855   | -260.344 | -110.6352 | -101.0809 | -125.5321 |
| 4497 | 0.5 | Extremo | -85.276  | 62.73    | -260.344 | -110.6352 | 29.0909   | -152.6786 |
| 4497 | 1   | Extremo | -85.276  | 79.605   | -260.344 | -110.6352 | 159.2626  | -188.2625 |
| 4497 | 0   | Extremo | -85.264  | 46.696   | -258.073 | -94.031   | -99.5685  | -126.2681 |
| 4497 | 0.5 | Extremo | -85.264  | 63.571   | -258.073 | -94.031   | 29.4681   | -153.8349 |
| 4497 | 1   | Extremo | -85.264  | 80.446   | -258.073 | -94.031   | 158.5047  | -189.8392 |
| 4498 | 0   | Extremo | -141.59  | 28.529   | -106.859 | -28.6551  | -15.1213  | -211.3658 |
| 4498 | 0.5 | Extremo | -141.59  | 45.404   | -106.859 | -28.6551  | 38.308    | -229.8492 |
| 4498 | 1   | Extremo | -141.59  | 62.279   | -106.859 | -28.6551  | 91.7373   | -256.7701 |
| 4498 | 0   | Extremo | -141.393 | 27.742   | -102.076 | -7.2348   | -12.069   | -213.9874 |
| 4498 | 0.5 | Extremo | -141.393 | 44.617   | -102.076 | -7.2348   | 38.9689   | -232.077  |
| 4498 | 1   | Extremo | -141.393 | 61.492   | -102.076 | -7.2348   | 90.0068   | -258.6042 |
| 4499 | 0   | Extremo | -133.399 | 3.514    | 51.533   | -18.6466  | 38.9273   | -263.0028 |
| 4499 | 0.5 | Extremo | -133.399 | 20.389   | 51.533   | -18.6466  | 13.1609   | -268.9788 |
| 4499 | 1   | Extremo | -133.399 | 37.264   | 51.533   | -18.6466  | -12.6054  | -283.3923 |
| 4499 | 0   | Extremo | -132.701 | 0.999    | 58.801   | 3.0994    | 42.9435   | -265.6515 |
| 4499 | 0.5 | Extremo | -132.701 | 17.874   | 58.801   | 3.0994    | 13.5432   | -270.3696 |
| 4499 | 1   | Extremo | -132.701 | 34.749   | 58.801   | 3.0994    | -15.8571  | -283.5252 |
| 4500 | 0   | Extremo | -133.892 | -22.165  | -67.249  | -2.7091   | -19.5702  | -282.0341 |
| 4500 | 0.5 | Extremo | -133.892 | -5.29    | -67.249  | -2.7091   | 14.0543   | -275.1704 |
| 4500 | 1   | Extremo | -133.892 | 11.585   | -67.249  | -2.7091   | 47.6787   | -276.7443 |
| 4500 | 0   | Extremo | -132.003 | -25.028  | -58.682  | 18.9211   | -15.9964  | -282.8089 |
| 4500 | 0.5 | Extremo | -132.003 | -8.153   | -58.682  | 18.9211   | 13.3447   | -274.5135 |
| 4500 | 1   | Extremo | -132.003 | 8.722    | -58.682  | 18.9211   | 42.6858   | -274.6557 |
| 4501 | 0   | Extremo | -142.45  | -59.781  | 95.523   | 10.2107   | 89.1832   | -267.9979 |
| 4501 | 0.5 | Extremo | -142.45  | -42.906  | 95.523   | 10.2107   | 41.4218   | -242.3263 |
| 4501 | 1   | Extremo | -142.45  | -26.031  | 95.523   | 10.2107   | -6.3395   | -225.0922 |
| 4501 | 0   | Extremo | -139.81  | -61.249  | 97.954   | 31.6571   | 88.823    | -266.8897 |
| 4501 | 0.5 | Extremo | -139.81  | -44.374  | 97.954   | 31.6571   | 39.846    | -240.4838 |
| 4501 | 1   | Extremo | -139.81  | -27.499  | 97.954   | 31.6571   | -9.1309   | -222.5153 |
| 4502 | 0   | Extremo | -85.114  | -95.734  | 251.124  | 115.0315  | 165.8561  | -200.2552 |
| 4502 | 0.5 | Extremo | -85.114  | -78.859  | 251.124  | 115.0315  | 40.2939   | -156.607  |

|      |     |         |          |          |          |          |           |           |
|------|-----|---------|----------|----------|----------|----------|-----------|-----------|
| 4502 | 1   | Extremo | -85.114  | -61.984  | 251.124  | 115.0315 | -85.2682  | -121.3963 |
| 4502 | 0   | Extremo | -83.415  | -95.578  | 247.524  | 131.1361 | 162.8764  | -199.2589 |
| 4502 | 0.5 | Extremo | -83.415  | -78.703  | 247.524  | 131.1361 | 39.1144   | -155.6887 |
| 4502 | 1   | Extremo | -83.415  | -61.828  | 247.524  | 131.1361 | -84.6475  | -120.5561 |
| 4503 | 0   | Extremo | -114.334 | 89.078   | -398.158 | -92.4649 | -155.7719 | -133.2938 |
| 4503 | 0.5 | Extremo | -114.334 | 105.953  | -398.158 | -92.4649 | 43.3074   | -182.0514 |
| 4503 | 1   | Extremo | -114.334 | 122.828  | -398.158 | -92.4649 | 242.3866  | -239.2465 |
| 4503 | 0   | Extremo | -114.461 | 89.46    | -395.874 | -74.7408 | -154.2285 | -134.7644 |
| 4503 | 0.5 | Extremo | -114.461 | 106.335  | -395.874 | -74.7408 | 43.7083   | -183.713  |
| 4503 | 1   | Extremo | -114.461 | 123.21   | -395.874 | -74.7408 | 241.6451  | -241.0991 |
| 4504 | 0   | Extremo | -210.787 | 27.784   | -115.591 | -22.4608 | 5.8893    | -261.1605 |
| 4504 | 0.5 | Extremo | -210.787 | 44.659   | -115.591 | -22.4608 | 63.6848   | -279.2714 |
| 4504 | 1   | Extremo | -210.787 | 61.534   | -115.591 | -22.4608 | 121.4804  | -305.8197 |
| 4504 | 0   | Extremo | -210.741 | 26.247   | -110.811 | 0.4024   | 9.0505    | -265.3854 |
| 4504 | 0.5 | Extremo | -210.741 | 43.122   | -110.811 | 0.4024   | 64.4561   | -282.7274 |
| 4504 | 1   | Extremo | -210.741 | 59.997   | -110.811 | 0.4024   | 119.8618  | -308.5069 |
| 4505 | 0   | Extremo | -159.431 | -29.822  | 159.481  | -30.4099 | 88.1934   | -292.8767 |
| 4505 | 0.5 | Extremo | -159.431 | -12.947  | 159.481  | -30.4099 | 8.4528    | -282.1843 |
| 4505 | 1   | Extremo | -159.431 | 3.928    | 159.481  | -30.4099 | -71.2877  | -279.9295 |
| 4505 | 0   | Extremo | -158.825 | -34.896  | 167.327  | -7.505   | 92.7898   | -297.6416 |
| 4505 | 0.5 | Extremo | -158.825 | -18.021  | 167.327  | -7.505   | 9.1261    | -284.4121 |
| 4505 | 1   | Extremo | -158.825 | -1.146   | 167.327  | -7.505   | -74.5376  | -279.6201 |
| 4506 | 0   | Extremo | -160.35  | 23.155   | -177.033 | 0.5801   | -78.9226  | -273.3348 |
| 4506 | 0.5 | Extremo | -160.35  | 40.03    | -177.033 | 0.5801   | 9.5938    | -289.1309 |
| 4506 | 1   | Extremo | -160.35  | 56.905   | -177.033 | 0.5801   | 98.1103   | -313.3645 |
| 4506 | 0   | Extremo | -157.791 | 16.579   | -165.434 | 23.1879  | -73.9959  | -274.5334 |
| 4506 | 0.5 | Extremo | -157.791 | 33.454   | -165.434 | 23.1879  | 8.721     | -287.0415 |
| 4506 | 1   | Extremo | -157.791 | 50.329   | -165.434 | 23.1879  | 91.4379   | -307.987  |
| 4507 | 0   | Extremo | -212.413 | -49.7    | 104.425  | -3.013   | 119.4775  | -312.6013 |
| 4507 | 0.5 | Extremo | -212.413 | -32.825  | 104.425  | -3.013   | 67.2649   | -291.97   |
| 4507 | 1   | Extremo | -212.413 | -15.95   | 104.425  | -3.013   | 15.0524   | -279.7761 |
| 4507 | 0   | Extremo | -208.052 | -51.876  | 106.749  | 20.1053  | 118.4109  | -309.0664 |
| 4507 | 0.5 | Extremo | -208.052 | -35.001  | 106.749  | 20.1053  | 65.0364   | -287.3469 |
| 4507 | 1   | Extremo | -208.052 | -18.126  | 106.749  | 20.1053  | 11.6618   | -274.0649 |
| 4508 | 0   | Extremo | -113.181 | -126.384 | 384.929  | 98.6669  | 250.5937  | -244.0726 |
| 4508 | 0.5 | Extremo | -113.181 | -109.509 | 384.929  | 98.6669  | 58.1293   | -185.0992 |
| 4508 | 1   | Extremo | -113.181 | -92.634  | 384.929  | 98.6669  | -134.3352 | -134.5632 |
| 4508 | 0   | Extremo | -110.73  | -125.273 | 378.57   | 116.2805 | 245.8359  | -241.299  |
| 4508 | 0.5 | Extremo | -110.73  | -108.398 | 378.57   | 116.2805 | 56.5509   | -182.8814 |
| 4508 | 1   | Extremo | -110.73  | -91.523  | 378.57   | 116.2805 | -132.7341 | -132.9013 |
| 4509 | 0   | Extremo | -112.021 | 210.681  | -620.046 | -71.4216 | -246.7952 | -142.2261 |
| 4509 | 0.5 | Extremo | -112.021 | 227.556  | -620.046 | -71.4216 | 63.2278   | -251.7853 |
| 4509 | 1   | Extremo | -112.021 | 244.431  | -620.046 | -71.4216 | 373.2509  | -369.782  |
| 4509 | 0   | Extremo | -112.799 | 210.407  | -618.058 | -51.3909 | -245.3945 | -144.6058 |
| 4509 | 0.5 | Extremo | -112.799 | 227.282  | -618.058 | -51.3909 | 63.6347   | -254.028  |
| 4509 | 1   | Extremo | -112.799 | 244.157  | -618.058 | -51.3909 | 372.6638  | -371.8878 |
| 4510 | 0   | Extremo | -368.296 | 7.773    | -110.442 | -28.0409 | 69.863    | -407.447  |
| 4510 | 0.5 | Extremo | -368.296 | 24.648   | -110.442 | -28.0409 | 125.084   | -415.5523 |
| 4510 | 1   | Extremo | -368.296 | 41.523   | -110.442 | -28.0409 | 180.305   | -432.095  |
| 4510 | 0   | Extremo | -368.65  | 6.24     | -106.114 | -2.633   | 72.9124   | -413.6313 |
| 4510 | 0.5 | Extremo | -368.65  | 23.115   | -106.114 | -2.633   | 125.9694  | -420.9703 |
|      |     |         |          |          |          |          |           |           |



|      |     |         |          |          |          |           |           |           |
|------|-----|---------|----------|----------|----------|-----------|-----------|-----------|
| 4514 | 1   | Extremo | -112.275 | -189.139 | 602.316  | 63.0971   | -218.5138 | -154.3525 |
| 4514 | 0   | Extremo | -109.288 | -219.431 | 591.082  | 83.4508   | 376.0743  | -354.1713 |
| 4514 | 0.5 | Extremo | -109.288 | -202.556 | 591.082  | 83.4508   | 80.5332   | -248.6743 |
| 4514 | 1   | Extremo | -109.288 | -185.681 | 591.082  | 83.4508   | -215.0078 | -151.6148 |
| 4515 | 0   | Extremo | -17.597  | 520.376  | -874.38  | -156.5444 | -442.6429 | -67.2065  |
| 4515 | 0.5 | Extremo | -17.597  | 537.251  | -874.38  | -156.5444 | -5.4529   | -331.6131 |
| 4515 | 1   | Extremo | -17.597  | 554.126  | -874.38  | -156.5444 | 431.7372  | -604.4572 |
| 4515 | 0   | Extremo | -20.839  | 519.636  | -874.094 | -130.8642 | -441.746  | -70.2379  |
| 4515 | 0.5 | Extremo | -20.839  | 536.511  | -874.094 | -130.8642 | -4.6987   | -334.2748 |
| 4515 | 1   | Extremo | -20.839  | 553.386  | -874.094 | -130.8642 | 432.3485  | -604.4572 |
| 4517 | 0   | Extremo | 13.251   | -607.6   | 766.602  | 66.8289   | 226.3375  | -456.734  |
| 4517 | 0.5 | Extremo | 13.251   | -590.725 | 766.602  | 66.8289   | -156.9636 | -157.1527 |
| 4517 | 1   | Extremo | 13.251   | -573.85  | 766.602  | 66.8289   | -540.2647 | 133.9912  |
| 4517 | 0   | Extremo | 14.696   | -622.534 | 770.467  | 97.397    | 230.4075  | -473.404  |
| 4517 | 0.5 | Extremo | 14.696   | -605.659 | 770.467  | 97.397    | -154.8259 | -166.3558 |
| 4517 | 1   | Extremo | 14.696   | -588.784 | 770.467  | 97.397    | -540.0594 | 132.2548  |
| 4518 | 0   | Extremo | 16.096   | 650.797  | -788.108 | -164.1556 | -551.0587 | 158.5445  |
| 4518 | 0.5 | Extremo | 16.096   | 667.672  | -788.108 | -164.1556 | -157.0049 | -171.0727 |
| 4518 | 1   | Extremo | 16.096   | 684.547  | -788.108 | -164.1556 | 237.0488  | -509.1274 |
| 4518 | 0   | Extremo | 14.469   | 618.729  | -767.144 | -128.9829 | -538.967  | 148.7223  |
| 4518 | 0.5 | Extremo | 14.469   | 635.604  | -767.144 | -128.9829 | -155.3949 | -164.8611 |
| 4518 | 1   | Extremo | 14.469   | 652.479  | -767.144 | -128.9829 | 228.1772  | -486.882  |
| 4520 | 0   | Extremo | -24.737  | -499.267 | 851.3    | 93.8444   | 444.9499  | -586.7346 |
| 4520 | 0.5 | Extremo | -24.737  | -482.392 | 851.3    | 93.8444   | 19.3001   | -341.3196 |
| 4520 | 1   | Extremo | -24.737  | -465.517 | 851.3    | 93.8444   | -406.3497 | -104.3422 |
| 4520 | 0   | Extremo | -21.493  | -489.662 | 833.437  | 117.3566  | 435.1597  | -575.185  |
| 4520 | 0.5 | Extremo | -21.493  | -472.787 | 833.437  | 117.3566  | 18.4415   | -334.5729 |
| 4520 | 1   | Extremo | -21.493  | -455.912 | 833.437  | 117.3566  | -398.2768 | -102.3982 |
| 4521 | 0   | Extremo | -4.53    | 653.248  | -892.883 | 231.9146  | -472.6801 | -11.8573  |
| 4521 | 0.5 | Extremo | -4.53    | 670.123  | -892.883 | 231.9146  | -26.2387  | -342.6998 |
| 4521 | 1   | Extremo | -4.53    | 686.998  | -892.883 | 231.9146  | 420.2027  | -681.9799 |
| 4521 | 0   | Extremo | -4.194   | 660.504  | -893.57  | 258.461   | -471.9562 | -17.2724  |
| 4521 | 0.5 | Extremo | -4.194   | 677.379  | -893.57  | 258.461   | -25.1713  | -351.7433 |
| 4521 | 1   | Extremo | -4.194   | 694.254  | -893.57  | 258.461   | 421.6136  | -694.6518 |
| 4523 | 0   | Extremo | 35.793   | -843.718 | 793.145  | -371.3264 | 205.7225  | -522.7796 |
| 4523 | 0.5 | Extremo | 35.793   | -826.843 | 793.145  | -371.3264 | -190.8502 | -105.1393 |
| 4523 | 1   | Extremo | 35.793   | -809.968 | 793.145  | -371.3264 | -587.4229 | 304.0635  |
| 4523 | 0   | Extremo | 36.021   | -845.857 | 795.2    | -328.8501 | 209.0644  | -526.4111 |
| 4523 | 0.5 | Extremo | 36.021   | -828.982 | 795.2    | -328.8501 | -188.5358 | -107.7016 |
| 4523 | 1   | Extremo | 36.021   | -812.107 | 795.2    | -328.8501 | -586.1359 | 302.5705  |
| 4524 | 0   | Extremo | 36.834   | 850.71   | -810.871 | 227.5691  | -596.7675 | 335.0936  |
| 4524 | 0.5 | Extremo | 36.834   | 867.585  | -810.871 | 227.5691  | -191.3322 | -94.4804  |
| 4524 | 1   | Extremo | 36.834   | 884.46   | -810.871 | 227.5691  | 214.1031  | -532.4919 |
| 4524 | 0   | Extremo | 35.883   | 829.336  | -791.767 | 267.5516  | -585.7686 | 322.8478  |
| 4524 | 0.5 | Extremo | 35.883   | 846.211  | -791.767 | 267.5516  | -189.8849 | -96.0389  |
| 4524 | 1   | Extremo | 35.883   | 863.086  | -791.767 | 267.5516  | 205.9988  | -523.363  |
| 4526 | 0   | Extremo | -2.737   | -635.416 | 870.952  | -318.8385 | 435.3272  | -690.1985 |
| 4526 | 0.5 | Extremo | -2.737   | -618.541 | 870.952  | -318.8385 | -0.1488   | -376.7093 |
| 4526 | 1   | Extremo | -2.737   | -601.666 | 870.952  | -318.8385 | -435.6249 | -71.6577  |
| 4526 | 0   | Extremo | -3.163   | -616.935 | 852.102  | -286.4101 | 424.687   | -668.2412 |
| 4526 | 0.5 | Extremo | -3.163   | -600.06  | 852.102  | -286.4101 | -1.3638   | -363.9924 |
| 4526 | 1   | Extremo | -3.163   | -583.185 | 852.102  | -286.4101 | -427.4145 | -68.1812  |
| 4527 | 0   | Extremo | 106.301  | 292.989  | -656.913 | 18.4212   | -262.8087 | -138.83   |
| 4527 | 0.5 | Extremo | 106.301  | 309.864  | -656.913 | 18.4212   | 65.6478   | -289.5434 |
| 4527 | 1   | Extremo | 106.301  | 326.739  | -656.913 | 18.4212   | 394.1044  | -448.6944 |
| 4527 | 0   | Extremo | 106.796  | 293.71   | -657.014 | 49.7771   | -262.4801 | -142.0629 |
| 4527 | 0.5 | Extremo | 106.796  | 310.585  | -657.014 | 49.7771   | 66.0271   | -293.1367 |
| 4527 | 1   | Extremo | 106.796  | 327.46   | -657.014 | 49.7771   | 394.5342  | -452.648  |
| 4528 | 0   | Extremo | 397.764  | -2.166   | -119.402 | -81.3951  | 74.8251   | -488.7539 |
| 4528 | 0.5 | Extremo | 397.764  | 14.709   | -119.402 | -81.3951  | 134.5262  | -491.8896 |
| 4528 | 1   | Extremo | 397.764  | 31.584   | -119.402 | -81.3951  | 194.2273  | -503.4627 |
| 4528 | 0   | Extremo | 397.624  | -8.278   | -118.477 | -38.2285  | 75.9096   | -496.3434 |
| 4528 | 0.5 | Extremo | 397.624  | 8.597    | -118.477 | -38.2285  | 135.1483  | -496.423  |
| 4528 | 1   | Extremo | 397.624  | 25.472   | -118.477 | -38.2285  | 194.387   | -504.94   |
| 4529 | 0   | Extremo | 101.598  | -321.574 | 424.898  | -91.6216  | 199.1871  | -425.2892 |
| 4529 | 0.5 | Extremo | 101.598  | -304.699 | 424.898  | -91.6216  | -13.2617  | -268.7211 |
| 4529 | 1   | Extremo | 101.598  | -287.824 | 424.898  | -91.6216  | -225.7105 | -120.5904 |
| 4529 | 0   | Extremo | 101.592  | -328.31  | 428.276  | -44.8868  | 202.0101  | -430.8181 |
| 4529 | 0.5 | Extremo | 101.592  | -311.435 | 428.276  | -44.8868  | -12.1278  | -270.8817 |
| 4529 | 1   | Extremo | 101.592  | -294.56  | 428.276  | -44.8868  | -226.2656 | -119.3828 |
| 4530 | 0   | Extremo | 103.09   | 330.437  | -438.283 | -100.3213 | -230.9294 | -99.9814  |
| 4530 | 0.5 | Extremo | 103.09   | 347.312  | -438.283 | -100.3213 | -11.7877  | -269.4186 |

|        |     |         |         |          |          |           |           |           |
|--------|-----|---------|---------|----------|----------|-----------|-----------|-----------|
| 4530   | 1   | Extremo | 103.09  | 364.187  | -438.283 | -100.3213 | 207.354   | -447.2933 |
| 4530   | 0   | Extremo | 100.745 | 317.73   | -425.867 | -52.5644  | -225.5824 | -103.2713 |
| 4530   | 0.5 | Extremo | 100.745 | 334.605  | -425.867 | -52.5644  | -12.6491  | -266.355  |
| 4530   | 1   | Extremo | 100.745 | 351.48   | -425.867 | -52.5644  | 200.2842  | -437.8762 |
| 4531   | 0   | Extremo | 404.605 | 13.544   | 115.684  | -105.6871 | 196.9301  | -487.2155 |
| 4531   | 0.5 | Extremo | 404.605 | 30.419   | 115.684  | -105.6871 | 139.0879  | -498.2062 |
| 4531   | 1   | Extremo | 404.605 | 47.294   | 115.684  | -105.6871 | 81.2456   | -517.6344 |
| 4531   | 0   | Extremo | 396.46  | 6.534    | 114.31   | -61.3421  | 192.7958  | -480.3928 |
| 4531   | 0.5 | Extremo | 396.46  | 23.409   | 114.31   | -61.3421  | 135.641   | -487.8855 |
| 4531   | 1   | Extremo | 396.46  | 40.284   | 114.31   | -61.3421  | 78.4862   | -503.8087 |
| 4532   | 0   | Extremo | 105.941 | -286.53  | 642.462  | -194.1796 | 407.3563  | -432.4512 |
| 4532   | 0.5 | Extremo | 105.941 | -269.655 | 642.462  | -194.1796 | 86.1253   | -293.4049 |
| 4532   | 1   | Extremo | 105.941 | -252.78  | 642.462  | -194.1796 | -235.1058 | -162.7962 |
| 4532   | 0   | Extremo | 103.186 | -282.061 | 629.207  | -157.6313 | 398.5782  | -424.2334 |
| 4532   | 0.5 | Extremo | 103.186 | -265.186 | 629.207  | -157.6313 | 83.9747   | -287.4216 |
| 4532   | 1   | Extremo | 103.186 | -248.311 | 629.207  | -157.6313 | -230.6289 | -159.0473 |
| 4533   | 0   | Extremo | 111.148 | 115.414  | -431.641 | 30.1935   | -169.8365 | -139.4018 |
| 4533   | 0.5 | Extremo | 111.148 | 132.289  | -431.641 | 30.1935   | 45.9841   | -201.3278 |
| 4533   | 1   | Extremo | 111.148 | 149.164  | -431.641 | 30.1935   | 261.8047  | -271.6912 |
| 4533   | 0   | Extremo | 111.356 | 115.175  | -431.661 | 64.589    | -169.5593 | -141.5422 |
| 4533   | 0.5 | Extremo | 111.356 | 132.05   | -431.661 | 64.589    | 46.2714   | -203.3483 |
| 4533   | 1   | Extremo | 111.356 | 148.925  | -431.661 | 64.589    | 262.102   | -273.5918 |
| 4534   | 0   | Extremo | 208.461 | 26.822   | -127.848 | -92.4301  | 4.6475    | -295.4269 |
| 4534   | 0.5 | Extremo | 208.461 | 43.697   | -127.848 | -92.4301  | 68.5715   | -313.0567 |
| 4534   | 1   | Extremo | 208.461 | 60.572   | -127.848 | -92.4301  | 132.4954  | -339.1241 |
| 4534   | 0   | Extremo | 208.457 | 22.191   | -126.867 | -44.5209  | 5.6382    | -300.5929 |
| 4534   | 0.5 | Extremo | 208.457 | 39.066   | -126.867 | -44.5209  | 69.0719   | -315.9071 |
| 4534   | 1   | Extremo | 208.457 | 55.941   | -126.867 | -44.5209  | 132.5056  | -339.6589 |
| 4535   | 0   | Extremo | 146.827 | -63.978  | 172.855  | -90.9333  | 96.5388   | -316.6312 |
| 4535   | 0.5 | Extremo | 146.827 | -47.103  | 172.855  | -90.9333  | 10.1112   | -288.8607 |
| 4535   | 1   | Extremo | 146.827 | -30.228  | 172.855  | -90.9333  | -76.3163  | -269.5277 |
| 4535   | 0   | Extremo | 146.228 | -70.181  | 176.051  | -40.023   | 98.6949   | -320.3806 |
| 4535   | 0.5 | Extremo | 146.228 | -53.306  | 176.051  | -40.023   | 10.6693   | -289.5087 |
| 4535   | 1   | Extremo | 146.228 | -36.431  | 176.051  | -40.023   | -77.3564  | -267.0742 |
| 4536   | 0   | Extremo | 147.758 | 65.7     | -182.334 | -135.7789 | -80.0805  | -256.4537 |
| 4536   | 0.5 | Extremo | 147.758 | 82.575   | -182.334 | -135.7789 | 11.0867   | -293.5222 |
| 4536   | 1   | Extremo | 147.758 | 99.45    | -182.334 | -135.7789 | 102.2539  | -339.0283 |
| 4536   | 0   | Extremo | 145.143 | 58.579   | -175.384 | -84.0919  | -77.3485  | -257.0527 |
| 4536   | 0.5 | Extremo | 145.143 | 75.454   | -175.384 | -84.0919  | 10.3435   | -290.5611 |
| 4536   | 1   | Extremo | 145.143 | 92.329   | -175.384 | -84.0919  | 98.0355   | -332.5069 |
| 4537   | 0   | Extremo | 210.09  | -32.619  | 123.422  | -131.7369 | 133.5779  | -336.2677 |
| 4537   | 0.5 | Extremo | 210.09  | -15.744  | 123.422  | -131.7369 | 71.8668   | -324.1771 |
| 4537   | 1   | Extremo | 210.09  | 1.131    | 123.422  | -131.7369 | 10.1557   | -320.5241 |
| 4537   | 0   | Extremo | 205.661 | -36.868  | 121.986  | -82.4258  | 130.9053  | -332.7277 |
| 4537   | 0.5 | Extremo | 205.661 | -19.993  | 121.986  | -82.4258  | 69.9122   | -318.5125 |
| 4537   | 1   | Extremo | 205.661 | -3.118   | 121.986  | -82.4258  | 8.9191    | -312.7348 |
| 4538   | 0   | Extremo | 109.803 | -143.444 | 421.805  | -235.6272 | 272.7876  | -272.2414 |
| 4538   | 0.5 | Extremo | 109.803 | -126.569 | 421.805  | -235.6272 | 61.8851   | -204.738  |
| 4538   | 1   | Extremo | 109.803 | -109.694 | 421.805  | -235.6272 | -149.0174 | -145.6721 |
| 4538</ |     |         |         |          |          |           |           |           |



|      |     |         |         |          |          |           |           |           |
|------|-----|---------|---------|----------|----------|-----------|-----------|-----------|
| 4542 | 1   | Extremo | 116.443 | 23.389   | -63.264  | -137.2478 | 49.3429   | -299.4019 |
| 4542 | 0   | Extremo | 114.483 | -14.623  | -59.565  | -82.888   | -12.6416  | -292.3379 |
| 4542 | 0.5 | Extremo | 114.483 | 2.252    | -59.565  | -82.888   | 17.1411   | -289.2451 |
| 4542 | 1   | Extremo | 114.483 | 19.127   | -59.565  | -82.888   | 46.9239   | -294.5898 |
| 4543 | 0   | Extremo | 129.778 | -56.233  | 119.272  | -151.3445 | 106.0915  | -287.48   |
| 4543 | 0.5 | Extremo | 129.778 | -39.358  | 119.272  | -151.3445 | 46.4557   | -263.5823 |
| 4543 | 1   | Extremo | 129.778 | -22.483  | 119.272  | -151.3445 | -13.1802  | -248.1221 |
| 4543 | 0   | Extremo | 126.955 | -58.631  | 117.801  | -99.002   | 104.1044  | -284.9165 |
| 4543 | 0.5 | Extremo | 126.955 | -41.756  | 117.801  | -99.002   | 45.204    | -259.82   |
| 4543 | 1   | Extremo | 126.955 | -24.881  | 117.801  | -99.002   | -13.6963  | -243.161  |
| 4544 | 0   | Extremo | 78.573  | -103.997 | 291.234  | -262.0969 | 190.0136  | -215.6788 |
| 4544 | 0.5 | Extremo | 78.573  | -87.122  | 291.234  | -262.0969 | 44.3969   | -167.899  |
| 4544 | 1   | Extremo | 78.573  | -70.247  | 291.234  | -262.0969 | -101.2199 | -128.5566 |
| 4544 | 0   | Extremo | 76.726  | -103.336 | 285.535  | -219.2418 | 186.0615  | -213.4194 |
| 4544 | 0.5 | Extremo | 76.726  | -86.461  | 285.535  | -219.2418 | 43.2942   | -165.9702 |
| 4544 | 1   | Extremo | 76.726  | -69.586  | 285.535  | -219.2418 | -99.4731  | -126.9585 |
| 4545 | 0   | Extremo | 55.754  | 34.779   | -227.662 | 83.2833   | -89.9273  | -132.7337 |
| 4545 | 0.5 | Extremo | 55.754  | 51.654   | -227.662 | 83.2833   | 23.9035   | -154.3419 |
| 4545 | 1   | Extremo | 55.754  | 68.529   | -227.662 | 83.2833   | 137.7343  | -184.3877 |
| 4545 | 0   | Extremo | 55.893  | 32.536   | -227.49  | 121.867   | -89.6985  | -134.4286 |
| 4545 | 0.5 | Extremo | 55.893  | 49.411   | -227.49  | 121.867   | 24.0467   | -154.9156 |
| 4545 | 1   | Extremo | 55.893  | 66.286   | -227.49  | 121.867   | 137.7918  | -183.84   |
| 4546 | 0   | Extremo | 88.053  | 43.384   | -113.978 | -80.4518  | -25.2778  | -215.8157 |
| 4546 | 0.5 | Extremo | 88.053  | 60.259   | -113.978 | -80.4518  | 31.7112   | -241.7266 |
| 4546 | 1   | Extremo | 88.053  | 77.134   | -113.978 | -80.4518  | 88.7002   | -276.075  |
| 4546 | 0   | Extremo | 88.054  | 40.72    | -113.41  | -26.915   | -24.8112  | -217.1709 |
| 4546 | 0.5 | Extremo | 88.054  | 57.595   | -113.41  | -26.915   | 31.8937   | -241.7497 |
| 4546 | 1   | Extremo | 88.054  | 74.47    | -113.41  | -26.915   | 88.5985   | -274.7661 |
| 4547 | 0   | Extremo | 88.688  | 13.838   | 5.794    | -119.1604 | 22.8752   | -285.7679 |
| 4547 | 0.5 | Extremo | 88.688  | 30.713   | 5.794    | -119.1604 | 19.9781   | -296.9058 |
| 4547 | 1   | Extremo | 88.688  | 47.588   | 5.794    | -119.1604 | 17.0809   | -316.4813 |
| 4547 | 0   | Extremo | 88.146  | 11.194   | 7.327    | -62.819   | 23.7206   | -285.8465 |
| 4547 | 0.5 | Extremo | 88.146  | 28.069   | 7.327    | -62.819   | 20.0569   | -295.6622 |
| 4547 | 1   | Extremo | 88.146  | 44.944   | 7.327    | -62.819   | 16.3932   | -313.9154 |
| 4548 | 0   | Extremo | 89.132  | -31.013  | -11.877  | -142.1964 | 14.6044   | -313.7407 |
| 4548 | 0.5 | Extremo | 89.132  | -14.138  | -11.877  | -142.1964 | 20.5428   | -302.4529 |
| 4548 | 1   | Extremo | 89.132  | 2.737    | -11.877  | -142.1964 | 26.4811   | -299.6026 |
| 4548 | 0   | Extremo | 87.668  | -33.171  | -10.08   | -85.6366  | 15.061    | -312.3096 |
| 4548 | 0.5 | Extremo | 87.668  | -16.296  | -10.08   | -85.6366  | 20.101    | -299.9429 |
| 4548 | 1   | Extremo | 87.668  | 0.579    | -10.08   | -85.6366  | 25.141    | -296.0138 |
| 4549 | 0   | Extremo | 88.99   | -70.167  | 109.688  | -171.9249 | 88.9811   | -284.9884 |
| 4549 | 0.5 | Extremo | 88.99   | -53.292  | 109.688  | -171.9249 | 34.1371   | -254.1236 |
| 4549 | 1   | Extremo | 88.99   | -36.417  | 109.688  | -171.9249 | -20.707   | -231.6962 |
| 4549 | 0   | Extremo | 87.004  | -71.236  | 108.193  | -117.3033 | 87.4124   | -282.5342 |
| 4549 | 0.5 | Extremo | 87.004  | -54.361  | 108.193  | -117.3033 | 33.3161   | -251.1348 |
| 4549 | 1   | Extremo | 87.004  | -37.486  | 108.193  | -117.3033 | -20.7801  | -228.1729 |
| 4550 | 0   | Extremo | 56.133  | -82.142  | 223.987  | -288.9911 | 145.9611  | -195.8557 |
| 4550 | 0.5 | Extremo | 56.133  | -65.267  | 223.987  | -288.9911 | 33.9674   | -159.0033 |
| 4550 | 1   | Extremo | 56.133  | -48.392  | 223.987  | -288.9911 | -78.0262  | -130.5884 |
| 4550 | 0   | Extremo | 54.762  | -81.39   | 219.956  | -244.475  | 143.1499  | -193.7648 |
| 4550 | 0.5 | Extremo | 54.762  | -64.515  | 219.956  | -244.475  | 33.1719   | -157.2888 |
| 4550 | 1   | Extremo | 54.762  | -47.64   | 219.956  | -244.475  | -76.8061  | -129.2502 |
| 4551 | 0   | Extremo | 39.11   | 97.124   | -194.928 | 178.5457  | -80.1029  | -93.1229  |
| 4551 | 0.5 | Extremo | 39.11   | 112.649  | -194.928 | 178.5457  | 17.3611   | -145.5663 |
| 4551 | 1   | Extremo | 39.11   | 128.174  | -194.928 | 178.5457  | 114.8252  | -205.7722 |
| 4551 | 0   | Extremo | 39.175  | 97.422   | -194.472 | 217.8469  | -79.8261  | -95.1041  |
| 4551 | 0.5 | Extremo | 39.175  | 112.947  | -194.472 | 217.8469  | 17.4098   | -147.6963 |
| 4551 | 1   | Extremo | 39.175  | 128.472  | -194.472 | 217.8469  | 114.6456  | -208.051  |
| 4552 | 0   | Extremo | 68.259  | 44.791   | -96.111  | -61.0226  | -23.7595  | -197.9388 |
| 4552 | 0.5 | Extremo | 68.259  | 60.316   | -96.111  | -61.0226  | 24.2961   | -224.2155 |
| 4552 | 1   | Extremo | 68.259  | 75.841   | -96.111  | -61.0226  | 72.3516   | -258.2547 |
| 4552 | 0   | Extremo | 68.178  | 46.511   | -95.832  | -12.0397  | -23.5802  | -197.1075 |
| 4552 | 0.5 | Extremo | 68.178  | 62.036   | -95.832  | -12.0397  | 24.3356   | -224.2441 |
| 4552 | 1   | Extremo | 68.178  | 77.561   | -95.832  | -12.0397  | 72.2515   | -259.1431 |
| 4553 | 0   | Extremo | 73.646  | 1.814    | -13.993  | -107.5218 | 11.3794   | -259.1938 |
| 4553 | 0.5 | Extremo | 73.646  | 17.339   | -13.993  | -107.5218 | 18.376    | -263.9821 |
| 4553 | 1   | Extremo | 73.646  | 32.864   | -13.993  | -107.5218 | 25.3727   | -276.5329 |
| 4553 | 0   | Extremo | 73.158  | 4.196    | -13.22   | -56.7227  | 11.7499   | -256.9156 |
| 4553 | 0.5 | Extremo | 73.158  | 19.721   | -13.22   | -56.7227  | 18.36     | -262.8947 |
| 4553 | 1   | Extremo | 73.158  | 35.246   | -13.22   | -56.7227  | 24.9702   | -276.6363 |
| 4554 | 0   | Extremo | 74.18   | -41.371  | 9.248    | -128.7731 | 23.4319   | -283.3581 |
| 4554 | 0.5 | Extremo | 74.18   | -25.846  | 9.248    | -128.7731 | 18.8079   | -266.554  |

|      |     |         |        |          |          |           |          |           |
|------|-----|---------|--------|----------|----------|-----------|----------|-----------|
| 4554 | 1   | Extremo | 74.18  | -10.321  | 9.248    | -128.7731 | 14.1839  | -257.5124 |
| 4554 | 0   | Extremo | 73.072 | -38.655  | 9.857    | -77.8873  | 23.4285  | -280.179  |
| 4554 | 0.5 | Extremo | 73.072 | -23.13   | 9.857    | -77.8873  | 18.4999  | -264.7329 |
| 4554 | 1   | Extremo | 73.072 | -7.605   | 9.857    | -77.8873  | 13.5713  | -257.0493 |
| 4555 | 0   | Extremo | 69.57  | -84.262  | 92.602   | -166.8493 | 72.577   | -269.7557 |
| 4555 | 0.5 | Extremo | 69.57  | -68.737  | 92.602   | -166.8493 | 26.2757  | -231.5058 |
| 4555 | 1   | Extremo | 69.57  | -53.212  | 92.602   | -166.8493 | -20.0255 | -201.0185 |
| 4555 | 0   | Extremo | 68.166 | -81.493  | 91.167   | -117.5133 | 71.3685  | -266.0681 |
| 4555 | 0.5 | Extremo | 68.166 | -65.968  | 91.167   | -117.5133 | 25.7849  | -229.2029 |
| 4555 | 1   | Extremo | 68.166 | -50.443  | 91.167   | -117.5133 | -19.7986 | -200.1002 |
| 4556 | 0   | Extremo | 39.972 | -133.193 | 193.026  | -359.5425 | 121.9853 | -222.2046 |
| 4556 | 0.5 | Extremo | 39.972 | -117.668 | 193.026  | -359.5425 | 25.4721  | -159.4895 |
| 4556 | 1   | Extremo | 39.972 | -102.143 | 193.026  | -359.5425 | -71.0411 | -104.5369 |
| 4556 | 0   | Extremo | 39.047 | -130.471 | 190.177  | -319.3408 | 120.0514 | -217.903  |
| 4556 | 0.5 | Extremo | 39.047 | -114.946 | 190.177  | -319.3408 | 24.9628  | -156.5487 |
| 4556 | 1   | Extremo | 39.047 | -99.421  | 190.177  | -319.3408 | -70.1257 | -102.957  |
| 4557 | 0   | Extremo | 34.457 | 124.072  | -141.269 | 32.4073   | -58.4868 | -92.8106  |
| 4557 | 0.5 | Extremo | 34.457 | 139.597  | -141.269 | 32.4073   | 12.1477  | -158.7281 |
| 4557 | 1   | Extremo | 34.457 | 155.122  | -141.269 | 32.4073   | 82.7822  | -232.408  |
| 4557 | 0   | Extremo | 34.441 | 124.365  | -141.115 | 70.8547   | -58.3677 | -93.2806  |
| 4557 | 0.5 | Extremo | 34.441 | 139.89   | -141.115 | 70.8547   | 12.1897  | -159.3444 |
| 4557 | 1   | Extremo | 34.441 | 155.415  | -141.115 | 70.8547   | 82.7471  | -233.1706 |
| 4558 | 0   | Extremo | 54.383 | 64.183   | -87.947  | -87.2977  | -26.4684 | -210.3103 |
| 4558 | 0.5 | Extremo | 54.383 | 79.708   | -87.947  | -87.2977  | 17.5051  | -246.2831 |
| 4558 | 1   | Extremo | 54.383 | 95.233   | -87.947  | -87.2977  | 61.4785  | -290.0184 |
| 4558 | 0   | Extremo | 54.221 | 62.885   | -87.838  | -36.8118  | -26.4073 | -211.1266 |
| 4558 | 0.5 | Extremo | 54.221 | 78.41    | -87.838  | -36.8118  | 17.5119  | -246.4505 |
| 4558 | 1   | Extremo | 54.221 | 93.935   | -87.838  | -36.8118  | 61.431   | -289.5368 |
| 4559 | 0   | Extremo | 58.707 | 12.495   | -22.22   | -116.4546 | 6.0823   | -278.685  |
| 4559 | 0.5 | Extremo | 58.707 | 28.02    | -22.22   | -116.4546 | 17.1925  | -288.8137 |
| 4559 | 1   | Extremo | 58.707 | 43.545   | -22.22   | -116.4546 | 28.3027  | -306.7049 |
| 4559 | 0   | Extremo | 58.279 | 10.887   | -21.956  | -63.8796  | 6.1548   | -278.5231 |
| 4559 | 0.5 | Extremo | 58.279 | 26.412   | -21.956  | -63.8796  | 17.1328  | -287.8479 |
| 4559 | 1   | Extremo | 58.279 | 41.937   | -21.956  | -63.8796  | 28.1108  | -304.9353 |
| 4560 | 0   | Extremo | 59.129 | -34.486  | 18.471   | -130.9817 | 26.7906  | -303.7808 |
| 4560 | 0.5 | Extremo | 59.129 | -18.961  | 18.471   | -130.9817 | 17.5553  | -290.419  |
| 4560 | 1   | Extremo | 59.129 | -3.436   | 18.471   | -130.9817 | 8.3199   | -284.8196 |
| 4560 | 0   | Extremo | 58.331 | -35.759  | 18.404   | -78.1599  | 26.5191  | -302.6195 |
| 4560 | 0.5 | Extremo | 58.331 | -20.234  | 18.404   | -78.1599  | 17.3171  | -288.6214 |
| 4560 | 1   | Extremo | 58.331 | -4.709   | 18.404   | -78.1599  | 8.115    | -282.3858 |
| 4561 | 0   | Extremo | 55.459 | -86.183  | 85.261   | -154.1541 | 61.7702  | -289.6817 |
| 4561 | 0.5 | Extremo | 55.459 | -70.658  | 85.261   | -154.1541 | 19.1398  | -250.4716 |
| 4561 | 1   | Extremo | 55.459 | -55.133  | 85.261   | -154.1541 | -23.4905 | -219.024  |
| 4561 | 0   | Extremo | 54.495 | -86.886  | 83.856   | -102.5863 | 60.7328  | -288.1139 |
| 4561 | 0.5 | Extremo | 54.495 | -71.361  | 83.856   | -102.5863 | 18.8046  | -248.5521 |
| 4561 | 1   | Extremo | 54.495 | -55.836  | 83.856   | -102.5863 | -23.1236 | -216.7527 |
| 4562 | 0   | Extremo | 35.295 | -144.833 | 140.123  | -241.0022 | 88.613   | -232.94   |
| 4562 | 0.5 | Extremo | 35.295 | -129.308 | 140.123  | -241.0022 | 18.5513  | -164.4049 |
| 4562 | 1   | Extremo | 35.295 | -113.783 | 140.123  | -241.0022 | -51.5104 | -103.6324 |
| 4562 | 0   | Extremo | 34.589 | -144.874 | 137.854  | -197.4965 | 87.0983  | -231.8624 |
| 4562 | 0.5 | Extremo | 34.589 | -129.349 | 137.854  | -197.4965 | 18.1712  | -163.3067 |
| 4562 | 1   | Extremo | 34.589 | -113.824 | 1        |           |          |           |





|      |     |         |        |          |         |           |          |           |
|------|-----|---------|--------|----------|---------|-----------|----------|-----------|
| 4566 | 1   | Extremo | 43.51  | -4.222   | 22.001  | -133.2479 | 4.9029   | -290.8935 |
| 4566 | 0   | Extremo | 42.925 | -36.929  | 21.521  | -78.9006  | 26.48    | -309.1188 |
| 4566 | 0.5 | Extremo | 42.925 | -21.404  | 21.521  | -78.9006  | 15.7194  | -294.5355 |
| 4566 | 1   | Extremo | 42.925 | -5.879   | 21.521  | -78.9006  | 4.9588   | -287.7147 |
| 4567 | 0   | Extremo | 39.657 | -84.531  | 78.159  | -149.8217 | 53.747   | -287.5901 |
| 4567 | 0.5 | Extremo | 39.657 | -69.006  | 78.159  | -149.8217 | 14.6674  | -249.206  |
| 4567 | 1   | Extremo | 39.657 | -53.481  | 78.159  | -149.8217 | -24.4123 | -218.5845 |
| 4567 | 0   | Extremo | 38.961 | -85.246  | 76.782  | -96.586   | 52.8305  | -285.6798 |
| 4567 | 0.5 | Extremo | 38.961 | -69.721  | 76.782  | -96.586   | 14.4396  | -246.9379 |
| 4567 | 1   | Extremo | 38.961 | -54.196  | 76.782  | -96.586   | -23.9513 | -215.9584 |
| 4568 | 0   | Extremo | 25.762 | -116.261 | 111.622 | -224.7891 | 70.2606  | -213.7382 |
| 4568 | 0.5 | Extremo | 25.762 | -100.736 | 111.622 | -224.7891 | 14.4496  | -159.4887 |
| 4568 | 1   | Extremo | 25.762 | -85.211  | 111.622 | -224.7891 | -41.3615 | -113.0017 |
| 4568 | 0   | Extremo | 25.238 | -115.965 | 109.746 | -179.9397 | 69.0382  | -212.5392 |
| 4568 | 0.5 | Extremo | 25.238 | -100.44  | 109.746 | -179.9397 | 14.1652  | -158.4382 |
| 4568 | 1   | Extremo | 25.238 | -84.915  | 109.746 | -179.9397 | -40.7078 | -112.0996 |
| 4569 | 0   | Extremo | 16.646 | 77.011   | -97.224 | 3.5507    | -41.2099 | -114.1571 |
| 4569 | 0.5 | Extremo | 16.646 | 92.536   | -97.224 | 3.5507    | 7.402    | -156.5438 |
| 4569 | 1   | Extremo | 16.646 | 108.061  | -97.224 | 3.5507    | 56.0138  | -206.6931 |
| 4569 | 0   | Extremo | 16.662 | 75.802   | -97.243 | 42.4607   | -41.2216 | -114.5697 |
| 4569 | 0.5 | Extremo | 16.662 | 91.327   | -97.243 | 42.4607   | 7.4001   | -156.3519 |
| 4569 | 1   | Extremo | 16.662 | 106.852  | -97.243 | 42.4607   | 56.0218  | -205.8967 |
| 4570 | 0   | Extremo | 24.235 | 60.36    | -73.592 | -103.7889 | -25.5434 | -212.322  |
| 4570 | 0.5 | Extremo | 24.235 | 75.885   | -73.592 | -103.7889 | 11.2525  | -246.3834 |
| 4570 | 1   | Extremo | 24.235 | 91.41    | -73.592 | -103.7889 | 48.0484  | -288.2073 |
| 4570 | 0   | Extremo | 24.179 | 57.841   | -73.775 | -51.5943  | -25.6876 | -212.3514 |
| 4570 | 0.5 | Extremo | 24.179 | 73.366   | -73.775 | -51.5943  | 11.2001  | -245.153  |
| 4570 | 1   | Extremo | 24.179 | 88.891   | -73.775 | -51.5943  | 48.0877  | -285.7171 |
| 4571 | 0   | Extremo | 27.658 | 16.065   | -24.922 | -126.9769 | 1.9681   | -288.7561 |
| 4571 | 0.5 | Extremo | 27.658 | 31.59    | -24.922 | -126.9769 | 14.429   | -300.6701 |
| 4571 | 1   | Extremo | 27.658 | 47.115   | -24.922 | -126.9769 | 26.89    | -320.3465 |
| 4571 | 0   | Extremo | 27.437 | 13.672   | -25.295 | -71.967   | 1.6883   | -287.3051 |
| 4571 | 0.5 | Extremo | 27.437 | 29.197   | -25.295 | -71.967   | 14.336   | -298.0224 |
| 4571 | 1   | Extremo | 27.437 | 44.722   | -25.295 | -71.967   | 26.9837  | -316.5021 |
| 4572 | 0   | Extremo | 27.912 | -36.199  | 22.683  | -137.1841 | 26.0274  | -316.9923 |
| 4572 | 0.5 | Extremo | 27.912 | -20.674  | 22.683  | -137.1841 | 14.6857  | -302.774  |
| 4572 | 1   | Extremo | 27.912 | -5.149   | 22.683  | -137.1841 | 3.344    | -296.3183 |
| 4572 | 0   | Extremo | 27.497 | -37.66   | 21.93   | -81.5187  | 25.5066  | -314.3249 |
| 4572 | 0.5 | Extremo | 27.497 | -22.135  | 21.93   | -81.5187  | 14.5416  | -299.376  |
| 4572 | 1   | Extremo | 27.497 | -6.61    | 21.93   | -81.5187  | 3.5766   | -292.1897 |
| 4573 | 0   | Extremo | 24.874 | -84.079  | 72.098  | -153.85   | 48.4637  | -289.5462 |
| 4573 | 0.5 | Extremo | 24.874 | -68.554  | 72.098  | -153.85   | 12.4147  | -251.3882 |
| 4573 | 1   | Extremo | 24.874 | -53.029  | 72.098  | -153.85   | -23.6342 | -220.9926 |
| 4573 | 0   | Extremo | 24.376 | -84.256  | 70.734  | -99.2645  | 47.6288  | -286.6634 |
| 4573 | 0.5 | Extremo | 24.376 | -68.731  | 70.734  | -99.2645  | 12.2619  | -248.4169 |
| 4573 | 1   | Extremo | 24.376 | -53.206  | 70.734  | -99.2645  | -23.1051 | -217.9328 |
| 4574 | 0   | Extremo | 17.168 | -110.09  | 96.798  | -224.9771 | 60.3829  | -210.1351 |
| 4574 | 0.5 | Extremo | 17.168 | -94.565  | 96.798  | -224.9771 | 11.9839  | -158.9715 |
| 4574 | 1   | Extremo | 17.168 | -79.04   | 96.798  | -224.9771 | -36.4151 | -115.5704 |
| 4574 | 0   | Extremo | 16.784 | -109.313 | 95.189  | -179.1064 | 59.3637  | -208.4304 |
| 4574 | 0.5 | Extremo | 16.784 | -93.788  | 95.189  | -179.1064 | 11.7695  | -157.6551 |
| 4574 | 1   | Extremo | 16.784 | -78.263  | 95.189  | -179.1064 | -35.8248 | -114.6424 |
| 4575 | 0   | Extremo | 10.147 | 92.024   | -93.197 | 3.3646    | -40.0754 | -112.8356 |
| 4575 | 0.5 | Extremo | 10.147 | 107.549  | -93.197 | 3.3646    | 6.5229   | -162.7287 |
| 4575 | 1   | Extremo | 10.147 | 123.074  | -93.197 | 3.3646    | 53.1212  | -220.3844 |
| 4575 | 0   | Extremo | 10.183 | 88.543   | -93.185 | 43.0725   | -40.0942 | -113.8119 |
| 4575 | 0.5 | Extremo | 10.183 | 104.068  | -93.185 | 43.0725   | 6.498    | -161.9647 |
| 4575 | 1   | Extremo | 10.183 | 119.593  | -93.185 | 43.0725   | 53.0903  | -217.8799 |
| 4576 | 0   | Extremo | 12.659 | 66.994   | -68.537 | -105.2515 | -23.3257 | -222.4427 |
| 4576 | 0.5 | Extremo | 12.659 | 82.519   | -68.537 | -105.2515 | 10.943   | -259.8209 |
| 4576 | 1   | Extremo | 12.659 | 98.044   | -68.537 | -105.2515 | 45.2116  | -304.9616 |
| 4576 | 0   | Extremo | 12.662 | 63.271   | -68.845 | -51.5372  | -23.5659 | -221.6544 |
| 4576 | 0.5 | Extremo | 12.662 | 78.796   | -68.845 | -51.5372  | 10.8566  | -257.1714 |
| 4576 | 1   | Extremo | 12.662 | 94.321   | -68.845 | -51.5372  | 45.279   | -300.4508 |
| 4577 | 0   | Extremo | 15.325 | 16.522   | -23.66  | -130.3981 | 2.1248   | -303.0653 |
| 4577 | 0.5 | Extremo | 15.325 | 32.047   | -23.66  | -130.3981 | 13.9546  | -315.2076 |
| 4577 | 1   | Extremo | 15.325 | 47.572   | -23.66  | -130.3981 | 25.7843  | -335.1124 |
| 4577 | 0   | Extremo | 15.192 | 14.01    | -24.252 | -73.8631  | 1.7255   | -300.2066 |
| 4577 | 0.5 | Extremo | 15.192 | 29.535   | -24.252 | -73.8631  | 13.8513  | -311.093  |
| 4577 | 1   | Extremo | 15.192 | 45.06    | -24.252 | -73.8631  | 25.9772  | -329.7418 |
| 4578 | 0   | Extremo | 15.492 | -38.072  | 21.906  | -141.594  | 25.126   | -331.4546 |
| 4578 | 0.5 | Extremo | 15.492 | -22.547  | 21.906  | -141.594  | 14.1731  | -316.2996 |

|      |     |         |        |          |          |           |          |           |
|------|-----|---------|--------|----------|----------|-----------|----------|-----------|
| 4578 | 1   | Extremo | 15.492 | -7.022   | 21.906   | -141.594  | 3.2202   | -308.9071 |
| 4578 | 0   | Extremo | 15.208 | -39.234  | 20.959   | -84.5877  | 24.5372  | -327.4361 |
| 4578 | 0.5 | Extremo | 15.208 | -23.709  | 20.959   | -84.5877  | 14.0575  | -311.7003 |
| 4578 | 1   | Extremo | 15.208 | -8.184   | 20.959   | -84.5877  | 3.5778   | -303.727  |
| 4579 | 0   | Extremo | 13.072 | -89.527  | 67.372   | -159.1835 | 45.6443  | -303.5815 |
| 4579 | 0.5 | Extremo | 13.072 | -74.002  | 67.372   | -159.1835 | 11.9583  | -262.6993 |
| 4579 | 1   | Extremo | 13.072 | -58.477  | 67.372   | -159.1835 | -21.7277 | -229.5796 |
| 4579 | 0   | Extremo | 12.72  | -89.059  | 66.007   | -103.4631 | 44.8612  | -299.4289 |
| 4579 | 0.5 | Extremo | 12.72  | -73.534  | 66.007   | -103.4631 | 11.8578  | -258.7809 |
| 4579 | 1   | Extremo | 12.72  | -58.009  | 66.007   | -103.4631 | -21.1455 | -225.8954 |
| 4580 | 0   | Extremo | 10.513 | -119.651 | 92.705   | -227.0452 | 57.0529  | -220.4523 |
| 4580 | 0.5 | Extremo | 10.513 | -104.126 | 92.705   | -227.0452 | 10.7005  | -164.5081 |
| 4580 | 1   | Extremo | 10.513 | -88.601  | 92.705   | -227.0452 | -35.652  | -116.3263 |
| 4580 | 0   | Extremo | 10.235 | -117.881 | 91.277   | -180.2122 | 56.1758  | -217.7255 |
| 4580 | 0.5 | Extremo | 10.235 | -102.356 | 91.277   | -180.2122 | 10.5375  | -162.6661 |
| 4580 | 1   | Extremo | 10.235 | -86.831  | 91.277   | -180.2122 | -35.1008 | -115.3692 |
| 4581 | 0   | Extremo | 7.159  | 135.775  | -101.403 | -19.2653  | -44.2804 | -103.2876 |
| 4581 | 0.5 | Extremo | 7.159  | 151.3    | -101.403 | -19.2653  | 6.4212   | -175.0562 |
| 4581 | 1   | Extremo | 7.159  | 166.825  | -101.403 | -19.2653  | 57.1228  | -254.8973 |
| 4581 | 0   | Extremo | 7.193  | 127.626  | -101.259 | 24.5152   | -44.2609 | -106.2679 |
| 4581 | 0.5 | Extremo | 7.193  | 143.151  | -101.259 | 24.5152   | 6.3686   | -173.9622 |
| 4581 | 1   | Extremo | 7.193  | 158.676  | -101.259 | 24.5152   | 56.9981  | -249.4189 |
| 4582 | 0   | Extremo | 7.834  | 72.564   | -63.811  | -117.3505 | -19.4218 | -241.932  |
| 4582 | 0.5 | Extremo | 7.834  | 88.089   | -63.811  | -117.3505 | 12.4838  | -282.095  |
| 4582 | 1   | Extremo | 7.834  | 103.614  | -63.811  | -117.3505 | 44.3894  | -330.0205 |
| 4582 | 0   | Extremo | 7.849  | 68.701   | -64.246  | -60.4854  | -19.7701 | -239.938  |
| 4582 | 0.5 | Extremo | 7.849  | 84.226   | -64.246  | -60.4854  | 12.3527  | -278.1699 |
| 4582 | 1   | Extremo | 7.849  | 99.751   | -64.246  | -60.4854  | 44.4755  | -324.1642 |
| 4583 | 0   | Extremo | 11.499 | 12.921   | -21.628  | -136.7664 | 3.3171   | -323.3395 |
| 4583 | 0.5 | Extremo | 11.499 | 28.446   | -21.628  | -136.7664 | 14.1308  | -333.6813 |
| 4583 | 1   | Extremo | 11.499 | 43.971   | -21.628  | -136.7664 | 24.9446  | -351.7855 |
| 4583 | 0   | Extremo | 11.396 | 11.501   | -22.4    | -78.0538  | 2.8174   | -319.1383 |
| 4583 | 0.5 | Extremo | 11.396 | 27.026   | -22.4    | -78.0538  | 14.0172  | -328.7699 |
| 4583 | 1   | Extremo | 11.396 | 42.551   | -22.4    | -78.0538  | 25.217   | -346.1641 |
| 4584 | 0   | Extremo | 11.575 | -40.489  | 20.171   | -144.8228 | 24.4122  | -349.9154 |
| 4584 | 0.5 | Extremo | 11.575 | -24.964  | 20.171   | -144.8228 | 14.3265  | -333.5521 |
| 4584 | 1   | Extremo | 11.575 | -9.439   | 20.171   | -144.8228 | 4.2409   | -324.9513 |
| 4584 | 0   | Extremo | 11.365 | -40.712  | 19.083   | -86.302   | 23.7719  | -344.9513 |
| 4584 | 0.5 | Extremo | 11.365 | -25.187  | 19.083   | -86.302   | 14.2304  | -328.4765 |
| 4584 | 1   | Extremo | 11.365 | -9.662   | 19.083   | -86.302   | 4.689    | -319.7643 |
| 4585 | 0   | Extremo | 7.966  | -96.466  | 62.767   | -158.0307 | 44.8182  | -326.8573 |
| 4585 | 0.5 | Extremo | 7.966  | -80.941  | 62.767   | -158.0307 | 13.4346  | -282.5056 |
| 4585 | 1   | Extremo | 7.966  | -65.416  | 62.767   | -158.0307 | -17.9491 | -245.9165 |
| 4585 | 0   | Extremo | 7.715  | -95.202  | 61.384   | -101.5529 | 44.0637  | -321.5166 |
| 4585 | 0.5 | Extremo | 7.715  | -79.677  | 61.384   | -101.5529 | 13.3719  | -277.7966 |
| 4585 | 1   | Extremo | 7.715  | -64.152  | 61.384   | -101.5529 | -17.3198 | -241.8391 |
| 4586 | 0   | Extremo | 7.168  | -152.084 | 100.685  | -217.5379 | 60.849   | -250.4759 |
| 4586 | 0.5 | Extremo | 7.168  | -136.559 | 100.685  | -217.5379 | 10.5063  | -178.3153 |
| 4586 | 1   | Extremo | 7.168  | -121.034 | 100.685  | -217.5379 | -39.8364 | -113.9173 |
| 4586 | 0   | Extremo | 6.972  | -147.65  | 99.376   | -170.8652 | 60.0713  | -245.4489 |
| 4586 | 0.5 | Extremo | 6.972  | -132.125 | 99.376   | -170.8652 | 10.3836  | -175.5051 |
| 4586 | 1   | Extremo | 6.972  | -116.6   | 99.376   | -170.8652 | -39.3042 | -113.3237 |
| 4587 | 0   | Extremo | 7.089  |          |          |           |          |           |



|      |     |         |        |          |         |           |          |           |
|------|-----|---------|--------|----------|---------|-----------|----------|-----------|
| 4590 | 1   | Extremo | 19.498 | -17.236  | 17.044  | -121.8126 | 4.0418   | -236.052  |
| 4590 | 0   | Extremo | 19.323 | -39.953  | 15.954  | -71.8808  | 20.4691  | -261.9336 |
| 4590 | 0.5 | Extremo | 19.323 | -26.003  | 15.954  | -71.8808  | 12.4922  | -245.4446 |
| 4590 | 1   | Extremo | 19.323 | -12.053  | 15.954  | -71.8808  | 4.5153   | -235.9306 |
| 4591 | 0   | Extremo | 15.652 | -81.54   | 52.748  | -121.8276 | 41.0335  | -252.0793 |
| 4591 | 0.5 | Extremo | 15.652 | -67.59   | 52.748  | -121.8276 | 14.6594  | -214.7969 |
| 4591 | 1   | Extremo | 15.652 | -53.64   | 52.748  | -121.8276 | -11.7147 | -184.4895 |
| 4591 | 0   | Extremo | 15.517 | -76.826  | 51.445  | -74.4972  | 40.3507  | -247.0226 |
| 4591 | 0.5 | Extremo | 15.517 | -62.876  | 51.445  | -74.4972  | 14.6284  | -212.0973 |
| 4591 | 1   | Extremo | 15.517 | -48.926  | 51.445  | -74.4972  | -11.0939 | -184.147  |
| 4592 | 0   | Extremo | 7.218  | -121.662 | 121.274 | -96.3695  | 70.5256  | -209.0662 |
| 4592 | 0.5 | Extremo | 7.218  | -107.712 | 121.274 | -96.3695  | 9.8885   | -151.7229 |
| 4592 | 1   | Extremo | 7.218  | -93.762  | 121.274 | -96.3695  | -50.7486 | -101.3546 |
| 4592 | 0   | Extremo | 7.177  | -118.058 | 120.122 | -64.6505  | 69.8812  | -203.5608 |
| 4592 | 0.5 | Extremo | 7.177  | -104.108 | 120.122 | -64.6505  | 9.82     | -148.0196 |
| 4592 | 1   | Extremo | 7.177  | -90.158  | 120.122 | -64.6505  | -50.2413 | -99.4533  |
| 4593 | 0   | Extremo | 11.487 | 28.386   | -87.597 | -54.3588  | -39.9709 | -121.3136 |
| 4593 | 0.5 | Extremo | 11.487 | 42.336   | -87.597 | -54.3588  | 3.8276   | -138.994  |
| 4593 | 1   | Extremo | 11.487 | 56.286   | -87.597 | -54.3588  | 47.6261  | -163.6495 |
| 4593 | 0   | Extremo | 11.361 | 32.49    | -87.548 | -12.8914  | -39.999  | -119.998  |
| 4593 | 0.5 | Extremo | 11.361 | 46.44    | -87.548 | -12.8914  | 3.7751   | -139.7305 |
| 4593 | 1   | Extremo | 11.361 | 60.39    | -87.548 | -12.8914  | 47.5492  | -166.4381 |
| 4594 | 0   | Extremo | 19.325 | 34.317   | -52.707 | -109.6356 | -16.0508 | -183.316  |
| 4594 | 0.5 | Extremo | 19.325 | 48.267   | -52.707 | -109.6356 | 10.3027  | -203.962  |
| 4594 | 1   | Extremo | 19.325 | 62.217   | -52.707 | -109.6356 | 36.6562  | -231.5831 |
| 4594 | 0   | Extremo | 19.134 | 33.993   | -53.239 | -58.8051  | -16.4385 | -183.6986 |
| 4594 | 0.5 | Extremo | 19.134 | 47.943   | -53.239 | -58.8051  | 10.1809  | -204.1827 |
| 4594 | 1   | Extremo | 19.134 | 61.893   | -53.239 | -58.8051  | 36.8003  | -231.6419 |
| 4595 | 0   | Extremo | 21.041 | 7.082    | -17.575 | -121.1525 | 2.6678   | -240.226  |
| 4595 | 0.5 | Extremo | 21.041 | 21.032   | -17.575 | -121.1525 | 11.4551  | -247.2544 |
| 4595 | 1   | Extremo | 21.041 | 34.982   | -17.575 | -121.1525 | 20.2425  | -261.2579 |
| 4595 | 0   | Extremo | 20.869 | 5.928    | -18.42  | -68.935   | 2.1529   | -239.4472 |
| 4595 | 0.5 | Extremo | 20.869 | 19.878   | -18.42  | -68.935   | 11.3627  | -245.8989 |
| 4595 | 1   | Extremo | 20.869 | 33.828   | -18.42  | -68.935   | 20.5726  | -259.3257 |
| 4596 | 0   | Extremo | 21.152 | -30.897  | 16.682  | -127.8128 | 19.9378  | -261.5662 |
| 4596 | 0.5 | Extremo | 21.152 | -16.947  | 16.682  | -127.8128 | 11.597   | -249.605  |
| 4596 | 1   | Extremo | 21.152 | -2.997   | 16.682  | -127.8128 | 3.2562   | -244.6187 |
| 4596 | 0   | Extremo | 21.029 | -31.664  | 15.605  | -75.4944  | 19.3349  | -260.0542 |
| 4596 | 0.5 | Extremo | 21.029 | -17.714  | 15.605  | -75.4944  | 11.5325  | -247.7097 |
| 4596 | 1   | Extremo | 21.029 | -3.764   | 15.605  | -75.4944  | 3.7301   | -242.3403 |
| 4597 | 0   | Extremo | 19.626 | -62.123  | 52.066  | -136.185  | 37.0592  | -237.7853 |
| 4597 | 0.5 | Extremo | 19.626 | -48.173  | 52.066  | -136.185  | 11.0262  | -210.2115 |
| 4597 | 1   | Extremo | 19.626 | -34.223  | 52.066  | -136.185  | -15.0068 | -189.6126 |
| 4597 | 0   | Extremo | 19.568 | -63.193  | 50.814  | -85.0537  | 36.3999  | -236.9338 |
| 4597 | 0.5 | Extremo | 19.568 | -49.243  | 50.814  | -85.0537  | 10.9932  | -208.8247 |
| 4597 | 1   | Extremo | 19.568 | -35.293  | 50.814  | -85.0537  | -14.4136 | -187.6907 |
| 4598 | 0   | Extremo | 11.674 | -70.027  | 86.986  | -169.0664 | 50.6028  | -173.9828 |
| 4598 | 0.5 | Extremo | 11.674 | -56.077  | 86.986  | -169.0664 | 7.1097   | -142.4567 |
| 4598 | 1   | Extremo | 11.674 | -42.127  | 86.986  | -169.0664 | -36.3834 | -117.9055 |
| 4598 | 0   | Extremo | 11.67  | -73.067  | 85.841  | -125.1026 | 49.951   | -174.6718 |
| 4598 | 0.5 | Extremo | 11.67  | -59.117  | 85.841  | -125.1026 | 7.0304   | -141.6258 |
| 4598 | 1   | Extremo | 11.67  | -45.167  | 85.841  | -125.1026 | -35.8903 | -115.5547 |
| 4599 | 0   | Extremo | 9.329  | 57.027   | -72.541 | -36.0535  | -33.452  | -113.7694 |
| 4599 | 0.5 | Extremo | 9.329  | 70.977   | -72.541 | -36.0535  | 2.8185   | -145.7703 |
| 4599 | 1   | Extremo | 9.329  | 84.927   | -72.541 | -36.0535  | 39.089   | -184.7463 |
| 4599 | 0   | Extremo | 9.217  | 57.052   | -72.669 | 3.2687    | -33.5526 | -113.4905 |
| 4599 | 0.5 | Extremo | 9.217  | 71.002   | -72.669 | 3.2687    | 2.7818   | -145.5039 |
| 4599 | 1   | Extremo | 9.217  | 84.952   | -72.669 | 3.2687    | 39.1162  | -184.4923 |
| 4600 | 0   | Extremo | 14.928 | 45.85    | -50.265 | -100.7768 | -16.958  | -192.2155 |
| 4600 | 0.5 | Extremo | 14.928 | 59.8     | -50.265 | -100.7768 | 8.1743   | -218.6279 |
| 4600 | 1   | Extremo | 14.928 | 73.75    | -50.265 | -100.7768 | 33.3067  | -252.0153 |
| 4600 | 0   | Extremo | 14.767 | 44.158   | -50.799 | -50.2456  | -17.3155 | -191.7379 |
| 4600 | 0.5 | Extremo | 14.767 | 58.108   | -50.799 | -50.2456  | 8.0838   | -217.3045 |
| 4600 | 1   | Extremo | 14.767 | 72.058   | -50.799 | -50.2456  | 33.4831  | -249.8461 |
| 4601 | 0   | Extremo | 17.066 | 10.91    | -16.987 | -120.8614 | 1.8638   | -254.4445 |
| 4601 | 0.5 | Extremo | 17.066 | 24.86    | -16.987 | -120.8614 | 10.3573  | -263.3869 |
| 4601 | 1   | Extremo | 17.066 | 38.81    | -16.987 | -120.8614 | 18.8507  | -279.3042 |
| 4601 | 0   | Extremo | 16.929 | 9.08     | -17.787 | -67.5666  | 1.3872   | -252.7069 |
| 4601 | 0.5 | Extremo | 16.929 | 23.03    | -17.787 | -67.5666  | 10.2807  | -260.7342 |
| 4601 | 1   | Extremo | 16.929 | 36.98    | -17.787 | -67.5666  | 19.1741  | -275.7365 |
| 4602 | 0   | Extremo | 17.095 | -32.39   | 16.237  | -132.7625 | 18.6073  | -277.7599 |
| 4602 | 0.5 | Extremo | 17.095 | -18.44   | 16.237  | -132.7625 | 10.4889  | -265.0524 |

|      |     |         |        |          |         |           |          |           |
|------|-----|---------|--------|----------|---------|-----------|----------|-----------|
| 4602 | 1   | Extremo | 17.095 | -4.49    | 16.237  | -132.7625 | 2.3705   | -259.3199 |
| 4602 | 0   | Extremo | 17.027 | -33.491  | 15.234  | -78.5565  | 18.0457  | -275.2593 |
| 4602 | 0.5 | Extremo | 17.027 | -19.541  | 15.234  | -78.5565  | 10.4286  | -262.0013 |
| 4602 | 1   | Extremo | 17.027 | -5.591   | 15.234  | -78.5565  | 2.8115   | -255.7183 |
| 4603 | 0   | Extremo | 15.009 | -70.742  | 49.824  | -146.6157 | 33.7263  | -254.753  |
| 4603 | 0.5 | Extremo | 15.009 | -56.792  | 49.824  | -146.6157 | 8.8145   | -222.8694 |
| 4603 | 1   | Extremo | 15.009 | -42.842  | 49.824  | -146.6157 | -16.0973 | -192.9607 |
| 4603 | 0   | Extremo | 15.015 | -71.206  | 48.64   | -92.9176  | 33.094   | -252.59   |
| 4603 | 0.5 | Extremo | 15.015 | -57.256  | 48.64   | -92.9176  | 8.7743   | -220.4746 |
| 4603 | 1   | Extremo | 15.015 | -43.306  | 48.64   | -92.9176  | -15.5455 | -195.3342 |
| 4604 | 0   | Extremo | 9.306  | -91.588  | 72.091  | -180.7956 | 41.7631  | -190.0595 |
| 4604 | 0.5 | Extremo | 9.306  | -77.638  | 72.091  | -180.7956 | 5.7176   | -147.7532 |
| 4604 | 1   | Extremo | 9.306  | -63.688  | 72.091  | -180.7956 | -30.328  | -112.4218 |
| 4604 | 0   | Extremo | 9.354  | -91.805  | 70.965  | -133.9507 | 41.1097  | -189.0801 |
| 4604 | 0.5 | Extremo | 9.354  | -77.855  | 70.965  | -133.9507 | 5.6271   | -146.665  |
| 4604 | 1   | Extremo | 9.354  | -63.905  | 70.965  | -133.9507 | -29.8554 | -111.2248 |
| 4605 | 0   | Extremo | 6.554  | 104.111  | -67.778 | -40.182   | -31.4283 | -100.3158 |
| 4605 | 0.5 | Extremo | 6.554  | 118.061  | -67.778 | -40.182   | 2.4609   | -155.8588 |
| 4605 | 1   | Extremo | 6.554  | 132.011  | -67.778 | -40.182   | 36.35    | -218.3769 |
| 4605 | 0   | Extremo | 6.452  | 99.441   | -67.976 | -0.4766   | -31.5533 | -101.1237 |
| 4605 | 0.5 | Extremo | 6.452  | 113.391  | -67.976 | -0.4766   | 2.4346   | -154.3317 |
| 4605 | 1   | Extremo | 6.452  | 127.341  | -67.976 | -0.4766   | 36.4225  | -214.5148 |
| 4606 | 0   | Extremo | 9.095  | 67.401   | -46.753 | -106.5117 | -15.689  | -205.9858 |
| 4606 | 0.5 | Extremo | 9.095  | 81.351   | -46.753 | -106.5117 | 7.6875   | -243.1737 |
| 4606 | 1   | Extremo | 9.095  | 95.301   | -46.753 | -106.5117 | 31.0639  | -287.3365 |
| 4606 | 0   | Extremo | 8.97   | 63.881   | -47.303 | -54.9228  | -16.0364 | -203.5937 |
| 4606 | 0.5 | Extremo | 8.97   | 77.831   | -47.303 | -54.9228  | 7.6152   | -239.0217 |
| 4606 | 1   | Extremo | 8.97   | 91.781   | -47.303 | -54.9228  | 31.2668  | -281.4248 |
| 4607 | 0   | Extremo | 11.464 | 13.184   | -15.731 | -125.1539 | 1.8705   | -277.2292 |
| 4607 | 0.5 | Extremo | 11.464 | 27.134   | -15.731 | -125.1539 | 9.7361   | -287.3085 |
| 4607 | 1   | Extremo | 11.464 | 41.084   | -15.731 | -125.1539 | 17.6016  | -304.3629 |
| 4607 | 0   | Extremo | 11.366 | 11.659   | -16.463 | -70.526   | 1.4439   | -272.7955 |
| 4607 | 0.5 | Extremo | 11.366 | 25.609   | -16.463 | -70.526   | 9.6755   | -282.1127 |
| 4607 | 1   | Extremo | 11.366 | 39.559   | -16.463 | -70.526   | 17.9071  | -298.4049 |
| 4608 | 0   | Extremo | 11.407 | -38.08   | 14.949  | -133.5543 | 17.3467  | -301.9775 |
| 4608 | 0.5 | Extremo | 11.407 | -24.13   | 14.949  | -133.5543 | 9.8723   | -286.4249 |
| 4608 | 1   | Extremo | 11.407 | -10.18   | 14.949  | -133.5543 | 2.3978   | -277.8473 |
| 4608 | 0   | Extremo | 11.397 | -38.131  | 14.059  | -78.0929  | 16.8417  | -297.0679 |
| 4608 | 0.5 | Extremo | 11.397 | -24.181  | 14.059  | -78.0929  | 9.8121   | -281.4898 |
| 4608 | 1   | Extremo | 11.397 | -10.231  | 14.059  | -78.0929  | 2.7825   | -272.8866 |
| 4609 | 0   | Extremo | 8.965  | -89.132  | 46.38   | -144.8397 | 31.4943  | -283.1422 |
| 4609 | 0.5 | Extremo | 8.965  | -75.182  | 46.38   | -144.8397 | 8.3042   | -242.0635 |
| 4609 | 1   | Extremo | 8.965  | -61.232  | 46.38   | -144.8397 | -14.8859 | -207.9599 |
| 4609 | 0   | Extremo | 9.042  | -87.633  | 45.265  | -90.1477  | 30.8832  | -278.581  |
| 4609 | 0.5 | Extremo | 9.042  | -73.683  | 45.265  | -90.1477  | 8.2505   | -238.2518 |
| 4609 | 1   | Extremo | 9.042  | -59.733  | 45.265  | -90.1477  | -14.3822 | -204.8976 |
| 4610 | 0   | Extremo | 6.389  | -123.142 | 67.437  | -177.7221 | 38.8902  | -215.511  |
| 4610 | 0.5 | Extremo | 6.389  | -109.192 | 67.437  | -177.7221 | 5.1717   | -157.4274 |
| 4610 | 1   | Extremo | 6.389  | -95.242  | 67.437  | -177.7221 | -28.5467 | -106.3187 |
| 4610 | 0   | Extremo | 6.503  | -120.513 | 66.328  | -130.0651 | 38.2264  | -212.4378 |
| 4610 | 0.5 | Extremo | 6.503  | -106.563 | 66.328  | -130.0651 | 5.0622   | -155.6686 |
| 4610 | 1   | Extremo | 6.503  | -92.613  | 66.328  | -130.0651 | -28.102  | -105.8744 |
| 4611 | 0   | Extremo | 6.033  | 185.283  | -73.017 | -98.0441  | -33.9155 | -70.5303  |
| 4611 | 0.5 |         |        |          |         |           |          |           |



|      |     |         |        |          |         |           |          |           |
|------|-----|---------|--------|----------|---------|-----------|----------|-----------|
| 4614 | 1   | Extremo | 11.079 | -13.127  | 12.734  | -128.3964 | 3.3776   | -282.6909 |
| 4614 | 0   | Extremo | 11.106 | -39.048  | 12.008  | -72.2214  | 15.684   | -303.2311 |
| 4614 | 0.5 | Extremo | 11.106 | -25.098  | 12.008  | -72.2214  | 9.68     | -287.1947 |
| 4614 | 1   | Extremo | 11.106 | -11.148  | 12.008  | -72.2214  | 3.6759   | -278.1334 |
| 4615 | 0   | Extremo | 7.252  | -99.463  | 41.594  | -121.397  | 30.2418  | -303.0787 |
| 4615 | 0.5 | Extremo | 7.252  | -85.513  | 41.594  | -121.397  | 9.4446   | -256.8348 |
| 4615 | 1   | Extremo | 7.252  | -71.563  | 41.594  | -121.397  | -11.3526 | -217.5658 |
| 4615 | 0   | Extremo | 7.4    | -96.029  | 40.544  | -67.5313  | 29.6424  | -296.9379 |
| 4615 | 0.5 | Extremo | 7.4    | -82.079  | 40.544  | -67.5313  | 9.3706   | -252.4108 |
| 4615 | 1   | Extremo | 7.4    | -68.129  | 40.544  | -67.5313  | -10.9011 | -214.8588 |
| 4616 | 0   | Extremo | 5.568  | -187.694 | 72.73   | -137.5967 | 41.6728  | -260.2587 |
| 4616 | 0.5 | Extremo | 5.568  | -173.744 | 72.73   | -137.5967 | 5.3076   | -169.899  |
| 4616 | 1   | Extremo | 5.568  | -159.794 | 72.73   | -137.5967 | -31.0577 | -86.5143  |
| 4616 | 0   | Extremo | 5.762  | -179.97  | 71.642  | -92.1513  | 40.9921  | -253.903  |
| 4616 | 0.5 | Extremo | 5.762  | -166.02  | 71.642  | -92.1513  | 5.1711   | -167.4056 |
| 4616 | 1   | Extremo | 5.762  | -152.07  | 71.642  | -92.1513  | -30.6499 | -87.8833  |
| 4617 | 0   | Extremo | 8.142  | 50.077   | -89.44  | -328.6865 | -42.2258 | -93.8506  |
| 4617 | 0.5 | Extremo | 8.142  | 62.79    | -89.44  | -328.6865 | 2.494    | -122.0672 |
| 4617 | 1   | Extremo | 8.142  | 75.502   | -89.44  | -328.6865 | 47.2138  | -156.6402 |
| 4617 | 0   | Extremo | 7.902  | 50.789   | -89.441 | -270.0751 | -42.2511 | -92.8664  |
| 4617 | 0.5 | Extremo | 7.902  | 63.501   | -89.441 | -270.0751 | 2.4695   | -121.4388 |
| 4617 | 1   | Extremo | 7.902  | 76.214   | -89.441 | -270.0751 | 47.1902  | -156.3674 |
| 4618 | 0   | Extremo | 16.103 | 9.577    | -33.026 | -159.5471 | -6.5099  | -167.9757 |
| 4618 | 0.5 | Extremo | 16.103 | 22.29    | -33.026 | -159.5471 | 10.0029  | -175.9426 |
| 4618 | 1   | Extremo | 16.103 | 35.002   | -33.026 | -159.5471 | 26.5157  | -190.2657 |
| 4618 | 0   | Extremo | 15.809 | 15.192   | -33.644 | -109.687  | -6.8751  | -160.5279 |
| 4618 | 0.5 | Extremo | 15.809 | 27.905   | -33.644 | -109.687  | 9.9468   | -171.3022 |
| 4618 | 1   | Extremo | 15.809 | 40.617   | -33.644 | -109.687  | 26.7686  | -188.4328 |
| 4619 | 0   | Extremo | 20.144 | -19.175  | -10.848 | -123.0973 | 2.7952   | -204.8098 |
| 4619 | 0.5 | Extremo | 20.144 | -6.462   | -10.848 | -123.0973 | 8.2191   | -198.4006 |
| 4619 | 1   | Extremo | 20.144 | 6.25     | -10.848 | -123.0973 | 13.643   | -198.3477 |
| 4619 | 0   | Extremo | 19.944 | -11.136  | -11.311 | -74.3539  | 2.5527   | -196.4637 |
| 4619 | 0.5 | Extremo | 19.944 | 1.576    | -11.311 | -74.3539  | 8.2082   | -194.0736 |
| 4619 | 1   | Extremo | 19.944 | 14.289   | -11.311 | -74.3539  | 13.8637  | -198.0398 |
| 4620 | 0   | Extremo | 20.036 | -43.505  | 9.596   | -101.8779 | 13.1988  | -214.6337 |
| 4620 | 0.5 | Extremo | 20.036 | -30.792  | 9.596   | -101.8779 | 8.4006   | -196.0595 |
| 4620 | 1   | Extremo | 20.036 | -18.08   | 9.596   | -101.8779 | 3.6025   | -183.8417 |
| 4620 | 0   | Extremo | 20.065 | -35.286  | 9.152   | -54.2306  | 12.91    | -208.2643 |
| 4620 | 0.5 | Extremo | 20.065 | -22.574  | 9.152   | -54.2306  | 8.3339   | -193.7992 |
| 4620 | 1   | Extremo | 20.065 | -9.861   | 9.152   | -54.2306  | 3.7577   | -185.6904 |
| 4621 | 0   | Extremo | 15.891 | -65.432  | 32.55   | -66.2701  | 26.9899  | -201.8146 |
| 4621 | 0.5 | Extremo | 15.891 | -52.719  | 32.55   | -66.2701  | 10.7151  | -172.277  |
| 4621 | 1   | Extremo | 15.891 | -40.007  | 32.55   | -66.2701  | -5.5597  | -149.0956 |
| 4621 | 0   | Extremo | 16.118 | -59.101  | 31.617  | -22.7008  | 26.4319  | -197.9021 |
| 4621 | 0.5 | Extremo | 16.118 | -46.389  | 31.617  | -22.7008  | 10.6236  | -171.5297 |
| 4621 | 1   | Extremo | 16.118 | -33.676  | 31.617  | -22.7008  | -5.1847  | -151.5135 |
| 4622 | 0   | Extremo | 7.773  | -91.356  | 89.549  | 95.1709   | 50.0448  | -171.7784 |
| 4622 | 0.5 | Extremo | 7.773  | -78.643  | 89.549  | 95.1709   | 5.2705   | -129.2788 |
| 4622 | 1   | Extremo | 7.773  | -65.931  | 89.549  | 95.1709   | -39.5038 | -93.1353  |
| 4622 | 0   | Extremo | 8.11   | -87.976  | 88.58   | 118.2006  | 49.4105  | -168.1346 |
| 4622 | 0.5 | Extremo | 8.11   | -75.264  | 88.58   | 118.2006  | 5.1208   | -127.3245 |
| 4622 | 1   | Extremo | 8.11   | -62.551  | 88.58   | 118.2006  | -39.169  | -92.8707  |
| 4623 | 0   | Extremo | 13.123 | -66.956  | -56.116 | -105.7344 | -26.7331 | -150.9112 |
| 4623 | 0.5 | Extremo | 13.123 | -54.244  | -56.116 | -105.7344 | 1.3248   | -120.6111 |
| 4623 | 1   | Extremo | 13.123 | -41.531  | -56.116 | -105.7344 | 29.3827  | -96.6673  |
| 4623 | 0   | Extremo | 12.787 | -58.236  | -56.589 | -68.3198  | -26.9465 | -142.7027 |
| 4623 | 0.5 | Extremo | 12.787 | -45.523  | -56.589 | -68.3198  | 1.3479   | -116.7631 |
| 4623 | 1   | Extremo | 12.787 | -32.811  | -56.589 | -68.3198  | 29.6422  | -97.1797  |
| 4624 | 0   | Extremo | 23.184 | -20.208  | -29.65  | -120.9232 | -8.2525  | -149.7796 |
| 4624 | 0.5 | Extremo | 23.184 | -7.496   | -29.65  | -120.9232 | 6.5726   | -142.8537 |
| 4624 | 1   | Extremo | 23.184 | 5.217    | -29.65  | -120.9232 | 21.3977  | -142.284  |
| 4624 | 0   | Extremo | 22.729 | -13.95   | -30.272 | -75.9522  | -8.5275  | -141.6205 |
| 4624 | 0.5 | Extremo | 22.729 | -1.237   | -30.272 | -75.9522  | 6.6086   | -137.8238 |
| 4624 | 1   | Extremo | 22.729 | 11.475   | -30.272 | -75.9522  | 21.7446  | -140.3833 |
| 4625 | 0   | Extremo | 26.339 | -18.342  | -9.813  | -113.1458 | 1.8492   | -171.035  |
| 4625 | 0.5 | Extremo | 26.339 | -5.629   | -9.813  | -113.1458 | 6.7559   | -165.0423 |
| 4625 | 1   | Extremo | 26.339 | 7.083    | -9.813  | -113.1458 | 11.6626  | -165.406  |
| 4625 | 0   | Extremo | 26.029 | -11.678  | -10.013 | -65.8696  | 1.7978   | -163.6403 |
| 4625 | 0.5 | Extremo | 26.029 | 1.035    | -10.013 | -65.8696  | 6.8042   | -160.9795 |
| 4625 | 1   | Extremo | 26.029 | 13.747   | -10.013 | -65.8696  | 11.8106  | -164.6751 |
| 4626 | 0   | Extremo | 26.159 | -31.349  | 8.152   | -102.4744 | 11.0687  | -175.526  |
| 4626 | 0.5 | Extremo | 26.159 | -18.637  | 8.152   | -102.4744 | 6.9927   | -163.0296 |

|      |     |         |        |         |         |           |          |           |
|------|-----|---------|--------|---------|---------|-----------|----------|-----------|
| 4626 | 1   | Extremo | 26.159 | -5.924  | 8.152   | -102.4744 | 2.9167   | -156.8895 |
| 4626 | 0   | Extremo | 26.211 | -25.149 | 8.147   | -54.6667  | 10.9777  | -171.9384 |
| 4626 | 0.5 | Extremo | 26.211 | -12.437 | 8.147   | -54.6667  | 6.904    | -162.542  |
| 4626 | 1   | Extremo | 26.211 | 0.276   | 8.147   | -54.6667  | 2.8303   | -159.5018 |
| 4627 | 0   | Extremo | 22.905 | -31.2   | 29.506  | -91.5649  | 21.9838  | -150.3704 |
| 4627 | 0.5 | Extremo | 22.905 | -18.488 | 29.506  | -91.5649  | 7.2307   | -137.9483 |
| 4627 | 1   | Extremo | 22.905 | -5.775  | 29.506  | -91.5649  | -7.5224  | -131.8825 |
| 4627 | 0   | Extremo | 23.224 | -28.816 | 28.625  | -45.3928  | 21.3988  | -152.0498 |
| 4627 | 0.5 | Extremo | 23.224 | -16.103 | 28.625  | -45.3928  | 7.0864   | -140.8199 |
| 4627 | 1   | Extremo | 23.224 | -3.391  | 28.625  | -45.3928  | -7.226   | -135.9464 |
| 4628 | 0   | Extremo | 12.751 | 4.171   | 56.238  | -92.397   | 31.574   | -104.8989 |
| 4628 | 0.5 | Extremo | 12.751 | 16.883  | 56.238  | -92.397   | 3.4553   | -110.1625 |
| 4628 | 1   | Extremo | 12.751 | 29.596  | 56.238  | -92.397   | -24.6635 | -121.7824 |
| 4628 | 0   | Extremo | 13.183 | -1.685  | 55.397  | -52.5737  | 30.9329  | -109.8331 |
| 4628 | 0.5 | Extremo | 13.183 | 11.027  | 55.397  | -52.5737  | 3.2343   | -112.1685 |
| 4628 | 1   | Extremo | 13.183 | 23.74   | 55.397  | -52.5737  | -24.4643 | -120.8601 |
| 4629 | 0   | Extremo | 13.233 | -9.612  | -37.149 | -53.0198  | -17.9044 | -128.6105 |
| 4629 | 0.5 | Extremo | 13.233 | 3.101   | -37.149 | -53.0198  | 0.6703   | -126.9828 |
| 4629 | 1   | Extremo | 13.233 | 15.813  | -37.149 | -53.0198  | 19.245   | -131.7114 |
| 4629 | 0   | Extremo | 12.832 | -6.17   | -37.972 | -24.6306  | -18.2553 | -119.1183 |
| 4629 | 0.5 | Extremo | 12.832 | 6.543   | -37.972 | -24.6306  | 0.7306   | -119.2116 |
| 4629 | 1   | Extremo | 12.832 | 19.255  | -37.972 | -24.6306  | 19.7165  | -125.6611 |
| 4630 | 0   | Extremo | 22.84  | -20.87  | -24.241 | -85.1113  | -8.0977  | -159.9531 |
| 4630 | 0.5 | Extremo | 22.84  | -8.157  | -24.241 | -85.1113  | 4.0226   | -152.6963 |
| 4630 | 1   | Extremo | 22.84  | 4.555   | -24.241 | -85.1113  | 16.1429  | -151.7957 |
| 4630 | 0   | Extremo | 22.272 | -12.547 | -24.922 | -47.3952  | -8.3044  | -144.7728 |
| 4630 | 0.5 | Extremo | 22.272 | 0.165   | -24.922 | -47.3952  | 4.1565   | -141.6772 |
| 4630 | 1   | Extremo | 22.272 | 12.878  | -24.922 | -47.3952  | 16.6174  | -144.9379 |
| 4631 | 0   | Extremo | 26.81  | -26.818 | -8.719  | -95.6252  | 0.6155   | -174.7475 |
| 4631 | 0.5 | Extremo | 26.81  | -14.105 | -8.719  | -95.6252  | 4.975    | -164.5168 |
| 4631 | 1   | Extremo | 26.81  | -1.393  | -8.719  | -95.6252  | 9.3344   | -160.6423 |
| 4631 | 0   | Extremo | 26.389 | -15.341 | -8.57   | -52.7258  | 0.8285   | -160.5629 |
| 4631 | 0.5 | Extremo | 26.389 | -2.628  | -8.57   | -52.7258  | 5.1133   | -156.0707 |
| 4631 | 1   | Extremo | 26.389 | 10.084  | -8.57   | -52.7258  | 9.3981   | -157.9346 |
| 4632 | 0   | Extremo | 26.452 | -34.788 | 6.342   | -99.4262  | 8.4893   | -173.5386 |
| 4632 | 0.5 | Extremo | 26.452 | -22.076 | 6.342   | -99.4262  | 5.3184   | -159.3226 |
| 4632 | 1   | Extremo | 26.452 | -9.363  | 6.342   | -99.4262  | 2.1474   | -151.4628 |
| 4632 | 0   | Extremo | 26.534 | -23.443 | 7.051   | -53.7717  | 8.713    | -165.7605 |
| 4632 | 0.5 | Extremo | 26.534 | -10.73  | 7.051   | -53.7717  | 5.1876   | -157.2172 |
| 4632 | 1   | Extremo | 26.534 | 1.982   | 7.051   | -53.7717  | 1.6622   | -155.0302 |
| 4633 | 0   | Extremo | 22.251 | -38.397 | 24.614  | -102.6976 | 17.0064  | -155.7042 |
| 4633 | 0.5 | Extremo | 22.251 | -25.685 | 24.614  | -102.6976 | 4.6992   | -139.6838 |
| 4633 | 1   | Extremo | 22.251 | -12.972 | 24.614  | -102.6976 | -7.6079  | -130.0197 |
| 4633 | 0   | Extremo | 22.642 | -31.303 | 23.612  | -57.1973  | 16.3036  | -155.4701 |
| 4633 | 0.5 | Extremo | 22.642 | -18.591 | 23.612  | -57.1973  | 4.4979   | -142.9965 |
| 4633 | 1   | Extremo | 22.642 | -5.878  | 23.612  | -57.1973  | -7.3079  | -136.8792 |
| 4634 | 0   | Extremo | 12.533 | -44.619 | 37.368  | -112.8507 | 21.09    | -130.6415 |
| 4634 | 0.5 | Extremo | 12.533 | -31.907 | 37.368  | -112.8507 | 2.4061   | -111.5099 |
| 4634 | 1   | Extremo | 12.533 | -19.194 | 37.368  | -112.8507 | -16.2778 | -98.7347  |
| 4634 | 0   | Extremo | 13.076 | -45.439 | 36.923  | -71.8808  | 20.5724  | -134.2546 |
| 4634 | 0.5 | Extremo | 13.076 | -32.726 | 36.923  | -71.8808  | 2.1111   | -114.7134 |
| 4634 | 1   | Extremo | 13.076 | -20.014 | 36.923  | -71.8808  | -16.3503 | -101.5284 |
| 4635 | 0   | Extremo | 12.086 | 20.605  | -23.954 | -37.3293  | -11.6576 | -121.6412 |
| 4635 | 0.5 | Extremo | 12.086 | 33.317  | -23.954 | -37.3293  | 0.3193   | -135.1217 |
| 46   |     |         |        |         |         |           |          |           |



|      |     |         |        |          |         |           |          |           |
|------|-----|---------|--------|----------|---------|-----------|----------|-----------|
| 4638 | 1   | Extremo | 23.877 | -22.664  | 3.535   | -87.9287  | 2.1088   | -156.3577 |
| 4638 | 0   | Extremo | 24.009 | -26.302  | 5.463   | -48.4393  | 6.3877   | -174.8817 |
| 4638 | 0.5 | Extremo | 24.009 | -13.59   | 5.463   | -48.4393  | 3.6564   | -164.9087 |
| 4638 | 1   | Extremo | 24.009 | -0.877   | 5.463   | -48.4393  | 0.9251   | -161.292  |
| 4639 | 0   | Extremo | 19.559 | -56.712  | 19.145  | -93.1739  | 12.6753  | -172.9758 |
| 4639 | 0.5 | Extremo | 19.559 | -43.999  | 19.145  | -93.1739  | 3.1027   | -147.7982 |
| 4639 | 1   | Extremo | 19.559 | -31.287  | 19.145  | -93.1739  | -6.4698  | -128.9768 |
| 4639 | 0   | Extremo | 19.988 | -41.365  | 17.491  | -54.1054  | 11.5909  | -168.0781 |
| 4639 | 0.5 | Extremo | 19.988 | -28.653  | 17.491  | -54.1054  | 2.8455   | -150.5735 |
| 4639 | 1   | Extremo | 19.988 | -15.94   | 17.491  | -54.1054  | -5.8999  | -139.4252 |
| 4640 | 0   | Extremo | 11.194 | -69.074  | 23.716  | -100.2237 | 13.6105  | -145.4673 |
| 4640 | 0.5 | Extremo | 11.194 | -56.362  | 23.716  | -100.2237 | 1.7527   | -114.1083 |
| 4640 | 1   | Extremo | 11.194 | -43.649  | 23.716  | -100.2237 | -10.1051 | -89.1057  |
| 4640 | 0   | Extremo | 11.828 | -64.246  | 24.283  | -62.3469  | 13.5294  | -147.0436 |
| 4640 | 0.5 | Extremo | 11.828 | -51.533  | 24.283  | -62.3469  | 1.3877   | -118.0989 |
| 4640 | 1   | Extremo | 11.828 | -38.821  | 24.283  | -62.3469  | -10.754  | -95.5104  |
| 4641 | 0   | Extremo | 10.878 | 32.596   | -13.856 | -25.192   | -6.8259  | -123.4096 |
| 4641 | 0.5 | Extremo | 10.878 | 45.309   | -13.856 | -25.192   | 0.102    | -142.8858 |
| 4641 | 1   | Extremo | 10.878 | 58.021   | -13.856 | -25.192   | 7.0299   | -168.7183 |
| 4641 | 0   | Extremo | 10.4   | 30.545   | -15.377 | -18.139   | -7.4568  | -105.9569 |
| 4641 | 0.5 | Extremo | 10.4   | 43.257   | -15.377 | -18.139   | 0.2317   | -124.4073 |
| 4641 | 1   | Extremo | 10.4   | 55.97    | -15.377 | -18.139   | 7.9202   | -149.214  |
| 4642 | 0   | Extremo | 18.1   | -5.388   | -11.034 | -42.4454  | -4.3697  | -190.0847 |
| 4642 | 0.5 | Extremo | 18.1   | 7.325    | -11.034 | -42.4454  | 1.1473   | -190.5688 |
| 4642 | 1   | Extremo | 18.1   | 20.037   | -11.034 | -42.4454  | 6.6644   | -197.4092 |
| 4642 | 0   | Extremo | 17.318 | 7.52     | -12.148 | -29.7556  | -4.543   | -152.305  |
| 4642 | 0.5 | Extremo | 17.318 | 20.232   | -12.148 | -29.7556  | 1.5311   | -159.2431 |
| 4642 | 1   | Extremo | 17.318 | 32.945   | -12.148 | -29.7556  | 7.6053   | -172.5374 |
| 4643 | 0   | Extremo | 22.052 | -42.751  | -5.393  | -55.9061  | -0.9602  | -221.4312 |
| 4643 | 0.5 | Extremo | 22.052 | -30.039  | -5.393  | -55.9061  | 1.7363   | -203.2336 |
| 4643 | 1   | Extremo | 22.052 | -17.326  | -5.393  | -55.9061  | 4.4328   | -191.3922 |
| 4643 | 0   | Extremo | 21.271 | -11.781  | -4.569  | -35.7354  | 0.0049   | -177.5001 |
| 4643 | 0.5 | Extremo | 21.271 | 0.931    | -4.569  | -35.7354  | 2.2893   | -174.7875 |
| 4643 | 1   | Extremo | 21.271 | 13.644   | -4.569  | -35.7354  | 4.5737   | -178.4311 |
| 4644 | 0   | Extremo | 21.179 | -71.989  | -0.646  | -67.7487  | 2.4245   | -216.4925 |
| 4644 | 0.5 | Extremo | 21.179 | -59.277  | -0.646  | -67.7487  | 2.7474   | -183.6759 |
| 4644 | 1   | Extremo | 21.179 | -46.564  | -0.646  | -67.7487  | 3.0703   | -157.2156 |
| 4644 | 0   | Extremo | 21.378 | -29.206  | 3.61    | -40.8589  | 4.1331   | -185.4202 |
| 4644 | 0.5 | Extremo | 21.378 | -16.494  | 3.61    | -40.8589  | 2.3281   | -173.9952 |
| 4644 | 1   | Extremo | 21.378 | -3.781   | 3.61    | -40.8589  | 0.5231   | -168.9264 |
| 4645 | 0   | Extremo | 17.249 | -67.23   | 15.007  | -67.6775  | 9.489    | -186.5745 |
| 4645 | 0.5 | Extremo | 17.249 | -54.518  | 15.007  | -67.6775  | 1.9853   | -156.1374 |
| 4645 | 1   | Extremo | 17.249 | -41.805  | 15.007  | -67.6775  | -5.5184  | -132.0565 |
| 4645 | 0   | Extremo | 17.592 | -48.383  | 11.317  | -45.0425  | 7.3565   | -177.6973 |
| 4645 | 0.5 | Extremo | 17.592 | -35.671  | 11.317  | -45.0425  | 1.6981   | -156.6837 |
| 4645 | 1   | Extremo | 17.592 | -22.958  | 11.317  | -45.0425  | -3.9603  | -142.0263 |
| 4646 | 0   | Extremo | 10.043 | -93.588  | 11.648  | -80.4427  | 7.0681   | -161.3809 |
| 4646 | 0.5 | Extremo | 10.043 | -80.875  | 11.648  | -80.4427  | 1.2441   | -117.7651 |
| 4646 | 1   | Extremo | 10.043 | -68.163  | 11.648  | -80.4427  | -4.5799  | -80.5055  |
| 4646 | 0   | Extremo | 10.613 | -70.254  | 14.74   | -48.7715  | 8.2245   | -152.1962 |
| 4646 | 0.5 | Extremo | 10.613 | -57.542  | 14.74   | -48.7715  | 0.8544   | -120.2472 |
| 4646 | 1   | Extremo | 10.613 | -44.829  | 14.74   | -48.7715  | -6.5157  | -94.6544  |
| 4647 | 0   | Extremo | 9.874  | 37.879   | -5.57   | -10.3398  | -2.8396  | -126.2529 |
| 4647 | 0.5 | Extremo | 9.874  | 50.591   | -5.57   | -10.3398  | -0.0545  | -148.3705 |
| 4647 | 1   | Extremo | 9.874  | 63.304   | -5.57   | -10.3398  | 2.7306   | -176.8443 |
| 4647 | 0   | Extremo | 9.605  | 33.861   | -7.368  | -19.3644  | -3.5828  | -105.5561 |
| 4647 | 0.5 | Extremo | 9.605  | 46.573   | -7.368  | -19.3644  | 0.101    | -125.6646 |
| 4647 | 1   | Extremo | 9.605  | 59.286   | -7.368  | -19.3644  | 3.7848   | -152.1292 |
| 4648 | 0   | Extremo | 16.278 | -1.704   | -4.636  | -18.0665  | -2.1315  | -202.2702 |
| 4648 | 0.5 | Extremo | 16.278 | 11.009   | -4.636  | -18.0665  | 0.1867   | -204.5964 |
| 4648 | 1   | Extremo | 16.278 | 23.721   | -4.636  | -18.0665  | 2.5048   | -213.2788 |
| 4648 | 0   | Extremo | 15.82  | 11.719   | -6.061  | -27.0033  | -2.3226  | -154.4751 |
| 4648 | 0.5 | Extremo | 15.82  | 24.431   | -6.061  | -27.0033  | 0.708    | -163.5127 |
| 4648 | 1   | Extremo | 15.82  | 37.144   | -6.061  | -27.0033  | 3.7387   | -178.9065 |
| 4649 | 0   | Extremo | 20.055 | -52.189  | -3.184  | -24.7233  | -1.5166  | -245.7716 |
| 4649 | 0.5 | Extremo | 20.055 | -39.477  | -3.184  | -24.7233  | 0.0756   | -222.8552 |
| 4649 | 1   | Extremo | 20.055 | -26.764  | -3.184  | -24.7233  | 1.6678   | -206.295  |
| 4649 | 0   | Extremo | 19.543 | -10.087  | -2.402  | -30.2304  | -0.0914  | -182.9631 |
| 4649 | 0.5 | Extremo | 19.543 | 2.625    | -2.402  | -30.2304  | 1.1095   | -181.0977 |
| 4649 | 1   | Extremo | 19.543 | 15.338   | -2.402  | -30.2304  | 2.3105   | -185.5885 |
| 4650 | 0   | Extremo | 19.602 | -125.538 | -7.689  | -31.42    | -1.8799  | -248.5702 |
| 4650 | 0.5 | Extremo | 19.602 | -112.826 | -7.689  | -31.42    | 1.9645   | -188.9791 |

|      |     |         |        |          |        |          |         |           |
|------|-----|---------|--------|----------|--------|----------|---------|-----------|
| 4650 | 1   | Extremo | 19.602 | -100.113 | -7.689 | -31.42   | 5.809   | -135.7442 |
| 4650 | 0   | Extremo | 19.646 | -30.773  | 1.684  | -32.8751 | 1.9753  | -192.15   |
| 4650 | 0.5 | Extremo | 19.646 | -18.061  | 1.684  | -32.8751 | 1.1331  | -179.9416 |
| 4650 | 1   | Extremo | 19.646 | -5.348   | 1.684  | -32.8751 | 0.2908  | -174.0894 |
| 4651 | 0   | Extremo | 16.016 | -36.762  | 14.527 | -29.8377 | 8.2953  | -179.7402 |
| 4651 | 0.5 | Extremo | 16.016 | -24.049  | 14.527 | -29.8377 | 1.0318  | -164.5375 |
| 4651 | 1   | Extremo | 16.016 | -11.337  | 14.527 | -29.8377 | -6.2318 | -155.691  |
| 4651 | 0   | Extremo | 16.085 | -51.743  | 5.436  | -34.7098 | 3.5197  | -183.0218 |
| 4651 | 0.5 | Extremo | 16.085 | -39.03   | 5.436  | -34.7098 | 0.8018  | -160.3285 |
| 4651 | 1   | Extremo | 16.085 | -26.318  | 5.436  | -34.7098 | -1.916  | -143.9915 |
| 4652 | 0   | Extremo | 9.616  | -160.942 | -2.592 | -39.5754 | -0.6172 | -203.6698 |
| 4652 | 0.5 | Extremo | 9.616  | -148.229 | -2.592 | -39.5754 | 0.6789  | -126.377  |
| 4652 | 1   | Extremo | 9.616  | -135.517 | -2.592 | -39.5754 | 1.9751  | -55.4404  |
| 4652 | 0   | Extremo | 9.821  | -72.295  | 6.904  | -35.0402 | 3.8638  | -154.4125 |
| 4652 | 0.5 | Extremo | 9.821  | -59.583  | 6.904  | -35.0402 | 0.4116  | -121.4429 |
| 4652 | 1   | Extremo | 9.821  | -46.87   | 6.904  | -35.0402 | -3.0406 | -94.8296  |
| 4653 | 0   | Extremo | 9.24   | 38.798   | 1.719  | 6.1395   | 0.6889  | -126.2952 |
| 4653 | 0.5 | Extremo | 9.24   | 51.511   | 1.719  | 6.1395   | -0.1705 | -148.8725 |
| 4653 | 1   | Extremo | 9.24   | 64.223   | 1.719  | 6.1395   | -1.03   | -177.8061 |
| 4653 | 0   | Extremo | 9.335  | 34.634   | -0.144 | -20.5975 | -0.0844 | -105.5561 |
| 4653 | 0.5 | Extremo | 9.335  | 47.347   | -0.144 | -20.5975 | -0.0125 | -126.0514 |
| 4653 | 1   | Extremo | 9.335  | 60.059   | -0.144 | -20.5975 | 0.0595  | -152.903  |
| 4654 | 0   | Extremo | 15.135 | -0.397   | 1.266  | 9.2139   | 0.0898  | -203.1905 |
| 4654 | 0.5 | Extremo | 15.135 | 12.315   | 1.266  | 9.2139   | -0.543  | -206.17   |
| 4654 | 1   | Extremo | 15.135 | 25.028   | 1.266  | 9.2139   | -1.1759 | -215.5058 |
| 4654 | 0   | Extremo | 15.319 | 12.818   | -0.203 | -24.6561 | -0.1149 | -155.1802 |
| 4654 | 0.5 | Extremo | 15.319 | 25.53    | -0.203 | -24.6561 | -0.0133 | -164.7673 |
| 4654 | 1   | Extremo | 15.319 | 38.243   | -0.203 | -24.6561 | 0.0883  | -180.7106 |
| 4655 | 0   | Extremo | 18.765 | -51.6    | -1.015 | 12.8108  | -1.5581 | -247.8597 |
| 4655 | 0.5 | Extremo | 18.765 | -38.888  | -1.015 | 12.8108  | -1.0505 | -225.2377 |
| 4655 | 1   | Extremo | 18.765 | -26.175  | -1.015 | 12.8108  | -0.5429 | -208.9719 |
| 4655 | 0   | Extremo | 18.957 | -9.625   | -0.237 | -25.1703 | -0.1251 | -184.6282 |
| 4655 | 0.5 | Extremo | 18.957 | 3.087    | -0.237 | -25.1703 | -0.0064 | -182.9937 |
| 4655 | 1   | Extremo | 18.957 | 15.8     | -0.237 | -25.1703 | 0.1123  | -187.7154 |
| 4656 | 0   | Extremo | 19.404 | -126.051 | -9.647 | 16.5015  | -3.9976 | -251.0972 |
| 4656 | 0.5 | Extremo | 19.404 | -113.339 | -9.647 | 16.5015  | 0.826   | -191.2497 |
| 4656 | 1   | Extremo | 19.404 | -100.626 | -9.647 | 16.5015  | 5.6495  | -137.7585 |
| 4656 | 0   | Extremo | 19.06  | -31.265  | -0.245 | -24.9918 | -0.1203 | -194.1638 |
| 4656 | 0.5 | Extremo | 19.06  | -18.552  | -0.245 | -24.9918 | 0.0024  | -181.7096 |
| 4656 | 1   | Extremo | 19.06  | -5.84    | -0.245 | -24.9918 | 0.125   | -175.6117 |
| 4657 | 0   | Extremo | 15.881 | -37.817  | 8.82   | 12.4986  | 4.6462  | -181.6493 |
| 4657 | 0.5 | Extremo | 15.881 | -25.105  | 8.82   | 12.4986  | 0.2362  | -165.9187 |
| 4657 | 1   | Extremo | 15.881 | -12.392  | 8.82   | 12.4986  | -4.1737 | -156.5444 |
| 4657 | 0   | Extremo | 15.582 | -52.677  | -0.223 | -24.3491 | -0.1014 | -184.5104 |
| 4657 | 0.5 | Extremo | 15.582 | -39.964  | -0.223 | -24.3491 | 0.0099  | -161.3502 |
| 4657 | 1   | Extremo | 15.582 | -27.252  | -0.223 | -24.3491 | 0.1212  | -144.5462 |
| 4658 | 0   | Extremo | 9.892  | -161.544 | -9.709 | 20.0409  | -4.5836 | -204.4289 |
| 4658 | 0.5 | Extremo | 9.892  | -148.831 | -9.709 | 20.0409  | 0.2711  | -126.8352 |
| 4658 | 1   | Extremo | 9.892  | -136.119 | -9.709 | 20.0409  | 5.1257  | -55.5977  |
| 4658 | 0   | Extremo | 9.553  | -72.788  | -0.164 | -21.4893 | -0.0769 | -154.9683 |
| 4658 | 0.5 | Extremo | 9.553  | -60.076  | -0.164 | -21.4893 | 0.0051  | -121.7522 |
| 4658 | 1   | Extremo | 9.553  | -47.363  | -0.164 | -21.4893 | 0.0872  | -94.8924  |
| 4659 | 0   | Extremo | 9.313  | 36.26    | 8.806  | 21.0397  | 4.1395  | -123.0703 |
| 4659 | 0.5 | Extremo | 9.313  | 48.973   | 8.806  | 21.0397  | -0.2635 | -144.3785 |
| 4659 | 1   | Extremo | 9.313  | 61.685   | 8.806  | 21.0397  | -4.6665 | -172.0431 |
| 4659 | 0   | Extremo | 9.606  | 33.661   | 7.081  |          |         |           |



|      |     |         |        |         |         |          |          |           |
|------|-----|---------|--------|---------|---------|----------|----------|-----------|
| 4662 | 1   | Extremo | 20.169 | -48.377 | -6.518  | 52.7095  | 2.5257   | -163.0426 |
| 4662 | 0   | Extremo | 19.652 | -30.925 | -2.175  | -17.029  | -2.2159  | -191.4438 |
| 4662 | 0.5 | Extremo | 19.652 | -18.212 | -2.175  | -17.029  | -1.1285  | -179.1596 |
| 4662 | 1   | Extremo | 19.652 | -5.5    | -2.175  | -17.029  | -0.0412  | -173.2316 |
| 4663 | 0   | Extremo | 16.675 | -71.002 | -2.34   | 50.3239  | -1.6761  | -192.585  |
| 4663 | 0.5 | Extremo | 16.675 | -58.29  | -2.34   | 50.3239  | -0.5062  | -160.2619 |
| 4663 | 1   | Extremo | 16.675 | -45.577 | -2.34   | 50.3239  | 0.6637   | -134.2951 |
| 4663 | 0   | Extremo | 16.09  | -51.704 | -5.881  | -13.8775 | -3.7229  | -182.3608 |
| 4663 | 0.5 | Extremo | 16.09  | -38.991 | -5.881  | -13.8775 | -0.7822  | -159.6871 |
| 4663 | 1   | Extremo | 16.09  | -26.279 | -5.881  | -13.8775 | 2.1584   | -143.3696 |
| 4664 | 0   | Extremo | 10.537 | -95.872 | -10.475 | 60.6603  | -5.2537  | -163.8779 |
| 4664 | 0.5 | Extremo | 10.537 | -83.159 | -10.475 | 60.6603  | -0.0161  | -119.1202 |
| 4664 | 1   | Extremo | 10.537 | -70.447 | -10.475 | 60.6603  | 5.2214   | -80.7188  |
| 4664 | 0   | Extremo | 9.825  | -72.15  | -7.234  | -7.8346  | -4.0183  | -154.0395 |
| 4664 | 0.5 | Extremo | 9.825  | -59.437 | -7.234  | -7.8346  | -0.4015  | -121.1427 |
| 4664 | 1   | Extremo | 9.825  | -46.725 | -7.234  | -7.8346  | 3.2153   | -94.6022  |
| 4665 | 0   | Extremo | 10.139 | 31.234  | 16.63   | 32.2079  | 7.9486   | -118.8359 |
| 4665 | 0.5 | Extremo | 10.139 | 43.946  | 16.63   | 32.2079  | -0.3662  | -137.631  |
| 4665 | 1   | Extremo | 10.139 | 56.659  | 16.63   | 32.2079  | -8.681   | -162.7823 |
| 4665 | 0   | Extremo | 10.403 | 30.022  | 15.092  | -23.0714 | 7.2899   | -105.9918 |
| 4665 | 0.5 | Extremo | 10.403 | 42.735  | 15.092  | -23.0714 | -0.2563  | -124.1811 |
| 4665 | 1   | Extremo | 10.403 | 55.447  | 15.092  | -23.0714 | -7.8025  | -148.7266 |
| 4666 | 0   | Extremo | 16.953 | -2.334  | 12.809  | 50.9641  | 4.5521   | -178.3993 |
| 4666 | 0.5 | Extremo | 16.953 | 10.378  | 12.809  | 50.9641  | -1.8522  | -180.4102 |
| 4666 | 1   | Extremo | 16.953 | 23.091  | 12.809  | 50.9641  | -8.2565  | -188.7774 |
| 4666 | 0   | Extremo | 17.325 | 6.651   | 11.746  | -19.4997 | 4.3154   | -151.9018 |
| 4666 | 0.5 | Extremo | 17.325 | 19.364  | 11.746  | -19.4997 | -1.5577  | -158.4055 |
| 4666 | 1   | Extremo | 17.325 | 32.076  | 11.746  | -19.4997 | -7.4307  | -171.2654 |
| 4667 | 0   | Extremo | 21.069 | -31.145 | 3.582   | 63.6455  | -0.8504  | -205.1882 |
| 4667 | 0.5 | Extremo | 21.069 | -18.433 | 3.582   | 63.6455  | -2.6416  | -192.7937 |
| 4667 | 1   | Extremo | 21.069 | -5.72   | 3.582   | 63.6455  | -4.4327  | -186.7555 |
| 4667 | 0   | Extremo | 21.281 | -12.518 | 4.097   | -14.416  | -0.2538  | -176.4021 |
| 4667 | 0.5 | Extremo | 21.281 | 0.195   | 4.097   | -14.416  | -2.3025  | -173.3213 |
| 4667 | 1   | Extremo | 21.281 | 12.907  | 4.097   | -14.416  | -4.3512  | -176.5968 |
| 4668 | 0   | Extremo | 21.872 | -51.499 | -6.177  | 73.4043  | -5.2339  | -203.5631 |
| 4668 | 0.5 | Extremo | 21.872 | -38.787 | -6.177  | 73.4043  | -2.1452  | -180.9915 |
| 4668 | 1   | Extremo | 21.872 | -26.074 | -6.177  | 73.4043  | 0.9436   | -164.7762 |
| 4668 | 0   | Extremo | 21.39  | -29.507 | -4.099  | -8.7945  | -4.3737  | -183.8742 |
| 4668 | 0.5 | Extremo | 21.39  | -16.794 | -4.099  | -8.7945  | -2.3241  | -172.2988 |
| 4668 | 1   | Extremo | 21.39  | -4.082  | -4.099  | -8.7945  | -0.2745  | -167.0797 |
| 4669 | 0   | Extremo | 18.3   | -64.592 | -10.366 | 77.2454  | -6.6247  | -183.652  |
| 4669 | 0.5 | Extremo | 18.3   | -51.88  | -10.366 | 77.2454  | -1.4417  | -154.5339 |
| 4669 | 1   | Extremo | 18.3   | -39.167 | -10.366 | 77.2454  | 3.7412   | -131.7721 |
| 4669 | 0   | Extremo | 17.603 | -48.23  | -11.764 | -3.2141  | -7.5609  | -176.2458 |
| 4669 | 0.5 | Extremo | 17.603 | -35.517 | -11.764 | -3.2141  | -1.6791  | -155.309  |
| 4669 | 1   | Extremo | 17.603 | -22.805 | -11.764 | -3.2141  | 4.2028   | -140.7286 |
| 4670 | 0   | Extremo | 11.409 | -75.713 | -15.901 | 80.6232  | -8.4381  | -151.1182 |
| 4670 | 0.5 | Extremo | 11.409 | -63     | -15.901 | 80.6232  | -0.4874  | -116.4399 |
| 4670 | 1   | Extremo | 11.409 | -50.288 | -15.901 | 80.6232  | 7.4633   | -88.1179  |
| 4670 | 0   | Extremo | 10.622 | -69.904 | -15.072 | 6.2126   | -8.3811  | -151.3849 |
| 4670 | 0.5 | Extremo | 10.622 | -57.191 | -15.072 | 6.2126   | -0.8449  | -119.6112 |
| 4670 | 1   | Extremo | 10.622 | -44.479 | -15.072 | 6.2126   | 6.6912   | -94.1937  |
| 4671 | 0   | Extremo | 11.456 | 19.991  | 26.253  | 40.4136  | 12.604   | -117.3785 |
| 4671 | 0.5 | Extremo | 11.456 | 32.703  | 26.253  | 40.4136  | -0.5227  | -130.5521 |
| 4671 | 1   | Extremo | 11.456 | 45.416  | 26.253  | 40.4136  | -13.6494 | -150.082  |
| 4671 | 0   | Extremo | 11.62  | 19.595  | 24.841  | -23.228  | 11.9814  | -108.9416 |
| 4671 | 0.5 | Extremo | 11.62  | 32.307  | 24.841  | -23.228  | -0.4389  | -121.9173 |
| 4671 | 1   | Extremo | 11.62  | 45.02   | 24.841  | -23.228  | -12.8592 | -141.2491 |
| 4672 | 0   | Extremo | 19.522 | -8.355  | 19.143  | 65.3626  | 6.7331   | -164.9594 |
| 4672 | 0.5 | Extremo | 19.522 | 4.358   | 19.143  | 65.3626  | -2.8382  | -163.96   |
| 4672 | 1   | Extremo | 19.522 | 17.07   | 19.143  | 65.3626  | -12.4096 | -169.317  |
| 4672 | 0   | Extremo | 19.701 | -2.775  | 18.147  | -14.2309 | 6.4479   | -148.4324 |
| 4672 | 0.5 | Extremo | 19.701 | 9.937   | 18.147  | -14.2309 | -2.6254  | -150.2228 |
| 4672 | 1   | Extremo | 19.701 | 22.65   | 18.147  | -14.2309 | -11.6987 | -158.3695 |
| 4673 | 0   | Extremo | 23.915 | -25.854 | 6.075   | 78.6108  | -0.7967  | -184.2371 |
| 4673 | 0.5 | Extremo | 23.915 | -13.141 | 6.075   | 78.6108  | -3.8343  | -174.4882 |
| 4673 | 1   | Extremo | 23.915 | -0.429  | 6.075   | 78.6108  | -6.8719  | -171.0956 |
| 4673 | 0   | Extremo | 23.907 | -15.569 | 6.215   | -7.0732  | -0.5074  | -167.0467 |
| 4673 | 0.5 | Extremo | 23.907 | -2.856  | 6.215   | -7.0732  | -3.615   | -162.4406 |
| 4673 | 1   | Extremo | 23.907 | 9.856   | 6.215   | -7.0732  | -6.7226  | -164.1906 |
| 4674 | 0   | Extremo | 24.502 | -38.229 | -6.879  | 87.5584  | -7.0223  | -183.8654 |
| 4674 | 0.5 | Extremo | 24.502 | -25.516 | -6.879  | 87.5584  | -3.5828  | -167.9292 |

|      |     |         |        |         |         |          |          |           |
|------|-----|---------|--------|---------|---------|----------|----------|-----------|
| 4674 | 1   | Extremo | 24.502 | -12.804 | -6.879  | 87.5584  | -0.1432  | -158.3494 |
| 4674 | 0   | Extremo | 24.028 | -26.745 | -5.95   | -0.7692  | -6.6286  | -172.3041 |
| 4674 | 0.5 | Extremo | 24.028 | -14.033 | -5.95   | -0.7692  | -3.6534  | -162.1096 |
| 4674 | 1   | Extremo | 24.028 | -1.32   | -5.95   | -0.7692  | -0.6782  | -158.2714 |
| 4675 | 0   | Extremo | 20.696 | -49.74  | -17.31  | 93.4546  | -11.3121 | -169.6692 |
| 4675 | 0.5 | Extremo | 20.696 | -37.028 | -17.31  | 93.4546  | -2.6572  | -147.9771 |
| 4675 | 1   | Extremo | 20.696 | -24.315 | -17.31  | 93.4546  | 5.9977   | -132.6413 |
| 4675 | 0   | Extremo | 20.007 | -40.932 | -17.94  | 6.3561   | -11.7974 | -165.5925 |
| 4675 | 0.5 | Extremo | 20.007 | -28.22  | -17.94  | 6.3561   | -2.8275  | -148.3047 |
| 4675 | 1   | Extremo | 20.007 | -15.507 | -17.94  | 6.3561   | 6.1425   | -137.373  |
| 4676 | 0   | Extremo | 12.552 | -65.314 | -24.569 | 97.7618  | -13.3798 | -144.5923 |
| 4676 | 0.5 | Extremo | 12.552 | -52.601 | -24.569 | 97.7618  | -1.0954  | -115.1135 |
| 4676 | 1   | Extremo | 12.552 | -39.889 | -24.569 | 97.7618  | 11.189   | -91.9909  |
| 4676 | 0   | Extremo | 11.842 | -63.474 | -24.62  | 20.3094  | -13.6893 | -145.6095 |
| 4676 | 0.5 | Extremo | 11.842 | -50.762 | -24.62  | 20.3094  | -1.3793  | -117.0505 |
| 4676 | 1   | Extremo | 11.842 | -38.049 | -24.62  | 20.3094  | 10.9308  | -94.8477  |
| 4677 | 0   | Extremo | 12.765 | -9.578  | 39.086  | 52.9316  | 18.7269  | -125.3166 |
| 4677 | 0.5 | Extremo | 12.765 | 3.135   | 39.086  | 52.9316  | -0.8159  | -123.7059 |
| 4677 | 1   | Extremo | 12.765 | 15.847  | 39.086  | 52.9316  | -20.3587 | -128.4513 |
| 4677 | 0   | Extremo | 12.838 | -9.28   | 37.698  | -15.8973 | 18.095   | -120.2053 |
| 4677 | 0.5 | Extremo | 12.838 | 3.433   | 37.698  | -15.8973 | -0.7541  | -118.7437 |
| 4677 | 1   | Extremo | 12.838 | 16.145  | 37.698  | -15.8973 | -19.6031 | -123.6383 |
| 4678 | 0   | Extremo | 22.264 | -18.306 | 25.547  | 84.0216  | 8.4284   | -153.4094 |
| 4678 | 0.5 | Extremo | 22.264 | -5.593  | 25.547  | 84.0216  | -4.3452  | -147.4346 |
| 4678 | 1   | Extremo | 22.264 | 7.119   | 25.547  | 84.0216  | -17.1187 | -147.816  |
| 4678 | 0   | Extremo | 22.286 | -15.515 | 24.533  | -0.6868  | 8.0838   | -143.9868 |
| 4678 | 0.5 | Extremo | 22.286 | -2.803  | 24.533  | -0.6868  | -4.1829  | -139.4073 |
| 4678 | 1   | Extremo | 22.286 | 9.91    | 24.533  | -0.6868  | -16.4496 | -141.1841 |
| 4679 | 0   | Extremo | 26.562 | -22.01  | 8.304   | 93.0685  | -1.1362  | -167.7993 |
| 4679 | 0.5 | Extremo | 26.562 | -9.298  | 8.304   | 93.0685  | -5.2882  | -159.9722 |
| 4679 | 1   | Extremo | 26.562 | 3.415   | 8.304   | 93.0685  | -9.4402  | -158.5014 |
| 4679 | 0   | Extremo | 26.411 | -17.162 | 8.11    | 3.8236   | -1.0729  | -157.9562 |
| 4679 | 0.5 | Extremo | 26.411 | -4.45   | 8.11    | 3.8236   | -5.1278  | -152.5533 |
| 4679 | 1   | Extremo | 26.411 | 8.263   | 8.11    | 3.8236   | -9.1827  | -153.5067 |
| 4680 | 0   | Extremo | 27.032 | -29.307 | -7.819  | 95.8502  | -9.0883  | -168.8977 |
| 4680 | 0.5 | Extremo | 27.032 | -16.595 | -7.819  | 95.8502  | -5.1788  | -157.4221 |
| 4680 | 1   | Extremo | 27.032 | -3.882  | -7.819  | 95.8502  | -1.2694  | -152.3028 |
| 4680 | 0   | Extremo | 26.561 | -24.004 | -7.536  | 5.2114   | -8.9541  | -162.1406 |
| 4680 | 0.5 | Extremo | 26.561 | -11.292 | -7.536  | 5.2114   | -5.1861  | -153.3167 |
| 4680 | 1   | Extremo | 26.561 | 1.421   | -7.536  | 5.2114   | -1.418   | -150.849  |
| 4681 | 0   | Extremo | 23.311 | -34.049 | -23.674 | 98.9974  | -16.2207 | -154.1545 |
| 4681 | 0.5 | Extremo | 23.311 | -21.337 | -23.674 | 98.9974  | -4.3835  | -140.308  |
| 4681 | 1   | Extremo | 23.311 | -8.624  | -23.674 | 98.9974  | 7.4536   | -132.8177 |
| 4681 | 0   | Extremo | 22.668 | -30.392 | -24.064 | 9.9335   | -16.5134 | -151.7049 |
| 4681 | 0.5 | Extremo | 22.668 | -17.679 | -24.064 | 9.9335   | -4.4814  | -139.6871 |
| 4681 | 1   | Extremo | 22.668 | -4.967  | -24.064 | 9.9335   | 7.5506   | -134.0257 |
| 4682 | 0   | Extremo | 13.702 | -43.838 | -36.982 | 109.1142 | -20.39   | -131.3499 |
| 4682 | 0.5 | Extremo | 13.702 | -31.125 | -36.982 | 109.1142 | -1.899   | -112.6092 |
| 4682 | 1   | Extremo | 13.702 | -18.413 | -36.982 | 109.1142 | 16.592   | -100.2248 |
| 4682 | 0   | Extremo | 13.096 | -43.485 | -37.266 | 30.3976  | -20.7374 | -131.6772 |
| 4682 | 0.5 | Extremo | 13.096 | -30.772 | -37.266 | 30.3976  | -2.1042  | -113.113  |
| 4682 | 1   | Extremo | 13.096 | -18.06  | -37.266 | 30.3976  | 16.5289  | -100.9051 |
| 4683 | 0   | Extremo | 12.779 | -66.283 | 57.803  | 103.1901 | 27.4839  | -148.5119 |
| 4683 | 0.5 | Extremo | 12.779 | -53.57  | 57.803  | 103.1901 | -1.4174  | -118.5487 |
| 4683 | 1   | Extremo | 12.779 | -40.858 | 57.803  | 103.1901 | -30.3187 | -94.9417  |
| 4683 | 0   | Extremo | 12.79  |         |         |          |          |           |



|      |     |         |        |         |         |           |          |           |
|------|-----|---------|--------|---------|---------|-----------|----------|-----------|
| 4686 | 1   | Extremo | 26.682 | -2.811  | -8.515  | 97.3107   | -2.6839  | -157.3894 |
| 4686 | 0   | Extremo | 26.248 | -25.375 | -8.629  | 6.9963    | -11.2191 | -167.7404 |
| 4686 | 0.5 | Extremo | 26.248 | -12.663 | -8.629  | 6.9963    | -6.9045  | -158.2309 |
| 4686 | 1   | Extremo | 26.248 | 0.05    | -8.629  | 6.9963    | -2.5899  | -155.0776 |
| 4687 | 0   | Extremo | 23.828 | -29.022 | -28.738 | 86.4331   | -21.4183 | -149.8217 |
| 4687 | 0.5 | Extremo | 23.828 | -16.31  | -28.738 | 86.4331   | -7.0495  | -138.4887 |
| 4687 | 1   | Extremo | 23.828 | -3.597  | -28.738 | 86.4331   | 7.3194   | -133.5119 |
| 4687 | 0   | Extremo | 23.259 | -27.312 | -29.082 | -1.8135   | -21.6131 | -147.1943 |
| 4687 | 0.5 | Extremo | 23.259 | -14.599 | -29.082 | -1.8135   | -7.0721  | -136.7164 |
| 4687 | 1   | Extremo | 23.259 | -1.887  | -29.082 | -1.8135   | 7.4689   | -132.5948 |
| 4688 | 0   | Extremo | 13.709 | 3.992   | -55.547 | 88.0274   | -30.8708 | -105.6909 |
| 4688 | 0.5 | Extremo | 13.709 | 16.705  | -55.547 | 88.0274   | -3.0973  | -110.8652 |
| 4688 | 1   | Extremo | 13.709 | 29.417  | -55.547 | 88.0274   | 24.6762  | -122.3956 |
| 4688 | 0   | Extremo | 13.209 | 3.316   | -55.749 | 10.3804   | -31.1043 | -104.9808 |
| 4688 | 0.5 | Extremo | 13.209 | 16.028  | -55.749 | 10.3804   | -3.23    | -109.8168 |
| 4688 | 1   | Extremo | 13.209 | 28.741  | -55.749 | 10.3804   | 24.6443  | -121.0091 |
| 4689 | 0   | Extremo | 7.867  | 50.239  | 90.95   | 323.2783  | 42.9397  | -92.7206  |
| 4689 | 0.5 | Extremo | 7.867  | 62.952  | 90.95   | 323.2783  | -2.5352  | -121.0183 |
| 4689 | 1   | Extremo | 7.867  | 75.664  | 90.95   | 323.2783  | -48.0102 | -155.6723 |
| 4689 | 0   | Extremo | 7.929  | 49.652  | 89.199  | 245.2664  | 42.1104  | -95.1389  |
| 4689 | 0.5 | Extremo | 7.929  | 62.364  | 89.199  | 245.2664  | -2.489   | -123.1429 |
| 4689 | 1   | Extremo | 7.929  | 75.077  | 89.199  | 245.2664  | -47.0884 | -157.5031 |
| 4690 | 0   | Extremo | 15.878 | 10.915  | 34.394  | 154.3807  | 7.0839   | -165.327  |
| 4690 | 0.5 | Extremo | 15.878 | 23.627  | 34.394  | 154.3807  | -10.113  | -173.9624 |
| 4690 | 1   | Extremo | 15.878 | 36.34   | 34.394  | 154.3807  | -27.3099 | -188.954  |
| 4690 | 0   | Extremo | 15.846 | 17.061  | 33.285  | 67.5981   | 6.67     | -157.9732 |
| 4690 | 0.5 | Extremo | 15.846 | 29.773  | 33.285  | 67.5981   | -9.9725  | -169.6817 |
| 4690 | 1   | Extremo | 15.846 | 42.486  | 33.285  | 67.5981   | -26.6151 | -187.7464 |
| 4691 | 0   | Extremo | 20.159 | -17.051 | 11.532  | 117.5048  | -2.5769  | -202.046  |
| 4691 | 0.5 | Extremo | 20.159 | -4.338  | 11.532  | 117.5048  | -8.3428  | -196.6988 |
| 4691 | 1   | Extremo | 20.159 | 8.374   | 11.532  | 117.5048  | -14.1088 | -197.7078 |
| 4691 | 0   | Extremo | 19.991 | -7.594  | 10.878  | 29.1099   | -2.7859  | -191.8477 |
| 4691 | 0.5 | Extremo | 19.991 | 5.119   | 10.878  | 29.1099   | -8.2249  | -191.2289 |
| 4691 | 1   | Extremo | 19.991 | 17.831  | 10.878  | 29.1099   | -13.664  | -196.9663 |
| 4692 | 0   | Extremo | 20.441 | -41.244 | -9.258  | 96.0555   | -13.0341 | -212.7475 |
| 4692 | 0.5 | Extremo | 20.441 | -28.532 | -9.258  | 96.0555   | -8.405   | -195.3034 |
| 4692 | 1   | Extremo | 20.441 | -15.819 | -9.258  | 96.0555   | -3.7759  | -184.2156 |
| 4692 | 0   | Extremo | 20.114 | -30.919 | -9.626  | 7.9828    | -13.1503 | -202.9798 |
| 4692 | 0.5 | Extremo | 20.114 | -18.207 | -9.626  | 7.9828    | -8.3371  | -190.6983 |
| 4692 | 1   | Extremo | 20.114 | -5.494  | -9.626  | 7.9828    | -3.524   | -184.7731 |
| 4693 | 0   | Extremo | 16.573 | -63.76  | -31.707 | 60.7976   | -26.5216 | -201.0629 |
| 4693 | 0.5 | Extremo | 16.573 | -51.047 | -31.707 | 60.7976   | -10.6679 | -172.3612 |
| 4693 | 1   | Extremo | 16.573 | -38.335 | -31.707 | 60.7976   | 5.1858   | -150.0157 |
| 4693 | 0   | Extremo | 16.157 | -54.611 | -32.078 | -24.5338  | -26.6512 | -192.6442 |
| 4693 | 0.5 | Extremo | 16.157 | -41.899 | -32.078 | -24.5338  | -10.6121 | -168.5167 |
| 4693 | 1   | Extremo | 16.157 | -29.186 | -32.078 | -24.5338  | 5.4271   | -150.7455 |
| 4694 | 0   | Extremo | 8.51   | -90.806 | -89.089 | -98.4399  | -49.5972 | -171.5364 |
| 4694 | 0.5 | Extremo | 8.51   | -78.094 | -89.089 | -98.4399  | -5.0529  | -129.3114 |
| 4694 | 1   | Extremo | 8.51   | -65.381 | -89.089 | -98.4399  | 39.4913  | -93.4427  |
| 4694 | 0   | Extremo | 8.127  | -83.945 | -88.935 | -169.2617 | -49.5888 | -162.5452 |
| 4694 | 0.5 | Extremo | 8.127  | -71.232 | -88.935 | -169.2617 | -5.1214  | -123.7508 |
| 4694 | 1   | Extremo | 8.127  | -58.52  | -88.935 | -169.2617 | 39.346   | -91.3127  |
| 4695 | 0   | Extremo | 5.893  | 184.243 | 74.501  | 92.9985   | 34.626   | -70.1215  |
| 4695 | 0.5 | Extremo | 5.893  | 198.193 | 74.501  | 92.9985   | -2.6246  | -165.7304 |
| 4695 | 1   | Extremo | 5.893  | 212.143 | 74.501  | 92.9985   | -39.8751 | -268.3143 |
| 4695 | 0   | Extremo | 5.926  | 176.429 | 72.956  | 14.8511   | 33.8878  | -72.8806  |
| 4695 | 0.5 | Extremo | 5.926  | 190.379 | 72.956  | 14.8511   | -2.59    | -164.5825 |
| 4695 | 1   | Extremo | 5.926  | 204.329 | 72.956  | 14.8511   | -39.0678 | -263.2595 |
| 4696 | 0   | Extremo | 7.5    | 74.853  | 43.523  | 132.5335  | 12.911   | -220.5958 |
| 4696 | 0.5 | Extremo | 7.5    | 88.803  | 43.523  | 132.5335  | -8.8503  | -261.5096 |
| 4696 | 1   | Extremo | 7.5    | 102.753 | 43.523  | 132.5335  | -30.6117 | -309.3985 |
| 4696 | 0   | Extremo | 7.523  | 70.362  | 42.264  | 34.1585   | 12.3852  | -217.3615 |
| 4696 | 0.5 | Extremo | 7.523  | 84.312  | 42.264  | 34.1585   | -8.7469  | -256.0301 |
| 4696 | 1   | Extremo | 7.523  | 98.262  | 42.264  | 34.1585   | -29.8789 | -301.6737 |
| 4697 | 0   | Extremo | 11.258 | 7.038   | 14.792  | 129.5243  | -2.2824  | -287.5347 |
| 4697 | 0.5 | Extremo | 11.258 | 20.988  | 14.792  | 129.5243  | -9.6782  | -294.541  |
| 4697 | 1   | Extremo | 11.258 | 34.938  | 14.792  | 129.5243  | -17.0739 | -308.5223 |
| 4697 | 0   | Extremo | 11.176 | 5.52    | 13.948  | 27.644    | -2.5888  | -280.9948 |
| 4697 | 0.5 | Extremo | 11.176 | 19.47   | 13.948  | 27.644    | -9.563   | -287.2423 |
| 4697 | 1   | Extremo | 11.176 | 33.42   | 13.948  | 27.644    | -16.5371 | -300.4647 |
| 4698 | 0   | Extremo | 11.374 | -40.039 | -11.96  | 121.2572  | -15.7563 | -308.3726 |
| 4698 | 0.5 | Extremo | 11.374 | -26.089 | -11.96  | 121.2572  | -9.7763  | -291.8407 |

|      |     |         |        |          |         |          |          |           |
|------|-----|---------|--------|----------|---------|----------|----------|-----------|
| 4698 | 1   | Extremo | 11.374 | -12.139  | -11.96  | 121.2572 | -3.7963  | -282.2837 |
| 4698 | 0   | Extremo | 11.175 | -39.809  | -12.495 | 19.4015  | -15.9351 | -301.1146 |
| 4698 | 0.5 | Extremo | 11.175 | -25.859  | -12.495 | 19.4015  | -9.6878  | -284.6973 |
| 4698 | 1   | Extremo | 11.175 | -11.909  | -12.495 | 19.4015  | -3.4405  | -275.2551 |
| 4699 | 0   | Extremo | 7.724  | -98.627  | -40.662 | 114.4988 | -29.7567 | -302.3362 |
| 4699 | 0.5 | Extremo | 7.724  | -84.677  | -40.662 | 114.4988 | -9.4258  | -256.5102 |
| 4699 | 1   | Extremo | 7.724  | -70.727  | -40.662 | 114.4988 | 10.9051  | -217.6593 |
| 4699 | 0   | Extremo | 7.468  | -97.154  | -41.034 | 15.39    | -29.8797 | -295.6748 |
| 4699 | 0.5 | Extremo | 7.468  | -83.204  | -41.034 | 15.39    | -9.363   | -250.5852 |
| 4699 | 1   | Extremo | 7.468  | -69.254  | -41.034 | 15.39    | 11.1538  | -212.4706 |
| 4700 | 0   | Extremo | 6.072  | -186.935 | -71.96  | 131.9332 | -41.1168 | -259.7924 |
| 4700 | 0.5 | Extremo | 6.072  | -172.985 | -71.96  | 131.9332 | -5.1366  | -169.8125 |
| 4700 | 1   | Extremo | 6.072  | -159.035 | -71.96  | 131.9332 | 30.8435  | -86.8076  |
| 4700 | 0   | Extremo | 5.811  | -183.628 | -72.034 | 46.4398  | -41.1948 | -254.6417 |
| 4700 | 0.5 | Extremo | 5.811  | -169.678 | -72.034 | 46.4398  | -5.178   | -166.3153 |
| 4700 | 1   | Extremo | 5.811  | -155.728 | -72.034 | 46.4398  | 30.8388  | -84.9639  |
| 4701 | 0   | Extremo | 6.465  | 103.688  | 69.192  | 35.16    | 32.125   | -100.0345 |
| 4701 | 0.5 | Extremo | 6.465  | 117.638  | 69.192  | 35.16    | -2.4711  | -155.366  |
| 4701 | 1   | Extremo | 6.465  | 131.588  | 69.192  | 35.16    | -37.0672 | -217.6726 |
| 4701 | 0   | Extremo | 6.465  | 99.27    | 67.755  | -39.7281 | 31.4284  | -101.2994 |
| 4701 | 0.5 | Extremo | 6.465  | 113.22   | 67.755  | -39.7281 | -2.4493  | -154.4221 |
| 4701 | 1   | Extremo | 6.465  | 127.17   | 67.755  | -39.7281 | -36.327  | -214.5199 |
| 4702 | 0   | Extremo | 9.027  | 67.323   | 48.302  | 100.0484 | 16.4385  | -205.0785 |
| 4702 | 0.5 | Extremo | 9.027  | 81.273   | 48.302  | 100.0484 | -7.7128  | -242.2277 |
| 4702 | 1   | Extremo | 9.027  | 95.223   | 48.302  | 100.0484 | -31.864  | -286.3519 |
| 4702 | 0   | Extremo | 9.008  | 61.821   | 46.985  | 4.9472   | 15.8522  | -203.773  |
| 4702 | 0.5 | Extremo | 9.008  | 75.771   | 46.985  | 4.9472   | -7.6405  | -238.1711 |
| 4702 | 1   | Extremo | 9.008  | 89.721   | 46.985  | 4.9472   | -31.1331 | -279.5443 |
| 4703 | 0   | Extremo | 11.521 | 13.43    | 17.024  | 118.1712 | -1.2882  | -276.161  |
| 4703 | 0.5 | Extremo | 11.521 | 27.38    | 17.024  | 118.1712 | -9.8002  | -286.3637 |
| 4703 | 1   | Extremo | 11.521 | 41.33    | 17.024  | 118.1712 | -18.3122 | -303.5414 |
| 4703 | 0   | Extremo | 11.433 | 9.357    | 16.066  | 19.3294  | -1.6651  | -271.5836 |
| 4703 | 0.5 | Extremo | 11.433 | 23.307   | 16.066  | 19.3294  | -9.6979  | -279.7497 |
| 4703 | 1   | Extremo | 11.433 | 37.257   | 16.066  | 19.3294  | -17.7307 | -294.8908 |
| 4704 | 0   | Extremo | 11.655 | -37.707  | -13.891 | 126.3672 | -16.8659 | -301.1366 |
| 4704 | 0.5 | Extremo | 11.655 | -23.757  | -13.891 | 126.3672 | -9.9204  | -285.7708 |
| 4704 | 1   | Extremo | 11.655 | -9.807   | -13.891 | 126.3672 | -2.9748  | -277.38   |
| 4704 | 0   | Extremo | 11.485 | -39.721  | -14.527 | 27.2254  | -17.0892 | -294.7895 |
| 4704 | 0.5 | Extremo | 11.485 | -25.771  | -14.527 | 27.2254  | -9.8255  | -278.4166 |
| 4704 | 1   | Extremo | 11.485 | -11.821  | -14.527 | 27.2254  | -2.5619  | -269.0187 |
| 4705 | 0   | Extremo | 9.345  | -88.764  | -45.388 | 137.7747 | -31.0142 | -282.6375 |
| 4705 | 0.5 | Extremo | 9.345  | -74.814  | -45.388 | 137.7747 | -8.3205  | -241.743  |
| 4705 | 1   | Extremo | 9.345  | -60.864  | -45.388 | 137.7747 | 14.3733  | -207.8236 |
| 4705 | 0   | Extremo | 9.131  | -88.54   | -45.761 | 40.8863  | -31.1304 | -276.4009 |
| 4705 | 0.5 | Extremo | 9.131  | -74.59   | -45.761 | 40.8863  | -8.2498  | -235.6184 |
| 4705 | 1   | Extremo | 9.131  | -60.64   | -45.761 | 40.8863  | 14.6308  | -201.8109 |
| 4706 | 0   | Extremo | 6.772  | -122.877 | -66.633 | 171.7708 | -38.3768 | -215.2819 |
| 4706 | 0.5 | Extremo | 6.772  | -108.927 | -66.633 | 171.7708 | -5.0606  | -157.3306 |
| 4706 | 1   | Extremo | 6.772  | -94.977  | -66.633 | 171.7708 | 28.2557  | -106.3544 |
| 4706 | 0   | Extremo | 6.569  | -120.984 | -66.746 | 87.8098  | -38.4489 | -211.3881 |
| 4706 | 0.5 | Extremo | 6.569  | -107.034 | -66.746 | 87.8098  | -5.0761  | -154.3835 |
| 4706 | 1   | Extremo | 6.569  | -93.084  | -66.746 | 87.8098  | 28.2967  | -104.3539 |
| 4707 | 0   | Extremo | 9.277  | 57.039   | 73.922  | 30.8576  | 34.1512  | -113.5671 |
| 4707 | 0.5 | Extremo | 9.277  | 70.989   | 73.922  | 30.8576  | -2.8096  | -145.5742 |



|      |     |         |        |         |         |          |          |           |
|------|-----|---------|--------|---------|---------|----------|----------|-----------|
| 4710 | 1   | Extremo | 17.343 | -4.428  | -14.968 | 125.6508 | -3.0695  | -258.9792 |
| 4710 | 0   | Extremo | 17.142 | -34.838 | -15.681 | 29.1732  | -18.2901 | -271.3973 |
| 4710 | 0.5 | Extremo | 17.142 | -20.888 | -15.681 | 29.1732  | -10.4494 | -257.466  |
| 4710 | 1   | Extremo | 17.142 | -6.938  | -15.681 | 29.1732  | -2.6087  | -250.5097 |
| 4711 | 0   | Extremo | 15.363 | -70.697 | -48.761 | 139.6096 | -33.2539 | -254.5226 |
| 4711 | 0.5 | Extremo | 15.363 | -56.747 | -48.761 | 139.6096 | -8.8732  | -222.6615 |
| 4711 | 1   | Extremo | 15.363 | -42.797 | -48.761 | 139.6096 | 15.5075  | -197.7753 |
| 4711 | 0   | Extremo | 15.132 | -70.616 | -49.149 | 45.0095  | -33.3567 | -248.1694 |
| 4711 | 0.5 | Extremo | 15.132 | -56.666 | -49.149 | 45.0095  | -8.7824  | -216.3491 |
| 4711 | 1   | Extremo | 15.132 | -42.716 | -49.149 | 45.0095  | 15.7919  | -191.5038 |
| 4712 | 0   | Extremo | 9.627  | -91.606 | -71.369 | 174.8798 | -41.3443 | -189.9949 |
| 4712 | 0.5 | Extremo | 9.627  | -77.656 | -71.369 | 174.8798 | -5.66    | -147.6796 |
| 4712 | 1   | Extremo | 9.627  | -63.706 | -71.369 | 174.8798 | 30.0244  | -112.3393 |
| 4712 | 0   | Extremo | 9.44   | -89.33  | -71.42  | 92.8268  | -41.3594 | -185.7714 |
| 4712 | 0.5 | Extremo | 9.44   | -75.38  | -71.42  | 92.8268  | -5.6496  | -144.5937 |
| 4712 | 1   | Extremo | 9.44   | -61.43  | -71.42  | 92.8268  | 30.0602  | -110.3911 |
| 4713 | 0   | Extremo | 11.453 | 28.809  | 88.958  | 48.8608  | 40.6755  | -121.1126 |
| 4713 | 0.5 | Extremo | 11.453 | 42.759  | 88.958  | 48.8608  | -3.8035  | -139.0045 |
| 4713 | 1   | Extremo | 11.453 | 56.709  | 88.958  | 48.8608  | -48.2825 | -163.8715 |
| 4713 | 0   | Extremo | 11.383 | 22.272  | 87.376  | -21.4894 | 39.907   | -124.2642 |
| 4713 | 0.5 | Extremo | 11.383 | 36.222  | 87.376  | -21.4894 | -3.781   | -138.8878 |
| 4713 | 1   | Extremo | 11.383 | 50.172  | 87.376  | -21.4894 | -47.4689 | -160.4864 |
| 4714 | 0   | Extremo | 19.335 | 34.366  | 54.392  | 102.9727 | 16.9185  | -183.2056 |
| 4714 | 0.5 | Extremo | 19.335 | 48.316  | 54.392  | 102.9727 | -10.2774 | -203.8761 |
| 4714 | 1   | Extremo | 19.335 | 62.266  | 54.392  | 102.9727 | -37.4734 | -231.5215 |
| 4714 | 0   | Extremo | 19.195 | 29.469  | 53.007  | 13.8613  | 16.3037  | -182.2846 |
| 4714 | 0.5 | Extremo | 19.195 | 43.419  | 53.007  | 13.8613  | -10.2    | -200.5066 |
| 4714 | 1   | Extremo | 19.195 | 57.369  | 53.007  | 13.8613  | -36.7036 | -225.7036 |
| 4715 | 0   | Extremo | 21.153 | 7.077   | 19.203  | 114.2656 | -1.8908  | -240.0176 |
| 4715 | 0.5 | Extremo | 21.153 | 21.027  | 19.203  | 114.2656 | -11.4923 | -247.0434 |
| 4715 | 1   | Extremo | 21.153 | 34.977  | 19.203  | 114.2656 | -21.0938 | -261.0442 |
| 4715 | 0   | Extremo | 20.981 | 4.07    | 18.118  | 21.5922  | -2.3315  | -235.9472 |
| 4715 | 0.5 | Extremo | 20.981 | 18.02   | 18.118  | 21.5922  | -11.3903 | -241.4698 |
| 4715 | 1   | Extremo | 20.981 | 31.97   | 18.118  | 21.5922  | -20.4491 | -253.9675 |
| 4716 | 0   | Extremo | 21.392 | -30.886 | -15.25  | 120.8854 | -19.3038 | -261.3587 |
| 4716 | 0.5 | Extremo | 21.392 | -16.936 | -15.25  | 120.8854 | -11.6789 | -249.4032 |
| 4716 | 1   | Extremo | 21.392 | -2.986  | -15.25  | 120.8854 | -4.054   | -244.4228 |
| 4716 | 0   | Extremo | 21.179 | -32.277 | -16.024 | 27.3156  | -19.5749 | -255.483  |
| 4716 | 0.5 | Extremo | 21.179 | -18.327 | -16.024 | 27.3156  | -11.5631 | -242.8318 |
| 4716 | 1   | Extremo | 21.179 | -4.377  | -16.024 | 27.3156  | -3.5512  | -237.1557 |
| 4717 | 0   | Extremo | 19.962 | -62.194 | -50.933 | 129.4305 | -36.604  | -237.7052 |
| 4717 | 0.5 | Extremo | 19.962 | -48.244 | -50.933 | 129.4305 | -11.1374 | -210.0957 |
| 4717 | 1   | Extremo | 19.962 | -34.294 | -50.933 | 129.4305 | 14.3291  | -189.4613 |
| 4717 | 0   | Extremo | 19.72  | -61.377 | -51.342 | 36.9425  | -36.6841 | -230.9304 |
| 4717 | 0.5 | Extremo | 19.72  | -47.427 | -51.342 | 36.9425  | -11.0129 | -203.7292 |
| 4717 | 1   | Extremo | 19.72  | -33.477 | -51.342 | 36.9425  | 14.6583  | -183.503  |
| 4718 | 0   | Extremo | 11.957 | -70.332 | -86.463 | 163.4214 | -50.3343 | -174.0595 |
| 4718 | 0.5 | Extremo | 11.957 | -56.382 | -86.463 | 163.4214 | -7.1027  | -142.3809 |
| 4718 | 1   | Extremo | 11.957 | -42.432 | -86.463 | 163.4214 | 36.1289  | -117.6772 |
| 4718 | 0   | Extremo | 11.78  | -65.496 | -86.344 | 82.321   | -50.2362 | -167.8072 |
| 4718 | 0.5 | Extremo | 11.78  | -51.546 | -86.344 | 82.321   | -7.0641  | -138.5468 |
| 4718 | 1   | Extremo | 11.78  | -37.596 | -86.344 | 82.321   | 36.1079  | -116.2614 |
| 4719 | 0   | Extremo | 7.039  | 85.1    | 123.119 | 127.9221 | 55.739   | -90.1677  |
| 4719 | 0.5 | Extremo | 7.039  | 99.05   | 123.119 | 127.9221 | -5.8206  | -136.2052 |
| 4719 | 1   | Extremo | 7.039  | 113     | 123.119 | 127.9221 | -67.3802 | -189.2177 |
| 4719 | 0   | Extremo | 7.048  | 84.323  | 121.214 | 70.399   | 54.8308  | -94.6541  |
| 4719 | 0.5 | Extremo | 7.048  | 98.273  | 121.214 | 70.399   | -5.7761  | -140.303  |
| 4719 | 1   | Extremo | 7.048  | 112.223 | 121.214 | 70.399   | -66.3829 | -192.927  |
| 4720 | 0   | Extremo | 15.337 | 34.225  | 55.432  | 111.44   | 13.9784  | -190.1631 |
| 4720 | 0.5 | Extremo | 15.337 | 48.175  | 55.432  | 111.44   | -13.7378 | -210.7632 |
| 4720 | 1   | Extremo | 15.337 | 62.125  | 55.432  | 111.44   | -41.454  | -238.3384 |
| 4720 | 0   | Extremo | 15.268 | 39.167  | 54.058  | 27.7075  | 13.3997  | -185.7421 |
| 4720 | 0.5 | Extremo | 15.268 | 53.117  | 54.058  | 27.7075  | -13.6292 | -208.8129 |
| 4720 | 1   | Extremo | 15.268 | 67.067  | 54.058  | 27.7075  | -40.6581 | -238.8588 |
| 4721 | 0   | Extremo | 19.466 | -6.305  | 19.894  | 112.7513 | -2.4879  | -246.8664 |
| 4721 | 0.5 | Extremo | 19.466 | 7.645   | 19.894  | 112.7513 | -12.435  | -247.2014 |
| 4721 | 1   | Extremo | 19.466 | 21.595  | 19.894  | 112.7513 | -22.3822 | -254.5113 |
| 4721 | 0   | Extremo | 19.345 | 1.575   | 18.792  | 24.1876  | -2.9337  | -238.924  |
| 4721 | 0.5 | Extremo | 19.345 | 15.525  | 18.792  | 24.1876  | -12.3298 | -243.1989 |
| 4721 | 1   | Extremo | 19.345 | 29.475  | 18.792  | 24.1876  | -21.7258 | -254.4488 |
| 4722 | 0   | Extremo | 19.686 | -44.395 | -15.522 | 115.1585 | -20.4202 | -266.6208 |
| 4722 | 0.5 | Extremo | 19.686 | -30.445 | -15.522 | 115.1585 | -12.6593 | -247.9107 |

|      |     |         |        |          |          |          |          |           |
|------|-----|---------|--------|----------|----------|----------|----------|-----------|
| 4722 | 1   | Extremo | 19.686 | -16.495  | -15.522  | 115.1585 | -4.8984  | -236.1756 |
| 4722 | 0   | Extremo | 19.53  | -35.401  | -16.329  | 25.2338  | -20.7    | -257.585  |
| 4722 | 0.5 | Extremo | 19.53  | -21.451  | -16.329  | 25.2338  | -12.5357 | -243.3719 |
| 4722 | 1   | Extremo | 19.53  | -7.501   | -16.329  | 25.2338  | -4.3713  | -236.1337 |
| 4723 | 0   | Extremo | 15.887 | -80.915  | -51.557  | 115.4918 | -40.6116 | -251.5234 |
| 4723 | 0.5 | Extremo | 15.887 | -66.965  | -51.557  | 115.4918 | -14.8332 | -214.5535 |
| 4723 | 1   | Extremo | 15.887 | -53.015  | -51.557  | 115.4918 | 10.9453  | -184.5585 |
| 4723 | 0   | Extremo | 15.719 | -72.257  | -51.999  | 25.4856  | -40.6626 | -242.3154 |
| 4723 | 0.5 | Extremo | 15.719 | -58.307  | -51.999  | 25.4856  | -14.663  | -209.6743 |
| 4723 | 1   | Extremo | 15.719 | -44.357  | -51.999  | 25.4856  | 11.3366  | -184.0083 |
| 4724 | 0   | Extremo | 7.433  | -121.272 | -121.193 | 91.9596  | -70.5398 | -208.4361 |
| 4724 | 0.5 | Extremo | 7.433  | -107.322 | -121.193 | 91.9596  | -9.9435  | -151.2877 |
| 4724 | 1   | Extremo | 7.433  | -93.372  | -121.193 | 91.9596  | 50.6527  | -101.1144 |
| 4724 | 0   | Extremo | 7.299  | -113.914 | -120.681 | 4.9125   | -70.2113 | -197.8516 |
| 4724 | 0.5 | Extremo | 7.299  | -99.964  | -120.681 | 4.9125   | -9.8707  | -144.3823 |
| 4724 | 1   | Extremo | 7.299  | -86.014  | -120.681 | 4.9125   | 50.47    | -97.888   |
| 4725 | 0   | Extremo | 7.243  | 134.977  | 102.824  | 13.2799  | 45.0056  | -103.6019 |
| 4725 | 0.5 | Extremo | 7.243  | 150.502  | 102.824  | 13.2799  | -6.4065  | -174.9717 |
| 4725 | 1   | Extremo | 7.243  | 166.027  | 102.824  | 13.2799  | -57.8185 | -254.104  |
| 4725 | 0   | Extremo | 7.216  | 135.455  | 101.149  | -58.7828 | 44.2181  | -104.672  |
| 4725 | 0.5 | Extremo | 7.216  | 150.98   | 101.149  | -58.7828 | -6.3565  | -176.2807 |
| 4725 | 1   | Extremo | 7.216  | 166.505  | 101.149  | -58.7828 | -56.9312 | -255.6519 |
| 4726 | 0   | Extremo | 7.939  | 72.197   | 65.652   | 109.7745 | 20.3812  | -241.75   |
| 4726 | 0.5 | Extremo | 7.939  | 87.722   | 65.652   | 109.7745 | -12.4447 | -281.7295 |
| 4726 | 1   | Extremo | 7.939  | 103.247  | 65.652   | 109.7745 | -45.2705 | -329.4715 |
| 4726 | 0   | Extremo | 7.939  | 69.783   | 64.16    | 11.5788  | 19.7212  | -242.6293 |
| 4726 | 0.5 | Extremo | 7.939  | 85.308   | 64.16    | 11.5788  | -12.359  | -281.4022 |
| 4726 | 1   | Extremo | 7.939  | 100.833  | 64.16    | 11.5788  | -44.4393 | -327.9376 |
| 4727 | 0   | Extremo | 11.602 | 12.798   | 23.451   | 128.9405 | -2.4427  | -322.9455 |
| 4727 | 0.5 | Extremo | 11.602 | 28.323   | 23.451   | 128.9405 | -14.1684 | -333.2258 |
| 4727 | 1   | Extremo | 11.602 | 43.848   | 23.451   | 128.9405 | -25.8941 | -351.2685 |
| 4727 | 0   | Extremo | 11.586 | 10.593   | 22.276   | 25.3126  | -2.9178  | -321.4624 |
| 4727 | 0.5 | Extremo | 11.586 | 26.118   | 22.276   | 25.3126  | -14.0558 | -330.6403 |
| 4727 | 1   | Extremo | 11.586 | 41.643   | 22.276   | 25.3126  | -25.1937 | -347.5807 |
| 4728 | 0   | Extremo | 11.659 | -40.511  | -18.566  | 137.0143 | -23.716  | -349.4631 |
| 4728 | 0.5 | Extremo | 11.659 | -24.986  | -18.566  | 137.0143 | -14.433  | -333.0891 |
| 4728 | 1   | Extremo | 11.659 | -9.461   | -18.566  | 137.0143 | -5.1499  | -324.4775 |
| 4728 | 0   | Extremo | 11.64  | -41.939  | -19.412  | 32.2413  | -24.0053 | -346.669  |
| 4728 | 0.5 | Extremo | 11.64  | -26.414  | -19.412  | 32.2413  | -14.2995 | -329.5805 |
| 4728 | 1   | Extremo | 11.64  | -10.889  | -19.412  | 32.2413  | -4.5936  | -320.2545 |
| 4729 | 0   | Extremo | 8.012  | -96.375  | -61.573  | 150.5226 | -44.3774 | -326.3745 |
| 4729 | 0.5 | Extremo | 8.012  | -80.85   | -61.573  | 150.5226 | -13.591  | -282.0683 |
| 4729 | 1   | Extremo | 8.012  | -65.325  | -61.573  | 150.5226 | 17.1953  | -245.5246 |
| 4729 | 0   | Extremo | 8      | -97.939  | -62.003  | 47.6281  | -44.4389 | -324.0665 |
| 4729 | 0.5 | Extremo | 8      | -82.414  | -62.003  | 47.6281  | -13.4377 | -278.9782 |
| 4729 | 1   | Extremo | 8      | -66.889  | -62.003  | 47.6281  | 17.5636  | -241.6525 |
| 4730 | 0   | Extremo | 7.223  | -151.7   | -100.276 | 211.5562 | -60.6779 | -250.0044 |
| 4730 | 0.5 | Extremo | 7.223  | -136.175 | -100.276 | 211.5562 | -10.5402 | -178.0358 |
| 4730 | 1   | Extremo | 7.223  | -120.65  | -100.276 | 211.5562 | 39.5976  | -113.8297 |
| 4730 | 0   | Extremo | 7.168  | -154.93  | -100.078 | 124.418  | -60.5047 | -249.7125 |
| 4730 | 0.5 | Extremo | 7.168  | -139.405 | -100.078 | 124.418  | -10.4656 | -176.1289 |
| 4730 | 1   | Extremo | 7.168  | -123.88  | -100.078 | 124.418  | 39.5735  | -110.3078 |
| 4731 | 0   | Extremo | 10.269 | 91.683   | 94.655   | -8.9159  | 40.8019  | -112.9608 |
| 4731 | 0.  |         |        |          |          |          |          |           |



|      |     |         |        |          |         |          |          |           |
|------|-----|---------|--------|----------|---------|----------|----------|-----------|
| 4734 | 1   | Extremo | 15.567 | -7.198   | -20.371 | 133.9826 | -4.0867  | -308.3987 |
| 4734 | 0   | Extremo | 15.557 | -41.699  | -21.187 | 32.6343  | -24.7459 | -329.8039 |
| 4734 | 0.5 | Extremo | 15.557 | -26.174  | -21.187 | 32.6343  | -14.1525 | -312.8359 |
| 4734 | 1   | Extremo | 15.557 | -10.649  | -21.187 | 32.6343  | -3.5591  | -303.6304 |
| 4735 | 0   | Extremo | 13.098 | -89.539  | -66.245 | 151.7989 | -45.2082 | -303.2062 |
| 4735 | 0.5 | Extremo | 13.098 | -74.014  | -66.245 | 151.7989 | -12.0855 | -262.3181 |
| 4735 | 1   | Extremo | 13.098 | -58.489  | -66.245 | 151.7989 | 21.0371  | -229.1924 |
| 4735 | 0   | Extremo | 13.09  | -91.932  | -66.665 | 53.2049  | -45.2919 | -301.2274 |
| 4735 | 0.5 | Extremo | 13.09  | -76.407  | -66.665 | 53.2049  | -11.9597 | -259.1424 |
| 4735 | 1   | Extremo | 13.09  | -60.882  | -66.665 | 53.2049  | 21.3726  | -224.8199 |
| 4736 | 0   | Extremo | 10.539 | -119.497 | -92.174 | 221.0818 | -56.8099 | -220.1885 |
| 4736 | 0.5 | Extremo | 10.539 | -103.972 | -92.174 | 221.0818 | -10.7229 | -164.3211 |
| 4736 | 1   | Extremo | 10.539 | -88.447  | -92.174 | 221.0818 | 35.364   | -116.2163 |
| 4736 | 0   | Extremo | 10.489 | -120.204 | -92.131 | 138.2371 | -56.716  | -218.9919 |
| 4736 | 0.5 | Extremo | 10.489 | -104.679 | -92.131 | 138.2371 | -10.6506 | -162.7711 |
| 4736 | 1   | Extremo | 10.489 | -89.154  | -92.131 | 138.2371 | 35.4147  | -114.3129 |
| 4737 | 0   | Extremo | 16.815 | 76.906   | 98.758  | -8.989   | 41.9554  | -114.2388 |
| 4737 | 0.5 | Extremo | 16.815 | 92.431   | 98.758  | -8.989   | -7.4236  | -156.573  |
| 4737 | 1   | Extremo | 16.815 | 107.956  | 98.758  | -8.989   | -56.8025 | -206.6698 |
| 4737 | 0   | Extremo | 16.68  | 75.68    | 97.21   | -79.8507 | 41.2488  | -115.6574 |
| 4737 | 0.5 | Extremo | 16.68  | 91.205   | 97.21   | -79.8507 | -7.3561  | -157.3786 |
| 4737 | 1   | Extremo | 16.68  | 106.73   | 97.21   | -79.8507 | -55.9609 | -206.8623 |
| 4738 | 0   | Extremo | 24.455 | 60.077   | 75.411  | 96.7552  | 26.4583  | -212.43   |
| 4738 | 0.5 | Extremo | 24.455 | 75.602   | 75.411  | 96.7552  | -11.2472 | -246.3497 |
| 4738 | 1   | Extremo | 24.455 | 91.127   | 75.411  | 96.7552  | -48.9527 | -288.0319 |
| 4738 | 0   | Extremo | 24.295 | 56.007   | 73.942  | 2.236    | 25.8     | -214.7593 |
| 4738 | 0.5 | Extremo | 24.295 | 71.532   | 73.942  | 2.236    | -11.1708 | -246.6442 |
| 4738 | 1   | Extremo | 24.295 | 87.057   | 73.942  | 2.236    | -48.1416 | -286.2916 |
| 4739 | 0   | Extremo | 27.851 | 15.752   | 26.622  | 119.6033 | -1.1697  | -288.7272 |
| 4739 | 0.5 | Extremo | 27.851 | 31.277   | 26.622  | 119.6033 | -14.4809 | -300.4845 |
| 4739 | 1   | Extremo | 27.851 | 46.802   | 26.622  | 119.6033 | -27.7921 | -320.0043 |
| 4739 | 0   | Extremo | 27.726 | 10.954   | 25.53   | 21.0713  | -1.613   | -289.2342 |
| 4739 | 0.5 | Extremo | 27.726 | 26.479   | 25.53   | 21.0713  | -14.3781 | -298.5923 |
| 4739 | 1   | Extremo | 27.726 | 42.004   | 25.53   | 21.0713  | -27.1432 | -315.713  |
| 4740 | 0   | Extremo | 28.036 | -36.434  | -21.229 | 129.7472 | -25.3942 | -316.8066 |
| 4740 | 0.5 | Extremo | 28.036 | -20.909  | -21.229 | 129.7472 | -14.7799 | -302.4706 |
| 4740 | 1   | Extremo | 28.036 | -5.384   | -21.229 | 129.7472 | -4.1656  | -295.8972 |
| 4740 | 0   | Extremo | 27.956 | -40.194  | -22.012 | 31.133   | -25.678  | -314.8441 |
| 4740 | 0.5 | Extremo | 27.956 | -24.669  | -22.012 | 31.133   | -14.6722 | -298.6282 |
| 4740 | 1   | Extremo | 27.956 | -9.144   | -22.012 | 31.133   | -3.6664  | -290.1748 |
| 4741 | 0   | Extremo | 24.938 | -84.165  | -71.021 | 146.6143 | -48.0374 | -289.286  |
| 4741 | 0.5 | Extremo | 24.938 | -68.64   | -71.021 | 146.6143 | -12.5268 | -251.0847 |
| 4741 | 1   | Extremo | 24.938 | -53.115  | -71.021 | 146.6143 | 22.9837  | -220.646  |
| 4741 | 0   | Extremo | 24.871 | -85.726  | -71.449 | 50.8719  | -48.1397 | -285.9418 |
| 4741 | 0.5 | Extremo | 24.871 | -70.201  | -71.449 | 50.8719  | -12.4152 | -246.96   |
| 4741 | 1   | Extremo | 24.871 | -54.676  | -71.449 | 50.8719  | 23.3093  | -215.7408 |
| 4742 | 0   | Extremo | 17.201 | -110.023 | -96.238 | 219.1259 | -60.12   | -209.9586 |
| 4742 | 0.5 | Extremo | 17.201 | -94.498  | -96.238 | 219.1259 | -12.0013 | -158.8283 |
| 4742 | 1   | Extremo | 17.201 | -78.973  | -96.238 | 219.1259 | 36.1175  | -115.4604 |
| 4742 | 0   | Extremo | 17.116 | -109.212 | -96.268 | 138.218  | -60.0576 | -207.559  |
| 4742 | 0.5 | Extremo | 17.116 | -93.687  | -96.268 | 138.218  | -11.9234 | -156.834  |
| 4742 | 1   | Extremo | 17.116 | -78.162  | -96.268 | 138.218  | 36.2108  | -113.8716 |
| 4743 | 0   | Extremo | 25.357 | 86.752   | 113.892 | -10.7928 | 47.7482  | -109.0907 |
| 4743 | 0.5 | Extremo | 25.357 | 102.277  | 113.892 | -10.7928 | -9.1979  | -156.348  |
| 4743 | 1   | Extremo | 25.357 | 117.802  | 113.892 | -10.7928 | -66.144  | -211.3678 |
| 4743 | 0   | Extremo | 25.139 | 83.085   | 112.227 | -79.5829 | 47.0095  | -111.6726 |
| 4743 | 0.5 | Extremo | 25.139 | 98.61    | 112.227 | -79.5829 | -9.1042  | -157.0964 |
| 4743 | 1   | Extremo | 25.139 | 114.135  | 112.227 | -79.5829 | -65.2178 | -210.2826 |
| 4744 | 0   | Extremo | 39.133 | 61.755   | 81.991  | 94.4925  | 27.6697  | -209.6448 |
| 4744 | 0.5 | Extremo | 39.133 | 77.28    | 81.991  | 94.4925  | -13.3256 | -244.4035 |
| 4744 | 1   | Extremo | 39.133 | 92.805   | 81.991  | 94.4925  | -54.3209 | -286.9246 |
| 4744 | 0   | Extremo | 38.844 | 55.899   | 80.543  | 3.115    | 27.0522  | -212.4893 |
| 4744 | 0.5 | Extremo | 38.844 | 71.424   | 80.543  | 3.115    | -13.2195 | -244.3199 |
| 4744 | 1   | Extremo | 38.844 | 86.949   | 80.543  | 3.115    | -53.4912 | -283.913  |
| 4745 | 0   | Extremo | 43.457 | 15.08    | 26.506  | 116.1564 | -2.4137  | -283.3927 |
| 4745 | 0.5 | Extremo | 43.457 | 30.605   | 26.506  | 116.1564 | -15.6668 | -294.8139 |
| 4745 | 1   | Extremo | 43.457 | 46.13    | 26.506  | 116.1564 | -28.9198 | -313.9975 |
| 4745 | 0   | Extremo | 43.224 | 9.28     | 25.523  | 20.5885  | -2.796   | -283.863  |
| 4745 | 0.5 | Extremo | 43.224 | 24.805   | 25.523  | 20.5885  | -15.5576 | -292.384  |
| 4745 | 1   | Extremo | 43.224 | 40.33    | 25.523  | 20.5885  | -28.3192 | -308.6676 |
| 4746 | 0   | Extremo | 43.697 | -35.566  | -20.645 | 125.9915 | -26.3167 | -310.5916 |
| 4746 | 0.5 | Extremo | 43.697 | -20.041  | -20.645 | 125.9915 | -15.9945 | -296.69   |

|      |     |         |        |          |          |           |          |           |
|------|-----|---------|--------|----------|----------|-----------|----------|-----------|
| 4746 | 1   | Extremo | 43.697 | -4.516   | -20.645  | 125.9915  | -5.6722  | -290.551  |
| 4746 | 0   | Extremo | 43.539 | -39.77   | -21.383  | 29.8812   | -26.5895 | -307.9419 |
| 4746 | 0.5 | Extremo | 43.539 | -24.245  | -21.383  | 29.8812   | -15.8981 | -291.9381 |
| 4746 | 1   | Extremo | 43.539 | -8.72    | -21.383  | 29.8812   | -5.2067  | -283.6967 |
| 4747 | 0   | Extremo | 39.768 | -84.698  | -77.133  | 142.7667  | -53.3397 | -287.4274 |
| 4747 | 0.5 | Extremo | 39.768 | -69.173  | -77.133  | 142.7667  | -14.7729 | -248.9597 |
| 4747 | 1   | Extremo | 39.768 | -53.648  | -77.133  | 142.7667  | 23.7938  | -218.2545 |
| 4747 | 0   | Extremo | 39.637 | -85.576  | -77.569  | 49.0686   | -53.4527 | -282.5078 |
| 4747 | 0.5 | Extremo | 39.637 | -70.051  | -77.569  | 49.0686   | -14.6682 | -243.6012 |
| 4747 | 1   | Extremo | 39.637 | -54.526  | -77.569  | 49.0686   | 24.1163  | -212.4571 |
| 4748 | 0   | Extremo | 25.808 | -116.252 | -111.105 | 219.065   | -70.0172 | -213.6077 |
| 4748 | 0.5 | Extremo | 25.808 | -100.727 | -111.105 | 219.065   | -14.4648 | -159.3632 |
| 4748 | 1   | Extremo | 25.808 | -85.202  | -111.105 | 219.065   | 41.0877  | -112.8811 |
| 4748 | 0   | Extremo | 25.679 | -113.674 | -111.169 | 139.7146  | -69.9588 | -209.5322 |
| 4748 | 0.5 | Extremo | 25.679 | -98.149  | -111.169 | 139.7146  | -14.3744 | -156.5763 |
| 4748 | 1   | Extremo | 25.679 | -82.624  | -111.169 | 139.7146  | 41.2099  | -111.383  |
| 4749 | 0   | Extremo | 34.76  | 124.202  | 143.086  | -37.7166  | 59.3157  | -92.9294  |
| 4749 | 0.5 | Extremo | 34.76  | 139.727  | 143.086  | -37.7166  | -12.2272 | -158.9115 |
| 4749 | 1   | Extremo | 34.76  | 155.252  | 143.086  | -37.7166  | -83.7701 | -232.6561 |
| 4749 | 0   | Extremo | 34.46  | 115.493  | 141.166  | -100.0195 | 58.4932  | -98.5222  |
| 4749 | 0.5 | Extremo | 34.46  | 131.018  | 141.166  | -100.0195 | -12.0898 | -160.1501 |
| 4749 | 1   | Extremo | 34.46  | 146.543  | 141.166  | -100.0195 | -82.6729 | -229.5404 |
| 4750 | 0   | Extremo | 54.805 | 63.978   | 89.803   | 80.5586   | 27.3296  | -210.629  |
| 4750 | 0.5 | Extremo | 54.805 | 79.503   | 89.803   | 80.5586   | -17.5719 | -246.4993 |
| 4750 | 1   | Extremo | 54.805 | 95.028   | 89.803   | 80.5586   | -62.4735 | -290.1321 |
| 4750 | 0   | Extremo | 54.395 | 57.253   | 88.401   | -4.9116   | 26.7931  | -214.531  |
| 4750 | 0.5 | Extremo | 54.395 | 72.778   | 88.401   | -4.9116   | -17.4072 | -247.0386 |
| 4750 | 1   | Extremo | 54.395 | 88.303   | 88.401   | -4.9116   | -61.6074 | -287.3088 |
| 4751 | 0   | Extremo | 59.077 | 12.169   | 23.66    | 109.4509  | -5.4529  | -278.8956 |
| 4751 | 0.5 | Extremo | 59.077 | 27.694   | 23.66    | 109.4509  | -17.2829 | -288.8615 |
| 4751 | 1   | Extremo | 59.077 | 43.219   | 23.66    | 109.4509  | -29.1128 | -306.5899 |
| 4751 | 0   | Extremo | 58.769 | 6.104    | 22.87    | 18.2597   | -5.7262  | -280.7521 |
| 4751 | 0.5 | Extremo | 58.769 | 21.629   | 22.87    | 18.2597   | -17.1614 | -287.6854 |
| 4751 | 1   | Extremo | 58.769 | 37.154   | 22.87    | 18.2597   | -28.5966 | -302.3813 |
| 4752 | 0   | Extremo | 59.366 | -34.788  | -17.245  | 123.954   | -26.2638 | -303.7913 |
| 4752 | 0.5 | Extremo | 59.366 | -19.263  | -17.245  | 123.954   | -17.6411 | -290.2785 |
| 4752 | 1   | Extremo | 59.366 | -3.738   | -17.245  | 123.954   | -9.0185  | -284.5282 |
| 4752 | 0   | Extremo | 59.176 | -39.604  | -17.926  | 30.7644   | -26.5222 | -302.204  |
| 4752 | 0.5 | Extremo | 59.176 | -24.079  | -17.926  | 30.7644   | -17.5592 | -286.2831 |
| 4752 | 1   | Extremo | 59.176 | -8.554   | -17.926  | 30.7644   | -8.5962  | -278.1247 |
| 4753 | 0   | Extremo | 55.603 | -86.385  | -84.288  | 147.3478  | -61.3917 | -289.5498 |
| 4753 | 0.5 | Extremo | 55.603 | -70.86   | -84.288  | 147.3478  | -19.2478 | -250.2384 |
| 4753 | 1   | Extremo | 55.603 | -55.335  | -84.288  | 147.3478  | 22.8961  | -218.6896 |
| 4753 | 0   | Extremo | 55.448 | -87.279  | -84.722  | 54.9664   | -61.5069 | -283.8796 |
| 4753 | 0.5 | Extremo | 55.448 | -71.754  | -84.722  | 54.9664   | -19.1458 | -244.1214 |
| 4753 | 1   | Extremo | 55.448 | -56.229  | -84.722  | 54.9664   | 23.2153  | -212.1256 |
| 4754 | 0   | Extremo | 35.352 | -144.887 | -139.741 | 235.4757  | -88.4393 | -232.8194 |
| 4754 | 0.5 | Extremo | 35.352 | -129.362 | -139.741 | 235.4757  | -18.5688 | -164.257  |
| 4754 | 1   | Extremo | 35.352 | -113.837 | -139.741 | 235.4757  | 51.3016  | -103.4571 |
| 4754 | 0   | Extremo | 35.185 | -137.921 | -139.821 | 155.6036  | -88.3695 | -225.2533 |
| 4754 | 0.5 | Extremo | 35.185 | -122.396 | -139.821 | 155.6036  | -18.4588 | -160.1739 |
| 4754 | 1   | Extremo | 35.185 | -106.871 | -139.821 | 155.6036  | 51.4519  | -102.857  |
| 4755 | 0   | Extremo | 39.49  | 97.2     |          |           |          |           |





|      |     |         |         |          |          |           |           |           |
|------|-----|---------|---------|----------|----------|-----------|-----------|-----------|
| 4758 | 1   | Extremo | 74.424  | -10.203  | -8.232   | 122.0624  | -14.7618  | -257.4099 |
| 4758 | 0   | Extremo | 74.304  | -41.715  | -8.844   | 33.2621   | -23.2448  | -284.3485 |
| 4758 | 0.5 | Extremo | 74.304  | -26.19   | -8.844   | 33.2621   | -18.823   | -267.3724 |
| 4758 | 1   | Extremo | 74.304  | -10.665  | -8.844   | 33.2621   | -14.4011  | -258.1587 |
| 4759 | 0   | Extremo | 69.65   | -84.073  | -91.694  | 160.414   | -72.2395  | -269.3194 |
| 4759 | 0.5 | Extremo | 69.65   | -68.548  | -91.694  | 160.414   | -26.3925  | -231.1644 |
| 4759 | 1   | Extremo | 69.65   | -53.023  | -91.694  | 160.414   | 19.4545   | -200.7718 |
| 4759 | 0   | Extremo | 69.603  | -82.76   | -92.083  | 69.6362   | -72.3397  | -265.6656 |
| 4759 | 0.5 | Extremo | 69.603  | -67.235  | -92.083  | 69.6362   | -26.298   | -228.1668 |
| 4759 | 1   | Extremo | 69.603  | -51.71   | -92.083  | 69.6362   | 19.7437   | -198.4304 |
| 4760 | 0   | Extremo | 39.985  | -132.888 | -192.977 | 354.5766  | -121.9975 | -221.6307 |
| 4760 | 0.5 | Extremo | 39.985  | -117.363 | -192.977 | 354.5766  | -25.5088  | -159.0679 |
| 4760 | 1   | Extremo | 39.985  | -101.838 | -192.977 | 354.5766  | 70.9799   | -104.2676 |
| 4760 | 0   | Extremo | 39.827  | -127.93  | -193.045 | 259.3979  | -121.8941 | -213.6945 |
| 4760 | 0.5 | Extremo | 39.827  | -112.405 | -193.045 | 259.3979  | -25.3714  | -153.6108 |
| 4760 | 1   | Extremo | 39.827  | -96.88   | -193.045 | 259.3979  | 71.1512   | -101.2896 |
| 4761 | 0   | Extremo | 56.397  | 34.516   | 230.298  | -88.4532  | 91.0014   | -133.1702 |
| 4761 | 0.5 | Extremo | 56.397  | 51.391   | 230.298  | -88.4532  | -24.1476  | -154.6469 |
| 4761 | 1   | Extremo | 56.397  | 68.266   | 230.298  | -88.4532  | -139.2967 | -184.5612 |
| 4761 | 0   | Extremo | 55.92   | 43.571   | 227.592  | -143.94   | 89.9569   | -137.5009 |
| 4761 | 0.5 | Extremo | 55.92   | 60.446   | 227.592  | -143.94   | -23.8392  | -163.5051 |
| 4761 | 1   | Extremo | 55.92   | 77.321   | 227.592  | -143.94   | -137.6353 | -197.9467 |
| 4762 | 0   | Extremo | 88.953  | 42.829   | 115.894  | 73.5834   | 25.9627   | -216.5445 |
| 4762 | 0.5 | Extremo | 88.953  | 59.704   | 115.894  | 73.5834   | -31.984   | -242.1778 |
| 4762 | 1   | Extremo | 88.953  | 76.579   | 115.894  | 73.5834   | -89.9308  | -276.2485 |
| 4762 | 0   | Extremo | 88.338  | 39.973   | 114.644  | -8.3284   | 25.7123   | -235.0578 |
| 4762 | 0.5 | Extremo | 88.338  | 56.848   | 114.644  | -8.3284   | -31.6097  | -259.2628 |
| 4762 | 1   | Extremo | 88.338  | 73.723   | 114.644  | -8.3284   | -88.9317  | -291.9054 |
| 4763 | 0   | Extremo | 89.332  | 13.088   | -5.119   | 111.8778  | -22.7123  | -286.3529 |
| 4763 | 0.5 | Extremo | 89.332  | 29.963   | -5.119   | 111.8778  | -20.1529  | -297.1159 |
| 4763 | 1   | Extremo | 89.332  | 46.838   | -5.119   | 111.8778  | -17.5936  | -316.3164 |
| 4763 | 0   | Extremo | 89.049  | 2.421    | -4.984   | 21.14     | -22.5027  | -307.957  |
| 4763 | 0.5 | Extremo | 89.049  | 19.296   | -4.984   | 21.14     | -20.0109  | -313.3864 |
| 4763 | 1   | Extremo | 89.049  | 36.171   | -4.984   | 21.14     | -17.519   | -327.2532 |
| 4764 | 0   | Extremo | 89.352  | -31.799  | 12.608   | 134.8379  | -14.2713  | -313.8822 |
| 4764 | 0.5 | Extremo | 89.352  | -14.924  | 12.608   | 134.8379  | -20.5753  | -302.2016 |
| 4764 | 1   | Extremo | 89.352  | 1.951    | 12.608   | 134.8379  | -26.8793  | -298.9584 |
| 4764 | 0   | Extremo | 89.385  | -45.772  | 12.011   | 39.0856   | -14.5633  | -330.6681 |
| 4764 | 0.5 | Extremo | 89.385  | -28.897  | 12.011   | 39.0856   | -20.5688  | -312.0006 |
| 4764 | 1   | Extremo | 89.385  | -12.022  | 12.011   | 39.0856   | -26.5743  | -301.7706 |
| 4765 | 0   | Extremo | 88.945  | -70.625  | -108.917 | 164.9202  | -88.6371  | -284.6419 |
| 4765 | 0.5 | Extremo | 88.945  | -53.75   | -108.917 | 164.9202  | -34.1787  | -253.5482 |
| 4765 | 1   | Extremo | 88.945  | -36.875  | -108.917 | 164.9202  | 20.2798   | -230.892  |
| 4765 | 0   | Extremo | 89.124  | -83.19   | -109.034 | 68.9094   | -88.7075  | -293.5238 |
| 4765 | 0.5 | Extremo | 89.124  | -66.315  | -109.034 | 68.9094   | -34.1904  | -256.1478 |
| 4765 | 1   | Extremo | 89.124  | -49.44   | -109.034 | 68.9094   | 20.3266   | -227.2093 |
| 4766 | 0   | Extremo | 56.036  | -82.01   | -223.628 | 283.5205  | -145.7518 | -195.4362 |
| 4766 | 0.5 | Extremo | 56.036  | -65.135  | -223.628 | 283.5205  | -33.9376  | -158.6501 |
| 4766 | 1   | Extremo | 56.036  | -48.26   | -223.628 | 283.5205  | 77.8766   | -130.3016 |
| 4766 | 0   | Extremo | 55.937  | -89.862  | -224.669 | 201.0887  | -146.1586 | -199.2646 |
| 4766 | 0.5 | Extremo | 55.937  | -72.987  | -224.669 | 201.0887  | -33.8238  | -158.5523 |
| 4766 | 1   | Extremo | 55.937  | -56.112  | -224.669 | 201.0887  | 78.5109   | -126.2775 |
| 4767 | 0   | Extremo | 79.548  | 60.03    | 300.785  | -56.6602  | 118.0668  | -128.8426 |
| 4767 | 0.5 | Extremo | 79.548  | 76.905   | 300.785  | -56.6602  | -32.3258  | -163.0762 |
| 4767 | 1   | Extremo | 79.548  | 93.78    | 300.785  | -56.6602  | -182.7183 | -205.7473 |
| 4767 | 0   | Extremo | 78.834  | 66.39    | 297.403  | -108.1893 | 116.8025  | -136.3338 |
| 4767 | 0.5 | Extremo | 78.834  | 83.265   | 297.403  | -108.1893 | -31.8989  | -173.7473 |
| 4767 | 1   | Extremo | 78.834  | 100.14   | 297.403  | -108.1893 | -180.6002 | -219.5984 |
| 4768 | 0   | Extremo | 130.129 | 36.465   | 125.712  | 85.1089   | 18.7238   | -227.8844 |
| 4768 | 0.5 | Extremo | 130.129 | 53.34    | 125.712  | 85.1089   | -44.1324  | -250.3357 |
| 4768 | 1   | Extremo | 130.129 | 70.215   | 125.712  | 85.1089   | -106.9886 | -281.2245 |
| 4768 | 0   | Extremo | 129.14  | 33.109   | 124.697  | 12.2429   | 18.7706   | -253.4892 |
| 4768 | 0.5 | Extremo | 129.14  | 49.984   | 124.697  | 12.2429   | -43.578   | -274.2622 |
| 4768 | 1   | Extremo | 129.14  | 66.859   | 124.697  | 12.2429   | -105.9267 | -303.4727 |
| 4769 | 0   | Extremo | 116.774 | 2.25     | -56.09   | 104.1708  | -45.2805  | -280.7752 |
| 4769 | 0.5 | Extremo | 116.774 | 19.125   | -56.09   | 104.1708  | -17.2354  | -286.119  |
| 4769 | 1   | Extremo | 116.774 | 36       | -56.09   | 104.1708  | 10.8097   | -299.9003 |
| 4769 | 0   | Extremo | 116.419 | -12.742  | -54.857  | 23.631    | -44.5528  | -315.05   |
| 4769 | 0.5 | Extremo | 116.419 | 4.133    | -54.857  | 23.631    | -17.1244  | -312.8979 |
| 4769 | 1   | Extremo | 116.419 | 21.008   | -54.857  | 23.631    | 10.3039   | -319.1833 |
| 4770 | 0   | Extremo | 116.702 | -11.963  | 63.603   | 130.3729  | 14.1371   | -293.4157 |
| 4770 | 0.5 | Extremo | 116.702 | 4.912    | 63.603   | 130.3729  | -17.6642  | -291.6527 |

|      |     |         |         |          |          |          |           |           |
|------|-----|---------|---------|----------|----------|----------|-----------|-----------|
| 4770 | 1   | Extremo | 116.702 | 21.787   | 63.603   | 130.3729 | -49.4655  | -298.3272 |
| 4770 | 0   | Extremo | 116.844 | -37.022  | 62.811   | 43.8328  | 13.6756   | -323.7343 |
| 4770 | 0.5 | Extremo | 116.844 | -20.147  | 62.811   | 43.8328  | -17.7299  | -309.4421 |
| 4770 | 1   | Extremo | 116.844 | -3.272   | 62.811   | 43.8328  | -49.1355  | -303.5875 |
| 4771 | 0   | Extremo | 129.737 | -57.118  | -118.682 | 144.8863 | -105.7536 | -286.9934 |
| 4771 | 0.5 | Extremo | 129.737 | -40.243  | -118.682 | 144.8863 | -46.4127  | -262.6532 |
| 4771 | 1   | Extremo | 129.737 | -23.368  | -118.682 | 144.8863 | 12.9283   | -246.7504 |
| 4771 | 0   | Extremo | 130.177 | -77.537  | -118.008 | 59.0084  | -105.6005 | -302.6603 |
| 4771 | 0.5 | Extremo | 130.177 | -60.662  | -118.008 | 59.0084  | -46.5963  | -268.1105 |
| 4771 | 1   | Extremo | 130.177 | -43.787  | -118.008 | 59.0084  | 12.4079   | -241.9982 |
| 4772 | 0   | Extremo | 78.462  | -103.813 | -290.739 | 257.0219 | -189.6842 | -215.0604 |
| 4772 | 0.5 | Extremo | 78.462  | -86.938  | -290.739 | 257.0219 | -44.3145  | -167.3727 |
| 4772 | 1   | Extremo | 78.462  | -70.063  | -290.739 | 257.0219 | 101.0553  | -128.1224 |
| 4772 | 0   | Extremo | 78.438  | -110.779 | -293.43  | 179.4386 | -190.9776 | -218.9423 |
| 4772 | 0.5 | Extremo | 78.438  | -93.904  | -293.43  | 179.4386 | -44.2628  | -167.7713 |
| 4772 | 1   | Extremo | 78.438  | -77.029  | -293.43  | 179.4386 | 102.452   | -125.0379 |
| 4773 | 0   | Extremo | 112.372 | 115.378  | 436.426  | -33.9469 | 171.6771  | -140.3378 |
| 4773 | 0.5 | Extremo | 112.372 | 132.253  | 436.426  | -33.9469 | -46.536   | -202.2456 |
| 4773 | 1   | Extremo | 112.372 | 149.128  | 436.426  | -33.9469 | -264.749  | -272.591  |
| 4773 | 0   | Extremo | 111.208 | 119.492  | 431.579  | -75.9161 | 169.8717  | -150.4376 |
| 4773 | 0.5 | Extremo | 111.208 | 136.367  | 431.579  | -75.9161 | -45.918   | -214.4021 |
| 4773 | 1   | Extremo | 111.208 | 153.242  | 431.579  | -75.9161 | -261.7076 | -286.8042 |
| 4774 | 0   | Extremo | 210.477 | 25.751   | 129.568  | 87.2248  | -4.5743   | -297.681  |
| 4774 | 0.5 | Extremo | 210.477 | 42.626   | 129.568  | 87.2248  | -69.3581  | -314.7755 |
| 4774 | 1   | Extremo | 210.477 | 59.501   | 129.568  | 87.2248  | -134.1419 | -340.3075 |
| 4774 | 0   | Extremo | 208.494 | 23.019   | 128.888  | 28.6672  | -4.0192   | -329.1354 |
| 4774 | 0.5 | Extremo | 208.494 | 39.894   | 128.888  | 28.6672  | -68.4634  | -344.8636 |
| 4774 | 1   | Extremo | 208.494 | 56.769   | 128.888  | 28.6672  | -132.9076 | -369.0294 |
| 4775 | 0   | Extremo | 147.975 | -65.865  | -174.492 | 84.9488  | -97.6505  | -318.8747 |
| 4775 | 0.5 | Extremo | 147.975 | -48.99   | -174.492 | 84.9488  | -10.4047  | -290.1609 |
| 4775 | 1   | Extremo | 147.975 | -32.115  | -174.492 | 84.9488  | 76.8411   | -269.8846 |
| 4775 | 0   | Extremo | 147.373 | -82.075  | -171.194 | 19.7809  | -95.9829  | -366.7367 |
| 4775 | 0.5 | Extremo | 147.373 | -65.2    | -171.194 | 19.7809  | -10.386   | -329.918  |
| 4775 | 1   | Extremo | 147.373 | -48.325  | -171.194 | 19.7809  | 75.2109   | -301.5368 |
| 4776 | 0   | Extremo | 148.036 | 62.505   | 182.348  | 129.7287 | 80.2625   | -257.7159 |
| 4776 | 0.5 | Extremo | 148.036 | 79.38    | 182.348  | 129.7287 | -10.9113  | -293.1873 |
| 4776 | 1   | Extremo | 148.036 | 96.255   | 182.348  | 129.7287 | -102.0851 | -332.0263 |
| 4776 | 0   | Extremo | 148.295 | 16.908   | 180.519  | 58.235   | 79.2192   | -307.8619 |
| 4776 | 0.5 | Extremo | 148.295 | 33.783   | 180.519  | 58.235   | -11.0404  | -320.5345 |
| 4776 | 1   | Extremo | 148.295 | 50.658   | 180.519  | 58.235   | -101.2999 | -341.6447 |
| 4777 | 0   | Extremo | 210.093 | -34.094  | -122.994 | 126.1749 | -133.2418 | -335.3113 |
| 4777 | 0.5 | Extremo | 210.093 | -17.219  | -122.994 | 126.1749 | -71.7447  | -322.4828 |
| 4777 | 1   | Extremo | 210.093 | -0.344   | -122.994 | 126.1749 | -10.2475  | -318.0918 |
| 4777 | 0   | Extremo | 211.073 | -56.733  | -120.175 | 56.9549  | -132.3193 | -359.3624 |
| 4777 | 0.5 | Extremo | 211.073 | -39.858  | -120.175 | 56.9549  | -72.232   | -335.2145 |
| 4777 | 1   | Extremo | 211.073 | -22.983  | -120.175 | 56.9549  | -12.1447  | -319.5041 |
| 4778 | 0   | Extremo | 109.657 | -142.937 | -421.236 | 231.1983 | -272.372  | -271.043  |
| 4778 | 0.5 | Extremo | 109.657 | -126.062 | -421.236 | 231.1983 | -61.754   | -203.7933 |
| 4778 | 1   | Extremo | 109.657 | -109.187 | -421.236 | 231.1983 | 148.864   | -144.9811 |
| 4778 | 0   | Extremo | 109.935 | -167.375 | -427.534 | 155.1321 | -275.6378 | -288.9493 |
| 4778 | 0.5 | Extremo | 109.935 | -150.5   | -427.534 | 155.     |           |           |



|      |     |         |          |          |          |           |           |           |
|------|-----|---------|----------|----------|----------|-----------|-----------|-----------|
| 4782 | 1   | Extremo | 103.118  | 358.116  | 438.336  | 96.2616   | -206.9702 | -443.6867 |
| 4782 | 0   | Extremo | 103.715  | 225.657  | 432.62   | 58.3254   | 228.3828  | -186.1906 |
| 4782 | 0.5 | Extremo | 103.715  | 242.532  | 432.62   | 58.3254   | 12.0726   | -303.2379 |
| 4782 | 1   | Extremo | 103.715  | 259.407  | 432.62   | 58.3254   | -204.2375 | -428.7228 |
| 4783 | 0   | Extremo | 404.799  | 11.558   | -115.373 | 101.624   | -196.6201 | -485.1053 |
| 4783 | 0.5 | Extremo | 404.799  | 28.433   | -115.373 | 101.624   | -138.9334 | -495.1029 |
| 4783 | 1   | Extremo | 404.799  | 45.308   | -115.373 | 101.624   | -81.2468  | -513.5381 |
| 4783 | 0   | Extremo | 406.653  | 25.193   | -107.186 | 59.1103   | -193.6308 | -505.7914 |
| 4783 | 0.5 | Extremo | 406.653  | 42.068   | -107.186 | 59.1103   | -140.038  | -522.6066 |
| 4783 | 1   | Extremo | 406.653  | 58.943   | -107.186 | 59.1103   | -86.4452  | -547.8594 |
| 4784 | 0   | Extremo | 105.594  | -284.965 | -641.773 | 190.5728  | -406.7991 | -430.0151 |
| 4784 | 0.5 | Extremo | 105.594  | -268.09  | -641.773 | 190.5728  | -85.9123  | -291.7512 |
| 4784 | 1   | Extremo | 105.594  | -251.215 | -641.773 | 190.5728  | 234.9744  | -161.9247 |
| 4784 | 0   | Extremo | 106.47   | -386.902 | -656.892 | 139.4682  | -414.9388 | -505.142  |
| 4784 | 0.5 | Extremo | 106.47   | -370.027 | -656.892 | 139.4682  | -86.4926  | -315.9098 |
| 4784 | 1   | Extremo | 106.47   | -353.152 | -656.892 | 139.4682  | 241.9536  | -135.1151 |
| 4785 | 0   | Extremo | -4.528   | 657.608  | 902.778  | -229.6003 | 477.1103  | -13.9101  |
| 4785 | 0.5 | Extremo | -4.528   | 674.483  | 902.778  | -229.6003 | 25.7215   | -346.9328 |
| 4785 | 1   | Extremo | -4.528   | 691.358  | 902.778  | -229.6003 | -425.6674 | -688.393  |
| 4785 | 0   | Extremo | -5.071   | 658.885  | 891.908  | -218.2153 | 471.6203  | -29.232   |
| 4785 | 0.5 | Extremo | -5.071   | 675.76   | 891.908  | -218.2153 | 25.6663   | -362.8934 |
| 4785 | 1   | Extremo | -5.071   | 692.635  | 891.908  | -218.2153 | -420.2876 | -704.9923 |
| 4787 | 0   | Extremo | 36.295   | -851.368 | -799.882 | 365.495   | -208.1856 | -529.6053 |
| 4787 | 0.5 | Extremo | 36.295   | -834.493 | -799.882 | 365.495   | 191.7556  | -108.14   |
| 4787 | 1   | Extremo | 36.295   | -817.618 | -799.882 | 365.495   | 591.6968  | 304.8878  |
| 4787 | 0   | Extremo | 36.756   | -862.159 | -789.134 | 313.5465  | -204.3102 | -588.2866 |
| 4787 | 0.5 | Extremo | 36.756   | -845.284 | -789.134 | 313.5465  | 190.2569  | -161.426  |
| 4787 | 1   | Extremo | 36.756   | -828.409 | -789.134 | 313.5465  | 584.824   | 256.9972  |
| 4788 | 0   | Extremo | 36.615   | 843.633  | 811.648  | -225.7145 | 598.0736  | 332.2145  |
| 4788 | 0.5 | Extremo | 36.615   | 860.508  | 811.648  | -225.7145 | 192.2495  | -93.8208  |
| 4788 | 1   | Extremo | 36.615   | 877.383  | 811.648  | -225.7145 | -213.5746 | -528.2935 |
| 4788 | 0   | Extremo | 37.891   | 768.836  | 805.733  | -195.6757 | 594.9452  | 257.6913  |
| 4788 | 0.5 | Extremo | 37.891   | 785.711  | 805.733  | -195.6757 | 192.0787  | -130.9455 |
| 4788 | 1   | Extremo | 37.891   | 802.586  | 805.733  | -195.6757 | -210.7878 | -528.0197 |
| 4790 | 0   | Extremo | -2.809   | -632.176 | -869.602 | 314.4735  | -433.8334 | -686.453  |
| 4790 | 0.5 | Extremo | -2.809   | -615.301 | -869.602 | 314.4735  | 0.9675    | -374.5838 |
| 4790 | 1   | Extremo | -2.809   | -598.426 | -869.602 | 314.4735  | 435.7683  | -71.1521  |
| 4790 | 0   | Extremo | -1.982   | -747.644 | -886.541 | 291.214   | -443.1883 | -777.0467 |
| 4790 | 0.5 | Extremo | -1.982   | -730.769 | -886.541 | 291.214   | 0.0823    | -407.4435 |
| 4790 | 1   | Extremo | -1.982   | -713.894 | -886.541 | 291.214   | 443.3529  | -46.2779  |
| 4791 | 0   | Extremo | -20.263  | 530.69   | 883.314  | 160.7909  | 446.7285  | -67.0288  |
| 4791 | 0.5 | Extremo | -20.263  | 547.565  | 883.314  | 160.7909  | 5.0715    | -336.5926 |
| 4791 | 1   | Extremo | -20.263  | 564.44   | 883.314  | 160.7909  | -436.5856 | -614.594  |
| 4791 | 0   | Extremo | -19.105  | 547.016  | 872.741  | 147.6541  | 441.6318  | -72.5087  |
| 4791 | 0.5 | Extremo | -19.105  | 563.891  | 872.741  | 147.6541  | 5.2613    | -350.2353 |
| 4791 | 1   | Extremo | -19.105  | 580.766  | 872.741  | 147.6541  | -431.1091 | -636.3994 |
| 4793 | 0   | Extremo | 14.662   | -624.281 | -774.727 | -69.1928  | -229.5666 | -465.3921 |
| 4793 | 0.5 | Extremo | 14.662   | -607.406 | -774.727 | -69.1928  | 157.797   | -157.4703 |
| 4793 | 1   | Extremo | 14.662   | -590.531 | -774.727 | -69.1928  | 545.1607  | 142.014   |
| 4793 | 0   | Extremo | 16.629   | -657.906 | -763.65  | -60.3866  | -224.8412 | -513.4267 |
| 4793 | 0.5 | Extremo | 16.629   | -641.031 | -763.65  | -60.3866  | 156.9837  | -188.6924 |
| 4793 | 1   | Extremo | 16.629   | -624.156 | -763.65  | -60.3866  | 538.8085  | 127.6044  |
| 4794 | 0   | Extremo | 14.57    | 653.111  | 787.128  | 168.941   | 551.0996  | 163.1717  |
| 4794 | 0.5 | Extremo | 14.57    | 669.986  | 787.128  | 168.941   | 157.5355  | -167.6024 |
| 4794 | 1   | Extremo | 14.57    | 686.861  | 787.128  | 168.941   | -236.0285 | -506.814  |
| 4794 | 0   | Extremo | 18.786   | 654.067  | 787.341  | 167.1775  | 550.584   | 138.3019  |
| 4794 | 0.5 | Extremo | 18.786   | 670.942  | 787.341  | 167.1775  | 156.9135  | -192.9504 |
| 4794 | 1   | Extremo | 18.786   | 687.817  | 787.341  | 167.1775  | -236.757  | -532.6403 |
| 4796 | 0   | Extremo | -22.419  | -501.482 | -850.657 | -96.9134  | -444.2522 | -586.9157 |
| 4796 | 0.5 | Extremo | -22.419  | -484.607 | -850.657 | -96.9134  | -18.9236  | -340.3936 |
| 4796 | 1   | Extremo | -22.419  | -467.732 | -850.657 | -96.9134  | 406.4049  | -102.309  |
| 4796 | 0   | Extremo | -24.569  | -548.512 | -859     | -60.7776  | -448.783  | -628.0564 |
| 4796 | 0.5 | Extremo | -24.569  | -531.637 | -859     | -60.7776  | -19.2828  | -358.019  |
| 4796 | 1   | Extremo | -24.569  | -514.762 | -859     | -60.7776  | 410.2173  | -96.4192  |
| 4797 | 0   | Extremo | -113.668 | 214.273  | 625.054  | 74.8674   | 248.4717  | -143.798  |
| 4797 | 0.5 | Extremo | -113.668 | 231.148  | 625.054  | 74.8674   | -64.0554  | -255.1534 |
| 4797 | 1   | Extremo | -113.668 | 248.023  | 625.054  | 74.8674   | -376.5824 | -374.9463 |
| 4797 | 0   | Extremo | -111.859 | 217.741  | 618.243  | 75.6222   | 245.9954  | -150.4704 |
| 4797 | 0.5 | Extremo | -111.859 | 234.616  | 618.243  | 75.6222   | -63.1259  | -263.5597 |
| 4797 | 1   | Extremo | -111.859 | 251.491  | 618.243  | 75.6222   | -372.2473 | -385.0866 |
| 4798 | 0   | Extremo | -372.158 | 5.764    | 108.96   | 31.0241   | -72.2297  | -414.7801 |
| 4798 | 0.5 | Extremo | -372.158 | 22.639   | 108.96   | 31.0241   | -126.7098 | -421.8806 |

|      |     |         |          |          |          |          |           |           |
|------|-----|---------|----------|----------|----------|----------|-----------|-----------|
| 4798 | 1   | Extremo | -372.158 | 39.514   | 108.96   | 31.0241  | -181.1899 | -437.4187 |
| 4798 | 0   | Extremo | -366.994 | 3.397    | 109.366  | 38.509   | -70.1016  | -434.449  |
| 4798 | 0.5 | Extremo | -366.994 | 20.272   | 109.366  | 38.509   | -124.7848 | -440.3661 |
| 4798 | 1   | Extremo | -366.994 | 37.147   | 109.366  | 38.509   | -179.468  | -454.7207 |
| 4799 | 0   | Extremo | -111.489 | -196.292 | -403.249 | 49.4767  | -191.8182 | -375.3668 |
| 4799 | 0.5 | Extremo | -111.489 | -179.417 | -403.249 | 49.4767  | 9.8064    | -281.4393 |
| 4799 | 1   | Extremo | -111.489 | -162.542 | -403.249 | 49.4767  | 211.431   | -195.9493 |
| 4799 | 0   | Extremo | -109.413 | -206.497 | -394.927 | 63.2218  | -187.2153 | -401.3508 |
| 4799 | 0.5 | Extremo | -109.413 | -189.622 | -394.927 | 63.2218  | 10.2482   | -302.3212 |
| 4799 | 1   | Extremo | -109.413 | -172.747 | -394.927 | 63.2218  | 207.7118  | -211.729  |
| 4800 | 0   | Extremo | -112.183 | 201.271  | 412.769  | 9.5728   | 215.4769  | -182.6538 |
| 4800 | 0.5 | Extremo | -112.183 | 218.146  | 412.769  | 9.5728   | 9.0925    | -287.5081 |
| 4800 | 1   | Extremo | -112.183 | 235.021  | 412.769  | 9.5728   | -197.2919 | -400.7999 |
| 4800 | 0   | Extremo | -111.3   | 189.856  | 416.038  | 22.1827  | 216.3321  | -205.5748 |
| 4800 | 0.5 | Extremo | -111.3   | 206.731  | 416.038  | 22.1827  | 8.3132    | -304.7216 |
| 4800 | 1   | Extremo | -111.3   | 223.606  | 416.038  | 22.1827  | -199.7056 | -412.3058 |
| 4801 | 0   | Extremo | -374.822 | -20.662  | -102.908 | 20.0683  | -180.8422 | -434.9049 |
| 4801 | 0.5 | Extremo | -374.822 | -3.787   | -102.908 | 20.0683  | -129.388  | -428.7924 |
| 4801 | 1   | Extremo | -374.822 | 13.088   | -102.908 | 20.0683  | -77.9338  | -431.1175 |
| 4801 | 0   | Extremo | -375.556 | -32.608  | -100.66  | 38.1248  | -180.6153 | -452.7497 |
| 4801 | 0.5 | Extremo | -375.556 | -15.733  | -100.66  | 38.1248  | -130.2852 | -440.6646 |
| 4801 | 1   | Extremo | -375.556 | 1.142    | -100.66  | 38.1248  | -79.9552  | -437.0171 |
| 4802 | 0   | Extremo | -111.751 | -224.031 | -603.097 | -63.0475 | -383.9907 | -361.0026 |
| 4802 | 0.5 | Extremo | -111.751 | -207.156 | -603.097 | -63.0475 | -82.442   | -253.206  |
| 4802 | 1   | Extremo | -111.751 | -190.281 | -603.097 | -63.0475 | 219.1066  | -153.8468 |
| 4802 | 0   | Extremo | -112.018 | -231.157 | -606.258 | -36.8352 | -385.7566 | -369.0662 |
| 4802 | 0.5 | Extremo | -112.018 | -214.282 | -606.258 | -36.8352 | -82.6274  | -257.7063 |
| 4802 | 1   | Extremo | -112.018 | -197.407 | -606.258 | -36.8352 | 220.5018  | -154.7839 |
| 4803 | 0   | Extremo | -115.499 | 90.153   | 400.741  | 97.3211  | 156.4292  | -134.5028 |
| 4803 | 0.5 | Extremo | -115.499 | 107.028  | 400.741  | 97.3211  | -43.9413  | -183.7982 |
| 4803 | 1   | Extremo | -115.499 | 123.903  | 400.741  | 97.3211  | -244.3117 | -241.5311 |
| 4803 | 0   | Extremo | -114.049 | 92.682   | 396.861  | 105.101  | 155.167   | -138.8912 |
| 4803 | 0.5 | Extremo | -114.049 | 109.557  | 396.861  | 105.101  | -43.2636  | -189.4511 |
| 4803 | 1   | Extremo | -114.049 | 126.432  | 396.861  | 105.101  | -241.6942 | -248.4484 |
| 4804 | 0   | Extremo | -212.764 | 26.71    | 113.951  | 26.7635  | -7.701    | -264.8655 |
| 4804 | 0.5 | Extremo | -212.764 | 43.585   | 113.951  | 26.7635  | -64.6764  | -282.439  |
| 4804 | 1   | Extremo | -212.764 | 60.46    | 113.951  | 26.7635  | -121.6518 | -308.4501 |
| 4804 | 0   | Extremo | -210.206 | 25.598   | 114.573  | 41.3454  | -6.2827   | -277.9739 |
| 4804 | 0.5 | Extremo | -210.206 | 42.473   | 114.573  | 41.3454  | -63.5692  | -294.9916 |
| 4804 | 1   | Extremo | -210.206 | 59.348   | 114.573  | 41.3454  | -120.8557 | -320.4467 |
| 4805 | 0   | Extremo | -160.633 | -32.895  | -165.054 | 35.1741  | -91.3659  | -296.1437 |
| 4805 | 0.5 | Extremo | -160.633 | -16.02   | -165.054 | 35.1741  | -8.8389   | -283.9148 |
| 4805 | 1   | Extremo | -160.633 | 0.855    | -165.054 | 35.1741  | 73.688    | -280.1234 |
| 4805 | 0   | Extremo | -159.076 | -38.276  | -159.536 | 53.3825  | -88.2221  | -313.2151 |
| 4805 | 0.5 | Extremo | -159.076 | -21.401  | -159.536 | 53.3825  | -8.4542   | -298.2957 |
| 4805 | 1   | Extremo | -159.076 | -4.526   | -159.536 | 53.3825  | 71.3137   | -291.8139 |
| 4806 | 0   | Extremo | -160.733 | 21.845   | 172.976  | 3.5696   | 77.1894   | -274.1575 |
| 4806 | 0.5 | Extremo | -160.733 | 38.72    | 172.976  | 3.5696   | -9.2987   | -289.2989 |
| 4806 | 1   | Extremo | -160.733 | 55.595   | 172.976  | 3.5696   | -95.7867  | -312.8778 |
| 4806 | 0   | Extremo | -160.38  |          |          |          |           |           |



|      |     |         |          |         |          |           |           |           |
|------|-----|---------|----------|---------|----------|-----------|-----------|-----------|
| 4810 | 1   | Extremo | -142.777 | 61.994  | 105.169  | 33.6986   | -91.6109  | -258.5873 |
| 4810 | 0   | Extremo | -141.269 | 28.515  | 105.858  | 52.1807   | 14.6398   | -222.7342 |
| 4810 | 0.5 | Extremo | -141.269 | 45.39   | 105.858  | 52.1807   | -38.2892  | -241.2103 |
| 4810 | 1   | Extremo | -141.269 | 62.265  | 105.858  | 52.1807   | -91.2181  | -268.1238 |
| 4811 | 0   | Extremo | -134.294 | 2.35    | -55.92   | 23.7987   | -41.4373  | -265.1967 |
| 4811 | 0.5 | Extremo | -134.294 | 19.225  | -55.92   | 23.7987   | -13.4774  | -270.5906 |
| 4811 | 1   | Extremo | -134.294 | 36.1    | -55.92   | 23.7987   | 14.4826   | -284.422  |
| 4811 | 0   | Extremo | -133.255 | -1.215  | -52.159  | 45.2249   | -39.255   | -277.2409 |
| 4811 | 0.5 | Extremo | -133.255 | 15.66   | -52.159  | 45.2249   | -13.1756  | -280.8523 |
| 4811 | 1   | Extremo | -133.255 | 32.535  | -52.159  | 45.2249   | 12.9038   | -292.9011 |
| 4812 | 0   | Extremo | -134.305 | -23.297 | 63.39    | 7.5047    | 17.8299   | -283.4107 |
| 4812 | 0.5 | Extremo | -134.305 | -6.422  | 63.39    | 7.5047    | -13.8653  | -275.9812 |
| 4812 | 1   | Extremo | -134.305 | 10.453  | 63.39    | 7.5047    | -45.5605  | -276.9891 |
| 4812 | 0   | Extremo | -134.008 | -29.542 | 66.274   | 30.7925   | 19.0118   | -294.1769 |
| 4812 | 0.5 | Extremo | -134.008 | -12.667 | 66.274   | 30.7925   | -14.125   | -283.6245 |
| 4812 | 1   | Extremo | -134.008 | 4.208   | 66.274   | 30.7925   | -47.2619  | -281.5096 |
| 4813 | 0   | Extremo | -142.631 | -60.698 | -98.167  | -6.1732   | -90.1495  | -268.7139 |
| 4813 | 0.5 | Extremo | -142.631 | -43.823 | -98.167  | -6.1732   | -41.0661  | -242.5834 |
| 4813 | 1   | Extremo | -142.631 | -26.948 | -98.167  | -6.1732   | 8.0173    | -224.8905 |
| 4813 | 0   | Extremo | -142.658 | -66.527 | -96.73   | 18.0073   | -89.8145  | -275.259  |
| 4813 | 0.5 | Extremo | -142.658 | -49.652 | -96.73   | 18.0073   | -41.4494  | -246.2142 |
| 4813 | 1   | Extremo | -142.658 | -32.777 | -96.73   | 18.0073   | 6.9158    | -225.6069 |
| 4814 | 0   | Extremo | -85.16   | -96.073 | -252.19  | -114.2598 | -166.2159 | -200.4873 |
| 4814 | 0.5 | Extremo | -85.16   | -79.198 | -252.19  | -114.2598 | -40.1209  | -156.6695 |
| 4814 | 1   | Extremo | -85.16   | -62.323 | -252.19  | -114.2598 | 85.974    | -121.2892 |
| 4814 | 0   | Extremo | -85.069  | -98.612 | -252.403 | -91.8339  | -166.4083 | -202.7866 |
| 4814 | 0.5 | Extremo | -85.069  | -81.737 | -252.403 | -91.8339  | -40.2069  | -157.6993 |
| 4814 | 1   | Extremo | -85.069  | -64.862 | -252.403 | -91.8339  | 85.9946   | -121.0495 |
| 4815 | 0   | Extremo | -63.709  | 11.13   | 178.226  | 154.5345  | 68.511    | -137.0223 |
| 4815 | 0.5 | Extremo | -63.709  | 28.005  | 178.226  | 154.5345  | -20.602   | -146.806  |
| 4815 | 1   | Extremo | -63.709  | 44.88   | 178.226  | 154.5345  | -109.715  | -165.0272 |
| 4815 | 0   | Extremo | -63.011  | 19.086  | 177.009  | 164.4507  | 68.2721   | -136.8804 |
| 4815 | 0.5 | Extremo | -63.011  | 35.961  | 177.009  | 164.4507  | -20.2325  | -150.6424 |
| 4815 | 1   | Extremo | -63.011  | 52.836  | 177.009  | 164.4507  | -108.7371 | -172.8418 |
| 4816 | 0   | Extremo | -103.446 | 30.504  | 91.335   | 53.5228   | 20.6624   | -204.6251 |
| 4816 | 0.5 | Extremo | -103.446 | 47.379  | 91.335   | 53.5228   | -25.0049  | -224.096  |
| 4816 | 1   | Extremo | -103.446 | 64.254  | 91.335   | 53.5228   | -70.6722  | -252.0044 |
| 4816 | 0   | Extremo | -102.416 | 31.325  | 92.064   | 72.999    | 21.541    | -211.4047 |
| 4816 | 0.5 | Extremo | -102.416 | 48.2    | 92.064   | 72.999    | -24.491   | -231.286  |
| 4816 | 1   | Extremo | -102.416 | 65.075  | 92.064   | 72.999    | -70.5231  | -259.6048 |
| 4817 | 0   | Extremo | -106.5   | 7.669   | -9.457   | 24.8516   | -19.1577  | -268.2025 |
| 4817 | 0.5 | Extremo | -106.5   | 24.544  | -9.457   | 24.8516   | -14.4293  | -276.2559 |
| 4817 | 1   | Extremo | -106.5   | 41.419  | -9.457   | 24.8516   | -9.701    | -292.7469 |
| 4817 | 0   | Extremo | -105.742 | 5.266   | -6.711   | 48.1237   | -17.5483  | -276.0964 |
| 4817 | 0.5 | Extremo | -105.742 | 22.141  | -6.711   | 48.1237   | -14.1927  | -282.9483 |
| 4817 | 1   | Extremo | -105.742 | 39.016  | -6.711   | 48.1237   | -10.8372  | -298.2378 |
| 4818 | 0   | Extremo | -106.638 | -34.334 | 16.707   | 6.2714    | -6.4473   | -293.7125 |
| 4818 | 0.5 | Extremo | -106.638 | -17.459 | 16.707   | 6.2714    | -14.8007  | -280.764  |
| 4818 | 1   | Extremo | -106.638 | -0.584  | 16.707   | 6.2714    | -23.1542  | -276.253  |
| 4818 | 0   | Extremo | -106.364 | -37.793 | 19.142   | 31.7806   | -5.3856   | -300.3036 |
| 4818 | 0.5 | Extremo | -106.364 | -20.918 | 19.142   | 31.7806   | -14.9567  | -285.6261 |
| 4818 | 1   | Extremo | -106.364 | -4.043  | 19.142   | 31.7806   | -24.5277  | -279.3861 |
| 4819 | 0   | Extremo | -103.789 | -67.1   | -84.688  | -23.201   | -69.2047  | -262.7996 |
| 4819 | 0.5 | Extremo | -103.789 | -50.225 | -84.688  | -23.201   | -26.8609  | -233.4681 |
| 4819 | 1   | Extremo | -103.789 | -33.35  | -84.688  | -23.201   | 15.4829   | -212.5741 |
| 4819 | 0   | Extremo | -103.755 | -71.039 | -83.357  | 3.6376    | -68.8146  | -267.8669 |
| 4819 | 0.5 | Extremo | -103.755 | -54.164 | -83.357  | 3.6376    | -27.1364  | -236.5664 |
| 4819 | 1   | Extremo | -103.755 | -37.289 | -83.357  | 3.6376    | 14.5419   | -213.7034 |
| 4820 | 0   | Extremo | -63.638  | -67.82  | -172.308 | -137.6073 | -114.7157 | -177.6171 |
| 4820 | 0.5 | Extremo | -63.638  | -50.945 | -172.308 | -137.6073 | -28.5616  | -147.9259 |
| 4820 | 1   | Extremo | -63.638  | -34.07  | -172.308 | -137.6073 | 57.5925   | -126.6721 |
| 4820 | 0   | Extremo | -63.567  | -73.941 | -172.121 | -112.4487 | -114.6896 | -182.1808 |
| 4820 | 0.5 | Extremo | -63.567  | -57.066 | -172.121 | -112.4487 | -28.6289  | -149.4289 |
| 4820 | 1   | Extremo | -63.567  | -40.191 | -172.121 | -112.4487 | 57.4317   | -125.1145 |
| 4821 | 0   | Extremo | -43.737  | 87.535  | 120.312  | 285.1001  | 46.9263   | -98.5597  |
| 4821 | 0.5 | Extremo | -43.737  | 103.06  | 120.312  | 285.1001  | -13.2295  | -146.2084 |
| 4821 | 1   | Extremo | -43.737  | 118.585 | 120.312  | 285.1001  | -73.3852  | -201.6196 |
| 4821 | 0   | Extremo | -43.215  | 86.822  | 119.717  | 277.3353  | 46.8874   | -100.3732 |
| 4821 | 0.5 | Extremo | -43.215  | 102.347 | 119.717  | 277.3353  | -12.971   | -147.6653 |
| 4821 | 1   | Extremo | -43.215  | 117.872 | 119.717  | 277.3353  | -72.8293  | -202.7199 |
| 4822 | 0   | Extremo | -74.097  | 45.24   | 73.127   | 66.3921   | 21.3146   | -187.199  |
| 4822 | 0.5 | Extremo | -74.097  | 60.765  | 73.127   | 66.3921   | -15.2489  | -213.7005 |

|      |     |         |         |          |          |           |          |           |
|------|-----|---------|---------|----------|----------|-----------|----------|-----------|
| 4822 | 1   | Extremo | -74.097 | 76.29    | 73.127   | 66.3921   | -51.8125 | -247.9645 |
| 4822 | 0   | Extremo | -73.343 | 44.953   | 73.856   | 82.8319   | 22.0165  | -188.6422 |
| 4822 | 0.5 | Extremo | -73.343 | 60.478   | 73.856   | 82.8319   | -14.9116 | -214.9999 |
| 4822 | 1   | Extremo | -73.343 | 76.003   | 73.856   | 82.8319   | -51.8397 | -249.1201 |
| 4823 | 0   | Extremo | -81.098 | 6.714    | 8.788    | 24.2451   | -7.6121  | -241.6485 |
| 4823 | 0.5 | Extremo | -81.098 | 22.239   | 8.788    | 24.2451   | -12.0061 | -248.8868 |
| 4823 | 1   | Extremo | -81.098 | 37.764   | 8.788    | 24.2451   | -16.4    | -263.8877 |
| 4823 | 0   | Extremo | -80.529 | 6.638    | 10.821   | 45.6098   | -6.4293  | -242.5529 |
| 4823 | 0.5 | Extremo | -80.529 | 22.163   | 10.821   | 45.6098   | -11.8396 | -249.7532 |
| 4823 | 1   | Extremo | -80.529 | 37.688   | 10.821   | 45.6098   | -17.2499 | -264.716  |
| 4824 | 0   | Extremo | -81.411 | -33.09   | -2.257   | 4.1555    | -13.4563 | -262.7951 |
| 4824 | 0.5 | Extremo | -81.411 | -17.565  | -2.257   | 4.1555    | -12.3278 | -250.1314 |
| 4824 | 1   | Extremo | -81.411 | -2.04    | -2.257   | 4.1555    | -11.1993 | -245.2303 |
| 4824 | 0   | Extremo | -81.197 | -32.834  | -0.284   | 27.7253   | -12.5584 | -262.6693 |
| 4824 | 0.5 | Extremo | -81.197 | -17.309  | -0.284   | 27.7253   | -12.4166 | -250.1336 |
| 4824 | 1   | Extremo | -81.197 | -1.784   | -0.284   | 27.7253   | -12.2747 | -245.3605 |
| 4825 | 0   | Extremo | -74.958 | -73.582  | -67.443  | -36.1535  | -50.4717 | -249.1368 |
| 4825 | 0.5 | Extremo | -74.958 | -58.057  | -67.443  | -36.1535  | -16.7504 | -216.2268 |
| 4825 | 1   | Extremo | -74.958 | -42.532  | -67.443  | -36.1535  | 16.9709  | -191.0794 |
| 4825 | 0   | Extremo | -74.947 | -72.595  | -66.226  | -9.8226   | -50.0537 | -247.7302 |
| 4825 | 0.5 | Extremo | -74.947 | -57.07   | -66.226  | -9.8226   | -16.941  | -215.314  |
| 4825 | 1   | Extremo | -74.947 | -41.545  | -66.226  | -9.8226   | 16.1718  | -190.6602 |
| 4826 | 0   | Extremo | -44.326 | -117.971 | -116.785 | -247.812  | -77.3078 | -202.6083 |
| 4826 | 0.5 | Extremo | -44.326 | -102.446 | -116.785 | -247.812  | -18.9154 | -147.5041 |
| 4826 | 1   | Extremo | -44.326 | -86.921  | -116.785 | -247.812  | 39.4771  | -100.1624 |
| 4826 | 0   | Extremo | -44.316 | -116.032 | -116.442 | -208.4066 | -77.189  | -200.1058 |
| 4826 | 0.5 | Extremo | -44.316 | -100.507 | -116.442 | -208.4066 | -18.9681 | -145.9708 |
| 4826 | 1   | Extremo | -44.316 | -84.982  | -116.442 | -208.4066 | 39.2529  | -99.5984  |
| 4827 | 0   | Extremo | -34.987 | 131.019  | 88.311   | 108.9739  | 34.9453  | -88.9472  |
| 4827 | 0.5 | Extremo | -34.987 | 146.544  | 88.311   | 108.9739  | -9.2099  | -158.3378 |
| 4827 | 1   | Extremo | -34.987 | 162.069  | 88.311   | 108.9739  | -53.3652 | -235.4908 |
| 4827 | 0   | Extremo | -34.61  | 122.963  | 88.085   | 121.8789  | 35.0298  | -92.0893  |
| 4827 | 0.5 | Extremo | -34.61  | 138.488  | 88.085   | 121.8789  | -9.0129  | -157.4522 |
| 4827 | 1   | Extremo | -34.61  | 154.013  | 88.085   | 121.8789  | -53.0556 | -230.5775 |
| 4828 | 0   | Extremo | -53.961 | 59.355   | 59.807   | 40.1935   | 19.1508  | -207.4028 |
| 4828 | 0.5 | Extremo | -53.961 | 74.88    | 59.807   | 40.1935   | -10.753  | -240.9618 |
| 4828 | 1   | Extremo | -53.961 | 90.405   | 59.807   | 40.1935   | -40.6567 | -282.2833 |
| 4828 | 0   | Extremo | -53.453 | 55.766   | 60.56    | 61.1872   | 19.7779  | -206.8732 |
| 4828 | 0.5 | Extremo | -53.453 | 71.291   | 60.56    | 61.1872   | -10.5019 | -238.6373 |
| 4828 | 1   | Extremo | -53.453 | 86.816   | 60.56    | 61.1872   | -40.7817 | -278.1639 |
| 4829 | 0   | Extremo | -60.454 | 6.184    | 14.768   | 19.9852   | -3.1141  | -269.3596 |
| 4829 | 0.5 | Extremo | -60.454 | 21.709   | 14.768   | 19.9852   | -10.4981 | -276.3328 |
| 4829 | 1   | Extremo | -60.454 | 37.234   | 14.768   | 19.9852   | -17.8821 | -291.0685 |
| 4829 | 0   | Extremo | -60.051 | 4.468    | 16.434   | 43.2933   | -2.1509  | -267.651  |
| 4829 | 0.5 | Extremo | -60.051 | 19.993   | 16.434   | 43.2933   | -10.3679 | -273.7664 |
| 4829 | 1   | Extremo | -60.051 | 35.518   | 16.434   | 43.2933   | -18.5848 | -287.6443 |
| 4830 | 0   | Extremo | -60.71  | -37.515  | -8.74    | 8.3038    | -15.1713 | -290.3461 |
| 4830 | 0.5 | Extremo | -60.71  | -21.99   | -8.74    | 8.3038    | -10.8015 | -275.4696 |
| 4830 | 1   | Extremo | -60.71  | -6.465   | -8.74    | 8.3038    | -6.4316  | -268.3556 |
| 4830 | 0   | Extremo | -60.52  | -38.284  | -7.037   | 32.603    | -14.3766 | -287.6766 |
| 4830 | 0.5 | Extremo | -60.52  | -22.759  | -7.037   | 32.603    | -10.8579 | -272.4161 |
| 4830 | 1   | Extremo | -60.52  | -7.234   | -7.037   | 32.603    | -7.3392  | -264.918  |
| 4831 | 0   | Extremo | -54.654 | -87.233  | -54.796  |           |          |           |



|      |     |         |         |          |         |          |           |           |
|------|-----|---------|---------|----------|---------|----------|-----------|-----------|
| 4834 | 1   | Extremo | -40.536 | 84.289   | 48.613  | 24.4794  | -32.1043  | -272.6013 |
| 4834 | 0   | Extremo | -40.17  | 50.487   | 49.379  | 48.5157  | 17.0845   | -203.6735 |
| 4834 | 0.5 | Extremo | -40.17  | 66.012   | 49.379  | 48.5157  | -7.605    | -232.7983 |
| 4834 | 1   | Extremo | -40.17  | 81.537   | 49.379  | 48.5157  | -32.2945  | -269.6855 |
| 4835 | 0   | Extremo | -46.412 | 6.481    | 15.634  | 15.9317  | -1.006    | -269.3925 |
| 4835 | 0.5 | Extremo | -46.412 | 22.006   | 15.634  | 15.9317  | -8.8229   | -276.5143 |
| 4835 | 1   | Extremo | -46.412 | 37.531   | 15.634  | 15.9317  | -16.6399  | -291.3986 |
| 4835 | 0   | Extremo | -46.109 | 4.777    | 17.068  | 40.8366  | -0.1866   | -267.9466 |
| 4835 | 0.5 | Extremo | -46.109 | 20.302   | 17.068  | 40.8366  | -8.7204   | -274.2161 |
| 4835 | 1   | Extremo | -46.109 | 35.827   | 17.068  | 40.8366  | -17.2542  | -288.2481 |
| 4836 | 0   | Extremo | -46.647 | -39.268  | -10.136 | 12.1513  | -14.1678  | -291.5953 |
| 4836 | 0.5 | Extremo | -46.647 | -23.743  | -10.136 | 12.1513  | -9.0999   | -275.8426 |
| 4836 | 1   | Extremo | -46.647 | -8.218   | -10.136 | 12.1513  | -4.032    | -267.8525 |
| 4836 | 0   | Extremo | -46.486 | -39.971  | -8.634  | 36.887   | -13.4549  | -289.2175 |
| 4836 | 0.5 | Extremo | -46.486 | -24.446  | -8.634  | 36.887   | -9.1378   | -273.1131 |
| 4836 | 1   | Extremo | -46.486 | -8.921   | -8.634  | 36.887   | -4.8207   | -264.7712 |
| 4837 | 0   | Extremo | -41.163 | -84.015  | -44.213 | 0.0812   | -31       | -271.2025 |
| 4837 | 0.5 | Extremo | -41.163 | -68.49   | -44.213 | 0.0812   | -8.8935   | -233.0765 |
| 4837 | 1   | Extremo | -41.163 | -52.965  | -44.213 | 0.0812   | 13.2129   | -202.7129 |
| 4837 | 0   | Extremo | -41.102 | -83.215  | -43.116 | 24.1206  | -30.563   | -268.2449 |
| 4837 | 0.5 | Extremo | -41.102 | -67.69   | -43.116 | 24.1206  | -9.0048   | -230.5187 |
| 4837 | 1   | Extremo | -41.102 | -52.165  | -43.116 | 24.1206  | 12.5534   | -200.555  |
| 4838 | 0   | Extremo | -26.968 | -114.402 | -64.151 | -70.2082 | -42.1993  | -206.4536 |
| 4838 | 0.5 | Extremo | -26.968 | -98.877  | -64.151 | -70.2082 | -10.124   | -153.1339 |
| 4838 | 1   | Extremo | -26.968 | -83.352  | -64.151 | -70.2082 | 21.9512   | -107.5766 |
| 4838 | 0   | Extremo | -26.934 | -112.408 | -63.595 | -48.4878 | -41.9555  | -204.1657 |
| 4838 | 0.5 | Extremo | -26.934 | -96.883  | -63.595 | -48.4878 | -10.158   | -151.8428 |
| 4838 | 1   | Extremo | -26.934 | -81.358  | -63.595 | -48.4878 | 21.6396   | -107.2824 |
| 4839 | 0   | Extremo | -20.29  | 65.062   | 50.49   | 70.8546  | 20.2016   | -113.1781 |
| 4839 | 0.5 | Extremo | -20.29  | 80.587   | 50.49   | 70.8546  | -5.0436   | -149.5903 |
| 4839 | 1   | Extremo | -20.29  | 96.112   | 50.49   | 70.8546  | -30.2888  | -193.765  |
| 4839 | 0   | Extremo | -20.086 | 64.853   | 50.652  | 88.9494  | 20.4067   | -113.4679 |
| 4839 | 0.5 | Extremo | -20.086 | 80.378   | 50.652  | 88.9494  | -4.9193   | -149.7759 |
| 4839 | 1   | Extremo | -20.086 | 95.903   | 50.652  | 88.9494  | -30.2454  | -193.8464 |
| 4840 | 0   | Extremo | -30.999 | 42.542   | 39.378  | 23.1273  | 13.8954   | -200.909  |
| 4840 | 0.5 | Extremo | -30.999 | 58.067   | 39.378  | 23.1273  | -5.7936   | -226.061  |
| 4840 | 1   | Extremo | -30.999 | 73.592   | 39.378  | 23.1273  | -25.4825  | -258.9755 |
| 4840 | 0   | Extremo | -30.728 | 41.643   | 40.157  | 48.3362  | 14.4382   | -201.4222 |
| 4840 | 0.5 | Extremo | -30.728 | 57.168   | 40.157  | 48.3362  | -5.6404   | -226.1248 |
| 4840 | 1   | Extremo | -30.728 | 72.693   | 40.157  | 48.3362  | -25.7189  | -258.5898 |
| 4841 | 0   | Extremo | -36.102 | 4.108    | 14.494  | 16.1125  | -0.000135 | -263.1512 |
| 4841 | 0.5 | Extremo | -36.102 | 19.633   | 14.494  | 16.1125  | -7.247    | -269.0864 |
| 4841 | 1   | Extremo | -36.102 | 35.158   | 14.494  | 16.1125  | -14.4938  | -282.784  |
| 4841 | 0   | Extremo | -35.869 | 2.959    | 15.781  | 41.9218  | 0.7255    | -263.2529 |
| 4841 | 0.5 | Extremo | -35.869 | 18.484   | 15.781  | 41.9218  | -7.1652   | -268.6137 |
| 4841 | 1   | Extremo | -35.869 | 34.009   | 15.781  | 41.9218  | -15.0559  | -281.7371 |
| 4842 | 0   | Extremo | -36.308 | -38.176  | -9.488  | 13.8423  | -12.2381  | -284.3759 |
| 4842 | 0.5 | Extremo | -36.308 | -22.651  | -9.488  | 13.8423  | -7.4943   | -269.1693 |
| 4842 | 1   | Extremo | -36.308 | -7.126   | -9.488  | 13.8423  | -2.7505   | -261.7251 |
| 4842 | 0   | Extremo | -36.17  | -39.135  | -8.128  | 39.1319  | -11.5867  | -283.9005 |
| 4842 | 0.5 | Extremo | -36.17  | -23.61   | -8.128  | 39.1319  | -7.5226   | -268.2144 |
| 4842 | 1   | Extremo | -36.17  | -8.085   | -8.128  | 39.1319  | -3.4585   | -260.2908 |
| 4843 | 0   | Extremo | -31.534 | -77.096  | -35.474 | 3.1358   | -24.4492  | -260.8768 |
| 4843 | 0.5 | Extremo | -31.534 | -61.571  | -35.474 | 3.1358   | -6.7122   | -226.2099 |
| 4843 | 1   | Extremo | -31.534 | -46.046  | -35.474 | 3.1358   | 11.0248   | -199.3054 |
| 4843 | 0   | Extremo | -31.471 | -77.57   | -34.43  | 27.438   | -24.0192  | -260.0854 |
| 4843 | 0.5 | Extremo | -31.471 | -62.045  | -34.43  | 27.438   | -6.8043   | -225.1819 |
| 4843 | 1   | Extremo | -31.471 | -46.52   | -34.43  | 27.438   | 10.4106   | -198.0409 |
| 4844 | 0   | Extremo | -20.687 | -101.778 | -48.794 | -63.7595 | -32.0665  | -195.8408 |
| 4844 | 0.5 | Extremo | -20.687 | -86.253  | -48.794 | -63.7595 | -7.6692   | -148.8329 |
| 4844 | 1   | Extremo | -20.687 | -70.728  | -48.794 | -63.7595 | 16.728    | -109.5876 |
| 4844 | 0   | Extremo | -20.655 | -101.632 | -48.223 | -41.7476 | -31.8088  | -195.2708 |
| 4844 | 0.5 | Extremo | -20.655 | -86.107  | -48.223 | -41.7476 | -7.6975   | -148.3362 |
| 4844 | 1   | Extremo | -20.655 | -70.582  | -48.223 | -41.7476 | 16.4139   | -109.1641 |
| 4845 | 0   | Extremo | -15.79  | 56.392   | 39.062  | 73.8185  | 15.7281   | -117.2181 |
| 4845 | 0.5 | Extremo | -15.79  | 71.917   | 39.062  | 73.8185  | -3.8028   | -149.2954 |
| 4845 | 1   | Extremo | -15.79  | 87.442   | 39.062  | 73.8185  | -23.3336  | -189.1353 |
| 4845 | 0   | Extremo | -15.638 | 58.807   | 39.331  | 91.6544  | 15.9659   | -116.8532 |
| 4845 | 0.5 | Extremo | -15.638 | 74.332   | 39.331  | 91.6544  | -3.6998   | -150.1378 |
| 4845 | 1   | Extremo | -15.638 | 89.857   | 39.331  | 91.6544  | -23.3655  | -191.1848 |
| 4846 | 0   | Extremo | -24.126 | 36.247   | 31.838  | 29.8391  | 11.5254   | -202.4118 |
| 4846 | 0.5 | Extremo | -24.126 | 51.772   | 31.838  | 29.8391  | -4.3934   | -224.4165 |

|      |     |         |         |         |         |          |          |           |
|------|-----|---------|---------|---------|---------|----------|----------|-----------|
| 4846 | 1   | Extremo | -24.126 | 67.297  | 31.838  | 29.8391  | -20.3122 | -254.1838 |
| 4846 | 0   | Extremo | -23.924 | 36.946  | 32.633  | 54.8909  | 12.0497  | -203.6058 |
| 4846 | 0.5 | Extremo | -23.924 | 52.471  | 32.633  | 54.8909  | -4.2667  | -225.96   |
| 4846 | 1   | Extremo | -23.924 | 67.996  | 32.633  | 54.8909  | -20.5831 | -256.0767 |
| 4847 | 0   | Extremo | -28.438 | 2.113   | 12.701  | 19.902   | 0.4496   | -262.4941 |
| 4847 | 0.5 | Extremo | -28.438 | 17.638  | 12.701  | 19.902   | -5.9008  | -267.4319 |
| 4847 | 1   | Extremo | -28.438 | 33.163  | 12.701  | 19.902   | -12.2511 | -280.1321 |
| 4847 | 0   | Extremo | -28.256 | 1.434   | 13.898  | 46.0482  | 1.1146   | -263.9989 |
| 4847 | 0.5 | Extremo | -28.256 | 16.959  | 13.898  | 46.0482  | -5.8345  | -268.5969 |
| 4847 | 1   | Extremo | -28.256 | 32.484  | 13.898  | 46.0482  | -12.7836 | -280.9574 |
| 4848 | 0   | Extremo | -28.608 | -37.503 | -8.115  | 14.4193  | -10.1774 | -282.8187 |
| 4848 | 0.5 | Extremo | -28.608 | -21.978 | -8.115  | 14.4193  | -6.12    | -267.9487 |
| 4848 | 1   | Extremo | -28.608 | -6.453  | -8.115  | 14.4193  | -2.0626  | -260.8412 |
| 4848 | 0   | Extremo | -28.49  | -38.699 | -6.854  | 40.5321  | -9.5712  | -284.0769 |
| 4848 | 0.5 | Extremo | -28.49  | -23.174 | -6.854  | 40.5321  | -6.1444  | -268.6087 |
| 4848 | 1   | Extremo | -28.49  | -7.649  | -6.854  | 40.5321  | -2.7176  | -260.9031 |
| 4849 | 0   | Extremo | -24.557 | -73.639 | -28.31  | 1.3488   | -19.3209 | -258.1277 |
| 4849 | 0.5 | Extremo | -24.557 | -58.114 | -28.31  | 1.3488   | -5.1661  | -225.1896 |
| 4849 | 1   | Extremo | -24.557 | -42.589 | -28.31  | 1.3488   | 8.9886   | -200.0141 |
| 4849 | 0   | Extremo | -24.496 | -75.378 | -27.308 | 26.7986  | -18.902  | -259.3838 |
| 4849 | 0.5 | Extremo | -24.496 | -59.853 | -27.308 | 26.7986  | -5.2478  | -225.5761 |
| 4849 | 1   | Extremo | -24.496 | -44.328 | -27.308 | 26.7986  | 8.4065   | -199.5309 |
| 4850 | 0   | Extremo | -16.096 | -97.257 | -37.54  | -60.2594 | -24.6287 | -192.757  |
| 4850 | 0.5 | Extremo | -16.096 | -81.732 | -37.54  | -60.2594 | -5.8589  | -148.0098 |
| 4850 | 1   | Extremo | -16.096 | -66.207 | -37.54  | -60.2594 | 12.9109  | -111.0252 |
| 4850 | 0   | Extremo | -16.068 | -99.026 | -36.974 | -37.5588 | -24.3709 | -193.8573 |
| 4850 | 0.5 | Extremo | -16.068 | -83.501 | -36.974 | -37.5588 | -5.8839  | -148.2256 |
| 4850 | 1   | Extremo | -16.068 | -67.976 | -36.974 | -37.5588 | 12.6031  | -110.3565 |
| 4851 | 0   | Extremo | -12.531 | 50.764  | 30.621  | 86.8092  | 12.4476  | -126.0841 |
| 4851 | 0.5 | Extremo | -12.531 | 66.289  | 30.621  | 86.8092  | -2.8628  | -155.3472 |
| 4851 | 1   | Extremo | -12.531 | 81.814  | 30.621  | 86.8092  | -18.1732 | -192.3727 |
| 4851 | 0   | Extremo | -12.411 | 57.327  | 30.976  | 101.2115 | 12.7143  | -124.1809 |
| 4851 | 0.5 | Extremo | -12.411 | 72.852  | 30.976  | 101.2115 | -2.7737  | -156.7258 |
| 4851 | 1   | Extremo | -12.411 | 88.377  | 30.976  | 101.2115 | -18.2617 | -197.0332 |
| 4852 | 0   | Extremo | -19.395 | 36.592  | 25.809  | 40.9091  | 9.5172   | -211.692  |
| 4852 | 0.5 | Extremo | -19.395 | 52.117  | 25.809  | 40.9091  | -3.3873  | -233.8692 |
| 4852 | 1   | Extremo | -19.395 | 67.642  | 25.809  | 40.9091  | -16.2917 | -263.8089 |
| 4852 | 0   | Extremo | -19.235 | 37.776  | 26.629  | 64.4728  | 10.0362  | -213.0787 |
| 4852 | 0.5 | Extremo | -19.235 | 53.301  | 26.629  | 64.4728  | -3.2783  | -235.8478 |
| 4852 | 1   | Extremo | -19.235 | 68.826  | 26.629  | 64.4728  | -16.5928 | -266.3795 |
| 4853 | 0   | Extremo | -23.174 | 2.185   | 10.872  | 25.3418  | 0.6326   | -273.3698 |
| 4853 | 0.5 | Extremo | -23.174 | 17.71   | 10.872  | 25.3418  | -4.8032  | -278.3438 |
| 4853 | 1   | Extremo | -23.174 | 33.235  | 10.872  | 25.3418  | -10.239  | -291.0803 |
| 4853 | 0   | Extremo | -23.029 | 1.802   | 12.021  | 51.5521  | 1.262    | -274.5301 |
| 4853 | 0.5 | Extremo | -23.029 | 17.327  | 12.021  | 51.5521  | -4.7485  | -279.3123 |
| 4853 | 1   | Extremo | -23.029 | 32.852  | 12.021  | 51.5521  | -10.7591 | -291.857  |
| 4854 | 0   | Extremo | -23.326 | -37.956 | -6.606  | 15.0336  | -8.3016  | -293.8917 |
| 4854 | 0.5 | Extremo | -23.326 | -22.431 | -6.606  | 15.0336  | -4.9986  | -278.795  |
| 4854 | 1   | Extremo | -23.326 | -6.906  | -6.606  | 15.0336  | -1.6955  | -271.4608 |
| 4854 | 0   | Extremo | -23.232 | -38.549 | -5.405  | 42.3717  | -7.7249  | -294.7618 |
| 4854 | 0.5 | Extremo | -23.232 | -23.024 | -5.405  | 42.3717  | -5.0226  | -279.3685 |
| 4854 | 1   | Extremo | -23.232 | -7.499  | -5.405  | 42.3717  | -2.3202  | -271.7376 |
| 4855 | 0   | Extremo | -19.764 | -74.745 | -22.528 | -2.7167  | -15.3122 | -267.8135 |
| 4855 | 0.5 | Extremo | -19.764 | -59.22  | -22.528 | -2.7167  | -4.048   | -234.3222 |



|      |     |         |         |          |         |          |          |           |
|------|-----|---------|---------|----------|---------|----------|----------|-----------|
| 4858 | 1   | Extremo | -14.671 | 63.042   | 19.578  | 41.6297  | -12.0816 | -220.1549 |
| 4858 | 0   | Extremo | -14.535 | 35.765   | 20.372  | 59.6983  | 7.9776   | -169.482  |
| 4858 | 0.5 | Extremo | -14.535 | 49.715   | 20.372  | 59.6983  | -2.2085  | -190.8519 |
| 4858 | 1   | Extremo | -14.535 | 63.665   | 20.372  | 59.6983  | -12.3945 | -219.1968 |
| 4859 | 0   | Extremo | -18.038 | 1.929    | 8.584   | 24.4473  | 0.9033   | -216.1161 |
| 4859 | 0.5 | Extremo | -18.038 | 15.879   | 8.584   | 24.4473  | -3.389   | -220.5683 |
| 4859 | 1   | Extremo | -18.038 | 29.829   | 8.584   | 24.4473  | -7.6812  | -231.9956 |
| 4859 | 0   | Extremo | -17.929 | 3.767    | 9.636   | 46.5055  | 1.4685   | -213.3192 |
| 4859 | 0.5 | Extremo | -17.929 | 17.717   | 9.636   | 46.5055  | -3.3493  | -218.6904 |
| 4859 | 1   | Extremo | -17.929 | 31.667   | 9.636   | 46.5055  | -8.1672  | -231.0367 |
| 4860 | 0   | Extremo | -18.211 | -30.759  | -4.845  | 14.1817  | -5.9631  | -232.2685 |
| 4860 | 0.5 | Extremo | -18.211 | -16.809  | -4.845  | 14.1817  | -3.5405  | -220.3763 |
| 4860 | 1   | Extremo | -18.211 | -2.859   | -4.845  | 14.1817  | -1.1179  | -215.4591 |
| 4860 | 0   | Extremo | -18.159 | -28.349  | -3.758  | 37.8966  | -5.4415  | -229.0608 |
| 4860 | 0.5 | Extremo | -18.159 | -14.399  | -3.758  | 37.8966  | -3.5623  | -218.3738 |
| 4860 | 1   | Extremo | -18.159 | -0.449   | -3.758  | 37.8966  | -1.6831  | -214.6618 |
| 4861 | 0   | Extremo | -15.099 | -64.334  | -16.674 | -3.9393  | -11.1338 | -220.0062 |
| 4861 | 0.5 | Extremo | -15.099 | -50.384  | -16.674 | -3.9393  | -7.7968  | -191.3267 |
| 4861 | 1   | Extremo | -15.099 | -36.434  | -16.674 | -3.9393  | 5.5403   | -169.6223 |
| 4861 | 0   | Extremo | -15.104 | -61.615  | -15.772 | 22.2195  | -10.7519 | -216.6501 |
| 4861 | 0.5 | Extremo | -15.104 | -47.665  | -15.772 | 22.2195  | -2.8658  | -189.3299 |
| 4861 | 1   | Extremo | -15.104 | -33.715  | -15.772 | 22.2195  | 5.0204   | -168.9848 |
| 4862 | 0   | Extremo | -9.058  | -100.389 | -21.43  | -82.8155 | -13.7861 | -181.4801 |
| 4862 | 0.5 | Extremo | -9.058  | -86.439  | -21.43  | -82.8155 | -3.0714  | -134.7734 |
| 4862 | 1   | Extremo | -9.058  | -72.489  | -21.43  | -82.8155 | 7.6434   | -95.0416  |
| 4862 | 0   | Extremo | -9.095  | -97.414  | -20.944 | -44.9137 | -13.5673 | -177.7572 |
| 4862 | 0.5 | Extremo | -9.095  | -83.464  | -20.944 | -44.9137 | -3.0954  | -132.5379 |
| 4862 | 1   | Extremo | -9.095  | -69.514  | -20.944 | -44.9137 | 7.3766   | -94.2937  |
| 4863 | 0   | Extremo | -7.444  | 77.827   | 18.175  | 53.8109  | 7.7771   | -99.3208  |
| 4863 | 0.5 | Extremo | -7.444  | 91.777   | 18.175  | 53.8109  | -1.3104  | -141.7218 |
| 4863 | 1   | Extremo | -7.444  | 105.727  | 18.175  | 53.8109  | -10.3979 | -191.0979 |
| 4863 | 0   | Extremo | -7.39   | 69.306   | 18.628  | 69.2052  | 8.0739   | -102.371  |
| 4863 | 0.5 | Extremo | -7.39   | 83.256   | 18.628  | 69.2052  | -1.2402  | -140.5114 |
| 4863 | 1   | Extremo | -7.39   | 97.206   | 18.628  | 69.2052  | -10.5543 | -185.6269 |
| 4864 | 0   | Extremo | -11.17  | 37.263   | 15.689  | 33.7789  | 6.0424   | -182.7347 |
| 4864 | 0.5 | Extremo | -11.17  | 51.213   | 15.689  | 33.7789  | -1.8022  | -204.8537 |
| 4864 | 1   | Extremo | -11.17  | 65.163   | 15.689  | 33.7789  | -9.6468  | -233.9477 |
| 4864 | 0   | Extremo | -11.099 | 33.751   | 16.501  | 55.7173  | 6.5259   | -180.797  |
| 4864 | 0.5 | Extremo | -11.099 | 47.701   | 16.501  | 55.7173  | -1.7247  | -201.1602 |
| 4864 | 1   | Extremo | -11.099 | 61.651   | 16.501  | 55.7173  | -9.9754  | -228.4984 |
| 4865 | 0   | Extremo | -13.385 | -0.037   | 7.136   | 25.693   | 0.8354   | -231.451  |
| 4865 | 0.5 | Extremo | -13.385 | 13.913   | 7.136   | 25.693   | -2.7324  | -234.9198 |
| 4865 | 1   | Extremo | -13.385 | 27.863   | 7.136   | 25.693   | -6.3003  | -245.3636 |
| 4865 | 0   | Extremo | -13.323 | -1.217   | 8.166   | 49.3312  | 1.3839   | -227.8465 |
| 4865 | 0.5 | Extremo | -13.323 | 12.733   | 8.166   | 49.3312  | -2.699   | -230.7255 |
| 4865 | 1   | Extremo | -13.323 | 26.683   | 8.166   | 49.3312  | -6.782   | -240.5794 |
| 4866 | 0   | Extremo | -13.488 | -34.22   | -3.636  | 19.1434  | -4.6844  | -247.796  |
| 4866 | 0.5 | Extremo | -13.488 | -20.27   | -3.636  | 19.1434  | -2.8663  | -234.1737 |
| 4866 | 1   | Extremo | -13.488 | -6.32    | -3.636  | 19.1434  | -1.0482  | -227.5264 |
| 4866 | 0   | Extremo | -13.456 | -34.315  | -2.589  | 43.5445  | -4.1833  | -243.524  |
| 4866 | 0.5 | Extremo | -13.456 | -20.365  | -2.589  | 43.5445  | -2.8886  | -229.8541 |
| 4866 | 1   | Extremo | -13.456 | -6.415   | -2.589  | 43.5445  | -1.594   | -223.1592 |
| 4867 | 0   | Extremo | -11.421 | -69.959  | -12.935 | 8.9734   | -8.7001  | -234.5506 |
| 4867 | 0.5 | Extremo | -11.421 | -56.009  | -12.935 | 8.9734   | -2.2324  | -203.0585 |
| 4867 | 1   | Extremo | -11.421 | -42.059  | -12.935 | 8.9734   | 4.2354   | -178.5413 |
| 4867 | 0   | Extremo | -11.423 | -68.083  | -12.062 | 33.8289  | -8.3235  | -229.4169 |
| 4867 | 0.5 | Extremo | -11.423 | -54.133  | -12.062 | 33.8289  | -2.2927  | -198.8629 |
| 4867 | 1   | Extremo | -11.423 | -40.183  | -12.062 | 33.8289  | 3.7381   | -175.284  |
| 4868 | 0   | Extremo | -7.618  | -106.684 | -16.771 | -25.3858 | -10.6537 | -190.7893 |
| 4868 | 0.5 | Extremo | -7.618  | -92.734  | -16.771 | -25.3858 | -2.2681  | -140.9347 |
| 4868 | 1   | Extremo | -7.618  | -78.784  | -16.771 | -25.3858 | 6.1176   | -98.0551  |
| 4868 | 0   | Extremo | -7.631  | -100.358 | -16.229 | -1.8379  | -10.4034 | -185.263  |
| 4868 | 0.5 | Extremo | -7.631  | -86.408  | -16.229 | -1.8379  | -2.2887  | -138.5715 |
| 4868 | 1   | Extremo | -7.631  | -72.458  | -16.229 | -1.8379  | 5.826    | -98.855   |
| 4869 | 0   | Extremo | -5.759  | 61.287   | 14.528  | 42.5221  | 6.2848   | -108.0319 |
| 4869 | 0.5 | Extremo | -5.759  | 75.237   | 14.528  | 42.5221  | -0.9794  | -142.163  |
| 4869 | 1   | Extremo | -5.759  | 89.187   | 14.528  | 42.5221  | -8.2435  | -183.2691 |
| 4869 | 0   | Extremo | -5.734  | 57.898   | 15.004  | 61.674   | 6.591    | -108.7973 |
| 4869 | 0.5 | Extremo | -5.734  | 71.848   | 15.004  | 61.674   | -0.9112  | -141.2339 |
| 4869 | 1   | Extremo | -5.734  | 85.798   | 15.004  | 61.674   | -8.4134  | -180.6454 |
| 4870 | 0   | Extremo | -8.606  | 35.635   | 12.701  | 30.5307  | 4.9387   | -184.7808 |
| 4870 | 0.5 | Extremo | -8.606  | 49.585   | 12.701  | 30.5307  | -1.4117  | -206.086  |

|      |     |         |         |         |         |          |         |           |
|------|-----|---------|---------|---------|---------|----------|---------|-----------|
| 4870 | 1   | Extremo | -8.606  | 63.535  | 12.701  | 30.5307  | -7.7621 | -234.3661 |
| 4870 | 0   | Extremo | -8.569  | 32.761  | 13.526  | 55.0096  | 5.4246  | -183.4105 |
| 4870 | 0.5 | Extremo | -8.569  | 46.711  | 13.526  | 55.0096  | -1.3386 | -203.2784 |
| 4870 | 1   | Extremo | -8.569  | 60.661  | 13.526  | 55.0096  | -8.1017 | -230.1213 |
| 4871 | 0   | Extremo | -10.285 | 0.284   | 5.976   | 27.0476  | 0.7903  | -235.9796 |
| 4871 | 0.5 | Extremo | -10.285 | 14.234  | 5.976   | 27.0476  | -2.1975 | -239.6089 |
| 4871 | 1   | Extremo | -10.285 | 28.184  | 5.976   | 27.0476  | -5.1853 | -250.2133 |
| 4871 | 0   | Extremo | -10.248 | -1.326  | 6.99    | 52.1234  | 1.3256  | -232.8862 |
| 4871 | 0.5 | Extremo | -10.248 | 12.624  | 6.99    | 52.1234  | -2.1696 | -235.7106 |
| 4871 | 1   | Extremo | -10.248 | 26.574  | 6.99    | 52.1234  | -5.6649 | -245.51   |
| 4872 | 0   | Extremo | -10.361 | -35.648 | -2.678  | 23.8722  | -3.6544 | -253.3062 |
| 4872 | 0.5 | Extremo | -10.361 | -21.698 | -2.678  | 23.8722  | -2.3157 | -238.9698 |
| 4872 | 1   | Extremo | -10.361 | -7.748  | -2.678  | 23.8722  | -0.9769 | -231.6085 |
| 4872 | 0   | Extremo | -10.343 | -36.082 | -1.668  | 48.8379  | -3.1729 | -249.3931 |
| 4872 | 0.5 | Extremo | -10.343 | -22.132 | -1.668  | 48.8379  | -2.339  | -234.8396 |
| 4872 | 1   | Extremo | -10.343 | -8.182  | -1.668  | 48.8379  | -1.505  | -227.2611 |
| 4873 | 0   | Extremo | -8.79   | -70.011 | -10.073 | 17.5948  | -6.8165 | -236.0679 |
| 4873 | 0.5 | Extremo | -8.79   | -56.061 | -10.073 | 17.5948  | -1.7802 | -204.55   |
| 4873 | 1   | Extremo | -8.79   | -42.111 | -10.073 | 17.5948  | 3.2562  | -180.0071 |
| 4873 | 0   | Extremo | -8.797  | -68.976 | -9.227  | 41.9396  | -6.4477 | -232.1019 |
| 4873 | 0.5 | Extremo | -8.797  | -55.026 | -9.227  | 41.9396  | -1.8342 | -201.1012 |
| 4873 | 1   | Extremo | -8.797  | -41.076 | -9.227  | 41.9396  | 2.7794  | -177.0754 |
| 4874 | 0   | Extremo | -5.884  | -94.702 | -13.09  | -10.3912 | -8.2962 | -184.4389 |
| 4874 | 0.5 | Extremo | -5.884  | -80.752 | -13.09  | -10.3912 | -1.7513 | -140.5756 |
| 4874 | 1   | Extremo | -5.884  | -66.802 | -13.09  | -10.3912 | 4.7936  | -103.6873 |
| 4874 | 0   | Extremo | -5.9    | -92.517 | -12.529 | 11.6095  | -8.0311 | -181.7186 |
| 4874 | 0.5 | Extremo | -5.9    | -78.567 | -12.529 | 11.6095  | -1.7668 | -138.9479 |
| 4874 | 1   | Extremo | -5.9    | -64.617 | -12.529 | 11.6095  | 4.4975  | -103.1521 |
| 4875 | 0   | Extremo | -4.472  | 57.194  | 11.696  | 41.4645  | 5.1052  | -111.015  |
| 4875 | 0.5 | Extremo | -4.472  | 71.144  | 11.696  | 41.4645  | -0.7426 | -143.0997 |
| 4875 | 1   | Extremo | -4.472  | 85.094  | 11.696  | 41.4645  | -6.5904 | -182.1594 |
| 4875 | 0   | Extremo | -4.468  | 56.932  | 12.185  | 60.8323  | 5.4185  | -110.5951 |
| 4875 | 0.5 | Extremo | -4.468  | 70.882  | 12.185  | 60.8323  | -0.6738 | -142.5484 |
| 4875 | 1   | Extremo | -4.468  | 84.832  | 12.185  | 60.8323  | -6.7662 | -181.4767 |
| 4876 | 0   | Extremo | -6.702  | 33.752  | 10.395  | 31.9972  | 4.0881  | -186.7554 |
| 4876 | 0.5 | Extremo | -6.702  | 47.702  | 10.395  | 31.9972  | -1.1096 | -207.1188 |
| 4876 | 1   | Extremo | -6.702  | 61.652  | 10.395  | 31.9972  | -6.3073 | -234.4571 |
| 4876 | 0   | Extremo | -6.687  | 32.381  | 11.239  | 57.1373  | 4.5808  | -185.7189 |
| 4876 | 0.5 | Extremo | -6.687  | 46.331  | 11.239  | 57.1373  | -1.0389 | -205.3969 |
| 4876 | 1   | Extremo | -6.687  | 60.281  | 11.239  | 57.1373  | -6.6586 | -232.0499 |
| 4877 | 0   | Extremo | -8.022  | -0.062  | 5.065   | 29.7851  | 0.7611  | -237.9415 |
| 4877 | 0.5 | Extremo | -8.022  | 13.888  | 5.065   | 29.7851  | -1.7715 | -241.398  |
| 4877 | 1   | Extremo | -8.022  | 27.838  | 5.065   | 29.7851  | -4.3042 | -251.8295 |
| 4877 | 0   | Extremo | -8.002  | -1.336  | 6.076   | 55.6984  | 1.2885  | -235.6841 |
| 4877 | 0.5 | Extremo | -8.002  | 12.614  | 6.076   | 55.6984  | -1.7496 | -238.5038 |
| 4877 | 1   | Extremo | -8.002  | 26.564  | 6.076   | 55.6984  | -4.7877 | -248.2985 |
| 4878 | 0   | Extremo | -8.082  | -35.783 | -1.921  | 28.1062  | -2.8373 | -255.4909 |
| 4878 | 0.5 | Extremo | -8.082  | -21.833 | -1.921  | 28.1062  | -1.8767 | -241.0871 |
| 4878 | 1   | Extremo | -8.082  | -7.883  | -1.921  | 28.1062  | -0.9162 | -233.6583 |
| 4878 | 0   | Extremo | -8.075  | -36.361 | -0.943  | 53.9193  | -2.3742 | -252.6408 |
| 4878 | 0.5 | Extremo | -8.075  | -22.411 | -0.943  | 53.9193  | -1.9028 | -237.9476 |
| 4878 | 1   | Extremo | -8.075  | -8.461  | -0.943  | 53.9193  | -1.4314 | -230.2294 |
| 4879 | 0   | Extremo | -6.843  | -69.569 | -7.858  | 22.8751  | -5.359  | -237.3927 |
| 4879 | 0.5 | Extremo | -6.843  | -55.619 | -7.858  | 22.8751  | -1.4301 | -206.0955 |
| 4879 | 1   | Extremo | -6.843  | -41.669 | -7.858  | 22.8751  | 2.4988  | -181.7734 |
| 4879 | 0   | Extremo | -6.861  | -69.648 | -7      |          |         |           |



|      |     |         |        |          |        |         |         |           |
|------|-----|---------|--------|----------|--------|---------|---------|-----------|
| 4882 | 1   | Extremo | -5.334 | 60.172   | 8.635  | 33.6983 | -5.1945 | -236.9292 |
| 4882 | 0   | Extremo | -5.338 | 31.775   | 9.514  | 58.2562 | 3.9507  | -189.3323 |
| 4882 | 0.5 | Extremo | -5.338 | 45.725   | 9.514  | 58.2562 | -0.8063 | -208.7072 |
| 4882 | 1   | Extremo | -5.338 | 59.675   | 9.514  | 58.2562 | -5.5634 | -235.057  |
| 4883 | 0   | Extremo | -6.428 | -0.605   | 4.366  | 33.1561 | 0.7405  | -239.6553 |
| 4883 | 0.5 | Extremo | -6.428 | 13.345   | 4.366  | 33.1561 | -1.4426 | -242.8402 |
| 4883 | 1   | Extremo | -6.428 | 27.295   | 4.366  | 33.1561 | -3.6258 | -253.0001 |
| 4883 | 0   | Extremo | -6.422 | -1.21    | 5.391  | 59.5214 | 1.2674  | -237.0263 |
| 4883 | 0.5 | Extremo | -6.422 | 12.74    | 5.391  | 59.5214 | -1.4281 | -239.9088 |
| 4883 | 1   | Extremo | -6.422 | 26.69    | 5.391  | 59.5214 | -4.1236 | -249.7664 |
| 4884 | 0   | Extremo | -6.483 | -34.401  | -1.323 | 32.9685 | -2.1992 | -256.7743 |
| 4884 | 0.5 | Extremo | -6.483 | -20.451  | -1.323 | 32.9685 | -1.5379 | -243.0613 |
| 4884 | 1   | Extremo | -6.483 | -6.501   | -1.323 | 32.9685 | -0.8766 | -236.3233 |
| 4884 | 0   | Extremo | -6.494 | -34.433  | -0.37  | 59.9593 | -1.7542 | -253.8214 |
| 4884 | 0.5 | Extremo | -6.494 | -20.483  | -0.37  | 59.9593 | -1.5691 | -240.0924 |
| 4884 | 1   | Extremo | -6.494 | -6.533   | -0.37  | 59.9593 | -1.384  | -233.3383 |
| 4885 | 0   | Extremo | -5.463 | -68.502  | -6.143 | 29.1441 | -4.234  | -240.9431 |
| 4885 | 0.5 | Extremo | -5.463 | -54.552  | -6.143 | 29.1441 | -1.1624 | -210.1798 |
| 4885 | 1   | Extremo | -5.463 | -40.602  | -6.143 | 29.1441 | 1.9091  | -186.3915 |
| 4885 | 0   | Extremo | -5.505 | -68.73   | -5.35  | 56.2316 | -3.8834 | -239.159  |
| 4885 | 0.5 | Extremo | -5.505 | -54.78   | -5.35  | 56.2316 | -1.2085 | -208.2817 |
| 4885 | 1   | Extremo | -5.505 | -40.83   | -5.35  | 56.2316 | 1.4664  | -184.3794 |
| 4886 | 0   | Extremo | -3.6   | -98.511  | -8.055 | 7.1014  | -5.1022 | -190.4651 |
| 4886 | 0.5 | Extremo | -3.6   | -84.561  | -8.055 | 7.1014  | -1.0746 | -144.6972 |
| 4886 | 1   | Extremo | -3.6   | -70.611  | -8.055 | 7.1014  | 2.9529  | -105.9042 |
| 4886 | 0   | Extremo | -3.651 | -100.783 | -7.47  | 32.3286 | -4.8117 | -190.7577 |
| 4886 | 0.5 | Extremo | -3.651 | -86.833  | -7.47  | 32.3286 | -1.077  | -143.8539 |
| 4886 | 1   | Extremo | -3.651 | -72.883  | -7.47  | 32.3286 | 2.6578  | -103.9252 |
| 4887 | 0   | Extremo | -2.395 | 42.194   | 7.457  | 18.214  | 3.371   | -98.3578  |
| 4887 | 0.5 | Extremo | -2.395 | 54.907   | 7.457  | 18.214  | -0.3574 | -122.6331 |
| 4887 | 1   | Extremo | -2.395 | 67.619   | 7.457  | 18.214  | -4.0858 | -153.2647 |
| 4887 | 0   | Extremo | -2.407 | 40.392   | 7.942  | 26.1611 | 3.6904  | -98.9396  |
| 4887 | 0.5 | Extremo | -2.407 | 53.105   | 7.942  | 26.1611 | -0.2807 | -122.314  |
| 4887 | 1   | Extremo | -2.407 | 65.817   | 7.942  | 26.1611 | -4.2519 | -152.0445 |
| 4888 | 0   | Extremo | -3.977 | 22.306   | 6.861  | 27.9085 | 2.8139  | -147.239  |
| 4888 | 0.5 | Extremo | -3.977 | 35.019   | 6.861  | 27.9085 | -0.6165 | -161.5701 |
| 4888 | 1   | Extremo | -3.977 | 47.731   | 6.861  | 27.9085 | -4.047  | -182.2575 |
| 4888 | 0   | Extremo | -3.994 | 22.96    | 7.741  | 47.9346 | 3.3189  | -143.9185 |
| 4888 | 0.5 | Extremo | -3.994 | 35.672   | 7.741  | 47.9346 | -0.5517 | -158.5764 |
| 4888 | 1   | Extremo | -3.994 | 48.385   | 7.741  | 47.9346 | -4.4222 | -179.5906 |
| 4889 | 0   | Extremo | -4.927 | -0.195   | 3.603  | 30.7526 | 0.7502  | -180.0532 |
| 4889 | 0.5 | Extremo | -4.927 | 12.517   | 3.603  | 30.7526 | -1.0514 | -183.1338 |
| 4889 | 1   | Extremo | -4.927 | 25.23    | 3.603  | 30.7526 | -2.853  | -192.5706 |
| 4889 | 0   | Extremo | -4.936 | 1.901    | 4.597  | 53.4097 | 1.2508  | -175.2193 |
| 4889 | 0.5 | Extremo | -4.936 | 14.613   | 4.597  | 53.4097 | -1.0478 | -179.3479 |
| 4889 | 1   | Extremo | -4.936 | 27.326   | 4.597  | 53.4097 | -3.3463 | -189.8327 |
| 4890 | 0   | Extremo | -4.997 | -24.913  | -0.8   | 32.7614 | -1.5284 | -193.2828 |
| 4890 | 0.5 | Extremo | -4.997 | -12.201  | -0.8   | 32.7614 | -1.1284 | -184.0043 |
| 4890 | 1   | Extremo | -4.997 | 0.512    | -0.8   | 32.7614 | -0.7283 | -181.082  |
| 4890 | 0   | Extremo | -5.034 | -22.096  | 0.07   | 56.5343 | -1.1286 | -188.3911 |
| 4890 | 0.5 | Extremo | -5.034 | -9.383   | 0.07   | 56.5343 | -1.1636 | -180.5214 |
| 4890 | 1   | Extremo | -5.034 | 3.329    | 0.07   | 56.5343 | -1.1986 | -179.008  |
| 4891 | 0   | Extremo | -4.152 | -50.04   | -4.529 | 32.8697 | -3.1116 | -184.6236 |
| 4891 | 0.5 | Extremo | -4.152 | -37.328  | -4.529 | 32.8697 | -0.8471 | -162.7817 |
| 4891 | 1   | Extremo | -4.152 | -24.615  | -4.529 | 32.8697 | 1.4174  | -147.296  |
| 4891 | 0   | Extremo | -4.242 | -46.971  | -3.813 | 57.8359 | -2.7898 | -180.3712 |
| 4891 | 0.5 | Extremo | -4.242 | -34.258  | -3.813 | 57.8359 | -0.8834 | -160.0639 |
| 4891 | 1   | Extremo | -4.242 | -21.546  | -3.813 | 57.8359 | 1.0229  | -146.1129 |
| 4892 | 0   | Extremo | -2.563 | -74.496  | -6.023 | 29.6484 | -3.7727 | -154.2116 |
| 4892 | 0.5 | Extremo | -2.563 | -61.784  | -6.023 | 29.6484 | -0.7614 | -120.1416 |
| 4892 | 1   | Extremo | -2.563 | -49.071  | -6.023 | 29.6484 | 2.25    | -92.4279  |
| 4892 | 0   | Extremo | -2.67  | -71.387  | -5.451 | 59.6126 | -3.4793 | -150.4146 |
| 4892 | 0.5 | Extremo | -2.67  | -58.674  | -5.451 | 59.6126 | -0.7539 | -117.8992 |
| 4892 | 1   | Extremo | -2.67  | -45.962  | -5.451 | 59.6126 | 1.9716  | -91.7401  |
| 4893 | 0   | Extremo | -2.012 | 30.3     | 6.257  | 25.1943 | 2.9024  | -103.785  |
| 4893 | 0.5 | Extremo | -2.012 | 43.013   | 6.257  | 25.1943 | -0.226  | -122.1133 |
| 4893 | 1   | Extremo | -2.012 | 55.725   | 6.257  | 25.1943 | -3.3543 | -146.7979 |
| 4893 | 0   | Extremo | -2.097 | 24.788   | 6.685  | 41.8838 | 3.2119  | -104.5664 |
| 4893 | 0.5 | Extremo | -2.097 | 37.501   | 6.685  | 41.8838 | -0.1305 | -120.1387 |
| 4893 | 1   | Extremo | -2.097 | 50.213   | 6.685  | 41.8838 | -3.4729 | -142.0673 |
| 4894 | 0   | Extremo | -2.962 | 15.843   | 5.832  | 29.6401 | 2.4209  | -146.7955 |
| 4894 | 0.5 | Extremo | -2.962 | 28.555   | 5.832  | 29.6401 | -0.495  | -157.8949 |

|      |     |         |        |         |        |         |         |           |
|------|-----|---------|--------|---------|--------|---------|---------|-----------|
| 4894 | 1   | Extremo | -2.962 | 41.268  | 5.832  | 29.6401 | -3.4109 | -175.3506 |
| 4894 | 0   | Extremo | -3.044 | 13.77   | 6.796  | 51.4141 | 2.9794  | -142.8594 |
| 4894 | 0.5 | Extremo | -3.044 | 26.482  | 6.796  | 51.4141 | -0.4184 | -152.9224 |
| 4894 | 1   | Extremo | -3.044 | 39.195  | 6.796  | 51.4141 | -3.8162 | -169.3416 |
| 4895 | 0   | Extremo | -3.536 | -3.742  | 3.184  | 34.297  | 0.7133  | -176.1364 |
| 4895 | 0.5 | Extremo | -3.536 | 8.97    | 3.184  | 34.297  | -0.8788 | -177.4435 |
| 4895 | 1   | Extremo | -3.536 | 21.683  | 3.184  | 34.297  | -2.471  | -185.1068 |
| 4895 | 0   | Extremo | -3.57  | -3.661  | 4.22   | 57.8515 | 1.22    | -170.4248 |
| 4895 | 0.5 | Extremo | -3.57  | 9.051   | 4.22   | 57.8515 | -0.8898 | -171.7722 |
| 4895 | 1   | Extremo | -3.57  | 21.764  | 4.22   | 57.8515 | -2.9995 | -179.4759 |
| 4896 | 0   | Extremo | -3.574 | -26.128 | -0.459 | 39.4004 | -1.1787 | -189.1887 |
| 4896 | 0.5 | Extremo | -3.574 | -13.415 | -0.459 | 39.4004 | -0.9492 | -179.3029 |
| 4896 | 1   | Extremo | -3.574 | -0.703  | -0.459 | 39.4004 | -0.7197 | -175.7733 |
| 4896 | 0   | Extremo | -3.621 | -24.967 | 0.353  | 63.947  | -0.8209 | -183.7007 |
| 4896 | 0.5 | Extremo | -3.621 | -12.255 | 0.353  | 63.947  | -0.9973 | -174.3952 |
| 4896 | 1   | Extremo | -3.621 | 0.458   | 0.353  | 63.947  | -1.1736 | -171.446  |
| 4897 | 0   | Extremo | -3.053 | -48.922 | -3.534 | 40.8285 | -2.4693 | -182.7528 |
| 4897 | 0.5 | Extremo | -3.053 | -36.21  | -3.534 | 40.8285 | -0.7022 | -161.4699 |
| 4897 | 1   | Extremo | -3.053 | -23.497 | -3.534 | 40.8285 | 1.065   | -146.5433 |
| 4897 | 0   | Extremo | -3.166 | -46.717 | -2.903 | 65.5122 | -2.1732 | -178.1778 |
| 4897 | 0.5 | Extremo | -3.166 | -34.004 | -2.903 | 65.5122 | -0.7214 | -157.9976 |
| 4897 | 1   | Extremo | -3.166 | -21.292 | -2.903 | 65.5122 | 0.7303  | -144.1737 |
| 4898 | 0   | Extremo | -2.079 | -67.987 | -4.751 | 31.9695 | -2.9517 | -153.3846 |
| 4898 | 0.5 | Extremo | -2.079 | -55.274 | -4.751 | 31.9695 | -0.5761 | -122.5693 |
| 4898 | 1   | Extremo | -2.079 | -42.562 | -4.751 | 31.9695 | 1.7996  | -98.1103  |
| 4898 | 0   | Extremo | -2.193 | -63.722 | -4.074 | 54.8602 | -2.587  | -149.7619 |
| 4898 | 0.5 | Extremo | -2.193 | -51.009 | -4.074 | 54.8602 | -0.5502 | -121.0792 |
| 4898 | 1   | Extremo | -2.193 | -38.297 | -4.074 | 54.8602 | 1.4865  | -98.7527  |
| 4899 | 0   | Extremo | -1.508 | 29.824  | 5.286  | 23.7496 | 2.4898  | -103.8146 |
| 4899 | 0.5 | Extremo | -1.508 | 42.536  | 5.286  | 23.7496 | -0.1532 | -121.9045 |
| 4899 | 1   | Extremo | -1.508 | 55.249  | 5.286  | 23.7496 | -2.7962 | -146.3508 |
| 4899 | 0   | Extremo | -1.648 | 26.772  | 5.594  | 41.2994 | 2.7667  | -102.6389 |
| 4899 | 0.5 | Extremo | -1.648 | 39.485  | 5.594  | 41.2994 | -0.0301 | -119.2032 |
| 4899 | 1   | Extremo | -1.648 | 52.197  | 5.594  | 41.2994 | -2.827  | -142.1238 |
| 4900 | 0   | Extremo | -2.194 | 11.992  | 5.109  | 27.5068 | 2.1555  | -143.6565 |
| 4900 | 0.5 | Extremo | -2.194 | 24.705  | 5.109  | 27.5068 | -0.3991 | -152.8307 |
| 4900 | 1   | Extremo | -2.194 | 37.417  | 5.109  | 27.5068 | -2.9537 | -168.3613 |
| 4900 | 0   | Extremo | -2.328 | 10.321  | 6.22   | 49.4933 | 2.8079  | -138.417  |
| 4900 | 0.5 | Extremo | -2.328 | 23.033  | 6.22   | 49.4933 | -0.302  | -146.7555 |
| 4900 | 1   | Extremo | -2.328 | 35.746  | 6.22   | 49.4933 | -3.4119 | -161.4502 |
| 4901 | 0   | Extremo | -2.576 | -4.785  | 2.882  | 35.4804 | 0.6861  | -165.1586 |
| 4901 | 0.5 | Extremo | -2.576 | 7.928   | 2.882  | 35.4804 | -0.7551 | -165.9444 |
| 4901 | 1   | Extremo | -2.576 | 20.64   | 2.882  | 35.4804 | -2.1963 | -173.0865 |
| 4901 | 0   | Extremo | -2.616 | -4.12   | 3.982  | 59.2968 | 1.2013  | -157.542  |
| 4901 | 0.5 | Extremo | -2.616 | 8.592   | 3.982  | 59.2968 | -0.7896 | -158.66   |
| 4901 | 1   | Extremo | -2.616 | 21.305  | 3.982  | 59.2968 | -2.7804 | -166.1342 |
| 4902 | 0   | Extremo | -2.601 | -20.542 | -0.236 | 46.8361 | -0.9381 | -176.5877 |
| 4902 | 0.5 | Extremo | -2.601 | -7.829  | -0.236 | 46.8361 | -0.8199 | -169.4951 |
| 4902 | 1   | Extremo | -2.601 | 4.883   | -0.236 | 46.8361 | -0.7017 | -168.7587 |
| 4902 | 0   | Extremo | -2.649 | -17.985 | 0.484  | 71.9263 | -0.6481 | -169.6653 |
| 4902 | 0.5 | Extremo | -2.649 | -5.273  | 0.484  | 71.9263 | -0.8901 | -163.8508 |
| 4902 | 1   | Extremo | -2.649 | 7.44    | 0.484  | 71.9263 | -1.1321 | -164.3925 |
| 4903 | 0   | Extremo | -2.257 | -42.544 | -2.856 | 50.9279 | -2.0146 | -178.4954 |
| 4903 | 0.5 | Extremo | -2.257 | -29.831 | -2.856 | 50.9279 | -0.5866 | -160.4017 |
| 4903 | 1   | Extremo | -2.257 | -17.119 | -2.856 | 50.9279 | 0.8414  | -148.6643 |
| 4903 | 0   | Extremo | -2.411 | -39.509 | -2.387 | 75.6699 | -1.7742 | -174.523  |
| 4903 | 0.5 | Extremo | -2.411 | -26.796 | -2.387 | 75.6699 | -0.5808 | -157.9469 |
| 4903 | 1   | Extremo | -2.411 | -14     |        |         |         |           |



|      |     |         |        |          |        |          |         |           |
|------|-----|---------|--------|----------|--------|----------|---------|-----------|
| 4906 | 1   | Extremo | -1.676 | 20.499   | 4.634  | 18.0805  | -2.6442 | -155.734  |
| 4906 | 0   | Extremo | -1.863 | -6.901   | 6.028  | 38.2547  | 2.8241  | -141.2161 |
| 4906 | 0.5 | Extremo | -1.863 | 5.811    | 6.028  | 38.2547  | -0.1899 | -140.9435 |
| 4906 | 1   | Extremo | -1.863 | 18.524   | 6.028  | 38.2547  | -3.204  | -147.0272 |
| 4907 | 0   | Extremo | -1.915 | -12.074  | 2.659  | 32.1318  | 0.6452  | -145.4899 |
| 4907 | 0.5 | Extremo | -1.915 | 0.639    | 2.659  | 32.1318  | -0.6844 | -142.631  |
| 4907 | 1   | Extremo | -1.915 | 13.351   | 2.659  | 32.1318  | -2.0139 | -146.1284 |
| 4907 | 0   | Extremo | -1.923 | -10.379  | 3.846  | 55.0121  | 1.1641  | -134.4487 |
| 4907 | 0.5 | Extremo | -1.923 | 2.334    | 3.846  | 55.0121  | -0.7588 | -132.4375 |
| 4907 | 1   | Extremo | -1.923 | 15.046   | 3.846  | 55.0121  | -2.6816 | -136.7826 |
| 4908 | 0   | Extremo | -1.939 | -3.239   | -0.113 | 55.2169  | -0.8039 | -147.1402 |
| 4908 | 0.5 | Extremo | -1.939 | 9.473    | -0.113 | 55.2169  | -0.7471 | -148.6986 |
| 4908 | 1   | Extremo | -1.939 | 22.186   | -0.113 | 55.2169  | -0.6904 | -156.6132 |
| 4908 | 0   | Extremo | -1.956 | 3.096    | 0.469  | 80.645   | -0.6233 | -136.9501 |
| 4908 | 0.5 | Extremo | -1.956 | 15.809   | 0.469  | 80.645   | -0.8579 | -141.6763 |
| 4908 | 1   | Extremo | -1.956 | 28.521   | 0.469  | 80.645   | -1.0926 | -152.7588 |
| 4909 | 0   | Extremo | -1.73  | -17.804  | -2.446 | 65.1418  | -1.7255 | -168.7845 |
| 4909 | 0.5 | Extremo | -1.73  | -5.092   | -2.446 | 65.1418  | -0.5027 | -163.0606 |
| 4909 | 1   | Extremo | -1.73  | 7.621    | -2.446 | 65.1418  | 0.7202  | -163.6929 |
| 4909 | 0   | Extremo | -1.934 | -11.036  | -2.295 | 90.5634  | -1.6029 | -165.3559 |
| 4909 | 0.5 | Extremo | -1.934 | 1.676    | -2.295 | 90.5634  | -0.4554 | -163.0159 |
| 4909 | 1   | Extremo | -1.934 | 14.389   | -2.295 | 90.5634  | 0.6921  | -167.0321 |
| 4910 | 0   | Extremo | -1.207 | -69.855  | -2.933 | 46.4327  | -1.8267 | -167.4207 |
| 4910 | 0.5 | Extremo | -1.207 | -57.142  | -2.933 | 46.4327  | -0.3602 | -135.6714 |
| 4910 | 1   | Extremo | -1.207 | -44.43   | -2.933 | 46.4327  | 1.1064  | -110.2784 |
| 4910 | 0   | Extremo | -1.429 | -68.998  | -1.878 | 66.9313  | -1.181  | -169.4718 |
| 4910 | 0.5 | Extremo | -1.429 | -56.285  | -1.878 | 66.9313  | -0.2422 | -138.1511 |
| 4910 | 1   | Extremo | -1.429 | -43.573  | -1.878 | 66.9313  | 0.6967  | -113.1867 |
| 4911 | 0   | Extremo | -1.204 | 68.093   | 3.565  | 28.8901  | 1.7017  | -111.0111 |
| 4911 | 0.5 | Extremo | -1.204 | 80.805   | 3.565  | 28.8901  | -0.081  | -148.2355 |
| 4911 | 1   | Extremo | -1.204 | 93.518   | 3.565  | 28.8901  | -1.8637 | -191.8162 |
| 4911 | 0   | Extremo | -1.513 | 68.286   | 3.089  | 43.4825  | 1.713   | -107.9619 |
| 4911 | 0.5 | Extremo | -1.513 | 80.999   | 3.089  | 43.4825  | 0.1685  | -145.2831 |
| 4911 | 1   | Extremo | -1.513 | 93.711   | 3.089  | 43.4825  | -1.3759 | -188.9606 |
| 4912 | 0   | Extremo | -1.482 | -74.605  | 4.327  | 1.8826   | 1.8954  | -188.6894 |
| 4912 | 0.5 | Extremo | -1.482 | -61.892  | 4.327  | 1.8826   | -0.2682 | -154.5651 |
| 4912 | 1   | Extremo | -1.482 | -49.18   | 4.327  | 1.8826   | -2.4318 | -126.797  |
| 4912 | 0   | Extremo | -1.59  | -81.213  | 6.271  | 18.7079  | 3.0948  | -182.3631 |
| 4912 | 0.5 | Extremo | -1.59  | -68.501  | 6.271  | 18.7079  | -0.0408 | -144.9346 |
| 4912 | 1   | Extremo | -1.59  | -55.788  | 6.271  | 18.7079  | -3.1764 | -113.8623 |
| 4913 | 0   | Extremo | -1.711 | -36.152  | 2.399  | 25.8681  | 0.5159  | -114.3797 |
| 4913 | 0.5 | Extremo | -1.711 | -23.44   | 2.399  | 25.8681  | -0.6837 | -99.4817  |
| 4913 | 1   | Extremo | -1.711 | -10.727  | 2.399  | 25.8681  | -1.8833 | -90.94    |
| 4913 | 0   | Extremo | -1.57  | -34.327  | 3.632  | 46.5378  | 0.9881  | -97.7387  |
| 4913 | 0.5 | Extremo | -1.57  | -21.615  | 3.632  | 46.5378  | -0.828  | -83.7532  |
| 4913 | 1   | Extremo | -1.57  | -8.902   | 3.632  | 46.5378  | -2.644  | -76.1238  |
| 4914 | 0   | Extremo | -1.851 | 36.313   | -0.108 | 59.4779  | -0.8091 | -86.9012  |
| 4914 | 0.5 | Extremo | -1.851 | 49.026   | -0.108 | 59.4779  | -0.7549 | -108.236  |
| 4914 | 1   | Extremo | -1.851 | 61.738   | -0.108 | 59.4779  | -0.7006 | -135.9271 |
| 4914 | 0   | Extremo | -1.809 | 50.261   | 0.256  | 83.9724  | -0.8155 | -69.2887  |
| 4914 | 0.5 | Extremo | -1.809 | 62.974   | 0.256  | 83.9724  | -0.9434 | -97.5975  |
| 4914 | 1   | Extremo | -1.809 | 75.686   | 0.256  | 83.9724  | -1.0712 | -132.2625 |
| 4915 | 0   | Extremo | -1.761 | 72.969   | -2.309 | 80.2832  | -1.6199 | -140.9363 |
| 4915 | 0.5 | Extremo | -1.761 | 85.682   | -2.309 | 80.2832  | -0.4652 | -180.599  |
| 4915 | 1   | Extremo | -1.761 | 98.394   | -2.309 | 80.2832  | 0.6895  | -226.618  |
| 4915 | 0   | Extremo | -2.065 | 94.033   | -2.825 | 106.1521 | -1.7626 | -135.7902 |
| 4915 | 0.5 | Extremo | -2.065 | 106.746  | -2.825 | 106.1521 | -0.35   | -185.9849 |
| 4915 | 1   | Extremo | -2.065 | 119.458  | -2.825 | 106.1521 | 1.0626  | -242.5359 |
| 4916 | 0   | Extremo | -1.059 | -106.772 | -2.117 | 36.08    | -1.325  | -218.3203 |
| 4916 | 0.5 | Extremo | -1.059 | -94.059  | -2.117 | 36.08    | -0.2664 | -168.1125 |
| 4916 | 1   | Extremo | -1.059 | -81.347  | -2.117 | 36.08    | 0.7922  | -124.2609 |
| 4916 | 0   | Extremo | -1.259 | -112.73  | -0.596 | 52.3655  | -0.3297 | -230.4126 |
| 4916 | 0.5 | Extremo | -1.259 | -100.017 | -0.596 | 52.3655  | -0.0316 | -177.2259 |
| 4916 | 1   | Extremo | -1.259 | -87.305  | -0.596 | 52.3655  | 0.2665  | -130.3954 |
| 4917 | 0   | Extremo | -2.755 | 242.11   | 1.895  | 12.9137  | 0.9017  | -65.575   |
| 4917 | 0.5 | Extremo | -2.755 | 254.822  | 1.895  | 12.9137  | -0.0456 | -189.8079 |
| 4917 | 1   | Extremo | -2.755 | 267.535  | 1.895  | 12.9137  | -0.993  | -320.3971 |
| 4917 | 0   | Extremo | -3.532 | 254.262  | 0.023  | 23.8552  | 0.3934  | -57.688   |
| 4917 | 0.5 | Extremo | -3.532 | 266.975  | 0.023  | 23.8552  | 0.382   | -187.9973 |
| 4917 | 1   | Extremo | -3.532 | 279.687  | 0.023  | 23.8552  | 0.3706  | -324.6628 |
| 4918 | 0   | Extremo | -1.252 | -287.492 | 3.913  | 20.4202  | 1.6694  | -317.4083 |
| 4918 | 0.5 | Extremo | -1.252 | -274.78  | 3.913  | 20.4202  | -0.2873 | -176.8401 |

|      |     |         |        |          |        |         |         |           |
|------|-----|---------|--------|----------|--------|---------|---------|-----------|
| 4918 | 1   | Extremo | -1.252 | -262.067 | 3.913  | 20.4202 | -2.244  | -42.6283  |
| 4918 | 0   | Extremo | -0.213 | -308.237 | 6.81   | 36.1193 | 3.4655  | -316.6538 |
| 4918 | 0.5 | Extremo | -0.213 | -295.525 | 6.81   | 36.1193 | 0.0605  | -165.7132 |
| 4918 | 1   | Extremo | -0.213 | -282.812 | 6.81   | 36.1193 | -3.3445 | -21.1288  |
| 4919 | 0   | Extremo | -2.611 | -62.71   | 1.814  | 30.5391 | 0.1001  | -69.7441  |
| 4919 | 0.5 | Extremo | -2.611 | -49.998  | 1.814  | 30.5391 | -0.8068 | -41.5672  |
| 4919 | 1   | Extremo | -2.611 | -37.285  | 1.814  | 30.5391 | -1.7138 | -19.7465  |
| 4919 | 0   | Extremo | -2.121 | -60.096  | 2.826  | 48.967  | 0.3261  | -45.5698  |
| 4919 | 0.5 | Extremo | -2.121 | -47.383  | 2.826  | 48.967  | -1.0869 | -18.7     |
| 4919 | 1   | Extremo | -2.121 | -34.671  | 2.826  | 48.967  | -2.4999 | 1.8135    |
| 4920 | 0   | Extremo | -3.405 | 82.889   | -0.317 | 42.6184 | -1.0218 | -7.2057   |
| 4920 | 0.5 | Extremo | -3.405 | 95.602   | -0.317 | 42.6184 | -0.8631 | -51.8285  |
| 4920 | 1   | Extremo | -3.405 | 108.314  | -0.317 | 42.6184 | -0.7043 | -102.8075 |
| 4920 | 0   | Extremo | -3.502 | 106.2    | -0.31  | 62.2341 | -1.3313 | 21.0216   |
| 4920 | 0.5 | Extremo | -3.502 | 118.912  | -0.31  | 62.2341 | -1.1764 | -35.2565  |
| 4920 | 1   | Extremo | -3.502 | 131.625  | -0.31  | 62.2341 | -1.0215 | -97.8908  |
| 4921 | 0   | Extremo | -3.866 | 344.3    | -2.745 | 44.9603 | -1.8017 | -46.2596  |
| 4921 | 0.5 | Extremo | -3.866 | 357.013  | -2.745 | 44.9603 | -0.429  | -221.5879 |
| 4921 | 1   | Extremo | -3.866 | 369.725  | -2.745 | 44.9603 | 0.9436  | -403.2724 |
| 4921 | 0   | Extremo | -4.762 | 409.369  | -4.842 | 62.9871 | -2.5748 | -28.6726  |
| 4921 | 0.5 | Extremo | -4.762 | 422.081  | -4.842 | 62.9871 | -0.1539 | -236.5352 |
| 4921 | 1   | Extremo | -4.762 | 434.794  | -4.842 | 62.9871 | 2.2671  | -450.7541 |
| 4922 | 0   | Extremo | -0.618 | -303.865 | -1.191 | 36.0189 | -0.8217 | -381.4697 |
| 4922 | 0.5 | Extremo | -0.618 | -291.152 | -1.191 | 36.0189 | -0.2261 | -232.7156 |
| 4922 | 1   | Extremo | -0.618 | -278.44  | -1.191 | 36.0189 | 0.3695  | -90.3176  |
| 4922 | 0   | Extremo | 0.166  | -342.573 | 1.161  | 49.4794 | 0.7607  | -422.0742 |
| 4922 | 0.5 | Extremo | 0.166  | -329.86  | 1.161  | 49.4794 | 0.18    | -253.9659 |
| 4922 | 1   | Extremo | 0.166  | -317.148 | 1.161  | 49.4794 | -0.4007 | -92.2139  |
| 4923 | 0   | Extremo | -3.176 | 55.227   | 0.875  | -5.088  | 0.3227  | -82.6622  |
| 4923 | 0.5 | Extremo | -3.176 | 66.477   | 0.875  | -5.088  | -0.1146 | -113.0881 |
| 4923 | 1   | Extremo | -3.176 | 77.727   | 0.875  | -5.088  | -0.5519 | -149.1389 |
| 4923 | 0   | Extremo | -2.155 | 59.838   | -0.239 | 1.2266  | 0.1757  | -75.4115  |
| 4923 | 0.5 | Extremo | -2.155 | 71.088   | -0.239 | 1.2266  | 0.2953  | -108.1432 |
| 4923 | 1   | Extremo | -2.155 | 82.338   | -0.239 | 1.2266  | 0.415   | -146.4999 |
| 4924 | 0   | Extremo | -4.87  | -68.124  | 2.119  | 35.4432 | 0.6885  | -132.2747 |
| 4924 | 0.5 | Extremo | -4.87  | -56.874  | 2.119  | 35.4432 | -0.3711 | -101.0252 |
| 4924 | 1   | Extremo | -4.87  | -45.624  | 2.119  | 35.4432 | -1.4307 | -75.4007  |
| 4924 | 0   | Extremo | -3.824 | -63.97   | 3.663  | 48.1775 | 1.7526  | -118.5847 |
| 4924 | 0.5 | Extremo | -3.824 | -52.72   | 3.663  | 48.1775 | -0.0788 | -89.412   |
| 4924 | 1   | Extremo | -3.824 | -41.47   | 3.663  | 48.1775 | -1.9102 | -65.8643  |
| 4925 | 0   | Extremo | -6.567 | -13.965  | 1.036  | 29.9117 | -0.321  | -41.0717  |
| 4925 | 0.5 | Extremo | -6.567 | -2.715   | 1.036  | 29.9117 | -0.8392 | -36.9016  |
| 4925 | 1   | Extremo | -6.567 | 8.535    | 1.036  | 29.9117 | -1.3573 | -38.3566  |
| 4925 | 0   | Extremo | -6.45  | 1.76     | 1.696  | 43.6531 | -0.2443 | -17.2899  |
| 4925 | 0.5 | Extremo | -6.45  | 13.01    | 1.696  | 43.6531 | -1.0925 | -20.9824  |
| 4925 | 1   | Extremo | -6.45  | 24.26    | 1.696  | 43.6531 | -1.9406 | -30.2999  |
| 4926 | 0   | Extremo | -6.875 | 73.476   | -0.407 | 20.3201 | -1.0833 | -10.8208  |
| 4926 | 0.5 | Extremo | -6.875 | 84.726   | -0.407 | 20.3201 | -0.8799 | -50.3711  |
| 4926 | 1   | Extremo | -6.875 | 95.976   | -0.407 | 20.3201 | -0.6765 | -95.5465  |
| 4926 | 0   | Extremo | -6.948 | 101.665  | -0.663 | 32.6508 | -1.4856 | 11.5397   |
| 4926 | 0.5 | Extremo | -6.948 | 112.915  | -0.663 | 32.6508 | -1.154  | -42.1055  |
| 4926 | 1   | Extremo | -6.948 | 124.165  | -0.663 | 32.6508 | -0.8224 | -101.3756 |
| 4927 | 0   | Extremo | -5.537 | 113.035  | -1.783 | 4.6712  | -1.3565 | -80.0095  |
| 4927 | 0.5 | Extremo | -5.537 | 124.285  | -1.783 | 4.6712  | -0.4648 | -139.3395 |
| 4927 | 1   | Extremo | -5.537 | 135.535  | -1.783 | 4.6712  | 0.4269  | -204.2945 |
| 4927 | 0   | Extremo | -4.891 | 144.533  | -3.132 | 12.973  | -1.7732 | -74.1709  |
| 4927 | 0.5 | Extremo | -4.891 | 155.783  | -3.132 | 12.973  | -0.207  | -149.2501 |
| 4927 | 1   | Extremo | -4.891 |          |        |         |         |           |



# ANEJO Nº 10

## REPLANTEO







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## 1. INTRODUCCIÓN

En el presente anejo se dispondrán los datos necesarios para la correcta materialización de la obra en el terreno, con una precisión adecuada. Para ello, al igual que se realizó en el levantamiento topográfico, se utilizara el sistema de referencia UTM, estando todas las coordenadas de los puntos dentro de la pagina 16-P.

En primer lugar se detalla la ubicación de las bases de replanteo, imprescindibles para ubicar en el terreno los puntos singulares. A continuación y de acuerdo con el proceso constructivo, se detallaran las coordenadas de la ubicación de pilotes, encepados, zapatas, pórtico, estribos y pilas. Por último se muestran las coordenadas de las secciones más representativas del tablero.

Todos los datos reflejados en este anejo se tomara especialmente en cuenta en el montaje de cimbras, encofrados, así como para la colocación de pilotes.

## 2. BASES DE REPLANTEO

### 2.1. CRITERIO DE SELECCIÓN

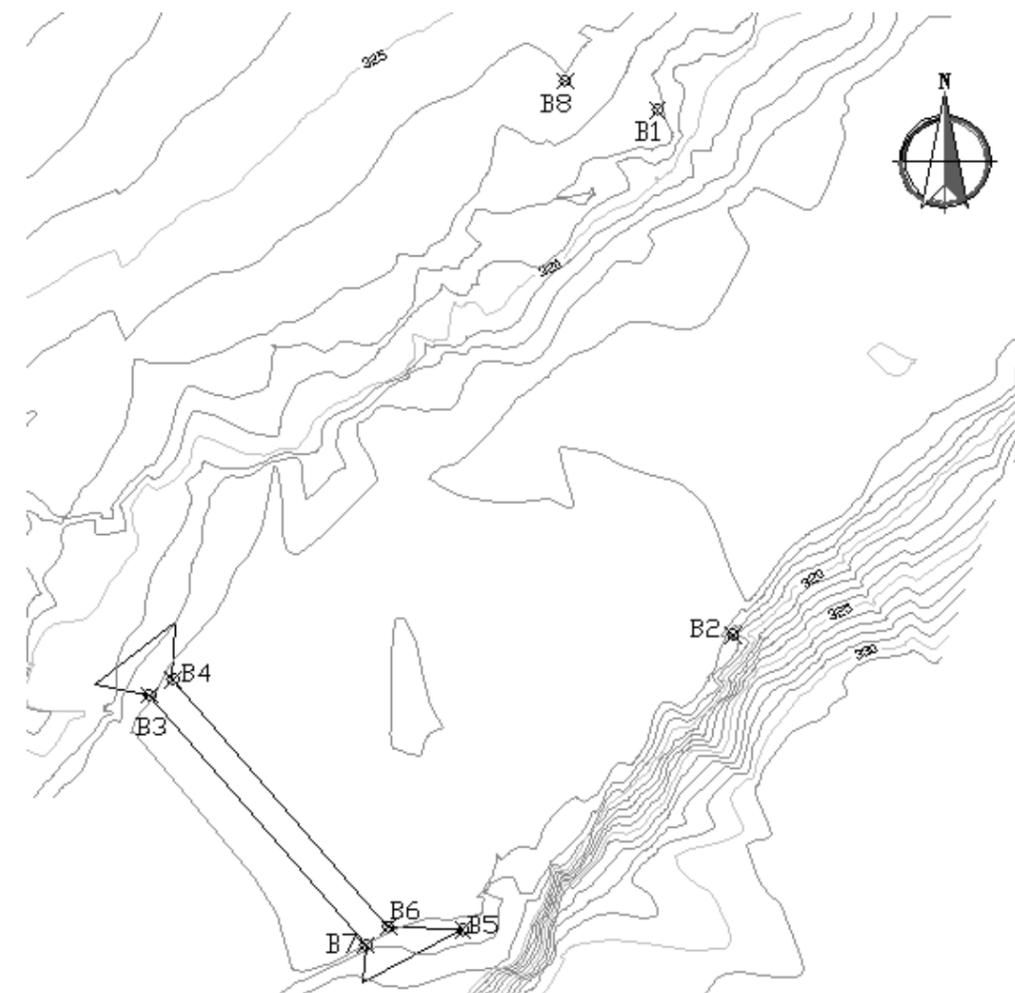
En función del levantamiento topográfico, se tomaron unos puntos inamovibles, tanto en el terreno, como en obras de hormigón cercanas. También fue importante para la selección de las bases, que desde ellas se viese toda la obra desde diferentes ángulos.

### 2.2. BREVE DESCRIPCIÓN DE LAS BASES

Como se ha mencionado, algunas de las bases son puntos singulares de estructuras de hormigón ya existentes, sin embargo otras, son puntos del terreno, en los que se clavaron pines (varillas de acero corrugado), a fin de consolidarlo posteriormente con un pequeño mojón de concreto.

- **B1:** Punto situado en el estribo izquierdo (San Dionisio) del puente derribado por el huracán Mitch.
- **B2:** Punto situado en un orificio de una roca de la margen derecha del río, cercana al sondeo N°3.
- **B3, B4, B5, B6 Y B7:** Puntos del actual puente vado.
- **B8:** Punto del terreno en la margen izquierda.

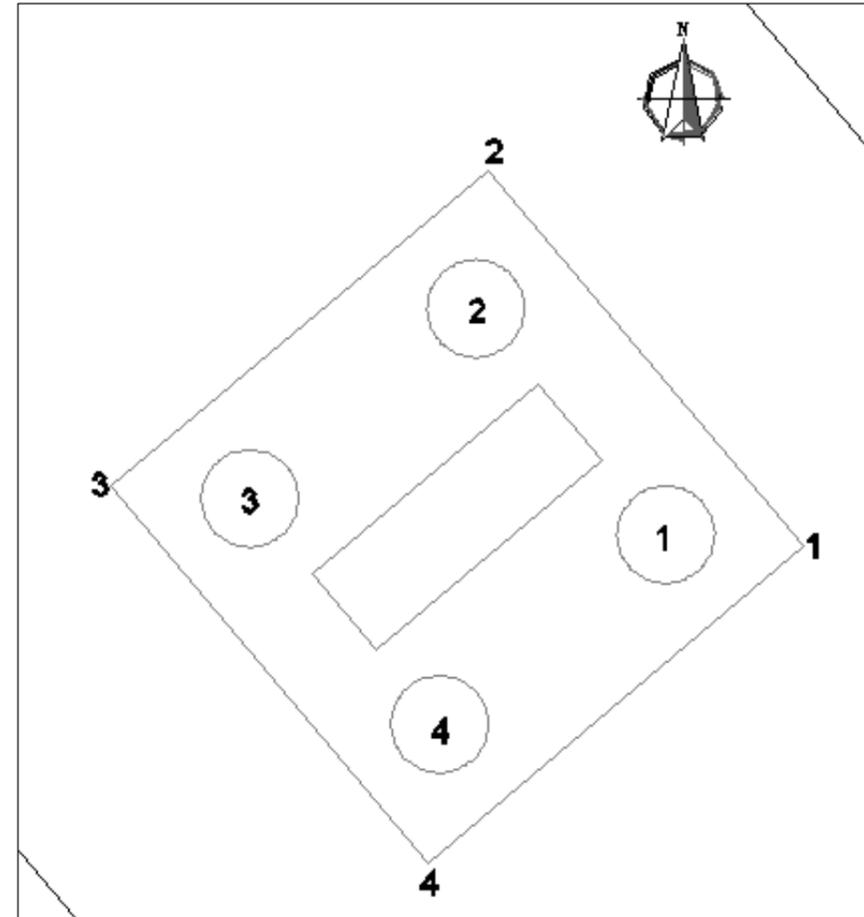
Los puntos B2 y B8 quedaron pendientes de afianzar con concreto.



### 2.3. COORDENADAS

En la siguiente tabla se muestran las coordenadas de las bases de replanteo:

| BASE | X UTM      | Y UTM       | Z (msnm) |
|------|------------|-------------|----------|
| B1   | 628680.477 | 1405973.945 | 324.057  |
| B2   | 628694.105 | 1405879.560 | 318.480  |
| B3   | 628589.115 | 1405868.665 | 319.050  |
| B4   | 628593.299 | 1405871.529 | 319.050  |
| B5   | 628645.471 | 1405826.500 | 319.060  |
| B6   | 628632.091 | 1405827.068 | 319.050  |
| B7   | 628627.991 | 1405823.756 | 319.050  |
| B8   | 628663.836 | 1405979.116 | 323.900  |



### 3. COORDENADAS DE LOS PUNTOS SINGULARES

La numeración que se ha asignado a cada una de las zapatas y las pilas, están reflejadas en los planos de definición general.

#### 3.1. CIMENTACIONES

Para el replanteo de las cimentaciones de los pilotes, encepados y zapatas se seguirá el orden descrito en la figura siguiente.

La denominación de cada punto singular, constará de dos números, el primero de ellos corresponde a la cimentación en la que se encuentra ubicada (ver planos de definición general), y el segundo de ellos se refiere al punto concreto dentro de la cimentación.

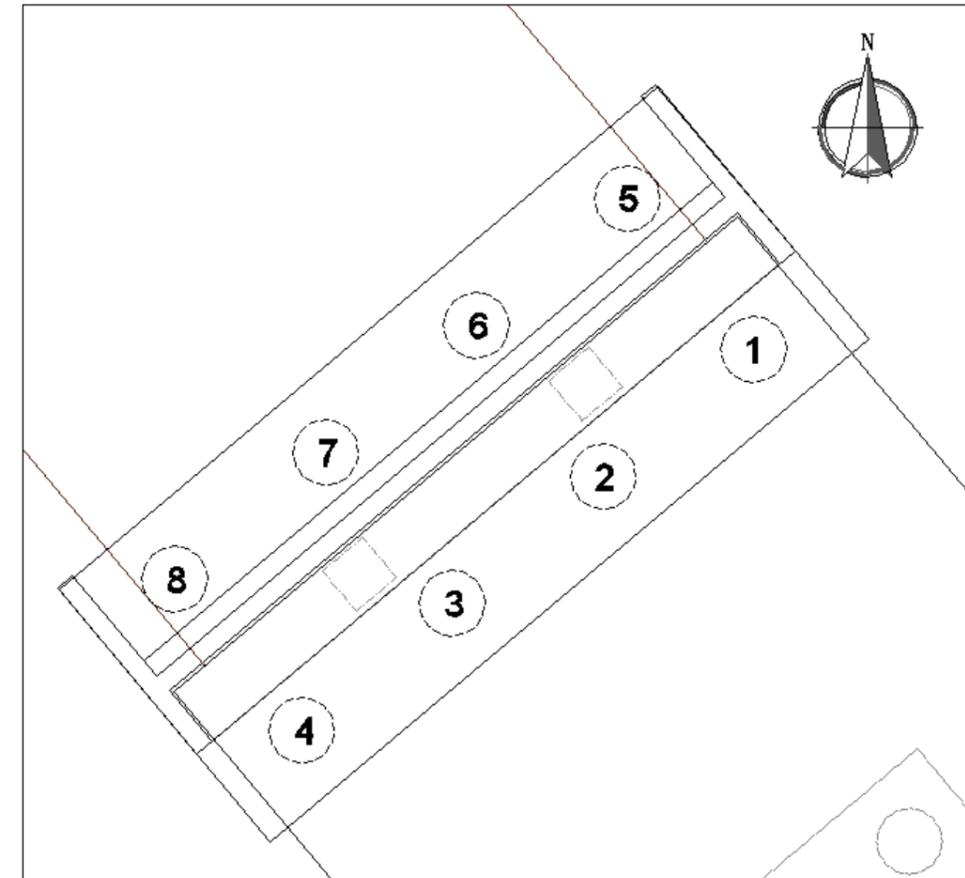
#### 3.1.1. PILOTES

Para el replanteo de los pilotes se hará una división entre los pilotes situados bajo los encepados de las pilas y los pilotes situados bajo el encepado del estribo 2.

##### 3.1.1.1. PILOTES DE LOS ENCEPADOS DE LAS PILAS

El replanteo de los pilotes se realizará mediante el punto central de cada uno de ellos, cuyas coordenadas se muestran a continuación. La numeración que siguen es la descrita anteriormente en el apartado "cimentaciones":

| PILOTE | X UTM      | Y UTM       | Z msnm  |
|--------|------------|-------------|---------|
| 4-1    | 628639.972 | 1405949.252 | 320.600 |
| 4-2    | 628638.042 | 1405951.549 | 320.600 |
| 4-3    | 628635.746 | 1405949.618 | 320.600 |
| 4-4    | 628637.676 | 1405947.322 | 320.600 |
| 5-1    | 628630.321 | 1405960.735 | 320.600 |
| 5-2    | 628628.391 | 1405963.031 | 320.600 |
| 5-3    | 628626.094 | 1405961.101 | 320.600 |
| 5-4    | 628628.024 | 1405958.804 | 320.600 |
| 6-1    | 628620.669 | 1405972.217 | 320.600 |
| 6-2    | 628618.739 | 1405974.514 | 320.600 |
| 6-3    | 628616.443 | 1405972.584 | 320.600 |
| 6-4    | 628618.373 | 1405970.287 | 320.600 |
| 7-1    | 628611.018 | 1405983.700 | 320.600 |
| 7-2    | 628609.088 | 1405985.996 | 320.600 |
| 7-3    | 628606.791 | 1405984.066 | 320.600 |
| 7-4    | 628608.721 | 1405981.770 | 320.600 |
| 8-1    | 628601.366 | 1405995.182 | 320.600 |
| 8-2    | 628599.436 | 1405997.479 | 320.600 |
| 8-3    | 628597.140 | 1405995.549 | 320.600 |
| 8-4    | 628599.070 | 1405993.252 | 320.600 |



### 3.1.1.2. PILOTES DEL ENCEPADO DEL ESTRIBO 2

Para la denominación de los puntos centrales de los pilotes que se encuentran bajo el estribo 2, se utilizará el criterio de la figura de a continuación. Se muestran las coordenadas de cada uno de éstos pilotes, con la cota Z correspondiente a su cara superior:

| PILOTE | X UTM      | Y UTM       | Z msnm  |
|--------|------------|-------------|---------|
| 1      | 628597.068 | 1406004.959 | 325.500 |
| 2      | 628594.771 | 1406003.029 | 325.500 |
| 3      | 628592.475 | 1406001.098 | 325.500 |
| 4      | 628590.178 | 1405999.168 | 325.500 |
| 5      | 628595.137 | 1406007.256 | 325.500 |
| 6      | 628592.841 | 1406005.325 | 325.500 |
| 7      | 628590.544 | 1406003.395 | 325.500 |
| 8      | 628588.248 | 1406001.465 | 325.500 |

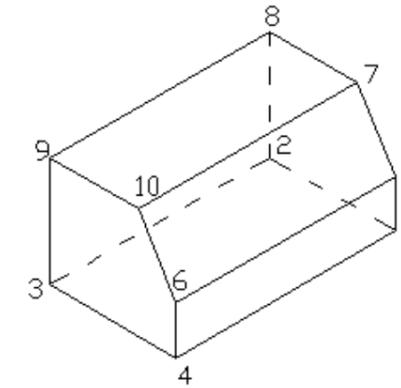
### 3.1.2. ZAPATAS

#### 3.1.2.1. ENCEPADOS DE LAS PILAS

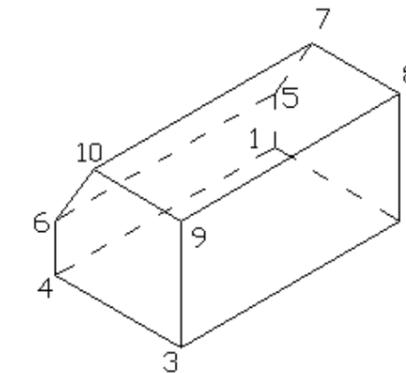
Como es obvio, la cota inferior del encepado será la misma que la superior del pilote (320.600 msnm).

La siguiente tabla muestra las coordenadas de las cuatro esquinas superiores de cada una de los encepados que se encuentran bajo pilas:

| PUNTO ZAPATA | X UTM      | Y UTM       | Z msnm  |
|--------------|------------|-------------|---------|
| 4-1          | 628641.381 | 1405949.130 | 322.350 |
| 4-2          | 628638.164 | 1405952.958 | 322.350 |
| 4-3          | 628634.337 | 1405949.741 | 322.350 |
| 4-4          | 628637.554 | 1405945.913 | 322.350 |
| 5-1          | 628631.730 | 1405960.613 | 322.350 |
| 5-2          | 628628.513 | 1405964.440 | 322.350 |
| 5-3          | 628624.685 | 1405961.223 | 322.350 |
| 5-4          | 628627.902 | 1405957.396 | 322.350 |
| 6-1          | 628622.078 | 1405972.095 | 322.350 |
| 6-2          | 628618.861 | 1405975.923 | 322.350 |
| 6-3          | 628615.034 | 1405972.706 | 322.350 |
| 6-4          | 628618.251 | 1405968.878 | 322.350 |
| 7-1          | 628612.427 | 1405983.578 | 322.350 |
| 7-2          | 628609.210 | 1405987.405 | 322.350 |
| 7-3          | 628605.382 | 1405984.188 | 322.350 |
| 7-4          | 628608.599 | 1405980.361 | 322.350 |
| 8-1          | 628602.775 | 1405995.060 | 322.350 |
| 8-2          | 628599.558 | 1405998.888 | 322.350 |
| 8-3          | 628595.731 | 1405995.671 | 322.350 |
| 8-4          | 628598.948 | 1405991.843 | 322.350 |



ZAPATA PILA 3



ZAPATA ESTRIBO 1

A continuación se muestra cada una de las coordenadas de dichos puntos singulares:

### 3.1.2.1. ZAPATAS DEL PÓRTICO

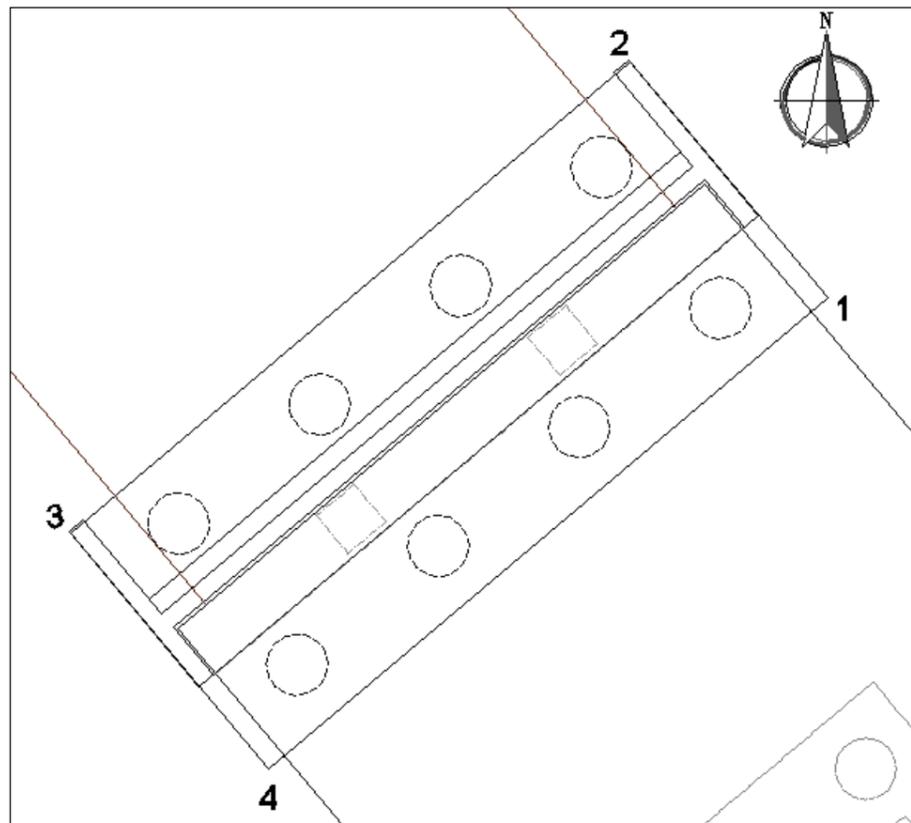
En la siguiente figura, se describe la denominación que se utilizará para cada uno de los puntos singulares de las zapatas que se encuentran bajo el pórtico:

| ZAPATA ESTRIBO 1 | X UTM      | Y UTM       | Z msnm  |
|------------------|------------|-------------|---------|
| 1                | 628706.872 | 1405872.769 | 312.786 |
| 2                | 628710.089 | 1405868.941 | 312.786 |
| 3                | 628704.731 | 1405864.437 | 312.786 |
| 4                | 628709.446 | 1405869.707 | 312.786 |
| 5                | 628706.872 | 1405872.769 | 314.786 |
| 6                | 628709.446 | 1405869.707 | 314.786 |
| 7                | 628707.644 | 1405871.850 | 316.784 |
| 8                | 628710.089 | 1405868.941 | 316.784 |
| 9                | 628704.731 | 1405864.437 | 316.784 |
| 10               | 628702.286 | 1405867.346 | 316.784 |

| ZAPATA<br>PILA 6 | X UTM      | Y UTM       | Z msnm  |
|------------------|------------|-------------|---------|
| 1                | 628651.416 | 1405938.746 | 312.786 |
| 2                | 628648.202 | 1405942.573 | 312.786 |
| 3                | 628642.844 | 1405938.069 | 312.786 |
| 4                | 628646.058 | 1405934.242 | 312.786 |
| 5                | 628651.416 | 1405938.746 | 314.786 |
| 6                | 628646.058 | 1405934.242 | 314.786 |
| 7                | 628650.644 | 1405939.664 | 316.784 |
| 8                | 628648.202 | 1405942.573 | 316.784 |
| 9                | 628642.844 | 1405938.069 | 316.784 |
| 10               | 628645.286 | 1405935.160 | 316.784 |

### 3.1.2.2. ENCEPADO DEL ESTRIBO 2

La cota inferior del encepado del estribo 2, será la misma que la superior de sus pilotes (325.500 msnm), por lo que en la tabla se reflejan las cotas de las cuatro esquinas superiores del encepado según muestra la siguiente figura:



En la tabla se muestran las coordenadas de dichos puntos singulares:

| PUNTO<br>ZAPATA | X UTM      | Y UTM       | Z msnm  |
|-----------------|------------|-------------|---------|
| 1               | 628598.821 | 1406005.127 | 327.250 |
| 2               | 628595.604 | 1406008.954 | 327.250 |
| 3               | 628586.494 | 1406001.297 | 327.250 |
| 4               | 628589.712 | 1405997.470 | 327.250 |

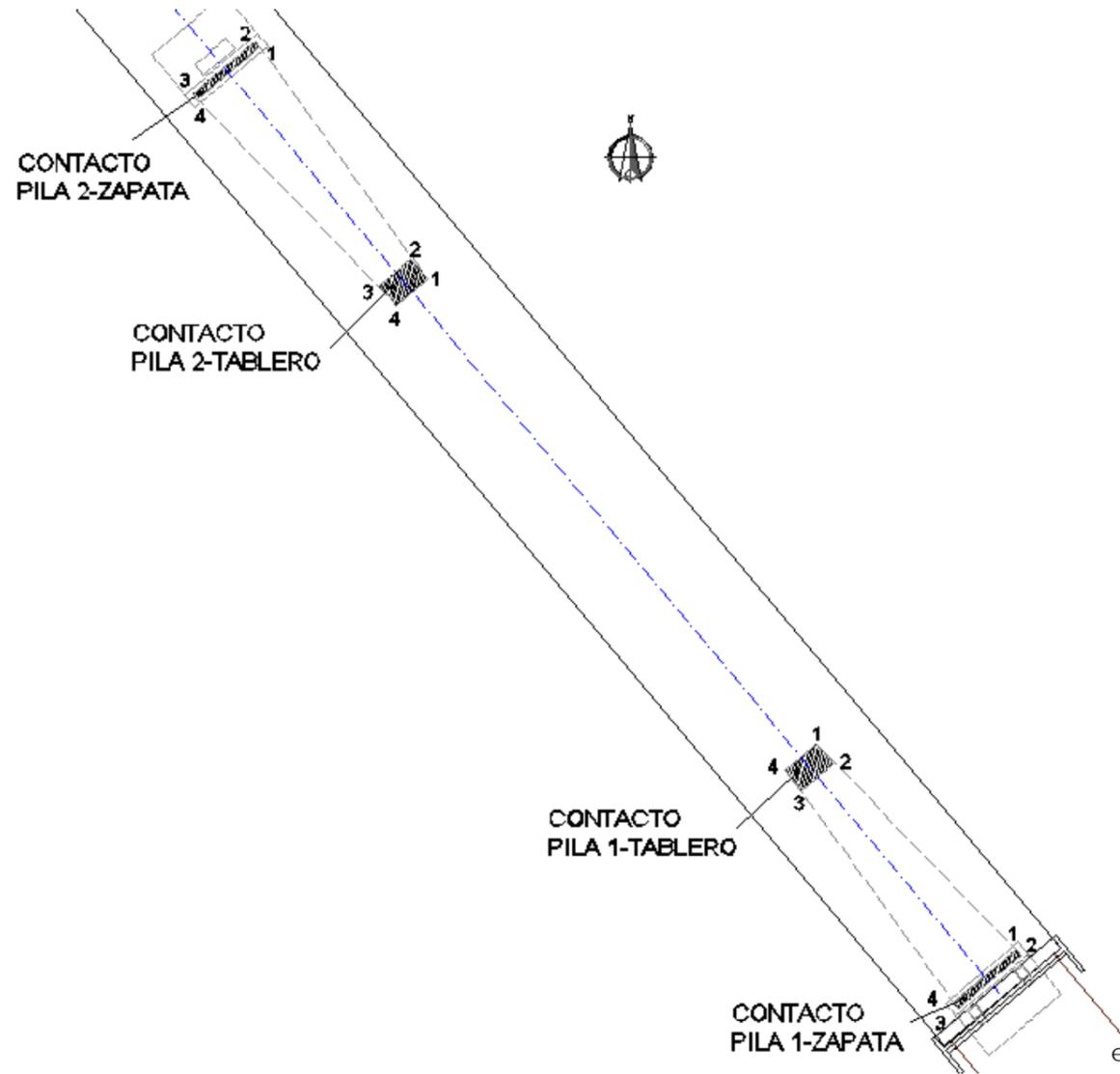
### 3.2. PILAS

La numeración de las pilas utilizada, se encuentra perfectamente descrita en los planos de definición general. Para la realización del replanteo, se han dividido todas las pilas en pilas inclinadas (la 1 y la 2), y pilas verticales (las pilas 3, 4, 5, 6, 6, 7 y 8).

#### 3.2.1. PILAS INCLINADAS

Las pilas inclinadas, al variar su anchura linealmente, quedarán perfectamente definidas por dos secciones, en éste caso, la inferior y la superior, que coinciden con los contactos de éstas con las zapatas y con el tablero. De ésta forma bastará con interpolar linealmente para sacar cualquier coordenada intermedia.





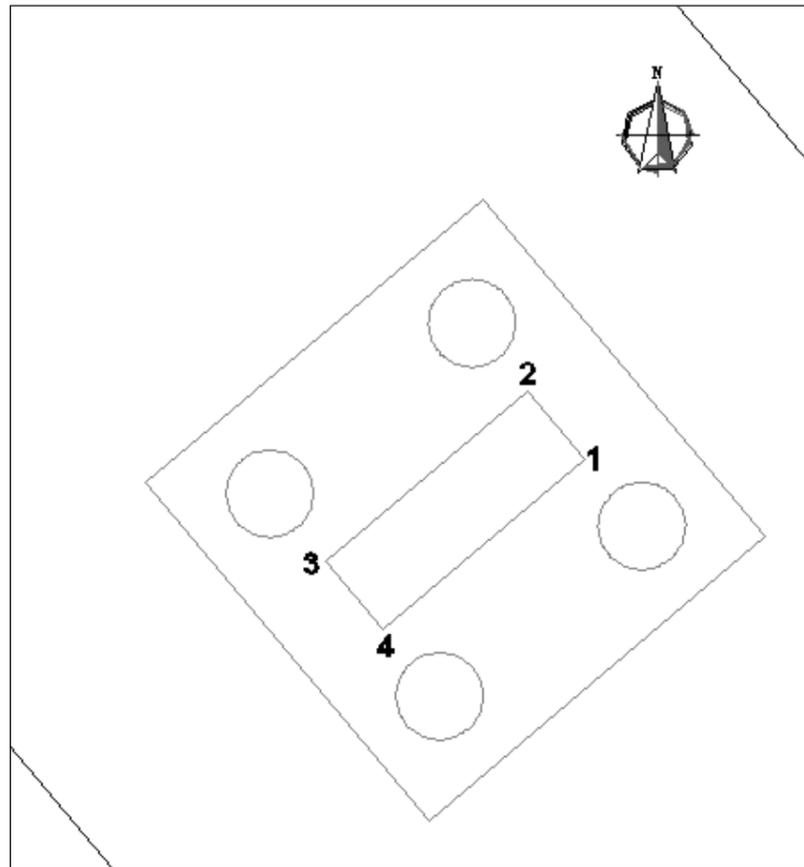
Coordenadas de los contactos con las zapatas y el tablero de las pilas inclinadas:

| SECCIÓN                 | PUNTO | X UTM      | Y UTM       | Z msnm  |
|-------------------------|-------|------------|-------------|---------|
| CONTACTO PILA 1-ZAPATA  | 1     | 628706.710 | 1405872.185 | 315.358 |
|                         | 2     | 628707.041 | 1405871.791 | 316.215 |
|                         | 3     | 628702.448 | 1405867.930 | 316.215 |
|                         | 4     | 628702.117 | 1405868.324 | 315.358 |
| CONTACTO PILA 1-TABLERO | 1     | 628691.998 | 1405887.357 | 328.003 |
|                         | 2     | 628693.210 | 1405885.914 | 328.039 |
|                         | 3     | 628690.914 | 1405883.984 | 328.039 |
|                         | 4     | 628689.701 | 1405885.426 | 328.003 |
| CONTACTO PILA 2-ZAPATA  | 1     | 628650.813 | 1405938.686 | 315.358 |
|                         | 2     | 628650.482 | 1405939.080 | 316.215 |
|                         | 3     | 628645.889 | 1405935.220 | 316.215 |
|                         | 4     | 628646.220 | 1405934.826 | 315.358 |
| CONTACTO PILA 2-TABLERO | 1     | 628663.228 | 1405921.584 | 328.003 |
|                         | 2     | 628662.016 | 1405923.027 | 328.039 |
|                         | 3     | 628659.719 | 1405921.096 | 328.039 |
|                         | 4     | 628660.932 | 1405919.654 | 328.003 |

### 3.2.2. PILAS VERTICALES

Para la denominación de las pilas verticales, se seguirá el mismo criterio que con los encepados y los pilotes.

La denominación se compondrá de dos números, el primero de ellos indica la posición de la pila según los planos de definición general, el segundo de ellos, indica la posición del punto singular dentro de esa pila según se describe en la figura a continuación:



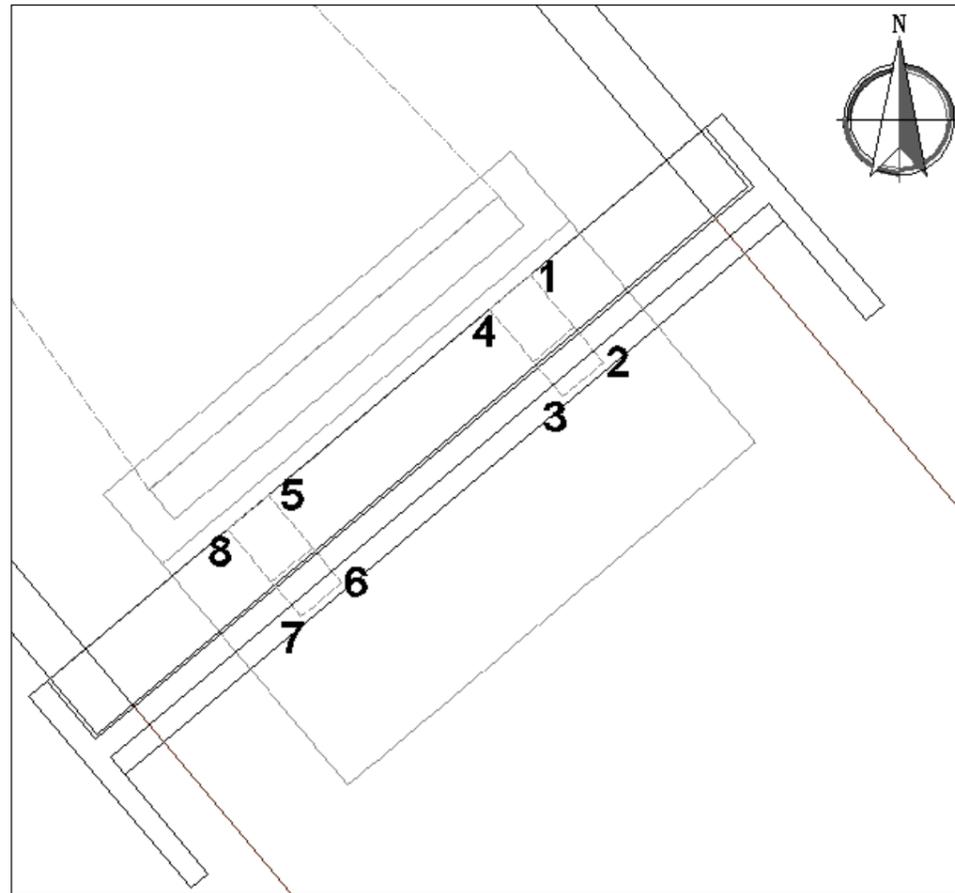
A partir de la pila 3 en adelante, el tablero tiene sección constante, por lo que todas las pilas a partir de la 3, tendrán la misma cota superior (328,350 msnm), es por esto que en los puntos que se describen a continuación, se refleja la cota de los cuatro puntos inferiores de cada pila, ya que no es la misma para todas:

| PUNTO PILA | X UTM      | Y UTM       | Z msnm  |
|------------|------------|-------------|---------|
| 3-1        | 628648,980 | 1405938,535 | 316,785 |
| 3-2        | 628648,337 | 1405939,301 | 316,785 |
| 3-3        | 628646,040 | 1405937,370 | 316,785 |
| 3-4        | 628646,684 | 1405936,605 | 316,785 |
| 4-1        | 628639,329 | 1405950,018 | 322,350 |
| 4-2        | 628638,685 | 1405950,783 | 322,350 |
| 4-3        | 628636,389 | 1405948,853 | 322,350 |
| 4-4        | 628637,032 | 1405948,087 | 322,350 |
| 5-1        | 628629,677 | 1405961,500 | 322,350 |
| 5-2        | 628629,034 | 1405962,266 | 322,350 |
| 5-3        | 628626,737 | 1405960,335 | 322,350 |
| 5-4        | 628627,381 | 1405959,570 | 322,350 |
| 6-1        | 628620,026 | 1405972,983 | 322,350 |
| 6-2        | 628619,382 | 1405973,748 | 322,350 |
| 6-3        | 628617,086 | 1405971,818 | 322,350 |
| 6-4        | 628617,729 | 1405971,052 | 322,350 |
| 7-1        | 628610,374 | 1405984,465 | 322,350 |
| 7-2        | 628609,731 | 1405985,231 | 322,350 |
| 7-3        | 628607,434 | 1405983,301 | 322,350 |
| 7-4        | 628608,078 | 1405982,535 | 322,350 |
| 8-1        | 628600,723 | 1405995,948 | 322,350 |
| 8-2        | 628600,079 | 1405996,713 | 322,350 |
| 8-3        | 628597,783 | 1405994,783 | 322,350 |
| 8-4        | 628598,426 | 1405994,018 | 322,350 |

### 3.3. ESTRIBOS

#### 3.3.1. ESTRIBO 1

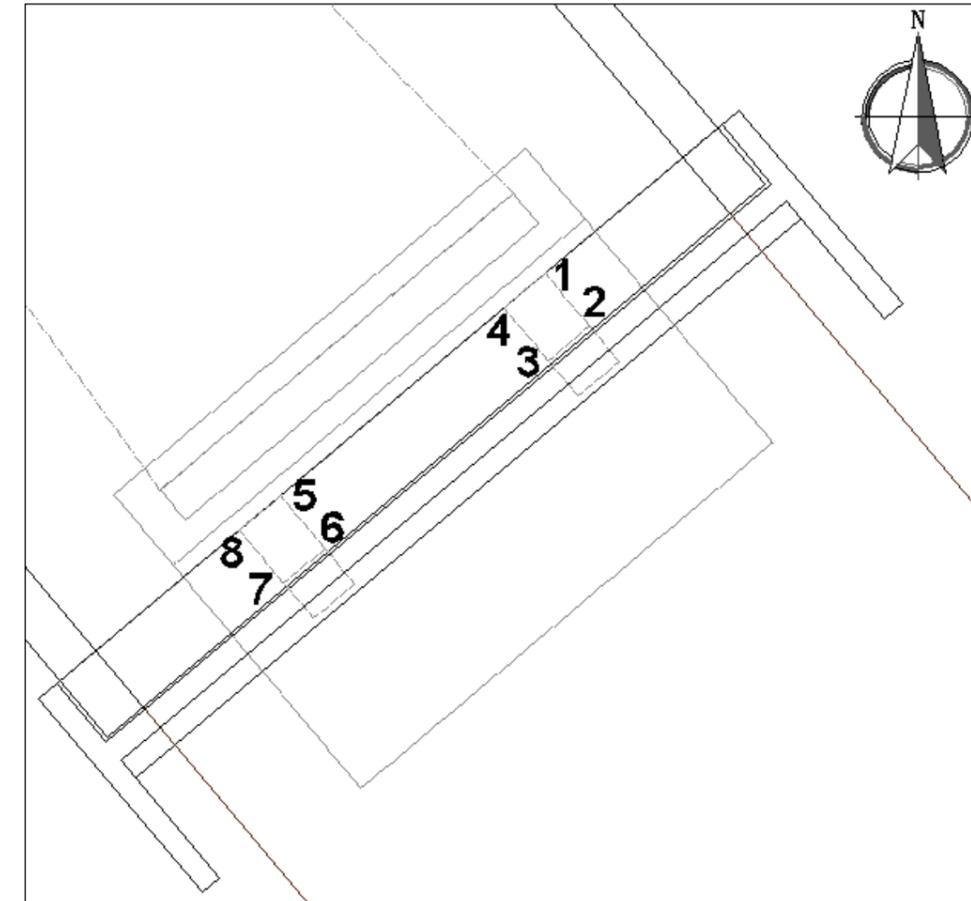
Los puntos utilizados para el replanteo del estribo 1 serán los que se muestran en la figura de a continuación:



Las coordenadas de dichos puntos son los siguientes:

| PUNTO ESTRIBO | X UTM      | Y UTM       | Z msnm  |
|---------------|------------|-------------|---------|
| 1             | 628707.126 | 1405871.145 | 316.784 |
| 2             | 628708.091 | 1405869.997 | 316.784 |
| 3             | 628707.556 | 1405869.547 | 316.784 |
| 4             | 628706.590 | 1405870.695 | 316.784 |
| 5             | 628703.682 | 1405868.250 | 316.784 |
| 6             | 628704.647 | 1405867.102 | 316.784 |
| 7             | 628704.111 | 1405866.651 | 316.784 |
| 8             | 628703.146 | 1405867.800 | 316.784 |

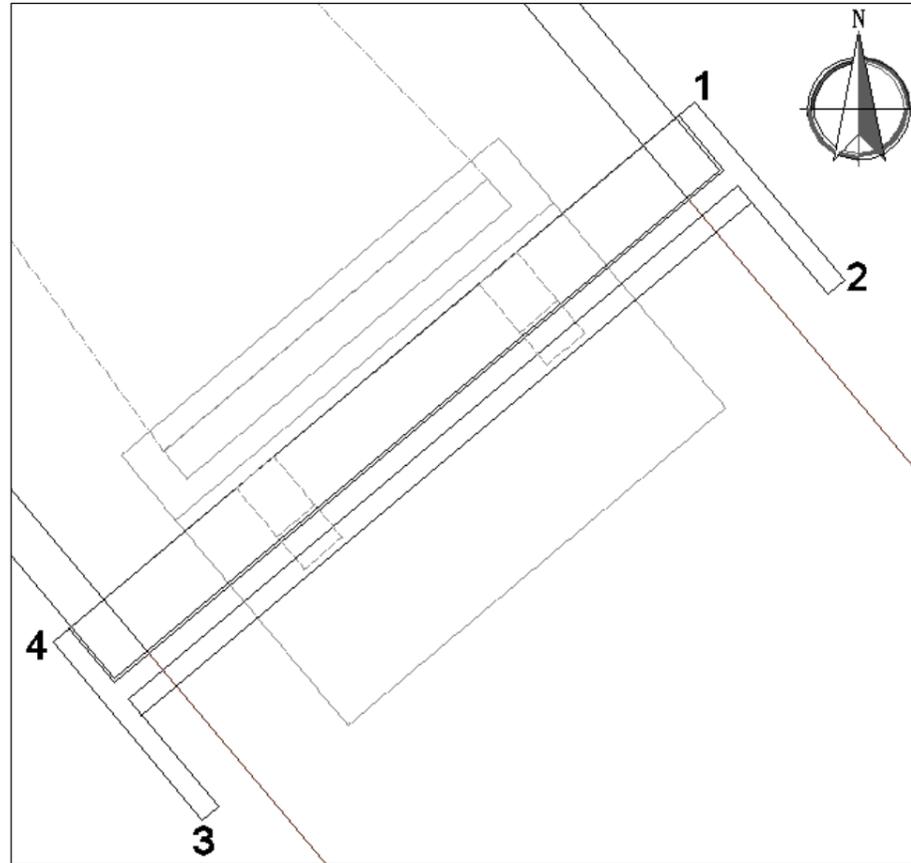
A continuación se muestra la figura con los siguientes puntos singulares del estribo:



Coordenadas de los puntos del estribo:

| PUNTO ESTRIBO | X UTM      | Y UTM       | Z msnm  |
|---------------|------------|-------------|---------|
| 1             | 628707.126 | 1405871.145 | 327.250 |
| 2             | 628707.705 | 1405870.457 | 327.250 |
| 3             | 628707.170 | 1405870.006 | 327.250 |
| 4             | 628706.590 | 1405870.695 | 327.250 |
| 5             | 628703.682 | 1405868.250 | 327.250 |
| 6             | 628704.261 | 1405867.561 | 327.250 |
| 7             | 628703.725 | 1405867.111 | 327.250 |
| 8             | 628703.146 | 1405867.800 | 327.250 |

También son importantes los cuatro puntos singulares de la cara superior del estribo 1, que se muestran en la siguiente figura:

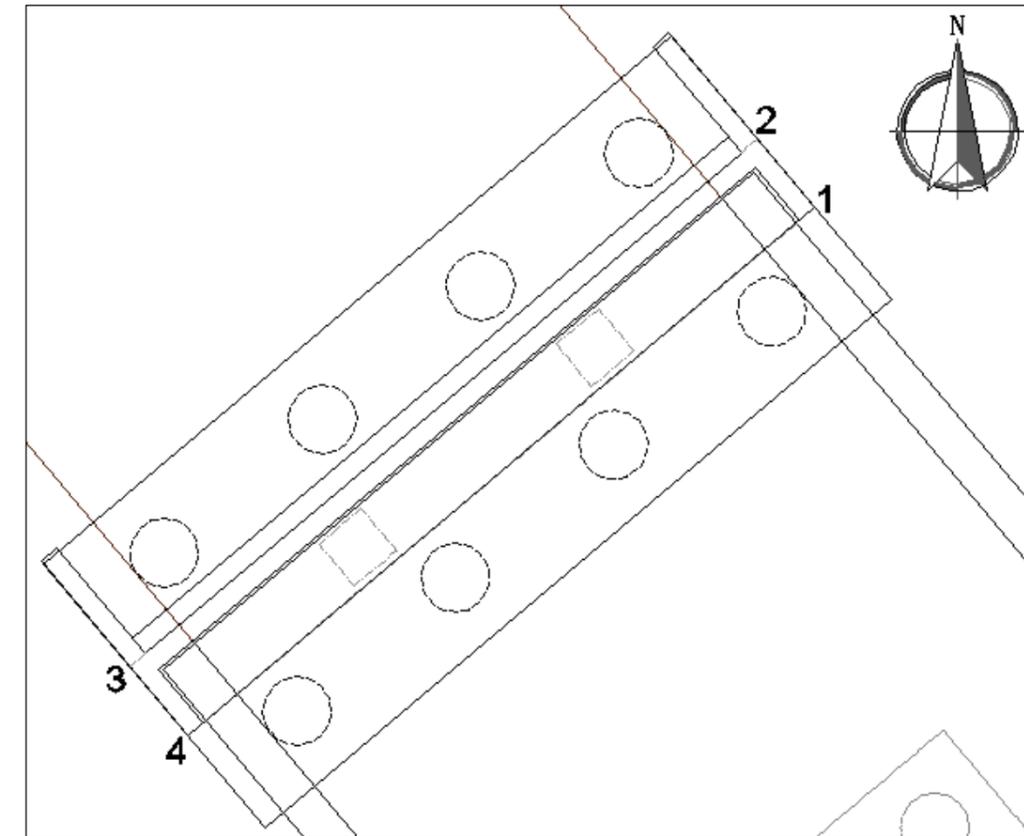


En la siguiente tabla se muestran las coordenadas de dichos puntos:

| PUNTO ESTRIBO | X UTM      | Y UTM       | Z msnm  |
|---------------|------------|-------------|---------|
| 1             | 628709.652 | 1405873.269 | 329.750 |
| 2             | 628711.776 | 1405870.743 | 329.750 |
| 3             | 628702.666 | 1405863.086 | 329.750 |
| 4             | 628700.543 | 1405865.612 | 329.750 |

### 3.3.2. ESTRIBO 2

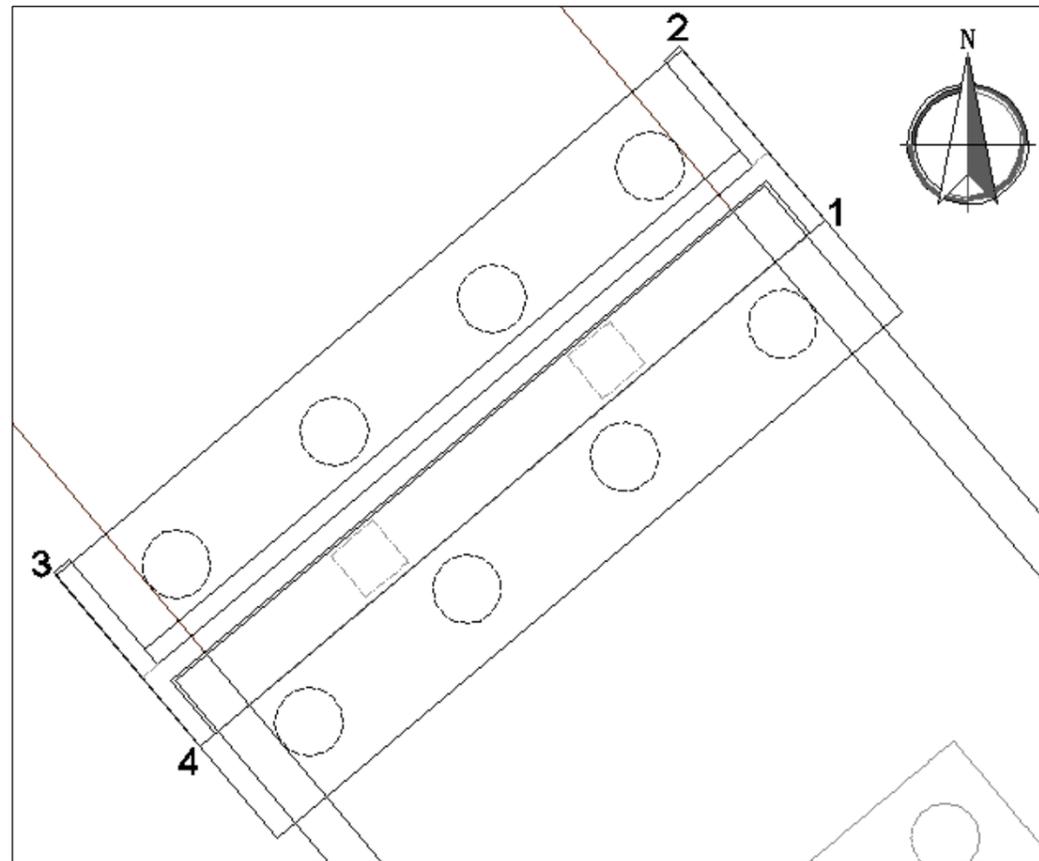
A continuación se muestran las cuatro esquinas del plano de contacto entre el estribo y su encepado, utilizadas para el replanteo:



Las coordenadas de dichos puntos son las siguientes:

| PUNTO ESTRIBO 2 | X UTM      | Y UTM       | Z msnm  |
|-----------------|------------|-------------|---------|
| 1               | 628597.695 | 1406006.466 | 327.250 |
| 2               | 628596.859 | 1406007.461 | 327.250 |
| 3               | 628587.749 | 1405999.804 | 327.250 |
| 4               | 628588.586 | 1405998.809 | 327.250 |

También se muestran las cuatro esquinas de la sección superior del estribo:



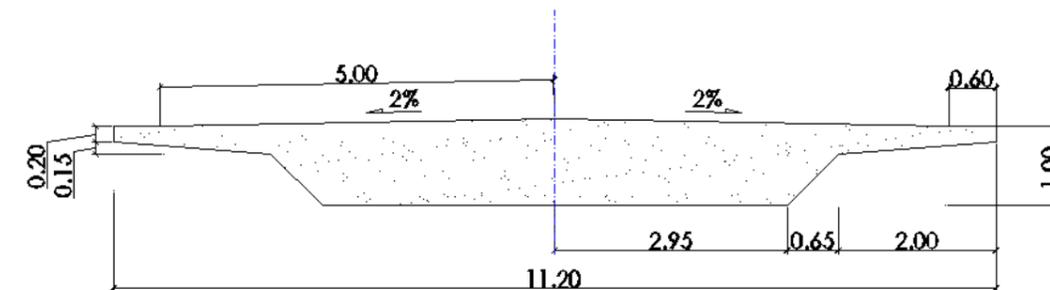
Cuyas coordenadas son:

| PTO<br>ESTRIBO | X UTM      | Y UTM       | Z msnm  |
|----------------|------------|-------------|---------|
| 1              | 628597.695 | 1406006.466 | 329.750 |
| 2              | 628595.572 | 1406008.992 | 329.750 |
| 3              | 628586.462 | 1406001.335 | 329.750 |
| 4              | 628588.586 | 1405998.809 | 329.750 |

### 3.4. TABLERO

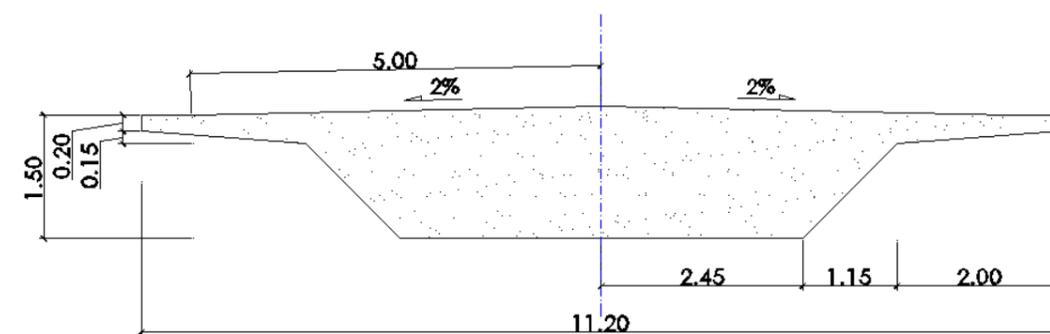
El tablero tiene una sección variable, que varía linealmente de la siguiente manera:

- Desde el P.K. 0+000 (sección 1), hasta el P.K. 0+022.5 (sección 2).
- Desde el P.K. 0+022.5 (sección 2), hasta el P.K. 0+045 (sección 1).
- Desde P.K. 0+045 (Sección 1), hasta el P.K. 0+067.5 (Sección 2).
- Desde P.K. 0+067.5 (Sección 2), hasta el P.K. 0+090 (Sección 1).
- Desde el P.K. 0+090 en adelante, el tablero mantiene una sección constante e igual a la Sección 1.



#### SECCIÓN 1

Cotas en metros



#### SECCIÓN 2

Cotas en metros

Coordenadas de puntos del eje del tablero, tomados cada 5 metros:



| P.K.    | X UTM      | Y UTM       | Z msnm  |
|---------|------------|-------------|---------|
| 0+000   | 628705.419 | 1405869.058 | 329.750 |
| 0+005   | 628702.202 | 1405872.885 | 329.750 |
| 0+010   | 628698.992 | 1405876.704 | 329.750 |
| 0+015   | 628695.775 | 1405880.532 | 329.750 |
| 0+020   | 628692.551 | 1405884.368 | 329.750 |
| 0+022.5 | 628690.850 | 1405886.392 | 329.750 |
| 0+025   | 628689.334 | 1405888.195 | 329.750 |
| 0+030   | 628686.124 | 1405892.014 | 329.750 |
| 0+035   | 628682.906 | 1405895.842 | 329.750 |
| 0+040   | 628679.689 | 1405899.669 | 329.750 |
| 0+045   | 628676.472 | 1405903.497 | 329.750 |
| 0+050   | 628673.255 | 1405907.324 | 329.750 |
| 0+055   | 628670.038 | 1405911.152 | 329.750 |
| 0+060   | 628666.821 | 1405914.979 | 329.750 |
| 0+065   | 628663.603 | 1405918.807 | 329.750 |
| 0+067.5 | 628662.080 | 1405920.619 | 329.750 |
| 0+070   | 628660.386 | 1405922.634 | 329.750 |
| 0+075   | 628657.169 | 1405926.462 | 329.750 |
| 0+080   | 628653.945 | 1405930.298 | 329.750 |
| 0+085   | 628650.728 | 1405934.125 | 329.750 |
| 0+090   | 628647.510 | 1405937.953 | 329.750 |
| 0+095   | 628644.293 | 1405941.780 | 329.750 |
| 0+100   | 628641.076 | 1405945.608 | 329.750 |
| 0+105   | 628637.859 | 1405949.435 | 329.750 |
| 0+110   | 628634.642 | 1405953.263 | 329.750 |
| 0+115   | 628631.425 | 1405957.090 | 329.750 |
| 0+120   | 628628.207 | 1405960.918 | 329.750 |
| 0+125   | 628624.990 | 1405964.745 | 329.750 |
| 0+130   | 628621.773 | 1405968.573 | 329.750 |
| 0+135   | 628618.556 | 1405972.400 | 329.750 |
| 0+140   | 628615.339 | 1405976.228 | 329.750 |
| 0+145   | 628612.122 | 1405980.055 | 329.750 |
| 0+150   | 628608.904 | 1405983.883 | 329.750 |
| 0+155   | 628605.687 | 1405987.710 | 329.750 |
| 0+160   | 628602.470 | 1405991.538 | 329.750 |
| 0+165   | 628599.253 | 1405995.365 | 329.750 |
| 0+170   | 628596.036 | 1405999.193 | 329.750 |
| 0+175   | 628592.819 | 1406003.020 | 329.750 |



# **ANEJO Nº 11**

## **PROCEDIMIENTO CONSTRUCTIVO**







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## 1. INTRODUCCIÓN

---

En este Anejo se tratará de dar una visión global del procedimiento constructivo del puente, dividiéndolo en diferentes fases de actuación.

El conocimiento y la determinación del procedimiento constructivo de un puente por parte del proyectista tienen gran importancia, ya que dicho procedimiento puede condicionar el material o la tipología estructural a utilizar, para un determinado caso.

Además, el variar el procedimiento constructivo puede trastocar totalmente todos los cálculos efectuados, ya que algunos procedimientos llevan asociado un proceso de cálculo totalmente particularizado.

En nuestro caso, las operaciones a realizar no deben presentar especial complejidad, siendo tan sólo preciso cumplir la secuencia de procesos y tiempos que se detallan a continuación.

## 2. DESCRIPCIÓN GENERAL DEL PROCESO CONSTRUCTIVO

---

El procedimiento constructivo será una ejecución "in situ" por fases separadas por elementos funcionales que se describirán más adelante. Se considera que el procedimiento más conveniente para el caso que nos ocupa es el de cimbra apoyada en el suelo.

Se ha optado por la construcción "in situ" debido a que, al ser una estructura de hormigón armado, esta solución constructiva presenta cuantiosas ventajas económicas y técnicas frente a otros métodos constructivos válidos pero que encarecerían innecesariamente el resultado final. El procedimiento elegido se caracteriza por la presencia de dos elementos básicos; el encofrado que da forma al hormigón y la cimbra, que lo sostiene en su sitio.

La cimbra a utilizar será de madera o metálica, dependiendo de cual resulte más económica. Sobre esta cimbra se apoyará un encofrado de madera, para dar forma a la geometría específica del dintel. Las pilas de la cimbra se apoyarán en el suelo sobre sus cimentaciones de hormigón, de modo que sus extremos queden bien ajustados para así obtener la altura del encofrado y facilitar las operaciones de desencofrado.

Dado que en este caso se trata de salvar un río, y al ser necesario operar en el tramo central del cauce, se procederá a realizar una obra provisional previa a la colocación de la cimbra. El objetivo de esta obra es asegurar que una subida de las aguas no se lleve la cimbra colocada y cause la destrucción del puente durante la fase de construcción. Para ello se colocarán varios tubos de 2 metros de diámetro, dimensionados para dar paso al río y sus crecidas. Además, las obras de cimbrado y hormigonado del vano principal deben realizarse durante la estación seca para así reducir el riesgo de las crecidas.

Antes de comenzar con las tareas del proceso constructivo, será necesario establecer unas operaciones previas, encaminadas a permitir el acceso de materiales y equipos a la zona



de actuación de manera eficaz. Para ello se realizarán unas pistas o caminos que permitan acceder a todos los puntos donde es necesario actuar.

Inmediatamente después de estas operaciones se comenzará con la excavación del terreno natural en las zonas donde vayan las pilas y estribos. Una vez que se ha llegado a la cota indicada se procederá a realizar las cimentaciones de los distintos elementos funcionales del puente, y posteriormente la construcción de dichos elementos, como son los estribos y pilas del futuro puente.

Una vez llegado a este punto de la obra, se montará la mencionada cimbra de la primera fase, que principalmente consiste en el vano principal del puente que es el que se encuentra sobre el cauce del río. Justo después de montar la cimbra se colocará el encofrado que se apoya en dicha estructura, se dispondrán las armaduras pasivas en la posición especificada en el Proyecto y se procederá al hormigonado.

El tablero del puente se construirá por fases. La primera fase consistirá en la realización de las pilas inclinadas y las pilas verticales. La segunda fase consistirá en ejecutar el vano principal de la estructura más los estribos, y en la tercera fase se ejecutará el resto del tablero del puente, dejando las juntas constructivas necesarias, hasta llegar a estribos.

En la primera fase se emplearán nueve semanas, de las cuales, las cuatro primeras se emplearán en las obras necesarias para montar la cimbra de las pilas inclinadas del vano principal, y del resto de pilas, así como en la colocación de dicha cimbra y de encofrados. En las cuatro siguientes semanas se emplearán en la colocación de la armadura pasiva y en el hormigonado de los distintos elementos. Y la última semana se empleará en desmontar la cimbra.

En la segunda fase, se emplearán cuatro semanas, en las que se ejecutará el tablero del vano principal y los estribos. Y en la tercera fase, se emplearán dos semanas para la ejecución de cada vano, una de ellas se empleará en desmontar la cimbra de la fase anterior

y montarla en el siguiente, así como en la colocación de encofrados y armadura pasiva. Una vez colocado el encofrado y la armadura, se hormigonará, y 7 días más tarde se procederá a desmontarse el encofrado de la fase para la ejecución de la siguiente.

Como el puente tiene 3 fases bien diferenciadas, las cuales se realizarán en unas 33 semanas, el número de días necesarios para su construcción será de 230. Otros 7 días más tarde, será el momento a partir del cual puedan aplicarse las cargas permanentes. Éstas son el extendido de la capa de impermeabilización del tablero, la ejecución del firme, la colocación de las impostas, así como todos los elementos auxiliares.

La ejecución del puente finaliza con la realización de la preceptiva prueba de carga de la estructura, la cual se llevará a cabo transcurrido al menos 90 días desde la última operación de hormigonado, tal y como se indica en el Pliego de Condiciones del apartado Prueba de carga del Anejo nº 9. Cálculo Estructural.



### **3. FASES DE LA EJECUCIÓN DEL PUENTE**

Una vez expuesto el procedimiento constructivo a utilizar de un modo general, se procede a una descripción más detallada del proceso, fase por fase.

#### **3.1. EXCAVACIÓN DEL TERRENO**

Antes de comenzar las fases de ejecución del puente es necesario realizar una excavación del terreno natural. Se excavará donde vayan las cimentaciones de los distintos elementos siendo cada excavación de una profundidad distinta debido a la forma del terreno. A estas excavaciones se les dará el ancho necesario para la realización de las cimentaciones así como las labores de ejecución de las mismas. Se ha decidido esto ya que es la solución más económica debido a que los volúmenes de tierra no son grandes.

Debido a la presencia del nivel freático a pocos metros de profundidad respecto de la superficie del terreno, se deberá utilizar procedimientos de tablestacas, agotamiento, o cualquier otro mecanismo que permita las labores de excavación y hormigonado.

#### **3.2. CONSTRUCCIÓN DE CIMENTACIONES, ESTRIBOS Y PILAS VERTICALES**

El proceso de ejecución del puente comienza con la realización de las cimentaciones. Dado la propia tipología del cauce así como la situación de las cimentaciones y estribos fuera del mismo, se considera que en esta fase de operaciones apenas se producirán afecciones, salvo avenidas no habituales.

La tipología elegida para la construcción de estos elementos son tanto cimentaciones profundas, mediante encepados rígidos y pilotes de hormigón armado, como cimentaciones superficiales, mediante zapatas rígidas. Los pilotes deberán llegar hasta la cota de roca sana y penetrar en ella lo suficiente, al igual que las zapatas, que deberán estar encajonadas cierta

profundidad en la roca sana. Las operaciones constructivas a realizar en esta fase son las típicas de cualquier obra de hormigón armado. Será necesario excavar, encofrar, colocar armaduras pasivas, hormigonar, vibrar, curar el hormigón y por último, desencofrar.

Debido a la presencia del nivel freático a pocos metros de profundidad respecto de la superficie del terreno, se deberá utilizar procedimientos de tablestacas, agotamiento, o cualquier otro mecanismo que permita las labores de excavación y hormigonado de los encepados.

En lo que se refiere a las pilas verticales, se construirán igualmente por métodos tradicionales, al no tratarse de alturas fuera de lo común.

#### **3.3. CIMBRADO, ENCOFRADO Y HORMIGONADO DE PILAS INCLINADAS Y DINTEL**

Este conjunto de operaciones constituye el cuerpo principal de la obra, ya que se trata de una estructura ejecutada completamente "in situ". Como ya se ha indicado anteriormente, el uso de cimbra convencional apoyada en el suelo está especialmente indicado para la construcción de este tipo de estructuras, debido a la poca altura que éstos suelen presentar.

La cimbra estará formada por un conjunto de elementos convenientemente arriostrados entre sí, para formar una estructura capaz de sustentar el encofrado de madera. Este encofrado servirá para dar forma a la sección de las pilas inclinadas y el dintel propuesta para este puente.

Se dispondrá inicialmente una cimbra en la zona ocupada por el río a partir de la cual se ejecutará el encofrado de las dos pilas inclinadas y el tablero entre ambas. En lo que se refiere a la cimbra de este vano, se realizará una cimentación de los puntales de la cimbra, para ello es necesario previamente encauzar el río dado que no se puede obtener vigas metálicas para disponer en el cuerpo central y así evitar apoyos en el cauce. En caso de ser posible la obtención de estas, y resultasen económicas, sería conveniente su utilización para



así salvar el cauce y evitar la realización de dicha obra de encauzamiento. Una vez encauzado el río se realizara sobre los tubos una capa de hormigón armado, de 20 cm de espesor con un mallado con barras nº4, 1/2", o de 12 mm de diámetros, cada 20 cm. Sobre esta capa de hormigón armado se apoyarán los puntales. La ejecución de esta fase debe de realizarse en la época de sequías debido a que el río no presenta un gran caudal en este momento del año.

Sobre la cimbra se dispondrá el encofrado de todo el vano y posteriormente las cuantías de la armadura pasiva correspondiente definida en Planos. Finalmente se realizará el hormigonado, y su posterior vibrado y curado para la ganancia de resistencia.

#### 3.4. CIMBRADO, ENCOFRADO Y HORMIGONADO DEL RESTO DEL TABLERO

Se precisará de cimbras diferentes, teniendo en cuenta la que se debe disponer sobre las pilas inclinadas del pórtico para la ejecución del tramo de tablero correspondiente, así como el cimbrado para los vanos restantes, de características habituales en estos procesos.

Una vez dispuesta toda la cimbra se procederá a la colocación de los encofrados, aparatos de apoyo y las cuantías de armadura pasiva definida en Planos. Posteriormente se hormigonará el tablero, y se pondrá especial cuidado en conseguir un adecuado curado de la masa de hormigón, para que la ganancia de resistencia de éste sea lo más rápida posible.

Se mantendrá el hormigón a una temperatura y humedad adecuadas, según la climatología reinante y mediante las medidas oportunas. Esta información se amplía en el Documento N°3: Pliego de Prescripciones Técnicas Particulares de este Proyecto.

#### 3.5. EJECUCIÓN DE LOS ELEMENTOS FUNCIONALES DEL TABLERO

Finalizada la estructura se procederá a la ejecución en su superficie de la capa de impermeabilización del tablero, la colocación del firmen de hormigo armado, y la colocación

de los elementos auxiliares como barandillas, señalización, drenaje, juntas de dilatación necesarios para conformar la sección transversal final.

#### 3.6. DESCIMBRADO Y DESENCOFRADO DEL PUENTE

Posteriormente, al tiempo necesario para alcanzar la resistencia característica del hormigón del tablero, 28 días, se procederá al desencofrado del tablero y descimbrado del puente.

Recordar que el puente no puede entrar en servicio hasta la realización de la pertinente prueba de carga, la cual se detalla en el Anejo nº 9. Cálculo Estructural.

#### 3.7. PROTECCIÓN DE LAS CIMENTACIONES

Para una mejor estabilidad de las cimentaciones, y mayor protección frente al agua se deberán de colocar escollera para proteger las cimentaciones del río y sus crecidas. Además, se deberá restaurar las márgenes del río, dejándolas lo más similar posible a como estaban antes del inicio de la obra, para ello se rellenarán las excavaciones realizadas.



# **ANEJO Nº 12**

## **DEMOLICIÓN Y GESTIÓN DE RESIDUOS**







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## 1. OBJETO DEL PROYECTO Y EMPLAZAMIENTO

El objetivo del presente anejo es la descripción y valoración de las obras necesarias para llevar a cabo la demolición del puente vado que se encuentra ubicado en la actualidad a 50 metros aguas arriba del futuro emplazamiento del nuevo puente aéreo vehicular, según se define en los planos de situación y emplazamiento correspondientes.

Las obras consisten en el derribo de dicho puente vado hasta el fondo natural o lecho del río, para el posterior traslado del concreto que no sea apropiado para revestimiento a vertedero.

## 2. DESCRIPCIÓN DEL ACTUAL PUENTE VADO

Se trata de un puente vado de 60 metros de longitud y 5.20 metros de ancho de concreto, la función de este es ser rebasado cuando existen crecidas por lo que el paso queda incomunicado hasta que el caudal no disminuye.

El problema recae en la socavación de ambos extremos del puente con la consiguiente destrucción del tablero y la obstrucción que genera la maleza y troncos arrastrados por la corriente, esto ha llevado a la imposibilidad de su utilización tras grandes avenidas.

En las siguientes fotografías se muestra lo anteriormente descrito.





### 3. JUSTIFICACIÓN DE LA DEMOLICIÓN

---

Una vez ejecutado el puente aéreo, el actual vado ya no tendrá ninguna utilidad, siendo además su conservación, contraproducente, por los siguientes motivos:

- El vado, constituye una barrera artificial en el cauce natural del río, por lo que es seguro, que ante las grandes crecidas, se generarán remansos, que aumentarán la cota de inundación aguas arriba, pudiendo quedar afectados tanto viviendas como terrenos de cultivo, ganado...
- La estructura del vado ha sufrido numerosas crecidas, afectando a los componentes de éste. Con motivo de las futuras crecidas, la estructura podría colapsar y ser arrastrada aguas abajo, comprometiendo la seguridad estructural del proyecto.
- Es inseguro el paso por el puente en las épocas de lluvia, por lo que eliminándolo, se forzará el paso por el puente aéreo.

### 4. VOLUMEN A DEMOLER

---

El volumen de concreto a demoler de forma aproximada será:

Volumen de concreto= 936.00 m<sup>3</sup>

Volumen extremos= 76.00 m<sup>3</sup>

A deducir volumen alcantarillas= 202.16 m<sup>3</sup>

**Volumen total= 809.84 m<sup>3</sup>**

### 5. PROCESO DE DEMOLICIÓN Y GESTIÓN DE LOS RESIDUOS

---

La demolición se realizará en su totalidad por medios mecánicos, con el objetivo de aumentar los rendimientos, pero sobre todo de prácticamente anular los riesgos hacia las personas, por lo que no será necesario tomar medidas de seguridad especiales. El proceso se llevará a cabo mediante una retroexcavadora equipada con martillo hidráulico. La retroexcavadora, equipada con la cuchara, efectuará un relleno de tierras en uno de los extremos del puente vado, con material sobrante de la propia obra, con el fin de poder situarse sobre el puente vado.

La retroexcavadora comenzará ubicada en el extremo opuesto de donde se realiza el relleno e irá avanzando en retroceso a lo largo del vado, utilizando el martillo hidráulico irá demoliendo el concreto a la vez que se desplaza. Cuando se haya producido el escombros suficiente sobre el lecho del río, la retroexcavadora cambiará el martillo hidráulico por una cuchara e irá depositando el escombros sobre un camión volquete situado también sobre el puente vado. Este proceso se repetirá hasta haber demolido todo el volumen de concreto. Y los escombros producidos serán transportados al botadero más cercano.

### 6. ASPECTOS A TENER EN CUENTA

---

La demolición no se llevará a cabo hasta que no esté habilitado el puente aéreo vehicular, para que el actual puente vado, con las correspondientes reparaciones, pueda servir de paso provisional durante la ejecución de la obra. Esta aclaración es debido a que en el presupuesto la remoción de estructuras de concreto se encuentra en la etapa de preliminares, por motivo de la estructuración de la guía del FISE.

Además para facilitar el proceso de demolición es importante que se efectúe durante la época de estiaje.



## 7. DEMOLICIÓN DE LA BASE DE LA CIMBRA

Al tratarse del mismo tipo de estructura que el puente vado, el proceso de demolición a seguir será idéntico.

La demolición se llevará a cabo cuando haya transcurrido el tiempo suficiente para que se puedan retirar con total seguridad, tanto las formaletas como las cimbras.

El volumen a demoler en la base de la cimbra será **731.71 m<sup>3</sup>**.



# **ANEJO Nº 13**

## **ESTUDIO DE IMPACTO AMBIENTAL**





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## 1. INTRODUCCIÓN

En el presente anejo se valora el impacto ambiental que el proyecto generará, tanto a largo plazo como a corto plazo en la zona.

La evaluación de impacto ambiental se basa en el SISTEMA DE EVALUACIÓN AMBIENTAL DE NICARAGUA (Decreto 76-2006).

## 2. CLASIFICACIÓN AMBIENTAL DEL PROYECTO

### 2.1. CATEGORÍAS AMBIENTALES

El sistema de evaluación antes mencionado, clasifica el proyecto como una OBRA HORIZONTAL, es decir, proyectos que se desarrollan a través de una superficie territorial relativamente extensa entre las que se encuentran: carreteras y vías de comunicación, conductos, túneles, presas, canales, vías férreas...

Una vez clasificada la obra se procede a la clasificación ambiental. Las obras pueden ser consideradas en las categorías I, II, III, IV o V:

- **Categoría ambiental I:** Las obras, proyectos e industrias categoría I, son considerados proyectos especiales por su trascendencia nacional, binacional o regional, por su connotación económica, social, ambiental y, porque pueden causar Alto Impacto Ambiental Potencial, están sujetos a un Estudio de Impacto Ambiental. Será administrado por el MARENA Central a través de la Dirección General de Calidad Ambiental, en coordinación con las Unidades Ambientales, Sectores pertinentes, las Delegaciones Territoriales del MARENA y los Gobiernos

Municipales, según el caso. En el caso de las Regiones Autónomas, el Consejo Regional respectivo en coordinación con las Alcaldías Municipales y comunidades involucradas, emitirán sus consideraciones técnicas a MARENA expresada en resolución del Consejo Regional, para ser incorporadas en la resolución administrativa correspondiente.

- **Categoría Ambiental II:** Las obras, proyectos, industrias y actividades considerados Categoría Ambiental II que pueden causar impactos ambientales potenciales altos, están sujetos a un Estudio de Impacto Ambiental. Será Administrado por el MARENA Central a través de la Dirección General de Calidad Ambiental, en coordinación con las autoridades ambientales sectoriales pertinentes, las delegaciones territoriales de MARENA y los Gobiernos Municipales, según el caso y el tipo de obra, proyecto o actividad. En el caso de las Regiones Autónomas, el sistema será administrado por los Consejos Regionales a través de las Secretarías de Recursos Naturales y Medio Ambiente (SERENA), en coordinación con el Ministerio del Ambiente y los Recursos Naturales.
- **Categoría ambiental III:** Los proyectos considerados en la Categoría Ambiental III son proyectos que pueden causar impactos ambientales moderados, aunque pueden generar efectos acumulativos, por lo que quedaran sujetos a una valoración ambiental, como condición para otorgar la autorización ambiental correspondientes proceso de valoración Ambiental y emisión de la autorización ambiental correspondiente. El proceso de valoración ambiental correspondiente quedaran a cargo de las Delegaciones territoriales del MARENA o consejos regionales en el ámbito de su territorio. Será administrado por MARENA a través de las Delegaciones territoriales, en coordinación con las Unidades Ambientales Sectoriales y Municipales pertinentes, según el tipo de obra, proyecto, industria o actividad. En el caso de las Regiones Autónomas, el Sistema será administrado por los Consejos Regionales a través de la Secretarías de Recursos Naturales y Medio Ambiente (SERENA), en coordinación con el Ministerio del Ambiente y los Recursos Naturales.

- **Categoría ambiental IV:** Agrupa algunos tipos de proyectos del Sistema de Inversión Pública que no están sujetos a los procedimientos ambientales de Ley y que por su incidencia ambiental deberían llevar durante su ciclo de vida un conjunto de instrumentos ambientales que incluyen: evaluación del emplazamiento, análisis ambiental, evaluación ambiental, seguimiento y monitoreo.
- **Categoría ambiental V:** Agrupa algunos tipos de proyectos del Sistema de Inversión Pública que no están sujetos a los procedimientos ambientales de Ley y que por su baja incidencia ambiental sólo deberían ajustarse a ciertos requisitos o normativas ambientales.

**Proyectos especiales:** Tipología de proyectos que tienen alta significación económica y ambiental para el país y pueden incidir significativamente en una o más regiones ecológicas de Nicaragua, según el mapa de Ecosistemas oficial del país, o bien trasciende a escala nacional, internacional, transfronteriza, considerándose además como proyectos de interés nacional por su connotación económica, social y ambiental.

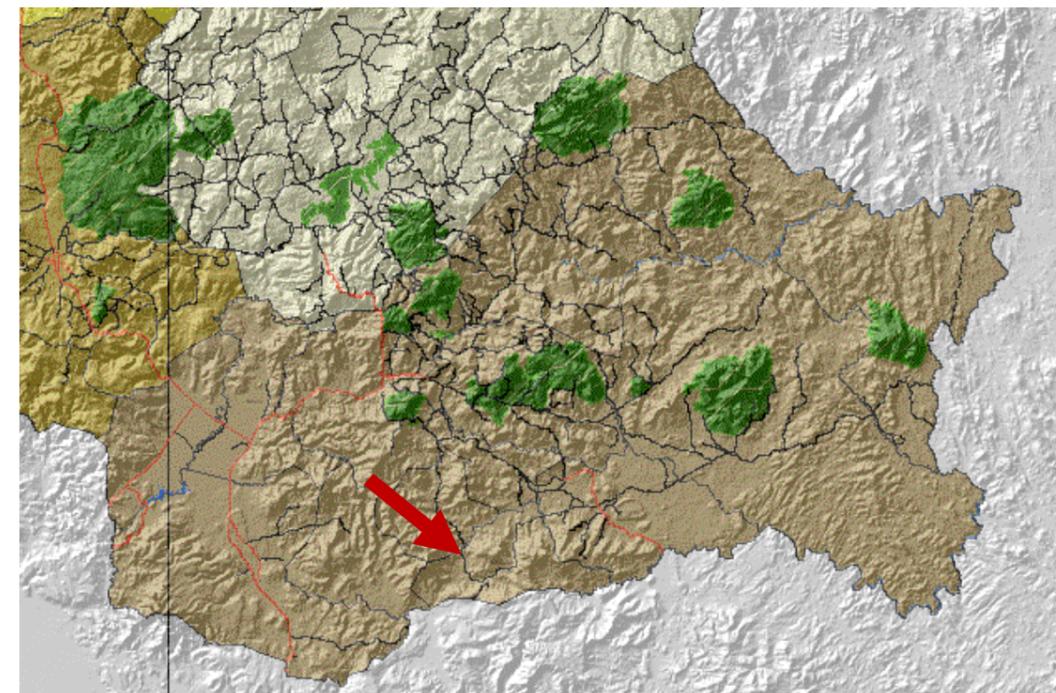
**Alto impacto ambiental:** Impacto ambiental potencial preestablecido de forma aproximada que considera un alto riesgo para el medio ambiente obtenido a partir de considerar actuaciones similares que ya se encuentran en operación.

**Moderado impacto ambiental potencial:** Impacto ambiental potencial preestablecido de forma aproximada que considera un mediano riesgo para el medio ambiente obtenido a partir de considerar actuaciones similares que ya se encuentran en operación.

## 2.2. ÁREAS PROTEGIDAS DE NICARAGUA

Las áreas protegidas son aquellos espacios que tienen por objeto la conservación, el manejo racional y la restauración de la flora, fauna silvestre y otras formas de vida, así como la biodiversidad y la biósfera. Dichas áreas son recogidas por el SINAP (Sistema Nacional de Áreas Protegidas).

En el siguiente mapa temático se muestran las diferentes áreas protegidas cercanas a los municipios de Esquipulas y San Dionisio, así como la ubicación del proyecto:

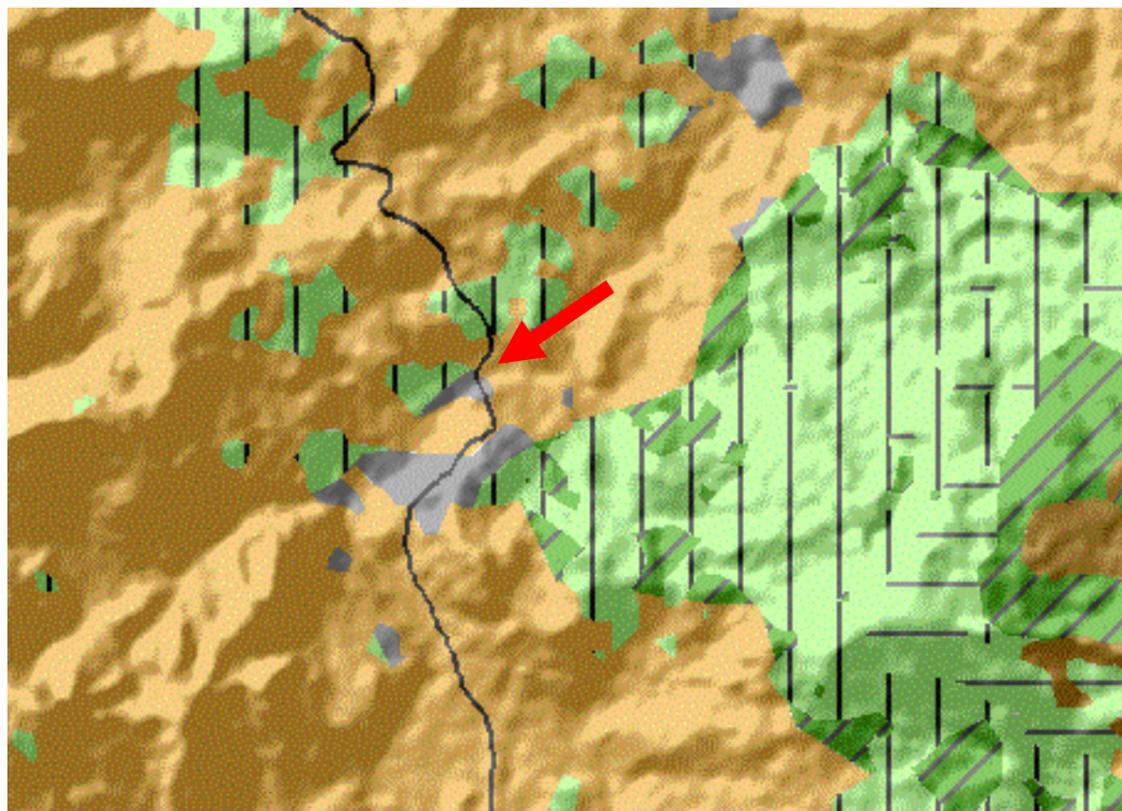


Como podemos observar, el proyecto se encuentra fuera de cualquier área protegida, y además situándose la más cercana a unas 10 millas (16 km).

### 2.3. ECOSISTEMAS DE LA ZONA

En el año 2000, Nicaragua fue dividida en 68 tipos diferentes de ecosistemas o formaciones vegetales, más tarde, en 2006, algunos de esos ecosistemas fueron agrupados por ser considerados muy similares, quedando definitivamente 44 tipos diferentes.

A continuación se muestra la zona de estudio, con la división de los diferentes tipos de ecosistema:



Como se observa, la zona del proyecto, está cercana a tres tipos de ecosistema que a continuación se describen:

- Zona marrón → Ecosistema SPA-1: Sistema productivo agropecuario.

Son áreas mosaicos de terrenos agrícolas, ganaderos y remanentes de bosques naturales de áreas pequeñas a medianas que en total pueden tener en ciertos sectores, 77 generalmente agrícolas de 10 a 25 % de vegetación natural y ganaderas de 25 a 50 % de vegetación natural. En los terrenos agrícolas ó de barbecho hay predominio de hierbas (malezas) hemicriptofitas y geofitas que se adapta a la cobertura (competencia) de plantas cultivadas perennes. Hierbas anuales están presentes pero no predominantemente. La diversidad de herbácea ha sido significativamente disminuida por el uso de herbicidas químicos.

En la región Central Este (Matagalpa y Jinotega), es predominantemente accidentada, con terrenos planos ondulados en las mesetas y valles intramontanos y terrenos accidentados, quebrados y escarpados en las laderas y partes altas de las cordilleras. Tiene una variedad de pisos altitudinales, pero en la zona de Esquipulas, pocas áreas menores de 300 msnm y área de 300-800msnm (318msnm en el paso Bopal), la precipitación pluvial media anual es de 800 -1200 mm, irregular, con periodos caniculares prolongados y temperatura media anual de 24 a 26°C. En estas zonas hay áreas de ganadería extensiva e intensiva, cultivo de arroz intensivo de riego y hortalizas (cebolla, tomate y chiltoma) intensivas de riego.

- Zona azul → Ecosistema VIAd: Lava con escasa vegetación.

A altitud entre 300 y 1,750 msnm, con media anual de: precipitación de 1,000 - 1800 mm, temperatura 20°C en las partes altas y 28°C en la planicie. Terreno con rocas basálticas volcánicas recientes, cuando hay suelo recién formado entre las grietas de rocas lávicas irregulares ("áa"), la vegetación es monótona conformada de árboles bajos.

- Zona verde clara → Ecosistema IB1a(1)-2: Bosque deciduo de bajura o submontano, intervenido.

De 0-600 msnm. En suelos de origen volcánico Cuaternario y rocas del Terciario, a veces en suelos aluviales y sedimentarios; de una gran variedad de texturas: arcilloso, franco arcilloso, franco, franco arenoso, arenoso, etc. La humedad relativa oscila entre 40 y 80 %



dependiendo de la época. La precipitación de 900 a 2,000 mm promedio anual (Mayo a Octubre), la temperatura media anual es entre 26-29 °C promedio.

- Zona verde oscura → Ecosistema IA2b (1): Bosque siempre verde estacional montano (600-1,100m) intervenido.

Se encuentran a altitudes entre 700 y 1,200 msnm. Los suelos son Molisoles que se han desarrollado a partir de rocas volcánicas básicas (basaltos, andesitas), con una textura media gruesa suave, de color oscuro ricos en materia orgánica, superficiales ( $\pm 25$  cm), con un buen drenaje. Lluvia de 1,200 a 1,800 mm al año de Mayo a Diciembre y presenta temperaturas medias anuales de 21 a 24°C (INETER).

#### 2.4. CLASIFICACIÓN

Según el cuadro de categorización ambiental de proyectos (Decreto 76-2006), el proyecto está situado en el sub sector "transporte vial interurbano (carreteras)" y en el tipo de proyecto "construcción de puentes", estando por ello clasificado dentro de la categoría ambiental IV.

Como se ha justificado anteriormente, se encuentra muy alejado de cualquier área protegida. Ninguno de los ecosistemas en los que se encuentra enmarcado, corre riesgo de ser alterado por causa de la obra.

Por todo esto, y al no estar incluido dentro de las tres primeras categorías ambientales, se considera un proyecto de bajo impacto ambiental, por lo tanto no está sujeto a un estudio de impacto ambiental para el otorgamiento de un permiso ambiental, ni requiere de la autorización ambiental del Ministerio del Ambiente y los Recursos Naturales (MARENA). Aún así, el Nuevo FISE ha diseñado Instrumentos Ambientales que conforman el Sistema de Gestión Ambiental (SIGA-FISE) los cuales son aplicables a proyectos de categorías ambientales IV y V que por su incidencia ambiental deben llevar una Evaluación de Emplazamiento y un Análisis Ambiental.

### 3. EVALUACIÓN DEL EMPLAZAMIENTO O PREFACTIBILIDAD AMBIENTAL

La evaluación del Emplazamiento se realiza para evitar alguna de las siguientes implicaciones:

- Vulnerabilidad del proyecto ante desastres naturales.
- Efectos ambientales negativos.
- Efectos sociales indeseables.
- Vulnerabilidad por carencia de sostenibilidad del proyecto.

La evaluación de cada componente se hace valorando todas las variables que lo integran, para ello, contando con la información de las características ambientales del territorio donde se emplazará el proyecto, se rellenan los valores obtenidos en escala (E) que va desde un valor 1 hasta 3 por cada variable objeto de estudio. Los valores son elaborados considerando tres rangos de situaciones que se pueden presentar en cada variable y su significado es el siguiente:

- Los valores de 1 en la escala representan las situaciones más riesgosas, peligrosas o ambientalmente no compatibles con el tipo de proyecto que se evalúa.
- Los valores de 2 en la escala representan situaciones intermedias de riesgos, peligros o ambientalmente aceptables con limitaciones con el tipo de proyecto que se evalúa.
- Los valores de 3 en la escala representan situaciones libres de todo tipo de riesgos y compatibles ambientalmente.

La columna P se corresponde con el peso o importancia del problema, así las situaciones con más riesgo o ambientalmente incompatibles tienen la máxima importancia o



peso (3), mientras que las situaciones sin riesgo o ambientalmente compatibles tienen la mínima importancia o peso (1), mientras que las situaciones intermedias tienen un peso o importancia mediado (2).

La columna F se refiere a la frecuencia, es decir, la cantidad de veces que en el histograma se obtiene la misma evaluación o escala. En la columna E x P x F, se multiplican los tres valores, o sea la escala o evaluación por el peso o importancia por la frecuencia. Mientras que en la columna P x F se multiplican sólo los valores del Peso o importancia por la Frecuencia. Posteriormente se suman los valores totales de la columna ExPxF y los valores de la columna Px F. Finalmente se divide la suma total de la columna ExPxF entre la suma total de la columna Px F y se obtiene el valor del componente.

Finalmente la evaluación final del sitio vendrá dada por un promedio de los valores registrados por todos los componentes. El procedimiento es el siguiente: Se suma el valor registrado por todos los componentes y se divide entre el número total de componentes. Este valor oscilará entre 1 y 3 teniendo el siguiente significado:

Valores entre 1 y 1.5 significa que el sitio donde se propone emplazar el proyecto es muy vulnerable, con alto componente de riesgo a desastres y/o con un severo deterioro de la calidad ambiental pudiendo dar lugar a la pérdida de la inversión o afectar a la salud de las personas que utilizarán el servicio. Por lo que el FISE recomienda no elegible el sitio para el desarrollo del proyecto y recomienda la selección de otro lugar.

Valores entre 1.6 y 2.0 significa que el sitio donde se propone emplazar el proyecto es vulnerable ya que tiene algunos riesgos a desastres y/o existen limitaciones ambientales que pueden eventualmente afectar a la salud de las personas que utilizan el sitio. Por lo que el FISE sugiere la búsqueda de una mejor alternativa de localización y en caso de no presentarse otra alternativa el FISE estudiará de forma detallada la elegibilidad del sitio para el desarrollo del proyecto.

Valores entre 2.1 y 2.5 significa que el sitio es poco vulnerable, con muy bajo componente de riesgo a desastres y/o bajo deterioro de la calidad ambiental a pesar de limitaciones aisladas. El FISE considera esta alternativa de sitio elegible siempre y cuando no se obtengan calificaciones de 1 en algunos de los siguientes aspectos:

- Sismicidad
- Deslizamientos
- Vulcanismo
- Mar y lagos
- Fuentes de contaminación

Valores superiores a 2.6 significa que el sitio no es vulnerable, exento de riesgo y/o buena calidad ambiental para el emplazamiento del proyecto.

| COMPONENTE GEOLOGIA             |                       |                        |                         |                    |                            |   |   |       |     |
|---------------------------------|-----------------------|------------------------|-------------------------|--------------------|----------------------------|---|---|-------|-----|
| E                               | SISMICIDAD            | DESLIZAMIENTO          | VULCANISMO              | RANGO DE PENDIENTE | CALIDAD SUELO              | P | F | ExPxF | PxF |
| 1                               |                       |                        |                         |                    |                            | 3 | 0 | 0     | 0   |
| 2                               |                       |                        |                         |                    |                            | 2 | 0 | 8     | 0   |
| 3                               | X                     | X                      | X                       | X                  | X                          | 1 | 5 | 15    | 5   |
| VALOR TOTAL= ExPxF/PxF =3       |                       |                        |                         |                    |                            |   |   | 15    | 5   |
| COMPONENTE ECOSISTEMA           |                       |                        |                         |                    |                            |   |   |       |     |
| E                               | SEDIMENTACION         | HIDROLOGIA SUPERFICIAL | HIDROLOGIA SUBTERRANEA  | MAR Y LAGOS        | ÁREAS AMBIENTALES FRÁGILES | P | F | ExPxF | PxF |
| 1                               |                       |                        |                         |                    |                            | 3 | 0 | 0     | 0   |
| 2                               | X                     |                        |                         |                    |                            | 2 | 1 | 4     | 2   |
| 3                               |                       | X                      | X                       | X                  | X                          | 1 | 4 | 12    | 4   |
| VALOR TOTAL= ExPxF/PxF=2.67     |                       |                        |                         |                    |                            |   |   | 16    | 6   |
| COMPONENTE INSTITUCIONAL SOCIAL |                       |                        |                         |                    |                            |   |   |       |     |
| E                               | CONFLICTO TERRITORIAL | IMPORT. OCIOECO.       | PARTICIPACION CIUDADANA | PLAN DE INVERSIÓN  |                            | P | F | ExPxF | PxF |
| 1                               |                       |                        |                         |                    |                            | 3 | 0 | 0     | 0   |
| 2                               | X                     |                        |                         |                    |                            | 2 | 1 | 4     | 2   |
| 3                               |                       | X                      | X                       | X                  |                            | 1 | 3 | 9     | 3   |
| VALOR TOTAL= ExPxF/PxF=2.60     |                       |                        |                         |                    |                            |   |   | 13    | 5   |



| RESUMEN DE LA EVALUACIÓN DEL EMPLAZAMIENTO |            |  |
|--|------------|--|
| FACTORES                                   | EVALUACIÓN | OBSERVACIÓN  |
| COMPONENTE GEOLOGÍA                        | 3.00       | <ul style="list-style-type: none"> <li>•Según el análisis realizado por el medio de la matriz de emplazamiento podemos decir que donde se está emplazando el proyecto no es vulnerable, está exento de riesgo y por lo tanto goza de buena calidad ambiental para la ejecución del mismo por lo que se considera elegible para su desarrollo.</li> <li>•Si hay que tener en cuenta las recomendaciones que se harán en el programa de mitigación para el momento de la ejecución de las obras para no alterar el ambiente en que se encuentra el área sin proyecto.</li> </ul> |
| COMPONENTE ECOSISTEMA                      | 2.67       |  |
| COMPONENTE INSTITUCIONAL SOCIAL            | 2.60       |  |

#### 4. ANÁLISIS AMBIENTAL

El Análisis Ambiental se basa en los siguientes aspectos:

- Calidad Ambiental del sitio sin considerar las acciones que pueda introducir el proyecto.
- Impactos Ambientales que genera el proyecto.
- Programa de mitigación de los impactos ambientales que genera el proyecto.
- Plan de contingencias ante los riesgos naturales.

##### 4.1. CALIDAD AMBIENTAL DEL SITIO SIN CONSIDERAR EL PROYECTO

Se pretende conocer mediante una valoración cualitativa la calidad ambiental del sitio donde se emplazará el proyecto, así como de su área de influencia. El propósito fundamental es predecir como evolucionaría el medio ambiente sin proyecto.

La calidad ambiental del sitio se determina mediante la matriz donde se relacionan los principales factores ambientales que serán valorados en tres niveles según el criterio a utilizar. A continuación se muestra el cuadro para definir dichos niveles:

| CRITERIOS   | CALIDAD AMBIENTAL   |  |  |
|---|---|--|--|
|   | NIVEL 3   | NIVEL 2  | NIVEL 1                                  |
| Intensidad de los problemas ambientales observados en el sitio para cada factor | BAJA o no existen problemas                                   | MEDIA  | ALTA                                     |
| Superficie afectada por el problema   | Se observa sólo en el sitio aislado (puntual) o no se observa | Se observa más allá del sitio (parte del territorio) | Se observa en todo el municipio más allá |
| ¿Se puede recuperar el medio Ambiente?  | SI (en el plazo de 1 año)                                     | SI (entre 1 y 10 años)                               | NO                                       |
| Duración de los problemas ambientales observados                                | Menos de 1 año o no hay problemas                             | Entre 1 y 5 años                                     | Más de 6 años                            |
| Cantidad de población de la comunidad próxima al sitio afectada                 | Menos del 25 % o no hay población afectada                    | Entre el 26% el 50%                                  | Mas del 50%                              |

Siendo la matriz del análisis ambiental:



| FACTORES AMBIENTALES                          | ALTERACIONES AMBIENTALES  |   | VALORACIÓN DE LA CALIDAD AMBIENTAL DEL FACTOR |
|---|---|---|---|
|   | CAUSAS ESPECIFICAR LAS ACCIONES HUMANAS QUE GENERAN EL DETERIORO DE LA CALIDAD AMBIENTAL EN CASO QUE LA VALORACIÓN SEA MALA | EFFECTOS ESPECIFICAR LOS EFFECTOS QUE SE OBSERVAN EN EL MEDIO AMBIENTE DEBIDO AL DETERIORO DE LA CALIDAD AMBIENTAL EN CASO QUE LA VALORACIÓN SEA MALA |   |
| CALIDAD DEL AIRE                              | Alta densidad de circulación vehicular u otras fuentes puntuales en el área de influencia                                   | Contaminación del aire por la emisión de humos y gases  | 2   |
|   | Tipos de rocas que propician emisión de polvos  | Contaminación del aire por la emisión de polvo  |   |
|   | Erosión eólica  |   |   |
|   | Vertido de desechos sólidos y líquidos a cielo abierto en las áreas de trazado  | Contaminación del aire por la emisión de gases y malos olores   |   |
| RUIDO   | Producida por la circulación vehicular  | Elevados niveles de ruido que provocan molestias  | 2   |
| CANTIDAD Y CALIDAD DE LAS AGUAS SUPERFICIALES | Vertidos directos de aguas contaminadas a fuentes superficiales   | Contaminación de las aguas superficiales con repercusión en la salud y el ecosistema  | 2   |
|   | Deficiente higiene comunal  |   |   |
|   | Vertido de desechos sólidos en cauces, y fuentes de agua superficiales  |   |   |
|   | No tratamiento de las aguas servidas  |   |   |
| CANTIDAD Y CALIDAD DE LAS AGUAS SUBTERRÁNEAS  | Vertido directo de desechos sólidos y líquidos  | Probabilidad de contaminación de las aguas, aumento de enfermedades   | 2   |
| SUELOS  | Vertido de desechos domésticos y desechos peligrosos  | Afectación a suelos de calidad edáfica, daños a la producción agrícola  | 1   |
| CUBIERTA VEGETAL                              | Deforestación   | Procesos de erosión, sedimentación, pérdida de especies de alto valor, daño al hábitat de la fauna, modificación del régimen hidrológico              | 1   |
| PAISAJE                                       | Modificación de la Topografía, geomorfología y vegetación existentes en zonas de alto potencial paisajístico                | Pérdida de la calidad paisajística  | 1   |

|                            |  |  |      |
|----------------------------|--|--|------|
| MEDIO CONSTRUIDO           | Deficiente higiene comunal, emisión de las aguas jabonosas                                   | Ausencia o deficiente tratamiento adecuado de los desechos sólidos y líquidos  | 2    |
| POBLACIÓN                  | Falta de empleo de la población  | Alteraciones sobre la estructura demográfica estimulando la emigración o inmigración   | 2    |
| CALIDAD DE VIDA            | Condiciones higiénico sanitarias y epidemiológicas (acueducto, alcantarillado y saneamiento) | Las alteraciones sobre la salud dependen en gran medida de los niveles de contaminación que se produzcan (medios o episódicos) y de las características de la población, especialmente la estructura de edades. Las afecciones sanitarias que se producen son principalmente respiratorias, gastrointestinales, enfermedades contagiosas o de transmisión por vectores (dengue, malaria, cólera y otras) enfermedades de transmisión sexual cardiovasculares, así como efectos sobre el rendimiento en el trabajo y psicológicas | 2    |
| CULTURA                    | Acciones que dañan el patrimonio construido y los gustos y costumbres locales                | Deterioro del patrimonio cultural  | 2    |
| VALOR MEDIO DE IMPORTANCIA |  |  | 1.72 |

#### 4.2. IMPACTOS AMBIENTALES QUE GENERA EL PROYECTO

El impacto generado por el proyecto se mide según las alteraciones ambientales que puedan crear las diferentes acciones del proyecto, tomando en consideración las diferentes etapas o estadios por los que transitará el proyecto. Las acciones de los proyectos se valoran para las siguientes etapas:

- Durante la construcción
- Durante el funcionamiento





Los impactos que se producen en la etapa de construcción se caracterizan por ser de corta duración aunque pueden llegar a ser intensos comparados con los que se generan durante el funcionamiento, debido a que estos actuarán durante la vida útil del proyecto.

Se valora cada impacto de forma cualitativa por el efecto que este causa; los criterios a utilizar son los mismos definidos anteriormente para valorar la calidad ambiental del sitio sin proyecto, por lo que existirán tres niveles de impacto:

- Nivel 1
- Nivel 2
- Nivel 3

Para la identificación y valoración de los impactos del presente proyecto la matriz utilizada para la etapa de construcción ha sido la siguiente:

| ESTADO DEL PROYECTO                              | ACCIONES IMPACTANTES                                    | EFFECTOS  | FACTOR AMBIENTAL AFECTADO | VALORACIÓN DEL IMPACTO |
|--|---|---|---------------------------|------------------------|
| Construcción                                     | Trabajos preliminares (limpieza y descapote)            | Producción de polvo   | Calidad del aire          | 2                      |
|  |   | Producción de desechos  | Calidad del aire          |                        |
|  |   | Producción de ruidos  | Ruido                     |                        |
|  |   | Riesgo de derrames de combustibles y grasas de la maquinaria                        | Suelo                     |                        |
| Construcción                                     | Trabajos de construcción (incluye las obras de drenaje) | Producción de polvo   | Calidad del aire          | 2                      |
|  |   | Producción de ruidos  | Ruidos                    |                        |
|  |   | Riesgo de accidentes  | Población                 |                        |
|  |   | Desviación temporal o permanente de cursos de agua                                  | Hidrología                |                        |
|  |   | Riesgo de destrucción de suelos de alta calidad edáfica y/o contaminación de suelos | Suelos                    |                        |
|  |   | Impermeabilización de superficies   | Suelos                    |                        |
| Riesgo de contaminación de grasas y combustibles | Suelos  |   |                           |                        |

|   |  |                  |      |
|---|--|------------------|------|
|   | Riesgo de daño a la infraestructura pública o privada  | Medio construido |      |
| Trabajos en bancos de préstamos                 | Alteración de geomorfología en bancos de préstamos   | Geomorfología    | 3    |
|   | Riesgo de derrumbes o deslizamientos   | Geomorfología    |      |
|   | Riesgo de contaminación por derrames de combustible y grasas de la maquinaria                        | Hidrología       |      |
|   | Destrucción de la vegetación   | Vegetación       |      |
|   | Riesgo de accidentes   | Población        |      |
|   | Producción de polvo  | Calidad del aire |      |
|   | Producción de ruidos   | Ruido            |      |
|   | Intrusión visual del paisaje   | Paisaje          |      |
| Explotación de la infraestructura de rodamiento | Aumento de los niveles de emisión de contaminantes por incremento del tránsito de vehículos          | Calidad del aire | 2    |
|   | Incremento de los niveles de ruido por el aumento del tránsito de vehículos                          | Ruido            |      |
|   | Riesgo de cambio en la calidad de las aguas superficiales por los residuos del tránsito de vehículos | Hidrología       |      |
|   | Aumento del riesgo de accidentes del tránsito  | Salud            |      |
|   | El proyecto impacta positivamente la economía local al mejorar la accesibilidad                      | Calidad de vida  |      |
|   | El proyecto impacta positivamente la economía local al mejorar la accesibilidad                      | Economía         |      |
| VALOR MEDIO DE IMPORTANCIA                      |  |                  | 2.25 |

#### 4.3. PROGRAMA DE MITIGACIÓN DE LOS IMPACTOS AMBIENTALES GENERADOS POR EL PROYECTO

El programa de mitigación tiene por objeto prevenir los efectos adversos de los impactos ambientales negativos generados por el proyecto, así como definir el o los responsables de la ejecución de las medidas y determinar el costo en que se incurre por prevenir ese efecto adverso.

La siguiente matriz muestra el programa de mitigación del presente proyecto:



| ACCIONES IMPACTANTES                                     | EFFECTOS  | MEDIDAS DE MITIGACIÓN   | COSTO DE LA MEDIDA        | RESPONSABLE POR EL CUMPLIMIENTO DE LA MEDIDA |
|--|---|---|---------------------------|--|
| Trabajos preliminares (limpieza y descapote)             | Producción de polvo   | Humedecimiento de la tierra   | Indirecto                 | Contratista                                  |
|  | Producción de desechos  | Selección del sitio receptor de los desechos, recopilación, transporte y producción de los desechos                 | Directo                   | Dueño de la inversión                        |
|  | Producción de ruidos  | Regulación de horarios  | Indirecto                 | Contratista                                  |
|  | Riesgo de derrames de combustible y grasas de la maquinaria     | Selección del sitio apropiado para mantenimiento de maquinaria  | Indirecto                 | Contratista                                  |
| Trabajos de construcción (incluye las obras de drenajes) | Producción de polvo   | Humedecimiento de la tierra   | Indirecto                 | Contratista                                  |
|  | Producción de ruidos  | Control de horarios, desvíos de circulación de quipos y vehículos   | Indirecto                 | Contratista                                  |
|  | Modificación de la calidad de las aguas                         | Mantener adecuada compactación y protección contra el arrastre de materiales, producir adecuado drenaje provisional | Indirecto                 | Contratista                                  |
|  | Desviación temporal o permanente de cursos de agua              | Realizar balsas temporales  | Indirecto                 | Contratista                                  |
|  | Impermeabilización de superficies                               | Evitar movimientos innecesarios de la maquinaria  | Indirecto                 | Contratista                                  |
|  |   |   | Mantener adecuado drenaje |  |
|  | Riesgo de accidentes  | Señalización y control de tráfico   | Indirecto                 | Contratista                                  |
|  | Riesgo de contaminación de grasas y combustibles                | Selección de sitios para mantenimiento de la maquinaria y recolectar residuos grasas y combustibles                 | Indirecto                 | Contratista                                  |
| Riesgo de daño a la infraestructura pública o privada    | Reparación de daños causados a la propiedad pública y/o privada | Indirecto   | Contratista               |  |
| Trabajos en bancos de                                    | Alteración de geomorfología en                                  | Realizar plan operativo de explotación de banco   | Indirecto                 | Contratista                                  |

|                                |   |   |           |             |
|--------------------------------|---|---|-----------|-------------|
| préstamos (si fuera necesario) | bancos de préstamos   | Proporcionar el corte de taludes acorde al ángulo de reposo   | Indirecto | Contratista |
|                                |   | Selección de sitios de apile  | Indirecto | Contratista |
|                                |   | Evitar cortes innecesarios  | Indirecto | Contratista |
|                                | Riesgo de contaminación por derrames de combustible y grasas de la maquinaria | Selección de sitios para mantenimiento de la maquinaria y recolectar residuos grasas y combustibles | Indirecto | Contratista |
|                                | Producción de polvo   | Humedecimiento de superficies   | Indirecto | Contratista |
|                                | Producción de ruidos  | Control de horarios y mantenimiento de la maquinaria  | Indirecto | Contratista |

#### 4.4. PROGRAMA DE CONTINGENCIAS ANTE RIESGOS

El programa de contingencias ante riesgos tiene el propósito de definir las acciones que deben realizarse para prevenir los efectos adversos de los desastres ante la presencia de un alto riesgo en el sitio.

En este caso el mayor riesgo se muestra en la posterior tabla:

| DESCRIPCIÓN<br>(Describir las características del riesgo, especificando la peligrosidad)                         | MEDIDAS PREVENTIVAS O DE CONTINGENCIAS                          | RESPONSABLE POR EL CUMPLIMIENTO DE LA MEDIDA |
|--|---|--|
| HURACANES<br>Daños a las obras de drenaje, con los consiguientes efectos: inundación, deslizamientos y desplomes | Muros de sostenimiento, refuerzo en caso de socavación de pilas | Autoridades Municipales                      |
|  | Programa de Educación a la población                            |  |
|  | Planes de contingencia  |  |



# **ANEJO Nº 14**

## **ESTUDIO DE SEGURIDAD Y SALUD**





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## MEMORIA



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## 1. INTRODUCCIÓN

El presente documento está integrado dentro del **"PROYECTO DE PUENTE EN EL PASO DE BOPAL SOBRE EL RÍO GRANDE DE MATAGALPA (NICARAGUA)"**.

Aunque la normativa nicaragüense no obliga a la inclusión de un anejo donde se realice un estudio de las medidas de prevención y mitigación de accidentes, se ha considerado oportuno incluir este Estudio de Seguridad y Salud en el proyecto, siguiendo normativa española, por la gran importancia y peso que tiene este anejo.

## 2. OBJETO DEL ESTUDIO

El presente Estudio de Seguridad y Salud establece, durante la ejecución de las obras previstas en el Proyecto, las previsiones de riesgos de accidentes y enfermedades profesionales, así como los derivados de las operaciones de reparación, conservación y mantenimiento, así como las instalaciones preceptivas de higiene y bienestar de los trabajadores.

El contenido de este estudio servirá para dar, a la empresa constructora que en su día será adjudicataria de las obras, unas directrices básicas para llevar a cabo sus obligaciones en el campo de la prevención de riesgos profesionales, facilitando su desarrollo bajo el control del equipo facultativo encargado de la dirección de las obras o en su caso del Coordinador en materia de seguridad y salud, de acuerdo con el Real Decreto 1627/1.997 por el que se establecen disposiciones mínimas de Seguridad y Salud en las obras de construcción y teniendo en cuenta la Ley 31/1.995 de Prevención de Riesgos Laborales y el R.D. 39/1.997 sobre Reglamento de Servicios de Prevención.

Con la elaboración de este "Estudio de Seguridad y Salud" y su posterior aplicación en obra a través del Plan, que basado en el mismo, redacte la empresa adjudicataria, se pretende conseguir los siguientes objetivos:

- Establecer unas Normas de Actuación basadas en el estudio de las características propias de la obra encaminadas a eliminar los riesgos técnicos derivados de los trabajos que se han de realizar y de las actuaciones humanas peligrosas, con el fin de reducir accidentes y consecuencias.
- Crear la Organización necesaria y dictar las Normas particulares que hagan aplicable en la práctica las Disposiciones Legales de carácter general existentes en materia de Seguridad y Salud en el trabajo.
- Cumplirlas Instrucciones y Normas sobre Seguridad y Salud en el Trabajo.

## 3. CARACTERÍSTICAS DE LA OBRA

### 3.1. PROMOTOR

El promotor del presente proyecto es el Ministerio de Transporte e Infraestructura.

### 3.2. DESCRIPCIÓN DE LAS OBRAS

La descripción pormenorizada de las obras se encuentra desarrollada en la "Memoria" del presente Proyecto.

#### 3.2.1. CRITERIOS DE DISEÑO

El presente proyecto es el resultado de la interacción de criterios hidráulicos, estructurales, económicos y medioambientales, teniendo presentes las limitaciones que provoca la presencia del Río Grande de Matagalpa y sus grandes variaciones de caudal en función de la época del año y las afecciones que se provocan al tráfico rodado de la zona.



El proyecto define las siguientes actuaciones:

- Dimensionamiento de un puente que permita cruzar el Río Grande de Matagalpa con seguridad, teniendo en cuenta en su dimensionamiento las grandes crecidas que han causado la ruina de puentes en la zona.
- Demolición del actual, debido a sus problemática con las nombradas crecidas.

### 3.3. PRESUPUESTO

El presupuesto de ejecución del proyecto asciende a la cantidad de: 93678583.33 C\$, NOVENTA Y TRES MILLONES SEISCIENTOS SETANTA Y OCHO MIL QUINIENTOS OCHENTA Y TRES CÓRDOBAS CON TREINTA Y TRES CENTAVOS.

### 3.4. PLAZO DE EJECUCIÓN.

El plazo de ejecución previsto del proyecto PUENTE EN EL PASO DE BOPAL SOBRE EL RÍO GRANDE DE MATAGALPA (NICARAGUA) será de 9 meses.

### 3.5. PERSONAL PREVISTO.

El personal previsto durante la ejecución de la obra es de 20 trabajadores.

### 3.6. UNIDADES CONSTRUCTIVAS QUE COMPONEN LA OBRA

Las obras a realizar se desglosan en los siguientes apartados:

- Demoliciones y movimiento de tierras.
- Canalización del río.
- Replanteo.
- Construcción de la subestructura del puente.
  - Ejecución de pilotes in situ.

- Ejecución de zapatas y encepados:
  - Encofrado
  - Ferrallado
  - Hormigonado
  - Desencofrado
- Ejecución de estribos:
  - Encofrado
  - Ferrallado
  - Hormigonado
  - Desencofrado
- Construcción de la superestructura del puente
  - Ejecución de pilas
    - Encofrado
    - Ferrallado
    - Hormigonado
    - Desencofrado
  - Ejecución de las pilas inclinadas:
    - Cimbrado
    - Ferrallado
    - Hormigonado
    - Descimbrado
  - Ejecución del tablero:
    - Cimbrado
    - Ferrallado
    - Hormigonado
    - Descimbrado
    - Impermeabilización
    - Pavimentación
- Señalización



#### 4. EVALUACIÓN DE POSIBLES RIESGOS

##### 4.1. EVALUACIÓN DE RIESGOS PROFESIONALES

- En desbroce y demoliciones:
  - Atropello por máquina y vehículos
  - Vuelcos y caídas por terraplenes
  - Colisiones
  - Vibraciones por manejo de maquinaria
  - Golpes y proyecciones
  - Caídas a distinto nivel y altura
  - Contacto con las líneas eléctricas
  - Polvo
  - Ruido
  - Caída de los materiales de los camiones
- En replanteo:
  - Atropellos causados por maquinaria y vehículos
  - Caídas a igual o a diferente nivel
  - Golpes y proyecciones
  - Polvo
  - Ruido
- En movimientos de tierras:
  - Atropellos causados por maquinaria y vehículos
  - Caídas a igual o a diferente nivel
  - Caídas de materiales y objetos
  - Golpes y proyecciones
  - Deslizamiento de las tierras
- Ejecución de pilotes
  - Polvo
  - Ruido
  - Golpes con objetos
  - Caídas al mismo nivel
  - Caídas a distinto nivel
  - Ahogamiento de personas por caídas al agua
  - Hidrocuciones
  - Electrocutión
  - Asfixia en trabajos de buceo
  - Cortes, punturas, rozaduras, etc. En el manejo de cables y otras piezas y herramientas
- En excavaciones:
  - Caídas a igual o a diferente nivel
  - Caídas de materiales y objetos
  - Golpes y proyecciones
  - Caída de materiales encima del operario
  - Atropello causado por maquinaria y vehículos
  - Sobreesfuerzo
  - Polvo
  - Ruido
- Encofrado y desencofrado.
  - Desprendimiento por el mal apilado de la madera.
  - Golpes en las manos.
  - Riesgos de incendio.
  - Caídas de trabajadores al andar por el borde de los encofrados.



- o Cortes al utilizar la mesa de sierra circular.
  - o Sobreesfuerzos por posturas inadecuadas.
  - o Golpes en la cabeza.
  - o Contactos con el cemento.
  - o Pisadas sobre objetos punzantes.
  - o Golpes por caída de objetos.
- Ferrallado.
    - o Cortes y heridas en manos, piernas y pies, por manejo de redondos de acero corrugados.
    - o Aplastamientos de manos o pies en operaciones de carga y descarga.
    - o Tropezos y torceduras al caminar entre las parrillas, o sobre ferralla en fase de montaje.
    - o Accidentes por eventual rotura de los hierros, durante el estirado.
    - o Caída desde altura durante el montaje de nervios y armaduras.
    - o Caída de armaduras montadas durante su transporte.
    - o Pisadas sobre objetos punzantes y/o cortantes.
  - Hormigonado.
    - o Caída de objetos.
    - o Caída del personal al mismo nivel.
    - o Caídas a distinto nivel.
    - o Hundimientos.
    - o Pinchazos y golpes contra obstáculos.
    - o Pisadas sobre objetos punzantes.
    - o Trabajos sobre pisos húmedos o mojados.
    - o Contactos con el hormigón.
    - o Desplome de paredes de zanjas o vaciados.
    - o Atrapamientos.
    - o Vibraciones por manejo de la aguja vibrante.
- o Ruido puntual y ambiental.
  - o Electrocutión.
  - o Aplastamiento por reventón de los encofrados.
  - o Contacto con desencofrantes.
  - o Interferencias con conducciones o servicios subterráneos
  - o Inundación
- Medios auxiliares.
    - o Caída al mismo nivel de personas.
    - o Caídas a distinto nivel.
    - o Caídas por fallo estructural del medio auxiliar.
    - o Caídas de objetos desde altura sobre las personas.
    - o Sobreesfuerzos durante el montaje y desmontaje.
    - o Atrapamiento entre objetos.
    - o Vuelco del medio auxiliar por viento o falta de arriostamiento.
    - o Rotura por fatiga del material.
    - o Rotura por sobrecarga.
    - o Caída por mal anclaje.
  - Maquinaria de obra.
    - o Vuelcos de la máquina.
    - o Choque entre máquinas o con otros vehículos.
    - o Atropello de personas.
    - o Interferencias con: Conducciones subterráneas de agua. Tendido eléctrico.
    - o Caída del maquinista al subir o bajar de la máquina. Polvo ambiental.
    - o Ruido.
    - o Vibraciones.
    - o Derivados del mantenimiento de la máquina: quemaduras, electrocuciones, atrapamientos o golpes con las partes móviles de la



máquina, caídas al mismo nivel, explosiones de los neumáticos al darles presión, explosión por trasiego de combustible.

derivados de la prevención de riesgos en los trabajos, que por tanto desarrollamos a continuación:

#### 4.2. EVALUACIÓN DE RIESGOS DE DAÑOS A TERCEROS

Vendrán producidos por la circulación de terceras personas ajenas a la obra en las proximidades de la misma:

- Caídas al mismo nivel.
- Caídas a distinto nivel.
- Caídas de objetos y materiales.
- Atropellos.
- Polvo.
- Ruido.

#### 4.3. EVALUACIÓN DE RIESGOS CLIMATOLÓGICOS

Los riesgos a tener en cuenta debido a los fenómenos meteorológicos son:

- Niebla
- Viento
- Lluvia
- Frío y calor

- En primer lugar, se procederá a la realización del montaje o acondicionamiento de las preceptivas instalaciones de Higiene y Bienestar.
- Comenzaremos por acotar el recinto que ocupan las diferentes actuaciones con el preceptivo cerramiento provisional y a colocar la señalización de seguridad y salud que exige el R.D. 485/97, advirtiendo de las prohibiciones, obligaciones, existencia de riesgos, impidiendo así, el acceso de terceras personas.
- Apoyándonos en la información obtenida del Plan de Seguridad y Salud de la obra y del proyecto de ejecución, en cuanto a posibles interferencias con servicios afectados, previa supervisión y localización "in situ" de los mismos, se procederá a la instalación de la señalización oportuna e instalación de los medios de protección colectiva previstos (pórticos de limitación de gálibo, cortes en el suministro del servicio, desviación del mismo, señalización, encauzamiento y ordenación del tráfico, etc.), eliminando así, los riesgos derivados de dichas interferencias.

Se respetarán las normas de seguridad para trabajos con maquinaria de movimiento de tierras, se guardarán las distancias de seguridad al borde de excavación, señalizando y colocando protecciones contra el riesgo de caídas para el personal, como cinta de balizamiento, barandillas, pasarelas de seguridad, y provisión de escaleras que cumplan la normativa, colocadas de forma accesible al personal para una rápida salida en caso de emergencia. En el caso de que se utilicen en esta unidad martillos neumáticos, se respetarán las normas de trabajo seguro y se hará uso del equipo completo de seguridad individual.

En lo que respecta al hormigonado de cimientos y estructuras, así como a la colocación de prefabricados, se seguirán las normas de seguridad y métodos de trabajos específicos para el manejo de hormigón, encofrado y ferrallado, separando las cargas del borde de la excavación, manteniendo la protección contra caídas a distinto nivel y refuerzos para la estabilidad de los taludes, haciendo uso de topes y preparando plataformas seguras de trabajo, tanto para el personal como para la maquinaria.

### 5. PLAN DE EJECUCIÓN

En la redacción del contenido del Estudio de Seguridad y Salud, art. 5 del R.D.1627, propone en su apartado a), la obligación de incluir un plan de ejecución de obra en el que se redacte en términos generales la secuencia de ejecución de la obra con los condicionantes



También se respetarán las normas de seguridad y métodos de trabajo de la maquinaria: hormigoneras, bombas de hormigonado, camiones grúas etc., haciéndose especial hincapié en el cumplimiento de las normas de seguridad sobre manejo de prefabricados, dirigidas tanto al personal como a los maquinistas.

Se mantendrá el orden y la limpieza durante las tareas en el lugar de trabajo, respetando las zonas de paso, ya que se suceden e incluso se solapan tareas de diferentes oficios en un mismo lugar o en lugares muy próximos con el inconveniente que esto significa. En todos estos trabajos que se deban realizar en alturas, se instalarán plataformas seguras de trabajo con las debidas protecciones.

Se llevará un control estricto de la simultaneidad de la ejecución de diferentes unidades de obra o de tajos de trabajo en el tiempo y en espacios próximos, de forma que esto no influya en la seguridad de la ejecución de las labores, debido a las posibles interferencias de unas sobre otras.

Al ejecutarse la obra en la cercanía a un núcleo urbano se pondrá especial interés en la señalización, balizamiento y defensa de los mismos de cara a terceras personas, así como en aminorar la producción de ruido, polvo y vibraciones, en prevención de accidentes.

### 5.1. EVALUACIÓN DE RIESGOS CATASTRÓFICOS

Los riesgos a tener en cuenta debido a fenómenos catastróficos son:

- o Seísmo
- o Desbordamiento o crecidas de ríos

## 6. PREVENCIÓN DE RIESGOS

En este apartado se describen las medidas preventivas: protecciones técnicas y normas, que nos permiten controlar y reducir los riesgos laborales que derivan de los trabajos a ejecutar en esta obra.

La prevención de riesgos profesionales exige, por un lado, el empleo de protecciones individuales y colectivas, y por otro lado, una continua labor de formación del personal de obra, de forma que cada trabajador conozca perfectamente los riesgos que conlleva la función que él desempeña, y sepa poner en práctica las oportunas medidas preventivas para garantizar su seguridad personal y en su caso, la colectiva.

También es fundamental establecer, por parte del contratista adjudicatario, un sistema de señalización de seguridad en cualquiera de los centros de trabajo afectados a la obra en cuestión, al efecto de llamar la atención de forma rápida e inteligible sobre objetos y situaciones susceptibles de provocar peligros determinados, así como para indicar el emplazamiento de dispositivos y equipos que tengan importancia desde el punto de vista de la seguridad. Se acatará lo dispuesto por el Real Decreto 485/1997 del 14 de abril, sobre disposiciones mínimas en materia de señalización de Seguridad y Salud en el trabajo y en su caso lo dispuesto en la norma de carreteras 8.3-IC sobre señalización de obras.

### 6.1. PROTECCIONES INDIVIDUALES.

Según se establece en el Real Decreto 773/97 de 30 de mayo, en el marco de la Ley 31/1995, de 8 de noviembre de Prevención de Riesgos Laborales las disposiciones mínimas de seguridad y de salud para la elección, utilización por los trabajadores en el trabajo y mantenimiento de los equipos de protección individual.

Cascos: para todas las personas que participan en la obra, incluidos visitantes. Guantes de uso general. Guantes de goma. Guantes de soldador. Guantes dieléctricos. Botas de agua. Botas de seguridad de cuero. Botas dieléctricas. Monos o buzos. Trajes de agua. Gafas contra impacto y antipolvo. Gafas para oxicorte. Equipo de protección de soldador. Mascarilla



antipolvo. Mascarilla contra agentes químicos. Protectores auditivos. Cinturón antivibratorio. Chalecos reflectantes. Cinturón de seguridad de sujeción. Cinturón de seguridad anticaídas. Cinturón antivibratorio. Protección de manos para punteros. Linterna de seguridad.

## 6.2. PROTECCIONES COLECTIVAS.

Vallas de limitación y protección. Señales normalizadas de tráfico. Señales normalizadas de peligro, advertencia y prohibición. Cinta de balizamiento. Tapas de madera para el cubrimiento de posibles huecos horizontales. Extintores. Interruptor diferencial. Toma de tierra. Transformadores de corriente a 24 V. Válvulas antiretroceso. Escalera de seguridad. Pasarela de seguridad. Topes para camiones. Camión de riego. Señalista circulación interna y de terceros. Empalizada de protección contra desprendimientos. Brigada de seguridad para mantenimiento y reposición de medios. Pórtico limitación de altura. Jalón de señalización. Señales normalizadas de tráfico. Señal manual a dos caras. Conos. Balizas luminosas.

## 6.3. PREVENCIÓN DE RIESGOS A TERCEROS.

Se deberán tomar una serie de medidas orientadas a prevenir el posible riesgo originado por la presencia de terceras personas y que podremos resumir en las siguientes:

- Señales correspondientes al código de circulación. Situadas en zona de acceso que indiquen zona de obra, precaución, limitaciones de velocidad, salida de camiones y trabajos con maquinaria etc.
- Carteles informativos de obra y de prohibición.
- Cartel de prohibido el paso a personal ajeno a la obra.
- Señales de seguridad en el interior de obra, en cumplimiento del R.D. 485/1997 del 14 de abril.

## 6.4. PREVENCIÓN DE RIESGOS CLIMATOLÓGICOS

Se deberán tomar una serie de medidas orientadas a prevenir los posibles riesgos a tener en cuenta debido a los fenómenos meteorológicos son:

- Niebla: Cuando sea muy intensa, se evitará realizar trabajos que precisen buena visibilidad, o si es necesario serán suspendidos. En cualquier caso se utilizarán focos y luces, así como ropas de alta visibilidad. Se deberá saber cuándo detener los trabajos por causa de niebla intensa.
- Viento: Cuando el viento sea muy intenso, se pondrán a resguardo aquellos materiales, máquinas o herramientas que puedan ser levantados o arrastrados, y los trabajadores se protegerán los ojos con gafas protectoras.
- Lluvia: Si la lluvia impide el normal desarrollo de los trabajos se suspenderán los mismos. En cualquier caso se utilizarán ropas de alta visibilidad e impermeables y botas de caña alta. Cuando la lluvia cese, se drenarán las zanjas afectadas y se revisará el estado de los taludes.
- Frío y calor: Los trabajadores se protegerán adecuadamente contra el calor y con ropa de abrigo para las bajas temperaturas. Cuando las condiciones de trabajo lo requieran, se limitará la permanencia de los trabajadores, estableciéndose turnos o interrumpiendo las actividades si fuese preciso. Se prohibirá el realizar hogueras.

## 6.5. EVALUACIÓN DE RIESGOS CATASTRÓFICOS

Se deberán tomar una serie de medidas orientadas a prevenir los posibles riesgos a tener en cuenta debido a fenómenos catastróficos son:

- Sismo: Los trabajadores evitarán las alturas y se alejarán de toda zona proclive a la caída de objetos. Se buscarán lugares amplios y libres de construcciones, grúas, maquinaria, árboles, y en ningún caso han de perder la calma.
- Desbordamiento o crecidas de ríos: En este caso se procurará alejarse lo más rápidamente posible de las márgenes del río, buscando zonas y lugares en altura que no presenten un peligro para los trabajadores aun cuando el nivel del agua aumente considerablemente.



## 6.6. FORMACIÓN.

Todo el personal debe recibir, al ingresar en la obra, una exposición de los métodos de trabajo y los riesgos que esto pudieran entrañar, juntamente con las medidas de seguridad que deberá emplear.

Dicha documentación le será entregada a modo de fichas a cada uno de los operarios que estén en obra dependiendo de las funciones que vayan a desempeñar, y cuantas especificaciones le afecten de las contenidas en los documentos de la presente Memoria. Así mismo, deberá tenerse en cuenta lo especificado en el Pliego de Condiciones Técnicas y Particulares de este Estudio de S.S.L.

## 7. MEDIDAS FRENTE A CONTAMINANTES FÍSICOQUÍMICOS

### 7.1. EL POLVO

Su prevención en trabajos de larga duración se realizará mediante protecciones colectivas que palien o eliminen en su origen el foco contaminante, empleándose según el proceso determinado, instalaciones especiales con métodos de: Captación, Filtraje, Sedimentación por vía húmeda, Ciclones, Extractores, Ventiladores, Renovadores de ambiente, etc.

Para casos puntuales o en defecto circunstancial de estos sistemas se emplearán protecciones individuales mediante mascarillas o equipos autónomos de respiración adecuados y estudiados de acuerdo con proceso productivo concreto.

### 7.2. GASES, VAPORES Y HUMOS

#### 7.2.1. PINTURAS, ESMALTES Y BARNICES POR PULVERIZACIÓN

Se procurará utilizar productos en cuya composición se hayan eliminado en todo, o en parte, las citadas sustancias tóxicas.

#### 7.2.2. HUMOS METÁLICOS DERIVADOS DE LAS OPERACIONES DE SOLDADURA ELÉCTRICA

No serán objeto de medidas especiales de prevención cuando los trabajos de soldadura se realicen al aire libre. En el caso de que se efectúen en recintos cerrados se observarán las mismas precauciones que en el caso anterior, llegando incluso a instalar, si fuese necesario, un dispositivo de extracción localizada. Con independencia de lo anteriormente expuesto, debe tenerse en cuenta que durante el proceso de soldadura se solapan normalmente distintos efectos contaminantes (humos metálicos, polvos, gases y vapores, ruidos y vibraciones, radiaciones etc.) para los que es preciso efectuar un Estudio de Seguridad adaptado al proceso de ejecución concreto de que se trate.

### 7.3. RUIDOS

Para la protección de los trabajadores frente a los riesgos derivados de la exposición al ruido en el ambiente de trabajo se aplicará lo dispuesto en el R.D. 1316/89, de 27 de octubre, es decir, se realizarán las mediciones pertinentes y en función de los resultados de estas mediciones se aplicaran las medidas correctoras y protectoras que dispone el R.D.

### 7.4. VIBRACIONES

La erradicación del riesgo depende en gran medida de las mejoras técnicas que puedan incorporarse como resultado de un tratamiento integral del ruido y de las vibraciones. En ausencia de criterios más concretos, se equipará con cinturones antivibratorios a los operados expuestos a posibles movimientos vibratorios de frecuencia inferior a 100 Hz.





### 7.5. RADIACIONES

En el caso de que, dentro de una zona de las obras, exista riesgo de exposición dentro del campo de alcance de algún foco emisor de radiaciones ionizantes, se tomarán las medidas necesarias para que el personal de obra se encuentre, de manera permanente lo más alejado posible del foco emisor, llegando a interponer barreras compactas constituidas por materiales fuertemente absorbentes (plomo, hormigón, etc.), si fuese necesario.

El personal especializado que por motivos imperativos, deba acercarse y/o manipular el foco emisor deberá ir perfectamente equipado con buzo de seguridad, mandiles, guantes y manguitos especiales antionizantes, debiendo limitarse su tiempo de exposición en función de la naturaleza del foco emisor y las instrucciones dictadas por la reglamentación vigente, en uso.

### 7.6. RIESGO ELÉCTRICO

#### Métodos de prevención:

Los métodos de prevención se adoptarán con objeto de prevenir los contactos eléctricos, con el fin de evitar que circule por la persona corrientes peligrosas, para lo cual se actuará modificando o controlando los valores de los cuatro parámetros que definen el riesgo eléctrico (tensión, resistencia, tiempo de exposición, intensidad) tratando de alcanzar los siguientes objetivos:

- Disminución de la tensión aplicada (tensiones menores de 15 V., ó 45 V., según los casos).
- Aumento de la resistencia que ofrece el cuerpo humano (Aislamiento).
- Disminución del tiempo de actuación de la corriente sobre el cuerpo humano (mediante el seccionamiento del circuito con interruptor diferencial y/o magnetotérmico).
- Imposibilidad de que exista el contacto eléctrico (Doble aislamiento).

- Imposibilidad de que circule por el cuerpo humano corriente alguna (interruptor del circuito de retomo: Centro de la estrella o grupo de transformación o equipo generador, transformador con separación de circuitos, etc.)

## 8. NORMAS DE SEGURIDAD EN LOS PROCESOS OPERATIVOS

Se exponen a continuación diversas normas de seguridad a seguir tanto durante la ejecución de las diversas unidades de obra como en el empleo de la diversa maquinaria y medios auxiliares.

### 8.1. NORMAS PARA LA EJECUCIÓN DE LAS UNIDADES DE OBRA

#### 8.1.1. MOVIMIENTO DE TIERRAS

##### Precauciones generales.

Antes de realizar el desbroce de los terrenos será preciso reconocer los mismos antes de meter las máquinas pesadas, para que estas no caigan en socavones.

Los árboles, de existir e interferir los trabajos, deben ser talados mediante motosierra, se avisará antes de proceder al derribo de cada árbol, para que no permanezca ningún trabajador bajo zona de caída del mismo. Una vez talados, mediante anclaje al escarificador, se puede proceder sin riesgo al arranque del tocón, que deberá realizarse a marcha lenta para evitar el "tirón" y la proyección de objetos al cesar la resistencia.

Es imprescindible cuidar los caminos de circulación interna, cubriendo y compactando mediante escorias, zahorras, etc., todos los barrizales afectados por circulación interna de vehículos.



A medida que se avance el frente de excavación este se irá dejando con la inclinación del talud estable en función del tipo de material, limpio de piedras suspendidas, y de viseras inestables. Cuando esto no sea posible será obligatorio entibar dichos taludes

Si durante los trabajos se producen ambientes con polvo con lo que se pierda visibilidad o resulten perjudiciales para la salud, se hará necesario el regar periódicamente los tajos.

Si la excavación se realiza mediante retroexcavadora:

En primer lugar, el maquinista deberá observar las precauciones de que se le hace entrega. En segundo lugar, el personal que deba trabajar conjuntamente con la maquinaria deberá tener en cuenta que está totalmente prohibido acceder al terreno comprendido en el radio de acción de la máquina.

No se permitirá el transporte de personas por maquinaria de movimiento de tierras, a no ser que esta lleve un asiento habilitado para tal efecto.

Estará totalmente prohibido el realizar mediciones ni replanteos en las zonas donde estén trabajando máquinas de movimiento de tierras hasta que estén paradas y en lugar seguro que no ofrezcan riesgo de vuelcos o desprendimiento de tierras.

Siempre que sea necesario que las maniobras de la maquinaria de movimiento de tierras y camiones sean dirigidas por un señalista. Este se hará visible mediante su ropa de trabajo, accesorios reflectantes y señales, respetará las distancias de seguridad a las máquinas y camiones y se hará uso del casco de protección.

Si en la excavación se usan martillos neumáticos:

Antes de iniciar los trabajos, los tajos serán inspeccionados por el Capataz, que dará la orden de comienzo.

Se recomienda prohibir trabajos en torno al martillo neumático en funcionamiento a distancias inferiores a 5 m., para evitar riesgos innecesarios. Se prohíbe situar obreros trabajando en cotas inferiores bajo un martillo neumático en funcionamiento, en prevención de accidentes por derrumbamiento.

Los empalmes y las mangueras de presión de los martillos neumáticos se revisarán al inicio de cada período de rompimiento, sustituyendo aquellos, o los tramos de aquellos, defectuosos o deteriorados.

Se procurará que los taladros efectúen a sotavento en prevención de exposiciones innecesarias a ambientes polvorientos.

El personal a utilizar los martillos conocerá el perfecto funcionamiento de la herramienta, la correcta ejecución del trabajo y los riesgos propios de la máquina. Se prohíbe dejar el puntero hincado al interrumpir el trabajo. Se prohíbe abandonar el martillo o taladro manteniendo conectado el circuito de presión.

Queda prohibido utilizar martillos de presión rompedores dentro del radio de acción de la maquinaria para el movimiento de tierras y/o excavación.

Los tajos con riesgo de caída desde altura se ejecutarán sujeto con el cinturón de seguridad a un punto firme y sólido de terreno (medio natural o construido ex profeso).

Se eliminarán los árboles ubicados al borde de taludes que deban soportar vibraciones de martillos neumáticos, en prevención de accidentes por vuelco de troncos.

Excavación en zanja:



Antes del comienzo de los trabajos es preciso conocer como mínimo:

- Es importante que el encargado de la obra sea informado de las características técnicas del terreno que deben estar definidas en el proyecto, como son: talud natural, capacidad portante, nivel freático, contenido de humedad, posibilidad de filtraciones, estratificaciones, si el terreno ha sido alterado de alguna forma anteriormente etc.
- Proximidad de edificaciones y características de sus cimentaciones, así como posibles sobrecargas en las proximidades de las paredes de la excavación.
- Existencia de fuentes de vibraciones (carreteras, máquinas, etc.).
- Existencia y/o proximidad de instalaciones de agua, gas, electricidad, alcantarillado, línea telefónica, etc.

El personal que haya de trabajar en el interior de zanjas, conocerá los riesgos a los que puede estar sometido.

El acceso y salida del personal a la zanja se efectuará por medio de escaleras de mano sólidamente ancladas al borde superior de la zanja, sobre pasando a la altura de éste en al menos 1,00 m.

Quedan prohibidos los acopios (tierras, materiales, tubos, etc.), a una distancia inferior a 2,00 m. del borde de la zanja. Esta altura podrá variar, en función de las características del terreno y de la profundidad de la zanja. Si las características del terreno o la profundidad de la zanja lo exigieran, se procederá a su entibación al objeto de prevenir desprendimientos del terreno.

Toda zanja, mientras permanezca abierta, se mantendrá protegida con barandilla rígida en el borde, en todas aquellas zonas en que existan pasos de personal y, señalizada con cordón de balizamiento, en el resto de su longitud.

Para pasos de personal sobre zanjas abiertas, se instalarán pasarelas de anchos mínimos 1,00 m., protegidos con barandillas rígidas y resistentes de al menos 1,00 m. de altura.

*Taludes máximos permitidos:*

- a) En roca - 80 grados
- b) En terrenos compactos - 50 grados
- c) En terrenos blandos pero resistentes - 45 grados
- d) En terrenos movedizos o desmoronables - 20 grados

Como esto resulta antieconómico y muchas ocasiones inviable será preciso entibar las paredes de la zanja, siendo absolutamente obligatorio a partir de una profundidad de 1,2 m. e incluso antes en caso de terrenos sueltos y poco estables.

Condiciones generales de una entibación de zanja:

- La profundidad máxima permitida sin entibar en el origen de la zanja, supuesto que el terreno sea suficientemente estable, no será superior a 1,20 m.; no obstante debe protegerse la zanja con un cabecero.
- La altura máxima sin entibar, en fondo de zanja (a partir de 1,40 m.) no superará los 0,70 cm., aún cuando el terreno sea de buena calidad.
- Aún cuando los paramentos de una excavación sean aparentemente estables, se entibarán siempre que se prevea el deterioro del terreno, como consecuencia de una larga duración de abertura.
- El material previsto para llevar a cabo la entibación debe estar a pie de obra en cantidad suficiente.
- El diámetro de los rollizos no debe ser inferior a 10 cm. en punta, para las excavaciones más estrechas, y entre 12 y 14 cm., si la excavación está comprendida entre 0,80 y 1,80 m.

Rellenos:

Señalar los bordes de terraplenes para evitar una aproximación excesiva que provoque un asentamiento elevado de las tierras.

Para las operaciones de vertido del material por los camiones, es preciso que algún auxiliar se encargue de indicar el sitio en que cada camión deba verter. Máxime cuando este se hace al borde del talud y se ha alcanzado cota suficiente. El personal que dirige las



operaciones de descarga debe retirarse de los laterales antes que el vehículo comience a vascular.

Igualmente sucede en las operaciones de nivelado del terraplén con la máquina motoniveladora, los trabajadores auxiliares deberán permanecer fuera del radio de peligro de la máquina en movimiento, estará terminantemente prohibido el subirse a alguna de las partes de la máquina para ser transportados en el avance la zona de trabajo. El maquinista de la motoniveladora por su lado pondrá especial atención en su trabajo y mantendrá en buen estado los dispositivos acústicos de aviso marcha atrás, las luces y los espejos retrovisores.

Cuando se construyan terraplenes estrechos con máquinas pesadas conviene mantener los bordes más elevados que el centro y señalizar la zona estable, para que las máquinas no caigan resbalando.

### 8.1.2. TRABAJOS CON HORMIGÓN

#### Encofrado y desencofrado.

Se prohíbe expresamente que permanezca ningún operario, en la zona de batida de carga, durante la operación de izado de madera o piezas de encofrado con camión-grúa.

El ascenso y descenso del personal a los encofrados se realizará por medio de escalera de manos reglamentaria. Los clavos existentes en la madera ya usada se sacarán o se remacharán inmediatamente después de haber desencofrado, retirando los que pudieran haber quedado sueltos por el suelo.

El acopio de madera, tanto nueva como usada, debe ocupar el menor espacio posible, estando debidamente clasificada y no estorbando las zonas de paso.

*Puntales:*

Los puntales se acopiarán ordenadamente por capas horizontales de un único puntal en altura y fondo el que desee, con la única salvedad de que cada capa se disponga de forma perpendicular a la inmediata inferior. Se prohíbe tras el desencofrado el amontonamiento irregular de los mismos.

La estabilidad de las torretas de acopio de puntales, se asegurará mediante la hincada de "pies derechos" de limitación lateral. Los puntales se izarán a las plantas en paquetes uniformes sobre bateas.

Los puntales de tipo telescópico se transportarán a brazo u hombro con los pasadores y mordazas instaladas en posición de inmovilidad de la capacidad de extensión o retracción de los puntales.

Los tablonos durmientes de apoyo de los puntales que deben trabajar inclinados con respecto a la vertical serán los que se acuñarán. Los puntales siempre apoyarán de forma perpendicular a la cara del tablón.

Los puntales de clavarán a los durmientes y a la sopanda, para conseguir una mayor estabilidad. Los puntales de madera deberán:

- Ser de una sola pieza, en madera sana, preferiblemente sin nudos y seca.
- Estar descortezados con el fin de poder ver el estado real del rollizo.
- Tener la longitud exacta para el apeo en el que se les instale.
- Ser acuñados con doble cuña de madera superpuesta en la base clavándose entre sí.
- Preferiblemente no se emplearán para recibir solicitaciones a flexión.
- Se prohíbe el empalme con tacos de los puntales de madera.
- Todo puntal agrietado se rechazará para el uso de transmisión de carga.

Los puntales metálicos:



- Tendrán la longitud adecuada para la misión a realizar.
- Estarán en perfectas condiciones de mantenimiento. Carecerán de deformaciones en el fuste.
- Los tornillos sin fin los tendrán engrasados.
- Estarán dotados en sus extremos de las placas para apoyo y clavazón.

#### Ferrallado.

Durante la descarga de las barras, se evitará que los paquetes de hierro pasen por encima del personal.

El izado de paquetes de armaduras, en barras sueltas o montadas, se hará suspendiendo la carga en dos puntos separados, lo suficiente para que la carga permanezca estable, evitando la permanencia o paso de personas bajo cargas suspendidas. Sólo se permitirá el transporte vertical para la ubicación exacta "in situ".

Las barras se almacenarán ordenadamente y no interceptarán los pasos, que se establecerán sobre durmientes por capas ordenadas de tal forma que sean evitados los enganches fortuitos entre paquetes.

Los desperdicios y recortes se amontonarán y eliminarán de la obra lo antes posible vertiéndolos sobre bateas destinadas a este fin.

Se pondrán sobre las parrillas planchas de madera, a fin de que el personal no pueda introducir el pie al andar por encima de estas.

Las maniobras de ubicación "in situ" de armaduras suspendidas, se ejecutarán por un mínimo de tres operarios: dos guiando con sogas en dos direcciones, mientras que el tercero procede manualmente a efectuar las correcciones de aplomado.

El taller de ferralla se ubicará de tal forma que, teniendo a él acceso la grúa, las cargas suspendidas no deben pasar por encima de los montadores.

#### Vertido de hormigón.

Hormigonado con canaleta:

Previamente al inicio del vertido del hormigón de camión hormigonera, se instalarán fuertes topes antideslizantes en el lugar donde haya de quedar situado el camión.

Los operarios no se situarán detrás de los camiones hormigonera en maniobras de marcha atrás; estas maniobras siempre deberán ser dirigidas desde fuera del vehículo por uno de los trabajadores. Tampoco se situarán en el lugar de hormigonado hasta que el camión hormigonera no esté en posición de vertido. Los camiones hormigonera no se aproximarán a menos de 2 m., de los cortes del terreno.

Se prohíbe el cambio de posición del camión hormigonera al mismo tiempo que se vierte el hormigón. Esta maniobra deberá efectuarse en su caso con la canaleta fija para evitar movimientos incontrolados.

#### *Precauciones generales en el vertido:*

Mientras se realiza el vertido, se prestará atención al comportamiento de los taludes para detectar los riesgos por vuelco.

Se mantendrán las zonas de trabajo limpias y ordenadas mediante una cuadrilla de limpieza.



Se habilitarán caminos de acceso a los tajos, estableciéndose pasarelas para poder atravesar las zanjas o caminos. Las pasarelas a más de 2 m., de altura estarán limitadas por barandillas.

Se hará una revisión previa de las excavaciones entibadas antes de proceder al vertido del hormigón.

Se señalarán y protegerán las excavaciones con vallas metálicas o de madera, pintada a bandas amarillas y negras ubicadas a 2 m. del borde.

Antes del vertido del hormigón se revisará los encofrados en evitación de reventones o derrames innecesarios sobre trabajadores.

En todas las operaciones con riesgo de caídas de altura, es obligatorio el uso del cinturón de seguridad. El cinturón deberá amarrarse de forma que la longitud de caída libre no supere a los 1,5 metros. Si existiese peligro de caída de objetos o materiales a otro nivel inferior, se acotará la zona para impedir el paso.

Se tendrá especial cuidado en evitar las quemaduras que pudieran producirse al estar en contacto directo con las hormigoneras.

#### **8.1.3. INSTALACIÓN DE MAQUINARIA. (MONTAJE DE EQUIPOS)**

Se mantendrá la zona de trabajo limpia y ordenada.

Se retirarán lo antes posible, los materiales de embalaje para atenuar el riesgo de incendio. Si los embalajes fueran de madera se doblarán los clavos cm o medida preventiva para evitar pinchazos en los pies.

Se evitará la presencia de personas bajo cargas suspendidas o en la proximidad de éstas. Para trabajos en altura se utilizarán andamios o plataformas protegidas, llegando a utilizar cinturón de seguridad que se estimará conveniente y restringiéndose el empleo de escaleras de mano en la medida de lo posible.

Se comprobará el funcionamiento y buen estado de los elementos auxiliares de izado (cables, estrobos, eslingas, cáncamos, gatos, pull-lifts, etc.). Se verificarán que la capacidad de los medios de izado a utilizar son suficientes para el peso de la carga.

Se tomarán las precauciones previstas en el apartado de instalaciones eléctricas de alta y baja tensión, comprobando la ausencia de tensión en el conexionado de equipos. Así mismo se tomarán precauciones especiales, tanto en pruebas eléctricas como de funcionamientos de los equipos.

Se dispondrán extintores portátiles como medida para aminorar el riesgo de incendio.

#### **8.1.4. BASES Y SUB-BASES**

Corresponden a la ejecución de las capas de material "seleccionado" estabilizado con cemento, las capas de grava cemento y a las capas de zahorra artificial extendidas en el vial objeto del proyecto.

Los riesgos detectables en esta unidad de obra son de atropellos, vuelcos de máquinas y vehículos, caídas de vehículos y máquinas a distinto nivel, colisiones, inhalación de polvo y contactos eléctricos.

- Toda la maquinaria móvil empleada en el extendido y compactado estará dotada de avisador acústico de marcha atrás.



- Toda la maquinaria móvil en sus operaciones de aproximación y marcha atrás será guiada por un operario experto
- Se prohibirá la circulación de vehículos en pendientes pronunciadas y en la trayectoria perpendicular a las mismas.
- Se ordenará el tráfico interno de la obra.
- Se utilizarán señales claras, sencillas y uniformes.
- El cambio de las señalizaciones, y por lo tanto, la ordenación de la circulación se efectuará simultáneamente al avance de la obra.
- Si bien se habrá de impedir la existencia de cables eléctricos aéreos en la zona de trabajo y que en todo caso estarán protegidos con elementos resistentes que impidan el contacto con algún elemento de la obra en movimiento, los camiones que efectúen la descarga de materiales por volteo de la caja, no iniciarán su marcha en tanto la caja no esté en su posición normal de marcha.
- Durante la descarga de materiales de los carbones, el conductor del mismo permanecerá en el interior de la cabina.

Si existiese homologación expresa del Ministerio de Trabajo y SS, las prendas de protección personal a utilizar en esta obra, estarán homologadas.

- Casco de polietileno.
- Botas de seguridad.
- Mascarillas antipolvo con filtro mecánico.
- Guantes de cuero.
- Cinturón antivibratorio.

## 8.2. NORMAS PARA EL MANEJO DE VEHÍCULOS Y MAQUINARIA

### 8.2.1. NORMAS GENERALES PARA TODO TIPO DE MAQUINARIA

Los conductores y maquinistas poseerán el carnet que exija la normativa para su manejo, si la legislación vigente no lo exigiese, estos poseerán la experiencia suficiente para su manejo. En el caso de ser un aprendiz, este estará bajo el mando y la supervisión de un

experimentado maquinista, encomendándosele tareas cuya dificultad vaya aumentando conforme aumente su experiencia.

La maquinaria de movimiento de tierras y excavaciones, estarán equipadas con:

- Señalización acústica automática para la marcha atrás.
- Faros para desplazamientos hacia delante o hacia atrás.
- Servofrenos y frenos de mano.
- Retrovisores de cada lado.
- Extintor.

Ante la presencia de conductores eléctricos bajo tensión se impedirá el acceso de la máquina a puntos donde pudiese entrar en contacto.

Las operaciones de mantenimiento se realizarán con la máquina totalmente parada y habiéndose cerciorado de que los puntos calientes de la misma ya se han enfriado o de que se ha eliminado la presión interior.

Se deberán utilizar herramientas totalmente aislantes y se tendrá la precaución de no colocar herramientas sobre la batería para evitar la producción de cortocircuitos. No obstante, se llevará obligatoriamente un pequeño extintor en la máquina para caso de urgencia.

Cuando una máquina de movimiento de tierras esté trabajando, no se permitirá el acceso al terreno comprendido en su radio de trabajo; si permanece estática, se señalará su zona de peligrosidad actuándose en el mismo sentido. No se procederá a reparaciones sobre la máquina con el motor en marcha.



No se realizarán ni mediciones ni replanteos en las zonas donde estén trabajando máquinas de movimiento de tierras hasta que estén paradas y en lugar seguro que no ofrezcan riesgo de vuelcos o desprendimiento de tierra.

Se mantendrán limpios los accesos de la máquina de grasas, polvo o combustible, para evitar caídas al subir o bajar de la misma. El repostado de la máquina se realizará evitando la cercanía de focos calientes y realizando la posterior limpieza del posible combustible derramado.

Examinar la superficie del terreno y la clase de suelo de la zona de trabajo, para determinar los lugares o puntos peligrosos así como los posibles obstáculos existentes, determinando el mejor método operativo.

Es práctica habitual, cuando una máquina o camión queda atascado, el sacado utilizando otra máquina que tire de ella por medio de un cable, se hará que todos los presentes permanezcan fuera de la zona en que pudieran ser alcanzados por el cable en caso de rotura.

Si se circula por una obra en la que existan zanjas o terraplenes, no se hará a menos de dos metros de distancia de la cabeza del talud.

Se tiene la obligación de mantener las condiciones de seguridad que se exigen a la máquina, e impedir su utilización, cuando, directa o indirectamente se tenga conocimiento de que no ofrece las debidas garantías de seguridad para las personas o los bienes. Todas las máquinas se ajustarán a lo dispuesto en el R. D. 1495/1986, de 26 de mayo, por el que se aprueba el Reglamento de Seguridad de las Máquinas.

### 8.2.2. EXCAVADORA

Los caminos de circulación interna poseerán la pendiente máxima autorizada por el fabricante para la máquina. No se sobrepasarán pendientes superiores al 20% al trabajar en terrenos húmedos y del 30% en terrenos secos. La máquina debe ir dotada de cabina con pórtico de seguridad y el maquinista utilizará el cinturón de seguridad del vehículo.

Utilizar la excavadora adecuada al terreno en el que se trabaja. Utilizar oruga en terrenos blandos para materiales duros y trayectos cortos o mejor sin desplazamientos. Utilizar retroexcavadora sobre neumáticos en terrenos duros y abrasivos para materiales sueltos y trayectos largos y/o de continuo desplazamiento.

Es necesario hacer retroceder la máquina cuando la cuchara comience a excavar por debajo del chasis. Nunca se excavará por debajo de la máquina pues puede volcar en la excavación.

Se asegurará el conductor, antes de abandonar la máquina, de haber dejado el motor parado, quitar la llave de contacto, puesto el freno y haber dejado la cuchara reposando en el suelo; en el caso de tener que estacionar en pendiente, se asegurará colocando un tope bajo las ruedas en prevención.

No se cargará la pala con una carga para la cual no está diseñada. La máquina debe venir dotada de la información de las limitaciones de carga; y esta debe existir independientemente de los limitadores y ser conocida por el maquinista. Se revisará periódicamente el tensado y mantenimiento de las cadenas.

Si la cabina de la retroexcavadora no está insonorizada, será conveniente el uso de cascos auditivos de protección.





Si el material extraído con la máquina produjese mucho polvo se deberán mantener las ventanillas cerradas.

Al cargar el material en los camiones, la cuchara nunca debe pasar por encima de la cabina del camión.

En las operaciones de traslado de la máquina, se debe mantener el cazo a una altura de unos 40 a 50 cm. sobre el suelo, de modo que se pueda bajar rápidamente al suelo ante una emergencia, consiguiendo la paralización de la máquina.

### 8.2.3. PALA CARGADORA

La máquina debe ir dotada de cabina con pórtico de seguridad y el maquinista utilizará el cinturón de seguridad del vehículo.

Se asegurará el conductor antes de abandonar la máquina de haber dejado el motor parado, quitar la llave de contacto, puesto el freno y haber dejado la cuchara reposando en el suelo, en el caso de tener que estacionar en pendiente, se asegurará colocando un tope bajo las ruedas en prevención.

No se cargará la pala con una carga para la cual no está diseñada. La máquina debe venir dotada de la información de las limitaciones de carga; y esta debe existir independientemente de los limitadores y ser conocida por el maquinista.

Nunca se deberá transportar la carga con el cucharón totalmente alzado, cuanto más cerca del suelo se mantenga, mejor será su estabilidad.

Se mantendrán limpios los accesos de la máquina de grasas, polvo o combustible, para evitar caídas al subir o bajar de la misma.

Se revisará periódicamente el tensado y mantenimiento de las cadenas. En el caso de llevar neumáticos, al realizar la carga de presión de los mismos, el maquinista realizará dicha operación teniendo la precaución de colocarse protegido de la onda expansiva en caso de reventón del neumático, con la propia máquina o con otro medio auxiliar.

Si la cabina de la pala cargadora no está insonorizada, será conveniente el uso de cascos auditivos de protección.

Si el material extraído con la máquina produjese mucho polvo se deberán mantener las ventanillas cerradas.

Al cargar el material en los camiones, la cuchara nunca debe pasar por encima de la cabina del camión.

En la carga contra un frente de cantera se evitarán los taludes invertidos, saneándose con antelación si es preciso.

Examinar la superficie del terreno y la clase de suelo de la zona de trabajo, para determinar los lugares o puntos peligrosos así como los posibles obstáculos existentes, determinando el mejor método operativo.

En las operaciones de traslado de la máquina se debe mantener el cazo a una altura de unos 40 a 50 cm. sobre el suelo de modo que se pueda bajar rápidamente al suelo ante una emergencia, consiguiendo la paralización de la máquina.



Al formar los acopios de material se irán creando plataformas con una pendiente máxima del 30 % si sólo acceden a ellas las palas y del 20 % al tratarse de camiones, la anchura de la misma será de 4,5 m. mínimo.

#### 8.2.4. CAMIÓN BASCULANTE Y DUMPER

Todos los conductores de camiones deberán ser poseedores del Permiso de Conducir. En el caso del dumper es aconsejable que así sea, e incluso obligatorio si se transita por vía urbana. Los vehículos subcontratados tendrán vigente la Póliza de Seguros con Responsabilidad Civil ilimitada, el Carnet de empresa y los Seguros Sociales cubiertos, antes de comenzar los trabajos en la obra.

Antes de poner el camión en marcha, el operador debe cerciorarse de que no existe nadie cerca, que pueda ser arrollado al iniciar la marcha. Es una buena costumbre hacer sonar el claxon antes de empezar a mover el camión. Es buena práctica circular con las luces encendidas.

Antes de arrancar el motor debe comprobar que todos los mandos están en su posición neutra, para evitar puestas en marcha intempestiva. Debe mirarse continuamente en la dirección de la marcha. Se prohíbe la marcha hacia atrás de los camiones con la caja levantada o durante la maniobra de descenso de la caja, tras el vertido del material, en especial, en presencia de tendidos eléctricos aéreos. Las maniobras de marcha atrás de los camiones para depositar el aglomerado en la extendedora se dirigirá mediante las indicaciones de un señalista.

Se prohíbe que los vehículos transporten personal fuera de la cabina de conducción y en número superior a los asientos existentes.

No se abandonará el camión sin antes haber parado el motor, quitado la llave de contacto, puesto el freno. Se colocará el seguro de bloqueo si lo tiene, en pendientes se colocará bajo las ruedas calzos o topes.

En el caso de realizar la carga de presión de las ruedas, esta se realizará teniendo la precaución de colocarse protegido de la onda expansiva en caso de reventón del neumático, con el propio vehículo o con otro medio auxiliar.

Se señalizará y establecerá un fuerte tope de fin de recorrido ante el borde de taludes o cortes en los que el camión o dumper deba verter su carga, aparte de haber puesto el freno de mano.

Se prohíbe sobrepasar la carga máxima autorizada. Debiendo llevar un rótulo visible con indicaciones de carga máxima que puedan admitir. En el caso de los dumpers, se prohíbe el colmo de las cargas que impida la correcta visión del conductor así como será obligatorio no exceder la velocidad de 20 km./h. tanto en el interior como en el exterior de la obra.

Todas las maniobras de los vehículos, serán guiadas por una persona, y su tránsito dentro de la zona de trabajo, se procurará que sea por sentidos constantes y previamente estudiados, impidiendo toda circulación junto a los bordes de la excavación. Si fuera necesario, se señalizarán los accesos y recorridos de los vehículos.

Es conveniente cuidar los caminos de circulación interna, cubriendo y compactando mediante escorias, zahorras, etc., todos los barrizales afectados por circulación interna de vehículos. Cuando en los tajos se produzcan polvaredas debidas a la circulación de los vehículos se regarán estos con la frecuencia necesaria.



Después del lavado del vehículo o de haber circulado por zonas con agua, conviene ensayar la frenada dos o tres veces.

En la puesta en marcha del dúmper, la manivela debe cogerse colocando el pulgar del mismo lado que los demás dedos.

Cuando el dúmper deba remontar pendientes bajo carga se efectuará siempre en marcha al frente, y los descensos en marcha de retroceso, en prevención de vuelcos. Al Circular cuesta abajo debe estar metida una marcha, nunca debe hacerse en punto muerto.

En el transporte de hormigón mediante el dúmper se debe tener cuidado con el posible fraguado, porque si ocurre, el vuelco al bascular es casi seguro.

Durante la carga en el dúmper el conductor debe permanecer fuera, a distancia prudencial.

No se procederá a reparaciones sobre el camión o el dúmper con el motor en marcha.

Examinar la superficie del terreno y la clase de suelo de la zona de trabajo, para determinar los lugares o puntos peligrosos así como los posibles obstáculos existentes.

#### **8.2.5. CAMIÓN HORMIGONERA**

No se deberá parar en curvas o zonas de poca visibilidad. En caso de ser imprescindible, se deberá señalar previamente dicho estacionamiento, incluso se controlará el tráfico mediante señalistas.

Probar los frenos después de los lavados o de circular por zonas de agua.

No circular con la canaleta suelta, así como, después de su uso de deberá lavar la misma, para que durante la circulación no se produzca perdidas de material. Se deberá maniobrar lentamente mientras se descarga el hormigón en los tajos. No dar marcha atrás sin asegurarse de que el camino está libre.

Atender las indicaciones del encargado de tajo y grúa.

Cambiar los neumáticos cuando se encuentren en mal estado.

Se asegurará el conductor antes de abandonar el camión de haber dejado el motor parado, quitar la llave de contacto, puesto el freno, en el caso de tener que estacionar en pendiente, se asegurará colocando un tope bajo las ruedas en prevención.

El camión debe ir dotado de la información de las limitaciones de carga; y esta debe existir independientemente de los limitadores y ser conocido por el conductor.

Al realizar la carga de presión de los neumáticos, el conductor realizará dicha operación teniendo la precaución de colocarse protegido de la onda expansiva en caso de reventón del neumático, con la propia máquina o con otro medio auxiliar.

Previamente al inicio del vertido del hormigón del camión hormigonera, se instalarán fuertes topes antideslizantes en el lugar donde haya de quedar situado el camión. Si se circula por una obra en la que existan zanjas o terraplenes, no se hará a menos de dos metros de distancia de la cabeza del talud, tampoco se podrá estacionar para el vertido a menor distancia. Se prohíbe el cambio de posición del camión hormigonera al mismo tiempo que se vierte el hormigón. Esta maniobra deberá efectuarse, en su caso con la canaleta fija, para



evitar movimientos incontrolados. Mientras se realiza el vertido se prestará atención al comportamiento de los taludes para detectar los riesgos de vuelco.

Los operarios no se situarán detrás de los camiones hormigoneras en maniobras de marcha atrás; estas maniobras siempre deberán ser dirigidas desde fuera del vehículo por uno de los trabajadores, Tampoco se situarán en el lugar de hormigonado hasta que el camión hormigonera no esté en posición de vertido.

#### 8.2.6. GRÚA AUTOPROPULSADA

Antes de comenzar a trabajar deben hacerse todas las revisiones indicadas en las Normas de Mantenimiento, en donde también figuran las que hay que realizar periódicamente. Este mantenimiento periódico podrá ser demostrado documentalmente.

Los cables de izado y de sustentación serán de construcción y tamaño apropiados para las operaciones en que se hayan de emplear; en caso de sustitución por deterioro o rotura se hará mediante mano de obra especializada y siguiendo las instrucciones para el caso dadas por el fabricante.

Los ajustes de ojales y lazos para los ganchos, anillos y argollas estarán provistos de guardacabos metálicos resistentes.

Se llevará a cabo semanalmente una inspección del número de hilos rotos, desechándose aquellos cables que lo estén en más del 10% de los mismos. Así como se procederá al mantenimiento de los cables con la misma periodicidad: se limpiará el cable con cepillo metálico, para proceder al engrase mediante brocha o si fuera posible mediante baño. La grasa debe ser fluida, de elevada adherencia y exenta de productos ácidos.

Antes de comenzar el trabajo se debe reconocer la zona para observar posibles agujeros, baches, líneas eléctricas, debilidades en el terreno, etc. No se deberán hacer trabajos con vientos fuertes.

Se deberá trabajar obligatoriamente con los gatos de sustentación, para dotarle de la estabilidad adecuada, sobre una superficie compactada que no implique ovimientos indeseables.

Se vigilará constantemente las variaciones posibles por fallo del firme durante las operaciones y transporte de cargas suspendidas. No se abandonará la máquina sin antes haberla dejado en un lugar estable con la pluma recogida, el motor parado sin la llave de contacto y puesto el freno. No se abandonará jamás la máquina con carga suspendida, ni se ubicará en una rampa o pendiente.

Llevará un rótulo visible con indicaciones de carga máxima que puedan admitir y que por ningún concepto será sobrepasada.

Se procurará que las rampas de acceso a los tajos sean uniformes y que no superen la pendiente del 20%.

Al elevar la carga, se comprobará que está debidamente embragada y sujeta al gancho, se elevará lentamente, tensando los cables antes de empezar la elevación, cerciorándose que no hay peligro de vuelco, para ello se vigilará que la carga está totalmente libre y que no se sobrepasa el peso máximo que puede levantar la grúa y la capacidad portante del gancho.



El desplazamiento con carga es peligroso. La grúa no es una máquina de transporte, no debe nunca desplazarse con carga en la pluma, ya que es origen de vuelco y de graves accidentes.

### 8.2.7. COMPACTADOR

La máquina debe ir dotada de cabina con pórtico de seguridad y el maquinista utilizará el cinturón de seguridad del vehículo. Se asegurará el conductor antes de abandonar la máquina de haber dejado el motor parado, quitar la llave de contacto, puesto el freno, en el caso de tener que estacionar en pendiente, se asegurará colocando un tope bajo las ruedas en prevención.

Al realizar la carga de presión de los neumáticos, el maquinista realizará dicha operación teniendo la precaución de colocarse protegido de la onda expansiva en caso de reventón del neumático, con la propia máquina o con otro medio auxiliar.

Se debe mantener siempre buenas condiciones de visibilidad desde el puesto de mando. No se deberá trabajar en terrenos que superen una pendiente de un 15%, siempre que el fabricante, en función de las características de la máquina, no autorice mayor pendiente.

### 8.2.8. BULLDOZER

Antes de arrancar el motor debe comprobar que todos los mandos están en su posición neutra, para evitar puestas en marcha intempestivas.

Se utilizará el ríper adecuado al material a escarificar. Un ríper de 3 dientes es adecuado para material blando y poco estratificado. Para material duro o materiales estratificados se empleará el ríper de un diente. La dirección del ripado, deberá ser idéntica a la que presentan los estratos del material.

No se debe abusar del tilt de la hoja de bulldozer, ya que se disminuyen sus prestaciones y produce accidentes. Es preferible dar unas pasadas con el ríper, dejando una pequeña capa de material suelto y, a continuación, bulldozer lo escarificado. Este procedimiento aumenta la tracción, disminuye averías y evita riesgos.

Se atacará con el ríper bajo el ángulo adecuado, y se favorecerá la penetración aprovechando pequeñas pendientes. El exceso de pendiente (en ningún caso la pendiente lateral será superior al 50%), limitará esta penetración, disminuyendo la producción y aumentando el riesgo. Deberá tenerse en cuenta que el bulldozer está diseñado para "empujar, y siempre que sea posible cuesta abajo. La velocidad óptima de ripado es de 1,5 a 2,3 km./h. Si el bulldozer es capaz de sobrepasar esta velocidad, deberá ser equipado con un mayor número de dientes. Así mismo la distancia media del bulldozer deberá ser de 50 m., la óptima de 30 m. y en ningún caso se superarán los 100 m.

Antes de proceder al ripado deberá realizarse un sondeo del terreno para determinar si es precisa una prevoladura.

Se prohíbe que los vehículos transporten personal fuera de la cabina de conducción y en número superior a los asientos existentes. Se recomienda circular con las luces encendidas.

Las máquinas deben ir dotadas de cabina con pórtico de seguridad y el maquinista utilizará el cinturón de seguridad del vehículo.

Se asegurará el conductor antes de abandonar la máquina de haber dejado el motor parado, quitar la llave de contacto, puesto el freno y haber dejado la cuchara reposando en el suelo, en el caso de tener que estacionar en pendiente, se asegurará colocando un tope bajo las ruedas en prevención. Se revisará periódicamente el tensado y mantenimiento de las cadenas.



Si la cabina de la maquina no está insonorizada, será conveniente el uso de cascos auditivos de protección.

Si el material extraído con la máquina produjese mucho polvo se deberán mantener las ventanillas cerradas.

### 8.3. NORMAS PARA EL USO DE HERRAMIENTAS Y MEDIOS AUXILIARES

#### 8.3.1. HERRAMIENTAS

##### Herramientas en general.

Deberá seleccionarse la herramienta adecuada a cada tipo de trabajo. Antes de ser utilizada, el operario se asegurará que esté en perfectas condiciones. Se observarán las instrucciones para el correcto uso de cada herramienta.

Deberán mantenerse en lugares seguros, lejos de donde puedan provocar o favorecer otro tipo de riesgos.

Al tratarse de un equipo de trabajo según se define en el R.D. 1215/97 del 18 de julio, modificado por el RD 2177/2004, de 12 de noviembre, por el que se establecen las disposiciones mínimas de seguridad y salud para la utilización por los trabajadores de los equipos de trabajo, deberá cumplir las disposiciones que le correspondan.

##### Martillo y maceta.

Se seleccionará su tipo y tamaño según el trabajo a realizar de acuerdo con el siguiente criterio:

- Martillo de bola en trabajos con metales.
- Martillo de peña, para trabajos de carpintería

- Martillo de uña, especial para arrancar clavos de la madera y para la ejecución de encofrados.
- Maceta, especialmente indicado en trabajos de albañilería

Antes de ser utilizado, deberá comprobarse que está en perfectas condiciones para su uso.

- La cabeza estará carente de rebabas.
- Cabeza y mango estarán sólidamente encajadas.
- El mango no estará roto ni astillado.
- El eje del mango y la cabeza serán sensiblemente perpendiculares.
- Tanto la cabeza como el mango estarán exentos de suciedad y grasas.

Se observarán las siguientes instrucciones para su correcto manejo:

- Para golpear se asirá fuertemente el mango, siempre por su extremo.  
En el momento del impacto, la superficie de la cabeza del martillo deberá ser paralela a la superficie del objeto golpeado.
- El operario se asegurará que no existen obstáculos en la trayectoria que describe el martillo, y estará equipado de guantes adecuados y gafas de protección, según los casos.

Para su transporte se utilizarán cajas y/o portaherramientas especiales. Nunca se dejarán en sitios de paso o en lugares elevados donde su caída pueda ocasionar accidentes.

##### Tijeras, alicates y tenazas.

Se seleccionará su tipo y tamaño según la naturaleza del trabajo a realizar, de acuerdo con las siguientes recomendaciones:

- Alicates universales, para cortar, doblar o sujetar.
- Alicates de puntas, para manipular piezas, cables y chapas finas.
- Alicates de corte, para efectuar cortes frontales, laterales o inclinados.
- Tenazas, para cortar o sujetar piezas.



- Tijeras, para cortar cables, cuerdas, alambres y chapas delgadas.

Antes de utilizarlos, deberá verificarse su perfecto estado de uso, comprobando que:

- Las mandíbulas están perfectamente enfrentadas, y carentes de melladuras y desgastes.
- Estén limpios de grasas, aceites y suciedad en general.

Para su correcto manejo no se utilizarán como llave para apretar o aflojar tuercas tomillos, ni tampoco para golpear o apalancar. No se martillearán los mangos para favorecer el corte.

No se utilizaran para cortar materiales más duros que el constitutivo de la propia herramienta. Si se utilizan para cortar cables o alambre sometidos a tensión mecánica, deberán sujetarse con firmeza los dos extremos equipados con mangos protegidos con material aislante.

Para su utilización en trabajos con riesgo eléctrico, deberán estar equipados con mangos protegidos con material aislante. Los operarios se protegerán durante el trabajo con guantes de caucho y gafas anti-impacto, si fuese necesario.

Para su transporte se utilizarán cajas y/o portaherramientas especiales, y nunca se dejarán en sitios de paso o lugares elevados, para evitar posibles accidentes.

#### Herramientas automáticas.

*Normas y medidas preventivas:*

- Se llevará a cabo al menos una vez al mes, una revisión minuciosa de todos los dispositivos de protección eléctrica, tales como fusibles, disyuntores, transformadores de seguridad.

- La máquina-herramienta debe llevar incorporado un interruptor de corte y se conectará a la red a través de una pareja de enchufe y clavija normalizados, de características acordes con la potencia nominal de la misma.
- Deberá disponerse de carcasas de protección en todos los elementos cortantes o punzantes, y se desconcertará la máquina cuando se proceda a cambiar el útil de trabajo.
- El operario encargado de su manejo deberá estar perfectamente instruido al respecto, y llevará puestos los elementos de protección personal exigidos por la naturaleza del trabajo que realice en cada caso.
- En recintos muy conductores, los motores deben ser alimentados con tensiones no superiores a 24 voltios.

#### Taladradora eléctrica:

- La toma de energía debe efectuarse a través de un enchufe normalizado y equipado con disyuntor diferencial. Asimismo la máquina debe disponer de doble aislamiento.
- Se deberá utilizar una broca adecuada al material que se quiere perforar:
- *Broca de Wydia, para fábricas de ladrillo y hormigones.*
- *Broca de acero rápido, para madera y metales.*
- Trabajar apoyado sobre una base estable.
- Antes de perforar, asegurarse de que no se afectarán cables eléctricos, conducciones de gas, agua, etc.
- Utilizar siempre guantes de caucho y gafas anti-impacto.

#### Rozadora-lijadora:

La toma de energía debe efectuarse a través de un enchufe normalizado y equipado con disyuntor diferencial. Asimismo la máquina debe disponer de doble aislamiento.

Se trabajará apoyándose en una superficie estable, sujetándose la máquina con firmeza. Las partes móviles y/o susceptibles de provocar proyecciones deben protegerse con carcasas adecuadas.



Debe utilizarse un disco-soporte apropiado en cada caso, y no se empleará para trabajar sobre materiales prohibidos. El operario encargado de su manejo deberá utilizar gafas o pantalla anti-impacto, mascarilla antipolvo y, en trabajos ininterrumpidos, protectores acústicos.

#### Herramientas impulsoras de clavos:

Confiar la utilización de la herramienta única y exclusivamente a personal cualificado instruido en su manejo. Utilizar protector y arandelas de freno adecuadas.

Comprobar previamente la naturaleza del material y su espesor. No disparar nunca sobre mármol, fundición, acero templado, etc.

Debe elegirse el cartucho y los clavos adecuados en cada caso. Nunca se debe fijar a menos de 10 cm. de bordes, o de una fijación fallida.

Trabajar en posición estable y no dirigir nunca la herramienta hacia personas u objetos susceptibles de provocar accidentes. No se debe utilizar las pistolas en recintos con vapores explosivos o inflamables.

El operario encargado de su manejo utilizará guantes de caucho y gafas anti-impactos. Para el transporte se debe utilizar un portaherramientas adecuado (de tipo bandolera), y se habilitarán cajas especiales cerradas con llave para guardar los cartuchos y los clavos.

Se llevará a cabo, al menos una vez cada dos semanas, una revisión general del estado de la máquina, y en caso de detectarse averías, se procederá inmediatamente a su reparación, confiando la realización de esta tarea a personal experto.

### **8.3.2. SIERRAS CIRCULARES**

Estarán dotados de los siguientes elementos de protección:

- Carcasa de cubrición del disco.
- Cuchillo divisor del corte.
- Empujador de la pieza a cortar y guía.
- Carcasa de protección de las transmisiones por poleas.
- Interruptor estanco.
- Toma de tierra.

Las mesas de sierra se ubicarán en la obra en el lugar adecuado, es decir, que satisfaga las necesidades de producción sin que esto suponga un incremento de los riesgos por las interferencias de otros tajos de obra o la influencia de vehículos o maquinaria. Está prohibido el asentarlas en lugares encharcados para evitar el riesgo eléctrico, así como se mantendrá el espacio de alrededor en orden y limpieza para evitar caídas.

Será manejada por personal especializado y con instrucción sobre su uso, que poseerá autorización expresa del Jefe de obra para utilizar la máquina. El personal empleará pantallas o gafas para protegerse de las posibles proyecciones.

El disco será revisado periódicamente, sustituyendo toda hoja exageradamente recalentada o que presente grietas profundas, ya que podría producir un accidente.

El operario designado para utilizar la sierra tiene la obligación de mantener el disco de corte en perfecto estado de afilado, y cuidará de no cortar madera que lleve en su interior partes metálicas o materiales abrasivos; si debe realizar operaciones como las descritas procederá a extraer las partes metálicas o abrasivas que contenga el material a collar.





Los cortes de ladrillo o elementos prefabricados se realizarán mediante el disco más adecuado para el corte de material componente. Siempre que sean posible los cortes de material cerámico o de prefabricados se realizaran en vía húmeda, es decir bajo el chorro de agua que impida el origen del polvo.

En caso de corte de materiales como los descritos en el punto anterior pero en los que no es posible utilizar la "vía húmeda" se procederá como sigue:

- El operario se colocará para realizar el corte a sotavento, es decir, procurando que los vientos incidiendo sobre su espalda esparzan en dirección contraria el polvo proveniente del corte efectuado.
- El operario utilizará siempre una mascarilla de filtros mecánicos recambiables apropiada al material específico a cortar; y quedará obligado a su uso.
- El mantenimiento de estas máquinas será hecho por personal cualificado expresamente autorizado por la Jefatura de Obra.
- El transporte de este tipo de maquinarias en obra mediante las grúas se efectuara amarrándolas de forma equilibrada de cuatro puntos distintos.
- La mesa de sierra circular irá provista de una señal de "Peligro" y otra de "Prohibido el uso a personal no autorizado".

Todas las máquinas se ajustarán a lo dispuesto en el R. D. 1495/1986, de 26 de mayo, por el que se aprueba el Reglamento de Seguridad de las Máquinas.

### 8.3.3. COMPACTADOR DE BANDEJA Y PISTÓN

La máquina deberá ser manejada única y exclusivamente por personal perfectamente instruido al respecto, prestando siempre la máxima atención y evitando posibles descuidos.

El operario deberá utilizar obligatoriamente botas de seguridad y guantes de cuero. Asimismo, se protegerá con cinturón antivibratorio siempre que permanezca al mando de la máquina durante toda la jornada de trabajo, o bien en intervalos ininterrumpidos de tiempo superiores a treinta minutos.

Al tratarse de un equipo de trabajo según se define en el R.D. 1215/97 del 18 de julio, modificado por el RD 2177/2004, de 12 de noviembre, por el que se establecen las disposiciones mínimas de seguridad y salud para la utilización por los trabajadores de los equipos de trabajo, deberá cumplir las disposiciones que le correspondan.

### 8.3.4. COMPRESOR

Será obligatorio el uso de auriculares en un radio de cuatro metros alrededor del compresor. Antes de su puesta en marcha se calzarán las ruedas del compresor, en evitación de desplazamientos indeseables. El arrastre y estacionamiento del compresor se realizará a una distancia superior a los 3 metros del borde de las zanjas, en evitación de vuelcos y por desplome de las cabezas de las mismas.

Se desecharán todas las mangueras que aparezcan desgastadas o agrietadas. El empalme de mangueras se efectuará por medio de racores.

El compresor se revisará periódicamente llevando a cabo las operaciones de mantenimiento y engrase estando fuera de funcionamiento.

Al tratarse de un equipo de trabajo según se define en el R.D. 1215/97 del 18 de julio, modificado por el RD 2177/2004, de 12 de noviembre, por el que se establecen las disposiciones mínimas de seguridad y salud para la utilización por los trabajadores de los equipos de trabajo, deberá cumplir las disposiciones que le correspondan.

### 8.3.5. ESCALERAS DE MANO

La longitud máxima será de 9 m. y la altura máxima a salvar de 7 m. Se colocarán con una relación de inclinación vertical/horizontal de 4/1 y sobrepasarán al menos 1 m. el piso superior. En su apoyo inferior tendrán zapatas, amarres o topes y en el superior algún tipo de



anclaje. Las superficies de apoyo serán planas y horizontales y jamás se emplearán ladrillos o similares para niveladas.

Las escaleras preferentemente serán metálicas. Ofrecerán las necesarias garantías de solidez, estabilidad y seguridad y, en su caso de aislamiento o incombustión.

Las de madera tendrán los peldaños machihembrados, no clavados, y firmes. No se pintarán pero sí se podrán barnizar. Se evitará exponerlas a la intemperie. Cada 3 m, tendrá un refuerzo metálico de guía a guía. Las de tijera tendrán un cable o cadena para que no deslice y topes en el extremo de la articulación. Las de corredera deben tener un cruzamiento de sus tramos de al menos 1 m.

No utilizar una escalera para un fin distinto del suyo propio (o emplearla como pasarela, andamio, etc.)

No pretender alcanzar desde una escalera objetos alejados: si es necesario hay que moverla. Se empleará de uno en uno y siempre de cara a la escalera. Evitar subir y bajar acarreando cargas, como máximo de 25 kg. Estará prohibido subirse a los tres últimos peldaños.

#### 8.3.6. MARTILLO ROMPEDOR

Las operaciones deberán ser desarrolladas por varias cuadrillas distintas, de tal forma que pueda evitarse la permanencia constante en el mismo y/u operaciones durante todas las horas de trabajo, para evitar lesiones en órganos internos.

Antes del comienzo de un trabajo se inspeccionará el terreno circundante, intentando detectar la posibilidad de desprendimientos de tierras y roca por las vibraciones que se

transmiten al terreno. Se prohíbe realizar trabajos por debajo de la cota del tajo de martillos rompedores.

Se evitará apoyarse a horcajadas sobre la culata de apoyo, en evitación de recibir vibraciones perjudiciales.

Se prohíbe, abandonar los martillos rompedores conectados a la red de presión.

Se prohíbe abandonar el martillo con la barrena hincada.

#### 8.3.7. HORMIGONERA ELÉCTRICA

Las hormigoneras se ubicarán en la obra en el lugar adecuado, es decir, que satisfaga las necesidades de producción sin que esto suponga un incremento de los riesgos por las interferencias de otros tajos de obra o la influencia de vehículos o maquinaria. Alrededor de la ubicación de la hormigonera se mantendrá el orden y limpieza en previsión de caídas al mismo nivel.

Las hormigoneras tendrán protegidos, mediante una carcasa metálica, los órganos de transmisión - correas, corona y engranajes -, para evitar los riesgos de atrapamiento. Las carcasas y demás partes metálicas de la hormigonera estarán conectadas a tierra.

Las operaciones de limpieza directa-manual se efectuarán previa desconexión de la red eléctrica, en previsión del riesgo eléctrico y de atrapamiento.

Se tiene la obligación de mantener las condiciones de seguridad que se exigen a la máquina, e impedir la utilización de la máquina cuando, directa o indirectamente se tenga



conocimiento de que no ofrece las debidas garantías de seguridad para las personas o los bienes.

Todas las máquinas se ajustarán a lo dispuesto en el R. D. 1495/1986, de 26 de mayo, por el que se aprueba el Reglamento de Seguridad de las Máquinas.

### 8.3.8. VIBRADORES

Se evitará vibrar directamente sobre las armaduras. El vibrado se efectuará desde tabloneros dispuestos sobre la capa de compresión de armaduras o sobre una base o plataforma de trabajo estable y segura, nunca sobre bovedillas o elementos poco resistentes.

Se vigilará que no sean anulados los elementos de protección contra el riesgo eléctrico. Nunca se deberá acceder a los órganos de origen eléctrico de alimentación con las manos mojadas o húmedas. Las conexiones eléctricas se efectuarán mediante conductores estancos de intemperie. Poseerán doble aislamiento eléctrico, y figurará en su placa de características el anagrama técnico correspondiente.

En los vibradores por combustibles líquidos, se tendrá en cuenta el riesgo que se deriva de la inflamabilidad del combustible.

El operario que maneja el vibrador hará uso de botas aislantes de goma, de caña alta y suelas antideslizantes.

### 8.3.9. UTILIZACIÓN DE LA INSTALACIÓN ELÉCTRICA PROVISIONAL DE OBRA

La instalación eléctrica de la obra deberá estar conforme al Reglamento Electrotécnico de Baja Tensión, de manera específica a las Instrucciones MIE-BT-027 y MIE-BT-028. Deberá ser realizada siempre por personal especializado y autorizado, al igual que las

ampliaciones, las verificaciones, el mantenimiento y las reparaciones (en la instalación o en los equipos).

Los interruptores estarán protegidos en cajas del tipo blindado, con cortacircuitos fusibles y ajustándose a las normas establecidas en el Reglamento Electrotécnico de Baja Tensión. Se instalarán dentro de cajas normalizadas con puerta y cierre, con una señal de "Peligro Electricidad" sobre la puerta.

Se revisarán periódicamente el estado de mangueras, clavijas, puesta a tierra, tomos de corriente y cuadros eléctricos en general, reponiendo y sustituyendo lo que haga falta.

El calibre o sección del cableado será el especificado por el especialista, de acuerdo a la carga eléctrica que ha de soportar en función de la maquinaria e iluminación prevista.

La distribución desde el cuadro general de obra a los cuadros secundarios (o de planta), se efectuará mediante canalizaciones enterradas.

Se comprobará periódicamente el estado de los interruptores diferenciales accionando el botón de prueba de los mismos.

Si no existe conexión a la red eléctrica general y la energía se toma de la producida por un grupo electrógeno se realizará la revisión diaria y periódica del mismo.

Los cuadros eléctricos deberán ir dotados de enclavamiento de apertura, serán metálicos de tipo para la intemperie, con puerta y cerraja de seguridad y se protegerán con viseras eficaces como protección adicional, la carcasa del cuadro deberá estar puesta a tierra. Se colgarán pendientes de tableros de maderos recibidos a los paramentos verticales o bien a "pies derechos" firmes.



Las tomas de corriente irán provistas de interruptores de corte omnipolar que permita dejadas sin tensión cuando no hayan de ser utilizadas.

Los cuadros deben mantenerse limpios y sin ningún material o herramienta depositada en el interior. Así como los alrededores deben estar en perfectas condiciones de orden y limpieza. El piso libre de agua, grasa y objetos que pueden ocasionar tropezones o resbalamientos.

Los grupos, cuadros, tomas eléctricas, tendrán puertas o tapas que permanecerán cerradas para evitar el acceso fortuito a los mismos, con la señalización oportuna de riesgo eléctrico.

No tocar nunca con las manos un conductor caído en el suelo, después de accidentes o averías hasta no desconectar la corriente.

La desconexión de prolongadores debe hacerse siempre sin tensión y no debe tirarse del cable para desconectar una clavija, tampoco deben usarse nunca enchufes con cuerpos externos rotos, ni conectar cables sin clavijas.

#### 8.3.10. SOLDADURA ELÉCTRICA

No es peligroso trabajar con un equipo de soldadura si se cumplen determinadas normas de seguridad específicas para este tipo de trabajo, en lo que se refiere a:

- La correcta conexión del equipo de soldar.
- La verificación y conservación de los cables conductores.
- El manejo y cuidado del equipo.
- La realización correcta de las operaciones de soldadura.

Soldar con seguridad:

Para evitar electrocuciones hay que evitar que la tensión en vacío descargue a través del cuerpo humano. Por lo tanto es preciso:

- Llevar puestos los guantes protectores cuando se está soldando.
- Cambiar inmediatamente los guantes que se estropeen.
- Dejar siempre el portaelectrodo encima de objetos aislantes, o colgado de una horquilla aislada.

Una protección eficaz sería: traje de trabajo cerrado hasta arriba, delantal de cuero, polainas, guantes y pantalla de soldador.

### 8.4. NORMAS PARA EL PERSONAL

#### 8.4.1. MANDOS Y ENCARGADOS

- Cumplir las normas de seguridad establecidas para cada trabajo y hacer cumplir dichas normas al personal bajo su autoridad.
- Hacer que el personal a sus órdenes utilice los medios de protección que tienen asignados.
- No permitir el incumplimiento de las Normas de Seguridad establecidas para cada trabajo.
- No permitir que el personal a sus órdenes se someta a riesgos innecesarios por exceso de confianza, negligencia o ignorancia.
- Velar por el mantenimiento de las condiciones de seguridad idóneas para cada trabajo.
- Analizar, y llevar a la práctica si procede, toda sugerencia que en materia de Seguridad e Salud en el Trabajo formule el personal bajo su mando.
- Elegir a las personas más adecuadas para cada tipo de trabajo.
- Informar al personal sobre los riesgos e instruirles en los métodos de trabajo más adecuados para cada tipo de actividad.
- Supervisar la correcta aplicación de los sistemas de seguridad, no permitiendo antes, el inicio del trabajo.
- La obligación de aumentar el nivel de seguridad es de TODOS, sobre quien tiene personal bajo su autoridad, esta obligación se convierte en RESPONSABILIDAD.



#### 8.4.2. PERSONAL DE OBRA

- Respete las normas de seguridad de que se le hace entrega en los que concierne a la realización de su trabajo.
- Tenga en cuenta las instrucciones dadas por los responsables de la obra.
- Absténgase de cualquier acción, de cualquier gesto que pueda exponerlo o exponer a sus compañeros al peligro.
- Si es posible, aleje inmediatamente todas las condiciones peligrosas o señálelas a su jefe directo.
- Procure mantener el espacio de trabajo lo más ordenado y limpio posible, manteniendo en todo momento los pasillos y diferentes lugares de paso libres de estorbos.
- Utilice las herramientas y los aparatos únicamente para el uso al que están destinados. Se debe solicitar la sustitución inmediata de toda herramienta en mal estado.
- No degrade, no quite ni neutralice, los dispositivos de protección.
- Si por necesidades de trabajo hay que retirar momentáneamente alguna protección colectiva, debe reponerse antes de ausentarse.
- Hacer el levantamiento de cargas a mano, flexionando las piernas, sin doblar la columna vertebral.
- Para transportar pesos a mano, es siempre preferible ir equilibrado llevando dos.
- No se deben hacer giros bruscos de cintura cuando se está cargando.
- Al utilizar carretillas de mano para el transporte de materiales:
  - No tirar de la carretilla dando la espalda al camino.
  - Antes de bascular la carretilla al borde de una zanja o solar, colocar un tope.
  - Observe las prohibiciones de fumar
  - Respete las señales de seguridad.
  - No consuma bebidas alcohólicas en la obra o taller.
- Utilice la prenda de seguridad necesaria que se ajuste a los riesgos derivados de la labor que realice y durante el tiempo que le lleve su realización.
- Ante cualquier accidente, avisará inmediatamente a cualquiera de sus mandos.
- No hará un trabajo sin saber cómo se hace. Preguntará antes.
- Se pondrá en conocimiento del superior cualquier antecedente de vértigo o miedo a las alturas.

- Es obligatorio utilizar cinturón de seguridad cuando se trabaja en altura y no exista protección colectiva eficaz.
- Antes de comenzar un trabajo en altura, se comprobará que no hay nadie trabajando ni por encima ni por debajo en la misma vertical.
- Está prohibido arrojar materiales o herramientas desde altura.
- Cuando se trabaja en altura, las herramientas deben llevarse en bolsas o cajas adecuadas que impidan su caída fortuita y poder utilizar las dos manos en los desplazamientos.

#### 8.4.3. MANEJO DE CARGAS

El empresario deberá adoptar las medidas necesarias para evitar en lo posible la manipulación manual de cargas, sirviéndose de equipos auxiliares para el manejo mecánico de las mismas. Cuando no pueda evitarse la necesidad de manipulación manual de cargas, el empresario deberá tomar las medidas de organización adecuadas y proporcionar a los trabajadores los medios para reducir el riesgo.

Es obligación del empresario informar y formar sobre los riesgos derivados de la manipulación manual de cargas y sobre las medidas de prevención y protección. Así como, consultar acerca de ello a los trabajadores.

Los trabajadores por tanto, tienen el deber y el derecho de presentar propuestas que afecten a la seguridad en la manipulación manual de cargas. Los trabajadores tendrán derecho a la vigilancia de los posibles efectos de la manipulación manual de cargas en su salud con una periodicidad mínima anual.

El peso máximo que se recomienda no sobrepasar es de 25 kg. en condiciones ideales de manipulación. Se entiende como condiciones ideales de manipulación manual a las que incluyen una postura ideal para el manejo (carga cerca del cuerpo, espalda derecha, sin giros ni inclinaciones), una sujeción firme del objeto con una posición neutral de la muñeca, levantamientos suaves y espaciados y condiciones ambientales favorables.



En circunstancias especiales, trabajadores sanos y entrenados físicamente podrían manipular cargas de hasta 40 kg., siempre que la tarea se realice de forma esporádica y en condiciones seguras. Dichas circunstancias especiales serían aquellas en que habiéndose realizado todos los esfuerzos posibles para evitar la manipulación manual de cargas, o para reducir los riesgos a los niveles más bajos posibles, existe la necesidad de manipular cargas que podrían exceder de 25kg.. En estos casos, se debe poner especial atención en la formación y en el entrenamiento en técnicas de manipulación de cargas, adecuadas a la situación concreta.

El peso teórico recomendado que se podría manejar en función de la posición de la carga con respecto al cuerpo se indica a continuación, teniendo en cuenta que cuando se manipulan cargas en más de una de las zonas, el límite será el de la más desfavorable:

| Distancia al cuerpo    | Pegado | Longitud brazo |
|------------------------|--------|----------------|
| Altura de la cabeza    | 13 kg  | 7 m            |
| Altura del hombro      | 19 kg  | 11 m           |
| Altura del codo        | 25 kg  | 13 m           |
| Altura de los nudillos | 20 kg  | 12 m           |

Si la manipulación de cargas se hace sentado, no se debería pasar de 5 g. de peso, siempre que sea en una zona próxima al tronco, evitando manipular cargas a nivel del suelo o por encima del nivel de los hombros y giros e inclinaciones del tronco.

Cuando la manipulación de cargas se realiza en equipo se tendrá en cuenta que la capacidad de levantamiento es dos tercios de la suma de las capacidades individuales. Cuando el equipo es de tres personas, la capacidad de levantamiento se reduce a la mitad de la suma de las capacidades individuales teóricas.

El recorrido de la carga desde que se inicia el levantamiento hasta que finaliza la manipulación, o desplazamiento vertical de la carga, tiene como valor ideal 25 cm.; siendo aceptables los desplazamientos comprendidos entre la "altura de los hombros y la altura de media pierna". Procurando evitar los desplazamientos que se realicen fuera de estos rangos. No deberían manejarse cargas por encima de 175 cm. que es el límite de alcance para muchas personal. Los límites establecidos se multiplicaran por los siguientes factores en función del desplazamiento vertical:

| Desplazamiento vertical | Factor de corrección |
|-------------------------|----------------------|
| Hasta 25 cm             | 1                    |
| Hasta 50 cm             | 0.91                 |
| Hasta 100 cm            | 0.87                 |
| Hasta 175 cm            | 0.84                 |
| Más de 175 cm           | 0                    |

Es preferible que las cargas tengan asas o ranuras en las que se pueda introducir la mano fácilmente, de modo que permitan un agarre correcto, en función del tipo de agarre que presente la carga deberán aplicarse los siguientes factores a los límites de carga:

| Tipo de agarre | Factor de corrección |
|----------------|----------------------|
| Agarre bueno   | 1                    |
| Agarre regular | 0.95                 |
| Agarre malo    | 0.9                  |

Factor de corrección a aplicar al límite de cargas en función de la frecuencia de la manipulación:



| Frecuencia de manipulación | Duración de la manipulación |               |          |
|----------------------------|-----------------------------|---------------|----------|
|                            | < 1h/día                    | entre 1 y 2 h | > 2h/día |
|                            | Factor de corrección        |               |          |
| 1 vez cada 5 minutos       | 1                           | 0.95          | 0.85     |
| 1 vez/minuto               | 0.94                        | 0.88          | 0.75     |
| 4 veces/minuto             | 0.84                        | 0.72          | 0.45     |
| 9 veces/minuto             | 0.52                        | 0.3           | 0        |
| 12 veces/minuto            | 0.37                        | 0             | 0        |
| > 15 veces/minuto          | 0                           | 0             | 0        |

La postura correcta al manejar una carga es con la espalda derecha. Es conveniente que la anchura de la carga no supere la anchura de los hombros, la profundidad no debería superar los 35 cm. La superficie de la carga no debe tener elementos peligrosos que generen riesgos de lesiones. En caso contrario, se aconseja la utilización de guantes.

Las cargas deberán tener el centro de gravedad fijo y centrado geométricamente. Si no fuera así se deberá advertir con una etiqueta, debiéndose manipular con el centro de gravedad lo más cerca posible del cuerpo.

Los equipos de protección individual no deberán interferir en la capacidad de realizar movimientos, no impedirán la visión ni disminuirán la destreza manual. Se evitarán los bolsillos, cinturones, u otros elementos fáciles de enganchar. La vestimenta deberá ser cómoda y no ajustada. El calzado constituirá un soporte adecuado para los pies, será estable, con la suela no deslizante, y proporcionará una protección adecuada del pie contra la caída de objetos.

#### METODO PARA LEVANTAR LA CARGA:

##### 1. Planificar el levantamiento

Siempre que sea posible se deberán utilizar ayudas mecánicas.

- Seguir las indicaciones que aparezcan en el embalaje.
- Observar la carga, forma y tamaño, posible peso, zonas de agarre, posibles puntos peligrosos.... Probar a alzar primero un lado, ya que no siempre el tamaño de la carga ofrece una idea exacta de su peso real.
- Solicitar ayuda de otras personas en caso necesario.

- Tener prevista la ruta de transporte y punto de destino final del levantamiento, retirando los materiales que entorpezcan el paso.
- Usar la vestimenta el calzado y los equipos adecuados.

##### 2. Colocar los pies

Separar los pies para proporcionar una postura estable y equilibrada para el levantamiento, colocando un pie más adelantado que el otro en la dirección del movimiento.

##### 3. Adoptar la postura de levantamiento

- Doblar las piernas manteniendo en todo momento la espalda recta No flexionar demasiado las rodillas.
- No girar el tronco ni adoptar posturas forzadas.

##### 4. Agarre firme

Sujetar firmemente la carga empleando ambas manos y pegarla al cuerpo. Cuando sea necesario cambiar el agarre, hacerlo suavemente o apoyando la carga.

##### 5. Levantamiento suave

Levantarse suavemente, por extensión de las piernas, manteniendo la espalda derecha. No dar tirones a la carga ni moverla de forma rápida o brusca.

##### 6. Evitar giros

Procurar no efectuar nunca giros, es preferible mover los pies para colocarse en la posición adecuada.

##### 7. Carga pegada al cuerpo

Mantener la carga pegada al cuerpo durante todo el levantamiento



#### 8. Depositarla carga

Si el levantamiento es desde el suelo hasta una altura importante, por ejemplo la altura de los hombros o más, apoyar la carga a medio camino para poder cambiar el agarre.

### 9. MEDICINA PREVENTIVA Y PRIMEROS AUXILIOS

#### 9.1. BOTIQUINES

En la obra existirá un lugar dedicado a la asistencia sanitaria con los medios para efectuar acciones de urgencia en caso de accidentes, este lugar contará con un botiquín de primeros auxilios que contará con todo lo necesario, que se revisará y completará periódicamente.

En cada vehículo de obra existirá un botiquín para efectuar acciones de urgencia en caso de accidentes, que contará con todo lo necesario, que se revisará y completará periódicamente, y de cuya existencia tendrá conocimiento todo el personal de la obra. El botiquín deberá contar de lo siguiente:

- Alcohol de 96 grados.
- Agua oxigenada.
- Solución desinfectante.
- Antiinflamatorio.
- Analgésico.
- Colirio.
- Algodón hidrófilo.
- Vendas.
- Gasas estériles.
- Esparadrapo.
- Tiritas.

- Guantes esterilizados.
- Tijeras.

#### 9.2. ASISTENCIA A ACCIDENTADOS

La dirección de obra del contratista adjudicatario deberá informarse sobre el emplazamiento de los diferentes Centros Médicos (Servicios propios, Mutuas Patronales, Mutualidades Laborales, Ambulatorios, etc.), donde debe trasladarse a los accidentados para su más rápido y efectivo tratamiento.

Se dispondrá en la obra, y en sitio bien visible, de una lista con los teléfonos de urgencias, ambulancias, taxis, etc., para garantizar un rápido traslado de los posibles accidentados a los Centros de asistencia.

A uno de los trabajadores de la obra, concretamente al capataz de la misma se le dará un resumen de instrucciones para caso de accidente, siendo él preferiblemente el encargado de atender al posible accidentado y de su traslado.

#### 9.3. RECONOCIMIENTOS MÉDICOS

La empresa pondrá al alcance de los trabajadores que se incorporen a la obra la posibilidad de someterse a un reconocimiento médico anual, esta vigilancia de la salud solo se podrá llevar a cabo cuando el trabajador preste su consentimiento o sea obligatorio por ocupar un puesto de riesgo de características especiales (Art. 22 de la Ley de Prevención de Riesgos Laborales 31/1.995, de 8 de noviembre).

### 10. INSTALACIONES PROVISIONALES DE HIGIENE Y BIENESTAR





Se hace obligatoria la instalación de unas determinadas instalaciones provisionales de obra como son: vestuarios, aseos, duchas y comedor.

Se habilitará dichas casetas para los trabajadores a pie de obra equipadas con todo lo que exige la legislación vigente de Seguridad y Salud en el Trabajo.

## 11. PREVENCIÓN Y PROTECCIÓN DE INCENDIOS

Para la prevención y protección de incendios dentro del recinto de las instalaciones, se instalarán en lugares estratégicos, como pueden ser aquellos cercanos a instalaciones eléctricas, acopios de materiales inflamables o equipos fijos de trabajo, el número suficiente y clase adecuada de extintores. Tanto los vehículos de transporte de personal como cada una de las maquinas de obra llevarán un extintor portátil.

## 12. LIBRO DE INCIDENCIAS

En cumplimiento del R.D. 1627/97 sobre disposiciones mínimas de seguridad y salud en las obras de construcción, existirá en obra un Libro de Incidencias debidamente cumplimentado con la finalidad de controlar y hacer un seguimiento del plan de seguridad y salud.

Burgos, Febrero de 2.012

AUTORES DEL PROYECTO

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## PLIEGO DE PRESCRIPCIONES TÉCNICAS PARTICULARES



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## **1. OBJETO DEL PLIEGO**

El presente Pliego de Prescripciones Técnicas Particulares tiene por objeto describir y regular la ejecución de las tareas de prevención de riesgos profesionales individuales y colectivos y la dotación de medios de protección y señalización adecuada para conseguir un óptimo nivel de bienestar y seguridad para las personas directa o indirectamente afectadas por la ejecución de las obras definidas en este Proyecto.

También se definen las características y especificaciones a las que deben ajustarse los equipos y materiales empleados en las diversas tareas relacionadas con los objetivos anteriormente citados.

## **2. DISPOSICIONES LEGALES DE APLICACIÓN**

El presente Estudio de Seguridad y Salud, no vulnera o incumple con lo legislado que le sea de aplicación. Por ello se omite hacer mención expresa de una extensa lista de legislación aplicable, la cual está en continuo cambio y/o desarrollo reglamentario por parte del legislador. Únicamente haremos mención expresa del cumplimiento del mismo con las directrices y especificaciones del R.D. 1627/1.997, por el que se establecen disposiciones mínimas de seguridad y salud en las obras de construcción; así como, la Ley 31/1995 de Prevención de Riesgos Laborales y R. D. 39/97 sobre el Reglamento de los Servicios de Prevención, como pilar fundamental para desarrollar la política a seguir en materia de prevención de riesgos laborales.

## **3. CONDICIONES DE LOS MEDIOS DE PROTECCIÓN**

### **3.1. CONDICIONES GENERALES**

Todos los elementos de protección, tanto individuales como colectivos, tendrán fijado un período de vida útil, desechándose a su término.

Cuando, por las circunstancias especiales de trabajo, se produzca un deterioro más rápido de una prenda o equipo, se repondrá ésta al momento, independientemente de cuál sea su duración prevista o la fecha de la próxima entrega.

Todo medio o equipo de protección que haya sufrido u trato límite, es decir, al máximo para el que fue concebido (por ejemplo, como consecuencia de un accidente) será desechado y reemplazado inmediatamente. De igual forma se procederá cuando, debido a su utilización, hayan adquirido holguras o tolerancias de las admitidas por el fabricante.

En ningún caso el uso de prenda o equipo de protección representará un riesgo en sí mismo.

### **3.2. CONDICIONES DE LOS EQUIPOS DE PROTECCIÓN PERSONAL**

Todos los elementos de protección personal se ajustarán a las Normas de Homologación del Ministerio de Trabajo (O.M. del 17-5-74). (B.O.E. del 29/5/74); siempre que exista en el mercado.

En los casos en que no exista Norma de Homologación oficial deberán ser, a juicio del Director de la obra, de calidad adecuada a sus respectivas prestaciones.



Se procurará que, en todo momento, los trabajadores o las terceras personas dispongan de un equipo de protección idónea, para lo cual:

- Deberá estar adaptado a la naturaleza del riesgo para el que ha sido concebido, es decir, deberá ser eficaz.
- Deberá causar la menor molestia, es decir, estorbará lo menos posible y, por lo tanto, será fácilmente aceptado por el trabajador.
- Deberá sentar bien por su concepción estética.

En cualquier caso, se tendrá siempre presente que la función de los equipos de protección individual consiste en aminorar las consecuencias de un accidente, y no en eliminar o reducir el riesgo de que éste se produzca, por lo que nunca deberán ser substitutivos, sino complementarios, de los equipos de protección colectiva y de las medidas de prevención general.

Se exceptuarán de lo dispuesto en el párrafo anterior los casos en que el empleo de protecciones colectivas entrañe mayor riesgo que el del propio trabajo en sí, lo que ocurrirá, eventualmente, en casos excepcionales y de corta duración.

### 3.2.1. PROTECCIONES DE LA CABEZA

Será obligatorio el empleo de casco protector en todo lugar de la zona de obras donde exista riesgo de que hombres y objetos puedan caer desde un nivel a otro.

El casco protector se compondrá de:

- Casco propiamente dicho.
- Barboquejo y/o atalaje.
- Accesorios varios.

### 3.2.2. PROTECCIONES DE LOS OÍDOS

Será obligatorio el empleo de cascos antiruido, en todo lugar de la zona de obras donde trabajadores y/o terceras personas estén sometidas a la acción de fuentes de emisión ruidosa durante periodos de tiempo y a niveles superiores a los permitidos en el R.D. 1.316/1.989 sobre medidas de protección a los trabajadores para los riesgos derivados de su exposición al ruido.

Se admitirá el empleo de tapones protectores en las mismas circunstancias, y siempre y cuando el nivel de protección aportado no sea inferior al exigido por las citadas recomendaciones.

Los cascos antiruido estarán formados por dos orejeras rígidas unidas entre sí por una lámina o unas varillas de acero que permitan la sustentación del conjunto por detrás de la cabeza. Las orejeras estarán provistas, del lado del pabellón auditivo, de una pieza elástica que sirva de junta de estanqueidad y que haga más confortables.

Los tapones protectores estarán constituidos por dos tapones auriculares que se adapten a la actividad del oído externo y protejan el sistema auditivo de los efectos de los niveles sonoros extremos.

### 3.2.3. PROTECCIONES DE LOS OJOS

Será obligatorio la utilización de gafas protectoras en todo lugar de la zona de obras en la que trabajadores y/o terceras personas estén expuestos a cualquier de los siguientes riesgos:

- Penetración o impacto de partículas sólidas en el ojo.
- Existencia de polvo, más o menos fino, en el aire.
- Contacto con líquidos o vapores corrosivos.
- Exposiciones a radiaciones visibles demasiado intensas.
- Exposiciones a radiaciones invisibles (infrarrojo y ultravioleta).



#### Protección frente al polvo e impactos.

Se utilizarán gafas de cazoleta con protecciones laterales, cuyos cristales sean ópticamente neutros y perfectamente transparentes. Si existiese riesgo de impacto con partículas gruesas, o suficientemente intenso como para producir la rotura de los cristales se emplearán gafas especiales de seguridad con rejilla metálica protectora.

#### Protecciones frente a líquidos y/o vapores corrosivos

Se utilizarán gafas estancas con protección perimetral completa, dotadas de sistemas de aireación adecuados y pantallas ejecutadas con un material plástico antiempañable.

#### Protecciones frente a radiaciones electromagnéticas

Se utilizarán gafas especiales equipadas con cristales fabricados con materiales capaces de eliminar en su totalidad las radiaciones peligrosas. El mecanismo de actuación podrá ser el de absorción o el de reflexión, o bien una combinación de ambos procedimientos.

Deberá disponerse de gafas con una gama completa de cristales de diferente opacidad que sean capaces de eliminar una determinada banda del espectro.

No se admitirá el empleo de gafas con cristales simplemente teñidos, sin características selectivas que permitan eliminar las radiaciones nocivas de la zona ultravioleta y las infrarrojas de pequeña longitud de onda. Los operarios que efectúen trabajos de soldadura deberán protegerse con pantallas faciales de seguridad materializadas en plástico, y dotadas de cristales filtrantes que eliminen por completo las bandas de radiaciones nocivas definidas en el párrafo anterior y aminoren el efecto de las radiaciones visibles demasiado intensas.

### **3.2.4. PROTECCIONES DE LAS VÍAS RESPIRATORIAS**

Será obligatoria la utilización de equipos de protección personal de las vías respiratorias en toda la zona de obras en la que trabajadores y/o terceras personas estén expuestos al riesgo de inhalación de polvo o vapores y/o gases irritantes o tóxicos, y siempre y cuando sea imposible o desaconsejable la implantación de sistemas de protección colectiva.

Los dispositivos de protección de las vías respiratorias estarán diseñados específicamente para resguardar el sistema respiratorio del individuo de los efectos del polvo, humos, vapores y gases tóxicos o nocivos, etc., y podrán utilizar alguno de los dos procedimientos siguientes:

- Filtración físico-química del aire inhalado.
- Aislamiento de las vías respiratorias respecto del aire ambiente.

#### Protección frente al polvo.

Se emplearán mascarillas antipolvo en las zonas de trabajo donde la atmósfera esté cargada de polvo. Constarán de una mascarilla propiamente dicha, ya sea completa o buconasal, equipada con un dispositivo filtrante de tipo mecánico que retenga las partículas agresivas.

Se tendrá presente que su vida útil estará limitada por la propia duración del filtro, cuyos poros se colmatarán después de un período de utilización más o menos largo. El usuario se dará cuenta de ello por un aumento de la dificultad en la respiración. Al ser este fenómeno progresivo, se repondrá la mascarilla cuando el grado de colmatación del filtro sea tal que haga imposible mantener el ritmo normal de respiración.

#### Protección frente a humos, vapores y gases.

Se emplearán mascarillas antigás en las zonas de trabajo donde la atmósfera esté contaminada por humos, vapores y/o gases irritantes o tóxicos. Constarán de una mascarilla



completa, equipada con un dispositivo filtrante de carácter químico que retenga o neutralice las sustancias nocivas presentes en el aire ambiente.

Se observarán, con toda exactitud, las instrucciones dadas por el fabricante en lo que se refiera al empleo, mantenimiento y vida útil de la mascarilla.

#### Elección del equipo adecuado.

La elección de un equipo de protección personal del sistema respiratorio deberá hacerse en base a las dos premisas siguientes

- Diseñar una protección separada para cada riesgo, y no reunir en un mismo dispositivo elementos de protección contra varios riesgos diferentes, salvo que esos riesgos se presentan simultáneamente en la misma zona de trabajo.
- A igualdad de eficacia, dar a los aparatos más sencillos y más fáciles de conservar y mantener.

### **3.2.5. PROTECCIÓN DEL CUERPO**

#### Ropa de trabajo.

Todos los trabajadores deberán estar equipados con ropas adecuadas que aseguren una protección eficaz contra las agresiones exteriores (intemperie, radiaciones, agentes parásitos, productos químicos, etc.).

El mono o buzo de trabajo deberá ser amplio y podrá ajustarse a la cintura mediante un cinturón de hebilla o de anillas. Asimismo, deberá estar dotado de aberturas de aireación y de puños ajustables.

#### Protecciones frente a polvo y gases.

Los trabajadores que realicen su labor en una atmósfera cargada de polvo, o en presencia de contaminantes físico-químicos que produzcan efectos nocivos en la piel, deberán ser equipados con ropa especial estanca y/o ropas con aire a presión.

#### Protección frente a efectos térmicos y radiaciones.

Los operarios que efectúen trabajos de soldadura estarán equipados con mandiles, manoplas y polainas especiales para protegerse de los efectos nocivos derivados de los procesos de soldadura.

### **3.2.6. PROTECCIÓN DE LAS MANOS**

Será obligatoria la utilización de protecciones personales para las manos en todo lugar de la zona de obras en el que los trabajadores y/o terceras personas estén expuestos al riesgo de accidentes mecánico y/o contacto manual con agentes agresivos de naturaleza físico-química.

#### Protecciones individuales contra las agresiones lentas (dermatosis).

Se emplearán cremas barreras o películas siliconadas y/o guantes adecuados para combatir las dermatosis profesionales. Estos últimos constituyen el medio más eficaz de protección, utilizándose aquellas solamente en los casos en que, excepcionalmente, fuera imposible o desaconsejable el empleo de guantes.

#### Protección individual contra agresiones rápidas.

Para proteger las manos frente a agresiones rápidas (golpes, cortes, arañazos, pinchazos, quemaduras, descargas eléctricas, etc.) se emplearán, según los casos, diferentes prendas, tales como guantes, manoplas, mandiles, etc. Su diseño deberá ser adecuado a la naturaleza de cada trabajo a realizar, por lo que deben ser confortables (tanto el material como la forma) y eficaces.

Las manoplas se utilizarán y exclusivamente para el manejo de grandes piezas. Cuando sea necesaria una buena aprehensión de las piezas, será indispensable que la goma del guante permita la oposición del dedo pulgar.





La naturaleza material de estas prendas de protección deberá ser adecuada a los riesgos inherentes a cada tipo de trabajo. En función de esto, se procurará utilizar los siguientes tipos de guantes y manoplas:

- De caucho, especialmente indicados en trabajos que conlleven riesgo eléctrico.
- De neopreno, resistentes a la abrasión y a los agentes químicos de carácter agresivo.
- De algodón o punto, en trabajos ligeros y/o que exijan manipular chapas delgadas.
- De cuero, para trabajos de manipulación en general.
- De material plástico, para protegerse de agentes químicos nocivos y/o procesos abrasivos.
- De amianto, especialmente indicados en trabajos que conlleven riesgos de sufrir quemaduras.
- De metálica, para trabajos de manipulación de piezas cortantes.
- De lona, especialmente indicados en trabajos de manipulación de objetos sin grandes asperezas, pero que puedan producir arañazos como es el caso de maderas fácilmente astillables.

### 3.2.7. PROTECCIONES DE LOS PIES

#### Elementos integrantes del calzado de seguridad.

El calzado de seguridad llevará incorporados, obligatoriamente, los siguientes elementos:

- Una suela especial que posea propiedades antideslizantes
- Una puntera reforzada que proteja los dedos del pie.

Además de esto, y en función del riesgo específico inherente a cada tipo de trabajo estarán dotados, eventualmente, de alguno o algunos de los siguientes elementos:

- Una plantilla imperforable.
- Un elemento de protección especial para los tobillos.

#### Protección frente al riesgo de aplastamiento.

Se realizará integrando en el calzado una puntera de acero que pueda absorber el choque de un objeto sin deformarse y, por lo tanto, sin poner en peligro la integridad física de los dedos de los pies.

Las punteras de seguridad deberán ser capaces de soportar una carga estática del orden de dos (2) toneladas y no se deformarán mucho bajo el efecto del choque de un objeto de veinte (20) Kg. de peso, dejando caer desde una altura de un (1) metro.

Asimismo, deberán tener una protección horizontal redondeada en evitación de que los dedos puedan resultar seccionados. El espacio libre en el interior de la puntera no será inferior a 15 mm en el momento del choque, ni a 20 mm después de producirse el choque.

#### Protección contra el riesgo de perforaciones.

Se realizará incorporando al calzado un plantilla protectora ligera y por lo tanto delgada de acero inoxidable.

Su resistencia deberá ser tal que un objeto de ciento veinte (120) Kg. De peso, animado de una velocidad de setenta y cinco (75) mm. por minuto, no producirá la perforación de la plantilla al incidir sobre la misma.

#### Características del calzado de seguridad.

El calzado de seguridad deberá reunir las siguientes características:

- Solidez, o lo que es lo mismo, resistencia adecuada a las condiciones particulares de cada uso.
- Flexibilidad.
- Ligereza.
- Confort.
- Diseño estético.



### 3.2.8. PROTECCIÓN CONTRA VIBRACIONES MECÁNICAS

Será obligatoria la utilización de cinturones antivibratorios por parte de los operarios sometidos a los efectos de movimientos vibratorios de frecuencia inferior a los 100 Hz..

En cualquier caso, deberán utilizar siempre cinturones antivibratorios los conductores de maquinaria y los operarios que trabajen con martillos neumáticos.

### 3.3. CONDICIONES DE LOS EQUIPOS DE PROTECCIÓN COLECTIVA

#### 3.3.1. SEÑALIZACIÓN

Tiene una utilización general en toda la obra. Se utilizaran las señales desarrolladas por el Real Decreto 485/1997 sobre disposiciones mínimas en materia de señalización de seguridad y salud en el trabajo. Así pues, se emplearán cuatro tipos de señales:

- Señales de prohibición.
- Señales de obligación.
- Señales de advertencia.
- Señales de información.

Las señales de prohibición y obligación tendrán forma de círculo y sus fondos rojos y azules, respectivamente. Para los carteles de advertencia la forma establecida es la forma triangular con el fondo amarillo. La forma rectangular es la reservada para la señalización de información con fondos azules o verdes. La correcta utilización de estas señales y el cumplimiento de sus indicaciones evitarán situaciones peligrosas y numerosos accidentes.

#### 3.3.2. INSTALACIÓN ELÉCTRICA PROVISIONAL

##### Personal instalador.

El montaje de la instalación deberá efectuado, necesariamente, por personal especializado. Hasta 50 Kw podrá dirigirlo un instalador autorizado sin título facultativo. A partir de esa potencia la dirección de la instalación corresponderá a un técnico titulado.

##### Ubicación distribución de los cuadros eléctricos.

Se colocarán en lugares sobre los que no exista riesgo de caída de materiales u objetos procedentes de trabajos realizados a niveles superiores, salvo que se utilice una protección específica que evite los riesgos de tal contingencia. Esta protección será extensible tanto al lugar en que se ubique cada cuadro cuanto a la zona de acceso de las personas que deban acercarse al mismo.

Todos los cuadros de la instalación eléctrica provisional estarán debidamente separados de los lugares de paso de máquinas y vehículos y siempre dentro del recinto de la obra.

El acceso al lugar en que se ubique cada uno de los cuadros estará libre de objetos y materiales que entorpezcan el paso, tales como escombros, áreas de acopio de materiales, etc.

Existirá un cuadro general del que se tomarán las derivaciones para otros auxiliares, facilitando así la conexión de máquinas y equipos portátiles y evitando tendidos eléctricos largos. Dentro de lo posible, el cuadro general se colocará en lugar próximo a las oficinas de obra o en el que estén las personas encargadas del mantenimiento de la instalación.

##### Condiciones de seguridad de los cuadros eléctricos.

Los distintos elementos de todos los cuadros, principal y secundarios o auxiliares, se colocarán sobre una placa de montaje de material aislante.

Todas las partes activas de la instalación estarán aisladas para evitar contactos peligrosos.



En el cuadro principal o de origen de la instalación se dispondrán dos interruptores diferenciales: uno para alumbrado y otro para fuerza. La sensibilidad de los mismos será de 300 mA.

El sistema de protección, en origen, se complementará mediante interruptores magnetotérmicos, para evitar los riesgos derivados de las posibles sobrecargas de líneas. Se colocará un magnetotérmico por cada circuito que se disponga.

Los cuadros dispondrán de las correspondientes bases de enchufe para la toma de corriente y conexión de los equipos y máquinas que lo requieran. Estas tomas de corriente se colocarán en los laterales de los armados, para facilitar que puedan permanecer cerrados. Las bases permitirán la conexión de equipos y máquinas con la instalación de puesta a tierra.

Podrá excluirse el ubicar las bases de enchufe en armados cuando se trate de un cuadro auxiliar y se sitúe en zonas en las que no existan los riesgos que requieran los antes citados grados de protección.

Las tomas de corriente irán provistas de un interruptor de corte omnipolar que permita dejadas sin tensión cuando no hayan de ser utilizadas.

En el caso de máquinas de elevación y transporte, la instalación, en su conjunto, se podrá poner fuera de servicio mediante un interruptor de corte omnipolar general, accionado a mano y colocado en el circuito principal. Este interruptor deberá estar situado en lugar fácilmente accesible desde el suelo, en el mismo punto en que se sitúe el equipo eléctrico de accionamiento, y será fácilmente identificable mediante rótulo indeleble.

#### Instalación de puesta a tierra.

Las estructuras de máquinas, equipos y las cubiertas de sus motores cuando trabajen a más de 24 voltios y no posean doble aislamiento, así como las cubiertas metálicas de todos los

dispositivos eléctricos en el interior de cajas o sobre ellas, deberán estar conectadas a la instalación de puesta a tierra.

La resistencia a tierra estará en función de la sensibilidad del interruptor diferencial del origen de la instalación. La relación será, en obras o emplazamientos húmedos: 1. Diferencial de 300 Ma.  $R_t < 80 \text{ ohm}$ .

Los circuitos de puesta a tierra formarán una línea eléctricamente continua en la que no podrán incluirse en serie sus masas para elementos metálicos, cualesquiera que sean éstos.

Se prohíbe intercalar en circuitos de tierra seccionadores, fusibles o interruptores. Las condiciones mínimas de los elementos constitutivos de la instalación deberán ajustarse a las prescripciones del Reglamento Electrotécnico para Baja Tensión, en su Instrucción 039. Los electrodos podrán ser de cobre o de hierro galvanizado y usarse en forma de pica o placas.

En el caso de picas:

- El diámetro mínimo de las de cobre será de 14 mm.
- El diámetro exterior mínimo de las de hierro galvanizado será de 25 mm.
- La longitud mínima, en ambos casos, será de 2 m.

El uso de otros materiales deberá estar ajustado a las exigencias del antes citado

Reglamento y ser objeto de cálculo adecuado, realizado por técnico especialista. Aquellos electrodos que no cumplan estos requisitos mínimos serán rechazados. El terreno deberá estar tan húmedo como sea posible.

#### Conductores eléctricos.

Las líneas aéreas con conductores desnudos destinados a la alimentación de la instalación temporal de obras sólo serán permitidas cuando su trazado no transcurra por encima de los locales o emplazamientos temporales que, además, sean inaccesibles a las



personas, y la traza sobre el suelo del conductor más próximo a cualquiera de éstos se encuentre separada de los mismos 1 m. como mínimo.

En caso de conductores aislados no se colocarán por el suelo, en zonas de paso de personas o de vehículos, ni en áreas de acopio de materiales. Para evitarlo, en tales lugares se colocarán elevados y fuera del alcance de personas y vehículos o enterrados y protegidos por una protección resistente. Esta preocupación se hará extensiva a las zonas encharcadas o con riesgo de que se encharquen.

Los extremos de los conductores estarán dotados de sus correspondientes clavijas de conexión. Se prohibirá que se conecten directamente los hilos desnudos en las bases de enchufe.

Caso de que se tengan que realizar empalmes, la operación la efectuará personal especializado y las condiciones de estanqueidad serán como mínimo las propias del conductor.

Los conductores aislados, utilizados tanto para acometidas como para las instalaciones interiores, serán de 1.000 voltios de tensión nominal como mínimo, y los utilizados en instalaciones interiores serán de tipo flexible, aislados con elastómeros o plásticos de 440 voltios, como mínimo, de tensión nominal.

#### Equipos herramientas de accionamiento eléctrico.

Todos los equipos y herramientas de accionamiento eléctrico que se utilicen en obra tendrán su placa de características técnicas en buen estado, de modo que sus sistemas de protección puedan ser claramente conocidos.

Todas las máquinas de accionamiento eléctrico se desconectarán tras finalizar su uso, aunque la paralización sea por corto espacio de tiempo, si quedan fuera de la vigilancia del operado que la utiliza.

Cada operario deberá estar advertido de los riesgos que conlleva cada máquina. En ningún caso se permitirá su uso por personal inexperto.

Cuando se empleen máquinas en lugares muy conductores, la tensión de alimentación no será superior a 24 voltios, si no son alimentados por un transformador de separación de circuitos.

#### Conservación y mantenimiento.

Diariamente se efectuará una revisión general de la instalación, comprobándose:

- Funcionamiento de interruptores diferenciales y magnetotérmicos.
- Conexión de cada cuadro y máquina con la red de tierra.
- Asimismo, se verificará la continuidad de los conductores a tierra.
- El grado de humedad de la tierra en que se encuentran enterrados los electrodos de puesta a tierra.
- Que los cuadros eléctricos permanecen con la cerradura en correcto estado de uso.
- Que no existen partes en tensión al descubierto en los cuadros generales, en los auxiliares y en los de las distintas máquinas.

Cada vez que entre en la obra una máquina de accionamiento eléctrico deberá ser realizada respecto a sus condiciones de seguridad.

Todos los trabajos de conservación y mantenimiento así como las revisiones periódicas, los efectuará un instalador autorizado, que extenderá el correspondiente parte en el que se



reflejará el trabajo realizado. Una de las copias se entregará al responsable del seguimiento del Plan de Seguridad.

Antes de iniciar los trabajos de reparación de cualquier elemento de la instalación, se comprobará que no existe tensión, mediante aparatos destinados a tal efecto. Al desconectar la instalación para efectuar tales operaciones, se adoptarán medidas excepcionales para evitar que alguien, de manera accidental, pueda conectarla nuevamente. Para ello se dispondrá de señales claras y se conservará la llave del cuadro o se colocará junto a él una persona que vigile ante cualquier contingencia. El operario que efectúe tales operaciones usará de manera complementada equipos de protección individual y herramientas aislantes homologadas, de acuerdo con las características de la instalación.

### **3.3.3. VALLAS AUTÓNOMAS DE LIMITACIÓN Y PROTECCIÓN**

Será obligatoria su instalación en todo lugar de la zona de obras en el que existan obstáculos o discontinuidades importantes a nivel del suelo, tales como escaleras, zanjas, pozos, vaciados, acopios de material, etc. También se instalarán cuando sea necesario limitar físicamente un determinado espacio afectado por riesgos derivados de la proximidad de determinados contaminantes, máquinas, o instalaciones de obra.

Tendrán como mínimo noventa (90) centímetros de altura, y estarán materializadas a base de entramados de tubos metálicos o de madera. Asimismo, dispondrán de patas regulables que aseguren, en todo momento, su perfecto equilibrio vertical.

### **3.3.4. TOPES DE DESPLAZAMIENTO**

Se instalarán en todo lugar de la zona de obras en el que exista riesgo de que vehículos y maquinaria en general puedan volcar o precipitarse a causa de un acercamiento excesivo al borde de coronación en terraplenes, vertederos o incluso en zonas en las que el terreno natural presente cambios bruscos de pendiente.

Se podrán materializar con un par de tablones embridados, que se fijarán sólidamente al terreno por medio de redondos de acero hincados, o bien, con cualquier otro sistema eficaz, y se ajustarán sensiblemente a las forma y dimensiones establecidas en los planos.

### **3.3.5. PROTECCIONES ANTIINCENDIOS**

Las condiciones de este medio de protección colectiva se reflejan en el apartado de MEDIDAS DE EMERGENCIA del presente Estudio.

### **3.3.6. MEDIOS AUXILIARES PARA TRABAJOS TOPOGRÁFICOS**

Estos medios, tales como cinta, jalones, mira, etc., deberán estar constituidos por material dieléctrico, en evitación de riesgos de electrocución por contacto con líneas eléctricas aéreas o subterráneas.

### **3.3.7. PASILLOS DE SEGURIDAD**

Podrán realizarse a base de pórticos con pies derechos y dintel a base de tablones embridados, firmemente sujetos al terreno y cubierta cuajada de tablones. Estos elementos también podrán ser metálicos (los pórticos a base de tubo o perfiles y la cubierta de chapa).

Serán capaces de soportar el impacto de los objetos que se prevea caer, pudiendo colocar elementos amortiguadores sobre la cubierta (sacos terrenos, capa de arena, etc.).

### **3.3.8. ESCALERAS**

La longitud máxima será de 9 m. y la altura máxima a salvar de 7 m. Se colocarán con una relación de inclinación vertical/horizontal de 4/1 y sobrepasarán al menos 1 m. el piso superior. En su apoyo inferior tendrán zapatas, amarres o topes y en el superior algún tipo de anclaje. Las superficies de apoyo serán planas y horizontales y jamás se emplearán ladrillos o similares para nivelarlas.



Las escaleras preferentemente serán metálicas. Ofrecerán las necesarias garantías de solidez, estabilidad y seguridad y, en su caso de aislamiento o incombustión. Las de madera tendrán los peldaños machihembrados, no clavados, y firmes. No se pintarán pero sí se podrán barnizar. Se evitará exponerlas a la intemperie. Cada 3 m, tendrán un refuerzo metálico de guía a guía.

Las de tijera tendrán un cable o cadena para que no deslice y topes en el extremo de la articulación. Se utilizarán siempre como tales escaleras de tijera abriendo ambos largueros y nunca se utilizarán a modo de borriquetas. Se sustituirán por otro tipo de escaleras si fuese necesario hacer uso de los 3 últimos peldaños.

Las de corredera deben tener un cruzamiento de sus tramos de al menos 1 m. Cuando una escalera presente algún tipo de defecto debe ser reparada o desechada inmediatamente. No se utilizará una escalera para un fin distinto del suyo propio (o emplearla como pasarela, andamio, etc.)

#### 4. ORDENACIÓN DE LA ACCIÓN PREVENTIVA

##### Principios generales de prevención y de seguridad aplicables durante la ejecución de la obra

Las acciones preventivas que se llevarán a cabo en la obra, por el empresario, estarán constituidas por el conjunto coordinado de medidas, cuya selección deberá dirigirse a:

- Evitar los riesgos.
- Evaluar los riesgos que no se pueden evitar, adoptando las medidas pertinentes
- Combatir los riesgos en su origen.
- Adaptar el trabajo a la persona, en particular en lo que respecta a la concepción de los puestos de trabajo, así como a la selección de los métodos de trabajo y de producción, con miras, en especial a atenuar el trabajo monótono y repetitivo y a reducir los efectos del mismo en la salud.
- Tener en cuenta la evolución de la técnica.

- Sustituir lo peligroso por lo que entraña poco o ningún peligro.
- Planificar la prevención buscando un conjunto coherente que integre en la misma la técnica, la organización del trabajo, las condiciones de trabajo, las relaciones sociales y la influencia de los factores ambientales en el trabajo.
- Adoptar medidas que antepongan la protección colectiva a la individual.
- Dar las debidas instrucciones a los trabajadores.

En la selección de las medidas preventivas se tendrán en cuenta los riesgos adicionales que las mismas pudieran implicar, debiendo adoptarse, solamente, cuando la magnitud de dichos riesgos sea substancialmente inferior a la de los que se pretende controlar y no existen alternativas razonables más seguras.

##### Planificación y Organización.

La planificación y organización de la acción preventiva deberá formar parte de la organización del trabajo, siendo, por tanto, responsabilidad del empresario, quien deberá orientar esta actuación a la mejora de las condiciones de trabajo y disponer de los medios oportunos para llevar a cabo la propia acción preventiva.

La acción preventiva deberá integrarse en el conjunto de actividades que conllevan la planificación, organización y ejecución de la obra y en todos los niveles jerárquicos del personal adscrito a la obra, a la empresa constructora principal y a las subcontratas.

El empresario deberá reflejar documentalmente la planificación y organización de la acción preventiva, dando conocimiento y traslado de dicha documentación, entre otros, al responsable del seguimiento y control del Plan de Seguridad y Salud, con carácter previo al inicio de las obras, para su aprobación.

El empresario, en base a la evaluación inicial de las condiciones de trabajo y a las previsiones establecidas en el Estudio de Seguridad y Salud, planificará la acción preventiva.



El empresario deberá tomar en consideración las capacidades profesionales, en materia de seguridad y Salud, de los trabajadores en el momento de encomendarles tareas que impliquen riesgos graves.

#### Coordinación de actividades empresariales.

El empresario principal adoptará las medidas necesarias para que los trabajadores de las demás empresas subcontratadas reciban la información adecuada sobre los riesgos existentes en la obra y las correspondientes medidas de prevención. Cuando en la obra desarrollen simultáneamente actividades dos o más empresas, vinculadas o no entre sí contractualmente, tendrán el deber de colaborar en la aplicación de las prescripciones y criterios contenidos en este Pliego, conjunta y separadamente.

El empresario deberá comprobar que los subcontratistas o empresas con las que ellos contraten determinados trabajos reúnen las características y condiciones que les permitan dar cumplimiento a las prescripciones establecidas en este Pliego. La empresa principal deberá vigilar que los contratistas, subcontratistas y trabajadores autónomos cumplan con las obligaciones que desarrollan el art. 11 y 12 del R.D. 1627/1997 así como se cumpla la Ley 32/2006, de 18 de octubre, reguladora de la subcontratación en el Sector de la Construcción.

### **4.1. ORGANIGRAMA FUNCIONAL**

#### **4.1.1. SERVICIOS DE PREVENCIÓN**

El empresario, en los términos y con las modalidades previstas en las disposiciones vigentes, deberá disponer de los servicios encargados de la asistencia técnica preventiva, en cuya actividad participarán los trabajadores conforme a los procedimientos establecidos.

El conjunto de medios humanos y materiales constitutivos de dicho servicio será organizado por el empresario directamente o mediante concierto.

Los servicios de prevención deberán estar en condiciones de proporcionar a la empresa el asesoramiento y apoyo que precise en función de los tipos de riesgo en ella existentes y en lo referente a:

- Diseñar y aplicar los planes y programas de actuación preventiva.
- Evaluar los factores de riesgo que puedan afectar a la salud e integridad física de los trabajadores.
- Definir las prioridades en la adopción de las medidas preventivas adecuadas y la importancia de su eficacia.
- La vigilancia para la correcta información y formación de los trabajadores.
- Asegurar la prestación de los primeros auxilios y planes de emergencia.
- Vigilar la salud de los trabajadores respecto de los riesgos derivados del trabajo.

El servicio de prevención tendrá carácter interdisciplinar, debiendo sus medios ser apropiados para cumplir sus funciones. Para ello, el personal de estos servicios, en cuanto a su formación, especialidad, capacitación, dedicación y número, así como los medios técnicos, deberán ser suficientes y adecuados a las actividades preventivas a desarrollar en función del tamaño de la empresa, tipos de riesgo a los que puedan enfrentarse los trabajadores y distribución de riesgos en la obra.

#### **4.1.2. LOS REPRESENTANTES DE LOS TRABAJADORES. DELEGADOS DE PREVENCIÓN**

Los representantes del personal que en materia de prevención de riesgos hayan de constituirse según las disposiciones vigentes, contarán con una especial formación y conocimiento sobre Seguridad y Salud Laboral.

Ello deberá proporcionar a los representantes de los trabajadores la formación complementada, en materia preventiva, que sea necesaria para el ejercicio de sus funciones, por sus propios medios o por entidades especializadas en la materia. Dicha formación se reiterará con la periodicidad necesaria.



#### 4.1.3. VIGILANTE Y COMITÉ DE SEGURIDAD Y SALUD

Se constituirá obligatoriamente un Comité de Seguridad y Salud cuando la obra cuente con 30 ó más trabajadores. Estará compuesto por los representantes de los trabajadores y por el empresario o sus representantes, en igual número. Su organización, funciones, competencias y facultades serán las determinadas legalmente. En las empresas no obligadas a constituir Comités de Seguridad y Salud y que ocupen a 5 o más trabajadores, el empresario designará un vigilante de Seguridad, cuyo nombramiento deberá recaer en la persona más cualificada en materia de Seguridad y Salud Laboral.

#### 4.1.4. COORDINADOR DE SEGURIDAD Y SALUD, TÉCNICOS Y MANDOS INTERMEDIOS

Cuando en la ejecución de la obra intervenga más de una empresa, o una empresa y trabajadores autónomos o diversos trabajadores autónomos, el promotor, antes del inicio de los trabajos o tan pronto como se constate dicha circunstancia, designará un coordinador en materia de seguridad y salud durante la ejecución de la obra, pudiendo ser designado como tal la misma persona que actúa como coordinador en la fase de proyecto.

El coordinador en materia de seguridad y salud durante la ejecución de la obra deberá desarrollar las siguientes funciones:

- Coordinar la aplicación de los principios generales de prevención y de seguridad:
- Al tomar las decisiones técnicas y de organización con el fin de planificar los distintos trabajos o fases de trabajo que vayan a desarrollarse simultánea o sucesivamente.
- Al estimar la duración requerida para la ejecución de estos distintos trabajos o fases de trabajo.
- Coordinar las actividades de la obra para garantizar que los contratistas y, en su caso, los subcontratistas y los trabajadores autónomos apliquen de manera coherente y responsable los principios de la acción preventiva que se recogen en el artículo 15 de la Ley de Prevención de Riesgos Laborales durante la ejecución de la obra y, en particular, en las tareas o actividades a las que se refiere el artículo 10 de este Real Decreto.
- Aprobar el plan de seguridad y salud elaborado por el contratista y, en su caso, las modificaciones introducidas en el mismo. Conforme a lo dispuesto en el último párrafo

del apartado 2 del artículo 7, la dirección facultativa asumirá esta función cuando no fuera necesaria la designación de Coordinador.

- Organizar la coordinación de actividades empresariales.
- Coordinar las acciones y funciones de control de la aplicación correcta de los métodos de trabajo.
- Adoptar las medidas necesarias para que sólo las personas autorizadas puedan acceder a la obra.

El resto de los técnicos, mandos intermedios, encargados y capataces adscritos a la obra, tanto de la empresa principal como de las subcontratadas, con funciones de control, organización y ejecución de la obra, deberán estar dotados de la formación suficiente en materia de prevención de riesgos y salud laboral, de acuerdo con los cometidos a desempeñar.

En cualquier caso, la empresa adjudicataria deberá determinar, antes del inicio de la obra, los niveles jerárquicos del personal técnico y mandos intermedios adscritos a la misma, dando conocimiento, por escrito, de ello al responsable del seguimiento del Plan de Seguridad y Salud.

#### 4.1.5. COORDINACIÓN DE LOS DISTINTOS ÓRGANOS ESPECIALIZADOS

Los distintos órganos especializados que coincidan en la obra, deberán coordinar entre sí sus actuaciones en materia preventiva estableciéndose por parte del contratista la programación de las diversas acciones, de modo que se consiga una actuación coordinada de los intervinientes en el proceso y se posibilite el desarrollo de sus funciones y competencias en la seguridad y salud del conjunto de la obra.

El empresario de la obra o su representante en materia de prevención de riesgos deberán poner en conocimiento del responsable del seguimiento y control del Plan de Seguridad y Salud cuantas acciones preventivas hayan de tomarse durante el curso de la obra por los distintos órganos especializados.





El Coordinador de seguridad y salud organizará la coordinación y cooperación en materia de seguridad y salud que propicien actuaciones conjuntas sin interferencias, mediante un intercambio constante de información sobre las acciones previstas o en ejecución y cuantas reuniones sean necesarias para contraste de pronunciamientos y puesta en común de las actuaciones a emprender.

## **4.2. NORMAS GENERALES DE SEGUIMIENTO Y CONTROL**

### **4.2.1. TOMA DE DECISIONES**

Con independencia de que por parte del empresario, su representante, los representantes legales de los trabajadores o Inspección de Trabajo se pueda llevar a cabo la vigilancia y control de la aplicación correcta y adecuada de las medidas preventivas recogidas en el Plan de Seguridad y Salud, la toma de decisiones en relación con el mismo corresponderá únicamente al Ingeniero responsable de su seguimiento, salvo que se trate de casos en que hayan de adaptarse medidas urgentes sobre la marcha que, en cualquier caso, podrán ser modificadas con posterioridad si el referido técnico no las estima adecuadas.

En aquellos otros supuestos de riesgos graves e inminentes para la salud de los trabajadores que hagan necesaria la paralización de los trabajos, la decisión deberá tomarse por quien detecte la anomalía referida y esté facultado para ello sin necesidad de contar con la aprobación previa del responsable del seguimiento y control del Plan de Seguridad y Salud, aun cuando haya de darse conocimiento inmediato al mismo, a fin de determinar las acciones posteriores.

### **4.2.2. EVALUACIÓN CONTINUA DE LOS RIESGOS**

Por parte del empresario principal se llevará a cabo durante el curso de la obra una evaluación continuada de los riesgos, debiéndose actualizar las previsiones iniciales, reflejadas en el Plan de Seguridad y Salud, cuando cambien las condiciones de trabajo o con ocasión de los daños para la salud que se detecten, proponiendo en consecuencia, si procede, la revisión del Plan aprobado al responsable de su seguimiento y control antes de reiniciar los trabajos afectados.

Asimismo, cuando se planteen modificaciones de la obra proyectada inicialmente, cambios de los sistemas constructivos, métodos de trabajo o proceso de ejecución previstos, o variaciones de los equipos de trabajo, el empresario deberá efectuar una nueva evaluación de riesgos previsible y, en base a aquella, proponer, en su caso, las medidas preventivas a modificar, en los trabajos reseñados anteriormente.

### **4.2.3. CONTROLES PERIÓDICOS**

- La empresa deberá llevar a cabo controles periódicos de las condiciones de trabajo, y examinar la actividad de los trabajadores en la prestación de sus servicios para detectar situaciones potencialmente peligrosas.
- Cuando se produzca un daño para la salud de los trabajadores o, si con ocasión de la vigilancia del estado de salud de éstos respecto de riesgos específicos, se apreciaren indicios de que las medidas de prevención adoptadas resultan insuficientes, el empresario deberá llevar a cabo una investigación al respecto, a fin de detectar las causas de dichos hechos. Sin perjuicio de que haya de notificarse a la autoridad laboral cuando proceda por caso de accidente.
- Asimismo, el empresario deberá llevar el control y seguimiento continuo de la siniestralidad que pueda producirse en la obra, mediante estudios en los que se reflejen: tipo de control, número de accidentes, tipología, gravedad y duración de la incapacidad (en su caso) y relaciones de partes de accidentes cursados y deficiencias. Todos estos datos estarán a disposición del responsable del seguimiento y control del Plan de Seguridad y Salud, con independencia de otros agentes intervinientes que vengan exigidos por las normas en vigor.
- La empresa principal deberá vigilar que los subcontratistas cumplen la normativa de protección de la salud de los trabajadores y las previsiones establecidas en el Plan de Seguridad y Salud, en la ejecución de los trabajos que desarrollen en la obra.
- El personal directivo de la empresa principal delegado o representante M contratista, técnicos y mandos intermedios adscritos a la obra deben cumplir personalmente y hacer cumplir al personal a sus órdenes lo establecido en el Plan de Seguridad y Salud y las normas o disposiciones vigentes sobre la materia.

### **4.2.4. ADECUACIÓN DE LAS MEDIDAS PREVENTIVAS Y ADOPCIÓN DE MEDIDAS CORRECTORAS**

Cuando, como consecuencia de los controles e investigaciones anteriormente reseñadas, se apreciase por el empresario la inadecuación de las medidas y acciones



preventivas utilizadas, se procederá a la modificación inmediata de las mismas en el caso de ser necesario, proponiendo al responsable del seguimiento y control del Plan de Seguridad y Salud su modificación en el supuesto de que afecten a trabajos que aún no se hayan iniciado. En cualquier caso, hasta tanto no puedan materializarse las medidas preventivas provisionales que puedan evitar o disminuir el riesgo, se interrumpirán, si fuere preciso, los trabajos afectados.

Cuando la dirección facultativa de la obra, contratistas, subcontratistas y trabajadores autónomos, las personas u órganos con responsabilidades en materia de prevención en las empresas intervinientes en la obra, los representantes de los trabajadores y técnicos de los órganos especializados en materia de seguridad y salud en el trabajo de las Administraciones públicas competentes, observasen una infracción a la normativa sobre prevención de riesgos laborales o la inadecuación a las previsiones reflejadas en el Plan de Seguridad y Salud y reclamasen al empresario para la adopción de las medidas correctoras que procedan mediante la correspondiente anotación en el libro de incidencias, el empresario vendrá obligado a su ejecución en el plazo que se fije para ello.

#### 4.2.5. PARALIZACIÓN DE LOS TRABAJOS

Cuando el Coordinador de seguridad y salud o la dirección facultativa, en su caso, observase la existencia de riesgo de especial gravedad o de urgencia, podrá disponer la paralización de los trabajos afectados o de la totalidad de la obra, en su caso, debiendo la empresa principal asegurar el conocimiento de dicha medida a los trabajadores afectados.

Si con posterioridad a la decisión de paralización se comprobase que han desaparecido las causas que provocaron el riesgo motivador de tal decisión o se han dispuesto las medidas oportunas para evitarlo, podrá acordarse la reanudación total o parcial de las tareas paralizadas mediante la orden oportuna.

El personal directivo de la empresa principal o representante del mismo así como los técnicos y mandos intermedios adscritos a la obra, habrán de prohibir o paralizar, en su caso, los trabajos en que se advierta peligro inminente de accidentes o de otros siniestros

profesionales, sin necesidad de contar previamente, con la aprobación del Coordinador responsable del seguimiento y control del Plan, si bien habrá de comunicársela inmediatamente dicha decisión.

A su vez, los trabajadores podrán paralizar su actividad en el caso de que, a su juicio, existiese un riesgo grave e inminente para la salud, siempre que se hubiese informado al superior jerárquico y no se hubiesen adoptado las necesarias medidas correctivas. Se exceptúan de esa obligación de información los casos en que el trabajador no pudiera ponerse en contacto de forma inmediata con su superior jerárquico. En los supuestos reseñados no podrá pedirse a los trabajadores que reanuden su actividad mientras persista el riesgo denunciado. De todo ello deberá informarse, por parte del empresario principal o su representante, a los trabajadores, con antelación al inicio de la obra o en el momento de su incorporación a ésta.

#### 4.2.6. REGISTRO Y COMUNICACIÓN DE DATOS E INCIDENCIAS

Las anotaciones en el libro de incidencias sólo podrán ser efectuadas por la dirección facultativa de la obra, los contratistas, subcontratistas y trabajadores autónomos, las personas u órganos con responsabilidades en materia de prevención en las empresas intervinientes en la obra, los representantes de los trabajadores y técnicos de los órganos especializados en materia de seguridad y salud en el trabajo de las Administraciones públicas competentes.

Efectuada una anotación en el libro de incidencias, el Coordinador o la dirección facultativa deberá remitir en el plazo máximo de veinticuatro (24) horas una copia a la Inspección de Trabajo de la provincia en que se realiza la obra, igualmente deberá notificar las anotaciones en el libro al contratista afectado y a los representantes de los trabajadores de este.

Los partes de accidentes, notificaciones e informes relativos a la Seguridad y Salud Laboral, que se cursen por escrito por quienes estén facultados para ello, deberán ser puestos a disposición del responsable del seguimiento y control del Plan de Seguridad y Salud.



Los datos obtenidos como consecuencia de los controles e investigaciones previstos en los apartados anteriores serán objeto de registro y archivo en obra por parte del empresario, y aquellos deberá tener acceso el responsable del seguimiento y control del Plan.

#### 4.2.7. REUNIONES DE SEGUIMIENTO Y CONTROL INTERNO

Las reuniones de seguimiento y control interno de la seguridad y salud de la obra tendrán como objetivo la consulta regular y periódica de los planes y programas de prevención de riesgos de la empresa, el análisis y evaluación continuada de las condiciones de trabajo y la promoción de iniciativas sobre métodos y procedimientos para la efectiva prevención de los riesgos, así como propiciar la adecuada coordinación entre los diversos órganos especializados que incidan en la seguridad y salud de la obra.

En las reuniones del Comité de Seguridad y Salud, cuando se hubiese constituido, participarán, con voz, pero sin voto, además de sus elementos constitutivos, los responsables técnicos de la seguridad de la empresa. Pueden participar, en las mismas condiciones, trabajadores de la empresa que cuenten con una especial cualificación o formación respecto de concretas cuestiones a debatir en dicho órgano, o técnicos en prevención ajenos a la empresa, siempre que así lo solicite alguna de las representaciones del Comité.

Sin perjuicio de lo establecido al respecto por la normativa vigente, se llevará a cabo como mínimo, una reunión mensual desde el inicio de la obra hasta su terminación, con independencia de las que fueran, además, necesarias ante situaciones que requieran una convocatoria urgente, o las que se estimen convenientes por quienes estén facultados para ello.

Salvo que se disponga otra cosa por la normativa vigente o por los Convenios Colectivos Provinciales, las reuniones se celebrarán en la propia obra y dentro de las horas de trabajo. En caso de prolongarse fuera de éstas, se abonarán sin recargo, o se retardará, si es posible, la entrada al trabajo en igual tiempo, si la prolongación ha tenido lugar durante el descanso del mediodía. Las convocatorias, orden de asuntos a tratar y desarrollo de las

reuniones se establecerán de conformidad con lo estipulado al respecto por las normas vigentes o según acuerden los órganos constitutivos de las mismas.

### 4.3. FORMACIÓN E INFORMACIÓN

#### 4.3.1. ACCIONES FORMATIVAS

##### Normas generales.

El empresario está obligado a posibilitar que los trabajadores reciban una formación teórica y práctica apropiada en materia preventiva en el momento de su contratación, cualquiera que sea la modalidad o duración de ésta, así como cuando se produzcan cambios en las funciones que desempeñen o se introduzcan nuevas tecnologías o cambios en los equipos de trabajo susceptibles de provocar riesgos para la salud del trabajador. Esta formación deberá repetirse periódicamente.

El tiempo dedicado a la formación que el empresario está obligado a posibilitar como consecuencia del apartado anterior, se lleva a cabo dentro del horario laboral o fuera de él, será considerado como tiempo de trabajo.

La formación inicial del trabajador habrá de orientarse en función del trabajo que vaya a desarrollar en la obra, proporcionándole el conocimiento completo de los riesgos que implica cada trabajo, de las protecciones colectivas adoptadas, del uso adecuado de las protecciones individuales previstas, de sus derechos y obligaciones y, en general, de las medidas de prevención de cualquier índole.

Con independencia de la formación impartida directamente a cuenta del empresario o sus representantes, en cumplimiento de lo estipulado anteriormente, se emplearán además, y como mínimo, las horas que se consideran en el presupuesto para formación de los trabajadores en la misma obra y dentro de la jornada laboral o fuera de ésta, considerando el tiempo empleado como tiempo de trabajo. A las sesiones que a tal fin se establezcan deberán asistir, también, los trabajadores de los subcontratistas.



#### Contenido de las acciones de formación.

A nivel de mandos intermedios, el contenido de las sesiones de formación estará principalmente integrado, entre otros, por los siguientes temas:

- Plan de seguridad y salud de la obra.
- Causas, consecuencias e investigación de los accidentes y forma de cumplimentar los partes y estadillos de régimen interior.
- Normativa sobre Seguridad y Salud Laboral. Factores técnicos y humanos
- Elección adecuada de los métodos de trabajo para atenuar el trabajo monótono y repetitivo.
- Protecciones colectivas e individuales. Socorrismo y primeros auxilios.
- Organización de la Seguridad de la obra. Responsabilidades.
- Obligaciones y derechos de los trabajadores.

A nivel de operarios, el contenido de las sesiones de formación se seleccionará fundamentalmente en función de los riesgos específicos de la obra y estará integrado principalmente, entre otros, por los siguientes temas:

- Plan de Seguridad de la obra. Riesgos específicos de la obra y medidas de prevención previstas.
- Causas y consecuencias de los accidentes.
- Normas de Seguridad.
- Señalización y circulación de obra.
- Socorrismo y primeros auxilios.
- Actitud ante el riesgo y formas de actuar en caso de accidente.
- Salud laboral.
- Obligaciones y derechos.

#### Organización de la acción formativa.

Las sesiones de formación serán impartidas por personal suficientemente acreditado y capacitado en la docencia de Seguridad y Salud Laboral contándose para ello con los servicios de seguridad de la empresa, representante o delegado de ésta en la obra, servicios de prevención, mutuas, organismos oficiales especializados, representantes cualificados de los

trabajadores y servicio médico, propio o mancomunado, que por su vinculación y conocimientos de la obra en materia específica de seguridad y salud sean los más aconsejables en cada caso.

Se utilizarán los medios didácticos más apropiados, tales como: transparencias, diapositivas, videos, etc.

#### **4.3.2. INSTRUCCIONES GENERALES Y ESPECIFICAS**

Independientemente de las acciones de formación que hayan de celebrarse antes de que el trabajador comience a desempeñar cualquier cometido o puesto de trabajo en la obra o se cambie de puesto o se produzcan variaciones de los métodos de trabajo inicialmente provistos, deberán de facilitársela, por parte del empresario o sus representantes en la obra, las instrucciones relacionadas con los riesgos inherentes al trabajo, en especial cuando no se trate de su ocupación habitual; las relativas a los riesgos generales de la obra que puedan afectarle y las referidas a las medidas preventivas que deban observarse, así como acerca del manejo y uso de las protecciones individuales. Se prestará especial dedicación a las instrucciones referidas a aquellos trabajadores que vayan a estar expuestos a riesgos de caída de altura, atrapamientos o electrocución.

El empresario habrá de garantizar que los trabajadores de las empresas exteriores o subcontratas que intervengan en la obra han recibido las instrucciones pertinentes en el sentido anteriormente indicado.

Las instrucciones serán claras, concisas e inteligibles y se proporcionarán de forma escrita y/o de palabra, según el trabajo y operarios de que se trate y directamente a los interesados.

Las instrucciones para maquinistas, conductores, personal de mantenimiento u otros análogos se referirán, además de a los aspectos reseñados, a: restricciones de uso y empleo,



manejo, manipulación, verificación y mantenimiento de equipos de trabajo. Deberán figurar también de forma escrita en la máquina o equipo de que se trate, siempre que sea posible.

Las instrucciones sobre socorrismo, primeros auxilios y medidas a adoptar en caso de situaciones de emergencia habrán de ser proporcionadas a quienes tengan encomendados cometidos relacionados con dichos aspectos y deberán figurar, además, por escrito en lugares visibles y accesibles a todo el personal adscrito a la obra, tales como oficina de obra, comedores y vestuarios.

Las personas relacionadas con la obra, con las empresas o con los trabajadores, que no intervengan directamente en la ejecución del trabajo, o las ajenas a la obra que hayan de visitada serán previamente advertidas por el empresario o sus representantes sobre los riesgos a que pueden exponerse, medidas y precauciones preventivas que han de seguir y utilización de las protecciones individuales de uso obligatorio.

#### 4.3.3. INFORMACIÓN Y DIVULGACIÓN

El empresario o sus representantes en la obra deberán informar a los trabajadores de:

- Los resultados de las valoraciones y controles del medioambiente laboral correspondientes a sus puestos de trabajo, así como los datos relativos a su estado de salud en relación con los riesgos a los que puedan encontrarse expuestos.
- Los riesgos para la salud que su trabajo pueda entrañar, así como las medidas técnicas de prevención o de emergencia que hayan sido adoptadas o deban adaptarse por el o, en su caso, especialmente aquella cuya ejecución corresponde al propio trabajador y, en particular, las referidas a riesgo grave e inminente.
- La existencia de un riesgo grave e inminente que les pueda afectar, así como las disposiciones adoptadas o que deban adaptarse en materia de protección, incluyendo las relativas a la evacuación de su puesto de trabajo. Esta información, cuando proceda, deberá darse lo antes posible.
- El derecho que tienen a paralizar su actividad en el caso de que, a su juicio, existiese un riesgo grave e inminente para la salud y no se hubiesen podido poner en contacto de forma inmediata con su superior jerárquico o, habiéndolo comunicado a éste, no se hubiesen adoptado las medidas colectivas necesarias.

Las informaciones anteriormente mencionadas deberán ser proporcionadas personalmente al trabajador, dentro del horario laboral o fuera del mismo, considerándose en ambos casos como tiempo de trabajo el empleado para tal comunicación.

Así mismo, habrá de proporcionarse información a los trabajadores, por el empresario o sus representantes en la obra, sobre:

- Obligaciones y derechos del empresario y de los trabajadores.
- Funciones y facultades de los Servicios de Prevención, Comités de Salud y Seguridad y delegados de Prevención.
- Servicios médicos y de asistencia sanitaria con indicación del nombre y ubicación del centro asistencial al que acudir en caso de accidente.
- Organigrama funcional del personal al servicio de la empresa
- Organigrama funcional del personal de seguridad e higiene de la empresa adscrita a la obra y de los órganos de prevención que inciden en la misma.
- Datos sobre el seguimiento de la siniestralidad y sobre las actuaciones preventivas que se llevan a cabo en la obra por la empresa.
- Estudios, investigaciones y estadísticas sobre la salud de los trabajadores.

Toda la información referida se les suministrará por escrito a los trabajadores o, en su defecto, se expondrá en lugares visibles y accesibles a los mismos, como oficina de obra, vestuarios o comedores, en cuyo caso habrá de darse conocimiento de aquello. El empresario deberá disponer en la oficina de obra de un ejemplar del Plan de S.S.T. aprobado y de las normas y disposiciones vigentes que incidan en la obra.

En la oficina de obra se contará, también, con un ejemplar del Plan y de las normas señaladas, para ponerlos a disposición de cuantas personas o instituciones hayan de intervenir reglamentariamente, en relación con aquellos.

El empresario o sus representantes deberán proporcionar al Ingeniero Técnico responsable del seguimiento y control del Plan de Seguridad y Salud toda la información



documental relativa a las distintas incidencias que puedan producirse en relación con dicho Plan y con las condiciones de trabajo de la obra.

El empresario deberá colocar en lugares visibles de la obra rótulos o carteles anunciadores, con mensajes preventivos de sensibilización y motivación colectiva. Deberá exponer, así mismo, los que le sean proporcionados por los organismos e instituciones competentes en la materia sobre campañas de divulgación.

## **5. ASISTENCIA MÉDICO SANITARIA**

### **5.1. SERVICIOS ASISTENCIALES**

#### Prestaciones generales.

El empresario deberá asegurar en todo momento, durante el transcurso de la obra, la prestación a todos los trabajadores que concurren en la misma de los servicios asistenciales sanitarios en materia de primeros auxilios, de asistencia médico-preventiva y de urgencia y de conservación y mejora de la salud laboral de los trabajadores.

A tales efectos deberá concertar y organizar las relaciones necesarias con los servicios médicos y preventivos exteriores e interiores que correspondan, a fin de que por parte de éstos se lleven a cabo las revisiones sanitarias exigidas por las disposiciones vigentes.

#### Características de los servicios.

Los servicios médicos, preventivos y asistenciales deberán reunir las características establecidas por las disposiciones vigentes sobre la materia. Deberán que dar precisados en el Plan de S.S.T. los servicios a disponer para la obra, especificando todos los datos necesarios para su localización e identificación inmediata.

#### Accidentes.

El empresario deberá estar al corriente en todo momento, durante la ejecución de la obra, de sus obligaciones en materia de Seguridad Social y Salud Laboral de los trabajadores, de acuerdo con las disposiciones vigentes.

En el Plan de S.S.T. deberá detallarse el centro o los centros asistenciales más próximos a la obra, donde podrán ser atendidos los trabajadores en caso de accidente. Se dispondrán en lugares y con caracteres visibles para los trabajadores (oficina de obra, vestuarios, etc.) las indicaciones relativas al nombre, dirección y teléfonos del centro o centros asistenciales a los que acudir en caso de accidentes así como las distancias existentes entre éstos y la obra y los itinerarios más adecuados para llegar a ellos.

En caso de accidentes habrán de cursarse los partes correspondientes según las disposiciones vigentes, debiendo facilitar el empresario al responsable del seguimiento y control del Plan de S.S.T. una copia de los mismos y cuantos datos e informaciones complementadas le fuesen recabados por el propio responsable.

En caso de accidente, el empresario habrá de asegurar la investigación del mismo, para precisar su causa y forma en que se produjo y proponer las medidas oportunas para evitar su repetición.

### **5.2. MEDICINA PREVENTIVA**

#### Reconocimientos médicos.

El empresario deberá velar por la vigilancia periódica del estado de salud laboral de los trabajadores, mediante los reconocimientos médicos o pruebas exigibles conforme a la normativa vigente, tanto en lo que se refiere a los que preceptivamente hayan de efectuarse con carácter previo al inicio de sus actividades como a los que se deban repetir posteriormente.



Los trabajadores deberán ser informados por el empresario, con carácter previo al inicio de sus actividades, de la necesidad de efectuar los controles médicos obligatorios.

#### Vacunaciones.

El empresario deberá facilitar y asegurar la vacunación de los trabajadores cuando fuera indicada por las autoridades sanitarias y, en general, el cumplimiento de las disposiciones que dictarán, en su caso, las mencionadas autoridades en orden a la prevención de enfermedades.

### **5.3. BOTIQUÍN DE OBRA**

Se dispondrá de un botiquín con los medios necesarios para efectuar las curas de urgencia en caso de accidente o lesión. El botiquín deberá situarse en lugar bien visible de la obra y convenientemente señalado.

Se hará cargo del botiquín, por designación del empresario, la persona más capacitada, que deberá haber seguido con aprovechamiento cursos de primeros auxilios y socorrismo.

La mencionada persona será la encargada del mantenimiento y reposición del contenido del botiquín, que será sometido, para ello, a una relación semanal y a la reposición de lo necesario, en orden al consumo y caducidad de los medicamentos.

El botiquín habrá de estar protegido del exterior y colocado en lugar acondicionado y provisto de cierre hermético que evita la entrada de agua y humedad. Contará, así mismo, con compartimentos o cajones debidamente señalizados en función de sus indicaciones, serán colocados de forma diferenciada, en cada uno de los compartimentos, los medicamentos que tienen una acción detallada sobre los componentes de cada aparato orgánico o acción terapéutica común.

El uso de jeringuillas y agujas para inyectables desechables sólo podrá llevarse a cabo por personal sanitario facultado para ello.

Las condiciones de los medicamentos, material de cura y quirúrgico, incluido el botiquín habrán de estar en todo momento adecuadas a los fines que han de servir, y el material será de fácil acceso, prestándose especial vigilancia a la fecha de caducidad de los medicamentos, a efectos de su sustitución cuando proceda.

En el interior del botiquín figurarán escritas las normas básicas a seguir para primeros auxilios, conducta a seguir ante un accidentado, curas de urgencia, principios de reanimación y formas de actuar ante heridas, hemorragias, fracturas, picaduras, quemaduras, etc.

### **5.4. NORMAS SOBRE PRIMEROS AUXILIOS Y SOCORRISMO**

Con base en el análisis previo de las posibles situaciones de emergencia y accidentes que puedan producirse por las circunstancias de toda índole que concurran en la obra, el empresario deberá asegurar el diseño y el establecimiento de las normas sobre primeros auxilios y socorrismo que habrán de observarse por quienes tengan asignado el cometido de su puesta en práctica.

Las normas sobre primeros auxilios habrán de estar encaminadas a realizar el rescate y/o primera cura de los operarios accidentados, a evitar en lo posible las complicaciones posteriores y a salvar la vida de los sujetos.

Para dotar de la mayor eficacia posible a las normas que se establezcan para primeros auxilios, éstas habrán de elaborarse de manera que cumplan los siguientes preceptos: simplicidad y exactitud técnica, facilidad de comprensión y aplicación rápida y fácil, sin necesidad de medios complicados.



En las normas a establecer sobre primeros auxilios deberán recogerse los modos de actuación y las conductas a seguir ante un accidentado para casos de rescate de heridos que queden aprisionados, pérdidas del conocimiento, asfixia, heridas, hemorragias, quemaduras, electrocución, contusiones, fracturas, picaduras y mordeduras. Se especificará, para cada caso concreto: forma de manejar al herido, traslados del accidentado, posiciones convenientes, principios de reanimación y métodos de respiración artificial, primeras curas a realizar, fármacos o bebidas que deben, o no, administrarse, etc.

Todos los trabajadores deberán ser adiestrados en técnicas elementales de reanimación para que, en caso de accidente en su área de trabajo, puedan actuar rápida y eficazmente.

Así mismo, habrá de ponerse en conocimiento de todo el personal de la obra la situación de los teléfonos de urgencia, del botiquín de obra, de las normas sobre primeros auxilios y de los anuncios indicativos que hayan de exponerse en relación con la localización de servicios médicos, ambulancias y centros asistenciales.

Las normas e instrucciones sobre primeros auxilios deberán exponerse en lugares accesibles y bien visibles de la obra.

En cumplimiento de las prescripciones anteriormente establecidas y de las disposiciones vigentes que regulen la materia, el Plan de S.S.T. deberá recoger de forma detallada las normas e instrucciones a seguir para primeros auxilios.

## 6. PREVENCIÓN Y EXTINCIÓN DE INCENDIOS

### Disposiciones generales.

Se observarán, además de las prescripciones que se establezcan en el presente Pliego, las normas y disposiciones vigentes sobre la materia. En los trabajos con riesgo específico de incendio se cumplirán, además, las prescripciones impuestas por los Reglamentos y normas técnicas generales o especiales, así como las preceptuadas por las correspondientes ordenanzas municipales.

Se deberá prever en obra un número suficiente de dispositivos apropiados de lucha contra incendios y en función de las características de la obra, dimensiones y usos de los locales y equipos que contengan, características físicas y químicas de las sustancias materiales que se hallen presentes y número máximo de personal que pueda hallarse en los lugares y locales de trabajo.

### Medidas de prevención y extinción.

Además de observar las disposiciones anteriores, se adoptarán las prevenciones que se indican a continuación, combinando su empleo, en su caso, con la protección general más próxima que puedan prestar los servicios públicos contra incendios.

### Uso del agua

Si existen conducciones de agua a presión se instalarán suficientes tomas o bocas de agua a distancias convenientes y cercanas a los lugares de trabajo, locales y lugares de paso del personal, colocándose junto a tal toma las correspondientes mangueras, que tendrán la sección y resistencia adecuadas.

En incendios que afecten a instalaciones eléctricas con tensión se prohibirá el empleo de extintores con espuma química, solución ácida o agua.





#### Extintores portátiles

En la proximidad de los puestos de trabajo con mayor riesgo de incendio y colocados en sitio visible y de fácil acceso, se dispondrán extintores portátiles, de espuma física o química, mezcla de ambas o polvos secos, según convenga a la posible causa determinante del fuego a extinguir.

Cuando se empleen distintos tipos de extintores serán rotulados con carteles indicadores del lugar y clase de incendio en que deben emplearse.

Los extintores serán revisados periódicamente y cargados, según los fabricantes, inmediatamente después de usados. Esta tarea será realizada por empresas autorizadas.

#### Prohibiciones

En las dependencias y lugares de trabajo con alto riesgo de incendio se prohibirá terminantemente fumar o introducir cerillas, mecheros o útiles de ignición. Esta prohibición se indicará con carteles visibles a la entrada y en los espacios libres de tales lugares o dependencias.

Se prohibirá igualmente al personal introducir o emplear útiles de trabajo no autorizados por la empresa y que puedan ocasionar chispas por contacto o proximidad a sustancias inflamables.

#### Otras actuaciones.

El empresario deberá prever, de acuerdo con lo fijado en el Estudio de S.S.T. en su caso y siguiendo las normas de las compañías suministradoras, las actuaciones a llevar a cabo para posibles casos de roturas de canalizaciones de agua, inundaciones, derrumbamientos y hundimientos, estableciendo en el Plan de Seguridad y Salud las previsiones y normas a seguir para tales casos de emergencia.

## 7. PROTECCIÓN FRENTE A CONTAMINANTES FÍSICO-QUÍMICOS

### **7.1. EL POLVO**

Se produce generalmente en instalaciones de Machaqueo, Clasificación y Tratamiento de áridos y en Perforaciones, siendo el elemento más nocivo habitual el SiO<sub>2</sub> (polvo de sílice) que da origen a la silicosis, pudiendo llegar a producir la grave enfermedad conocida por neumoconiosis. En relación con la cantidad de polvo inhalado, sus efectos tóxicos pueden ser:

- a) Inertes. Si el contenido en sílice del polvo ambiental es inferior al 1%.
- b) Neumoconiáticos. Si el contenido en sílice es superior al 1%

Su prevención en trabajos de larga duración se realizará mediante protecciones colectivas que pallen o eliminen en su origen el foco contaminante, empleándose según el proceso determinado, instalaciones especiales con métodos de: Captación, Filtraje, Sedimentación por vía húmeda, Ciclones, Extractores, Ventiladores, Renovadores de ambiente, etc.

Para casos puntuales o en defecto circunstancial de estos sistemas se emplearán protecciones individuales mediante mascarillas o equipos autónomos de respiración adecuados y estudiados de acuerdo con proceso productivo concreto.

### **7.2. RUIDOS**

Para la protección de los trabajadores frente a los riesgos derivados de la exposición al ruido en el ambiente de trabajo se aplicará lo dispuesto en el R.D. 1316/89, de 27 de octubre, es decir, se realizarán las mediciones pertinentes y en función de los resultados de estas mediciones se aplicaran las medidas correctoras y protectoras que dispone el R.D.



### 7.3. VIBRACIONES

La erradicación del riesgo depende en gran medida de las mejoras técnicas que puedan incorporarse como resultado de un tratamiento integral del ruido y de las vibraciones. En ausencia de criterios más concretos, se equipará con cinturones antivibratorios a los operarios expuestos a posibles movimientos vibratorios de frecuencia inferior a 100 Hz.

### 7.4. RADIACIONES

En el caso de que, dentro de una zona de las obras, exista riesgo de exposición dentro del campo de alcance de algún foco emisor de radiaciones ionizantes, se tomarán las medidas necesarias para que el personal de obra se encuentre, de manera permanente lo más alejado posibles del foco emisor, llegando a interponer barreras compactas constituidas por materiales fuertemente absorbentes (plomo, hormigón, etc.), si fuese necesario.

El personal especializado que por motivos imperativos, deba acercarse y/o manipular el foco emisor deberá ir perfectamente equipado con buzo de seguridad, mandiles, guantes y manguitos especiales antionizantes, debiendo limitarse su tiempo de exposición en función de la naturaleza del foco emisor y las instrucciones dictadas por la reglamentación vigente, en uso.

### 7.5. RIESGO ELÉCTRICO

El análisis detallado de las lesiones producidas por electrocución, ha demostrado que los factores determinantes de la gravedad de las mismas son la intensidad de la corriente que circula por el cuerpo humano y la duración de la descarga.

Como valor general de intensidad-tiempo que es inócuo a la mayoría de las personas se puede tomar 30 Ma durante 3sg., que en adelante denominaremos valor de seguridad. Teniendo en cuenta el valor de Seguridad y la resistencia media que ofrece el cuerpo humano (500 ohm. en locales secos, 1.500 ohm. en lugares húmedos) obtendremos las siguientes tensiones de seguridad:

- Locales secos:  $1.55 \text{ ohm.} \times 0,03 \text{ A} = 45 \text{ V.}$
- Locales húmedos:  $500 \text{ ohm.} \times 0,003 \text{ A} = 15 \text{ V.}$

#### Métodos de prevención:

Los métodos de prevención se adoptarán con objeto de prevenir los contactos eléctricos, con el fin de evitar que circule por la persona corrientes peligrosas, para lo cual se actuará modificando o controlando los valores de los cuatro parámetros que definen el riesgo eléctrico (tensión, resistencia, tiempo de exposición, intensidad) tratando de alcanzar los siguientes objetivos:

- Disminución de la tensión aplicada (tensiones menores de 15 V., ó 45 V., según los casos).
- Aumento de la resistencia que ofrece el cuerpo humano (Aislamiento).
- Disminución del tiempo de actuación de la corriente sobre el cuerpo humano (mediante el seccionamiento del circuito con interruptor diferencial y/o magnetotérmico).
- Imposibilidad de que exista el contacto eléctrico (Doble aislamiento).
- Imposibilidad de que circule por el cuerpo humano corriente alguna (interruptor del circuito de retomo: Centro de la estrella o grupo de transformación o equipo generador, transformador con separación de circuitos, etc.)



Burgos, Febrero de 2.012

## 8. LOCALES Y SERVICIOS DE HIGIENE Y BIENESTAR

En el Plan de Seguridad y Salud deberán quedar fijados de forma detallada y en función del programa de trabajos, personal y dispositivos de toda índole presentados por la empresa los emplazamientos y características de los servicios de higiene y bienestar.

Cualquier modificación de las características y/o emplazamiento de dichos locales que se plantee una vez aprobado el Plan de S.S.T. requerirá la modificación del mismo, así como su posterior informe y aprobación en los términos establecidos por las disposiciones vigentes.

### AUTORES DEL PROYECTO

D. Sergio Agustín Ratón Alomar

Dña. Miriam Sacristán Terradillos

Dña. Raquel Estrada Merino

D. Alfonso Cid González







## PLANOS



MANEJO DE MATERIALES

ACCIONES PELIGROSAS

CONDICIONES PELIGROSAS

MANEJO DE CARGAS

MAL

BIEN

MAL

BIEN

MEDIDAS DE SEGURIDAD  
MANEJO DE MATERIALES Y CARGAS  
SIN ESCALA



**TIPOS DE ESLINGAS**

**GAZAS**

**MÉTODO CORRECTO**      **MÉTODOS INCORRECTOS**

| Dámetro del Cable | Número de Partes | Distancia entre Partes |
|-------------------|------------------|------------------------|
| Mayor 12 mm       | 3                | 6 Diámetros            |
| 12 mm a 20 mm     | 4                | 6 Diámetros            |
| 20 mm a 25 mm     | 5                | 6 Diámetros            |
| 25 mm a 35 mm     | 6                | 6 Diámetros            |

**MANEJO DE MATERIALES LA MISMA ESLINGA**

Ángulo 30°.....1.000kg  
 Ángulo 60°.....850kg  
 Ángulo 90°.....700kg  
 Ángulo 120°.....500kg

**MEDIDAS DE SEGURIDAD TIPO DE ESLINGAS Y MANEJO DE ESTAS**  
SIN ESCALA

La carga debe ir bien centrada y la eslinga no debe torcerse con ángulos superiores a noventa grados.

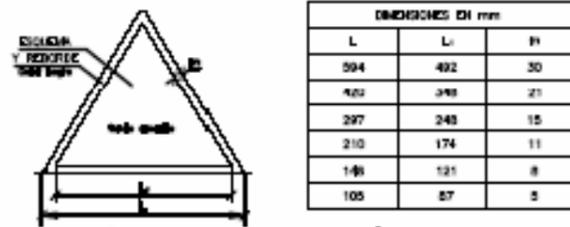
BD = DC = AD

USO PROTECCIÓN OJOS  
 USO CASCO  
 USO PROTECCIÓN AUDÍFONA  
 USO GAFAS  
 USO GUANTES  
 USO GUANTES RESISTENTES  
 USO BOTAS  
 USO BOTAS RESISTENTES  
 SEÑAL PUNTA  
 USO CABLES DE ALUMINIO  
 USO CABLES DE ACERO  
 USO CASCO APERTURAS  
 USO DE CINTA O FIBRA  
 USO DE FIBRA  
 SEÑALIZADO EN OBRA  
 USO DE PUENTES ALTERNOS  
 SEÑAL NO PASAR  
 USO DE PUENTES NO

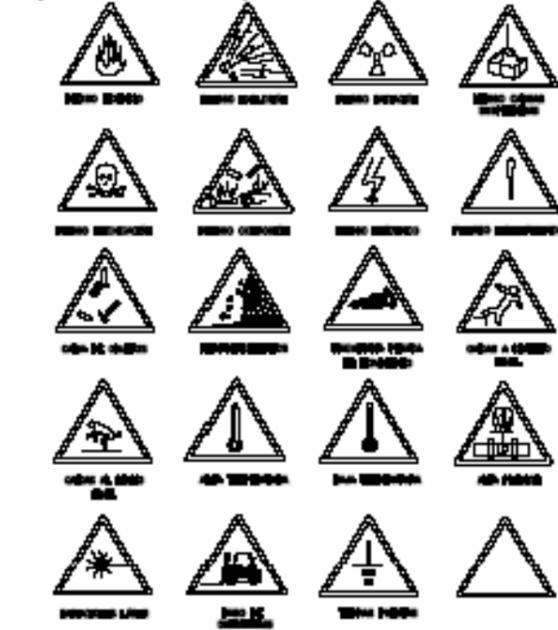
| DIMENSIONES EN mm |     |    |
|-------------------|-----|----|
| D                 | d   | m  |
| 594               | 534 | 30 |
| 420               | 378 | 21 |
| 297               | 267 | 15 |
| 210               | 188 | 11 |
| 148               | 132 | 8  |
| 105               | 87  | 5  |

PROTECCIONES COLECTIVAS  
 SEÑALES DE OBLIGACIÓN  
 SIN ESCALA

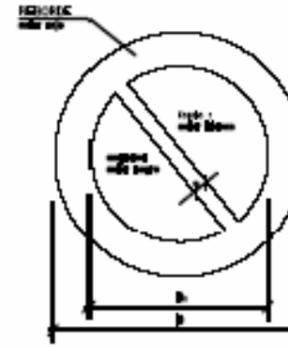
SEÑALES DE ADVERTENCIA DE PELIGRO



| DIMENSIONES EN mm |     |    |
|-------------------|-----|----|
| L                 | L1  | H  |
| 594               | 492 | 30 |
| 422               | 348 | 21 |
| 297               | 248 | 15 |
| 210               | 174 | 11 |
| 146               | 121 | 8  |
| 105               | 87  | 5  |



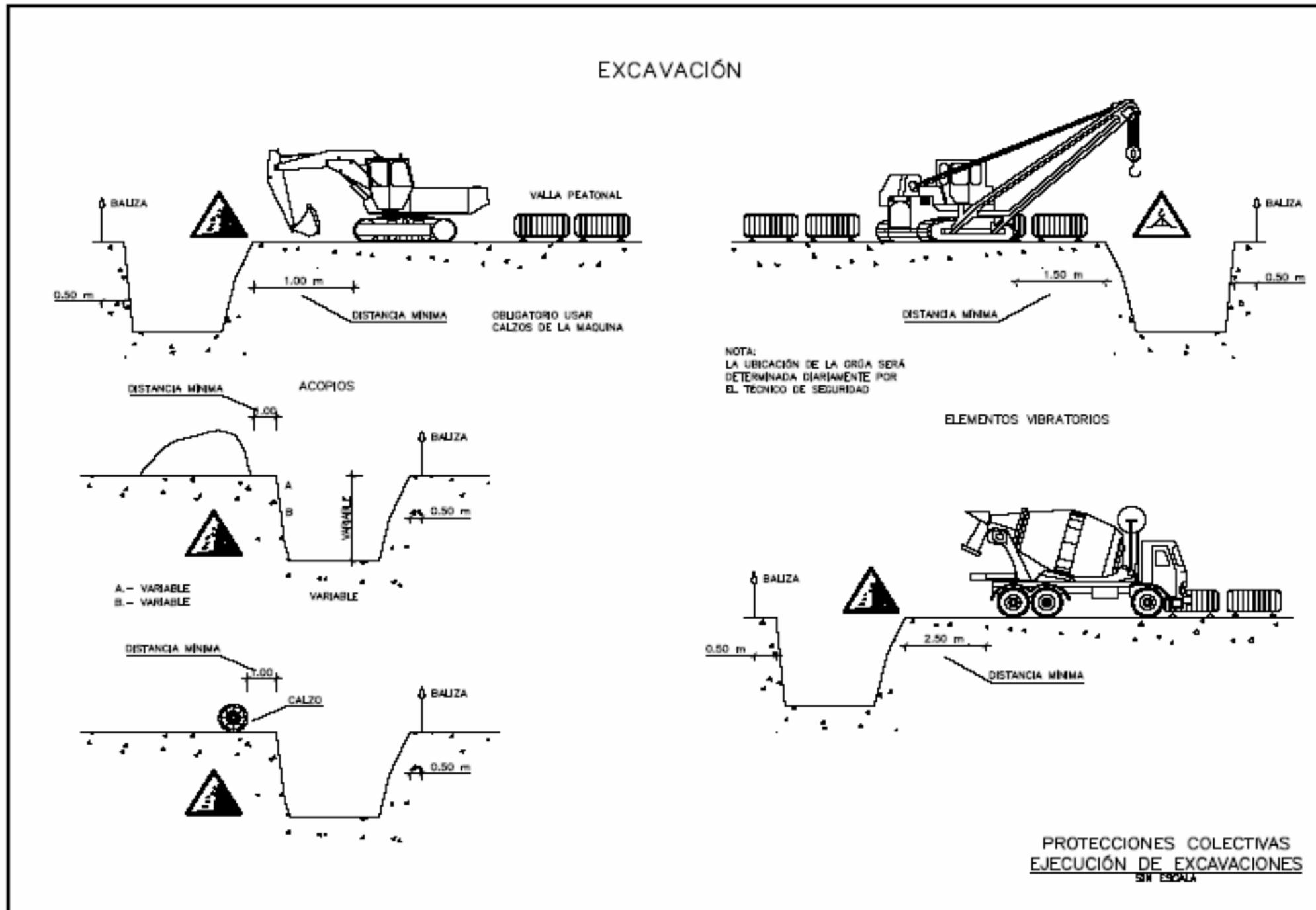
SEÑALES DE PROHIBICIÓN

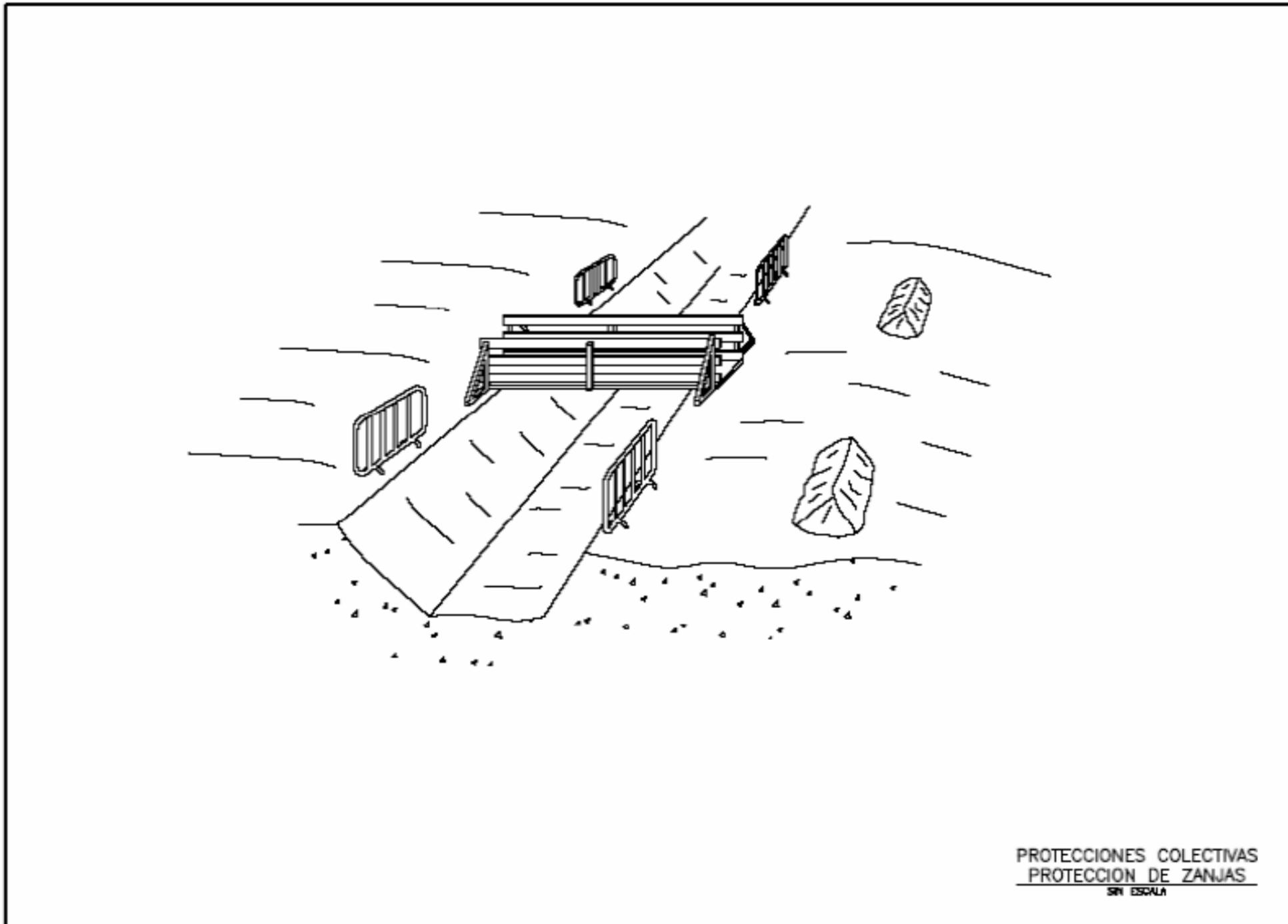


| DIMENSIONES EN mm |     |    |
|-------------------|-----|----|
| D                 | D1  | H  |
| 594               | 420 | 44 |
| 420               | 287 | 31 |
| 297               | 210 | 17 |
| 210               | 148 | 12 |
| 146               | 105 | 11 |
| 105               | 74  | 8  |

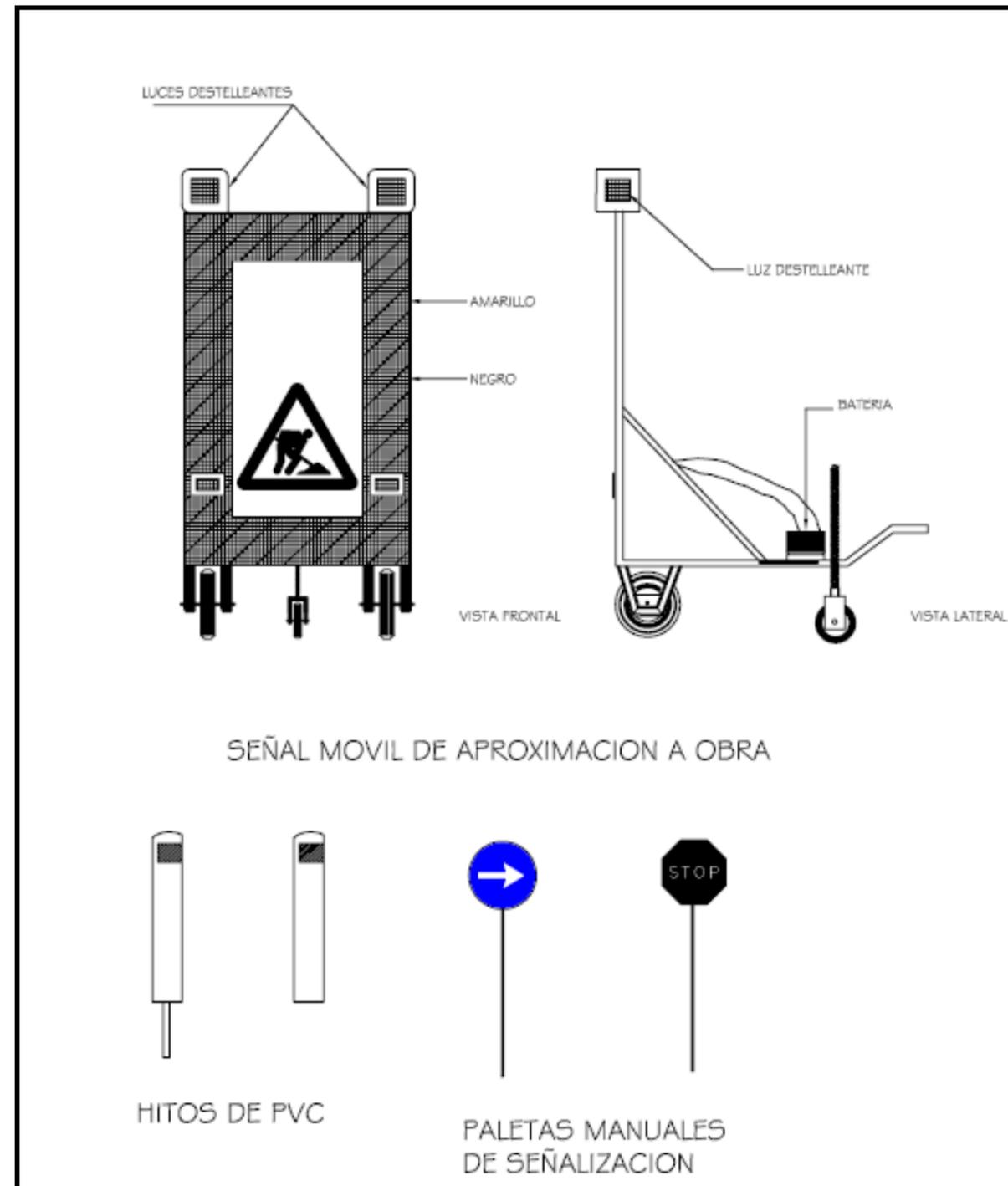


MEDIDAS DE SEGURIDAD  
SEÑALES DE ADVERTENCIA DE PELIGRO  
SEÑALES DE PROHIBICIÓN  
SIN ESCALA



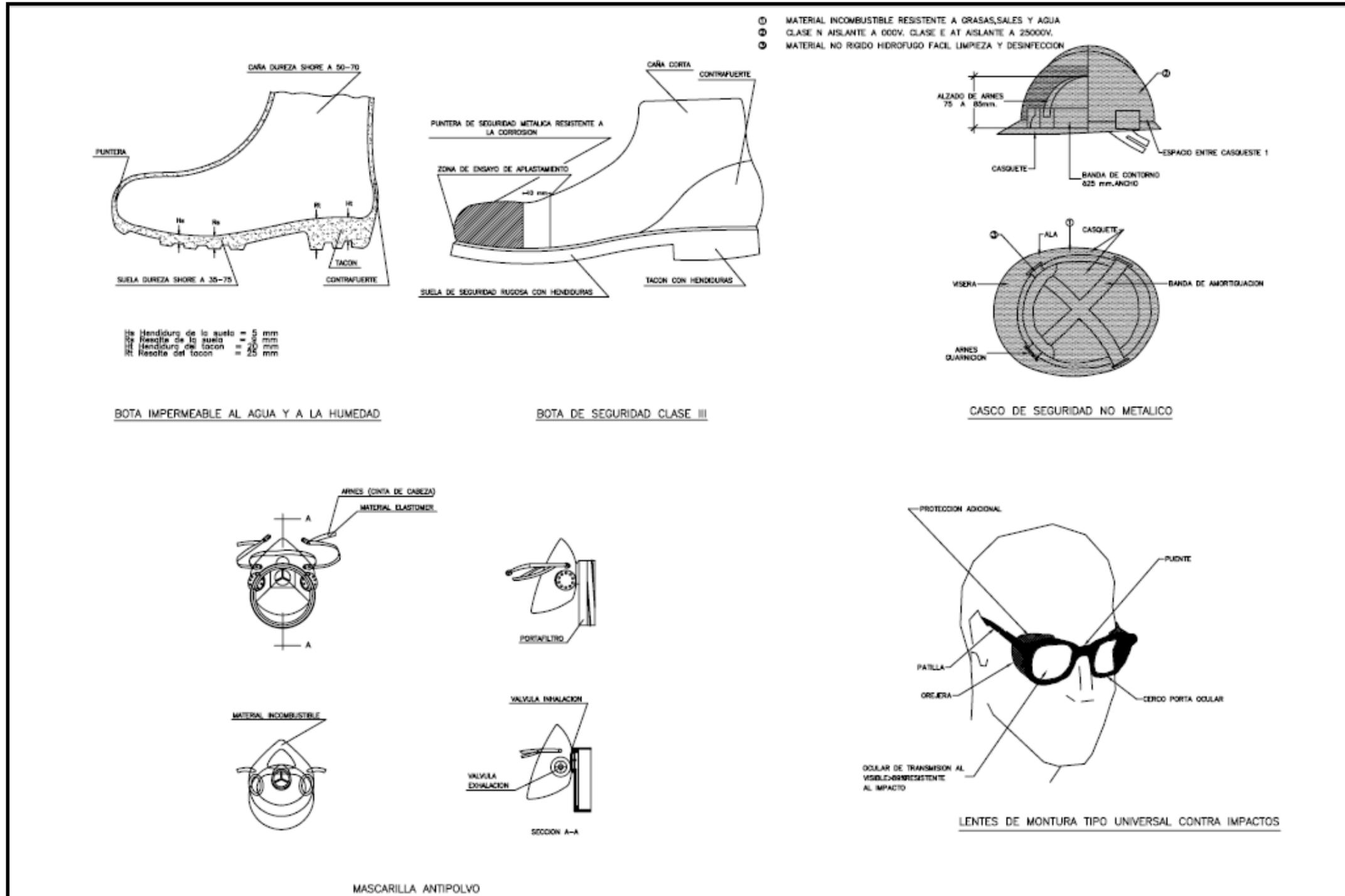


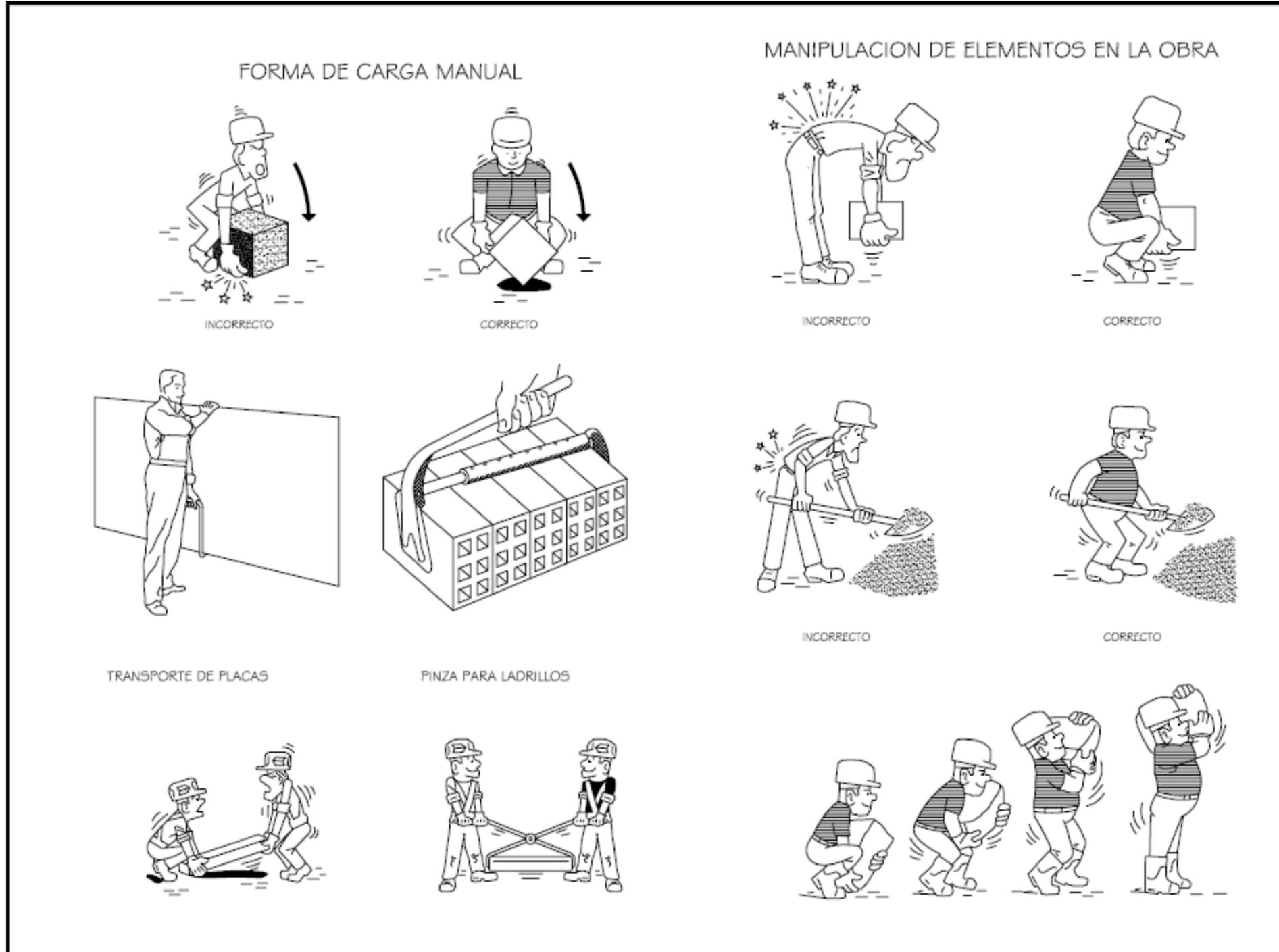


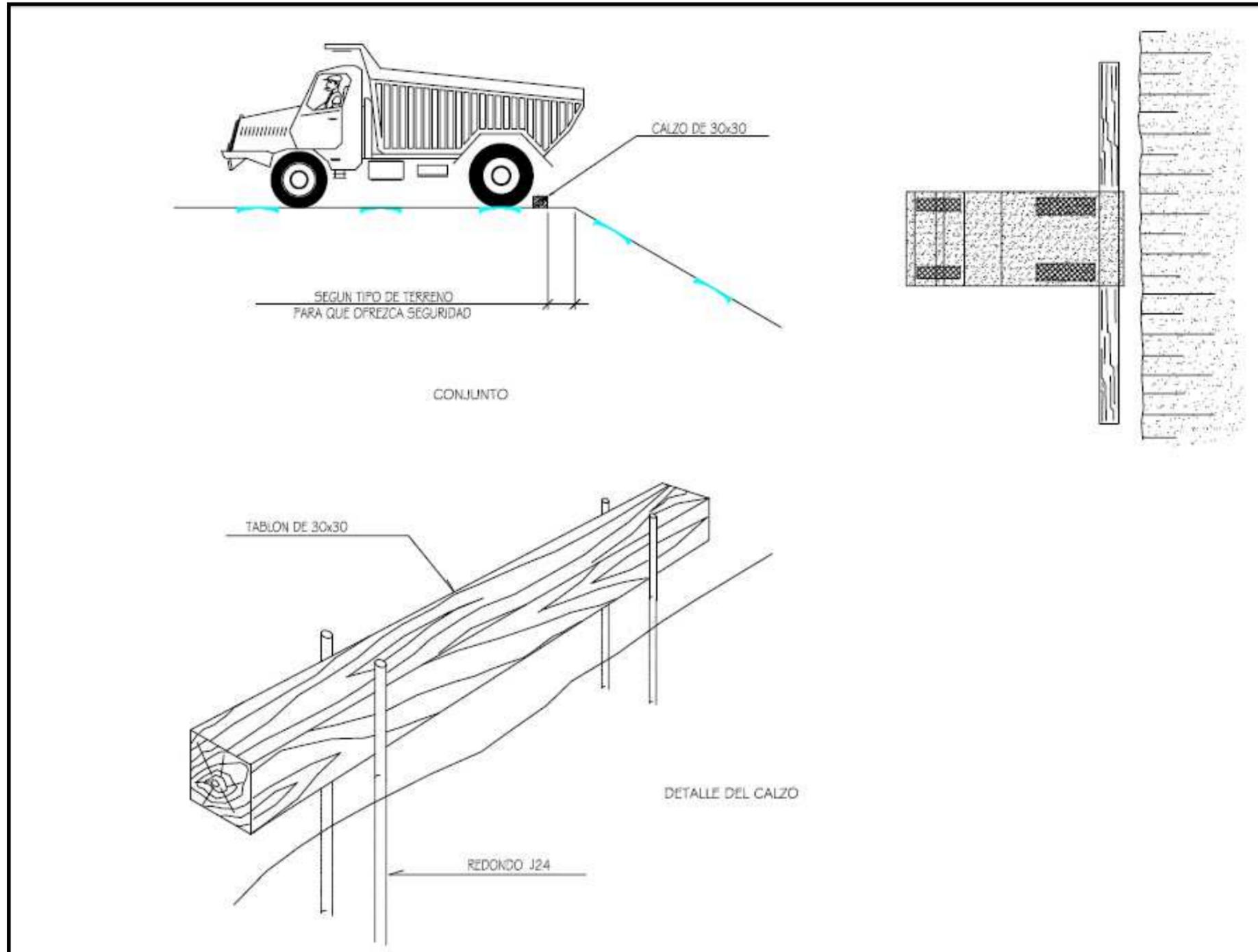


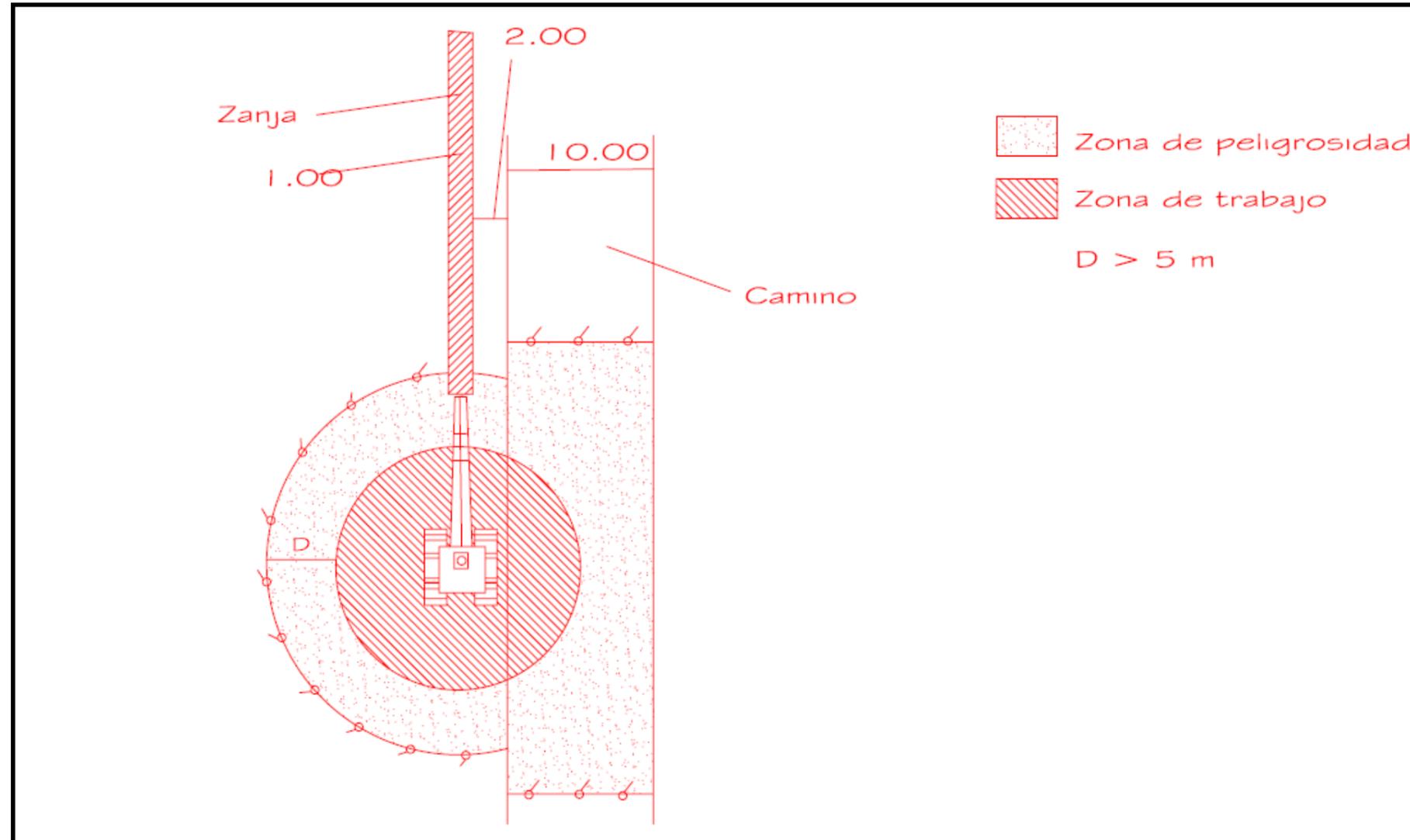


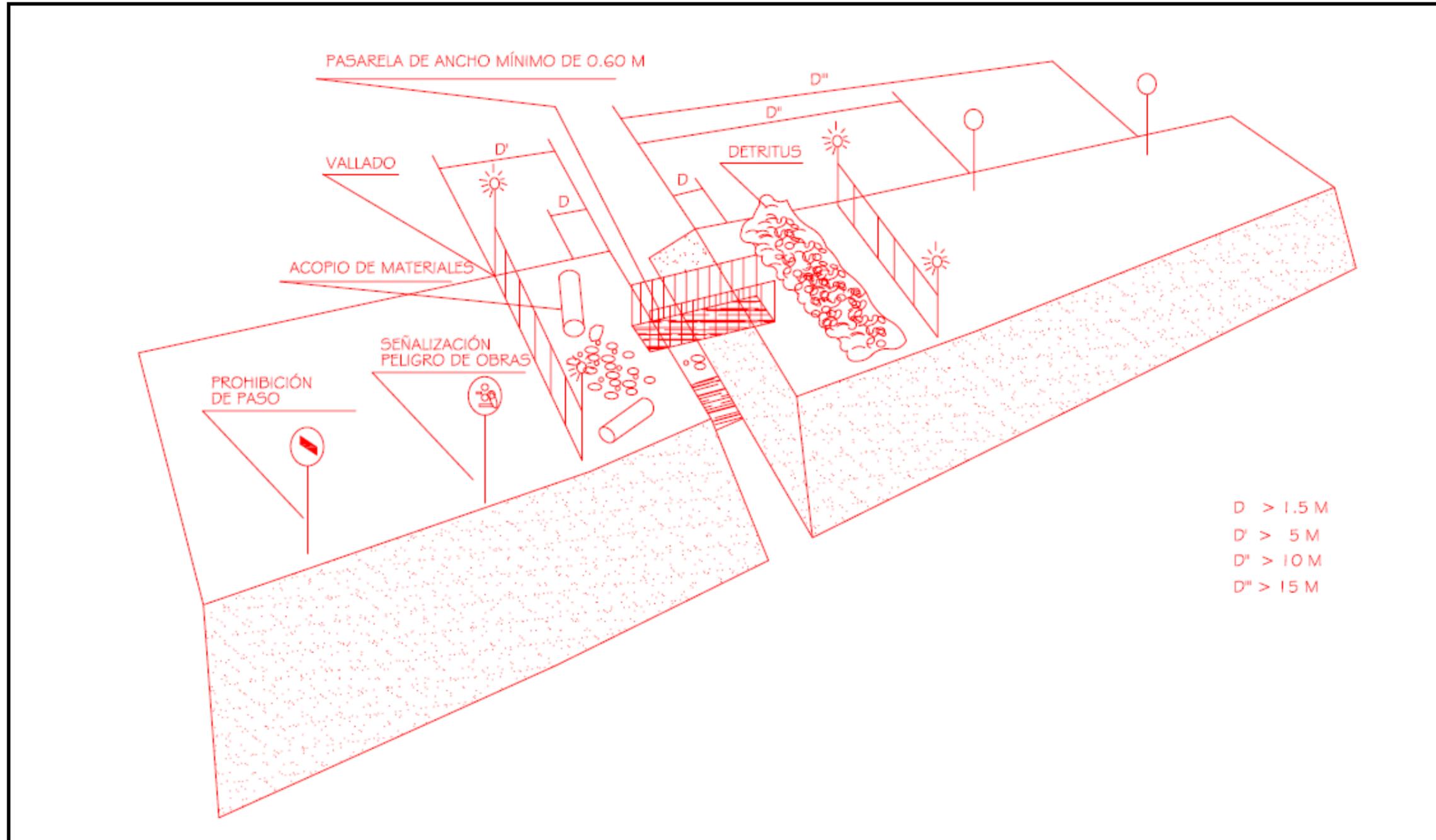


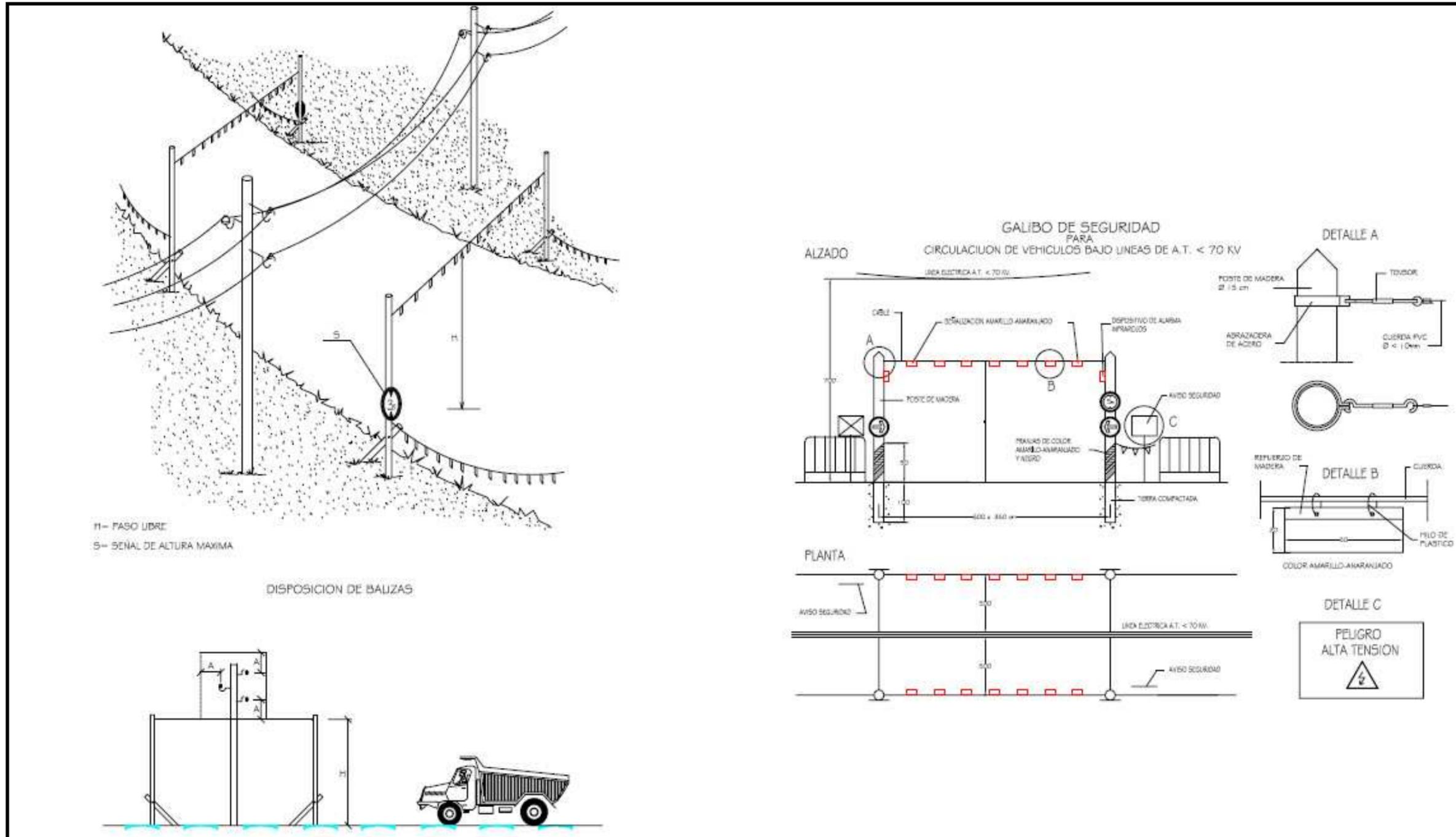


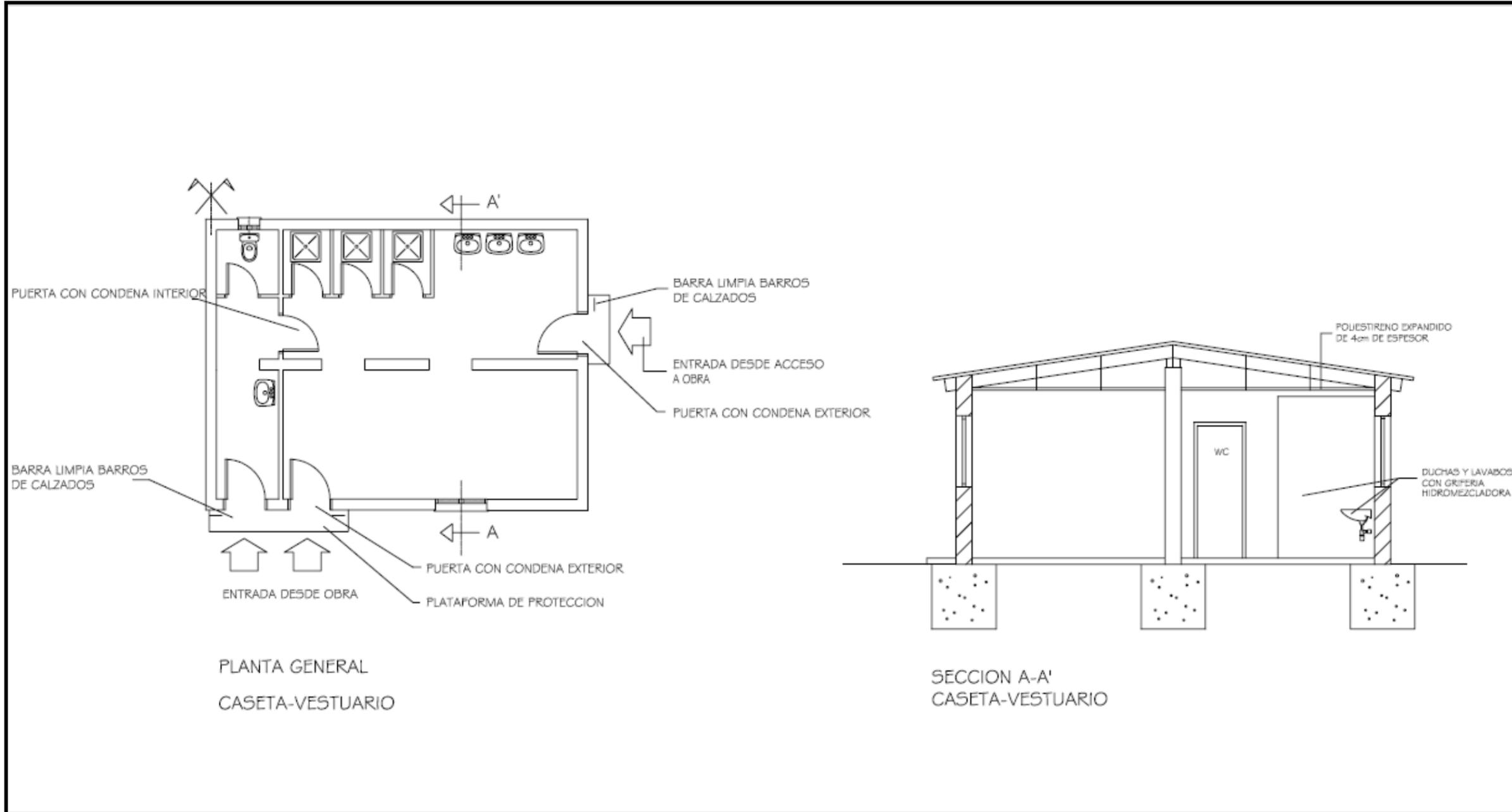








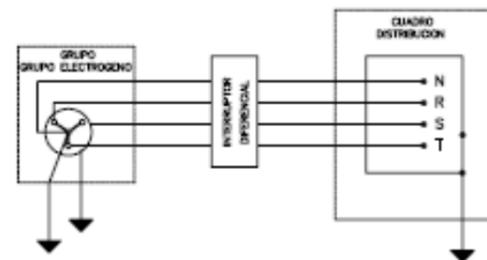




### GRUPOS ELECTROGENOS

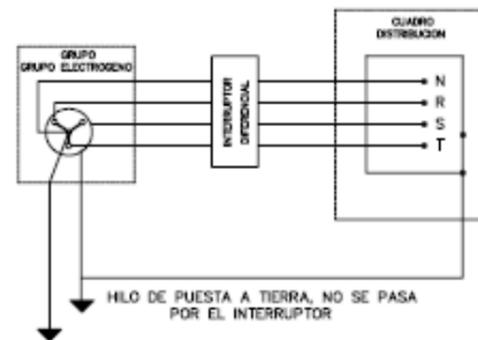
ESQUEMA DE UNA INSTALACION CONECTADA  
A UN GRUPO ELECTROGENO EN ESTRELLA

A) CON CENTRO A TIERRA



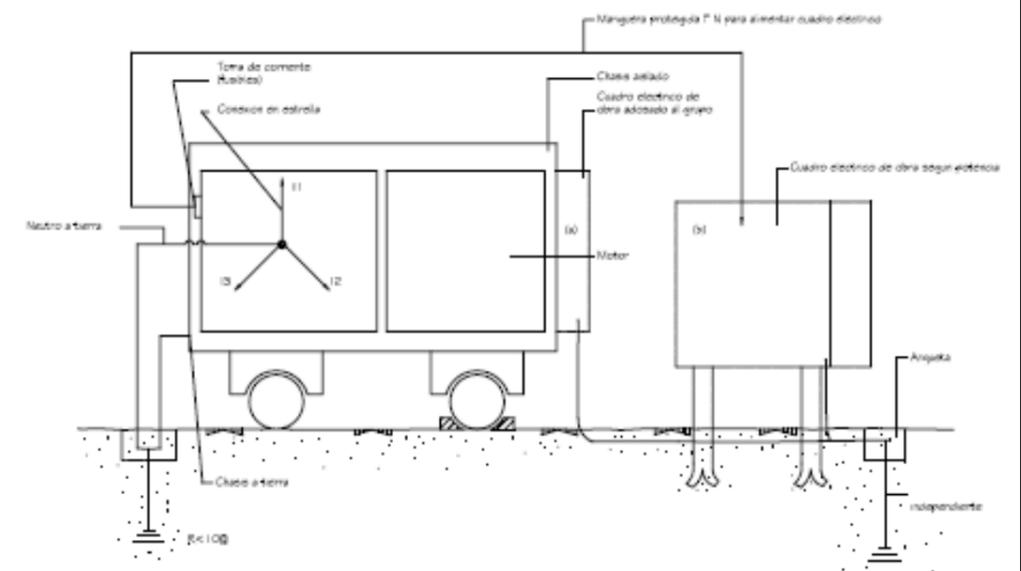
ESQUEMA DE UNA INSTALACION CONECTADA  
A UN GRUPO ELECTROGENO EN ESTRELLA

B) CON EL HILO DE TIERRA DEL CUADRO  
DISTRIBUIDOR



- LOS GRUPOS ELECTROGENOS TENDRAN EL NEUTRO ACCESIBLE Y CON POSIBILIDAD DE SER DISTRIBUIDO.
- EL NEUTRO ESTARA CONEXIONADO A TIERRA, ANTES DEL DIFERENCIAL.
- LA CARCASA DEL GRUPO LLEVARA UNA TOMA A TIERRA INDEPENDIENTE DEL NEUTRO.
- EL CUADRO DE DISTRIBUCION TENDRA TIERRA INDEPENDIENTE O CONECTADA A LA DE LA CARCASA DEL GRUPO.

GRUPO ELECTROGENO  
P > 15 KVA







Burgos, Febrero de 2.012

AUTORES DEL PROYECTO

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## PRESUPUESTO



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## 1. MEDICIONES

| CÓDIGO                                       | RESUMEN   | UDS | LONGITUD | ANCHURA | ALTURA | PARCIALES | CANTIDAD |
|--|---|-----|----------|---------|--------|-----------|----------|
| <b>CAPÍTULO 01 PROTECCIONES INDIVIDUALES</b> |   |     |          |         |        |           |          |
| 01.01  | <b>ud CASCO DE SEGURIDAD</b><br>Casco de seguridad con arnés de adaptación. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                               |     |          |         |        |           | 20,00    |
| 01.02  | <b>ud MONO DE TRABAJO POLIESTER-ALGODÓN</b><br>Mono de trabajo de una pieza de poliéster-algodón. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.         |     |          |         |        |           | 20,00    |
| 01.03  | <b>ud TRAJE AGUA VERDE INGENIERO</b><br>Traje de agua color verde tipo ingeniero (amortizable en un uso). Certificado CE. s/R.D. 773/97 y R.D. 1407/92. |     |          |         |        |           | 20,00    |
| 01.04  | <b>ud PAR DE BOTAS DE SEGURIDAD</b><br>Par de botas de seguridad con plantilla y puntera de acero. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.        |     |          |         |        |           | 20,00    |
| 01.05  | <b>ud CINTURÓN PORTA-HERRAMIENTAS</b><br>Cinturón portaherramientas. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                                      |     |          |         |        |           | 8,00     |
| 01.06  | <b>ud SEMI MASCAR. ANTIPOLVO 2 FILTROS</b><br>Semi-mascarilla antipolvo doble filtro. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                     |     |          |         |        |           | 20,00    |
| 01.07  | <b>ud JUEGO TAPONES ANTIRUIDO SILIC.</b><br>Juego de tapones antiruido de silicona ajustables. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.            |     |          |         |        |           | 20,00    |
| 01.08  | <b>ud PAR GUANTES DE LONA</b><br>Par guantes de lona protección estándar. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                                 |     |          |         |        |           | 20,00    |
| 01.09  | <b>ud PAR GUANTES DE LÁTEX-ANTIC.</b><br>Par guantes de goma látex-anticorte. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                             |     |          |         |        |           | 20,00    |
| 01.10  | <b>ud FAJA DE PROTECCIÓN LUMBAR</b><br>Faja protección lumbar. Certificado CE EN385. s/R.D. 773/97 y R.D. 1407/92.                                      |     |          |         |        |           | 20,00    |

|       |  |  |  |  |  |  |      |
|-------|--|--|--|--|--|--|------|
| 01.11 | <b>ud PANTALLA CONTRA PARTÍCULAS</b><br>Pantalla para protección contra partículas, con sujeción en cabeza. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.  |  |  |  |  |  | 4,00 |
| 01.12 | <b>ud GAFAS CONTRA IMPACTOS</b><br>Gafas protectoras contra impactos, incoloras. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                             |  |  |  |  |  | 4,00 |
| 01.13 | <b>ud CHALECO SALVAVIDAS</b><br>Chaleco salvavidas ergonómico (amortizable en un uso). Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                       |  |  |  |  |  | 3,00 |
| 01.14 | <b>ud PANTALLA SEGURIDAD SOLDADOR</b><br>Pantalla manual de seguridad para soldador, con fijación en cabeza. Certificado CE. s/R.D. 773/97 y R.D. 1407/92. |  |  |  |  |  | 4,00 |
| 01.15 | <b>ud MANDIL CUERO PARA SOLDADOR</b><br>Mandil de cuero para soldador. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                                       |  |  |  |  |  | 4,00 |
| 01.16 | <b>ud PAR DE POLAINAS SOLDADURA</b><br>Par de polainas para soldador. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.  |  |  |  |  |  | 4,00 |

| CÓDIGO                                     | RESUMEN   | UDS | LONGITUD | ANCHURA | ALTURA | PARCIALES | CANTIDAD |
|--|---|-----|----------|---------|--------|-----------|----------|
| <b>CAPÍTULO 02 PROTECCIONES COLECTIVAS</b> |   |     |          |         |        |           |          |
| 02.01                                      | <b>mes ALQUILER CONTENEDOR ESCOMBRO</b><br>Mes de alquiler de contenedor para depositar escombros situado en la vía pública.  |     |          |         |        |           | 9,00     |
| 02.02                                      | <b>m2 MONTAJE ANDAMIO METALICO</b><br>Alquiler, montaje y desmontaje de andamio metálico de perfil europeo, formado por montantes, y arriostamientos de acero, incluso plataformas de trabajo de chapa, así como módulo con escalera, con zócalo y antepecho de protección contra caídas, con plataforma cerrada a nivel de planta baja y red perimetral para recogida de cascotes, incluso p.p. de arriostamientos a fachadas o muro de hormigón, y p.p. de medios auxiliares y trabajos previos de limpieza para apoyos. Según normativa CE y R.D. 2177/2004. |     |          |         |        |           | 100,00   |
| 02.03                                      | <b>m VALLA FIJA GALVANIZADA</b><br>Vallado fijo de 2,00 m. de altura realizado con malla simple torsión galvanizada y postes de tubo de acero galvanizado i, p.p. de postes de esquina, jabalcones, toma-puntas, tensores, grupillas y accesorios, montada i/replanteo y recibido de postes con hormigón y posterior retirada al finalizar la obra.   |     |          |         |        |           | 50,00    |



|       |   |  |  |  |  |        |  |
|-------|---|--|--|--|--|--------|--|
| 02.04 | m BARANDILLA TUBO   |  |  |  |  |        |  |
|       | Barandilla de protección: excavaciones, laterales del tablero y huecos s/ R.D. 486/97.  |  |  |  |  |        |  |
|       |   |  |  |  |  | 200,00 |  |
| 02.05 | MI CINTA DE BALIZAMIENTO R/B  |  |  |  |  |        |  |
|       | MI. Cinta corrida de balizamiento plástica pintada a dos colores roja y blanca, incluso colocación y desmontado.  |  |  |  |  |        |  |
|       |   |  |  |  |  | 200,00 |  |
| 02.06 | ud PICTOGRAMAS  |  |  |  |  |        |  |
|       | Pictogramas colocados a lo largo del vallado perimetral (rogamos disculpen las molestias, peligro, desprendimientos, prohibido el paso a toda persona ajena a la obra).           |  |  |  |  |        |  |
|       |   |  |  |  |  | 2,00   |  |
| 02.07 | ud PALETA MANUAL 2 CARAS STOP-OBL.  |  |  |  |  |        |  |
|       | Señal de seguridad manual a dos caras: Stop-Dirección obligatoria, tipo paleta. s/R.D. 485/97.  |  |  |  |  |        |  |
|       |   |  |  |  |  | 2,00   |  |
| 02.08 | m MALLA POLIETILENO   |  |  |  |  |        |  |
|       | Malla de polietileno alta densidad con tratamiento antiultravioleta, color naranja de 1 m. de altura, tipo stopper, i/colocación desmontaje, amortizado tres usos s/ R.D. 486/97. |  |  |  |  |        |  |
|       |   |  |  |  |  | 200,00 |  |
| 02.09 | ud SEÑAL NORMALIZADA TRAFICO  |  |  |  |  |        |  |
|       | Señal normalizada de tráfico con soporte metálico incluso colocación.   |  |  |  |  |        |  |
|       |   |  |  |  |  | 4,00   |  |

| CÓDIGO | RESUMEN  | UDS | LONGITUD | ANCHURA | ALTURA | PARCIALES | CANTIDAD |
|--------|--|-----|----------|---------|--------|-----------|----------|
|        | <b>CAPÍTULO 03 INSTALACIONES HIGIENE Y BIENESTAR</b>   |     |          |         |        |           |          |
| 03.01  | mes ALQUILER CASETA OFIC.+VEST.  |     |          |         |        |           |          |
|        | Mes de alquiler (min. 05 meses) de caseta prefabricada para un despacho de oficina, vestuarios y un aseo con inodoro y lavabo. Estructura y cerramiento de chapa galvanizada pintada, aislamiento de poliestireno expandido autoextinguible, interior con tablero melaminado en color. Cubierta en arco de chapa galvanizada ondulada reforzada con perfil de acero; fibra de vidrio de 60 mm., interior con tablex lacado. Suelo de aglomerado revestido con PVC continuo de 2 mm., y poliestireno de 50 mm. con apoyo en base de chapa galvanizada de sección trapezoidal. Puerta de 0,8x2 m., de chapa galvanizada de 1 mm., reforzada y con poliestireno de 20 mm., picaporte y cerradura. Ventana aluminio anodizado corredera, contraventana de acero galvanizado. Instalación eléctrica 220 V., toma de tierra, automático, 2 fluorescentes de 40 W., enchufes para 1500 W. y punto luz exterior de 60 W. Con transporte a 150 km.(ida y vuelta). Entrega y recogida del módulo con camión grúa. Según R.D. 486/97. |     |          |         |        |           |          |
|        |  |     |          |         |        |           | 9,00     |

| CÓDIGO | RESUMEN   | UDS | LONGITUD | ANCHURA | ALTURA | PARCIALES | CANTIDAD |
|--------|---|-----|----------|---------|--------|-----------|----------|
|        | <b>CAPÍTULO 04 INSTALACIONES PROVISIONALES</b>  |     |          |         |        |           |          |
| 04.01  | ud INSTALACIONES PROVISIONALES  |     |          |         |        |           |          |
|        | Precio de ejecución de todas las instalaciones provisionales necesarias para la correcta ejecución de la obra. Dentro de estas instalaciones provisionales se encuentran la acometida eléctrica, la acometida de fontanería, la acometida de saneamiento, la acometida de teléfono, además de toma de tierra y cuadro general y secundario de obra. |     |          |         |        |           |          |
|        |   |     |          |         |        |           | 1,00     |

| CÓDIGO | RESUMEN   | UDS | LONGITUD | ANCHURA | ALTURA | PARCIALES | CANTIDAD |
|--------|---|-----|----------|---------|--------|-----------|----------|
|        | <b>CAPÍTULO 05 PROTECCION CONTRA INCENDIOS</b>                        |     |          |         |        |           |          |
| 05.01  | ud EXTINTOR CO2   |     |          |         |        |           |          |
|        | Extintor de CO2 de 2 Kg, en oficinas de obra.                         |     |          |         |        |           |          |
|        |   |     |          |         |        |           | 3,00     |
| 05.02  | ud EXTINTOR POLIVALENTE   |     |          |         |        |           |          |
|        | Extintor polivalente de 3.5 Kg situados en instalaciones de personal, |     |          |         |        |           |          |
|        |   |     |          |         |        |           | 3,00     |

| CÓDIGO | RESUMEN  | UDS | LONGITUD | ANCHURA | ALTURA | PARCIALES | CANTIDAD |
|--------|--|-----|----------|---------|--------|-----------|----------|
|        | <b>CAPÍTULO 06 MEDICINA DEL TRABAJO</b>  |     |          |         |        |           |          |
| 06.01  | ud RECONOCIMIENTO MÉDICO BÁSICO  |     |          |         |        |           |          |
|        | Reconocimiento médico básico anual trabajador, compuesto por control visión, audiometría y analítica de sangre y orina con 6 parámetros.   |     |          |         |        |           |          |
|        |  |     |          |         |        |           | 15,00    |
| 06.02  | ud COSTO MENSUAL DE CONSERVACIÓN   |     |          |         |        |           |          |
|        | Costo mensual de conservación de instalaciones provisionales de obra, considerando 2 horas a la semana un oficial de 2ª.   |     |          |         |        |           |          |
|        |  |     |          |         |        |           | 9,00     |
| 06.03  | ud COSTO MENSUAL LIMPIEZA Y DESINF.  |     |          |         |        |           |          |
|        | Costo mensual de limpieza y desinfección de casetas de obra, considerando dos horas a la semana un peón ordinario.   |     |          |         |        |           |          |
|        |  |     |          |         |        |           | 9,00     |
| 06.04  | ud BOTIQUÍN DE URGENCIA  |     |          |         |        |           |          |
|        | Botiquín de urgencia para obra fabricado en chapa de acero, pintado al horno con tratamiento anticorrosivo y seigrafía de cruz. Color blanco, con contenidos mínimos obligatorios, colocado. |     |          |         |        |           |          |
|        |  |     |          |         |        |           | 2,00     |
| 06.05  | ud REPOSICIÓN BOTIQUÍN   |     |          |         |        |           |          |
|        | Reposición de material de botiquín de urgencia.  |     |          |         |        |           |          |
|        |  |     |          |         |        |           | 2,00     |
| 06.06  | Ud CAMILLA PORTÁTIL EVACUACIONES   |     |          |         |        |           |          |
|        | Ud. Camilla portátil para evacuaciones, colocada. (20 usos)  |     |          |         |        |           |          |
|        |  |     |          |         |        |           | 3,00     |



## 2. CUADRO DE PRECIOS Nº 1

| CÓDIGO                                       | UD | RESUMEN   | PRECIO |
|--|----|---|--------|
| <b>CAPÍTULO 01 PROTECCIONES INDIVIDUALES</b> |    |   |        |
| 01.01  | ud | CASCO DE SEGURIDAD  | 1,92   |
|  |    | Casco de seguridad con arnés de adaptación. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                         |        |
|  |    | UN EUROS con NOVENTA Y DOS CÉNTIMOS   |        |
| 01.02  | ud | MONO DE TRABAJO POLIESTER-ALGODÓN   | 14,02  |
|  |    | Mono de trabajo de una pieza de poliéster-algodón. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                  |        |
|  |    | CATORCE EUROS con DOS CÉNTIMOS  |        |
| 01.03  | ud | TRAJE AGUA VERDE INGENIERO  | 16,36  |
|  |    | Traje de agua color verde tipo ingeniero (amortizable en un uso). Certificado CE. s/R.D. 773/97 y R.D. 1407/92.   |        |
|  |    | DIECISEIS EUROS con TREINTA Y SEIS CÉNTIMOS   |        |
| 01.04  | ud | PAR DE BOTAS DE SEGURIDAD   | 8,72   |
|  |    | Par de botas de seguridad con plantilla y puntera de acero. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.         |        |
|  |    | OCHO EUROS con SETENTA Y DOS CÉNTIMOS   |        |
| 01.05  | ud | CINTURÓN PORTA-HERRAMIENTAS   | 5,10   |
|  |    | Cinturón portaherramientas. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.   |        |
|  |    | CINCO EUROS con DIEZ CÉNTIMOS   |        |
| 01.06  | ud | SEMI MASCAR. ANTIPOLVO 2 FILTROS  | 12,10  |
|  |    | Semi-mascarilla antipolvo doble filtro. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                             |        |
|  |    | DOCE EUROS con DIEZ CÉNTIMOS  |        |
| 01.07  | ud | JUEGO TAPONES ANTIRUIDO SILIC.  | 0,44   |
|  |    | Juego de tapones antiruido de silicona ajustables. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                  |        |
|  |    | CERO EUROS con CUARENTA Y CUATRO CÉNTIMOS   |        |
| 01.08  | ud | PAR GUANTES DE LONA   | 1,96   |
|  |    | Par guantes de lona protección estándar. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                            |        |
|  |    | UN EUROS con NOVENTA Y SEIS CÉNTIMOS  |        |
| 01.09  | ud | PAR GUANTES DE LÁTEX-ANTIC.   | 1,15   |
|  |    | Par guantes de goma látex-anticorte. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                                |        |
|  |    | UN EUROS con QUINCE CÉNTIMOS  |        |
| 01.10  | ud | FAJA DE PROTECCIÓN LUMBAR   | 5,33   |
|  |    | Faja protección lumbar. Certificado CE EN385. s/R.D. 773/97 y R.D. 1407/92.                                       |        |
|  |    | CINCO EUROS con TREINTA Y TRES CÉNTIMOS   |        |
| 01.11  | ud | PANTALLA CONTRA PARTÍCULAS  | 1,01   |
|  |    | Pantalla para protección contra partículas, con sujeción en cabeza. Certificado CE. s/R.D. 773/97 y R.D. 1407/92. |        |
|  |    | UN EUROS con UN CÉNTIMOS  |        |
| 01.12  | ud | GAFAS CONTRA IMPACTOS   | 2,62   |

|       |    |   |       |
|-------|----|---|-------|
| 01.13 | ud | Gafas protectoras contra impactos, incoloras. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.<br>DOS EUROS con SESENTA Y DOS CÉNTIMOS<br>CHALECO SALVAVIDAS | 16,36 |
|       |    | Chaleco salvavidas ergonómico (amortizable en un uso). Certificado CE. s/R.D. 773/97 y R.D. 1407/92.  |       |
|       |    | DIECISEIS EUROS con TREINTA Y SEIS CÉNTIMOS   |       |
| 01.14 | ud | PANTALLA SEGURIDAD SOLDADOR   | 2,31  |
|       |    | Pantalla manual de seguridad para soldador, con fijación en cabeza. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.   |       |
|       |    | DOS EUROS con TREINTA Y UN CÉNTIMOS   |       |
| 01.15 | ud | MANDIL CUERO PARA SOLDADOR  | 3,48  |
|       |    | Mandil de cuero para soldador. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.  |       |
|       |    | TRES EUROS con CUARENTA Y OCHO CÉNTIMOS   |       |
| 01.16 | ud | PAR DE POLAINAS SOLDADURA   | 2,04  |
|       |    | Par de polainas para soldador. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.  |       |
|       |    | DOS EUROS con CUATRO CÉNTIMOS   |       |

| CÓDIGO                                     | UD  | RESUMEN   | PRECIO |
|--|-----|---|--------|
| <b>CAPÍTULO 02 PROTECCIONES COLECTIVAS</b> |     |   |        |
| 02.01                                      | mes | ALQUILER CONTENEDOR ESCOMBRO  | 47,52  |
|  |     | Mes de alquiler de contenedor para depositar escombros situado en la vía pública.   |        |
|  |     | CUARENTA Y SIETE EUROS con CINCUENTA Y DOS CÉNTIMOS   |        |
| 02.02                                      | m2  | MONTAJE ANDAMIO METALICO  | 14,89  |
|  |     | Alquiler, montaje y desmontaje de andamio metálico de perfil europeo, formado por montantes, y arriostamientos de acero, incluso plataformas de trabajo de chapa, así como módulo con escalera, con zócalo y antepecho de protección contra caídas, con plataforma cerrada a nivel de planta baja y red perimetral para recogida de cascotes, incluso p.p. de arriostamientos a fachadas o muro de hormigón, y p.p. de medios auxiliares y trabajos previos de limpieza para apoyos. Según normativa CE y R.D. 2177/2004. |        |
|  |     | CATORCE EUROS con OCHENTA Y NUEVE CÉNTIMOS  |        |
| 02.03                                      | m   | VALLA FIJA GALVANIZADA  | 15,41  |
|  |     | Vallado fijo de 2,00 m. de altura realizado con malla simple torsión galvanizada y postes de tubo de acero galvanizado i, p.p. de postes de esquina, jabalcones, tornapuntas, tensores, grupillas y accesorios, montada i/replanteo y recibido de postes con hormigón y posterior retirada al finalizar la obra.  |        |
|  |     | QUINCE EUROS con CUARENTA Y UN CÉNTIMOS   |        |
| 02.04                                      | m   | BARANDILLA TUBO   | 7,22   |
|  |     | Barandilla de protección: excavaciones, laterales del tablero y huecos s/ R.D. 486/97.  |        |
|  |     | SIETE EUROS con VEINTIDOS CÉNTIMOS  |        |
| 02.05                                      | MI  | CINTA DE BALIZAMIENTO R/B   | 1,86   |
|  |     | MI. Cinta corrida de balizamiento plástica pintada a dos colores roja y blanca, incluso colocación y desmontado.  |        |
|  |     | UN EUROS con OCHENTA Y SEIS CÉNTIMOS  |        |
| 02.06                                      | ud  | PICTOGRAMAS   | 41,51  |
|  |     | Pictogramas colocados a lo largo del vallado perimetral (rogamos disculpen las molestias, peligro, desprendimientos, prohibido el paso a toda persona ajena a la obra).   |        |
|  |     | CUARENTA Y UN EUROS con CINCUENTA Y UN CÉNTIMOS   |        |



|               |           |   |               |
|---------------|-----------|---|---------------|
| 02.07         | ud        | PALETA MANUAL 2 CARAS STOP-OBL.   | 11,72         |
|               |           | Señal de seguridad manual a dos caras: Stop-Dirección obligatoria, tipo paleta. s/R.D. 485/97.<br>ONCE EUROS con SETENTA Y DOS CÉNTIMOS   |               |
| 02.08         | m         | MALLA POLIETILENO   | 0,98          |
|               |           | Malla de polietileno alta densidad con tratamiento antiultravioleta, color naranja de 1 m. de altura, tipo stopper, i/colocación desmontaje, amortizado tres usos s/ R.D. 486/97.<br>CERO EUROS con NOVENTA Y OCHO CÉNTIMOS |               |
| 02.09         | ud        | SEÑAL NORMALIZADA TRAFICO   | 16,59         |
|               |           | Señal normalizada de tráfico con soporte metálico incluso colocación.<br>DIECISEIS EUROS con CINCUENTA Y NUEVE CÉNTIMOS   |               |
| <b>CÓDIGO</b> | <b>UD</b> | <b>RESUMEN</b>  | <b>PRECIO</b> |

### CAPÍTULO 03 INSTALACIONES HIGIENE Y BIENESTAR

|               |           |  |               |
|---------------|-----------|--|---------------|
| 03.01         | mes       | ALQUILER CASETA OFIC.+VEST.  | 152,85        |
|               |           | Mes de alquiler (min. 05 meses) de caseta prefabricada para un despacho de oficina, vestuarios y un aseo con inodoro y lavabo. Estructura y cerramiento de chapa galvanizada pintada, aislamiento de poliestireno expandido autoextinguible, interior con tablero melaminado en color. Cubierta en arco de chapa galvanizada ondulada reforzada con perfil de acero; fibra de vidrio de 60 mm., interior con tablero lacado. Suelo de aglomerado revestido con PVC continuo de 2 mm., y poliestireno de 50 mm. con apoyo en base de chapa galvanizada de sección trapezoidal. Puerta de 0,8x2 m., de chapa galvanizada de 1 mm., reforzada y con poliestireno de 20 mm., picaporte y cerradura. Ventana aluminio anodizado corredera, contraventana de acero galvanizado. Instalación eléctrica 220 V., toma de tierra, automático, 2 fluorescentes de 40 W., enchufes para 1500 W. y punto luz exterior de 60 W. Con transporte a 150 km.(ida y vuelta). Entrega y recogida del módulo con camión grúa. Según R.D. 486/97.<br>CIENTO CINCUENTA Y DOS EUROS con OCHENTA Y CINCO CÉNTIMOS |               |
| <b>CÓDIGO</b> | <b>UD</b> | <b>RESUMEN</b>   | <b>PRECIO</b> |

### CAPÍTULO 04 INSTALACIONES PROVISIONALES

|               |           |   |               |
|---------------|-----------|---|---------------|
| 04.01         | Ud        | INSTALACIONES PROVISIONALES   | 1.500,00      |
|               |           | Precio de ejecución de todas las instalaciones provisionales necesarias para la correcta ejecución de la obra. Dentro de estas instalaciones provisionales se encuentran la acometida eléctrica, la acometida de fontanería, la acometida de saneamiento, la acometida de teléfono, además de toma de tierra y cuadro general y secundario de obra.<br>MIL QUINIENTOS EUROS |               |
| <b>CÓDIGO</b> | <b>UD</b> | <b>RESUMEN</b>  | <b>PRECIO</b> |

### CAPÍTULO 05 PROTECCION CONTRA INCENDIOS

|       |    |   |       |
|-------|----|---|-------|
| 05.01 | ud | EXTINTOR CO2  | 90,32 |
|       |    | Extintor de CO2 de 2 Kg, en oficinas de obra.<br>NOVENTA EUROS con TREINTA Y DOS CÉNTIMOS |       |

|       |    |  |       |
|-------|----|--|-------|
| 05.02 | ud | EXTINTOR POLIVALENTE   | 47,73 |
|       |    | Extintor polivalente de 3.5 Kg situados en instalaciones de personal, CUARENTA Y SIETE EUROS con SETENTA Y TRES CÉNTIMOS |       |

|               |           |                |               |
|---------------|-----------|----------------|---------------|
| <b>CÓDIGO</b> | <b>UD</b> | <b>RESUMEN</b> | <b>PRECIO</b> |
|---------------|-----------|----------------|---------------|

### CAPÍTULO 06 MEDICINA DEL TRABAJO

|       |    |  |        |
|-------|----|--|--------|
| 06.01 | ud | RECONOCIMIENTO MÉDICO BÁSICO   | 84,41  |
|       |    | Reconocimiento médico básico anual trabajador, compuesto por control visión, audiometría y analítica de sangre y orina con 6 parámetros.<br>OCHENTA Y CUATRO EUROS con CUARENTA Y UN CÉNTIMOS  |        |
| 06.02 | ud | COSTO MENSUAL DE CONSERVACIÓN  | 70,67  |
|       |    | Costo mensual de conservación de instalaciones provisionales de obra, considerando 2 horas a la semana un oficial de 2ª.<br>SETENTA EUROS con SESENTA Y SIETE CÉNTIMOS   |        |
| 06.03 | ud | COSTO MENSUAL LIMPIEZA Y DESINF.   | 77,92  |
|       |    | Costo mensual de limpieza y desinfección de casetas de obra, considerando dos horas a la semana un peón ordinario.<br>SETENTA Y SIETE EUROS con NOVENTA Y DOS CÉNTIMOS   |        |
| 06.04 | ud | BOTIQUÍN DE URGENCIA   | 108,29 |
|       |    | Botiquín de urgencia para obra fabricado en chapa de acero, pintado al horno con tratamiento anticorrosivo y seigrafía de cruz. Color blanco, con contenidos mínimos obligatorios, colocado.<br>CIENTO OCHO EUROS con VEINTINUEVE CÉNTIMOS |        |
| 06.05 | ud | REPOSICIÓN BOTIQUÍN  | 60,27  |
|       |    | Reposición de material de botiquín de urgencia.<br>SESENTA EUROS con VEINTISIETE CÉNTIMOS  |        |
| 06.06 | Ud | CAMILLA PORTATIL EVACUACIONES  | 6,98   |
|       |    | Ud. Camilla portátil para evacuaciones, colocada. (20 usos)<br>SEIS EUROS con NOVENTA Y OCHO CÉNTIMOS  |        |



### 3. CUADRO DE PRECIOS Nº 2

| CÓDIGO                                       | UD | RESUMEN  | PRECIO       |
|--|----|--|--------------|
| <b>CAPÍTULO 01 PROTECCIONES INDIVIDUALES</b> |    |  |              |
| 01.01  | ud | <b>CASCO DE SEGURIDAD</b><br>Casco de seguridad con arnés de adaptación. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                               |              |
|  |    | Resto de obra y materiales .....   | 1,92         |
|  |    | <b>TOTAL PARTIDA.....</b>  | <b>1,92</b>  |
| 01.02  | ud | <b>MONO DE TRABAJO POLIESTER-ALGODÓN</b><br>Mono de trabajo de una pieza de poliéster-algodón. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.         |              |
|  |    | Resto de obra y materiales .....   | 14,02        |
|  |    | <b>TOTAL PARTIDA.....</b>  | <b>14,02</b> |
| 01.03  | ud | <b>TRAJE AGUA VERDE INGENIERO</b><br>Traje de agua color verde tipo ingeniero (amortizable en un uso). Certificado CE. s/R.D. 773/97 y R.D. 1407/92. |              |
|  |    | Resto de obra y materiales .....   | 16,36        |
|  |    | <b>TOTAL PARTIDA.....</b>  | <b>16,36</b> |
| 01.04  | ud | <b>PAR DE BOTAS DE SEGURIDAD</b><br>Par de botas de seguridad con plantilla y puntera de acero. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.        |              |
|  |    | Resto de obra y materiales .....   | 8,72         |
|  |    | <b>TOTAL PARTIDA.....</b>  | <b>8,72</b>  |
| 01.05  | ud | <b>CINTURÓN PORTA-HERRAMIENTAS</b><br>Cinturón portaherramientas. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                                      |              |
|  |    | Resto de obra y materiales .....   | 5,10         |
|  |    | <b>TOTAL PARTIDA.....</b>  | <b>5,10</b>  |
| 01.06  | ud | <b>SEMI MASCAR. ANTIPOLVO 2 FILTROS</b><br>Semi-mascarilla antipolvo doble filtro. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                     |              |
|  |    | Resto de obra y materiales .....   | 12,10        |
|  |    | <b>TOTAL PARTIDA.....</b>  | <b>12,10</b> |
| 01.07  | ud | <b>JUEGO TAPONES ANTIRUIDO SILIC.</b><br>Juego de tapones antiruido de silicona ajustables. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.            |              |
|  |    | Resto de obra y materiales .....   | 0,44         |
|  |    | <b>TOTAL PARTIDA.....</b>  | <b>0,44</b>  |
| 01.08  | ud | <b>PAR GUANTES DE LONA</b><br>Par guantes de lona protección estándar. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                                 |              |
|  |    | Resto de obra y materiales .....   | 1,96         |
|  |    | <b>TOTAL PARTIDA.....</b>  | <b>1,96</b>  |
| 01.09  | ud | <b>PAR GUANTES DE LÁTEX-ANTIC.</b><br>Par guantes de goma látex-anticorte. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                             |              |
|  |    | Resto de obra y materiales .....   | 1,15         |

|       |    |   |              |
|-------|----|---|--------------|
|       |    | <b>TOTAL PARTIDA.....</b>   | <b>1,15</b>  |
| 01.10 | ud | <b>FAJA DE PROTECCIÓN LUMBAR</b><br>Faja protección lumbar. Certificado CE EN385. s/R.D. 773/97 y R.D. 1407/92.   |              |
|       |    | Resto de obra y materiales.....   | 5,33         |
|       |    | <b>TOTAL PARTIDA.....</b>   | <b>5,33</b>  |
| 01.11 | ud | <b>PANTALLA CONTRA PARTÍCULAS</b><br>Pantalla para protección contra partículas, con sujeción en cabeza. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.  |              |
|       |    | Resto de obra y materiales.....   | 1,01         |
|       |    | <b>TOTAL PARTIDA.....</b>   | <b>1,01</b>  |
| 01.12 | ud | <b>GAFAS CONTRA IMPACTOS</b><br>Gafas protectoras contra impactos, incoloras. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                             |              |
|       |    | Resto de obra y materiales.....   | 2,62         |
|       |    | <b>TOTAL PARTIDA.....</b>   | <b>2,62</b>  |
| 01.13 | ud | <b>CHALECO SALVAVIDAS</b><br>Chaleco salvavidas ergonómico (amortizable en un uso). Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                       |              |
|       |    | Resto de obra y materiales.....   | 16,36        |
|       |    | <b>TOTAL PARTIDA.....</b>   | <b>16,36</b> |
| 01.14 | ud | <b>PANTALLA SEGURIDAD SOLDADOR</b><br>Pantalla manual de seguridad para soldador, con fijación en cabeza. Certificado CE. s/R.D. 773/97 y R.D. 1407/92. |              |
|       |    | Resto de obra y materiales.....   | 2,31         |
|       |    | <b>TOTAL PARTIDA.....</b>   | <b>2,31</b>  |
| 01.15 | ud | <b>MANDIL CUERO PARA SOLDADOR</b><br>Mandil de cuero para soldador. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                                       |              |
|       |    | Resto de obra y materiales.....   | 3,48         |
|       |    | <b>TOTAL PARTIDA.....</b>   | <b>3,48</b>  |
| 01.16 | ud | <b>PAR DE POLAINAS SOLDADURA</b><br>Par de polainas para soldador. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.  |              |
|       |    | Resto de obra y materiales.....   | 2,04         |
|       |    | <b>TOTAL PARTIDA.....</b>   | <b>2,04</b>  |

| CÓDIGO                                     | UD  | RESUMEN  | PRECIO       |
|--|-----|--|--------------|
| <b>CAPÍTULO 02 PROTECCIONES COLECTIVAS</b> |     |  |              |
| 02.01                                      | mes | <b>ALQUILER CONTENEDOR ESCOMBRO</b><br>Mes de alquiler de contenedor para depositar escombros situado en la vía pública. |              |
|  |     | Resto de obra y materiales.....  | 47,52        |
|  |     | <b>TOTAL PARTIDA.....</b>  | <b>47,52</b> |





|       |   |                                  |              |
|-------|---|----------------------------------|--------------|
| 02.02 | <b>m2 MONTAJE ANDAMIO METALICO</b><br>Alquiler, montaje y desmontaje de andamio metálico de perfil europeo, formado por montantes, y arriostramientos de acero, incluso plataformas de trabajo de chapa, así como módulo con escalera, con zócalo y antepecho de protección contra caídas, con plataforma cerrada a nivel de planta baja y red perimetral para recogida de cascotes, incluso p.p. de arriostramientos a fachadas o muro de hormigón, y p.p. de medios auxiliares y trabajos previos de limpieza para apoyos. Según normativa CE y R.D. 2177/2004. |                                  |              |
|       |   | Mano de obra .....               | 3,98         |
|       |   | Resto de obra y materiales ..... | 10,91        |
|       |   | <b>TOTAL PARTIDA.....</b>        | <b>14,89</b> |
| 02.03 | <b>m VALLA FIJA GALVANIZADA</b><br>Vallado fijo de 2,00 m. de altura realizado con malla simple torsión galvanizada y postes de tubo de acero galvanizado i, p.p. de postes de esquina, jabalcones, tomapuntas, tensores, grupillas y accesorios, montada i/replanteo y recibido de postes con hormigón y posterior retirada al finalizar la obra.  |                                  |              |
|       |   | Mano de obra .....               | 3,14         |
|       |   | Resto de obra y materiales ..... | 12,27        |
|       |   | <b>TOTAL PARTIDA.....</b>        | <b>15,41</b> |
| 02.04 | <b>m BARANDILLA TUBO</b><br>Barandilla de protección: excavaciones, laterales del tablero y huecos s/ R.D. 486/97.  |                                  |              |
|       |   | Mano de obra .....               | 4,77         |
|       |   | Resto de obra y materiales ..... | 2,45         |
|       |   | <b>TOTAL PARTIDA.....</b>        | <b>7,22</b>  |
| 02.05 | <b>MI CINTA DE BALIZAMIENTO R/B</b><br>MI. Cinta corrida de balizamiento plástica pintada a dos colores roja y blanca, incluso colocación y desmontado.   |                                  |              |
|       |   | Mano de obra .....               | 1,44         |
|       |   | Resto de obra y materiales ..... | 0,42         |
|       |   | <b>TOTAL PARTIDA.....</b>        | <b>1,86</b>  |
| 02.06 | <b>ud PICTOGRAMAS</b><br>Pictogramas colocados a lo largo del vallado perimetral (rogamos disculpen las molestias, peligro, desprendimientos, prohibido el paso a toda persona ajena a la obra).  |                                  |              |
|       |   | Resto de obra y materiales ..... | 41,51        |
|       |   | <b>TOTAL PARTIDA.....</b>        | <b>41,51</b> |
| 02.07 | <b>ud PALETA MANUAL 2 CARAS STOP-OBL.</b><br>Señal de seguridad manual a dos caras: Stop-Dirección obligatoria, tipo paleta. s/R.D. 485/97.   |                                  |              |
|       |   | Resto de obra y materiales ..... | 11,72        |
|       |   | <b>TOTAL PARTIDA.....</b>        | <b>11,72</b> |
| 02.08 | <b>m MALLA POLIETILENO</b><br>Malla de polietileno alta densidad con tratamiento antiultravioleta, color naranja de 1 m. de altura, tipo stopper, i/colocación desmontaje, amortizado tres usos s/ R.D. 486/97.   |                                  |              |
|       |   | Mano de obra .....               | 0,78         |
|       |   | Resto de obra y materiales ..... | 0,20         |
|       |   | <b>TOTAL PARTIDA.....</b>        | <b>0,98</b>  |
| 02.09 | <b>ud SEÑAL NORMALIZADA TRAFICO</b><br>Señal normalizada de tráfico con soporte metálico incluso colocación.  |                                  |              |
|       |   | Resto de obra y materiales ..... | 16,59        |
|       |   | <b>TOTAL PARTIDA.....</b>        | <b>16,59</b> |

CÓDIGO UD RESUMEN PRECIO

**CAPÍTULO 03 INSTALACIONES HIGIENE Y BIENESTAR**

|       |  |                                 |               |
|-------|--|---------------------------------|---------------|
| 03.01 | <b>mes ALQUILER CASETA OFIC.+VEST.</b><br>Mes de alquiler (min. 05 meses) de caseta prefabricada para un despacho de oficina, vestuarios y un aseo con inodoro y lavabo. Estructura y cerramiento de chapa galvanizada pintada, aislamiento de poliestireno expandido autoextinguible, interior con tablero melaminado en color. Cubierta en arco de chapa galvanizada ondulada reforzada con perfil de acero; fibra de vidrio de 60 mm., interior con tablex lacado. Suelo de aglomerado revestido con PVC continuo de 2 mm., y poliestireno de 50 mm. con apoyo en base de chapa galvanizada de sección trapezoidal. Puerta de 0,8x2 m., de chapa galvanizada de 1 mm., reforzada y con poliestireno de 20 mm., picaporte y cerradura. Ventana aluminio anodizado corredera, contraventana de acero galvanizado. Instalación eléctrica 220 V., toma de tierra, automático, 2 fluorescentes de 40 W., enchufes para 1500 W. y punto luz exterior de 60 W. Con transporte a 150 km.(ida y vuelta). Entrega y recogida del módulo con camión grúa. Según R.D. 486/97. |                                 |               |
|       |  | Mano de obra.....               | 1,56          |
|       |  | Resto de obra y materiales..... | 151,29        |
|       |  | <b>TOTAL PARTIDA.....</b>       | <b>152,85</b> |

**CAPÍTULO 04 INSTALACIONES PROVISIONALES**

|       |  |                           |                 |
|-------|--|---------------------------|-----------------|
| 04.01 | <b>Ud INSTALACIONES PROVISIONALES</b><br>Precio de ejecución de todas las instalaciones provisionales necesarias para la correcta ejecución de la obra. Dentro de estas instalaciones provisionales se encuentran la acometida eléctrica, la acometida de fontanería, la acometida de saneamiento, la acometida de teléfono, además de toma de tierra y cuadro general y secundario de obra. |                           |                 |
|       |  | <b>TOTAL PARTIDA.....</b> | <b>1.500,00</b> |

CÓDIGO UD RESUMEN PRECIO

**CAPÍTULO 05 PROTECCION CONTRA INCENDIOS**

|       |   |                                 |              |
|-------|---|---------------------------------|--------------|
| 05.01 | <b>ud EXTINTOR CO2</b><br>Extintor de CO2 de 2 Kg, en oficinas de obra.                                 |                                 |              |
|       |   | Resto de obra y materiales..... | 90,32        |
|       |   | <b>TOTAL PARTIDA.....</b>       | <b>90,32</b> |
| 05.02 | <b>ud EXTINTOR POLIVALENTE</b><br>Extintor polivalente de 3.5 Kg situados en instalaciones de personal, |                                 |              |
|       |   | Resto de obra y materiales..... | 47,73        |
|       |   | <b>TOTAL PARTIDA.....</b>       | <b>47,73</b> |

CÓDIGO UD RESUMEN PRECIO

**CAPÍTULO S06 MEDICINA DEL TRABAJO**

|       |  |                                 |              |
|-------|--|---------------------------------|--------------|
| 06.01 | <b>ud RECONOCIMIENTO MÉDICO BÁSICO</b><br>Reconocimiento médico básico anual trabajador, compuesto por control visión, audiometría y analítica de sangre y orina con 6 parámetros. |                                 |              |
|       |  | Resto de obra y materiales..... | 84,41        |
|       |  | <b>TOTAL PARTIDA.....</b>       | <b>84,41</b> |



|       |   |                                  |               |
|-------|---|----------------------------------|---------------|
| 06.02 | ud <b>COSTO MENSUAL DE CONSERVACIÓN</b><br>Costo mensual de conservación de instalaciones provisionales de obra, considerando 2 horas a la semana un oficial de 2ª.   | Resto de obra y materiales ..... | 70,67         |
|       |   | <b>TOTAL PARTIDA.....</b>        | <b>70,67</b>  |
| 06.03 | ud <b>COSTO MENSUAL LIMPIEZA Y DESINF.</b><br>Costo mensual de limpieza y desinfección de casetas de obra, considerando dos horas a la semana un peón ordinario.  | Resto de obra y materiales ..... | 77,92         |
|       |   | <b>TOTAL PARTIDA.....</b>        | <b>77,92</b>  |
| 06.04 | ud <b>BOTIQUÍN DE URGENCIA</b><br>Botiquín de urgencia para obra fabricado en chapa de acero, pintado al horno con tratamiento anti-corrosivo y seigrafía de cruz. Color blanco, con contenidos mínimos obligatorios, colocado. | Mano de obra .....               | 2,34          |
|       |   | Resto de obra y materiales ..... | 105,95        |
|       |   | <b>TOTAL PARTIDA.....</b>        | <b>108,29</b> |
| 06.05 | ud <b>REPOSICIÓN BOTIQUÍN</b><br>Reposición de material de botiquín de urgencia.  | Resto de obra y materiales ..... | 60,27         |
|       |   | <b>TOTAL PARTIDA.....</b>        | <b>60,27</b>  |
| 06.06 | Ud <b>CAMILLA PORTATIL EVACUACIONES</b><br>Ud. Camilla portátil para evacuaciones, colocada. (20 usos)  | Resto de obra y materiales ..... | 6,98          |
|       |   | <b>TOTAL PARTIDA.....</b>        | <b>6,98</b>   |



#### 4. PRESUPUESTO

| CÓDIGO                                       | RESUMEN   | CANTIDAD | PRECIO | IMPORTE |
|--|---|----------|--------|---------|
| <b>CAPÍTULO 01 PROTECCIONES INDIVIDUALES</b> |   |          |        |         |
| 01.01  | <b>ud CASCO DE SEGURIDAD</b><br>Casco de seguridad con arnés de adaptación. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                               | 20,00    | 1,92   | 38,40   |
| 01.02  | <b>ud MONO DE TRABAJO POLIESTER-ALGODÓN</b><br>Mono de trabajo de una pieza de poliéster-algodón. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.         | 20,00    | 14,02  | 280,40  |
| 01.03  | <b>ud TRAJE AGUA VERDE INGENIERO</b><br>Traje de agua color verde tipo ingeniero (amortizable en un uso). Certificado CE. s/R.D. 773/97 y R.D. 1407/92. | 20,00    | 16,36  | 327,20  |
| 01.04  | <b>ud PAR DE BOTAS DE SEGURIDAD</b><br>Par de botas de seguridad con plantilla y puntera de acero. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.        | 20,00    | 8,72   | 174,40  |
| 01.05  | <b>ud CINTURÓN PORTA-HERRAMIENTAS</b><br>Cinturón portaherramientas. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                                      | 8,00     | 5,10   | 40,80   |
| 01.06  | <b>ud SEMI MASCAR. ANTIPOLVO 2 FILTROS</b><br>Semi-mascarilla antipolvo doble filtro. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                     | 20,00    | 12,10  | 242,00  |
| 01.07  | <b>ud JUEGO TAPONES ANTIRUIDO SILIC.</b><br>Juego de tapones antiruido de silicona ajustables. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.            | 20,00    | 0,44   | 8,80    |
| 01.08  | <b>ud PAR GUANTES DE LONA</b><br>Par guantes de lona protección estándar. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                                 | 20,00    | 1,96   | 39,20   |
| 01.09  | <b>ud PAR GUANTES DE LÁTEX-ANTIC.</b><br>Par guantes de goma látex-anticorte. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                             | 20,00    | 1,15   | 23,00   |

|  |  |       |       |                 |
|--|--|-------|-------|-----------------|
| 01.10  | <b>ud FAJA DE PROTECCIÓN LUMBAR</b><br>Faja protección lumbar. Certificado CE EN385. s/R.D. 773/97 y R.D. 1407/92.   | 20,00 | 5,33  | 106,60          |
| 01.11  | <b>ud PANTALLA CONTRA PARTÍCULAS</b><br>Pantalla para protección contra partículas, con sujeción en cabeza. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.  | 4,00  | 1,01  | 4,04            |
| 01.12  | <b>ud GAFAS CONTRA IMPACTOS</b><br>Gafas protectoras contra impactos, incoloras. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                             | 4,00  | 2,62  | 10,48           |
| 01.13  | <b>ud CHALECO SALVAVIDAS</b><br>Chaleco salvavidas ergonómico (amortizable en un uso). Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                       | 3,00  | 16,36 | 49,08           |
| 01.14  | <b>ud PANTALLA SEGURIDAD SOLDADOR</b><br>Pantalla manual de seguridad para soldador, con fijación en cabeza. Certificado CE. s/R.D. 773/97 y R.D. 1407/92. | 4,00  | 2,31  | 9,24            |
| 01.15  | <b>ud MANDIL CUERO PARA SOLDADOR</b><br>Mandil de cuero para soldador. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.                                       | 4,00  | 3,48  | 13,92           |
| 01.16  | <b>ud PAR DE POLAINAS SOLDADURA</b><br>Par de polainas para soldador. Certificado CE. s/R.D. 773/97 y R.D. 1407/92.  | 4,00  | 2,04  | 8,16            |
| <b>TOTAL CAPÍTULO 01 PROTECCIONES INDIVIDUALES .....</b> |  |       |       | <b>1.375,72</b> |

| CÓDIGO                                     | RESUMEN   | CANTIDAD | PRECIO | IMPORTE  |
|--|---|----------|--------|----------|
| <b>CAPÍTULO 02 PROTECCIONES COLECTIVAS</b> |   |          |        |          |
| 02.01                                      | <b>mes ALQUILER CONTENEDOR ESCOMBRO</b><br>Mes de alquiler de contenedor para depositar escombros situado en la vía pública.  | 9,00     | 47,52  | 427,68   |
| 02.02                                      | <b>m2 MONTAJE ANDAMIO METALICO</b><br>Alquiler, montaje y desmontaje de andamio metálico de perfil europeo, formado por montantes, y arriostamientos de acero, incluso plataformas de trabajo de chapa, así como módulo con escalera, con zócalo y antepecho de protección contra caídas, con plataforma cerrada a nivel de planta baja y red perimetral para recogida de cascos, incluso p.p. de arriostamientos a fachadas o muro de hormigón, y p.p. de medios auxiliares y trabajos previos de limpieza para apoyos. Según normativa CE y R.D. 2177/2004. | 100,00   | 14,89  | 1.489,00 |



| CÓDIGO   | RESUMEN   | CANTIDAD | PRECIO | IMPORTE         |
|--|---|----------|--------|-----------------|
| 02.03  | <b>m VALLA FIJA GALVANIZADA</b><br>Vallado fijo de 2,00 m. de altura realizado con malla simple torsión galvanizada y postes de tubo de acero galvanizado i, p.p. de postes de esquina, jabalcones, tornapuntas, tensores, grupillas y accesorios, montada i/replanteo y recibido de postes con hormigón y posterior retirada al finalizar la obra. |          |        |                 |
|  |   | 50,00    | 15,41  | 770,50          |
| 02.04  | <b>m BARANDILLA TUBO</b><br>Barandilla de protección: excavaciones, laterales del tablero y huecos s/ R.D. 486/97.  |          |        |                 |
|  |   | 200,00   | 7,22   | 1.444,00        |
| 02.05  | <b>MI CINTA DE BALIZAMIENTO R/B</b><br>MI. Cinta corrida de balizamiento plástica pintada a dos colores roja y blanca, incluso colocación y desmontado.   |          |        |                 |
|  |   | 200,00   | 1,86   | 372,00          |
| 02.06  | <b>ud PICTOGRAMAS</b><br>Pictogramas colocados a lo largo del vallado perimetral (rogamos disculpen las molestias, peligro, desprendimientos, prohibido el paso a toda persona ajena a la obra).  |          |        |                 |
|  |   | 2,00     | 41,51  | 83,02           |
| 02.07  | <b>ud PALETA MANUAL 2 CARAS STOP-OBL.</b><br>Señal de seguridad manual a dos caras: Stop-Dirección obligatoria, tipo paleta. s/R.D. 485/97.   |          |        |                 |
|  |   | 2,00     | 11,72  | 23,44           |
| 02.08  | <b>m MALLA POLIETILENO</b><br>Malla de polietileno alta densidad con tratamiento antiultravioleta, color naranja de 1 m. de altura, tipo stopper, i/colocación desmontaje, amortizado tres usos s/ R.D. 486/97.   |          |        |                 |
|  |   | 200,00   | 0,98   | 196,00          |
| 02.09  | <b>ud SEÑAL NORMALIZADA TRAFICO</b><br>Señal normalizada de tráfico con soporte metálico incluso colocación.  |          |        |                 |
|  |   | 4,00     | 16,59  | 66,36           |
| <b>TOTAL CAPÍTULO 02 PROTECCIONES COLECTIVAS</b> |   |          |        | <b>4.872,00</b> |

| CÓDIGO   | RESUMEN  | CANTIDAD | PRECIO | IMPORTE         |
|--|--|----------|--------|-----------------|
| <b>CAPÍTULO 03 INSTALACIONES HIGIENE Y BIENESTAR</b>       |  |          |        |                 |
| 03.01  | <b>mes ALQUILER CASETA OFIC.+VEST.</b><br>Mes de alquiler (min. 05 meses) de caseta prefabricada para un despacho de oficina, vestuarios y un aseo con inodoro y lavabo. Estructura y cerramiento de chapa galvanizada pintada, aislamiento de poliestireno expandido autoextinguible, interior con tablero melaminado en color. Cubierta en arco de chapa galvanizada ondulada reforzada con perfil de acero; fibra de vidrio de 60 mm., interior con tablex lacado. Suelo de aglomerado revestido con PVC continuo de 2 mm., y poliestireno de 50 mm. con apoyo en base de chapa galvanizada de sección trapezoidal. Puerta de 0,8x2 m., de chapa galvanizada de 1 mm., reforzada y con poliestireno de 20 mm., picaporte y cerradura. Ventana aluminio anodizado corredera, contraventana de acero galvanizado. Instalación eléctrica 220 V., toma de tierra, automático, 2 fluorescentes de 40 W., enchufes para 1500 W. y punto luz exterior de 60 W. Con transporte a 150 km.(ida y vuelta). Entrega y recogida del módulo con camión grúa. Según R.D. 486/97. |          |        |                 |
|  |  | 9,00     | 152,85 | 1.375,65        |
| <b>TOTAL CAPÍTULO 03 INSTALACIONES HIGIENE Y BIENESTAR</b> |  |          |        | <b>1.375,65</b> |

| CÓDIGO   | RESUMEN  | CANTIDAD | PRECIO   | IMPORTE         |
|--|--|----------|----------|-----------------|
| <b>CAPÍTULO 04 INSTALACIONES PROVISIONALES</b>       |  |          |          |                 |
| 04.01  | <b>Ud INSTALACIONES PROVISIONALES</b><br>Precio de ejecución de todas las instalaciones provisionales necesarias para la correcta ejecución de la obra. Dentro de estas instalaciones provisionales se encuentran la acometida eléctrica, la acometida de fontanería, la acometida de saneamiento, la acometida de teléfono, además de toma de tierra y cuadro general y secundario de obra. |          |          |                 |
|  |  | 1,00     | 1.500,00 | 1.500,00        |
| <b>TOTAL CAPÍTULO 04 INSTALACIONES PROVISIONALES</b> |  |          |          | <b>1.500,00</b> |

| CÓDIGO   | RESUMEN   | CANTIDAD | PRECIO | IMPORTE       |
|--|---|----------|--------|---------------|
| <b>CAPÍTULO 05 PROTECCION CONTRA INCENDIOS</b>             |   |          |        |               |
| 05.01  | <b>ud EXTINTOR CO2</b><br>Extintor de CO2 de 2 Kg, en oficinas de obra.                                 |          |        |               |
|  |   | 3,00     | 90,32  | 270,96        |
| 05.02  | <b>ud EXTINTOR POLIVALENTE</b><br>Extintor polivalente de 3.5 Kg situados en instalaciones de personal, |          |        |               |
|  |   | 3,00     | 47,73  | 143,19        |
| <b>TOTAL CAPÍTULO 05 PROTECCION CONTRA INCENDIOS .....</b> |   |          |        | <b>414,15</b> |



| CÓDIGO  | RESUMEN  | CANTIDAD | PRECIO | IMPORTE         |
|---|--|----------|--------|-----------------|
| <b>CAPÍTULO 06 MEDICINA DEL TRABAJO</b>             |  |          |        |                 |
| 06.01   | <b>ud RECONOCIMIENTO MÉDICO BÁSICO</b><br>Reconocimiento médico básico anual trabajador, compuesto por control visión, audiometría y analítica de sangre y orina con 6 parámetros.   |          |        |                 |
|   |  | 15,00    | 84,41  | 1.266,15        |
| 06.02   | <b>ud COSTO MENSUAL DE CONSERVACIÓN</b><br>Costo mensual de conservación de instalaciones provisionales de obra, considerando 2 horas a la semana un oficial de 2ª.  |          |        |                 |
|   |  | 9,00     | 70,67  | 636,03          |
| 06.03   | <b>ud COSTO MENSUAL LIMPIEZA Y DESINF.</b><br>Costo mensual de limpieza y desinfección de casetas de obra, considerando dos horas a la semana un peón ordinario.   |          |        |                 |
|   |  | 9,00     | 77,92  | 701,28          |
| 06.04   | <b>ud BOTIQUÍN DE URGENCIA</b><br>Botiquín de urgencia para obra fabricado en chapa de acero, pintado al horno con tratamiento anticorrosivo y seigrafía de cruz. Color blanco, con contenidos mínimos obligatorios, colocado. |          |        |                 |
|   |  | 2,00     | 108,29 | 216,58          |
| 06.05   | <b>ud REPOSICIÓN BOTIQUÍN</b><br>Reposición de material de botiquín de urgencia.   |          |        |                 |
|   |  | 2,00     | 60,27  | 120,54          |
| 06.06   | <b>Ud CAMILLA PORTATIL EVACUACIONES</b><br>Ud. Camilla portátil para evacuaciones, colocada. (20 usos)   |          |        |                 |
|   |  | 3,00     | 6,98   | 20,94           |
| <b>TOTAL CAPÍTULO 06 MEDICINA DEL TRABAJO .....</b> |  |          |        | <b>2.961,52</b> |



Burgos, Febrero de 2.012

**5. RESUMEN DE PRESUPUESTO**

| CAPITULO                        | RESUMEN                                 | EUROS                | %     |
|---------------------------------|---|----------------------|-------|
| 1                               | PROTECCIONES INDIVIDUALES.....          | 1.375,72             | 11,01 |
| 2                               | PROTECCIONES COLECTIVAS .....           | 4.872,00             | 38,98 |
| 3                               | INSTALACIONES HIGIENE Y BIENESTAR ..... | 1.375,65             | 11,01 |
| 4                               | INSTALACIONES PROVISIONALES.....        | 1.500,00             | 12,00 |
| 5                               | PROTECCION CONTRA INCENDIOS .....       | 414,15               | 3,31  |
| 6                               | MEDICINA DEL TRABAJO .....              | 2.961,52             | 23,69 |
| <b>TOTAL EJECUCIÓN MATERIAL</b> |   | <b>12.499,04 €</b>   |       |
|                                 |   | <b>374971.20 C\$</b> |       |
|                                 |   | <b>17044.15 \$</b>   |       |

AUTORES DEL PROYECTO

D. Sergio Agustín Ratón Alomar

Dña. Miriam Sacristán Terradillos

Asciende el presupuesto base de licitación a la expresada cantidad de:

- DOCEMIL CUATROCIENTOS NOVENTA Y NUEVE EUROS CON CUATRO CÉNTIMOS.
- TRESCIENTOS SETANTA Y CUATRO MIL NOVECIENTOS SETENTA Y UN CÓRDOBAS CON VEINTE CENTAVOS.
- DIECISIETE MIL CUARENTA Y CUATRO DÓLARES CON QUINCE CENTAVOS.

Dña. Raquel Estrada Merino

D. Alfonso Cid González



# **ANEJO Nº15**

## **CONTROL DE CALIDAD**







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## 1. INTRODUCCIÓN

Se desarrolla en el presente Anejo el PROGRAMA DE CONTROL DE CALIDAD Y GEOMÉTRICO de las obras que se deben realizar en el presente proyecto.

En este programa se incluye el control de calidad de materiales previstos en la obra y las medidas necesarias para hacer efectivo el control de calidad de ejecución y el control geométrico de la obra. Además, contiene las actuaciones previstas como obligatorias en las normativas, instrucciones y reglamentos de nivel nacional.

Como dato de partida, suponemos que el contratista adjudicatario de las obras, estará obligado a la ejecución de un autocontrol de cotas, tolerancias y geometría en general, así como de la calidad de los materiales, mediante ensayos de laboratorio, tales como densidades de compactación, etc.

Mediante este autocontrol se garantizará que no se presente a la Administración ninguna unidad de obra como ejecutada sin que el contratista haya hecho sus propias comprobaciones y ensayos para asegurar que el material cumple las especificaciones indicadas en el Pliego de Prescripciones.

Para ello, el Contratista dispondrá en obra de los equipos necesarios y suficientes (laboratorio con sus instalaciones y aparatos adecuados), como medios humanos capacitados para los mencionados ensayos.

La Dirección de Obra deberá dar la expresa conformidad a la empresa debidamente acreditada que el Contratista proponga para llevar a cabo el plan de control de calidad.

A continuación se da una relación valorada de los ensayos a realizar, como mínimo, para la ejecución de las obras definidas en el presente Proyecto. Dicha relación ha sido elaborada en base a la normativa ASTM



## 2. RELACIÓN VALORADA DE ENSAYOS

En los precios de los ensayos que se relacionan a continuación se incluye un 6% correspondiente a los costes indirectos, es decir, se trata de precios de ejecución material.

### 2.1. HORMIGONES.

Se consideran hormigones fabricados en central, poseedores de Sello de Calidad oficialmente reconocido. El contratista sólo realizará ensayos en el lugar de empleo. Según se ha comentado en anteriores apartados del presente proyecto, el control del hormigón se realizará a nivel estadístico, lo que nos marcará la definición de los lotes y el número de amasadas a controlar. Los lotes serán de 100 m<sup>3</sup>, controlando en cada uno de ellos seis amasadas.

|   |                |
|---|----------------|
| En lugar de empleo:   | <b>Córdoba</b> |
| <i>Hormigón; puesta en obra: Por cada 100 m<sup>3</sup> de hormigón se realizarán los siguientes:</i>   |                |
| Un (1) Ensayo Granulométrico (ASTM E-11), a 462.3 córdobas (50 % de los lotes)  | 462.3          |
| Seis (6) Ensayos de Determinación de consistencia por el Método Cono de Abrahms (ASTM C-143 / AASHTO T-23) a 991.2 córdobas a probetas que se fabriquen para controlar la resistencia   | 5947.2         |
| Ensayo característico del hormigón, incluyendo la realización de 4 series de 5 probetas cilíndricas de 15 X 30 cm. procedentes de seis amasadas distintas. conservación, refrentado y rotura de las probetas y emisión del informe correspondiente, según ASTM C-469. | 11470.2        |

### 2.2. ACERO PARA ARMADURAS PASIVAS

El acero a emplear en la obra deberá poseer distintivo reconocido.

|   |                |
|---|----------------|
| En lugar de empleo:   | <b>Córdoba</b> |
| <i>Por cada 40 t o fracción se realizarán los siguientes ensayos:</i>   |                |
| Límite elástico convencional Carga máxima Alargamiento de rotura Sección equivalente Características geométricas Resaltos Doblado simple a 180 ° Doblado/desdoblado El precio total del ensayo será de 4092.6 córdobas. | 4092.6         |

### 2.3. EXCAVACIÓN DE LA EXPLANACIÓN

El objeto de este control de calidad, es el de comprobar que el terreno que aparece en los taludes, después de terminada la excavación conserva sus características naturales, y que en dichos taludes no se presentan defectos, ni se realizan operaciones que comprometan su estabilidad.

Así, se realizarán los ensayos que a continuación se enumeran:

|  |                |
|--|----------------|
| Excavaciones en tierra :   | <b>Córdoba</b> |
| <i>Por cada dos mil quinientos metros cuadrados de zona marcada, en Proyecto (2.500 m<sup>2</sup>), con las mismas características :</i> |                |
| Dos (2) Equivalentes de Arena (NLT-113/58), a 450.9 córdobas   | 901.8          |
| Un (1) Ensayo Proctor Modificado (NLT-108/58), a 1713 córdobas   | 1713           |



|  |               |
|--|---------------|
| <i>Por cada cinco mil metros cuadrados de zona marcada, en Proyecto (5.000 m<sup>2</sup>), con las mismas características :</i>              |               |
| Un (1) Granulométrico, a 720.6 córdobas  | 720.6         |
| Un (1) Determinación de los límites de Atterberg a 720.6 córdobas  | 720.6         |
| <i>Por cada lote de material de un mismo tipo excavado que aparece en 5.000 m<sup>2</sup>, o fracción diaria excavada si ésta es menor :</i> |               |
| Cinco (5) determinación de la densidad y humedad "in situ", por el método de isótopos radioactivos a 540.9 córdobas                          | <b>2704.5</b> |
| <i>Por cada diez mil metros cuadrados de zona marcada, en Proyecto (10.000 m<sup>2</sup>), con las mismas características :</i>              |               |
| Un (1) CBR de laboratorio, según NLT-111 a 2794.8 córdobas   | 2794.8        |

#### 2.4. RELLENOS

Las materias objeto de control en esta unidad de obra serán las siguientes:

- Materiales que la constituyen.
- Extensión.
- Compactación.
- Geometría.

Se trata de comprobar que el material a utilizar cumple con todas las prescripciones establecidas en el P.P.T.P., tanto en el lugar de origen como en el lugar de empleo para evitar cualquier alteración que pudiera producirse como consecuencia de las operaciones de excavación, carga, transporte y descarga.

Así, se realizarán los ensayos que a continuación se enumeran:

|   |          |
|---|----------|
| En lugar de procedencia :   | Córdobas |
| <i>Por cada mil metros cúbicos de material (1.000 m<sup>3</sup>) se realizarán :</i>                                |          |
| Un (1) Ensayo Proctor Modificado (NLT-108/58), a 2279.1 córdobas  | 2279.1   |
| <i>Por cada cinco mil metros cúbicos de material (5.000 m<sup>3</sup>) :</i>  |          |
| Un (1) Granulométrico, a 900 córdobas   | 900      |
| Un (1) Determinación de los límites de Atterberg a 927 córdobas   | 927      |
| <i>Por cada diez mil metros cúbicos de material (10.000 m<sup>3</sup>) :</i>  |          |
| Un (1) CBR de laboratorio, según NLT-111 a 4045.2 córdobas  | 4045.2   |
| En lugar de empleo, durante su compactación :   | Córdobas |
| <i>Por cada cinco mil metros cúbicos (5.000 m<sup>3</sup>) de tongada :</i>   |          |
| Cinco (5) determinación de la densidad y humedad "in situ", por el método de isótopos radioactivos a 778.2 córdobas | 3891     |



### 3. VALORACIÓN DE LOS ENSAYOS

#### 3.1. HORMIGONES

Mediciones:

|   |         |
|---|---------|
| Hormigón en Masa de 3000 PSI de consistencia Plástica, con un tamaño máximo de árido de 25mm.                   | 75.15   |
| Hormigón Armado de 4500 PSI de consistencia Plástica, con un tamaño máximo de árido de 20mm, en un ambiente C1. | 3849.60 |

Valoración:

|   | Precio / Ud. | Nº Ensayos | Córdobas |
|---|--------------|------------|----------|
| En lugar de empleo  |              |            |          |
| 1 Ensayo Granulométrico (NLT-150/63)  | 462.30       | 50         | 23115    |
| 6 Ensayos de Determinación de consistencia por el Método Cono de Abrahms (UNE 7103) / 100 m3  | 5947.20      | 50         | 297360   |
| 1 Ensayo característico del hormigón, incluyendo la realización de 6 series de 5 probetas cilíndricas de 15 X 30 cm. según UNE-83.301 / 100 m3 (para cada tipo de hormigón) | 11467.20     | 50         | 573360   |
| TOTAL   |              | 893835     |          |

#### 3.2. ACERO PARA ARMADURAS PASIVAS

Medición:

|                    |               |
|--------------------|---------------|
| Material necesario | 766654.90 lbs |
|--------------------|---------------|

Valoración:

|                        | Precio / Ud. | Nº Ensayos | Córdobas |
|------------------------|--------------|------------|----------|
| Ensayo completo/ 40 t: | 4092.60      | 9          | 36833.40 |
| TOTAL                  |              |            | 36833.40 |



### 3.3.- EXCAVACIÓN

Medición:

|                           |                        |
|---------------------------|------------------------|
| Superficie de explanación | 2847.23 m <sup>2</sup> |
| Longitud de explanada     | 132.91m                |

Valoración:

|   | Precio/Ud. | Nº Ensayos Total | Córdobas |
|---|------------|------------------|----------|
| 2 Equivalentes de Arena / 2.500 m2  | 901.80     | 4                | 3607.20  |
| 1 Proctor Modificado / 2.500 m2   | 1713.00    | 2                | 3426.00  |
| 1 Granulométrico / 5.000 m2   | 720.60     | 1                | 720.60   |
| 1 D. Limites de Atterberg / 5.000 m2  | 720.60     | 1                | 720.60   |
| 5 determinación de la densidad y humedad "in situ", por el método de isótopos radioactivos / 5.000 m2 | 2704.50    | 5                | 13522.50 |
| 1 CBR / 10.000 m2   | 2794.80    | 1                | 2794.80  |
|   |            | TOTAL            | 24791.70 |

### 3.5.- RELLENOS

Medición:

|                    |             |
|--------------------|-------------|
| Material necesario | 12569.94 m3 |
|--------------------|-------------|

Valoración:

|   | Precio/ud | Nº    | Córdobas |
|---|-----------|-------|----------|
| 1 Proctor / 1.000 m3  | 2279.10   | 13    | 29628.30 |
| 1 Granulométrico / 5.000 m3   | 900.00    | 3     | 2700,00  |
| 1 D. Limites de Atterberg / 5.000 m3  | 927.00    | 3     | 2781.00  |
| 1 CBR / 10.000 m3   | 4195.20   | 2     | 8390.40  |
| 5 determinación de la densidad y humedad "in situ", por el método de isótopos radioactivos /5000 m3 | 3891.00   | 3     | 11673.00 |
|   |           | TOTAL | 55172.70 |



#### 4. RESUMEN DE LA VALORACIÓN DE LOS ENSAYOS

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|              | Córdoba           |
|--------------|-------------------|
| Hormigón     | 893835.00         |
| Acero pasivo | 36833.40          |
| Excavación   | 24791.7           |
| Rellenos     | 55172.7           |
| <b>TOTAL</b> | <b>1010632.80</b> |

La valoración de los ensayos a realizar en la admisión de materiales y de control durante la ejecución de las obras asciende a la cantidad de:

**Un millón diez mil seiscientos treinta y dos con ochenta Córdoba**

Esta cantidad corresponde al 1,26% del presupuesto de ejecución material, por lo que se considera lo suficientemente significativo como para incluirlo en una partida independiente dentro del presupuesto.





# **ANEJO Nº 16**

## **JUSTIFICACIÓN DE PRECIOS**





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## 1. INTRODUCCIÓN

El objeto del presente anejo es el de detallar la procedencia de los distintos precios empleados en el documento "Presupuesto".

Para los precios se ha empleado:

- La guía de costos del Nuevo FISE.

Para la correcta utilización de la misma hay que tener en consideración que los costos reflejados en ella se encuentran a nivel de costos directos, con referencia a la ciudad de Managua y se deben considerar como costos directos estimados.

## 2. VARIABLES A CONSIDERAR PARA TRASLADAR A PRECIOS DE VENTA

### 2.1. FACTOR TRANSPORTE

Los costos directos de los catálogos no incluyen ningún tipo de transporte, por el que se debe estimar el monto por transportar los distintos materiales y/o equipo al sitio del proyecto.

Para ello es preciso usar un factor, el cual es específico para cada proyecto, donde se consideran las variables que intervienen en el costo de transporte, así como: distancia, tiempo, volumen a transportar y el grado de dificultad para acceder al sitio del proyecto.

A continuación se muestra la tabla con las diferentes cabeceras municipales de la Región Central Norte:

FACTORES ESTIMADOS DE TRANSPORTE A LAS CABECERAS MUNICIPALES

| DEPARTAMENTO | MUNICIPIOS POR DEPARTAMENTO | CABECERA MUNICIPAL | DISTANCIA DESDE MANAGUA (Km) | GRADO DE DIFICULTAD DE ACCESO | FACTOR DE TRANSPORTE |        |
|--------------|-----------------------------|--------------------|------------------------------|-------------------------------|----------------------|--------|
| MATAGALPA    | 1                           | San Isidro         | San Isidro                   | 118                           | 1                    | 1.1822 |
|              | 2                           | Sébaco             | Sébaco                       | 103                           | 1                    | 1.0725 |
|              | 3                           | Ciudad Darío       | Ciudad Darío                 | 89                            | 1                    | 1.0711 |
|              | 4                           | Terrabona          | Terrabona                    | 110                           | 2                    | 1.2613 |
|              | 5                           | San Dionisio       | San Dionisio                 | 122                           | 2                    | 1.2892 |
|              | 6                           | Esquipulas         | Esquipulas                   | 108                           | 1                    | 1.1553 |
|              | 7                           | Muy Muy            | Muy Muy                      | 132                           | 1                    | 1.1742 |
|              | 8                           | Matagalpa          | Matagalpa                    | 127                           | 1                    | 1.1681 |
|              | 9                           | San Ramón          | San Ramón                    | 137                           | 1                    | 1.1966 |
|              | 10                          | El Tuma-La Dalia   | La Dalia                     | 168                           | 1                    | 1.2431 |
|              | 11                          | Rancho Grande      | Rancho Grande                | 203                           | 1                    | 1.2355 |
|              | 12                          | Matiguás           | Matiguás                     | 156                           | 1                    | 1.1732 |
|              | 13                          | Río Blanco         | Río Blanco                   | 188                           | 1                    | 1.1832 |

### 2.2. COSTOS INDIRECTOS, ADMINISTRACIÓN, IMPREVISTOS Y UTILIDAD

En la estimación de los precios de venta, se debe hacer el correspondiente cálculo de los costes indirectos, costos por administración, márgenes de utilidad e imprevistos a fin de determinar el factor de sobre costo a aplicarse a los costos directos del proyecto.

Seguidamente se muestra la tabla con los factores de venta estimados por modalidad de gestión y tipo de proyecto:



| MODALIDAD DE GESTIÓN | TIPO DE PROYECTO   | FACTOR DE VENTA |
|----------------------|--|-----------------|
| NORMAL               | Obras verticales (mayor complejidad)                               | 1.25            |
|                      | Obras verticales (menor complejidad)                               | 1.30            |
|                      | Obras horizontales (mayor complejidad)                             | 1.23            |
|                      | Obras horizontales (menor complejidad)                             | 1.25            |
|                      | Agua potable y Saneamiento rural ( $\leq$ US\$ 50,000)             | 1.30            |
|                      | Agua potable y Saneamiento rural (US\$ 50,001 < x $\leq$ 150,000)  | 1.27            |
|                      | Agua potable y Saneamiento rural (US\$ 150,001 < x $\leq$ 600,000) | 1.25            |
|                      | Letrinas   | 1.22            |
|                      | Canchas deportivas   | 1.30            |
|                      | Paneles solares  | 1.15            |

En el presente proyecto la modalidad de gestión es normal, y el tipo de proyecto es una obra horizontal de mayor complejidad, por lo que tomamos un factor de venta de 1.23.

### 2.3. PORCENTAJE POR DESLIZAMIENTO DE LA MONEDA

Es el porcentaje que hay que aplicar a los valores de los precios de la guía de costos del FISE, para conocer el valor real de las cosas en el momento de ejecución de las obras.

Este porcentaje, va cambiando con el tiempo, debido a los cambios de valor que sufre la moneda.

El último dato que se ha conseguido, es el correspondiente a marzo de 2011, y dicho valor es del 63%, por lo que para obtener el valor real en éste momento habría que multiplicarlo por 1.63.



# **ANEJO Nº 17**

## **PLAN DE OBRA**







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## 1. INTRODUCCIÓN

---

El presente anejo desarrolla el análisis de la ejecución de los trabajos que comprende el proyecto. El desarrollo de dicho análisis es el Plan de Obra, cuyo objeto es la comprobación de la viabilidad de los trabajos y los plazos propuestos.

En el mismo, se incluye la descripción del desarrollo de los trabajos, con el estudio de los diferentes tajos y tramos en que se divide la obra, para mostrar la relación y dependencia entre los mismos, de cuyo análisis se deriva la necesidad de simultanear los trabajos o desfasar alguno de ellos.

## 2. OBJETIVOS

---

La programación de la obra se ha realizado en base a la consecución de los siguientes objetivos:

- garantizar la viabilidad de la misma desde el punto de vista técnico.
- evitar, al máximo posible, las interferencias que la ejecución de las obras imponen para el tráfico existente en la zona por la entrada y salida de camiones desde la margen del río hasta las vías existentes en el tramo.
- adelantar, dentro de lo posible, la ejecución de los tajos de mayor dificultad, con el fin de evitar retrasos en la finalización de las obras por posibles complicaciones en los mismos.
- lograr la utilización óptima de los recursos de mano de obra, maquinaria y materiales evitando en lo posible, puntas de trabajo con el objeto de lograr una alta rentabilidad económica.

Del análisis del Plan de Obra se deducen cuales son las actividades más críticas, a las cuales se deberá dedicar una mayor atención durante la ejecución de los trabajos para evitar que, debido a causas no previstas, se originen retrasos o paralizaciones en otros tajos a los cuales condicionan, lo que supondría una alteración importante tanto en los costos como en los plazos estimados.



### **3. PLAZO TOTAL DE LOS TRABAJOS**

---

De acuerdo con la programación realizada, el Plan de Ejecución de las Obras del presente Proyecto prevé un plazo de NUEVE MESES (9) meses, contados desde la firma del acta de replanteo, para su completa ejecución.

Las obras propuestas se han programado considerando los equipos disponibles y los rendimientos de trabajo de Nicaragua, se han usado para ello información procedente de otros proyectos. Las obras comenzarán con la preparación del terreno colindante a la zona de actuación para los acopios de material y estacionamiento de maquinaria pesada. La siguiente fase consistirá en realizar el encauzamiento del río para así poder proceder a trabajar en la zona con mayor facilidad y con la seguridad requerida. Preparado el terreno, se realizará la sub-estructura del puente, es decir, la cimentación de todas las pilas y los estribos. La siguiente fase consiste en la ejecución de las propias pilas, pilas inclinadas y del tablero de hormigón armado, incluyéndose en esta fase la realización del pavimento, también de hormigón armado. Las últimas fases antes de la finalización de la obra son las obras de drenaje y la señalización (horizontal y vertical). Por último, se procederá a la demolición y retirada de los restos del antiguo puente, de las cimentaciones de las cimbras y las obras de encauzamiento del río. El control de calidad se realizará de forma periódica, y las medidas de prevención y mitigación de accidentes se aplicarán en todo el tiempo que dure la obra.



#### 4. DIAGRAMA DE BARRAS

| ACTIVIDADES   | DIAGRAMA DE BARRAS VALORADO. PROYECTO DE PUENTE EN EL PASO DE BOPAL SOBRE EL RÍO GRANDE DE MATAGALPA (NICARAGUA). |                   |                   |                   |                   |                   |                   |                   |                   | % s/PE            | IMPORTE |                   |
|---|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|---------|-------------------|
|   | Mes 1   | Mes 2             | Mes 3             | Mes 4             | Mes 5             | Mes 6             | Mes 7             | Mes 8             | Mes 9             |                   |         |                   |
| 1.- PRELIMINARES  | C\$ 4.971.995,61  |                   |                   |                   |                   |                   |                   |                   |                   |                   | 6,10%   | C\$ 4.971.995,61  |
| 2.- MOVIMIENTO DE TIERRAS (APROCHES) meter desvío río               | C\$ 16.506.515,39   |                   |                   |                   |                   |                   |                   |                   |                   |                   | 20,26%  | C\$ 16.506.515,39 |
| 3.- SUBESTRUCTURA PARA PUENTE (CIMENTACIÓN)                         | C\$ 6.772.657,61  | C\$ 5.970.614,84  |                   | C\$ 802.042,77    |                   |                   |                   |                   |                   |                   | 16,63%  | C\$ 13.545.315,22 |
| 3.1.- CIMENTACIÓN DE PILAS  | C\$ 5.970.614,84  | C\$ 5.970.614,84  |                   |                   |                   |                   |                   |                   |                   |                   | 14,66%  | C\$ 11.941.229,68 |
| 3.2.- ESTRIBOS  | C\$ 802.042,77  |                   |                   | C\$ 802.042,77    |                   |                   |                   |                   |                   |                   | 1,97%   | C\$ 1.604.085,54  |
| 4.- SUPERESTRUCTURA PARA PUENTE (PILAS, PILAS INCLINADAS Y TABLERO) |   | C\$ 2.341.974,52  | C\$ 2.941.670,97  | C\$ 3.130.724,63  | C\$ 9.038.342,36  | C\$ 9.038.342,36  | C\$ 9.038.342,36  | C\$ 9.038.342,36  |                   |                   | 54,71%  | C\$ 44.567.739,56 |
| 4.1.- PILAS   |   | C\$ 542.885,17    | C\$ 542.885,17    | C\$ 271.442,59    |                   |                   |                   |                   |                   |                   | 1,67%   | C\$ 1.357.212,93  |
| 4.2.- PILAS INCLINADAS  |   | C\$ 1.799.089,35  | C\$ 2.398.785,80  | C\$ 599.696,45    |                   |                   |                   |                   |                   |                   | 5,89%   | C\$ 4.797.571,60  |
| 4.3.- TABLERO   |   |                   |                   | C\$ 2.259.585,59  | C\$ 9.038.342,36  | C\$ 9.038.342,36  | C\$ 9.038.342,36  | C\$ 9.038.342,36  |                   |                   | 47,16%  | C\$ 38.412.955,03 |
| 5.- SEÑALIZACIÓN HORIZONTAL Y VERTICAL                              |   |                   |                   |                   |                   |                   |                   | C\$ 19.256,47     |                   |                   | 0,02%   | C\$ 19.256,47     |
| 6.- PRUEBA DE CARGA   |   |                   |                   |                   |                   |                   |                   |                   | C\$ 72.498,65     |                   | 0,09%   | C\$ 72.498,65     |
| 7.- CONTROL DE CALIDAD  | C\$ 112.292,53  | C\$ 112.292,53    | C\$ 112.292,53    | C\$ 112.292,53    | C\$ 112.292,53    | C\$ 112.292,53    | C\$ 112.292,53    | C\$ 112.292,53    | C\$ 112.292,53    |                   | 1,24%   | C\$ 1.010.632,80  |
| 8.- MEDIDAS DE MITIGACIÓN Y PREVENCIÓN DE ACCIDENTES                | C\$ 41.663,47   | C\$ 41.663,47     | C\$ 41.663,47     | C\$ 41.663,47     | C\$ 41.663,47     | C\$ 41.663,47     | C\$ 41.663,47     | C\$ 41.663,47     | C\$ 41.663,47     |                   | 0,46%   | C\$ 374.971,20    |
| 9.-DEMOLICIÓN   |   |                   |                   |                   |                   |                   |                   |                   | 390.712,78 €      |                   | 0,48%   | C\$ 390.712,78    |
| CERTIFICACIÓN %   | MENSUAL   | 34,87%            | 10,39%            | 3,80%             | 5,02%             | 11,28%            | 11,28%            | 11,28%            | 11,31%            | 0,76%             | 100,00% | C\$ 81.459.637,68 |
|   | A ORIGEN  | 34,87%            | 45,26%            | 49,06%            | 54,08%            | 65,37%            | 76,65%            | 87,93%            | 99,24%            | 100,00%           |         |                   |
| CERTIFICACIÓN PE  | MENSUAL   | C\$ 28.405.124,61 | C\$ 8.466.545,36  | C\$ 3.095.626,97  | C\$ 4.086.723,40  | C\$ 9.192.298,36  | C\$ 9.192.298,36  | C\$ 9.192.298,36  | C\$ 9.211.554,83  | C\$ 617.167,43    |         |                   |
|   | A ORIGEN  | C\$ 28.405.124,61 | C\$ 36.871.669,97 | C\$ 39.967.296,94 | C\$ 44.054.020,34 | C\$ 53.246.318,70 | C\$ 62.438.617,06 | C\$ 71.630.915,42 | C\$ 80.842.470,25 | C\$ 81.459.637,68 |         |                   |



# **ANEJO Nº 18**

## **ESTUDIO FOTOGRÁFICO**





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## 1. INTRODUCCIÓN

El cometido de este anejo es dar una visión de la zona donde se va a ubicar el proyecto y de la situación actual de la misma, para ello nos valemos de diversas fotografías tomadas en campo.

## 2. REPORTAJE FOTOGRÁFICO

### 2.1. FOTOGRAFÍAS DEL EMPLAZAMIENTO



Vista desde la ubicación del proyecto hacia aguas arriba.



Vista desde la ubicación del proyecto hacia aguas abajo.



Emplazamiento propuesto



Vista desde la margen derecha del rio.

## 2.2. FOTOGRAFÍAS DE LAS PERFORACIONES

### 2.2.1. SONDEO N°1



### 2.2.3. SONDEO N°3



### 2.2.2. SONDEO N°2



### 2.2.4. SONDEO N°4



### 2.3. FOTOGRAFÍAS DE LOS RESTOS DEL PUENTE ANTERIOR



Fotografía del estribo de la margen de San Dionisio, el huracán Mitch lo dejó prácticamente intacto.



Restos de una parte de tablero de la margen de San Dionisio.



Fotografía del estribo y parte del tablero de la margen de Esquipulas.



Restos de cordones de postesado de anterior puente.



Estribo derecho del anterior puente (margen de Esquipulas)



Restos del tablero y de las obras de protección de estribos del anterior puente.

2.4. FOTOGRAFÍAS DEL PUENTE VADO



Motocicleta atravesando el puente vado.



Vista completa del puente vado.



Autobús cruzando el puente vado camino a Esquipulas.



Toma de datos desde el puente vado.



Vista de la crecida desde el lado de Esquipulas.



Estribo de la margen derecha socavado tras la crecida.



Puente vado rebosado por la crecida.



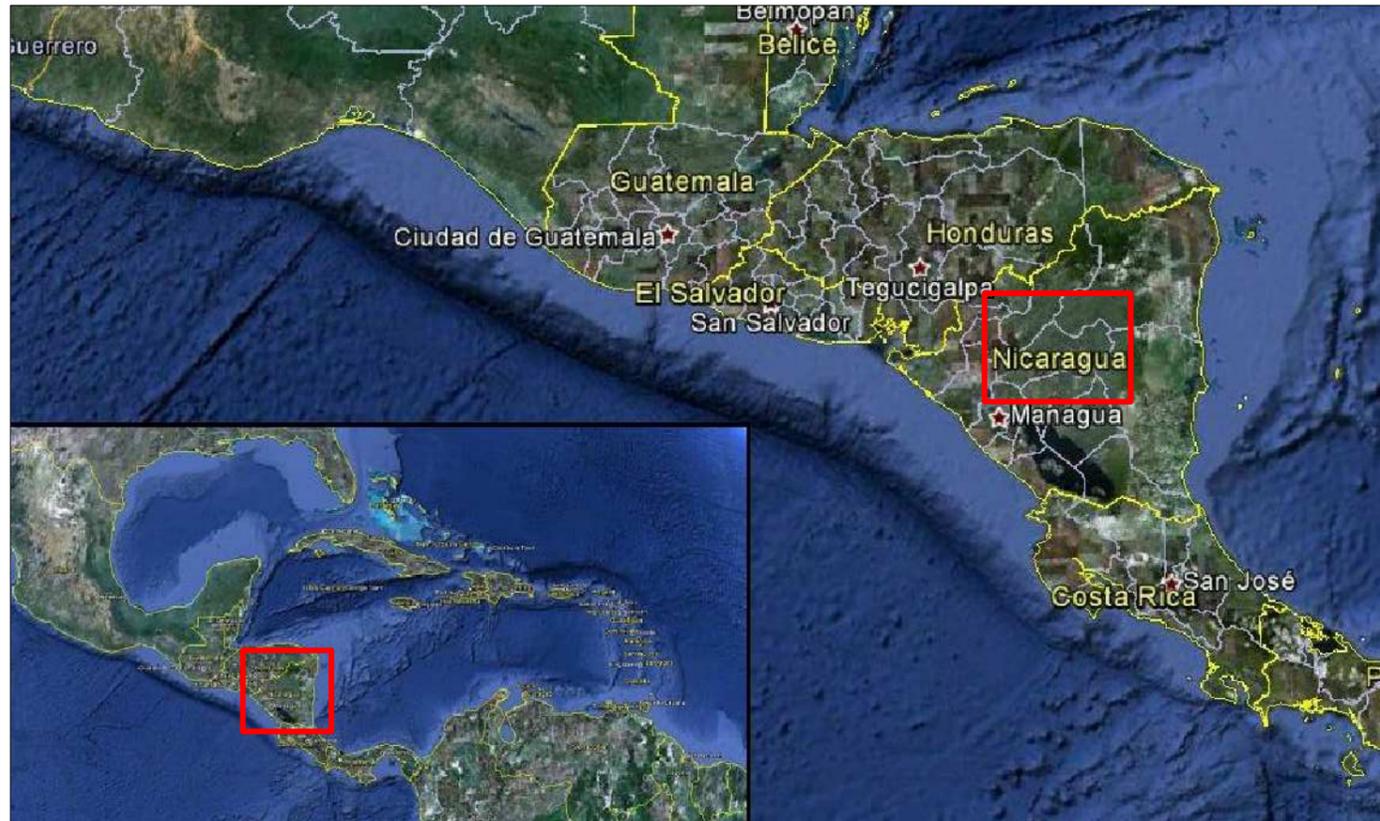
Estribo de la margen izquierda socavado y destruido tras la crecida.



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| 3.9         | - PRUEBA DE CARGA                   | 1           |





1. Situación geográfica de Nicaragua y del departamento de Matagalpa



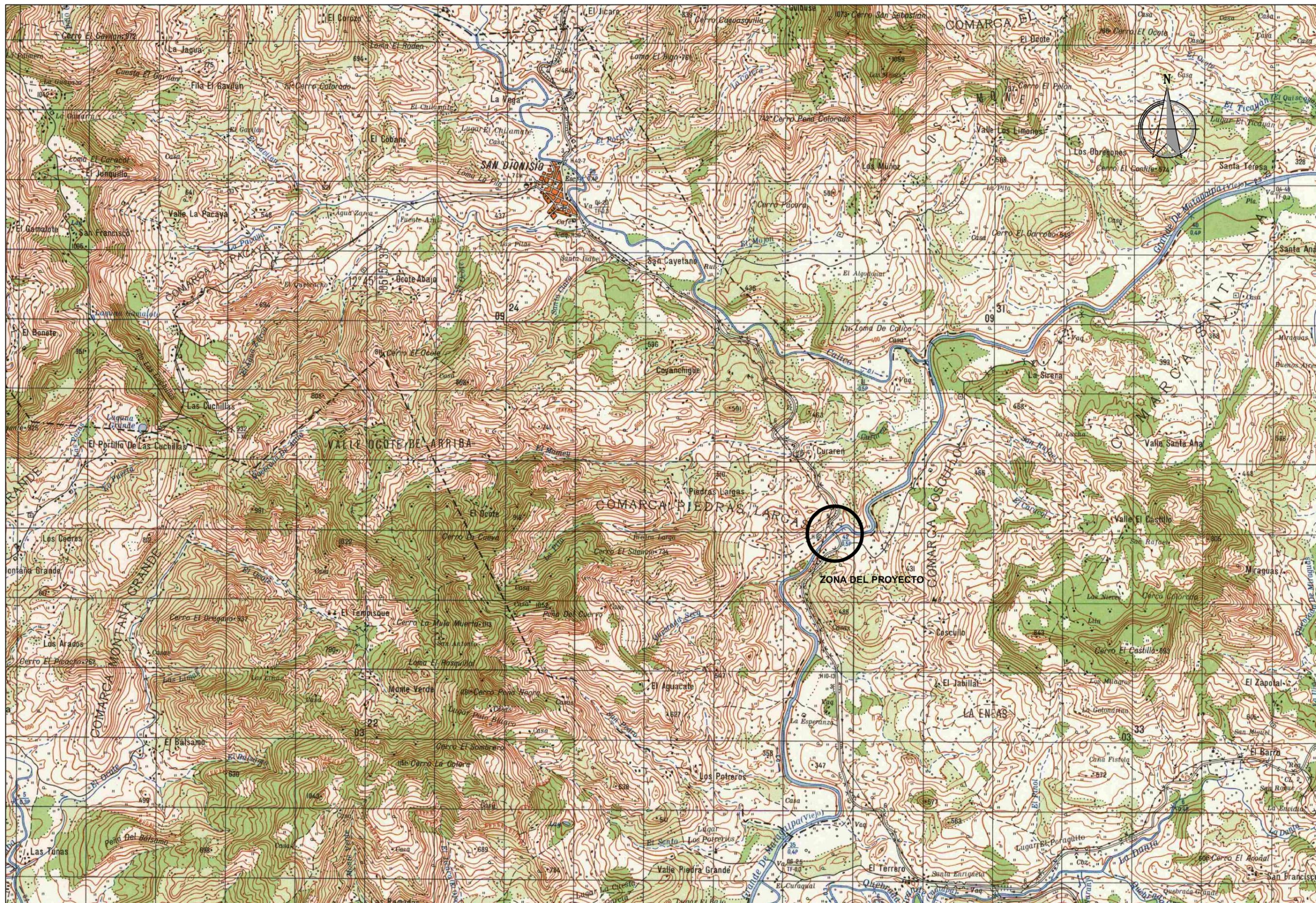
3. Situación geográfica de Esquipulas, San Dionisio y la zona del Proyecto



2. Situación geográfica del departamento de Matagalpa y la zona del Proyecto



4. Ubicación de la zona del Proyecto



**UNIVERSIDAD DE BURGOS**  
 ESCUELA POLITÉCNICA SUPERIOR



**AUTORES DEL PROYECTO:**  
 D. Alfonso Cid González  
 Dña. Raquel Estrada Merino  
 D. Sergio Agustín Ratón Alomar  
 Dña. Miriam Sacristán Terradillos

**PROYECTO FIN DE CARRERA:**  
**PUENTE EN EL PASO DE BOPAL SOBRE EL RÍO GRANDE DE MATAGALPA (NICARAGUA)**

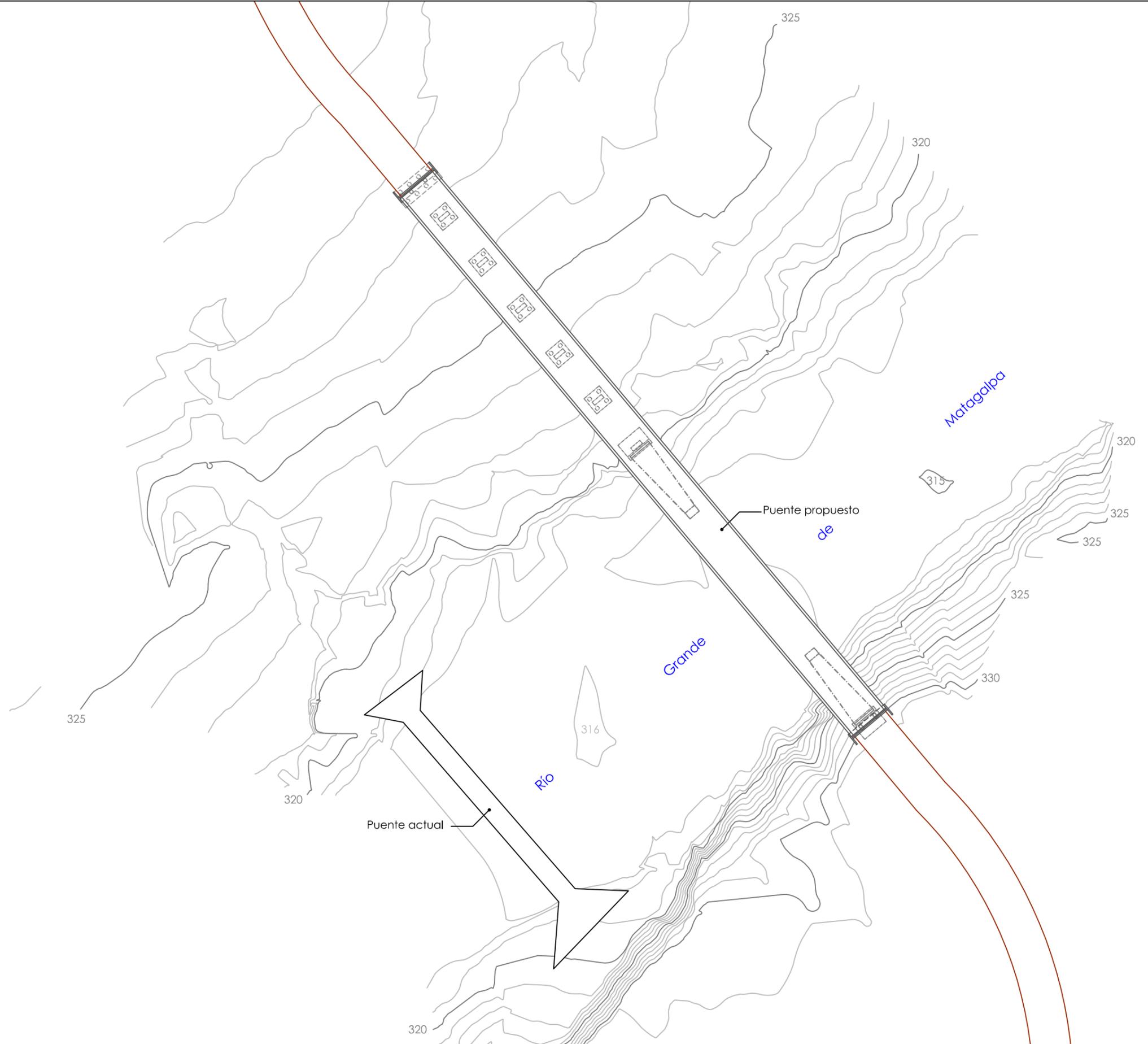
**TUTOR DEL PROYECTO:**  
 D. Juan Manuel Manso Villalain

**FECHA:** Febrero de 2012

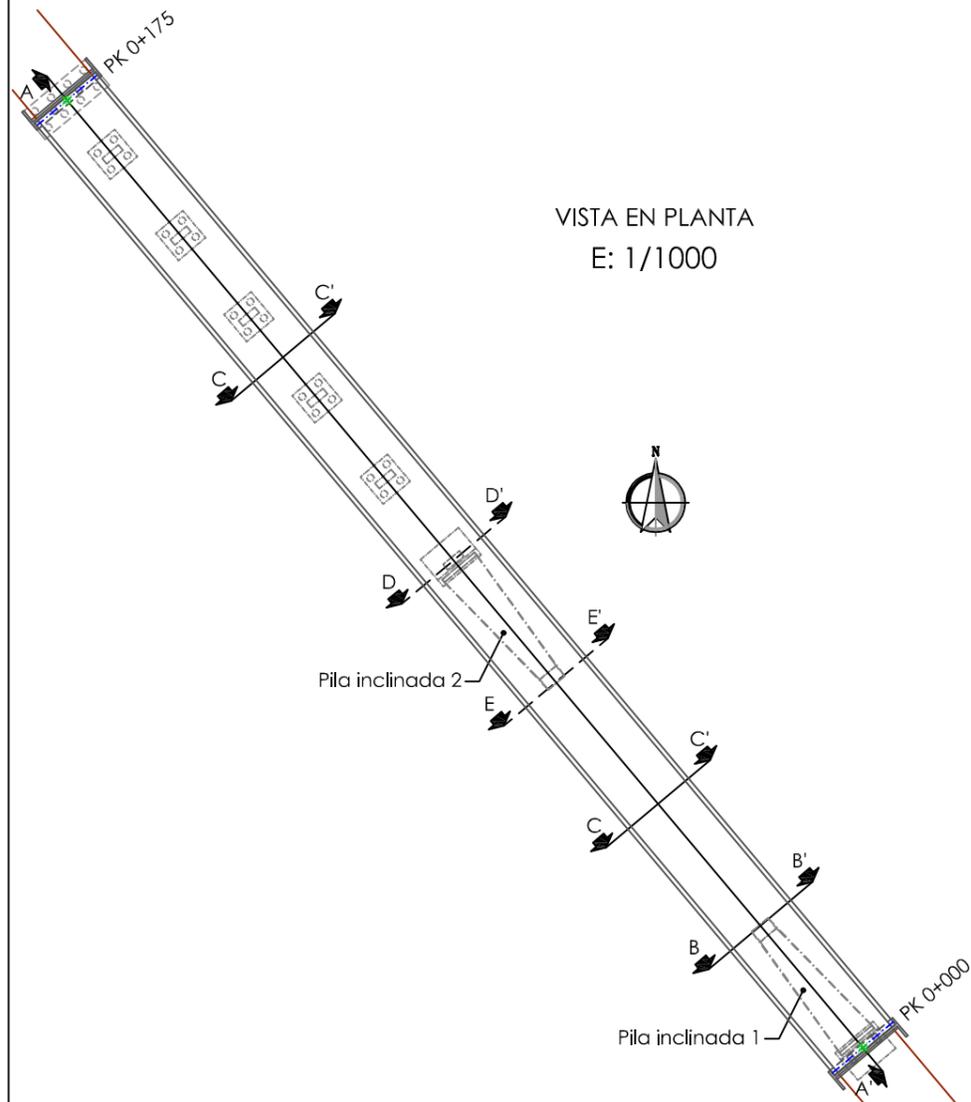
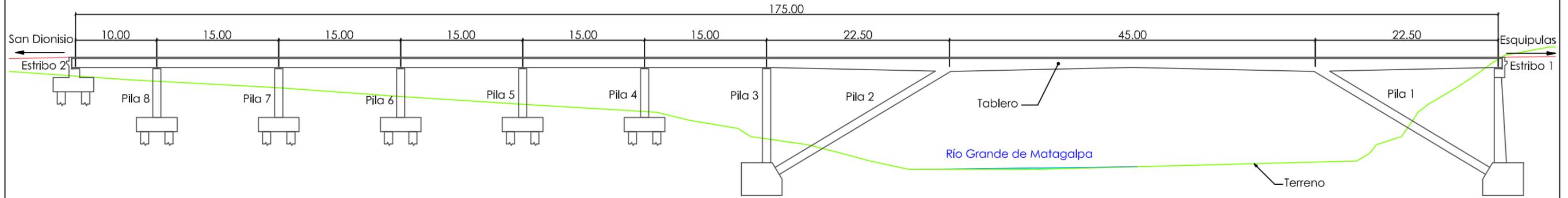
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**ESCALA:** 1/50000

**PLANO:** 1.3  
**HOJA:** 1 de 1

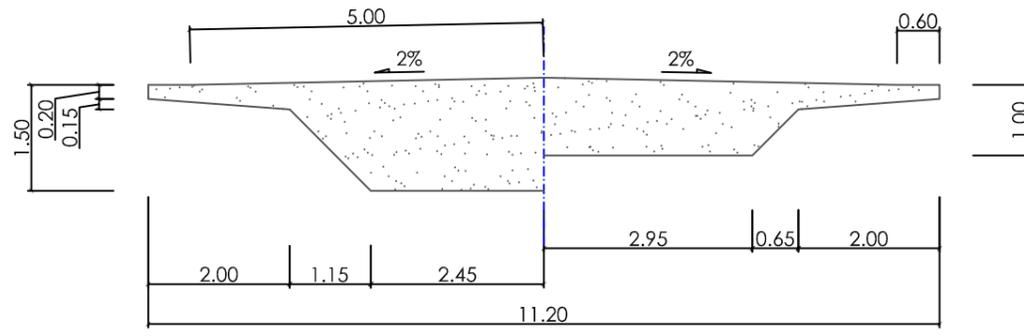


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E: 1/500  
Cotas en metros



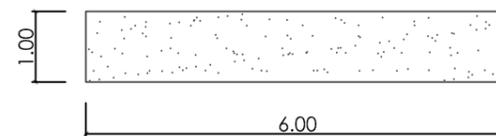
VISTA EN PLANTA  
E: 1/1000

SECCIÓN DEL TABLERO  
E: 1/100  
Cotas en metros



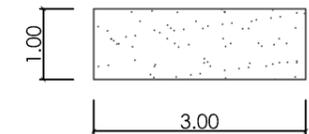
Semisección B-B' Semisección C-C'  
Losa aligerada exterior de canto variable

Sección D-D'  
SECCIÓN DE PILA INCLINADA  
E: 1/100  
Cotas en metros

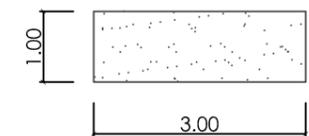


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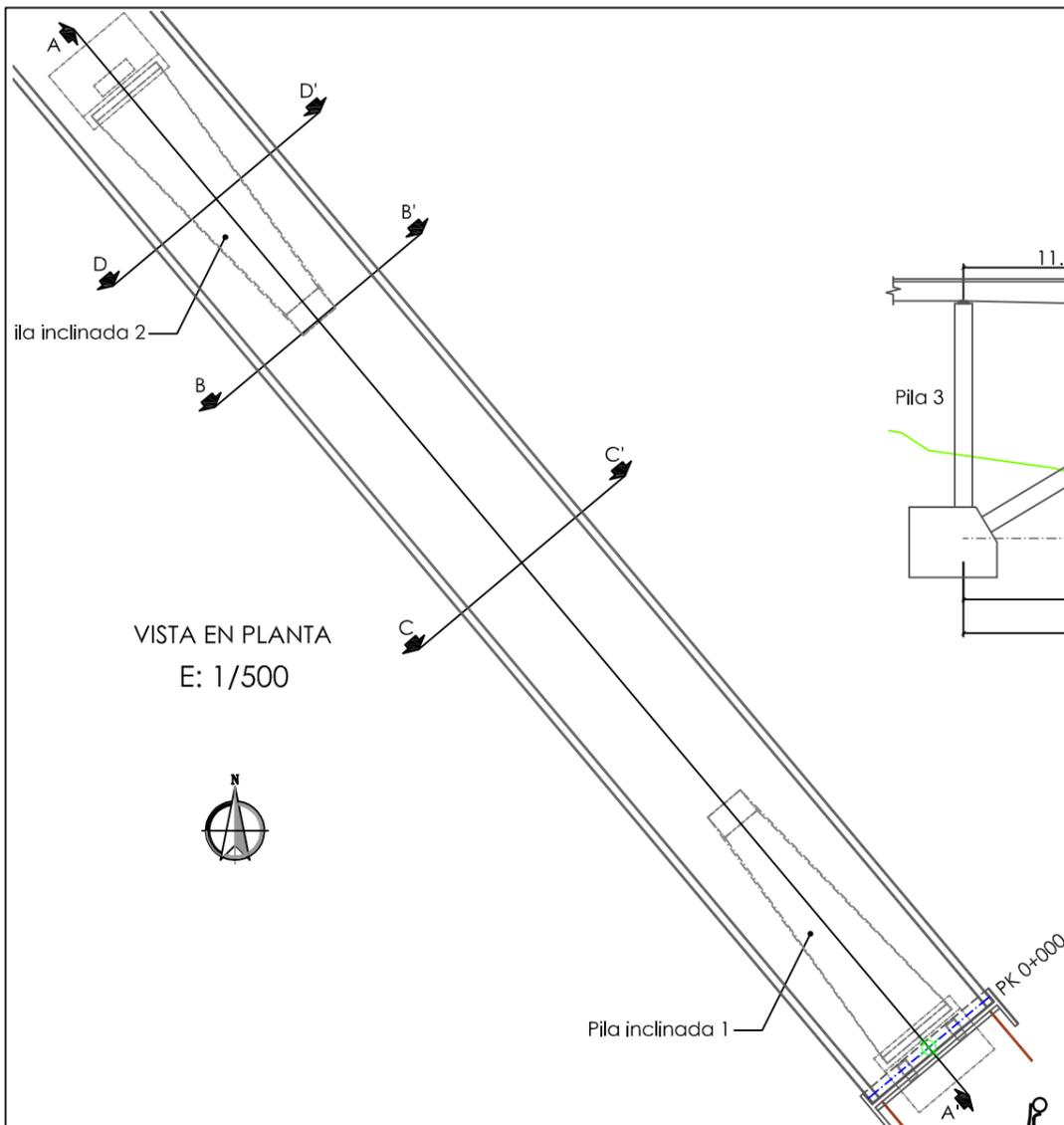
SECCIÓN DE PILAS VERTICALES  
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Cotas en metros



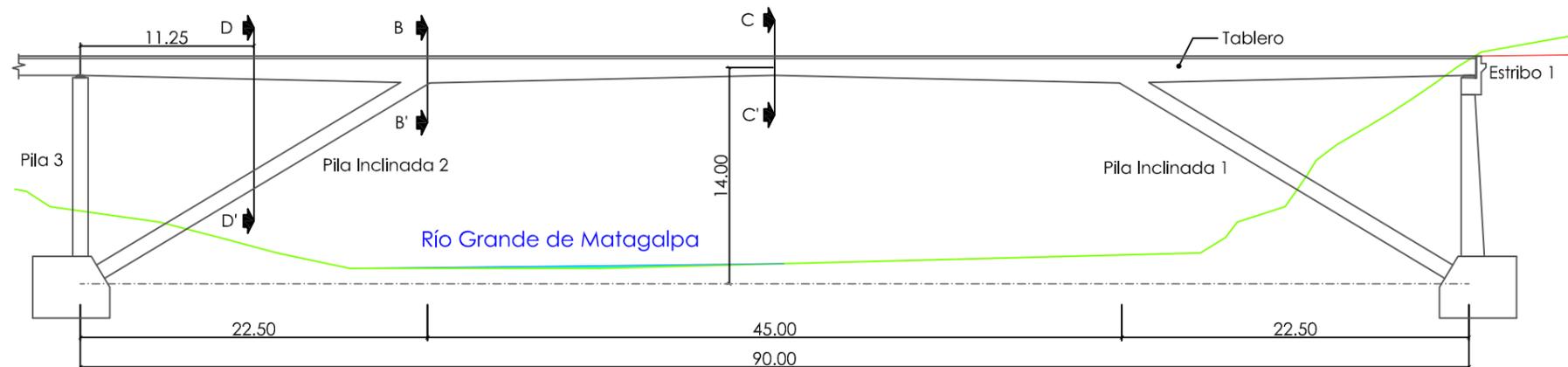
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SECCIÓN DE PILA INCLINADA  
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Cotas en metros



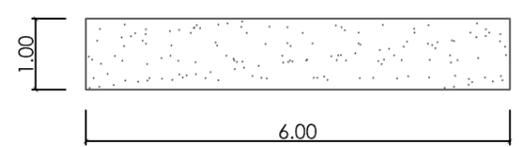
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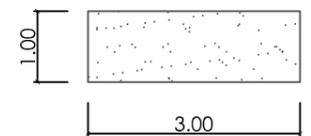
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Cotas en metros



SECCIONES DE LAS PILAS INCLINADAS  
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Cotas en metros

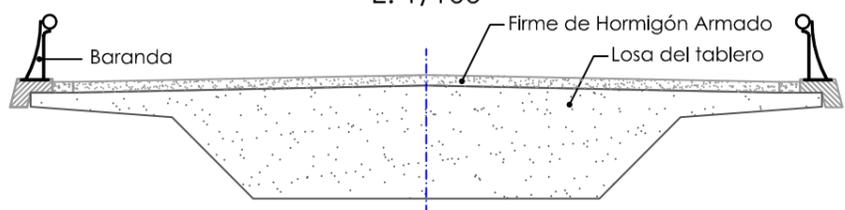


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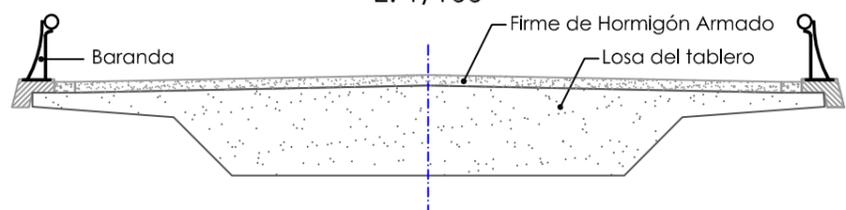
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SECCIÓN DEL TABLERO  
E: 1/100



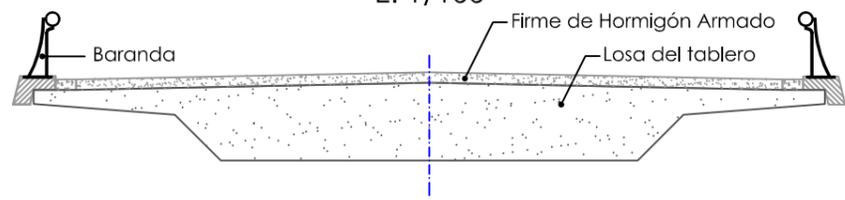
Pila empotrada al tablero

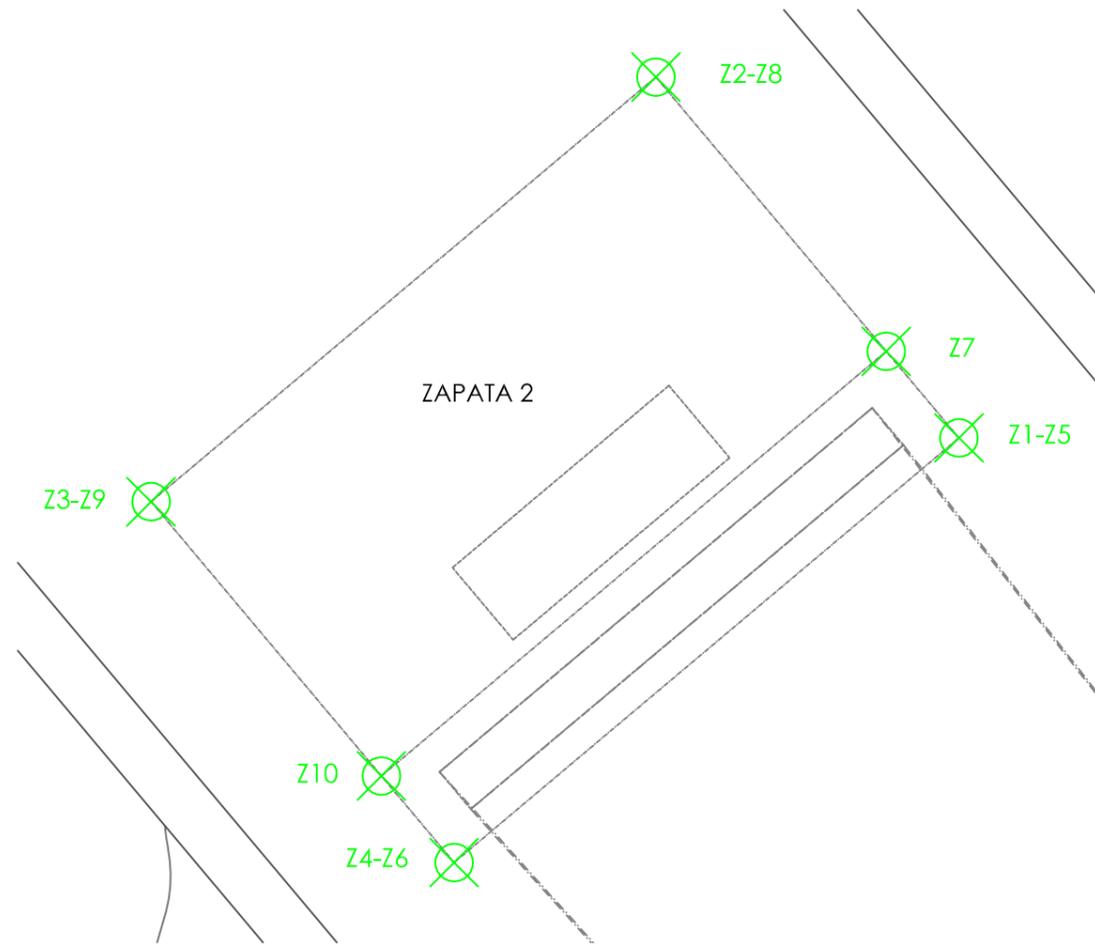
Sección D-D'  
SECCIÓN DEL TABLERO Y PILA  
E: 1/100



Pila (sección de la pila en el corte D-D')

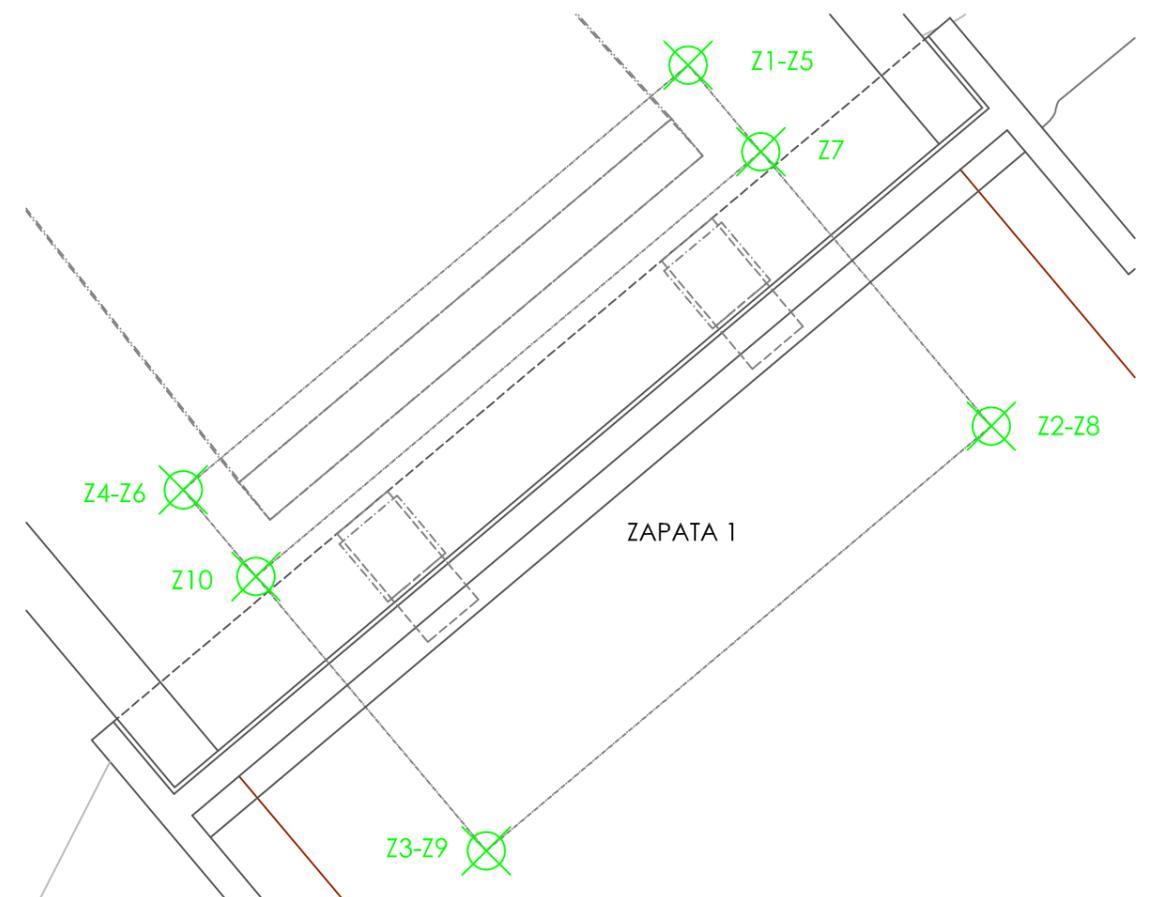
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SECCIÓN DEL TABLERO  
E: 1/100

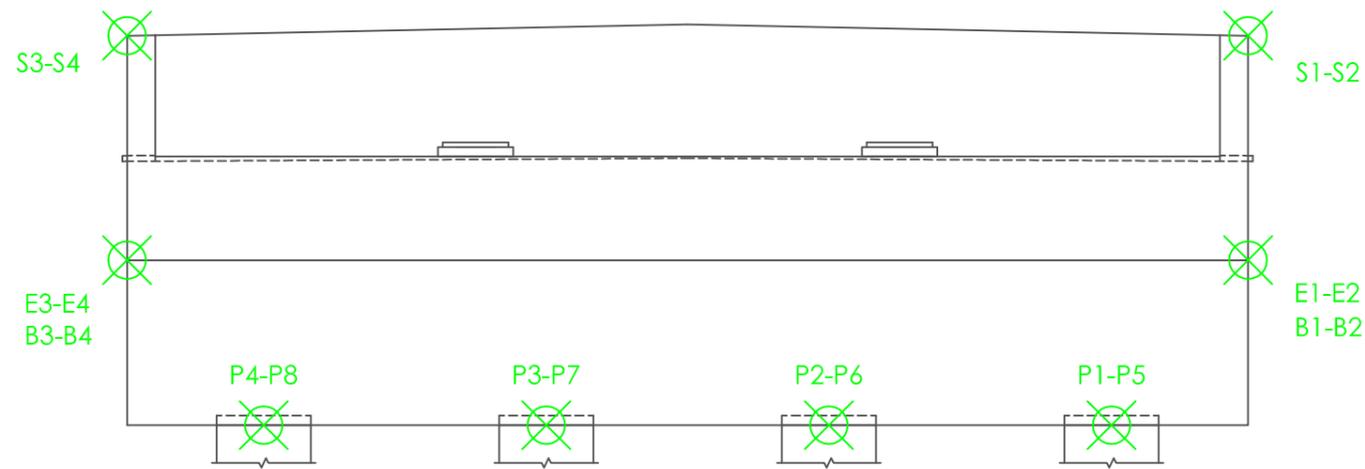




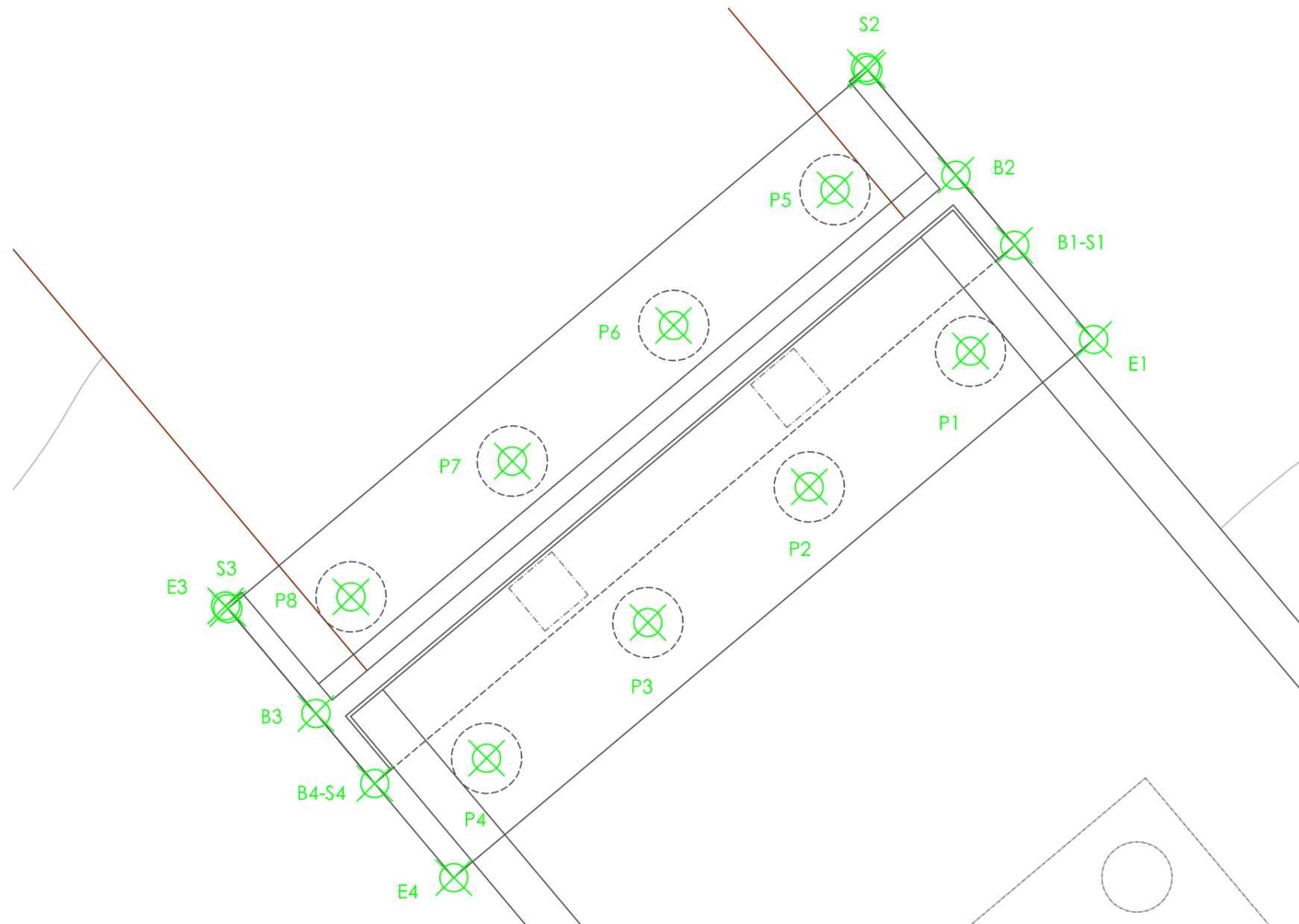
| ZAPATA 2 | X UTM      | Y UTM       | Z msnm  |
|----------|------------|-------------|---------|
| 1        | 628651,416 | 1405938,746 | 312,786 |
| 2        | 628648,202 | 1405942,573 | 312,786 |
| 3        | 628642,844 | 1405938,069 | 312,786 |
| 4        | 628646,058 | 1405934,242 | 312,786 |
| 5        | 628651,416 | 1405938,746 | 314,786 |
| 6        | 628646,058 | 1405934,242 | 314,786 |
| 7        | 628650,644 | 1405939,664 | 316,784 |
| 8        | 628648,202 | 1405942,573 | 316,784 |
| 9        | 628642,844 | 1405938,069 | 316,784 |
| 10       | 628645,286 | 1405935,160 | 316,784 |

| ZAPATA 1 | X UTM      | Y UTM       | Z msnm  |
|----------|------------|-------------|---------|
| 1        | 628706,872 | 1405872,769 | 312,786 |
| 2        | 628710,089 | 1405868,941 | 312,786 |
| 3        | 628704,731 | 1405864,437 | 312,786 |
| 4        | 628709,446 | 1405869,707 | 312,786 |
| 5        | 628706,872 | 1405872,769 | 314,786 |
| 6        | 628709,446 | 1405869,707 | 314,786 |
| 7        | 628707,644 | 1405871,850 | 316,784 |
| 8        | 628710,089 | 1405868,941 | 316,784 |
| 9        | 628704,731 | 1405864,437 | 316,784 |
| 10       | 628702,286 | 1405867,346 | 316,784 |





| PILOTES E2 | X UTM      | Y UTM       | Z msnm  |
|------------|------------|-------------|---------|
| 1          | 628597,068 | 1406004,959 | 325,500 |
| 2          | 628594,771 | 1406003,029 | 325,500 |
| 3          | 628592,475 | 1406001,098 | 325,500 |
| 4          | 628590,178 | 1405999,168 | 325,500 |
| 5          | 628595,137 | 1406007,256 | 325,500 |
| 6          | 628592,841 | 1406005,325 | 325,500 |
| 7          | 628590,544 | 1406003,395 | 325,500 |
| 8          | 628588,248 | 1406001,465 | 325,500 |

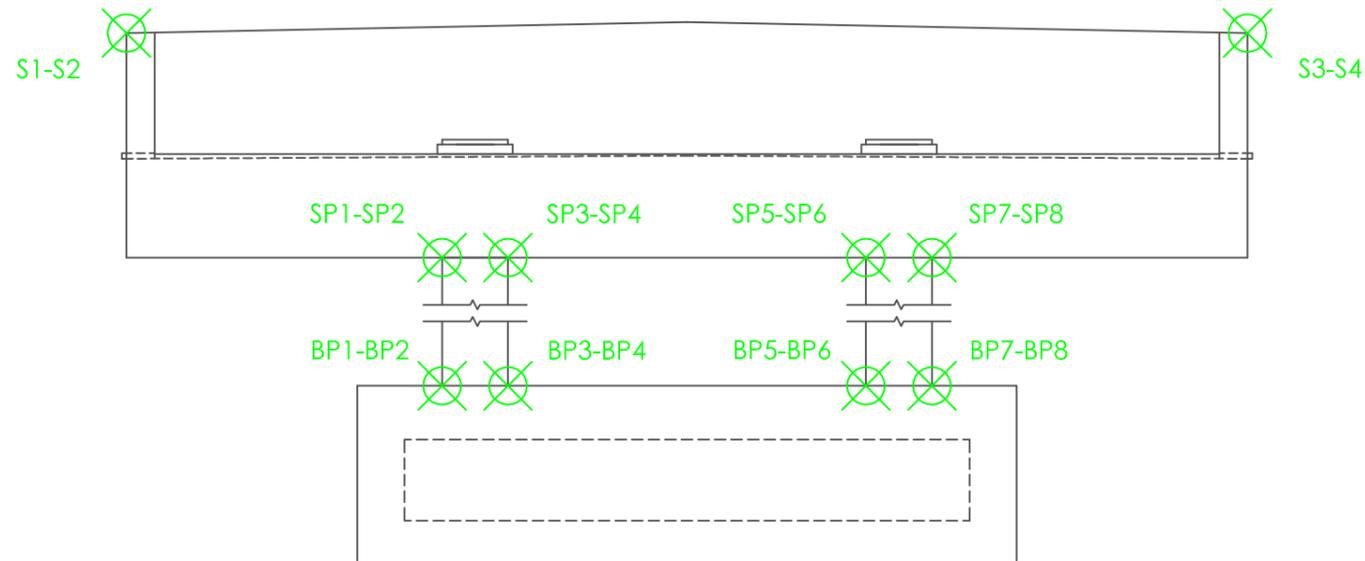


| ENCEPADO E2 | X UTM      | Y UTM       | Z msnm  |
|-------------|------------|-------------|---------|
| 1           | 628598,821 | 1406005,127 | 327,250 |
| 2           | 628595,604 | 1406008,954 | 327,250 |
| 3           | 628586,494 | 1406001,297 | 327,250 |
| 4           | 628589,712 | 1405997,470 | 327,250 |

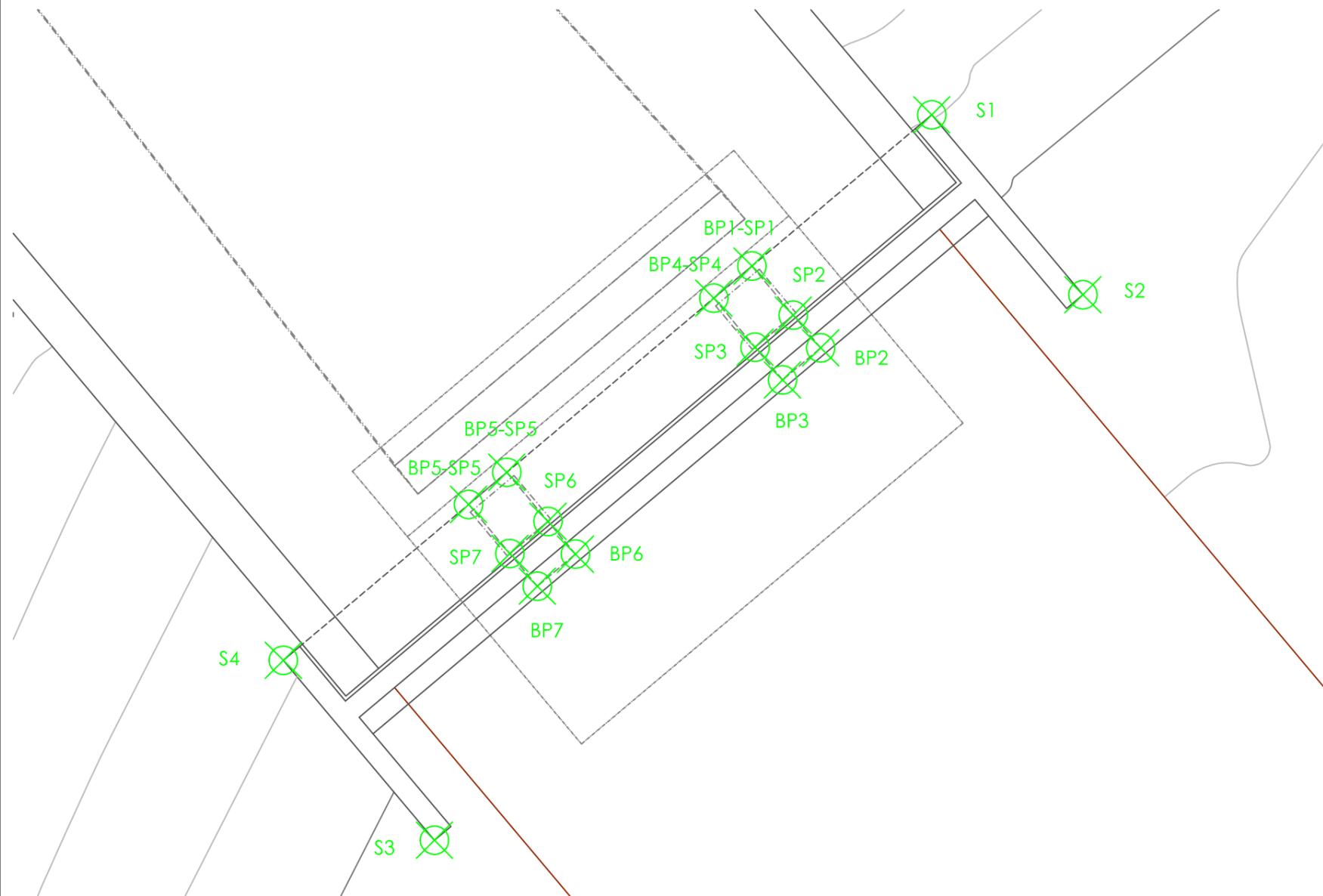
| BASE E2 | X UTM      | Y UTM       | Z msnm  |
|---------|------------|-------------|---------|
| 1       | 628597,695 | 1406006,466 | 327,250 |
| 2       | 628596,859 | 1406007,461 | 327,250 |
| 3       | 628587,749 | 1405999,804 | 327,250 |
| 4       | 628588,586 | 1405998,809 | 327,250 |

| SUPERIOR E2 | X UTM      | Y UTM       | Z msnm  |
|-------------|------------|-------------|---------|
| 1           | 628597,695 | 1406006,466 | 329,750 |
| 2           | 628595,572 | 1406008,992 | 329,750 |
| 3           | 628586,462 | 1406001,335 | 329,750 |
| 4           | 628588,586 | 1405998,809 | 329,750 |



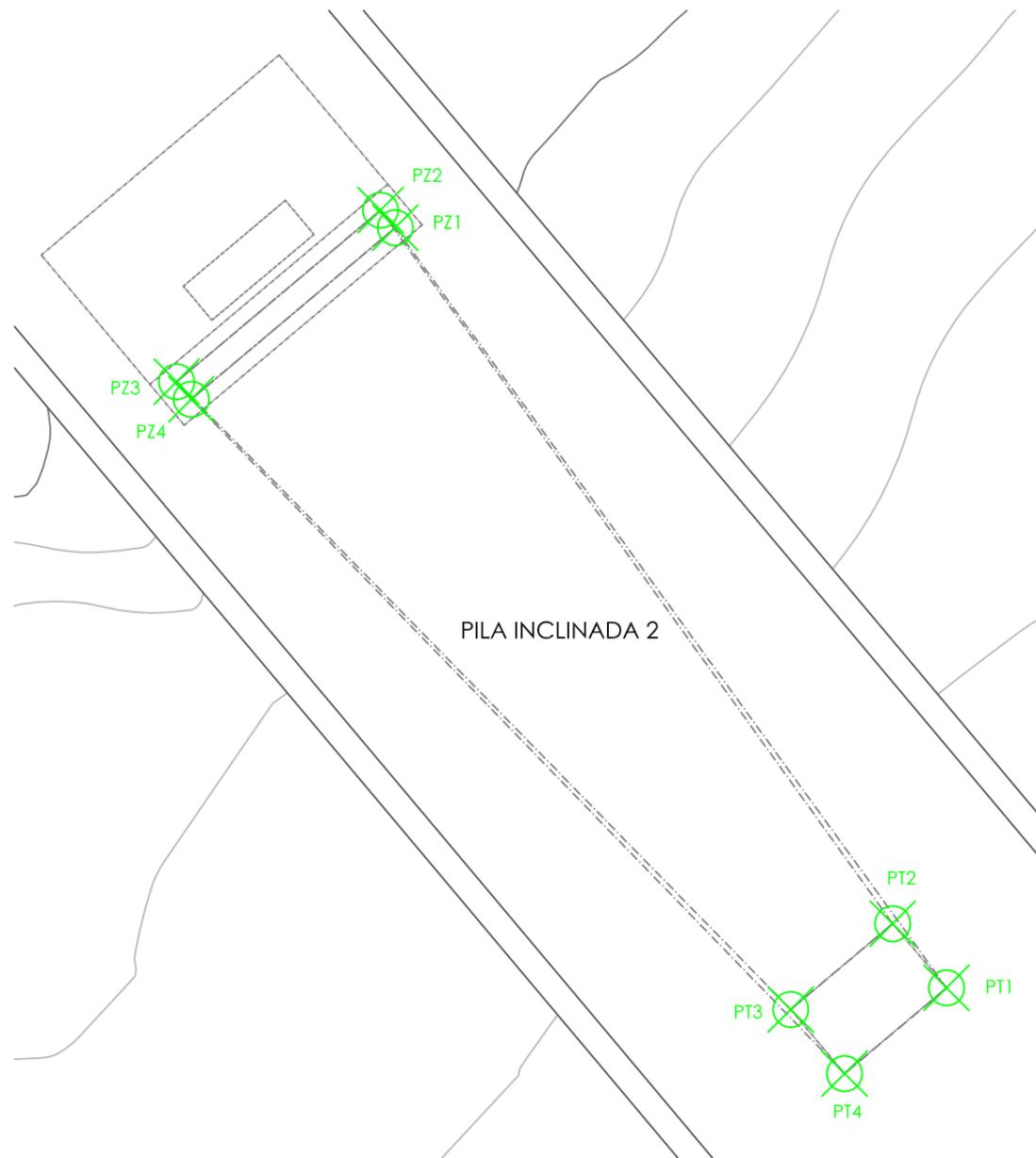


| BASE PILAS E1 | X UTM      | Y UTM       | Z msnm  |
|---------------|------------|-------------|---------|
| 1             | 628707,126 | 1405871,145 | 316,784 |
| 2             | 628708,091 | 1405869,997 | 316,784 |
| 3             | 628707,556 | 1405869,547 | 316,784 |
| 4             | 628706,590 | 1405870,695 | 316,784 |
| 5             | 628703,682 | 1405868,250 | 316,784 |
| 6             | 628704,647 | 1405867,102 | 316,784 |
| 7             | 628704,111 | 1405866,651 | 316,784 |
| 8             | 628703,146 | 1405867,800 | 316,784 |

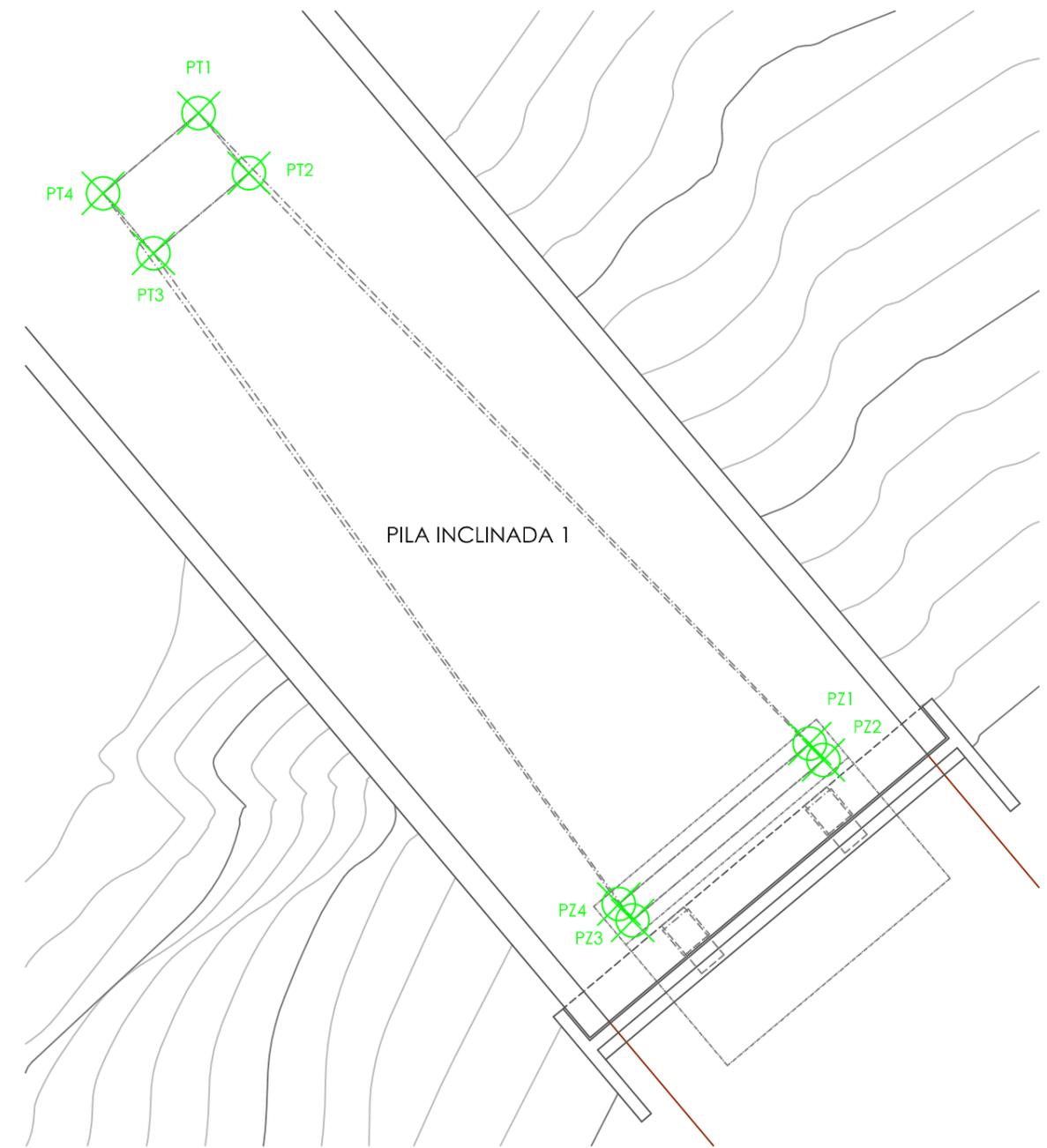


| SUPERIOR PILAS E1 | X UTM      | Y UTM       | Z msnm  |
|-------------------|------------|-------------|---------|
| 1                 | 628707,126 | 1405871,145 | 327,250 |
| 2                 | 628707,705 | 1405870,457 | 327,250 |
| 3                 | 628707,170 | 1405870,006 | 327,250 |
| 4                 | 628706,590 | 1405870,695 | 327,250 |
| 5                 | 628703,682 | 1405868,250 | 327,250 |
| 6                 | 628704,261 | 1405867,561 | 327,250 |
| 7                 | 628703,725 | 1405867,111 | 327,250 |
| 8                 | 628703,146 | 1405867,800 | 327,250 |

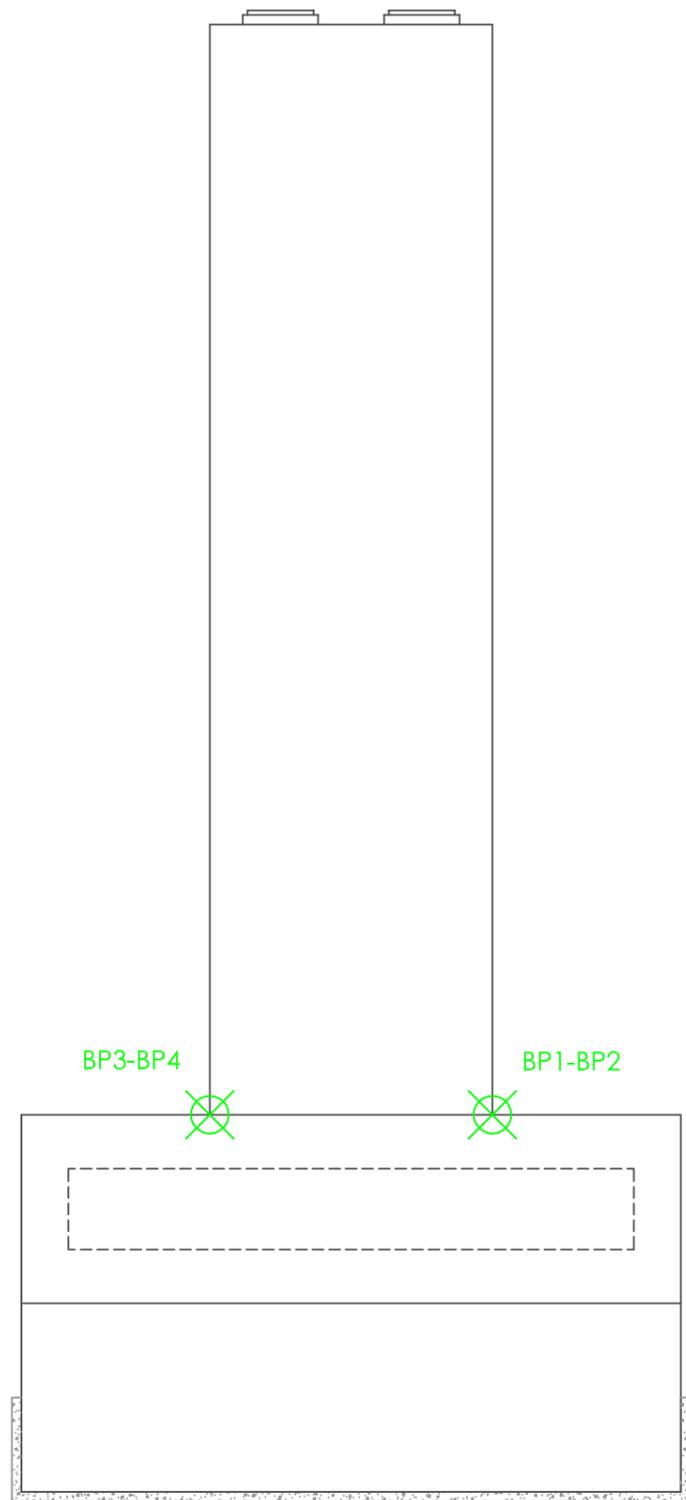
| SUPERIOR E1 | X UTM      | Y UTM       | Z msnm  |
|-------------|------------|-------------|---------|
| 1           | 628709,652 | 1405873,269 | 329,750 |
| 2           | 628711,776 | 1405870,743 | 329,750 |
| 3           | 628702,666 | 1405863,086 | 329,750 |
| 4           | 628700,543 | 1405865,612 | 329,750 |



| SECCIÓN                        | PUNTO | X UTM      | Y UTM       | Z msnm  |
|--------------------------------|-------|------------|-------------|---------|
| CONTACTO<br>PILA 1-<br>ZAPATA  | 1     | 628706,710 | 1405872,185 | 315,358 |
|                                | 2     | 628707,041 | 1405871,791 | 316,215 |
|                                | 3     | 628702,448 | 1405867,930 | 316,215 |
|                                | 4     | 628702,117 | 1405868,324 | 315,358 |
| CONTACTO<br>PILA 1-<br>TABLERO | 1     | 628691,998 | 1405887,357 | 328,003 |
|                                | 2     | 628693,210 | 1405885,914 | 328,039 |
|                                | 3     | 628690,914 | 1405883,984 | 328,039 |
|                                | 4     | 628689,701 | 1405885,426 | 328,003 |

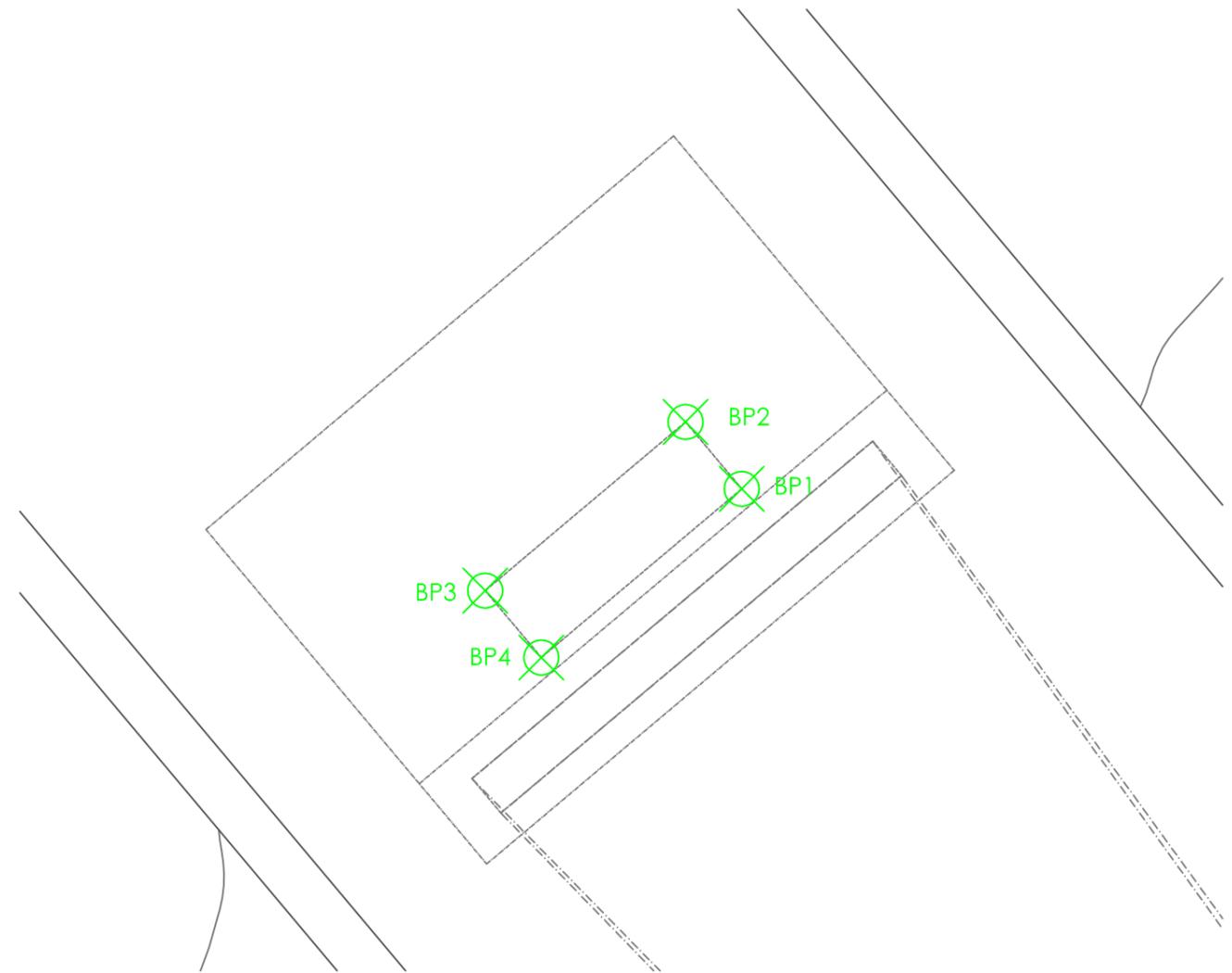


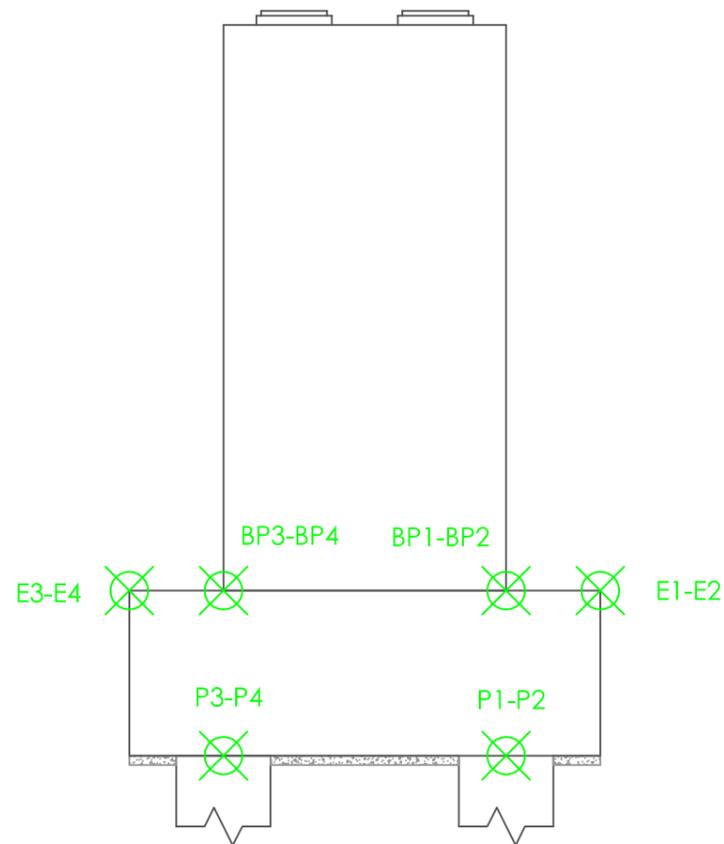
| SECCIÓN                        | PUNTO | X UTM      | Y UTM       | Z msnm  |
|--------------------------------|-------|------------|-------------|---------|
| CONTACTO<br>PILA 2-<br>ZAPATA  | 1     | 628650,813 | 1405938,686 | 315,358 |
|                                | 2     | 628650,482 | 1405939,080 | 316,215 |
|                                | 3     | 628645,889 | 1405935,220 | 316,215 |
|                                | 4     | 628646,220 | 1405934,826 | 315,358 |
| CONTACTO<br>PILA 2-<br>TABLERO | 1     | 628663,228 | 1405921,584 | 328,003 |
|                                | 2     | 628662,016 | 1405923,027 | 328,039 |
|                                | 3     | 628659,719 | 1405921,096 | 328,039 |
|                                | 4     | 628660,932 | 1405919,654 | 328,003 |



| PUNTO PILA | X UTM      | Y UTM       | Z msnm  |
|------------|------------|-------------|---------|
| 3-1        | 628648,980 | 1405938,535 | 316,785 |
| 3-2        | 628648,337 | 1405939,301 | 316,785 |
| 3-3        | 628646,040 | 1405937,370 | 316,785 |
| 3-4        | 628646,684 | 1405936,605 | 316,785 |

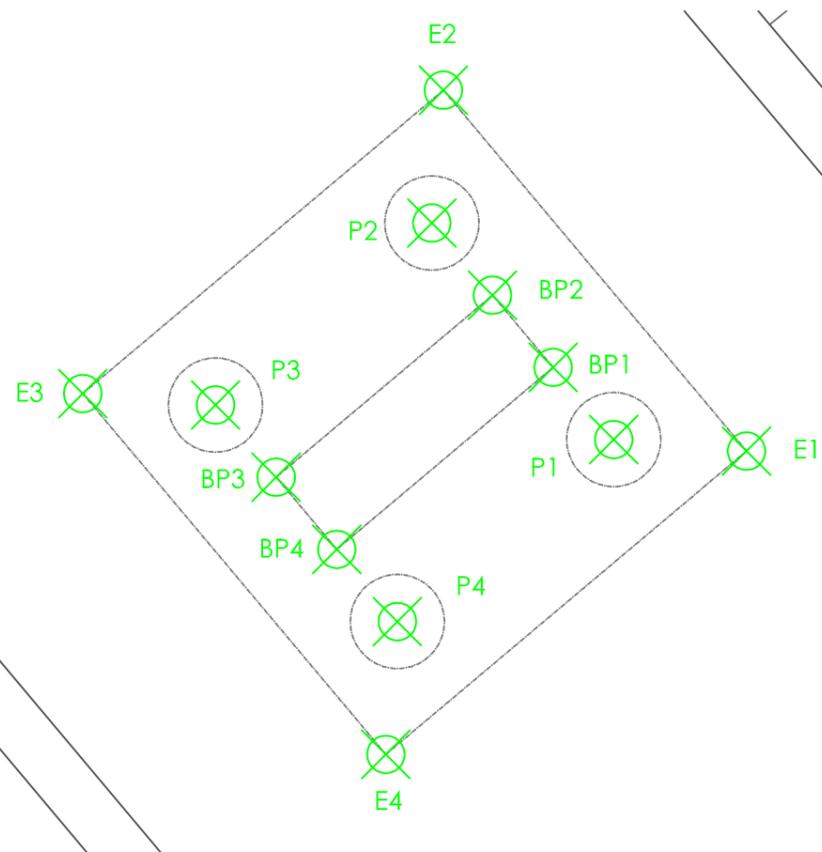
El primer número equivale a la pila.  
El segundo número equivale al punto de replanteo.





El primer número equivale a la pila.  
El segundo número equivale al punto de replanteo.

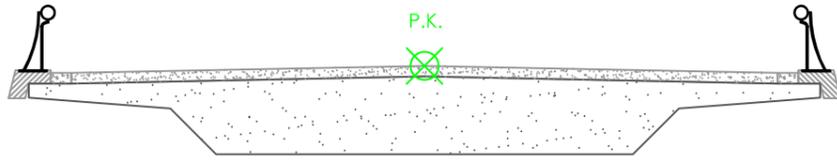
| PILOTES | X UTM      | Y UTM       | Z msnm  |
|---------|------------|-------------|---------|
| 4-1     | 628639,972 | 1405949,252 | 320,600 |
| 4-2     | 628638,042 | 1405951,549 | 320,600 |
| 4-3     | 628635,746 | 1405949,618 | 320,600 |
| 4-4     | 628637,676 | 1405947,322 | 320,600 |
| 5-1     | 628630,321 | 1405960,735 | 320,600 |
| 5-2     | 628628,391 | 1405963,031 | 320,600 |
| 5-3     | 628626,094 | 1405961,101 | 320,600 |
| 5-4     | 628628,024 | 1405958,804 | 320,600 |
| 6-1     | 628620,669 | 1405972,217 | 320,600 |
| 6-2     | 628618,739 | 1405974,514 | 320,600 |
| 6-3     | 628616,443 | 1405972,584 | 320,600 |
| 6-4     | 628618,373 | 1405970,287 | 320,600 |
| 7-1     | 628611,018 | 1405983,700 | 320,600 |
| 7-2     | 628609,088 | 1405985,996 | 320,600 |
| 7-3     | 628606,791 | 1405984,066 | 320,600 |
| 7-4     | 628608,721 | 1405981,770 | 320,600 |
| 8-1     | 628601,366 | 1405995,182 | 320,600 |
| 8-2     | 628599,436 | 1405997,479 | 320,600 |
| 8-3     | 628597,140 | 1405995,549 | 320,600 |
| 8-4     | 628599,070 | 1405993,252 | 320,600 |



| ENCEPADOS | X UTM      | Y UTM       | Z msnm  |
|-----------|------------|-------------|---------|
| 4-1       | 628641,381 | 1405949,130 | 322,350 |
| 4-2       | 628638,164 | 1405952,958 | 322,350 |
| 4-3       | 628634,337 | 1405949,741 | 322,350 |
| 4-4       | 628637,554 | 1405945,913 | 322,350 |
| 5-1       | 628631,730 | 1405960,613 | 322,350 |
| 5-2       | 628628,513 | 1405964,440 | 322,350 |
| 5-3       | 628624,685 | 1405961,223 | 322,350 |
| 5-4       | 628627,902 | 1405957,396 | 322,350 |
| 6-1       | 628622,078 | 1405972,095 | 322,350 |
| 6-2       | 628618,861 | 1405975,923 | 322,350 |
| 6-3       | 628615,034 | 1405972,706 | 322,350 |
| 6-4       | 628618,251 | 1405968,878 | 322,350 |
| 7-1       | 628612,427 | 1405983,578 | 322,350 |
| 7-2       | 628609,210 | 1405987,405 | 322,350 |
| 7-3       | 628605,382 | 1405984,188 | 322,350 |
| 7-4       | 628608,599 | 1405980,361 | 322,350 |
| 8-1       | 628602,775 | 1405995,060 | 322,350 |
| 8-2       | 628599,558 | 1405998,888 | 322,350 |
| 8-3       | 628595,731 | 1405995,671 | 322,350 |
| 8-4       | 628598,948 | 1405991,843 | 322,350 |

| BASES PILAS | X UTM      | Y UTM       | Z msnm  |
|-------------|------------|-------------|---------|
| 4-1         | 628639,329 | 1405950,018 | 328,350 |
| 4-2         | 628638,685 | 1405950,783 | 328,350 |
| 4-3         | 628636,389 | 1405948,853 | 328,350 |
| 4-4         | 628637,032 | 1405948,087 | 328,350 |
| 5-1         | 628629,677 | 1405961,500 | 328,350 |
| 5-2         | 628629,034 | 1405962,266 | 328,350 |
| 5-3         | 628626,737 | 1405960,335 | 328,350 |
| 5-4         | 628627,381 | 1405959,570 | 328,350 |
| 6-1         | 628620,026 | 1405972,983 | 328,350 |
| 6-2         | 628619,382 | 1405973,748 | 328,350 |
| 6-3         | 628617,086 | 1405971,818 | 328,350 |
| 6-4         | 628617,729 | 1405971,052 | 328,350 |
| 7-1         | 628610,374 | 1405984,465 | 328,350 |
| 7-2         | 628609,731 | 1405985,231 | 328,350 |
| 7-3         | 628607,434 | 1405983,301 | 328,350 |
| 7-4         | 628608,078 | 1405982,535 | 328,350 |
| 8-1         | 628600,723 | 1405995,948 | 328,350 |
| 8-2         | 628600,079 | 1405996,713 | 328,350 |
| 8-3         | 628597,783 | 1405994,783 | 328,350 |
| 8-4         | 628598,426 | 1405994,018 | 328,350 |

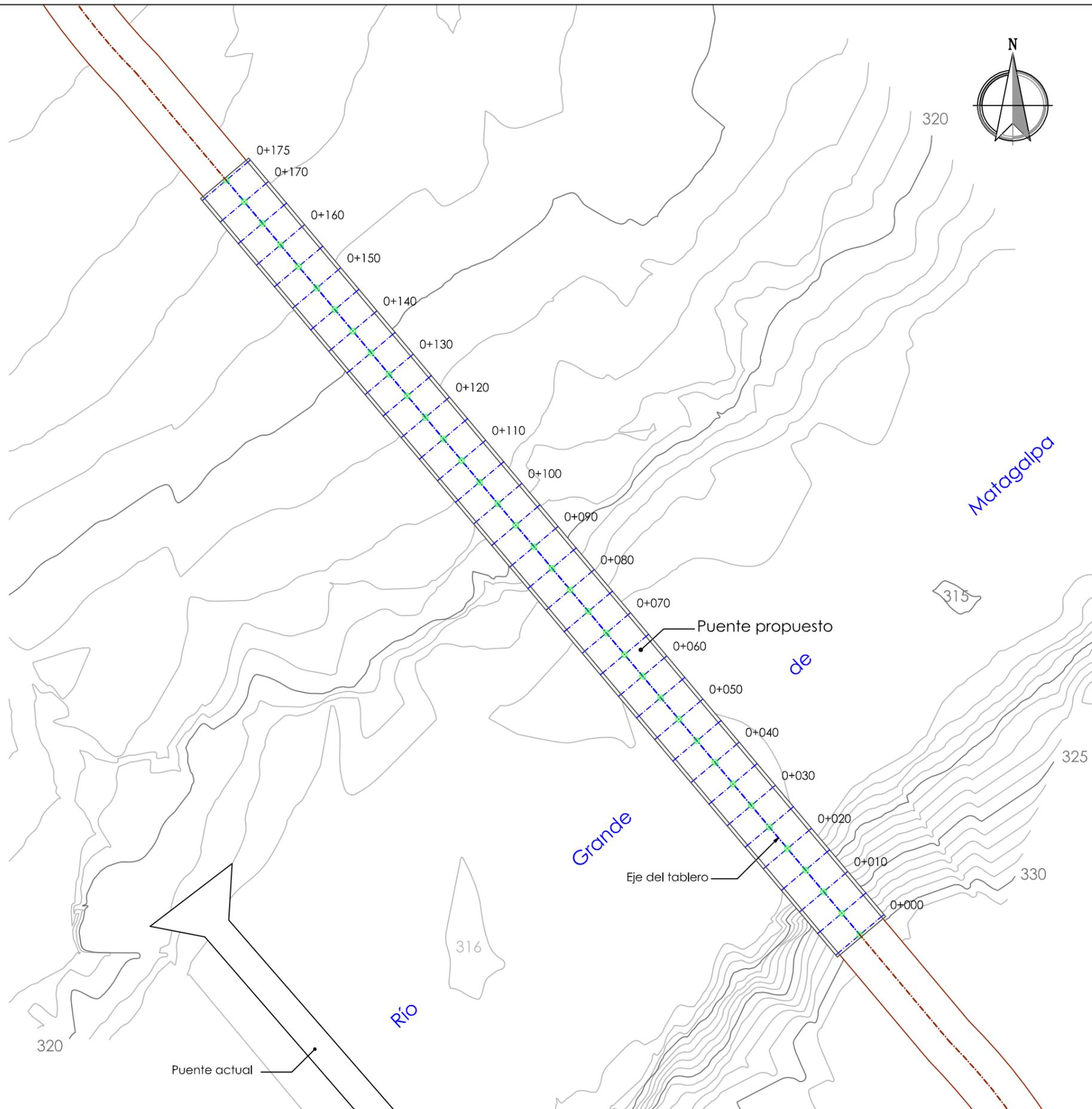




E: 1/100

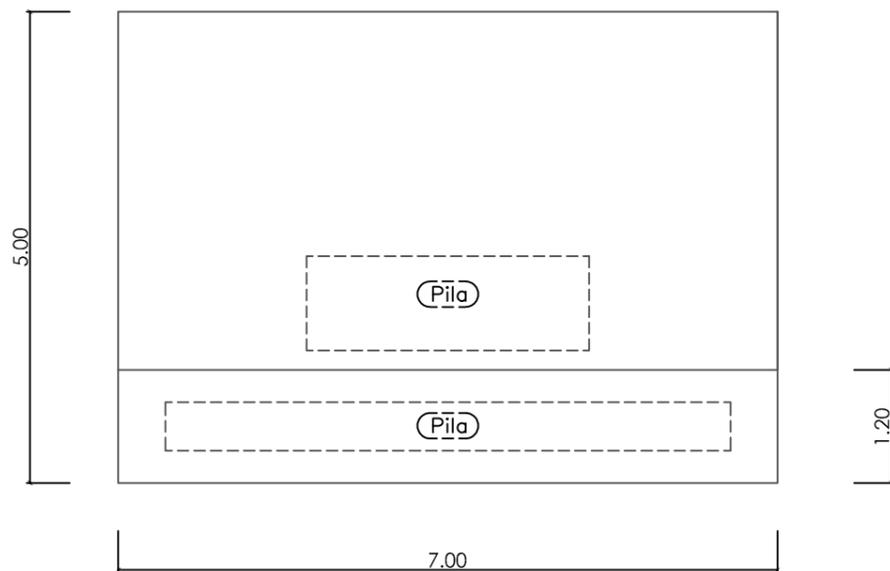
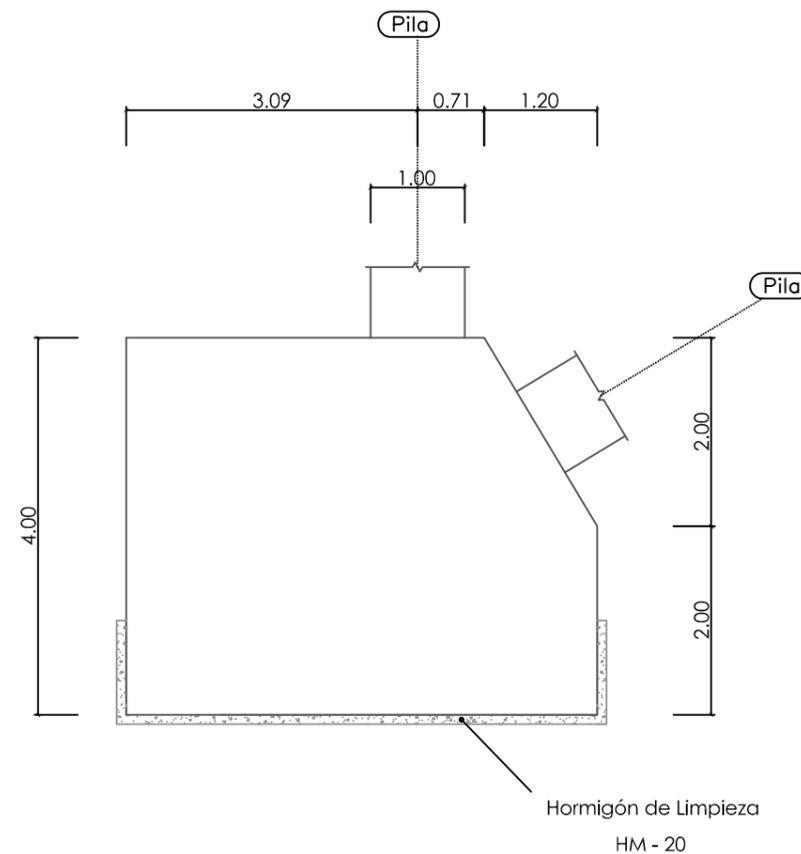
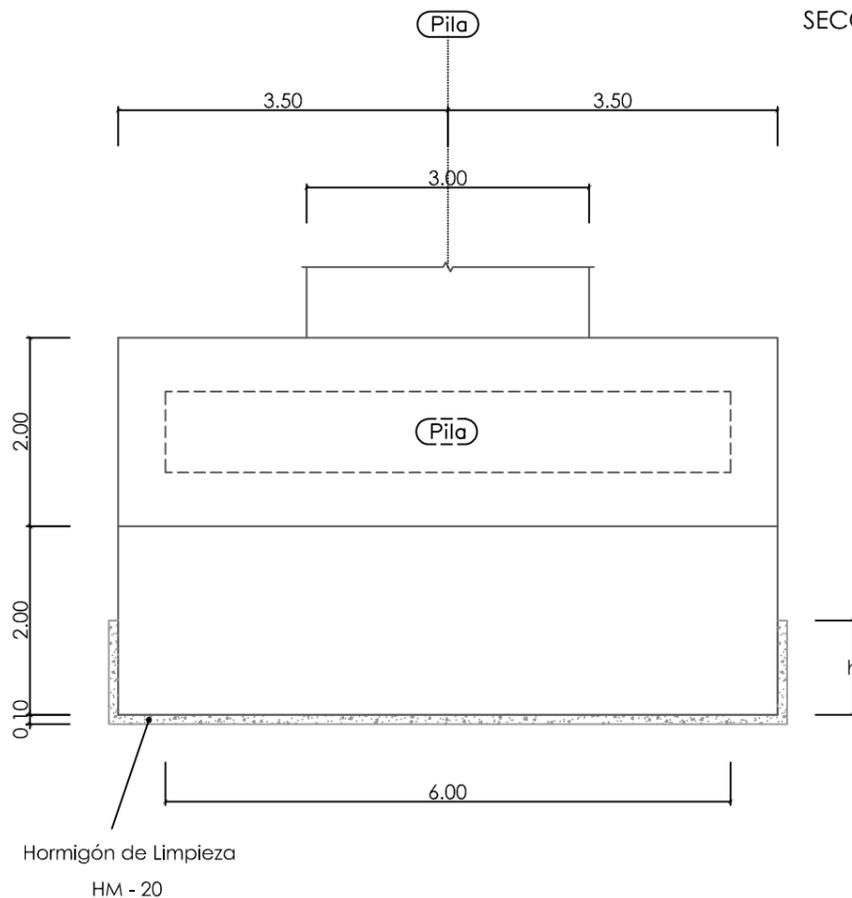
REPLANTEO DEL EJE DEL TABLERO

| P.K.    | X UTM      | Y UTM       | Z msnm  |
|---------|------------|-------------|---------|
| 0+000   | 628705,419 | 1405869,058 | 329,750 |
| 0+005   | 628702,202 | 1405872,885 | 329,750 |
| 0+010   | 628698,992 | 1405876,704 | 329,750 |
| 0+015   | 628695,775 | 1405880,532 | 329,750 |
| 0+020   | 628692,551 | 1405884,368 | 329,750 |
| 0+022.5 | 628690,850 | 1405886,392 | 329,750 |
| 0+025   | 628689,334 | 1405888,195 | 329,750 |
| 0+030   | 628686,124 | 1405892,014 | 329,750 |
| 0+035   | 628682,906 | 1405895,842 | 329,750 |
| 0+040   | 628679,689 | 1405899,669 | 329,750 |
| 0+045   | 628676,472 | 1405903,497 | 329,750 |
| 0+050   | 628673,255 | 1405907,324 | 329,750 |
| 0+055   | 628670,038 | 1405911,152 | 329,750 |
| 0+060   | 628666,821 | 1405914,979 | 329,750 |
| 0+065   | 628663,603 | 1405918,807 | 329,750 |
| 0+067.5 | 628662,080 | 1405920,619 | 329,750 |
| 0+070   | 628660,386 | 1405922,634 | 329,750 |
| 0+075   | 628657,169 | 1405926,462 | 329,750 |
| 0+080   | 628653,945 | 1405930,298 | 329,750 |
| 0+085   | 628650,728 | 1405934,125 | 329,750 |
| 0+090   | 628647,510 | 1405937,953 | 329,750 |
| 0+095   | 628644,293 | 1405941,780 | 329,750 |
| 0+100   | 628641,076 | 1405945,608 | 329,750 |
| 0+105   | 628637,859 | 1405949,435 | 329,750 |
| 0+110   | 628634,642 | 1405953,263 | 329,750 |
| 0+115   | 628631,425 | 1405957,090 | 329,750 |
| 0+120   | 628628,207 | 1405960,918 | 329,750 |
| 0+125   | 628624,990 | 1405964,745 | 329,750 |
| 0+130   | 628621,773 | 1405968,573 | 329,750 |
| 0+135   | 628618,556 | 1405972,400 | 329,750 |
| 0+140   | 628615,339 | 1405976,228 | 329,750 |
| 0+145   | 628612,122 | 1405980,055 | 329,750 |
| 0+150   | 628608,904 | 1405983,883 | 329,750 |
| 0+155   | 628605,687 | 1405987,710 | 329,750 |
| 0+160   | 628602,470 | 1405991,538 | 329,750 |
| 0+165   | 628599,253 | 1405995,365 | 329,750 |
| 0+170   | 628596,036 | 1405999,193 | 329,750 |
| 0+175   | 628592,819 | 1406003,020 | 329,750 |



SECCIÓN DE LAS ZAPATAS

Cotas en metros



h es la profundidad que se debe de empotrar la zapata para evitar posible inestabilidad.

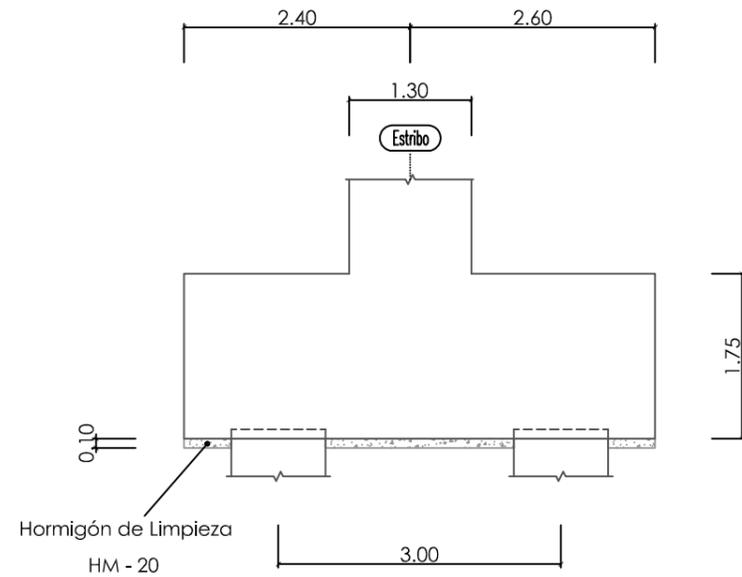
La zapata deberá de estar empotrada en la roca al menos 100 cm de profundidad, más 10 cm de hormigón de limpieza.

La roca deberá de tener al menos la capacidad resistente de cálculo.

CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO

| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO |               | CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO |  |               |                           |                                      |                       |
|--|---------------|---|--|---------------|---------------------------|--------------------------------------|-----------------------|
| Diametros (mm)                             | Diametros (") | LOCALIZACIÓN                                  | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE   | fck N/mm2     | NIVEL DE CONTROL          | COEF. DE SEGURIDAD Yc                |                       |
| Ø12  | Nº4 1/2"      | LIMPIEZA                                      | HM-20 / P / 25   | 20 (3000 PSI) |                           |                                      |                       |
| Ø14  | Nº5 5/8"      | CIMENTACION                                   | HA-30 / P / 20 / XC2   | 30 (4500 PSI) | NORMAL                    | 1.50                                 |                       |
| Ø16  | Nº6 3/4"      | ALZADOS                                       | HA-30 / P / 20 / XC2   | 30 (4500 PSI) | NORMAL                    | 1.50                                 |                       |
| Ø20  | Nº7 7/8"      | ARMADURA                                      | TIPO   | DESIGNACIÓN   | LÍMITE ELÁSTICO fyk N/mm2 | NIVEL DE CONTROL                     | COEF. DE SEGURIDAD Ys |
| Ø25  | Nº8 1"        | ACERO PASIVO                                  | B 400 S (Grado 60)   |               | 400                       | NORMAL                               | 1.15                  |
|  | Nº9 1-1/8"    | RECUBRIMIENTO NOMINAL                         | RECUBRIMIENTO MÍNIMO   |               | Cimentaciones: 40 mm      | VIDA ÚTIL DE LA ESTRUCTURA: 100 años |                       |
|  | Nº10 1-1/4"   |   | Δr   |               | 30 mm                     | CONTROL DE LA EJECUCIÓN NORMAL       |                       |
|  |               |   |  |               | 10 mm                     |                                      |                       |
|  |               | NOTAS   | LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |               |                           |                                      |                       |





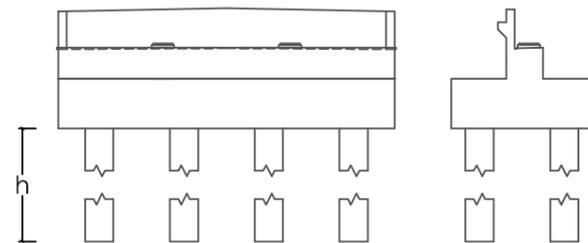
SECCIÓN DEL ENCEPADO DEL ESTRIBO 2

Cotas en metros

LONGITUD DE LOS PILOTES

E: 1/250

Cotas en metros



h es en función de la profundidad a la que se encuentre la roca sana.

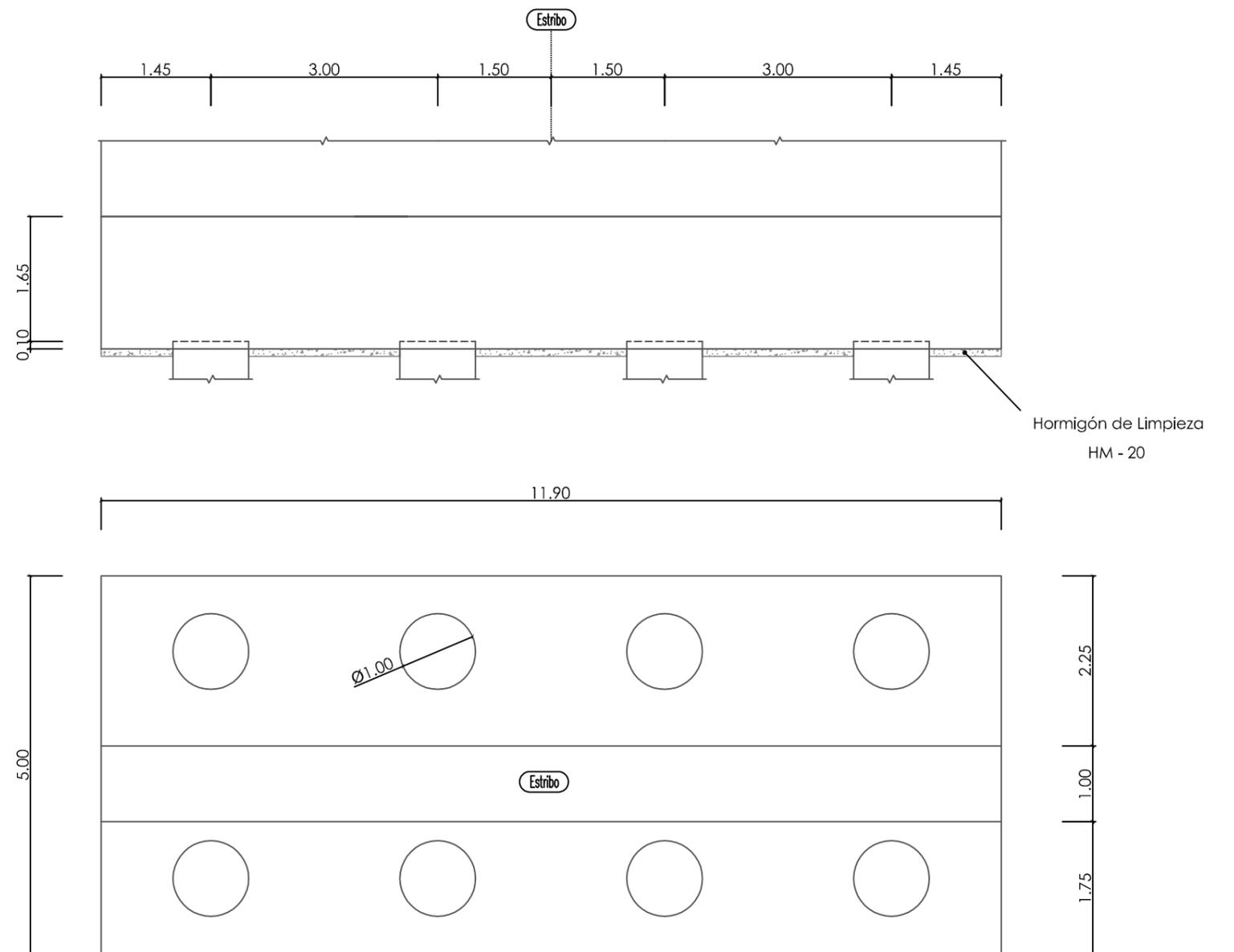
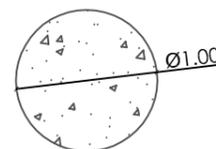
La roca deberá tener al menos la capacidad resistente de cálculo.

Cada grupo de pilotes deberán de medir la longitud suficiente como para que queden empotrados en la roca al menos 1.5Ø.

SECCIÓN DE LOS PILOTES

E: 1/50

Cotas en metros



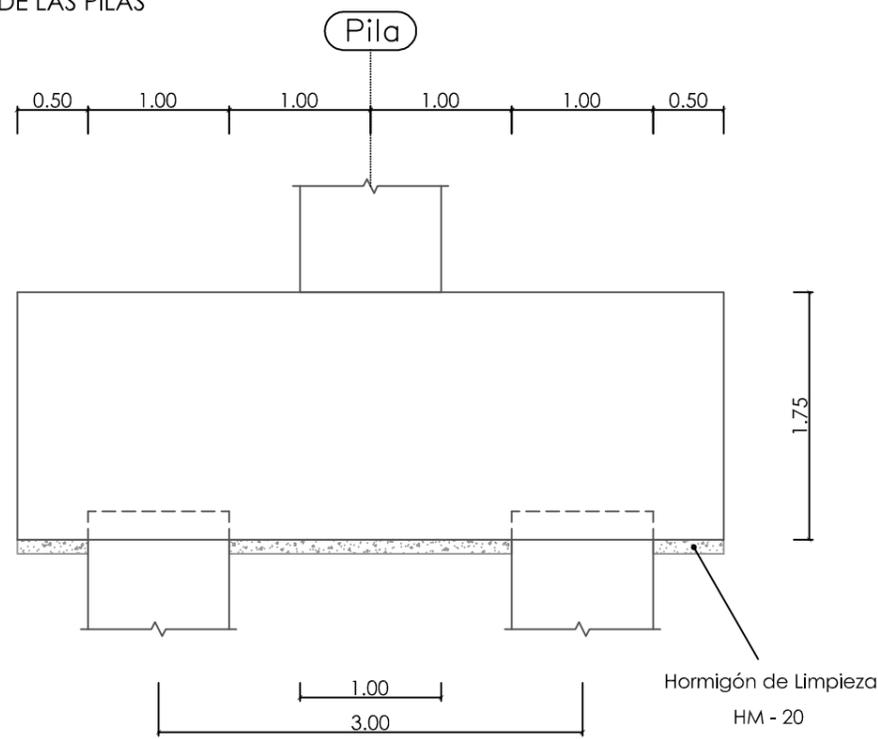
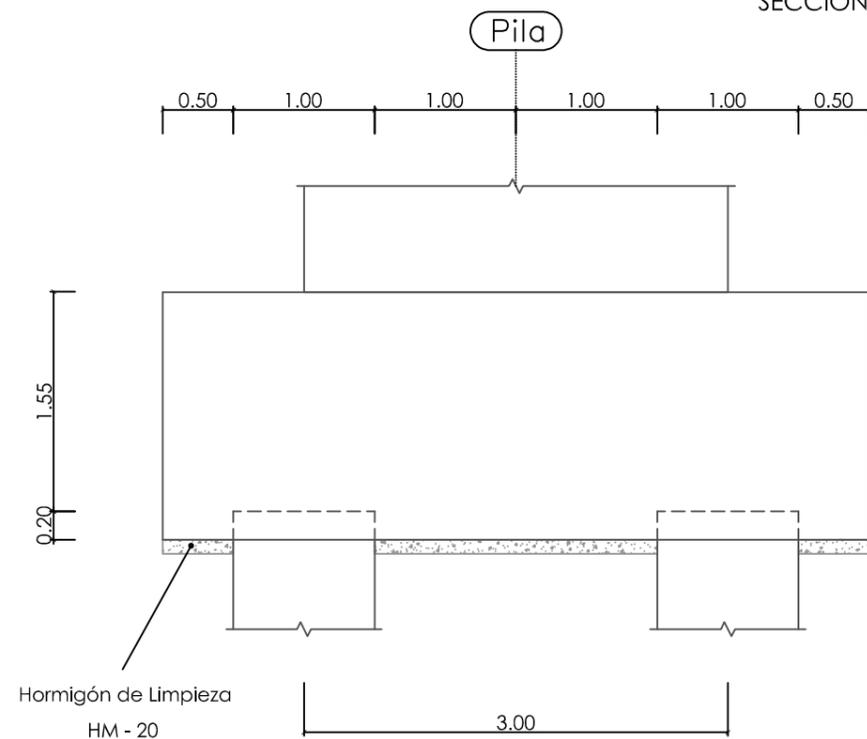
CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO

| HORMIGÓN   | LOCALIZACIÓN         | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE | fck N/mm2                 | NIVEL DE CONTROL   | COEF. DE SEGURIDAD Yc |
|--|----------------------|--|---------------------------|--|-----------------------|
|  | LIMPIEZA             |  | HM-20 / P / 25            | 20 (3000 PSI)  |                       |
| CIMENTACION  |                      | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)             | NORMAL   | 1,50                  |
|  | ALZADOS              |  | HA-30 / P / 20 / XC2      | 30 (4500 PSI)  | NORMAL                |
| ARMADURA   | TIPO                 | DESIGNACIÓN                                      | LÍMITE ELÁSTICO fyk N/mm2 | NIVEL DE CONTROL   | COEF. DE SEGURIDAD Ys |
|  | ACERO PASIVO         | B 400 S (Grado 60)                               | 400                       | NORMAL   | 1,15                  |
| RECUBRIMIENTO NOMINAL  | RECUBRIMIENTO MÍNIMO | Δr   | Cimentaciones: 40 mm      | VIDA ÚTIL DE LA ESTRUCTURA: 100 años<br>CONTROL DE LA EJECUCIÓN NORMAL |                       |
|  |                      |  | 30 mm                     |  |                       |
|  |                      |  | 10 mm                     |  |                       |
| NOTAS  |                      |  |                           |  |                       |
| LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |                      |  |                           |  |                       |

| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO |               |
|--|---------------|
| Diametros (mm)                             | Diametros (") |
| Ø12  | Nº4 1/2"      |
| Ø14  | Nº5 5/8"      |
| Ø16  | Nº6 3/4"      |
| Ø20  | Nº7 7/8"      |
| Ø25  | Nº8 1"        |
|  | Nº9 1-1/8"    |
| Ø32  | Nº10 1-1/4"   |

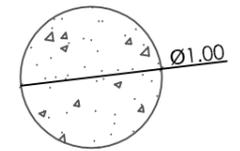
SECCIÓN DEL ENCEPADO DE LAS PILAS

Cotas en metros



SECCIÓN DE LOS PILOTES

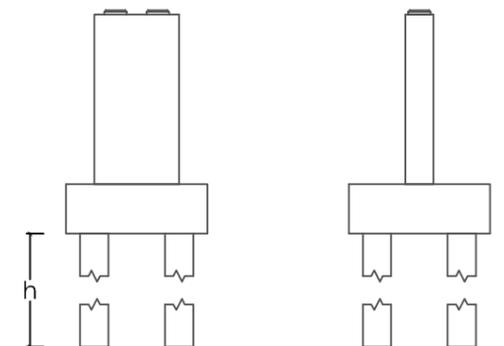
Cotas en metros



LONGITUD DE LOS PILOTES

E: 1/250

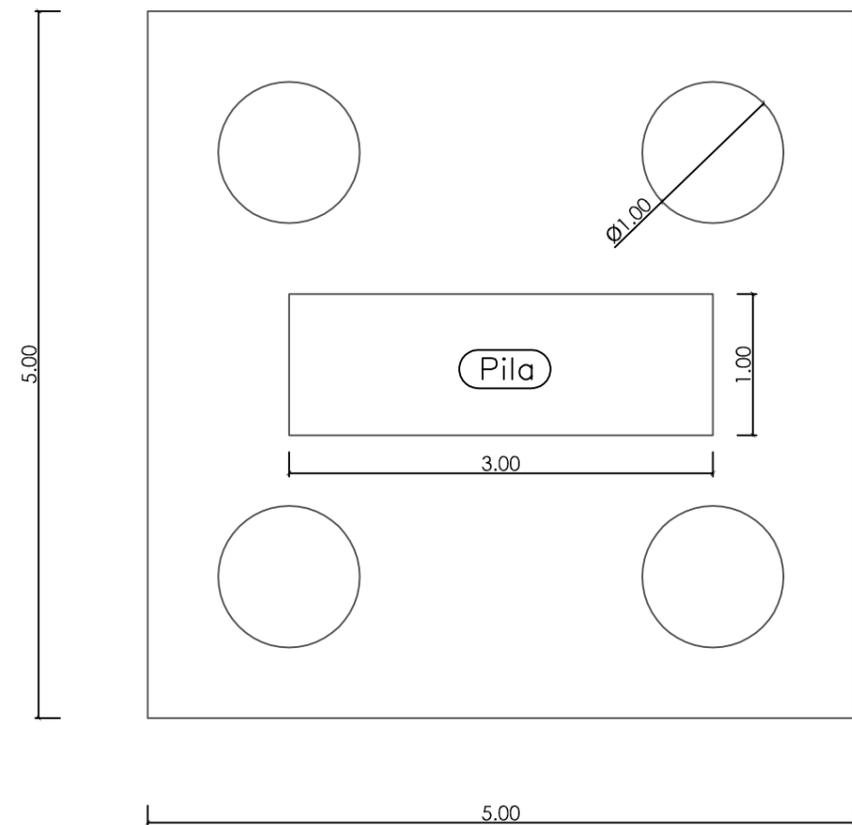
Cotas en metros



h es en función de la profundidad a la que se encuentre la roca sana en cada caso.

La roca deberá tener al menos la capacidad resistente de cálculo.

Cada grupo de pilotes deberán de medir la longitud suficiente como para que queden empotrados en la roca al menos 1,5Ø.



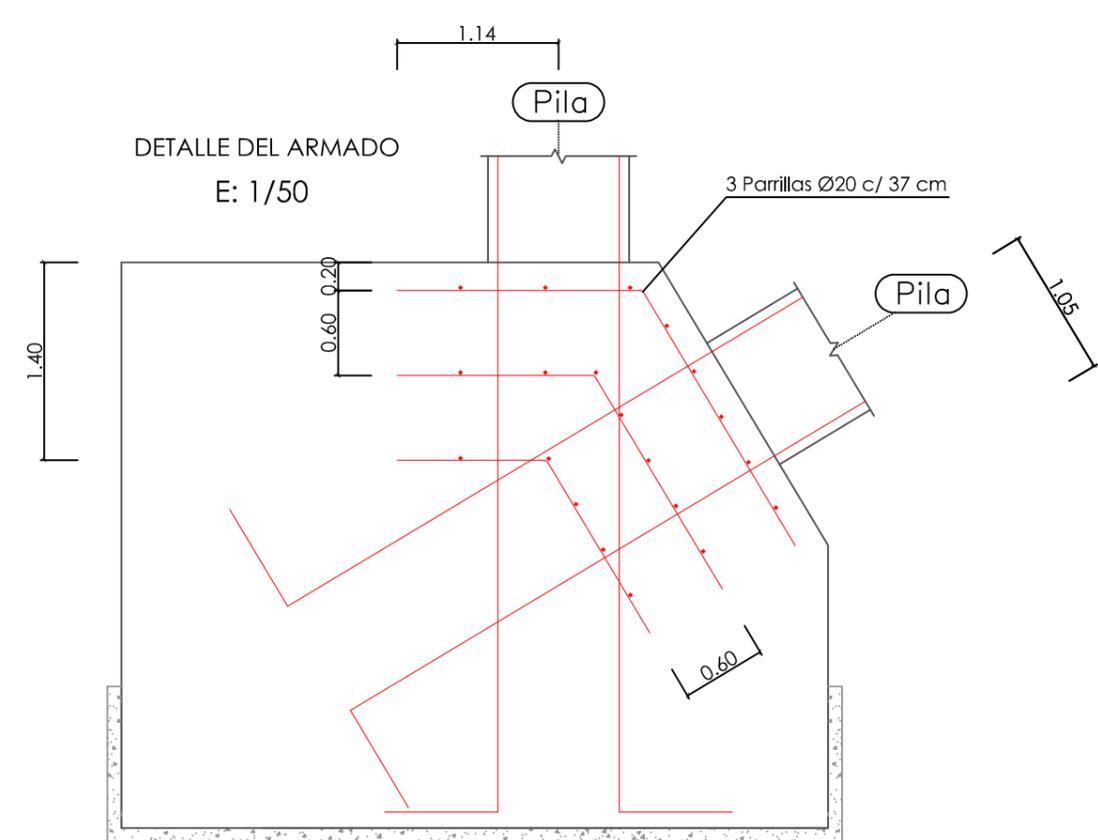
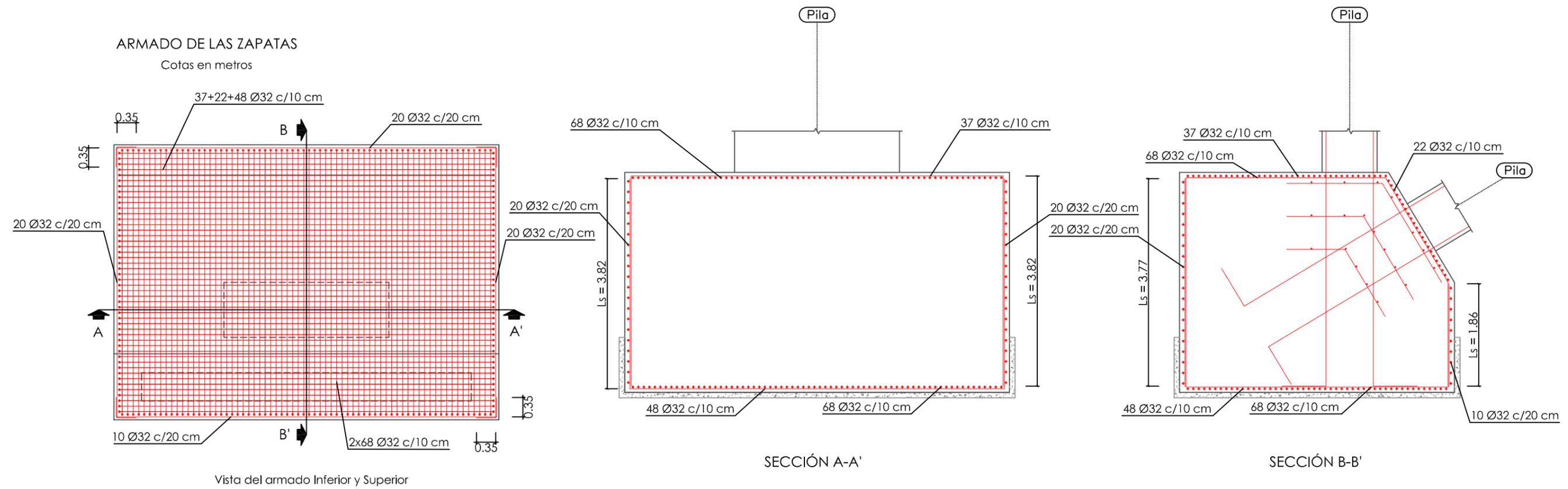
| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO |                 |
|--|-----------------|
| Diametros (mm)                             | Diametros ( " ) |
| Ø12  | Nº4 1/2"        |
| Ø14  | Nº5 5/8"        |
| Ø16  | Nº6 3/4"        |
| Ø20  | Nº7 7/8"        |
| Ø25  | Nº8 1"          |
|  | Nº9 1-1/8"      |
| Ø32  | Nº10 1-1/4"     |

CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO

| HORMIGÓN              | LOCALIZACIÓN   | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE | fck N/mm2                 | NIVEL DE CONTROL   | COEF. DE SEGURIDAD Yc |
|-----------------------|--|--|---------------------------|--|-----------------------|
| HORMIGÓN              | LIMPIEZA   | HM-20 / P / 25                                   | 20 (3000 PSI)             |  |                       |
|                       | CIMENTACION  | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)             | NORMAL   | 1,50                  |
|                       | ALZADOS  | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)             | NORMAL   | 1,50                  |
| ARMADURA              | TIPO   | DESIGNACIÓN                                      | LÍMITE ELÁSTICO fyk N/mm2 | NIVEL DE CONTROL   | COEF. DE SEGURIDAD Ys |
|                       | ACERO PASIVO   | B 400 S (Grado 60)                               | 400                       | NORMAL   | 1,15                  |
| RECUBRIMIENTO NOMINAL | RECUBRIMIENTO MÍNIMO   | Δr   | Cimentaciones: 40 mm      | VIDA ÚTIL DE LA ESTRUCTURA: 100 años<br>CONTROL DE LA EJECUCIÓN NORMAL |                       |
|                       |  |  | 30 mm                     |  |                       |
|                       |  |  | 10 mm                     |  |                       |
| NOTAS                 | LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |  |                           |  |                       |





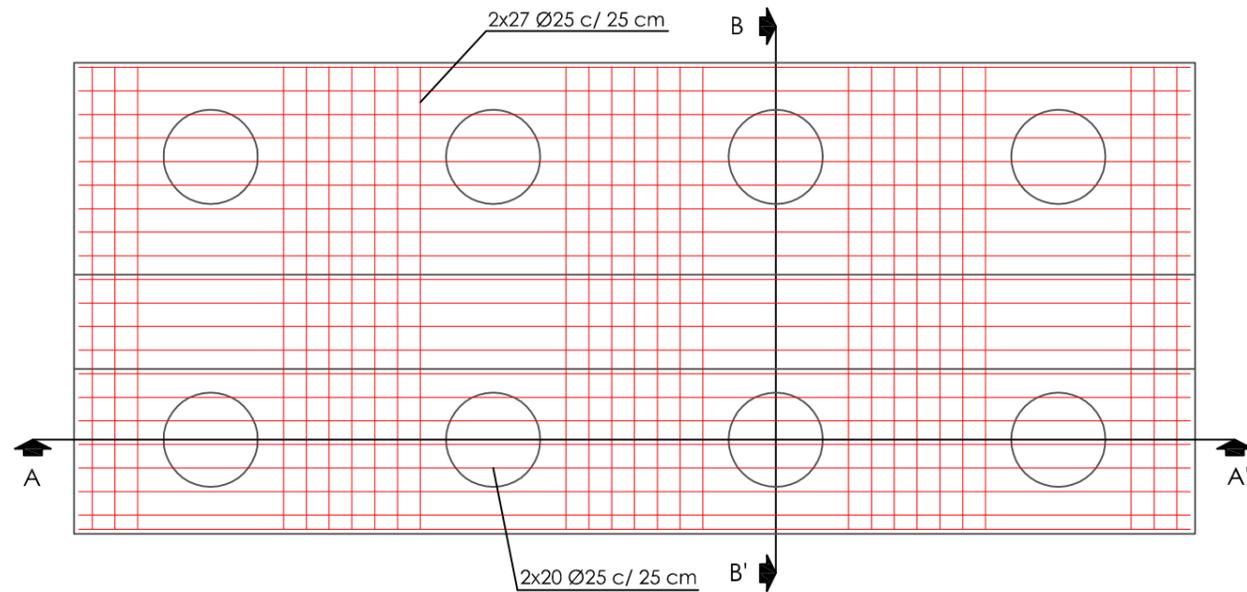


| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO |               |
|--|---------------|
| Diametros (mm)                             | Diametros (") |
| Ø12  | Nº4 1/2"      |
| Ø14  | Nº5 5/8"      |
| Ø16  | Nº6 3/4"      |
| Ø20  | Nº7 7/8"      |
| Ø25  | Nº8 1"        |
|  | Nº9 1-1/8"    |
| Ø32  | Nº10 1-1/4"   |

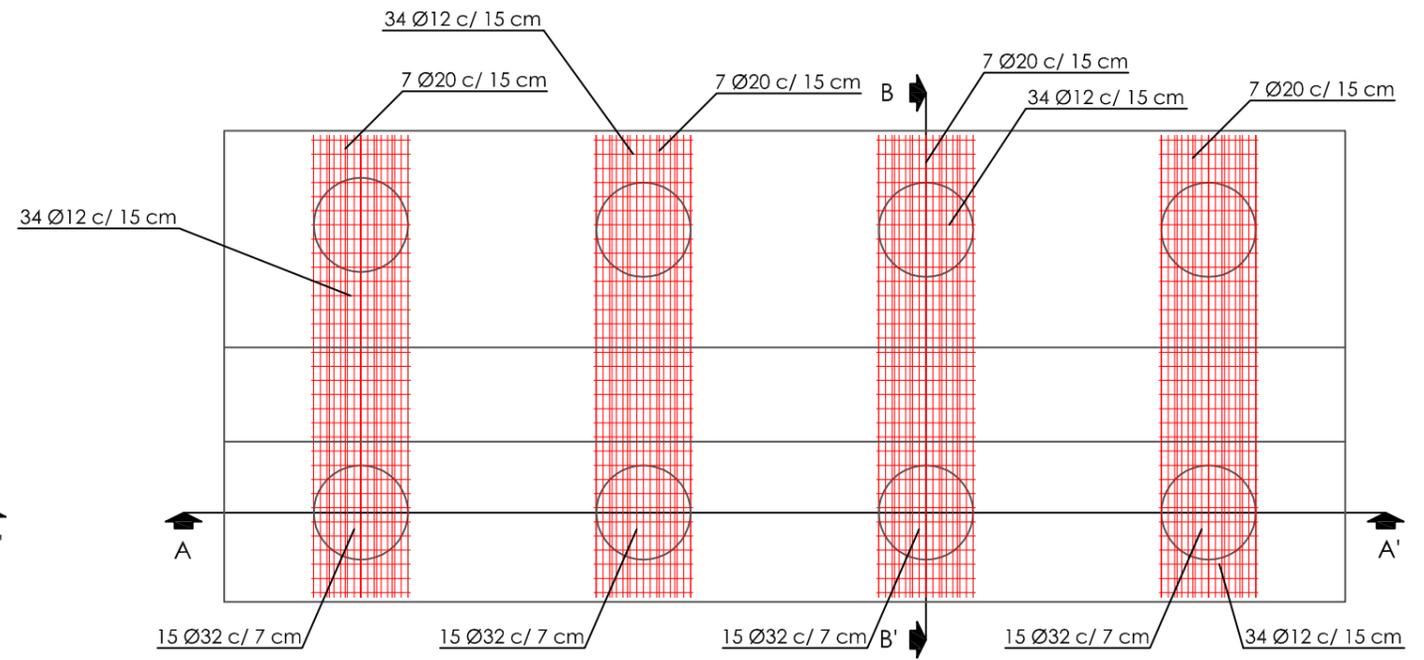
| CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO  |                      |  |  |                  |                       |
|--|----------------------|--|--|------------------|-----------------------|
| HORMIGÓN   | LOCALIZACIÓN         | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE | fck N/mm2  | NIVEL DE CONTROL | COEF. DE SEGURIDAD Yc |
|  | LIMPIEZA             | HM-20 / P / 25                                   | 20 (3000 PSI)  |                  |                       |
|  | CIMENTACION          | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)  | NORMAL           | 1,50                  |
| ARMADURA   | ALZADOS              | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)  | NORMAL           | 1,50                  |
|  | TIPO                 | DESIGNACIÓN                                      | LÍMITE ELÁSTICO fyk N/mm2  | NIVEL DE CONTROL | COEF. DE SEGURIDAD Ys |
|  | ACERO PASIVO         | B 400 S (Grado 60)                               | 400  | NORMAL           | 1,15                  |
| RECUBRIMIENTO NOMINAL  | RECUBRIMIENTO MÍNIMO | Cimentaciones: 40 mm                             | VIDA ÚTIL DE LA ESTRUCTURA: 100 años<br>CONTROL DE LA EJECUCIÓN NORMAL |                  |                       |
|  |                      | 30 mm  |  |                  |                       |
|  | Δr                   | 10 mm  |  |                  |                       |
| NOTAS LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |                      |  |  |                  |                       |

### ARMADO DEL ENCEPADO DEL ESTRIBO 2

Cotas en metros

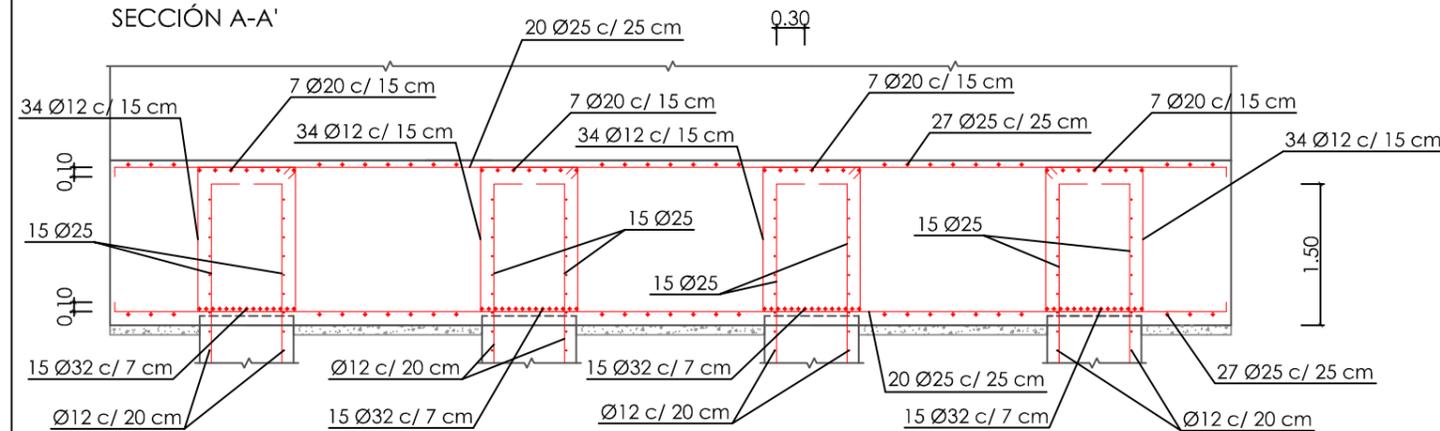


Vista del armado Inferior y Superior

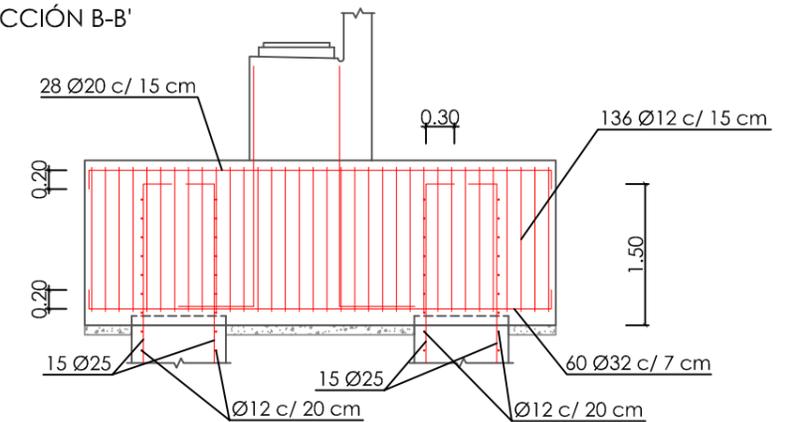


Viga de atado de los pilotes paralela a Y

### SECCIÓN A-A'

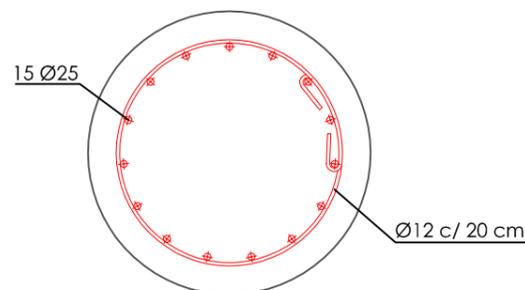


### SECCIÓN B-B'

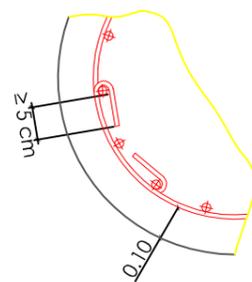


### SECCIÓN DE LOS PILOTES

E: 1/25



DETALLE  
E: 1/20

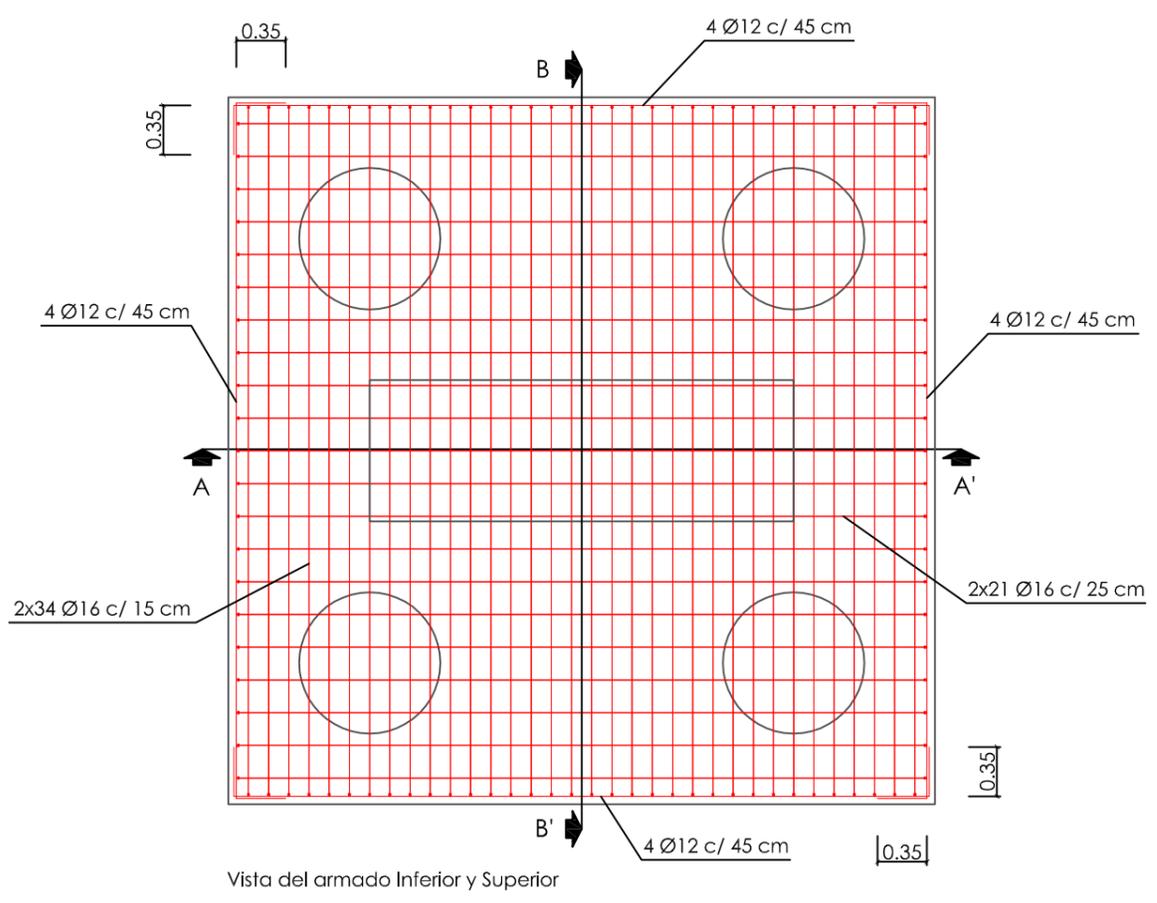
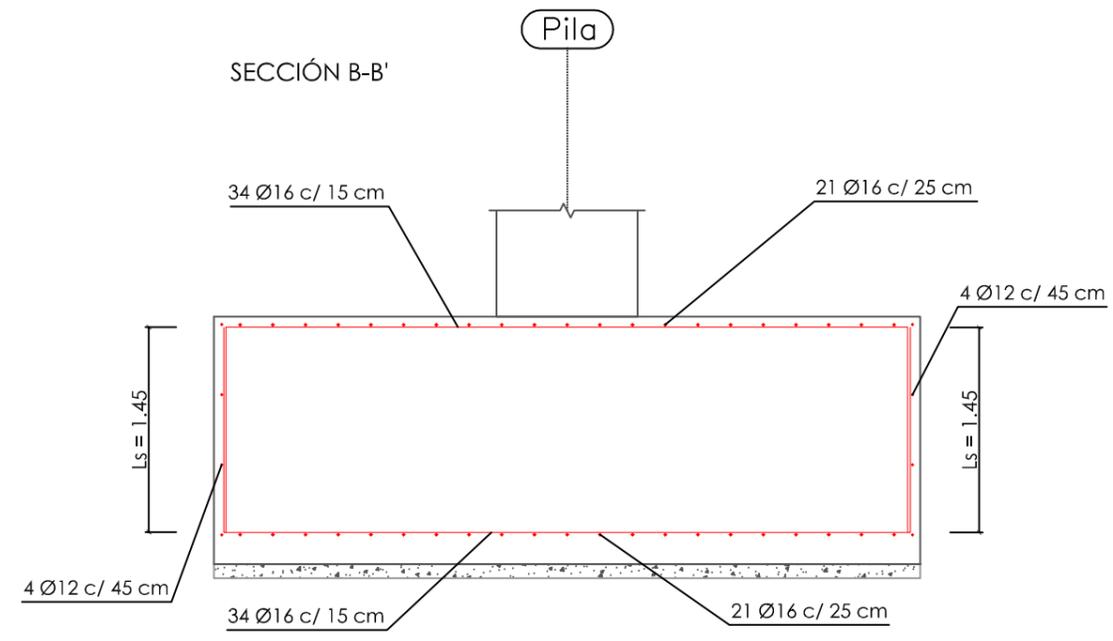
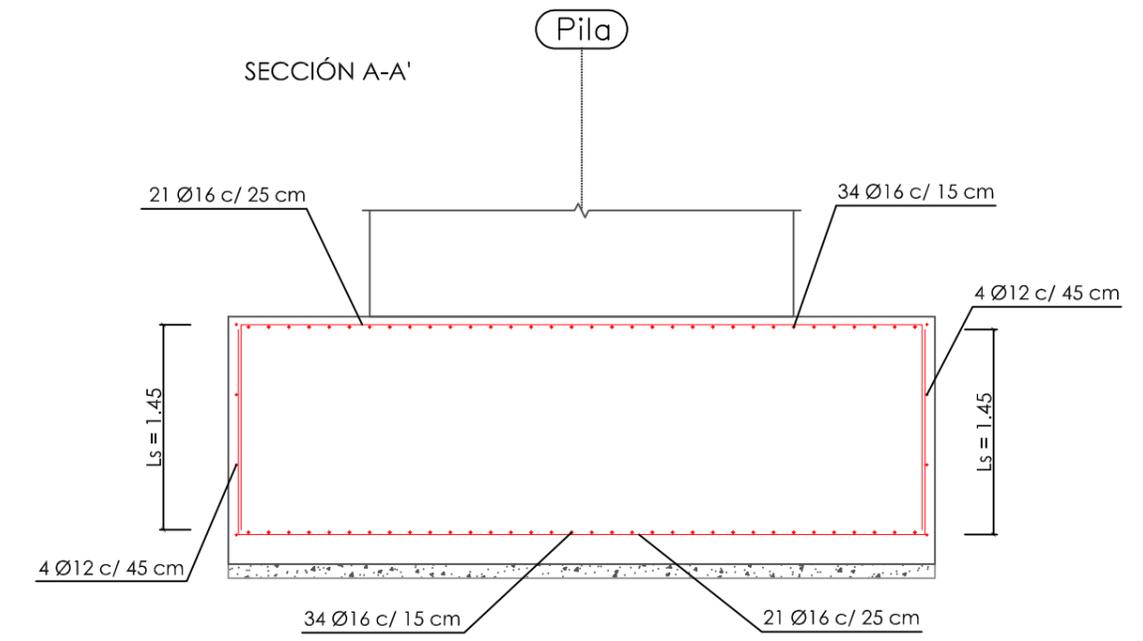


| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO |               |
|--|---------------|
| Diametros (mm)                             | Diametros (") |
| Ø12  | Nº4 1/2"      |
| Ø14  | Nº5 5/8"      |
| Ø16  | Nº6 3/4"      |
| Ø20  | Nº7 7/8"      |
| Ø25  | Nº8 1"        |
|  | Nº9 1-1/8"    |
| Ø32  | Nº10 1-1/4"   |

### CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO

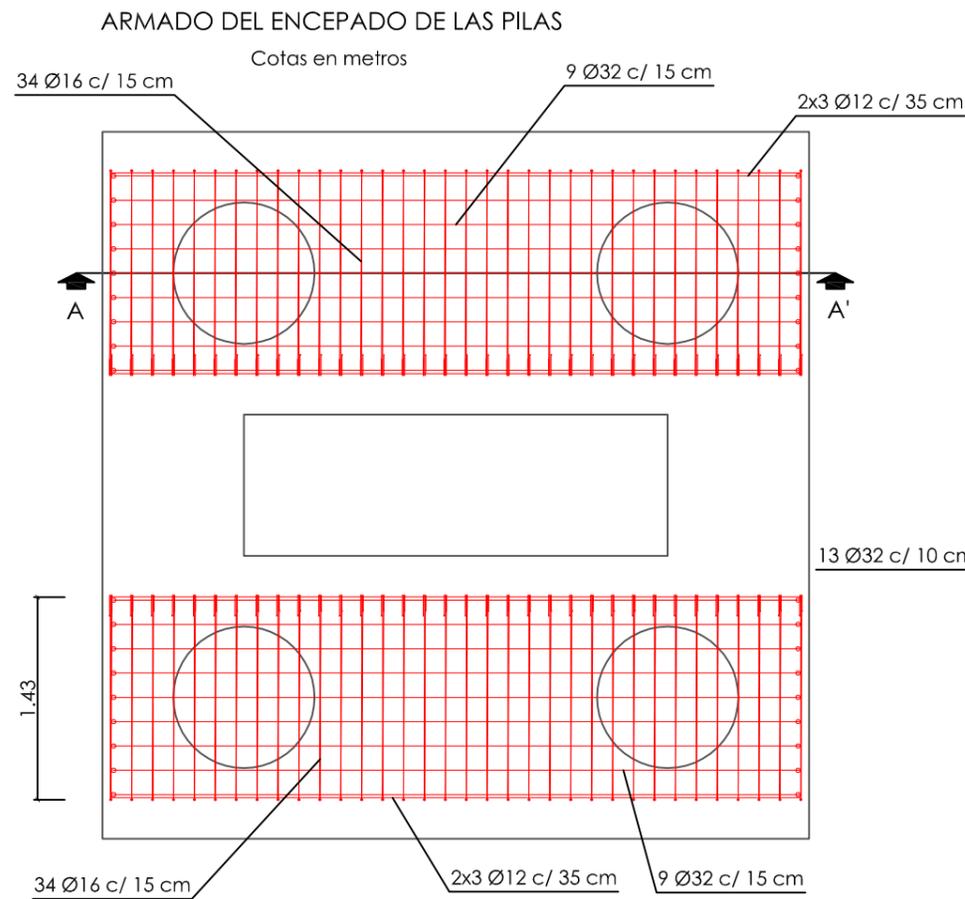
| HORMIGÓN               | LOCALIZACIÓN | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE | fck N/mm2  | NIVEL DE CONTROL | COEF. DE SEGURIDAD Yc |
|------------------------|--------------|--|--|------------------|-----------------------|
|                        | LIMPIEZA     | HM-20 / P / 25                                   | 20 (3000 PSI)  |                  |                       |
| ARMADURA               | CIMENTACION  | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)  | NORMAL           | 1,50                  |
|                        | ALZADOS      | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)  | NORMAL           | 1,50                  |
| RECURBRIMIENTO NOMINAL | TIPO         | DESIGNACIÓN                                      | LÍMITE ELÁSTICO fyk N/mm2  | NIVEL DE CONTROL | COEF. DE SEGURIDAD Ys |
|                        | ACERO PASIVO | B 400 S (Grado 60)                               | 400  | NORMAL           | 1,15                  |
| NOTAS                  |              |  | LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |                  |                       |

ARMADO DEL ENCEPADO DE LAS PILAS  
Cotas en metros

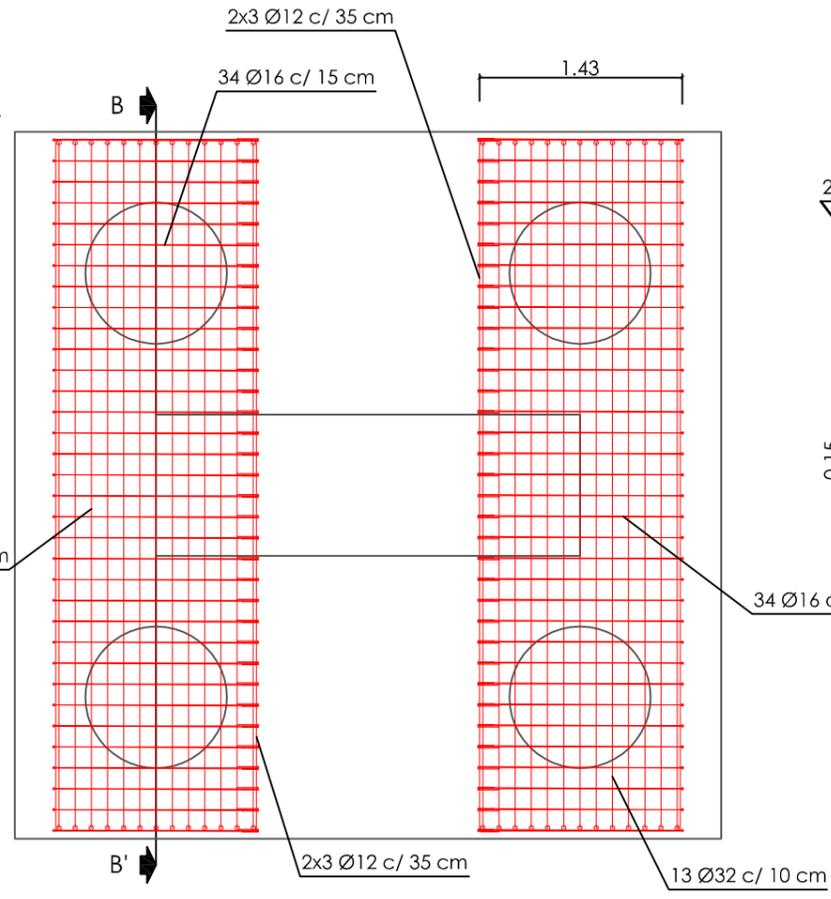


| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO |               |
|--|---------------|
| Diametros (mm)                             | Diametros (") |
| Ø12  | Nº4 1/2"      |
| Ø14  | Nº5 5/8"      |
| Ø16  | Nº6 3/4"      |
| Ø20  | Nº7 7/8"      |
| Ø25  | Nº8 1"        |
|  | Nº9 1-1/8"    |
| Ø32  | Nº10 1-1/4"   |

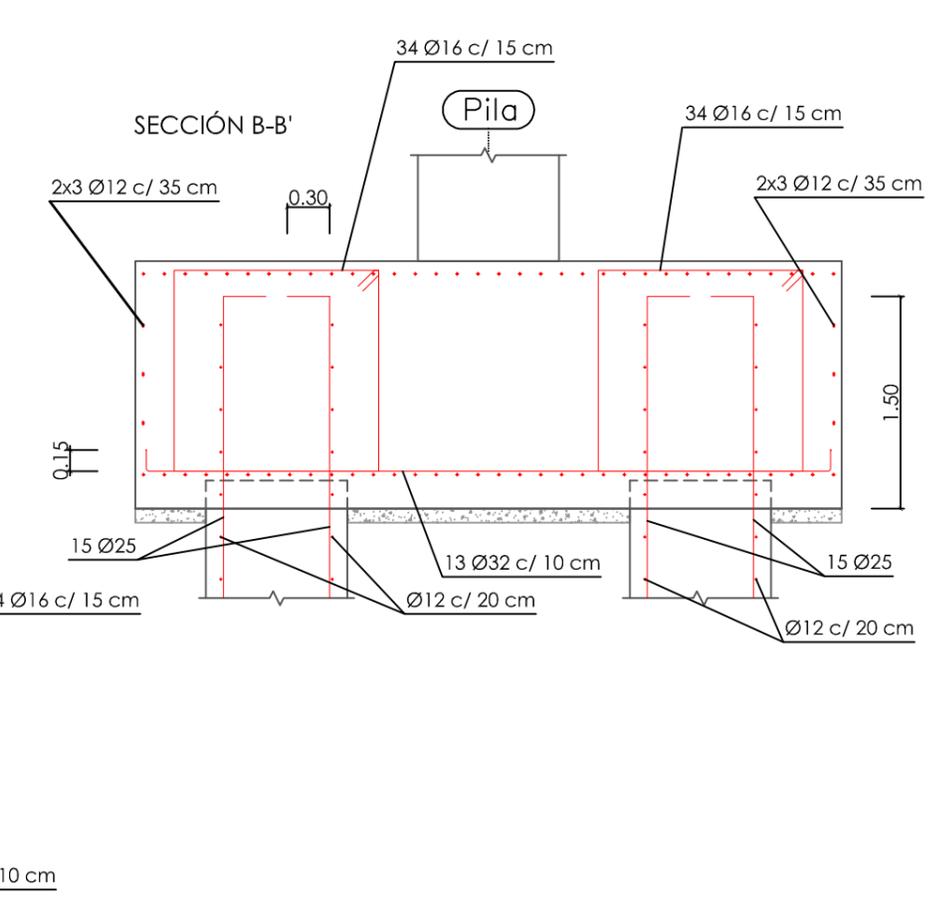
| CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO |                      |  |                           |  |                               |
|---|----------------------|--|---------------------------|--|-------------------------------|
| HORMIGÓN                                      | LOCALIZACIÓN         | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE   | fck N/mm2                 | NIVEL DE CONTROL   | COEF. DE SEGURIDAD $\gamma_c$ |
|   | LIMPIEZA             | HM-20 / P / 25   | 20 (3000 PSI)             |  |                               |
|   | CIMENTACION          | HA-30 / P / 20 / XC2   | 30 (4500 PSI)             | NORMAL   | 1,50                          |
|   | ALZADOS              | HA-30 / P / 20 / XC2   | 30 (4500 PSI)             | NORMAL   | 1,50                          |
| ARMADURA                                      | TIPO                 | DESIGNACIÓN  | LÍMITE ELÁSTICO fyk N/mm2 | NIVEL DE CONTROL   | COEF. DE SEGURIDAD $\gamma_s$ |
|   | ACERO PASIVO         | B 400 S (Grado 60)   | 400                       | NORMAL   | 1,15                          |
| RECUBRIMIENTO NOMINAL                         | RECUBRIMIENTO MÍNIMO |  | Cimentaciones: 40 mm      | VIDA ÚTIL DE LA ESTRUCTURA: 100 años<br>CONTROL DE LA EJECUCIÓN NORMAL |                               |
|   |                      |  | 30 mm                     |  |                               |
|   |                      | $\Delta r$   | 10 mm                     |  |                               |
| NOTAS   |                      | LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |                           |  |                               |



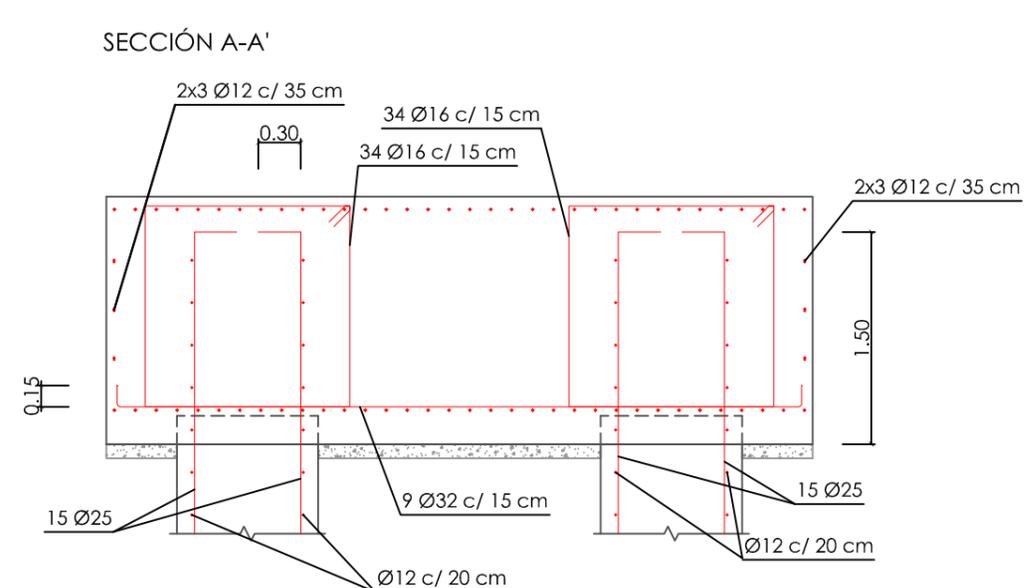
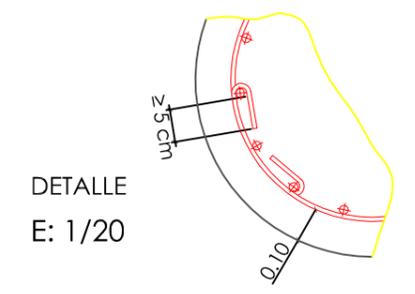
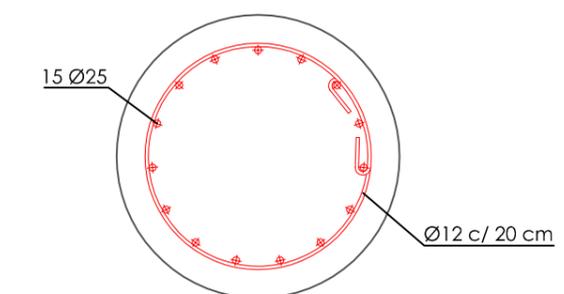
Viga de atado de los pilotes paralela a X



Viga de atado de los pilotes paralela a Y



SECCIÓN DE LOS PILOTES  
E: 1/25

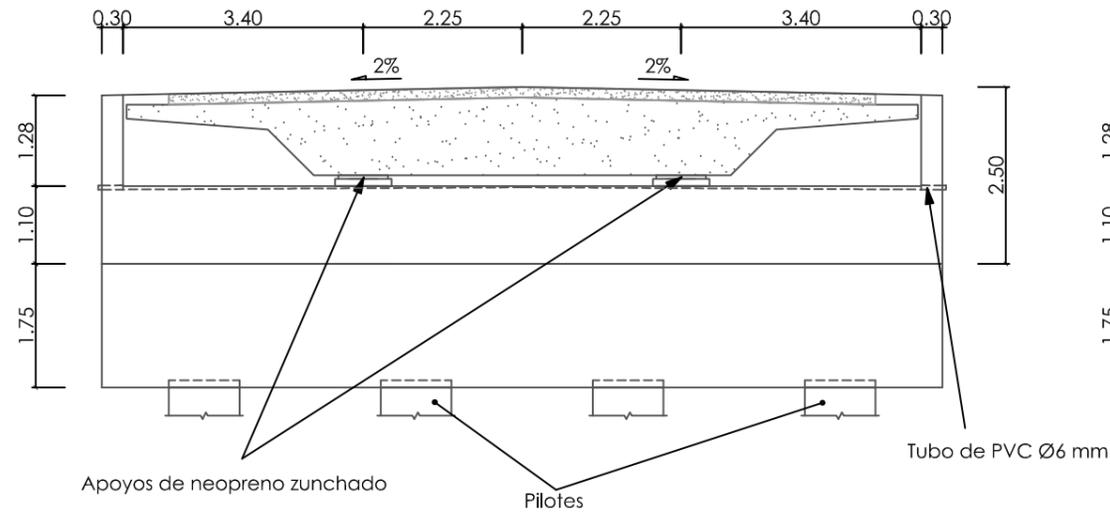


| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO |               |
|--|---------------|
| Diametros (mm)                             | Diametros (") |
| Ø12  | Nº4 1/2"      |
| Ø14  | Nº5 5/8"      |
| Ø16  | Nº6 3/4"      |
| Ø20  | Nº7 7/8"      |
| Ø25  | Nº8 1"        |
|  | Nº9 1-1/8"    |
| Ø32  | Nº10 1-1/4"   |

| CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO |  |  |                           |                                      |                  |                       |
|---|--|--|---------------------------|--------------------------------------|------------------|-----------------------|
| HORMIGÓN                                      | LOCALIZACIÓN   | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE |                           | fck N/mm2                            | NIVEL DE CONTROL | COEF. DE SEGURIDAD Yc |
|   | LIMPIEZA   | HM-20 / P / 25                                   |                           | 20 (3000 PSI)                        |                  |                       |
|   | CIMENTACION  | HA-30 / P / 20 / XC2                             |                           | 30 (4500 PSI)                        | NORMAL           | 1,50                  |
| ARMADURA                                      | ALZADOS  | HA-30 / P / 20 / XC2                             |                           | 30 (4500 PSI)                        | NORMAL           | 1,50                  |
|   | TIPO   | DESIGNACIÓN                                      | LÍMITE ELÁSTICO fyk N/mm2 |                                      | NIVEL DE CONTROL | COEF. DE SEGURIDAD Ys |
| RECUBRIMIENTO NOMINAL                         | ACERO PASIVO   | B 400 S (Grado 60)                               | 400                       |                                      | NORMAL           | 1,15                  |
|   |  | RECUBRIMIENTO MÍNIMO                             | Cimentaciones: 40 mm      | VIDA ÚTIL DE LA ESTRUCTURA: 100 años |                  |                       |
|   |  | Δr   | 30 mm                     |                                      |                  |                       |
|   |  | 10 mm  |                           |                                      |                  |                       |
| NOTAS   | LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |  |                           |                                      |                  |                       |

SECCIÓN DEL ESTRIBO 2

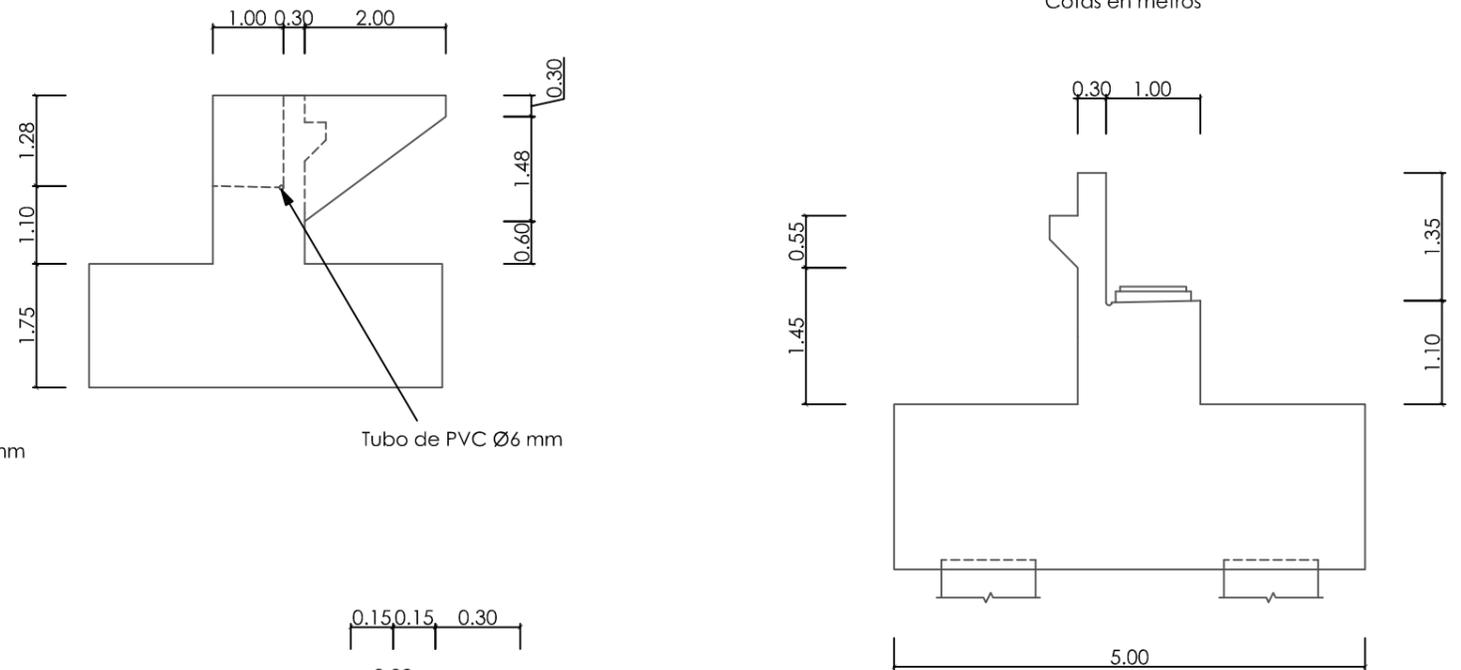
Cotas en metros



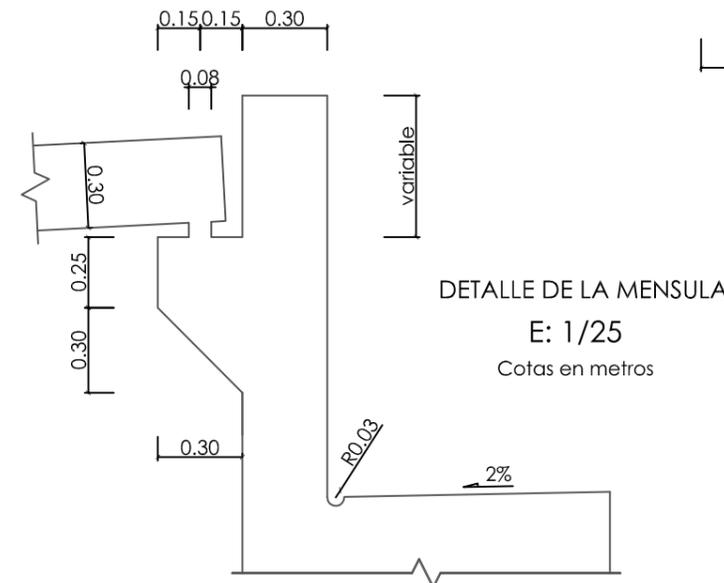
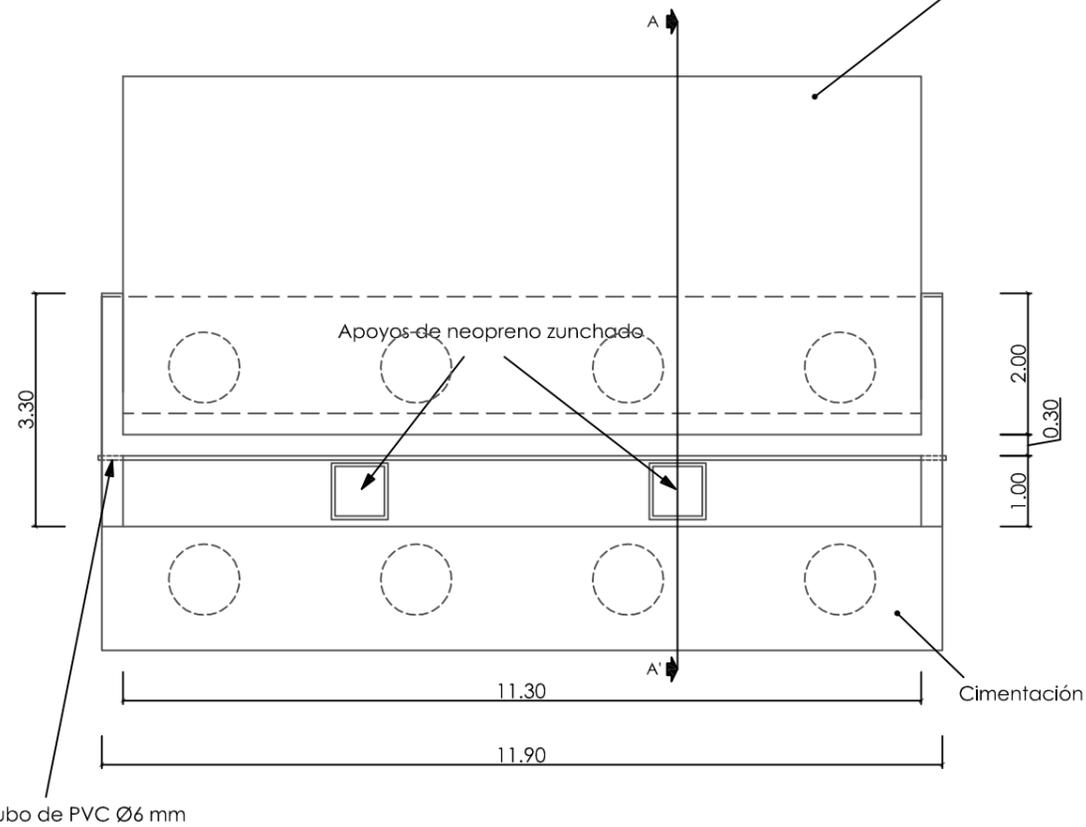
SECCIÓN DEL CORTE A-A'

E: 1/75

Cotas en metros



Losa de transición



DETALLE DE LA MENSULA

E: 1/25

Cotas en metros

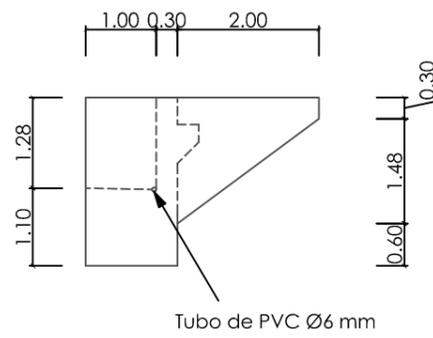
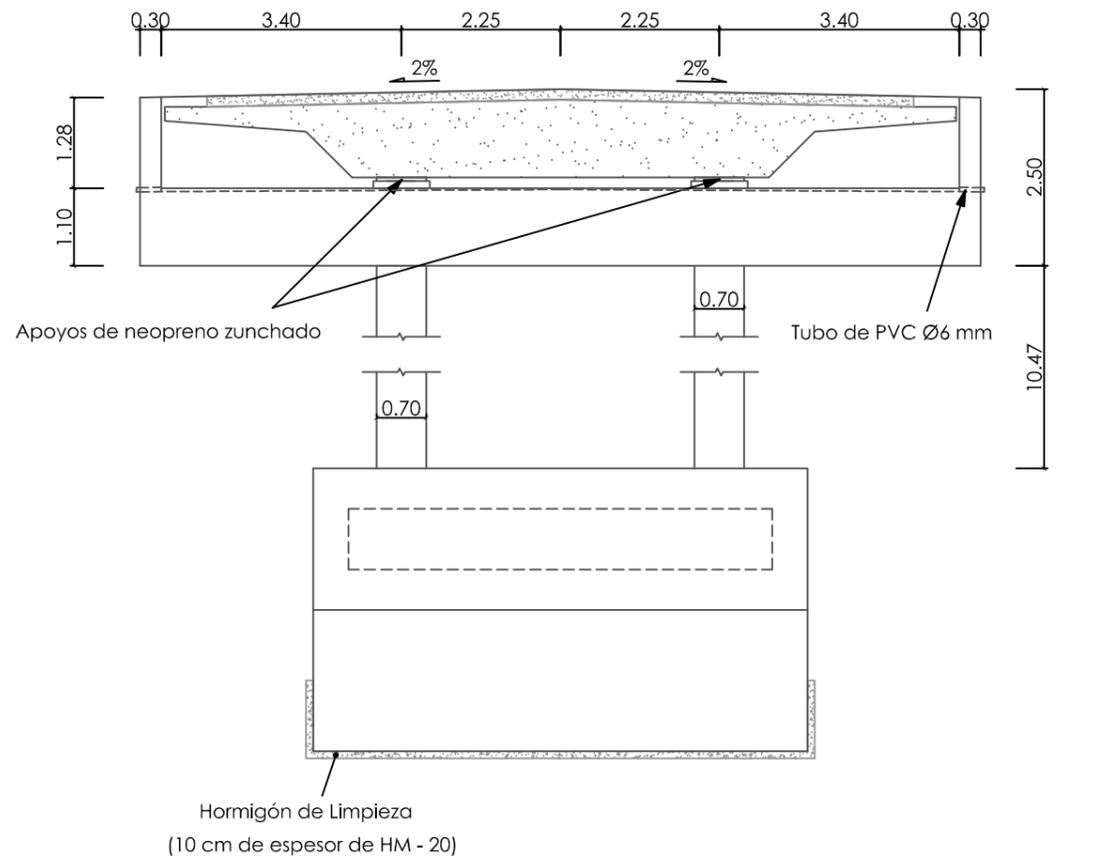
CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO

| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO |               | LOCALIZACIÓN   | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE | fck N/mm2                 | NIVEL DE CONTROL   | COEF. DE SEGURIDAD Yc |
|--|---------------|--|--|---------------------------|--|-----------------------|
| Diametros (mm)                             | Diametros (") | LIMPIEZA   | HM-20 / P / 25                                   | 20 (3000 PSI)             |  |                       |
| Ø12  | Nº4 1/2"      | CIMENTACION  | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)             | NORMAL   | 1.50                  |
| Ø14  | Nº5 5/8"      | ALZADOS  | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)             | NORMAL   | 1.50                  |
| Ø16  | Nº6 3/4"      | TIPO   | DESIGNACIÓN                                      | LÍMITE ELÁSTICO fyk N/mm2 | NIVEL DE CONTROL   | COEF. DE SEGURIDAD Ys |
| Ø20  | Nº7 7/8"      | ACERO PASIVO   | B 400 S (Grado 60)                               | 400                       | NORMAL   | 1.15                  |
| Ø25  | Nº8 1"        | RECUBRIMIENTO NOMINAL  | RECUBRIMIENTO MÍNIMO                             | Cimentaciones: 40 mm      | VIDA ÚTIL DE LA ESTRUCTURA: 100 años<br>CONTROL DE LA EJECUCIÓN NORMAL |                       |
|  | Nº9 1-1/8"    |  | Δr   | 30 mm                     |  |                       |
| Ø32  | Nº10 1-1/4"   |  |  | 10 mm                     |  |                       |
| NOTAS                                      |               | LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |  |                           |  |                       |



### SECCIÓN DEL ESTRIBO 1

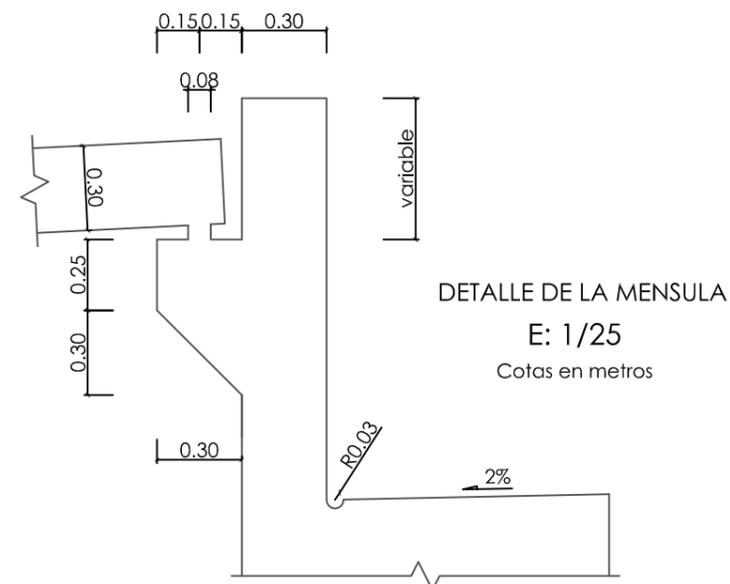
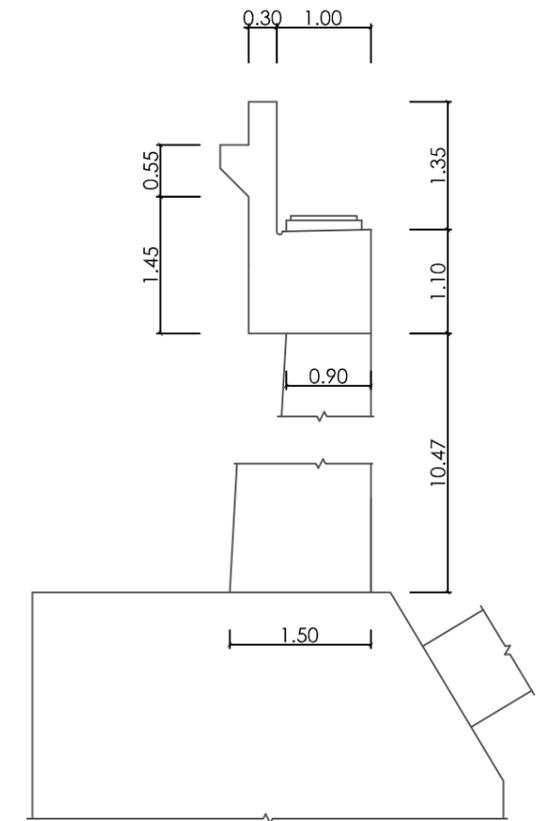
Cotas en metros



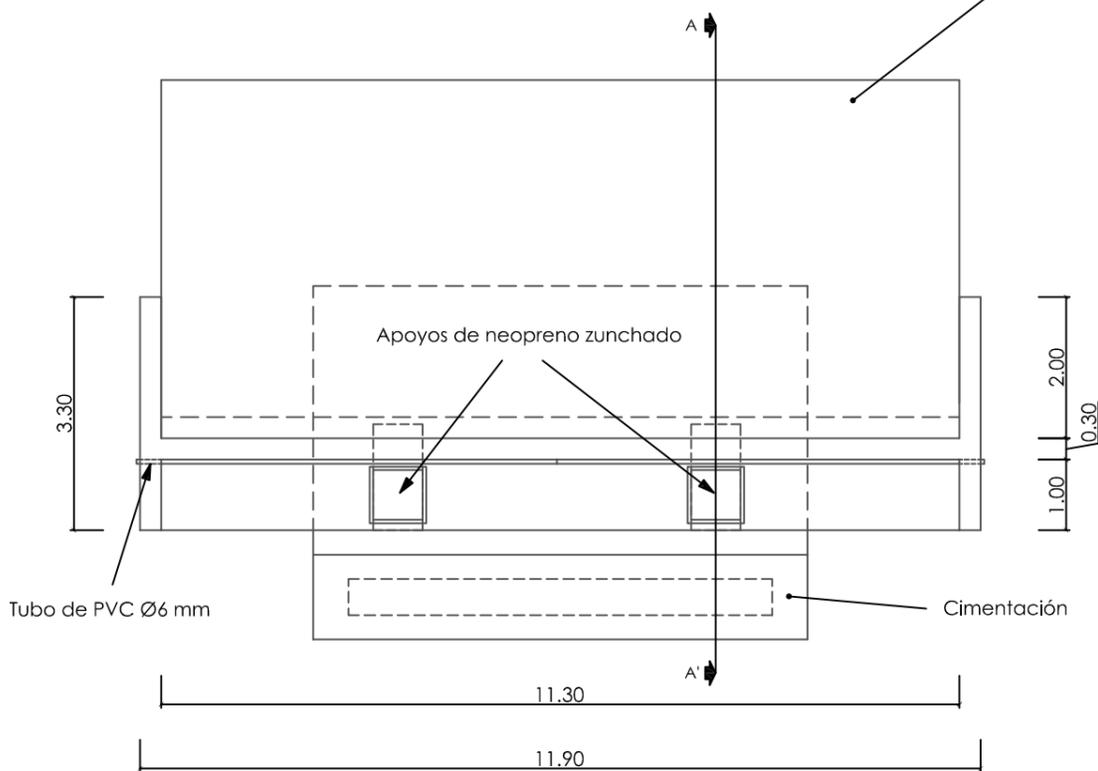
### SECCIÓN DEL CORTE A-A'

E: 1/75

Cotas en metros



Losa de transición

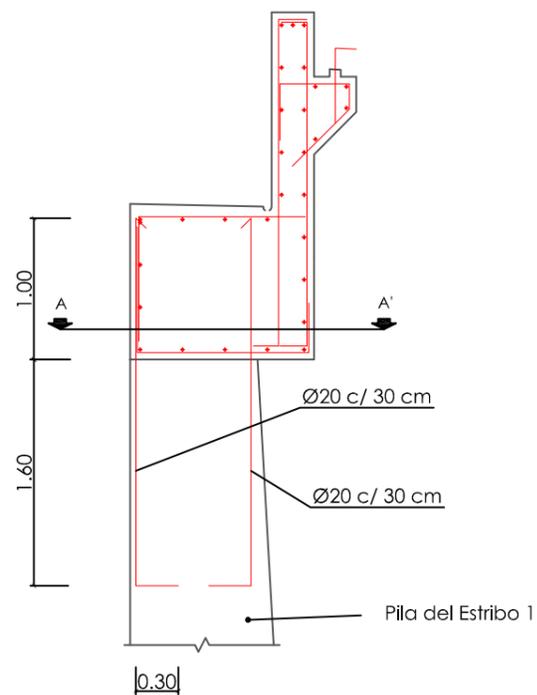


### CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO

| HORMIGÓN              | LOCALIZACIÓN         | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE   |                           | fck N/mm2  | NIVEL DE CONTROL | COEF. DE SEGURIDAD Yc |
|-----------------------|----------------------|--|---------------------------|--|------------------|-----------------------|
|                       | LIMPIEZA             | HM-20 / P / 25   |                           | 20 (3000 PSI)  |                  |                       |
| CIMENTACION           | HA-30 / P / 20 / XC2 |  | 30 (4500 PSI)             | NORMAL   | 1.50             |                       |
|                       | ALZADOS              |  | 30 (4500 PSI)             | NORMAL   | 1.50             |                       |
| ARMADURA              | TIPO                 | DESIGNACIÓN  | LÍMITE ELÁSTICO fyk N/mm2 |  | NIVEL DE CONTROL | COEF. DE SEGURIDAD Ys |
|                       | ACERO PASIVO         | B 400 S (Grado 60)   | 400                       |  | NORMAL           | 1.15                  |
| RECUBRIMIENTO NOMINAL | RECUBRIMIENTO MÍNIMO | Cimentaciones: 40 mm   |                           | VIDA ÚTIL DE LA ESTRUCTURA: 100 años<br>CONTROL DE LA EJECUCIÓN NORMAL |                  |                       |
|                       |                      | 30 mm  |                           |  |                  |                       |
|                       |                      | 10 mm  |                           |  |                  |                       |
| NOTAS                 |                      | LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |                           |  |                  |                       |

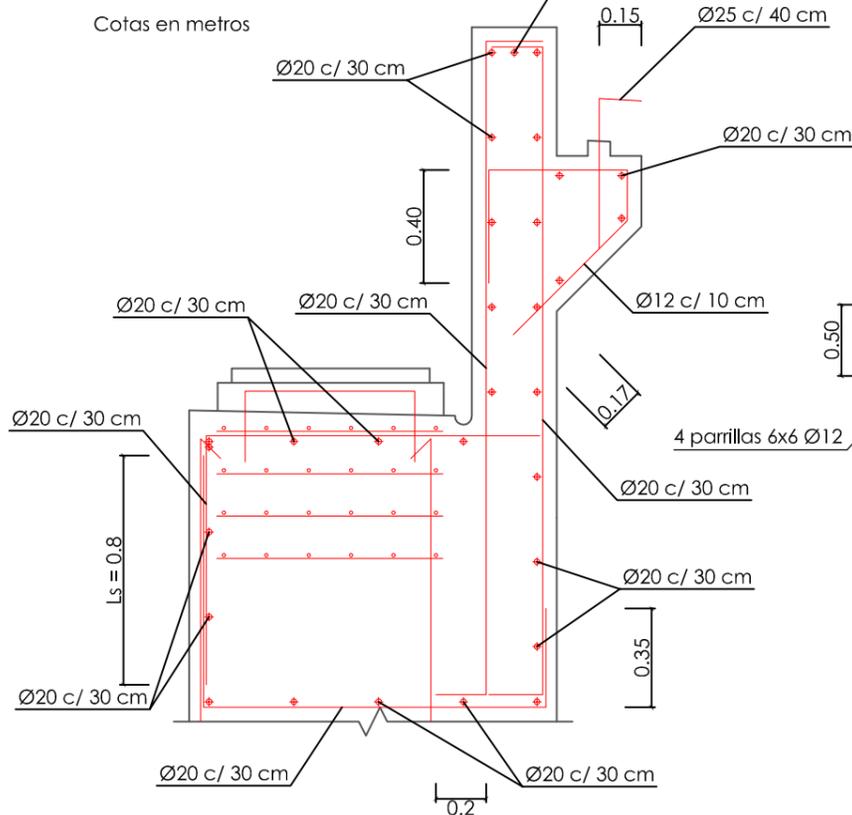


SECCIÓN TRANSVERSAL DEL ESTRIBO 1  
E: 1/50

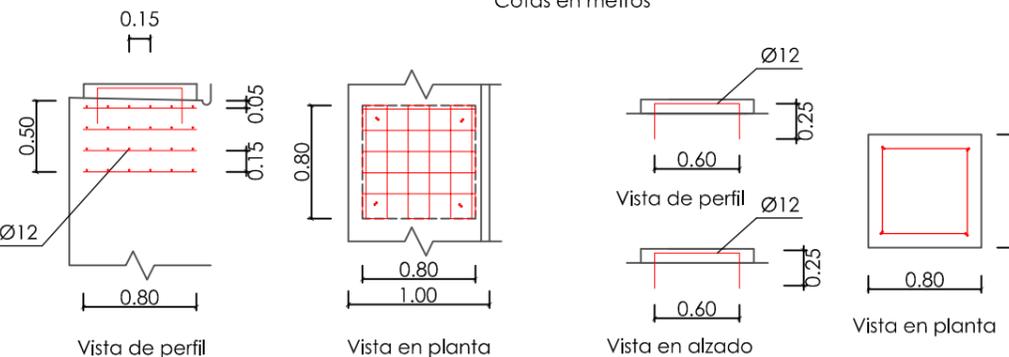


El armado de ambos estribos se detalla en la sección transversal en apoyos

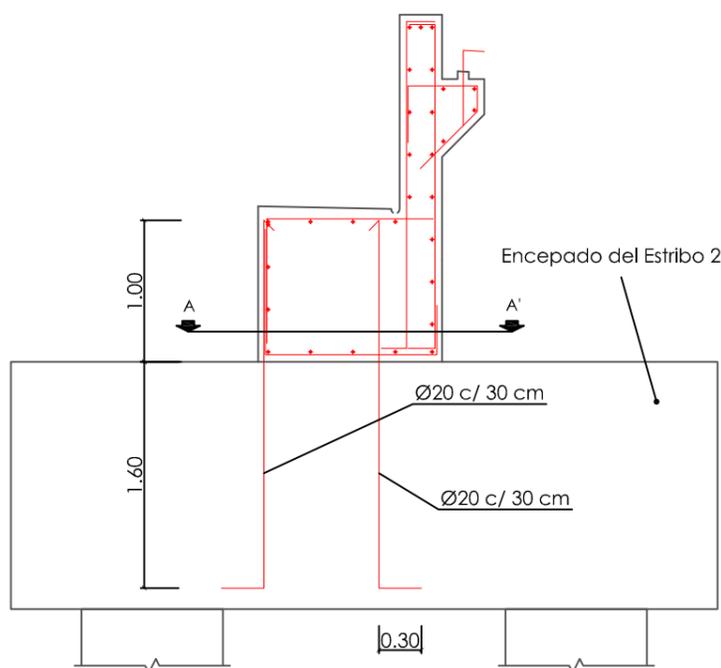
SECCIÓN TRANSVERSAL EN APOYOS  
E: 1/25



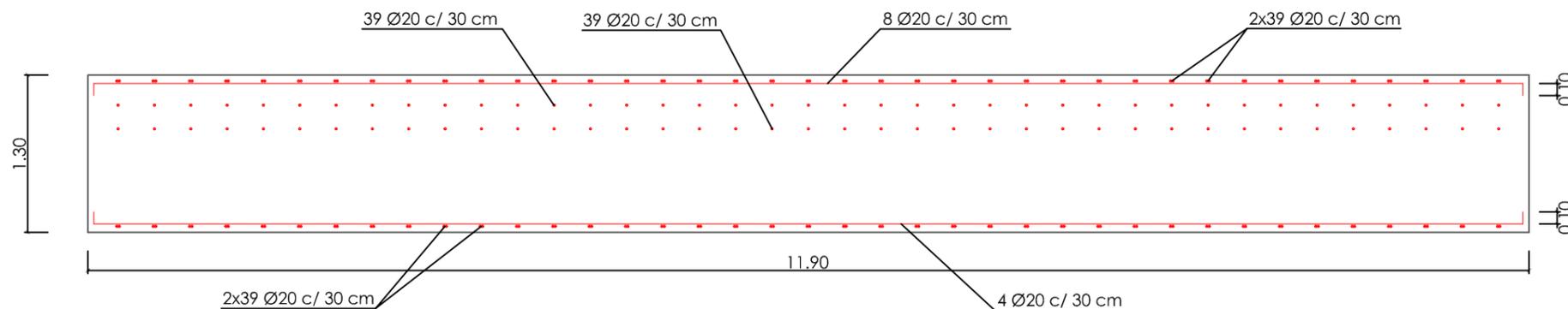
ARMADO EN APOYOS  
E: 1/50



SECCIÓN A-A'  
E: 1/50



SECCIÓN TRANSVERSAL DEL ESTRIBO 2  
E: 1/50



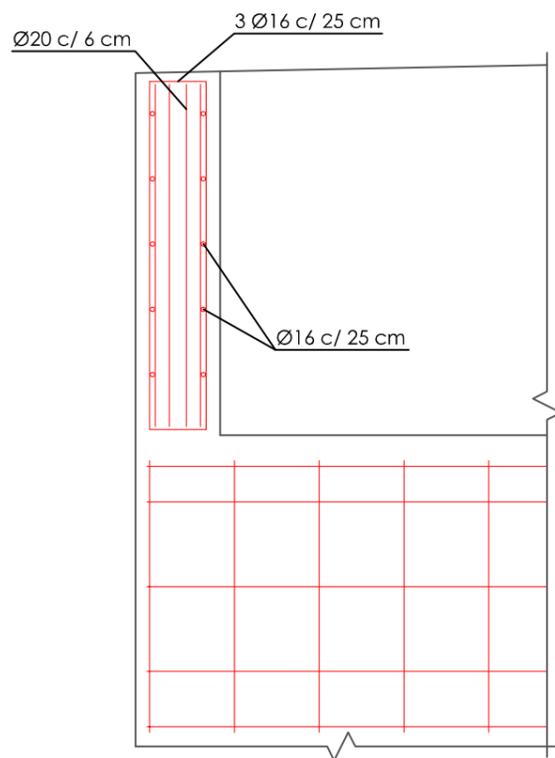
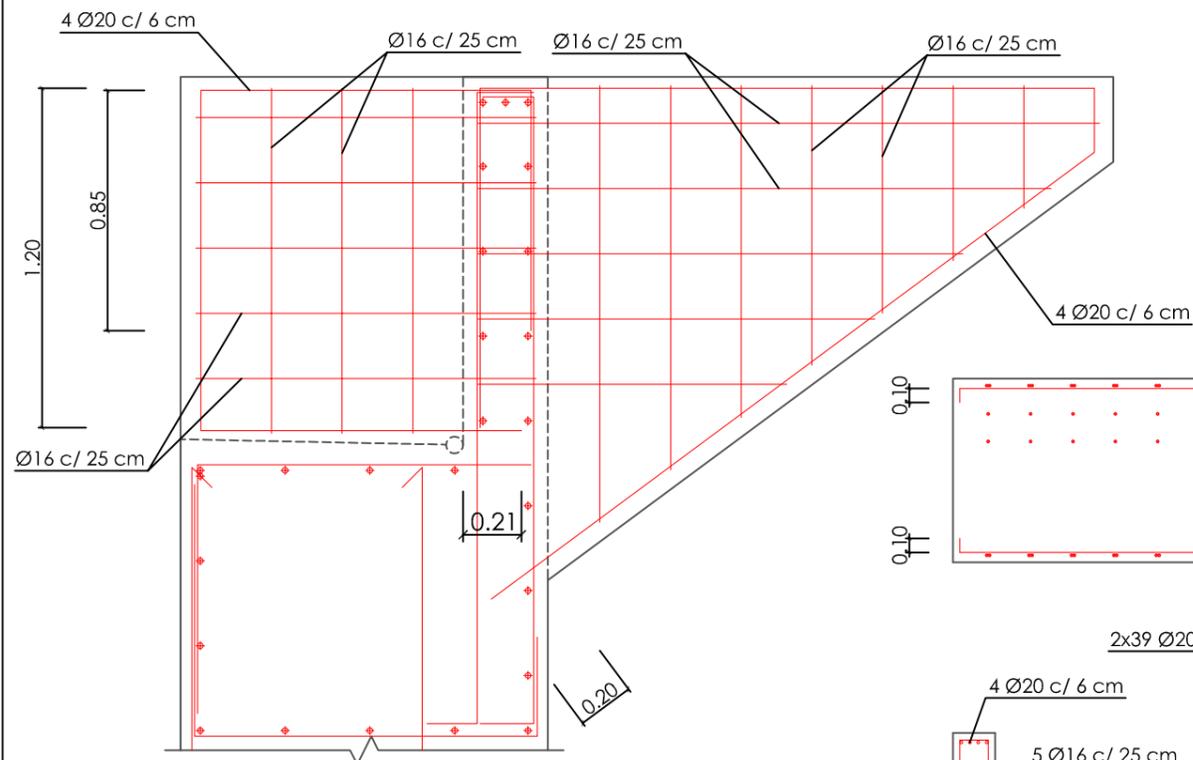
CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO

| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO |               |
|--|---------------|
| Diametros (mm)                             | Diametros (") |
| Ø12  | Nº4 1/2"      |
| Ø14  | Nº5 5/8"      |
| Ø16  | Nº6 3/4"      |
| Ø20  | Nº7 7/8"      |
| Ø25  | Nº8 1"        |
|  | Nº9 1-1/8"    |
| Ø32  | Nº10 1-1/4"   |

| HORMIGÓN   | LOCALIZACIÓN         | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE | fck N/mm2  | NIVEL DE CONTROL | COEF. DE SEGURIDAD Yc |
|--|----------------------|--|--|------------------|-----------------------|
|  | LIMPIEZA             |  | HM-20 / P / 25   | 20 (3000 PSI)    |                       |
| CIMENTACION  |                      | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)  | NORMAL           | 1,50                  |
|  | ALZADOS              |  | 30 (4500 PSI)  | NORMAL           | 1,50                  |
| ARMADURA   | TIPO                 | DESIGNACIÓN                                      | LÍMITE ELÁSTICO fyk N/mm2  | NIVEL DE CONTROL | COEF. DE SEGURIDAD Ys |
|  | ACERO PASIVO         | B 400 S (Grado 60)                               | 400  | NORMAL           | 1,15                  |
| RECUBRIMIENTO NOMINAL  | RECUBRIMIENTO MÍNIMO | Cimentaciones: 40 mm                             | VIDA ÚTIL DE LA ESTRUCTURA: 100 años<br>CONTROL DE LA EJECUCIÓN NORMAL |                  |                       |
|  |                      | 30 mm  |  |                  |                       |
|  |                      | Δr<br>10 mm                                      |  |                  |                       |
| NOTAS  |                      |  |  |                  |                       |
| LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |                      |  |  |                  |                       |

ARMADO DE ALETAS DEL ESTRIBO

E: 1/25

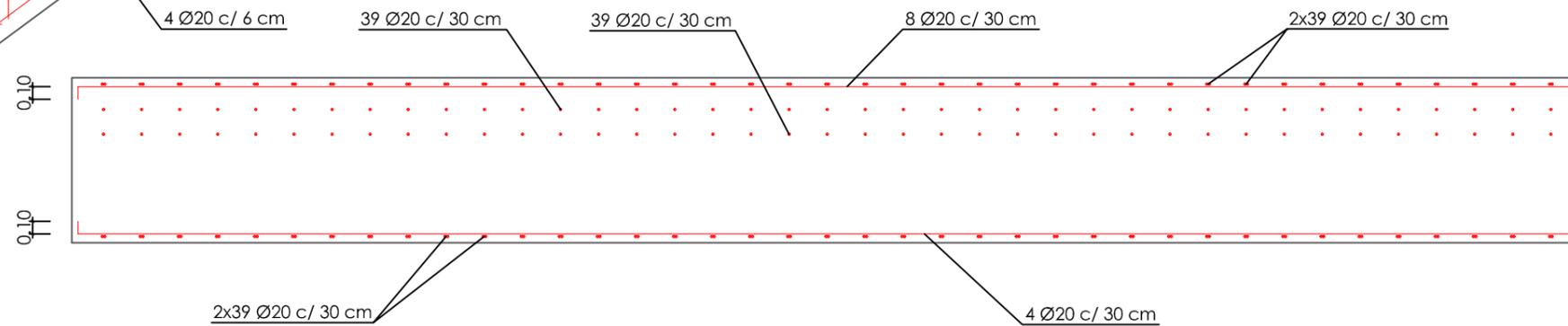


ARMADO PARRILLA INTRASDOS DEL ESTRIBO

E: 1/25

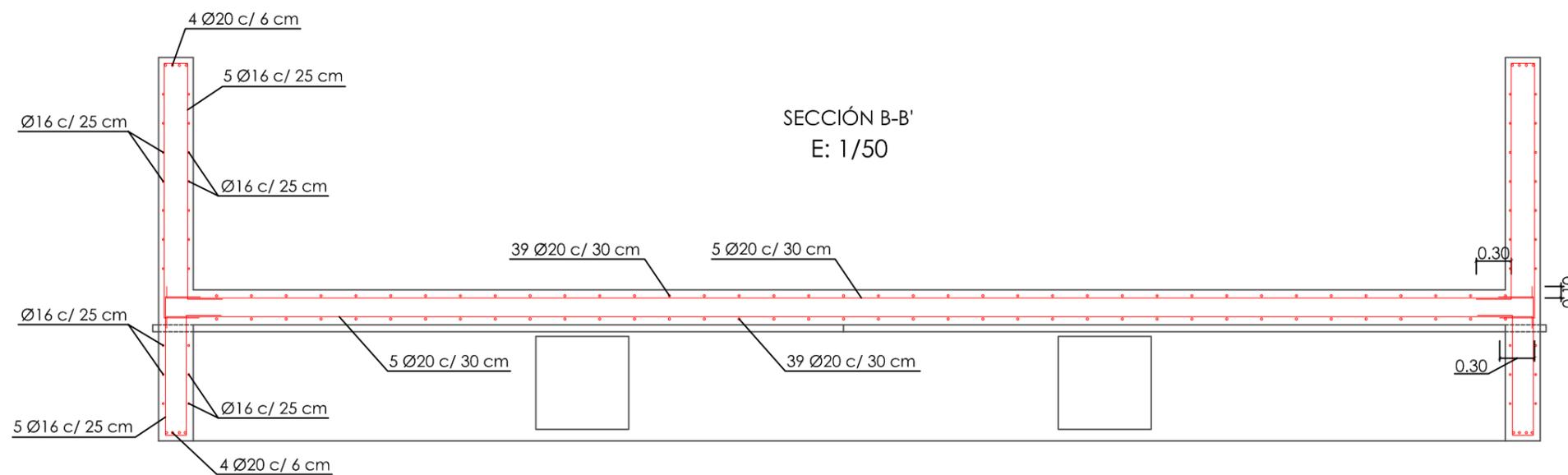
SECCIÓN A-A'

E: 1/50



SECCIÓN B-B'

E: 1/50



CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO

| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO |               |
|--|---------------|
| Diametros (mm)                             | Diametros (") |
| Ø12  | Nº4 1/2"      |
| Ø14  | Nº5 5/8"      |
| Ø16  | Nº6 3/4"      |
| Ø20  | Nº7 7/8"      |
| Ø25  | Nº8 1"        |
|  | Nº9 1-1/8"    |
| Ø32  | Nº10 1-1/4"   |

| HORMIGÓN              | LOCALIZACIÓN         | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE   | fck N/mm2                 | NIVEL DE CONTROL   | COEF. DE SEGURIDAD Yc |
|-----------------------|----------------------|--|---------------------------|--|-----------------------|
| HORMIGÓN              | LIMPIEZA             | HM-20 / P / 25   | 20 (3000 PSI)             |  |                       |
|                       | CIMENTACION          | HA-30 / P / 20 / XC2   | 30 (4500 PSI)             | NORMAL   | 1,50                  |
|                       | ALZADOS              | HA-30 / P / 20 / XC2   | 30 (4500 PSI)             | NORMAL   | 1,50                  |
| ARMADURA              | TIPO                 | DESIGNACIÓN  | LÍMITE ELÁSTICO fyk N/mm2 | NIVEL DE CONTROL   | COEF. DE SEGURIDAD Ys |
|                       | ACERO PASIVO         | B 400 S (Grado 60)   | 400                       | NORMAL   | 1,15                  |
| RECUBRIMIENTO NOMINAL | RECUBRIMIENTO MÍNIMO | Δr   | Cimentaciones: 40 mm      | VIDA ÚTIL DE LA ESTRUCTURA: 100 años<br>CONTROL DE LA EJECUCIÓN NORMAL |                       |
|                       |                      |  | 30 mm                     |  |                       |
|                       |                      |  | 10 mm                     |  |                       |
| NOTAS                 |                      | LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |                           |  |                       |

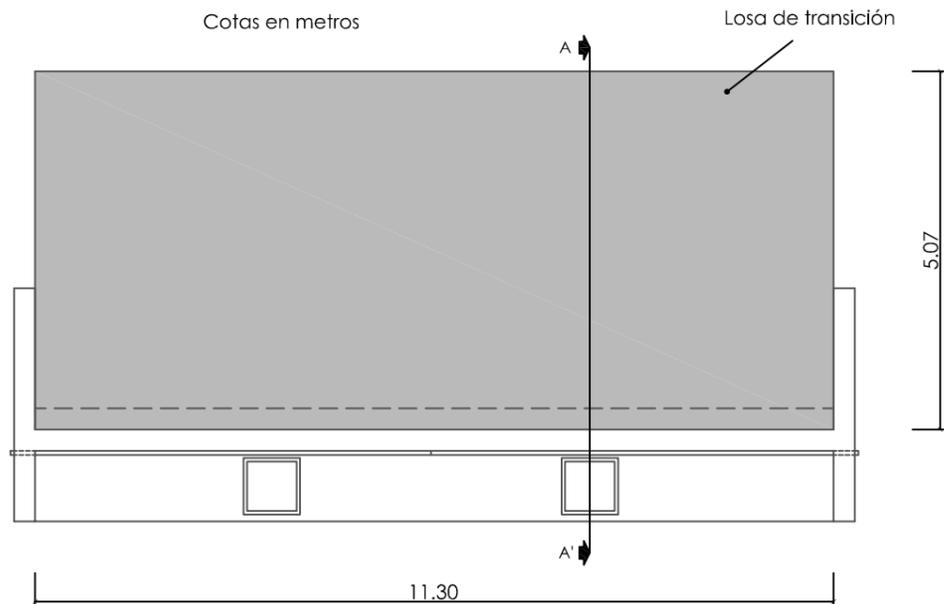




PLANTA DE LA LOSA DE TRANSICIÓN

E: 1/100

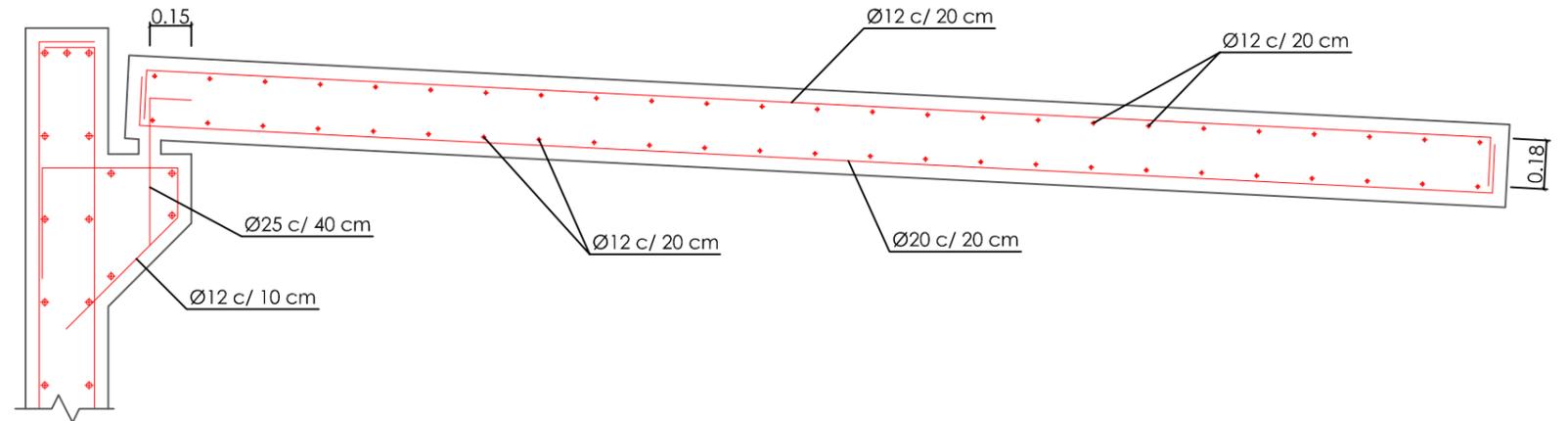
Cotas en metros



ARMADO DE LA LOSA DE TRANSICIÓN

E: 1/25

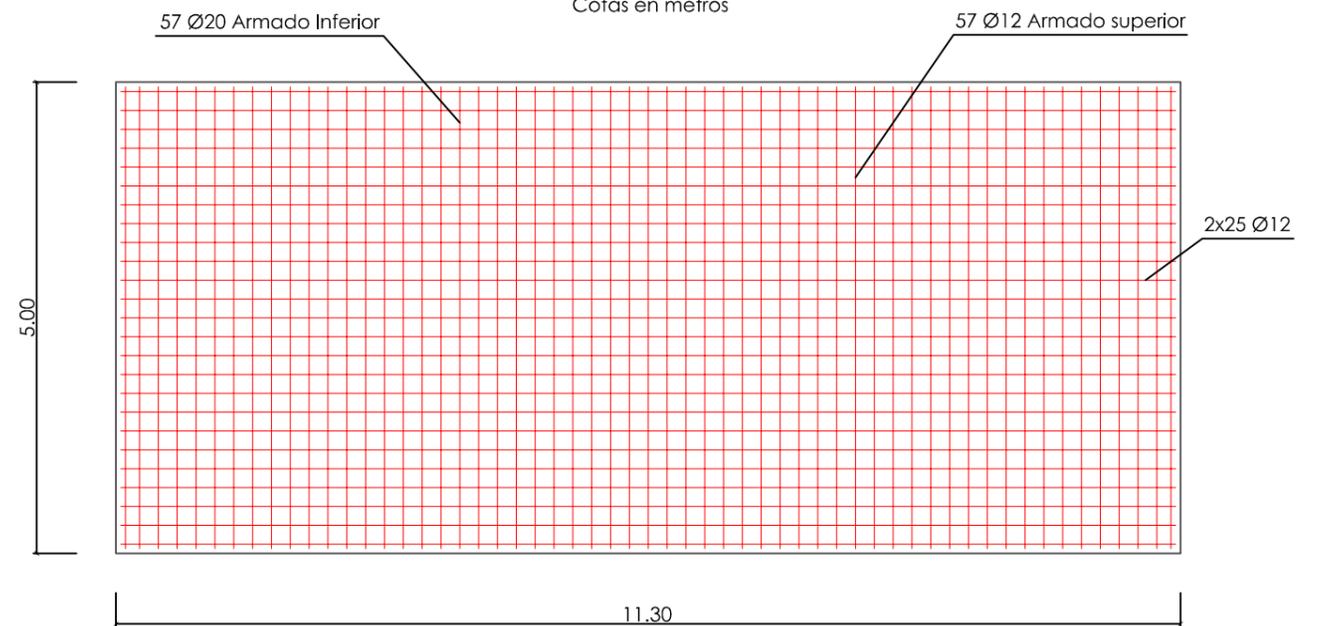
Cotas en metros



ARMADO DE LA LOSA DE TRANSICIÓN

E: 1/75

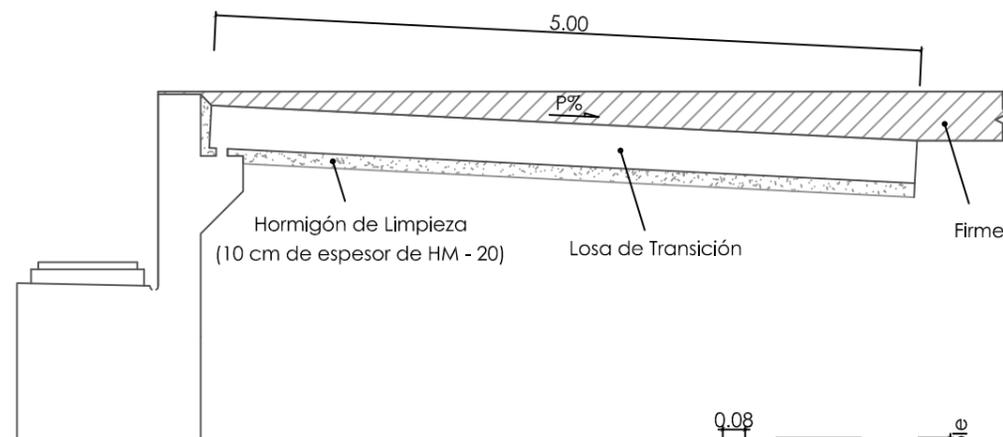
Cotas en metros



SECCIÓN TRANSVERSAL DE LA LOSA DE TRANSICIÓN

E: 1/50

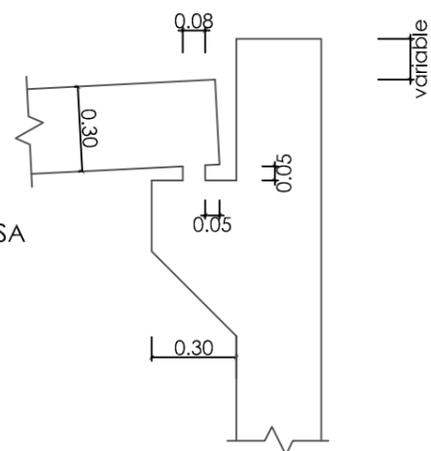
Cotas en metros



DETALLE DE LA LOSA

E: 1/25

Cotas en metros



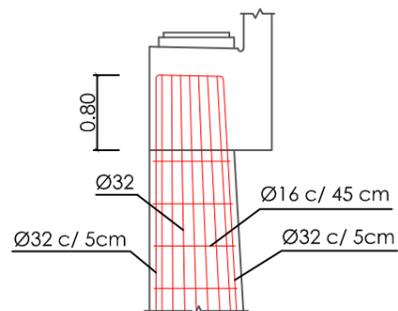
CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO

| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO   |  | CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO |                                      |                                |                       |
|--|--|---|--------------------------------------|--------------------------------|-----------------------|
| LOCALIZACIÓN   | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE | fck N/mm2                                     | NIVEL DE CONTROL                     | COEF. DE SEGURIDAD Yc          |                       |
| LIMPIEZA   | HM-20 / P / 25                                   | 20 (3000 PSI)                                 |                                      |                                |                       |
| CIMENTACION  | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)                                 | NORMAL                               | 1.50                           |                       |
| ALZADOS  | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)                                 | NORMAL                               | 1.50                           |                       |
| TIPO   | DESIGNACIÓN                                      | LÍMITE ELÁSTICO fyk N/mm2                     |                                      | NIVEL DE CONTROL               | COEF. DE SEGURIDAD Ys |
| ACERO PASIVO   | B 400 S (Grado 60)                               | 400   |                                      | NORMAL                         | 1.15                  |
| RECUBRIMIENTO NOMINAL  |  | RECUBRIMIENTO MÍNIMO                          | VIDA ÚTIL DE LA ESTRUCTURA: 100 años |                                |                       |
|  |  | Δr  | Cimentaciones: 40 mm                 | CONTROL DE LA EJECUCIÓN NORMAL |                       |
|  |  |   | 30 mm                                |                                |                       |
|  |  |   | 10 mm                                |                                |                       |
| NOTAS LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |  |   |                                      |                                |                       |

SECCIÓN LONGITUDINAL PILA ESTRIBO

E: 1/75

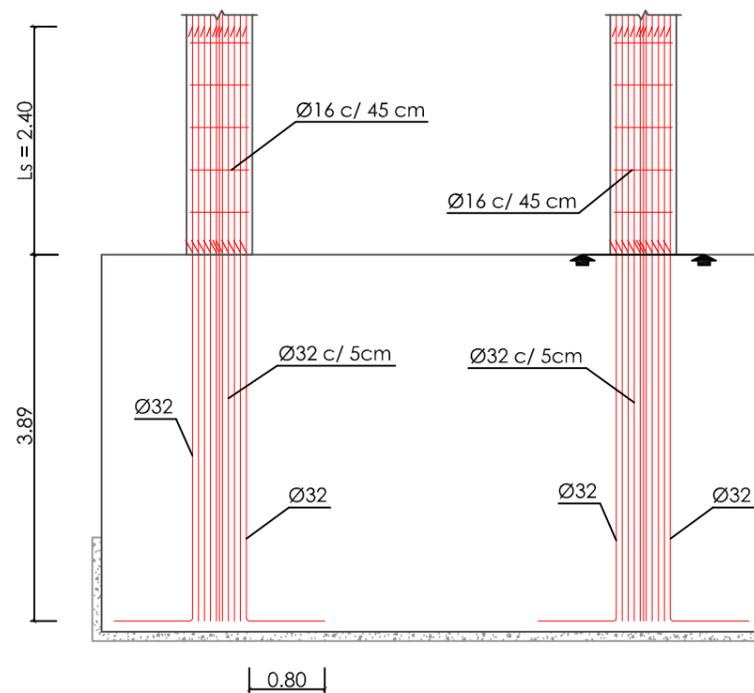
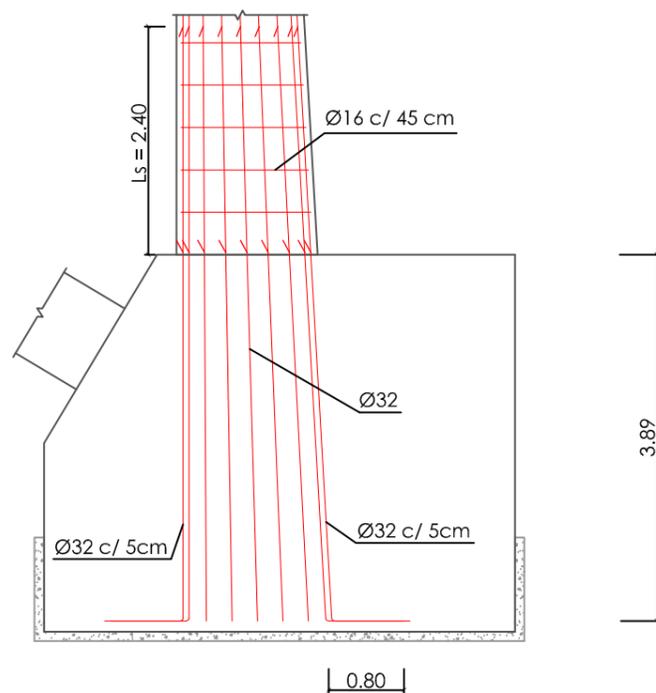
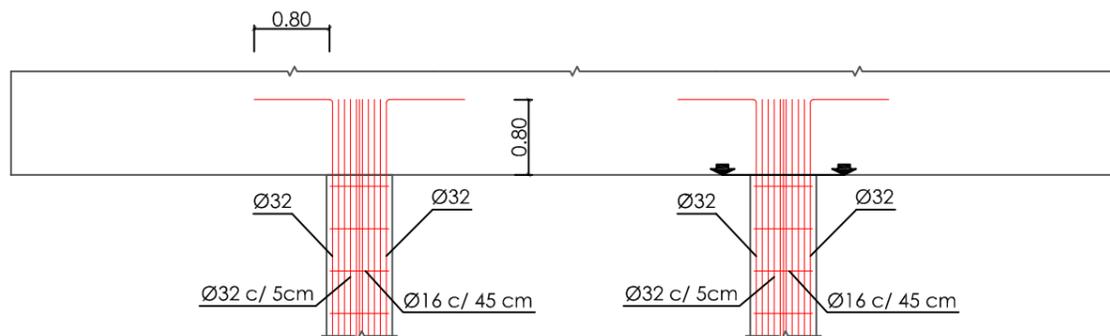
Cotas en metros



SECCIÓN TRANSVERSAL PILA ESTRIBO

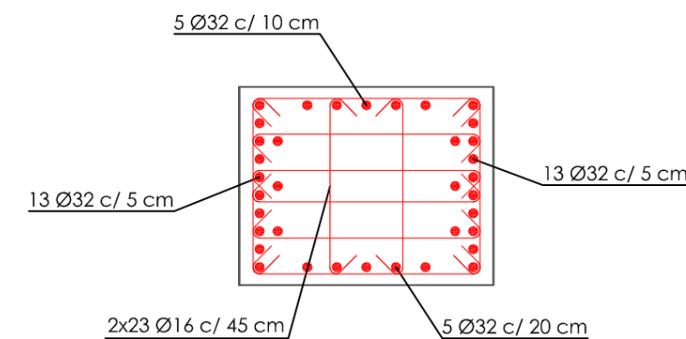
E: 1/75

Cotas en metros



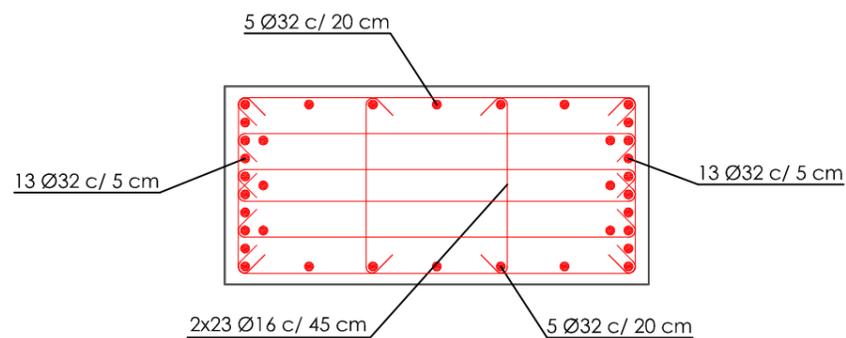
Sección A-A'  
SECCIÓN SUPERIOR PILA DEL ESTRIBO

E: 1/25



Sección B-B'  
SECCIÓN INFERIOR PILA DEL ESTRIBO

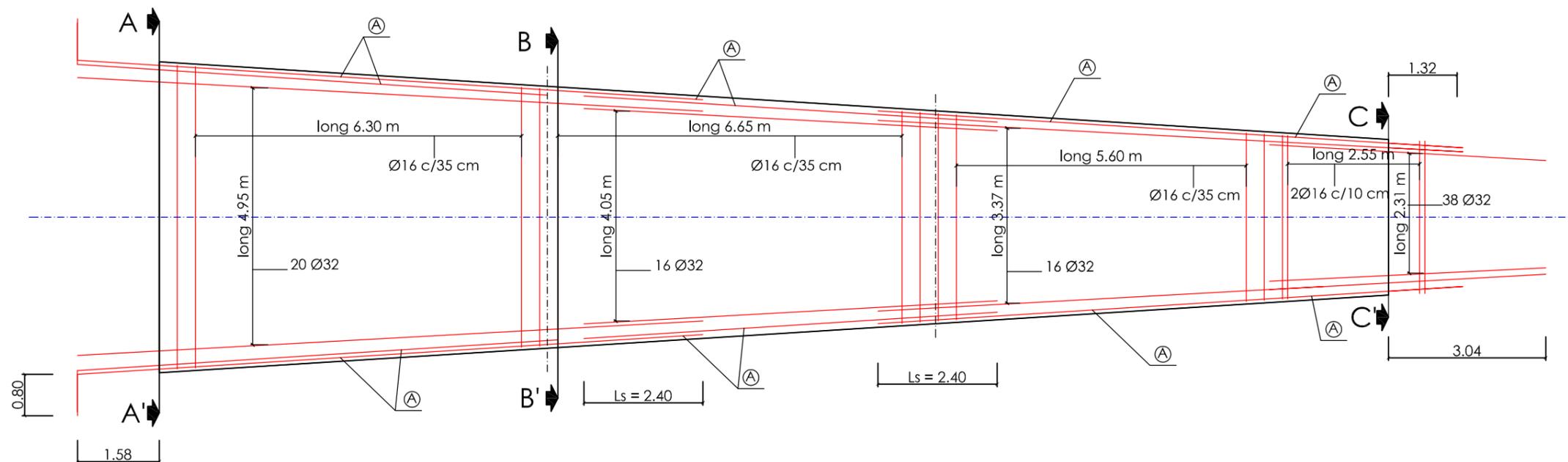
E: 1/25



CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO

| HORMIGÓN              | LOCALIZACIÓN         | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE   | fck N/mm2  | NIVEL DE CONTROL | COEF. DE SEGURIDAD $\gamma_c$ |
|-----------------------|----------------------|--|--|------------------|-------------------------------|
|                       | LIMPIEZA             | HM-20 / P / 25   | 20 (3000 PSI)  |                  |                               |
| CIMENTACION           | HA-30 / P / 20 / XC2 | 30 (4500 PSI)  | NORMAL   | 1.50             |                               |
|                       | ALZADOS              | HA-30 / P / 20 / XC2   | 30 (4500 PSI)  | NORMAL           | 1.50                          |
| ARMADURA              | TIPO                 | DESIGNACIÓN  | LÍMITE ELÁSTICO fyk N/mm2  | NIVEL DE CONTROL | COEF. DE SEGURIDAD $\gamma_s$ |
|                       | ACERO PASIVO         | B 400 S (Grado 60)   | 400  | NORMAL           | 1.15                          |
| RECUBRIMIENTO NOMINAL | RECUBRIMIENTO MÍNIMO | Cimentaciones: 40 mm   | VIDA ÚTIL DE LA ESTRUCTURA: 100 años<br>CONTROL DE LA EJECUCIÓN NORMAL |                  |                               |
|                       |                      | 30 mm  |  |                  |                               |
|                       |                      | 10 mm  |  |                  |                               |
| NOTAS                 |                      | LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |  |                  |                               |

| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO |               |
|--|---------------|
| Diametros (mm)                             | Diametros (") |
| Ø12  | Nº4 1/2"      |
| Ø14  | Nº5 5/8"      |
| Ø16  | Nº6 3/4"      |
| Ø20  | Nº7 7/8"      |
| Ø25  | Nº8 1"        |
|  | Nº9 1-1/8"    |
| Ø32  | Nº10 1-1/4"   |



Armado de la pila inclinada  
 PLANTA DE LA DIRECTRIZ DE LA PILA INCLINADA  
 E: 1/100

Las pilas inclinadas 1 y 2 disponen del mismo armado.

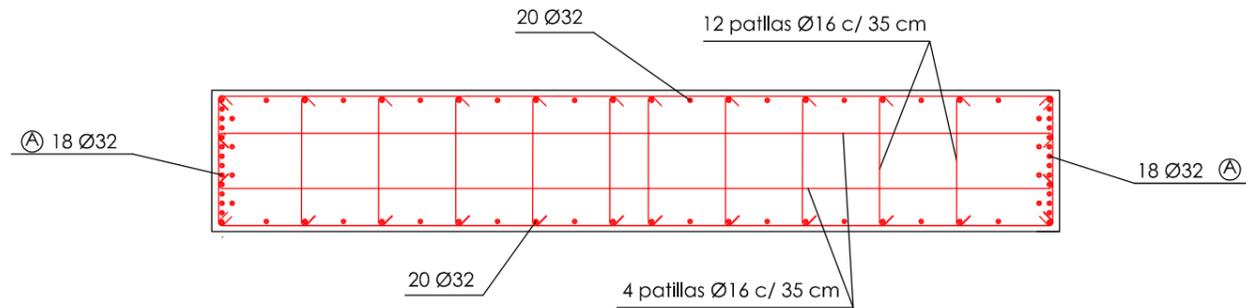
| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO |               |
|--|---------------|
| Diametros (mm)                             | Diametros (") |
| Ø12  | Nº4 1/2"      |
| Ø14  | Nº5 5/8"      |
| Ø16  | Nº6 3/4"      |
| Ø20  | Nº7 7/8"      |
| Ø25  | Nº8 1"        |
|  | Nº9 1-1/8"    |
| Ø32  | Nº10 1-1/4"   |

| CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO |  |  |                                       |  |                  |                       |
|---|--|--|---------------------------------------|--|------------------|-----------------------|
| HORMIGÓN                                      | LOCALIZACIÓN   | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE |                                       | fck N/mm <sup>2</sup>  | NIVEL DE CONTROL | COEF. DE SEGURIDAD Yc |
|   | LIMPIEZA   | HM-20 / P / 25                                   |                                       | 20 (3000 PSI)  |                  |                       |
|   | CIMENTACION  | HA-30 / P / 20 / XC2                             |                                       | 30 (4500 PSI)  | NORMAL           | 1,50                  |
|   | ALZADOS  | HA-30 / P / 20 / XC2                             |                                       | 30 (4500 PSI)  | NORMAL           | 1,50                  |
| ARMADURA                                      | TIPO   | DESIGNACIÓN                                      | LÍMITE ELÁSTICO fyk N/mm <sup>2</sup> |  | NIVEL DE CONTROL | COEF. DE SEGURIDAD Ys |
|   | ACERO PASIVO   | B 400 S (Grado 60)                               | 400                                   |  | NORMAL           | 1,15                  |
| RECUBRIMIENTO NOMINAL                         | RECUBRIMIENTO MÍNIMO   | Cimentaciones: 40 mm                             |                                       | VIDA ÚTIL DE LA ESTRUCTURA: 100 años<br>CONTROL DE LA EJECUCIÓN NORMAL |                  |                       |
|   |  | 30 mm  |                                       |  |                  |                       |
|   |  | Δr<br>10 mm                                      |                                       |  |                  |                       |
| NOTAS   | LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |  |                                       |  |                  |                       |

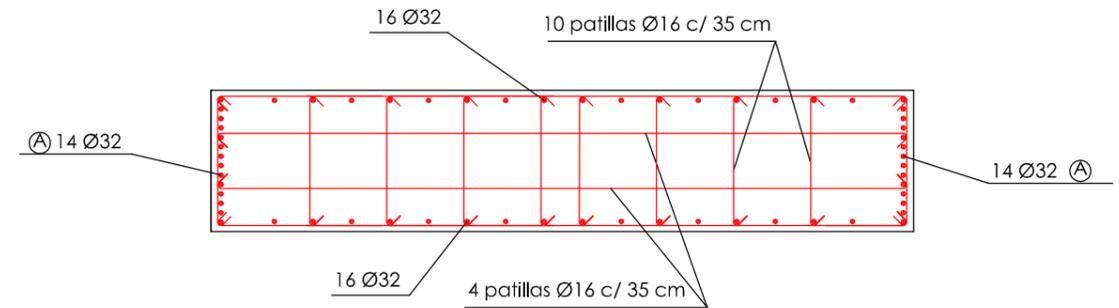


SECCIONES TRANSVERSALES DE LAS PILAS INCLINADAS  
E: 1/50

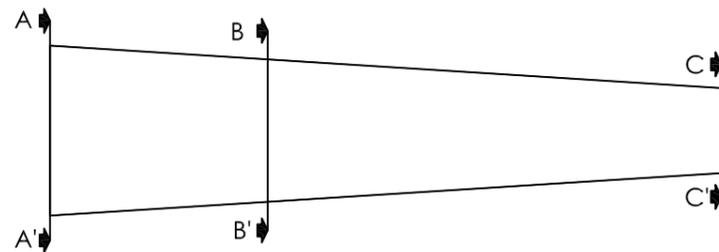
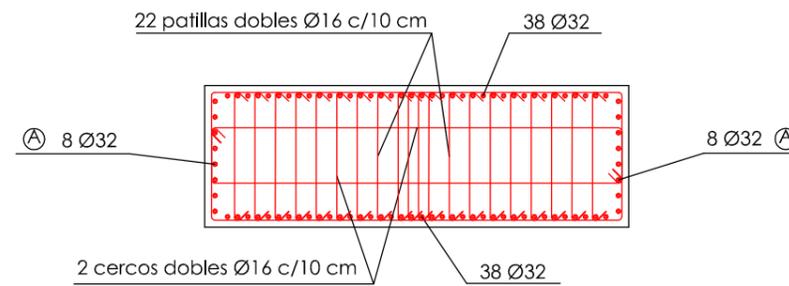
SECCIÓN A-A'



SECCIÓN B-B'



SECCIÓN C-C'



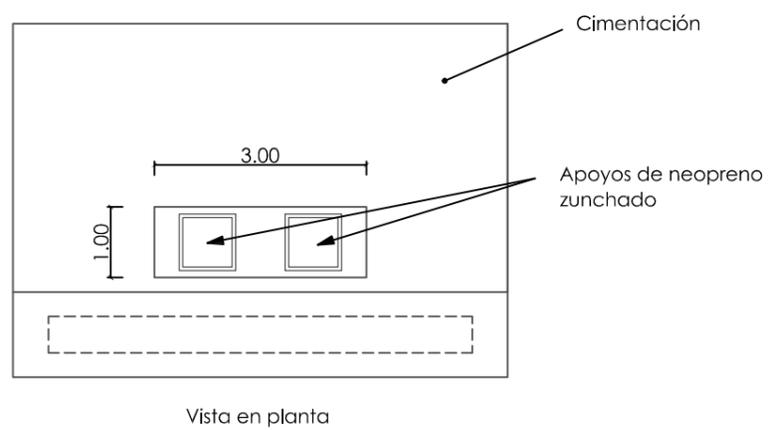
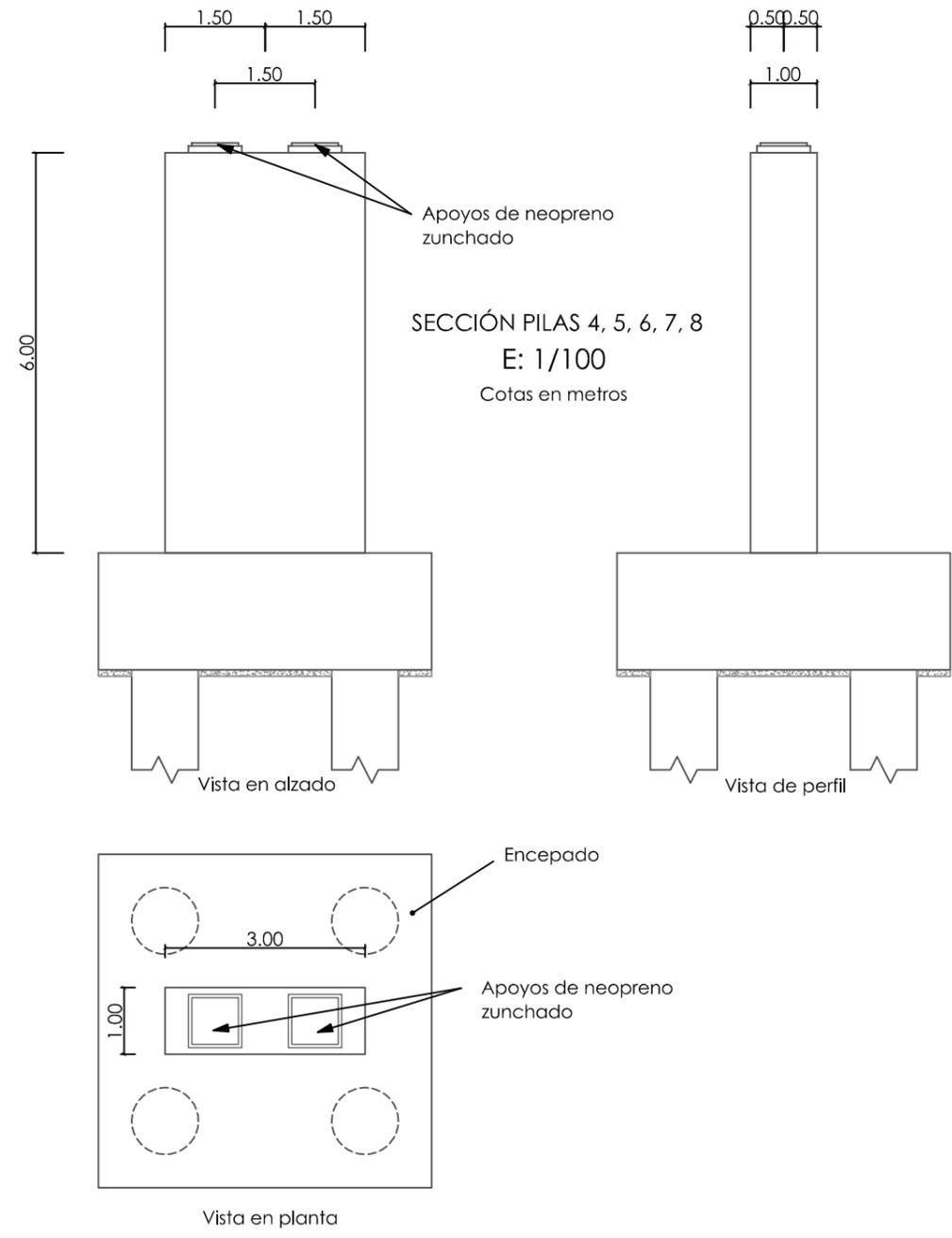
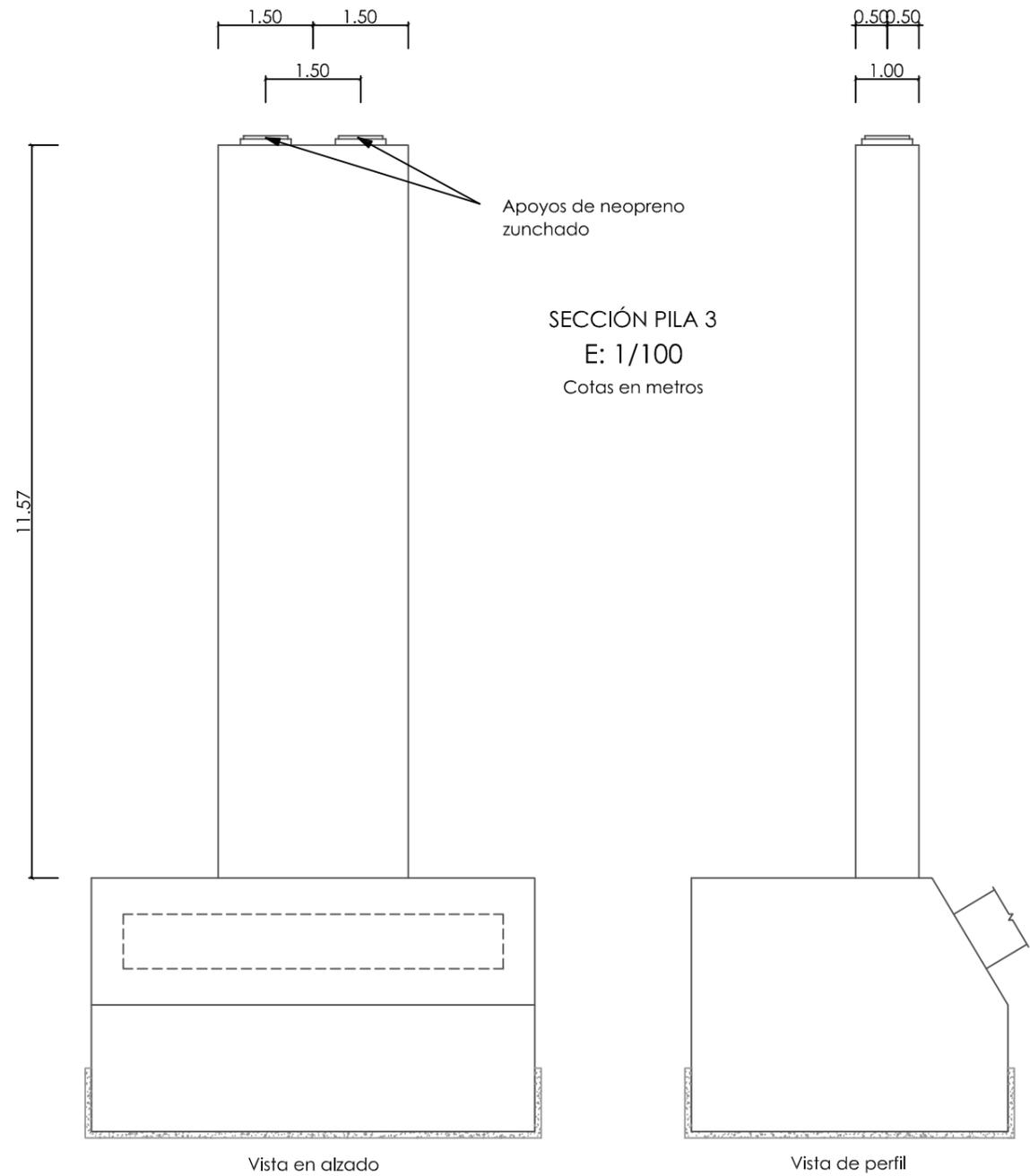
PLANTA DE LA DIRECTRIZ DE LA PILA INCLINADA  
E: 1/250

| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO |               |
|--|---------------|
| Diametros (mm)                             | Diametros (") |
| Ø12  | Nº4 1/2"      |
| Ø14  | Nº5 5/8"      |
| Ø16  | Nº6 3/4"      |
| Ø20  | Nº7 7/8"      |
| Ø25  | Nº8 1"        |
|  | Nº9 1-1/8"    |
| Ø32  | Nº10 1-1/4"   |

CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO

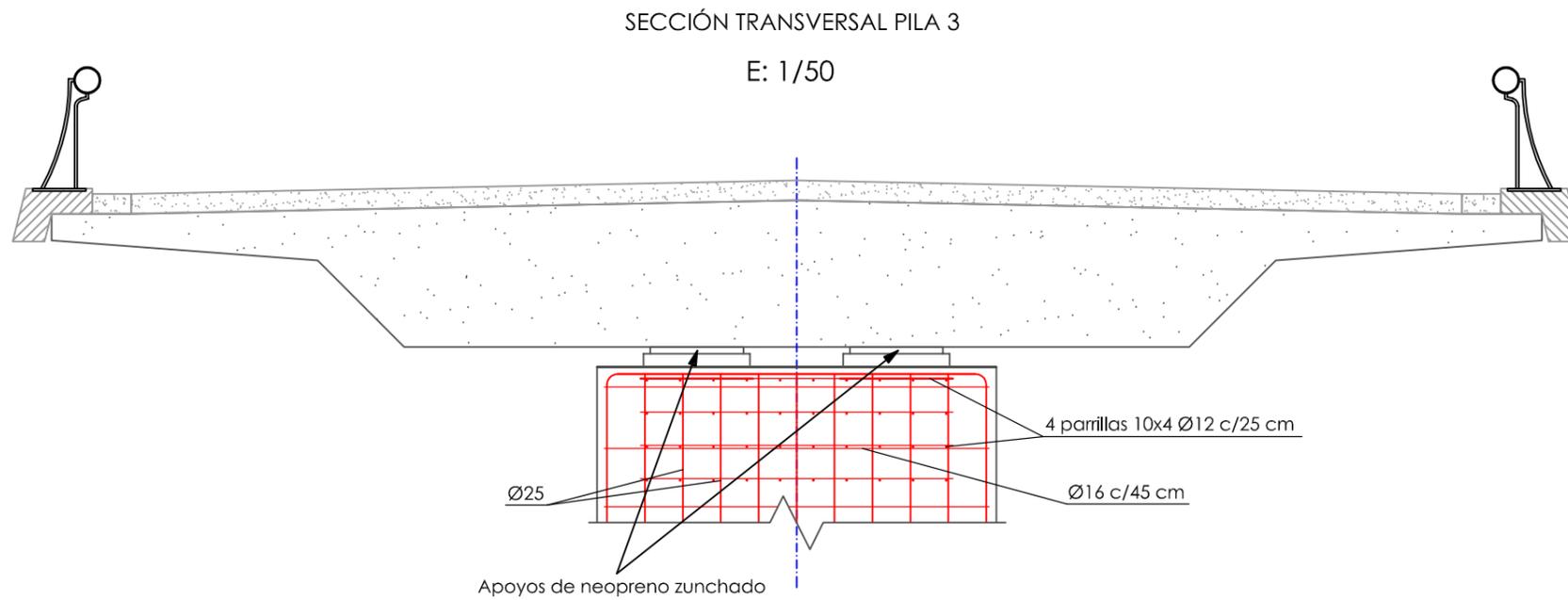
| HORMIGÓN   | LOCALIZACIÓN         | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE | fck N/mm2  | NIVEL DE CONTROL | COEF. DE SEGURIDAD $\gamma_c$ |
|--|----------------------|--|--|------------------|-------------------------------|
|  | LIMPIEZA             | HM-20 / P / 25                                   | 20 (3000 PSI)  |                  |                               |
| CIMENTACION  | HA-30 / P / 20 / XC2 | 30 (4500 PSI)                                    | NORMAL   | 1.50             |                               |
|  | ALZADOS              | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)  | NORMAL           | 1.50                          |
| ARMADURA   | TIPO                 | DESIGNACIÓN                                      | LÍMITE ELÁSTICO fyk N/mm2  | NIVEL DE CONTROL | COEF. DE SEGURIDAD $\gamma_s$ |
|  | ACERO PASIVO         | B 400 S (Grado 60)                               | 400  | NORMAL           | 1.15                          |
| RECUBRIMIENTO NOMINAL  | RECUBRIMIENTO MÍNIMO | Cimentaciones: 40 mm                             | VIDA ÚTIL DE LA ESTRUCTURA: 100 años<br>CONTROL DE LA EJECUCIÓN NORMAL |                  |                               |
|  |                      | 30 mm  |  |                  |                               |
|  |                      | Δr<br>10 mm                                      |  |                  |                               |
| NOTAS  |                      |  |  |                  |                               |
| LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |                      |  |  |                  |                               |



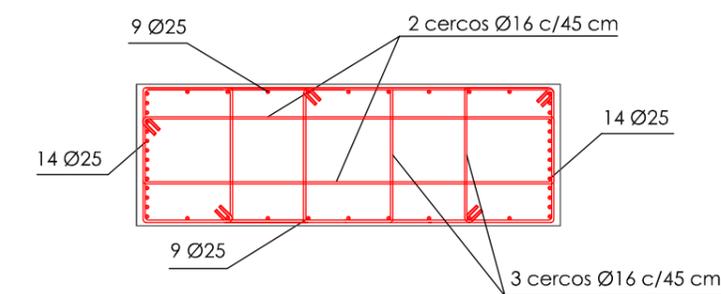


| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO |               |
|--|---------------|
| Diametros (mm)                             | Diametros (") |
| Ø12  | Nº4 1/2"      |
| Ø14  | Nº5 5/8"      |
| Ø16  | Nº6 3/4"      |
| Ø20  | Nº7 7/8"      |
| Ø25  | Nº8 1"        |
|  | Nº9 1-1/8"    |
| Ø32  | Nº10 1-1/4"   |

| CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO  |                      |  |                           |                                      |                  |                                |
|--|----------------------|--|---------------------------|--------------------------------------|------------------|--------------------------------|
| HORMIGÓN   | LOCALIZACIÓN         | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE |                           | fck N/mm2                            | NIVEL DE CONTROL | COEF. DE SEGURIDAD Yc          |
|  | LIMPIEZA             | HM-20 / P / 25                                   |                           | 20 (3000 PSI)                        |                  |                                |
|  | CIMENTACION          | HA-30 / P / 20 / XC2                             |                           | 30 (4500 PSI)                        | NORMAL           | 1,50                           |
| ARMADURA   | ALZADOS              | HA-30 / P / 20 / XC2                             |                           | 30 (4500 PSI)                        | NORMAL           | 1,50                           |
|  | TIPO                 | DESIGNACIÓN                                      | LÍMITE ELÁSTICO fyk N/mm2 |                                      | NIVEL DE CONTROL | COEF. DE SEGURIDAD Ys          |
|  | ACERO PASIVO         | B 400 S (Grado 60)                               | 400                       |                                      | NORMAL           | 1,15                           |
| RECUBRIMIENTO NOMINAL  | RECUBRIMIENTO MÍNIMO | Δr   | Cimentaciones: 40 mm      | VIDA ÚTIL DE LA ESTRUCTURA: 100 años |                  | CONTROL DE LA EJECUCIÓN NORMAL |
|  |                      |  | 30 mm                     |                                      |                  |                                |
|  |                      |  | 10 mm                     |                                      |                  |                                |
| NOTAS LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |                      |  |                           |                                      |                  |                                |



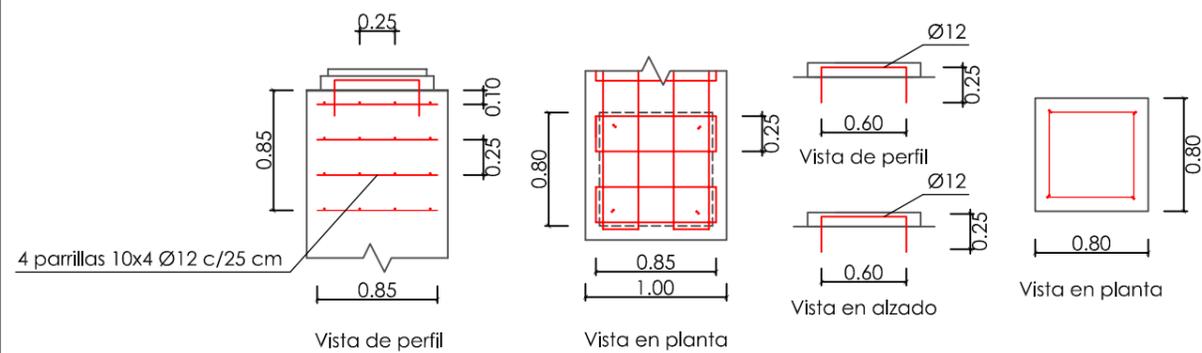
Sección A-A'  
SECCIÓN PILA 3  
E: 1/50



ARMADO EN APOYOS

E: 1/50

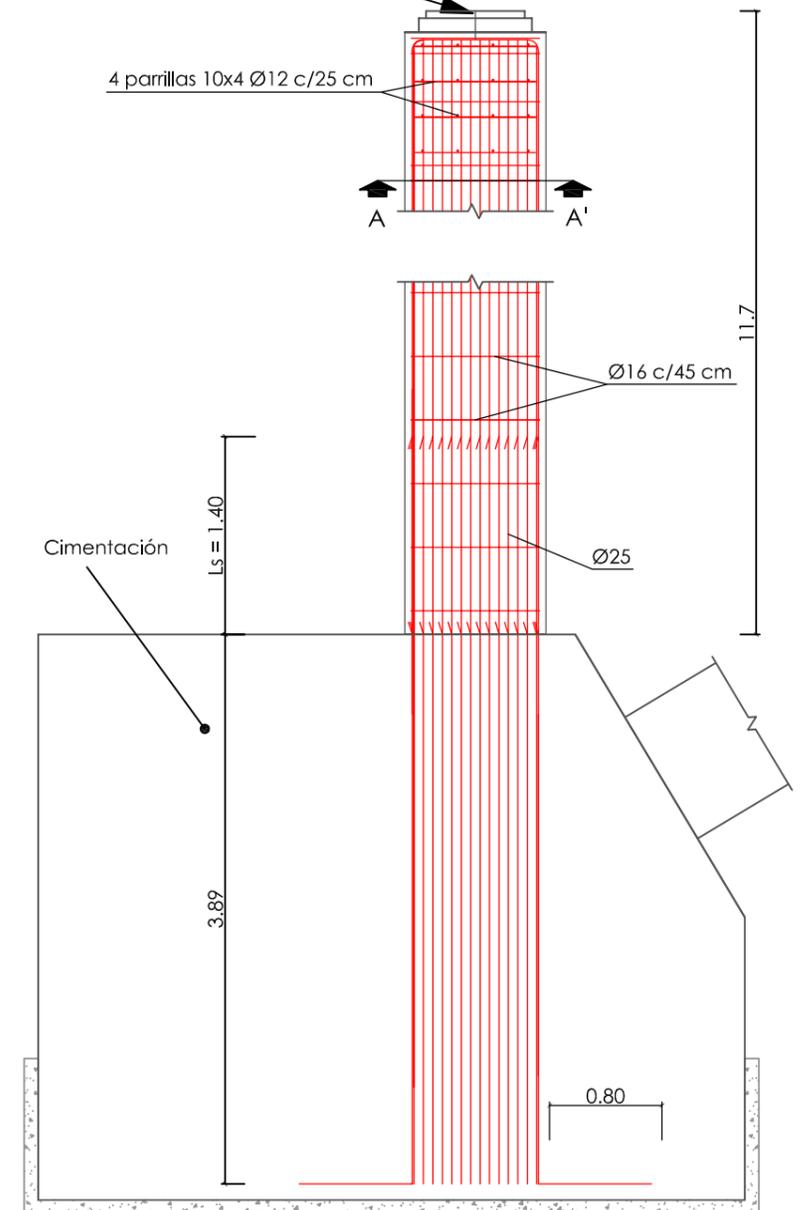
Cotas en metros



| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO |               |
|--|---------------|
| Diametros (mm)                             | Diametros (") |
| Ø12  | Nº4 1/2"      |
| Ø14  | Nº5 5/8"      |
| Ø16  | Nº6 3/4"      |
| Ø20  | Nº7 7/8"      |
|  | Nº9 1-1/8"    |
| Ø32  | Nº10 1-1/4"   |

SECCIÓN LONGITUDINAL PILA 1 y 5

Apoyos de neopreno zunchado E: 1/50 Cotas en metros



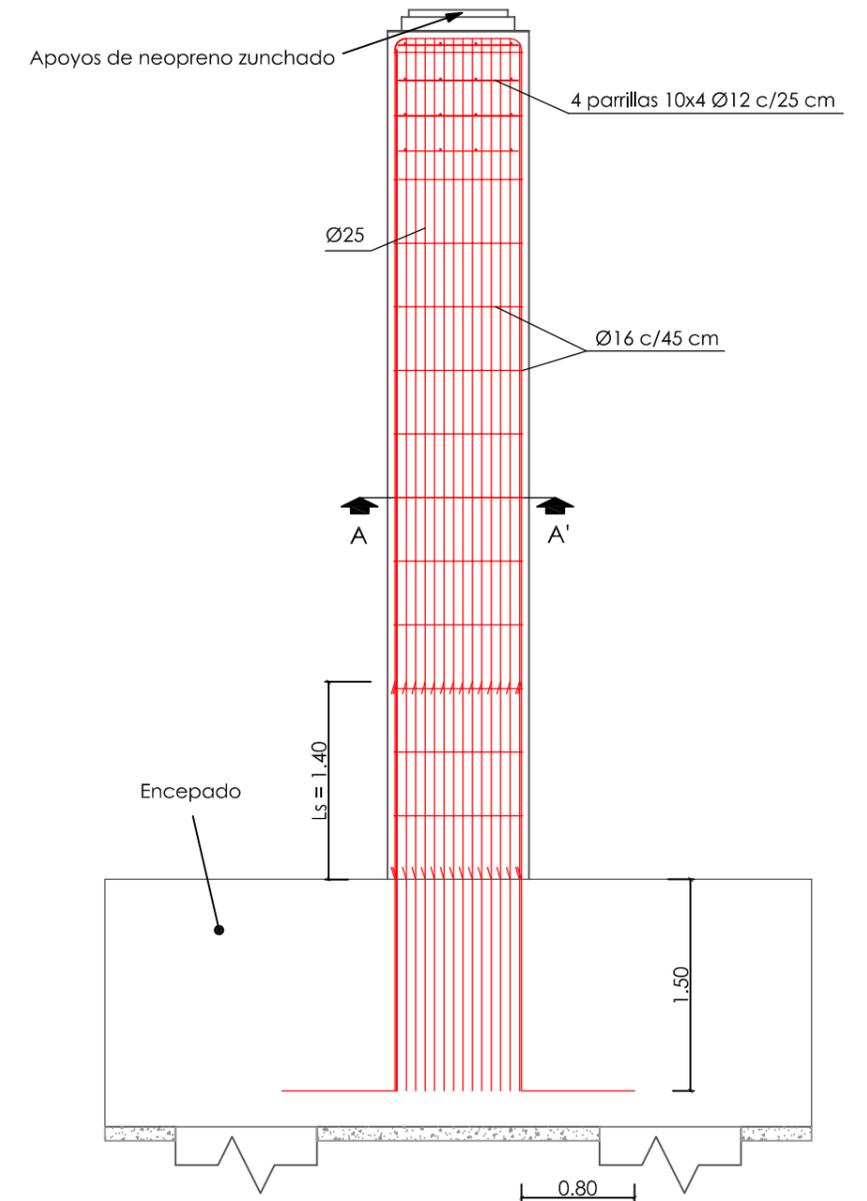
CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO

| HORMIGÓN              | LOCALIZACIÓN   | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE | fck N/mm2  | NIVEL DE CONTROL | COEF. DE SEGURIDAD Yc |
|-----------------------|--|--|--|------------------|-----------------------|
|                       | LIMPIEZA   | HM-20 / P / 25                                   | 20 (3000 PSI)  |                  |                       |
| CIMENTACION           | HA-30 / P / 20 / XC2   |  | 30 (4500 PSI)  | NORMAL           | 1.50                  |
|                       | ALZADOS  | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)  | NORMAL           | 1.50                  |
| ARMADURA              | TIPO   | DESIGNACIÓN                                      | LÍMITE ELÁSTICO fyk N/mm2  | NIVEL DE CONTROL | COEF. DE SEGURIDAD Ys |
|                       | ACERO PASIVO   | B 400 S (Grado 60)                               | 400  | NORMAL           | 1.15                  |
| RECUBRIMIENTO NOMINAL | RECUBRIMIENTO MÍNIMO   | Cimentaciones: 40 mm                             | VIDA ÚTIL DE LA ESTRUCTURA: 100 años<br>CONTROL DE LA EJECUCIÓN NORMAL |                  |                       |
|                       |  | 30 mm  |  |                  |                       |
|                       |  | Δr<br>10 mm                                      |  |                  |                       |
| NOTAS                 | LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |  |  |                  |                       |

SECCIÓN LONGITUDINAL PILA 4,5,6,7,8

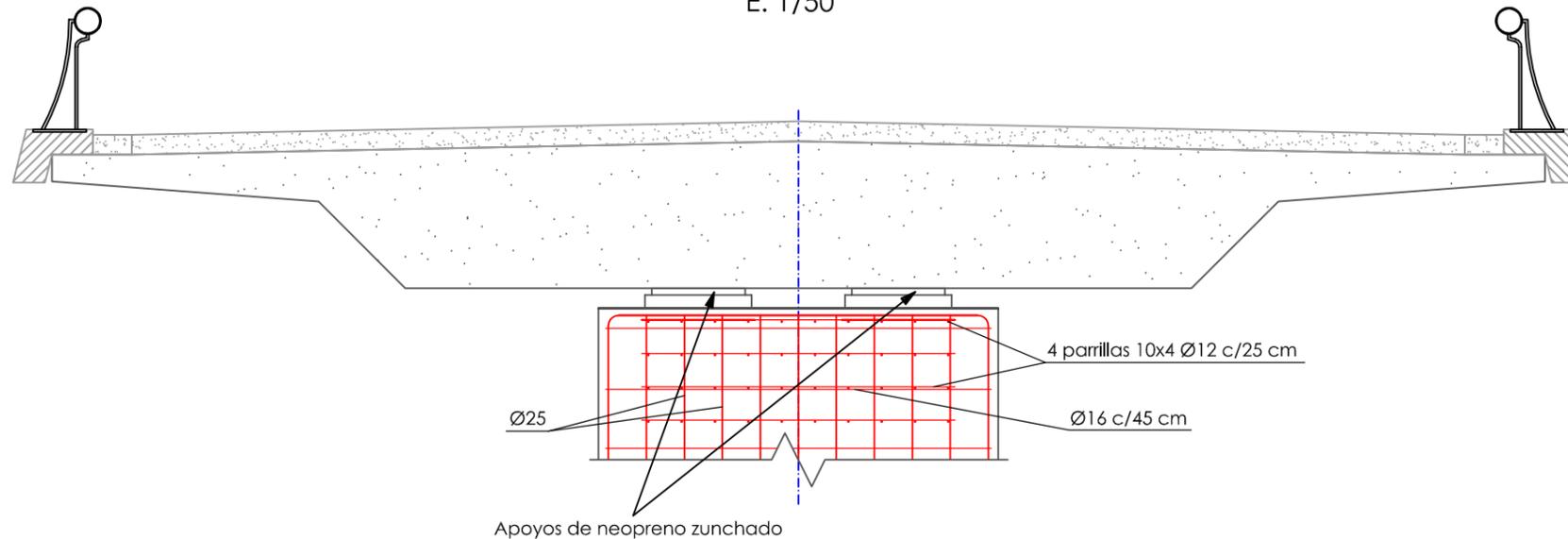
E: 1/50

Cotas en metros

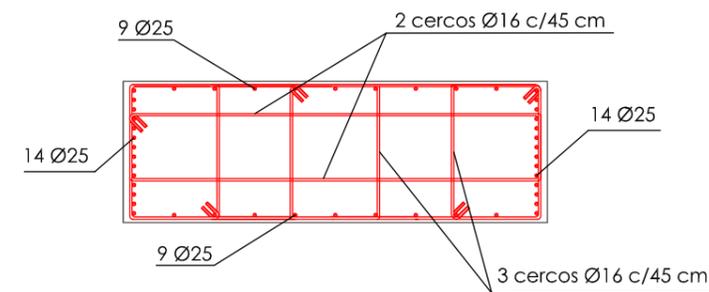


SECCIÓN TRANSVERSAL PILA 4,5,6,7,8

E: 1/50



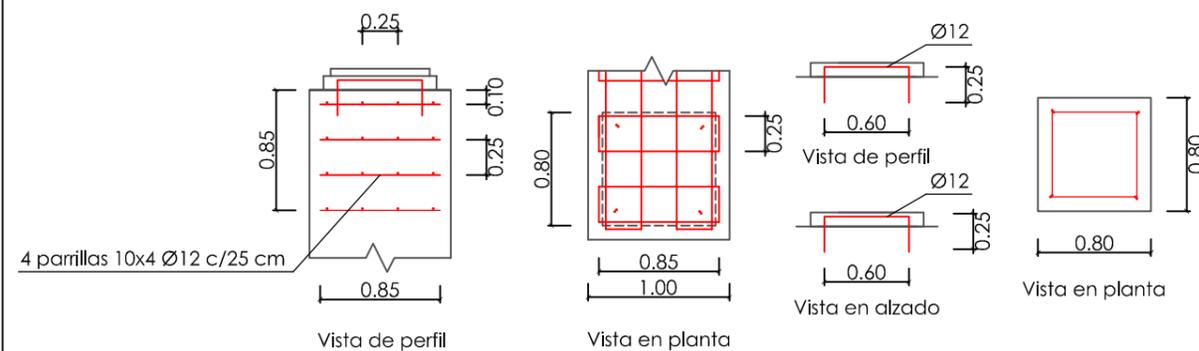
Sección A-A'  
SECCIÓN PILA 4,5,6,7,8  
E: 1/50



ARMADO EN APOYOS

E: 1/50

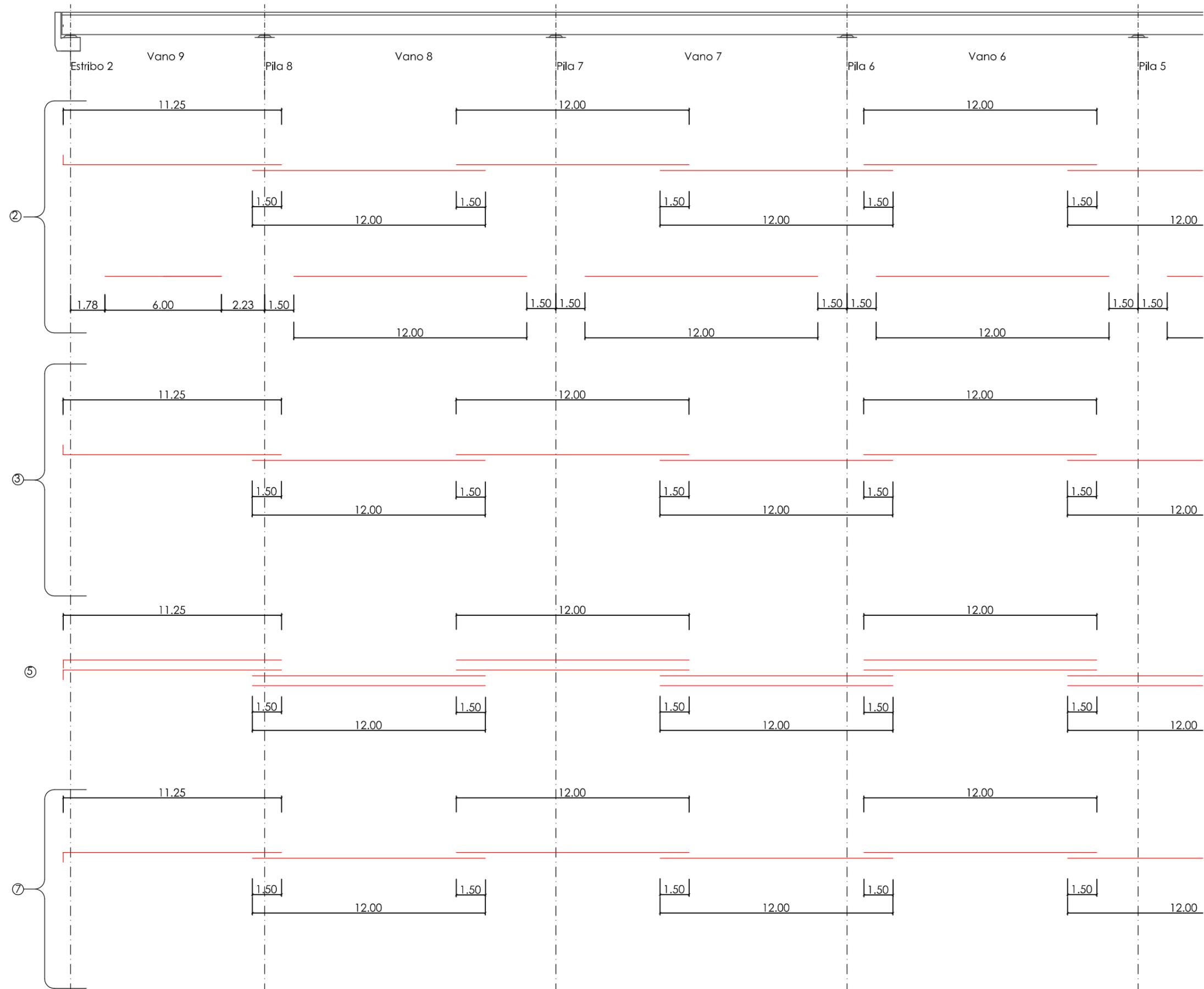
Cotas en metros



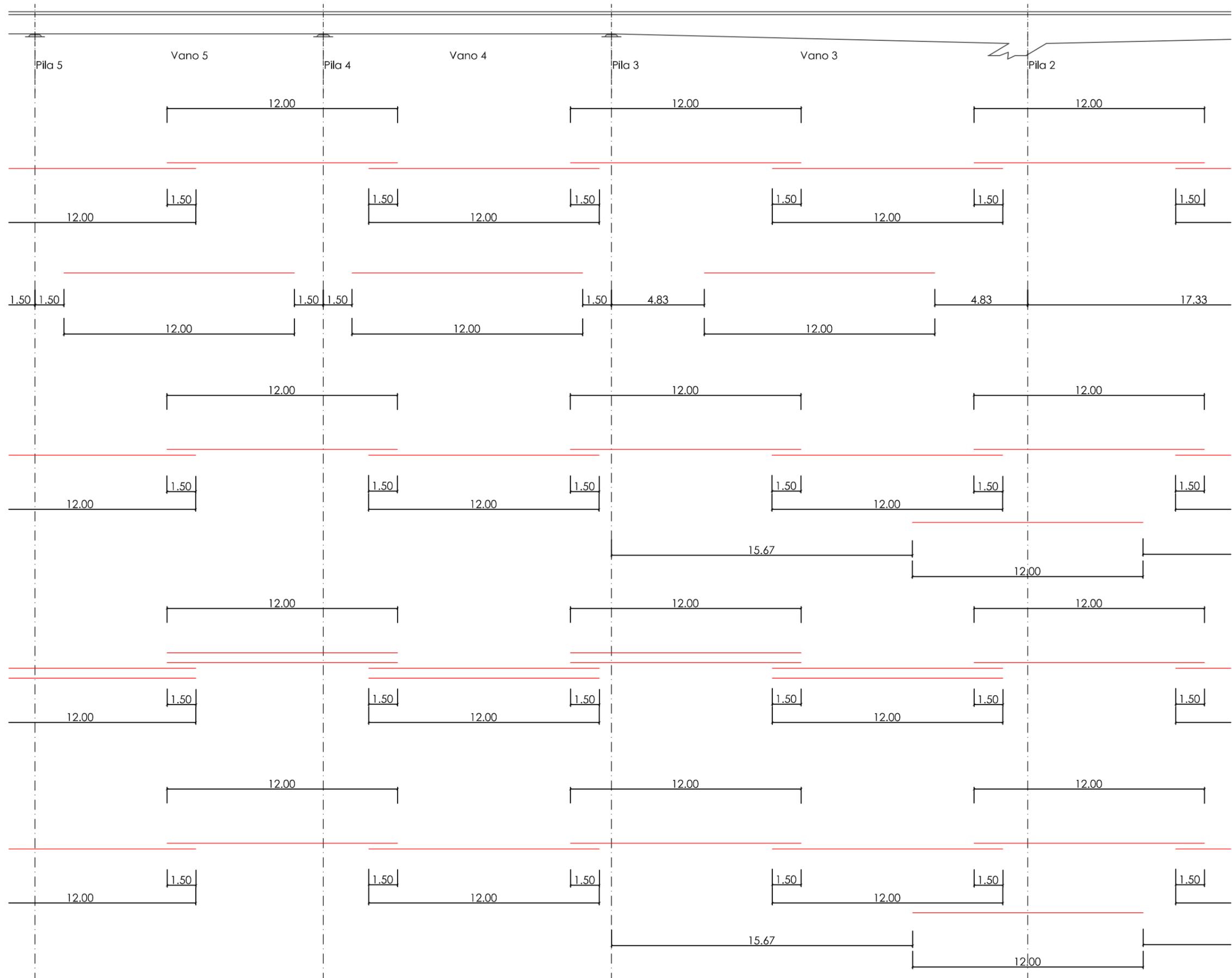
| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO |               |
|--|---------------|
| Diametros (mm)                             | Diametros (") |
| Ø12  | Nº4 1/2"      |
| Ø14  | Nº5 5/8"      |
| Ø16  | Nº6 3/4"      |
| Ø20  | Nº7 7/8"      |
| Ø25  | Nº8 1"        |
|  | Nº9 1-1/8"    |
| Ø32  | Nº10 1-1/4"   |

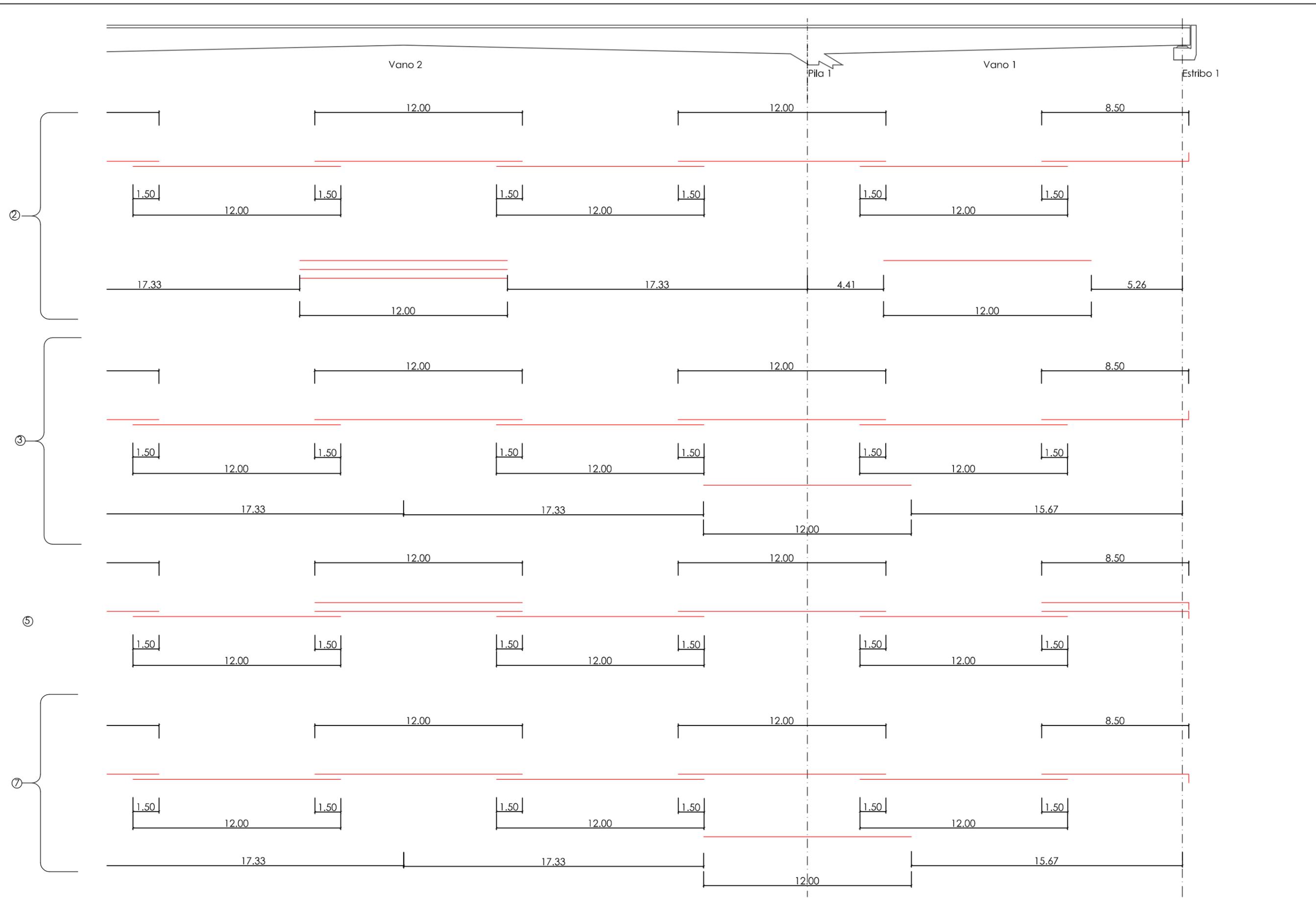
CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO

| HORMIGÓN              | LOCALIZACIÓN   | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE | fck N/mm2  | NIVEL DE CONTROL | COEF. DE SEGURIDAD Yc |
|-----------------------|--|--|--|------------------|-----------------------|
|                       | LIMPIEZA   | HM-20 / P / 25                                   | 20 (3000 PSI)  |                  |                       |
| CIMENTACION           | HA-30 / P / 20 / XC2   | 30 (4500 PSI)                                    | NORMAL   | 1,50             |                       |
|                       | ALZADOS  | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)  | NORMAL           | 1,50                  |
| ARMADURA              | TIPO   | DESIGNACIÓN                                      | LÍMITE ELÁSTICO fyk N/mm2  | NIVEL DE CONTROL | COEF. DE SEGURIDAD Ys |
|                       | ACERO PASIVO   | B 400 S (Grado 60)                               | 400  | NORMAL           | 1,15                  |
| RECUBRIMIENTO NOMINAL | RECUBRIMIENTO MÍNIMO   | Cimentaciones: 40 mm                             | VIDA ÚTIL DE LA ESTRUCTURA: 100 años<br>CONTROL DE LA EJECUCIÓN NORMAL |                  |                       |
|                       |  | 30 mm  |  |                  |                       |
|                       |  | Δr<br>10 mm                                      |  |                  |                       |
| NOTAS                 | LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |  |  |                  |                       |









EN APOYO

| Número | Ø                     |
|--------|-----------------------|
| ①      | Ø16 c/30 cm           |
| ②      | Ø25 c/20 cm           |
| ③      | 6Ø16                  |
| ④      | Ø16 c/30 cm           |
| ⑤      | 14Ø16 + Refuerzo 2Ø16 |
| ⑥      | Ø16 c/30 cm           |
| ⑦      | Ø25 c/20 cm           |
| ⑧      | Ø16 c/30 cm           |

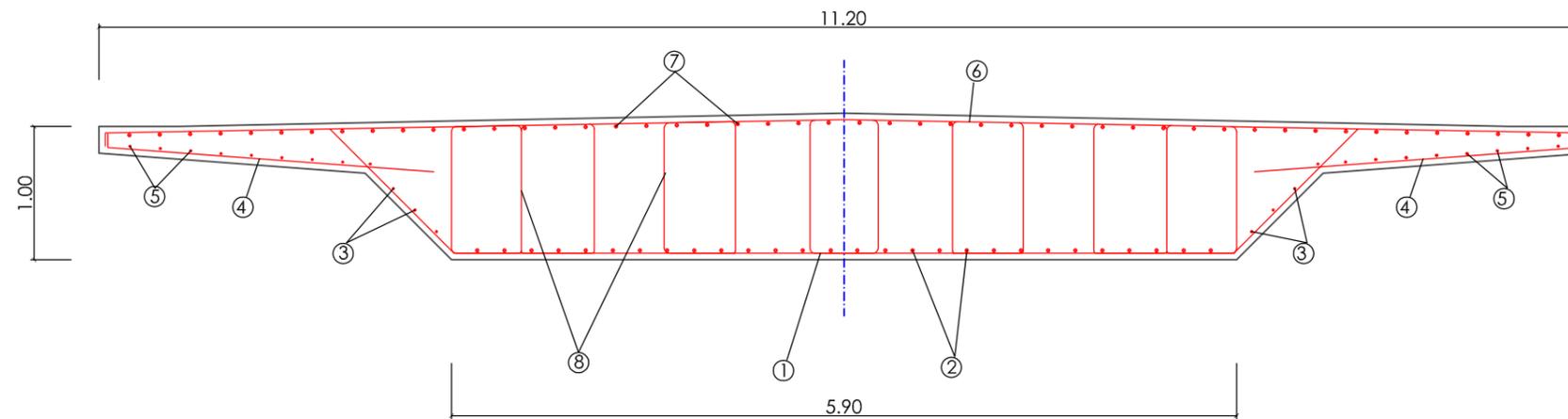
EN CENTRO-LUZ

| Número | Ø                            |
|--------|------------------------------|
| ①      | Ø16 c/30 cm                  |
| ②      | Ø25 c/20 + Refuerzo Ø25 c/20 |
| ③      | 6Ø16                         |
| ④      | Ø16 c/30 cm                  |
| ⑤      | 14Ø16 + Refuerzo 2Ø16        |
| ⑥      | Ø16 c/30 cm                  |
| ⑦      | Ø25 c/20 cm                  |
| ⑧      | Ø16 c/30 cm                  |

SECCIÓN TIPO TABLERO

E: 1/50

Cotas en metros



CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO

| HORMIGÓN   | LOCALIZACIÓN         | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE | fck N/mm2                 | NIVEL DE CONTROL   | COEF. DE SEGURIDAD Yc |
|--|----------------------|--|---------------------------|--|-----------------------|
|  | LIMPIEZA             | HM-20 / P / 25                                   | 20 (3000 PSI)             |  |                       |
| ARMADURA   | CIMENTACION          | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)             | NORMAL   | 1,50                  |
|  | ALZADOS              | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)             | NORMAL   | 1,50                  |
| RECUBRIMIENTO NOMINAL  | TIPO                 | DESIGNACIÓN                                      | LÍMITE ELÁSTICO fyk N/mm2 | NIVEL DE CONTROL   | COEF. DE SEGURIDAD Ys |
|  | ACERO PASIVO         | B 400 S (Grado 60)                               | 400                       | NORMAL   | 1,15                  |
| NOTAS  | RECUBRIMIENTO MÍNIMO | Δr   | Cimentaciones: 40 mm      | VIDA ÚTIL DE LA ESTRUCTURA: 100 años<br>CONTROL DE LA EJECUCIÓN NORMAL |                       |
|  |                      |  | 30 mm                     |  |                       |
|  |                      |  | 10 mm                     |  |                       |
| LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |                      |  |                           |  |                       |

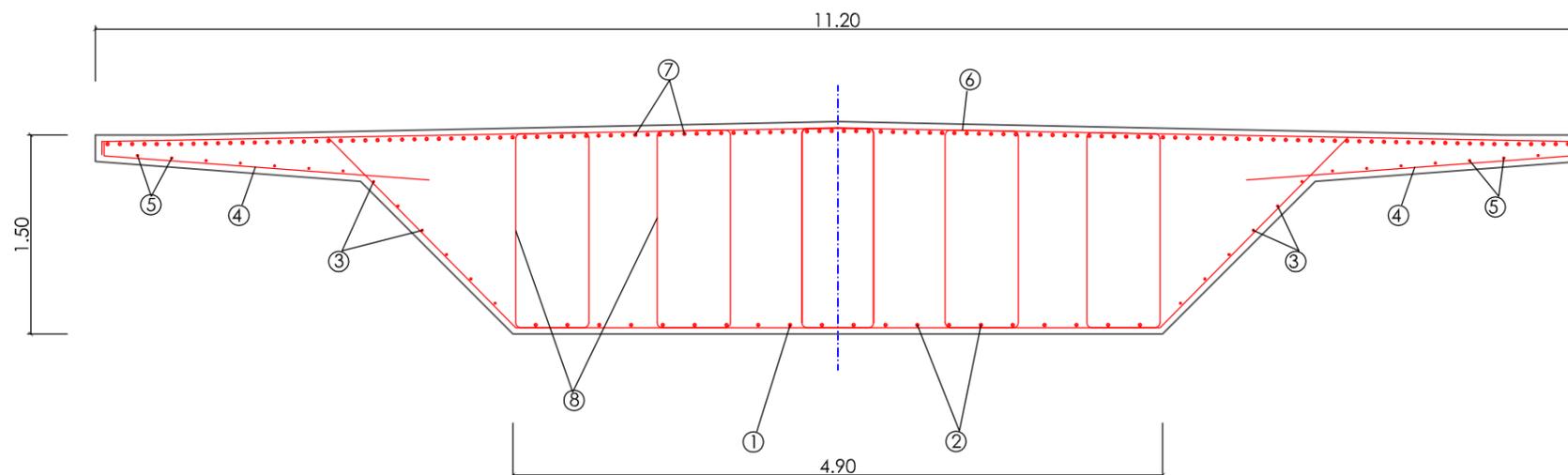
| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO |               |
|--|---------------|
| Diametros (mm)                             | Diametros (") |
| Ø12  | Nº4 1/2"      |
| Ø14  | Nº5 5/8"      |
| Ø16  | Nº6 3/4"      |
| Ø20  | Nº7 7/8"      |
| Ø25  | Nº8 1"        |
|  | Nº9 1-1/8"    |
| Ø32  | Nº10 1-1/4"   |



SECCIÓN PILA 1 Y 2

E: 1/50

Cotas en metros



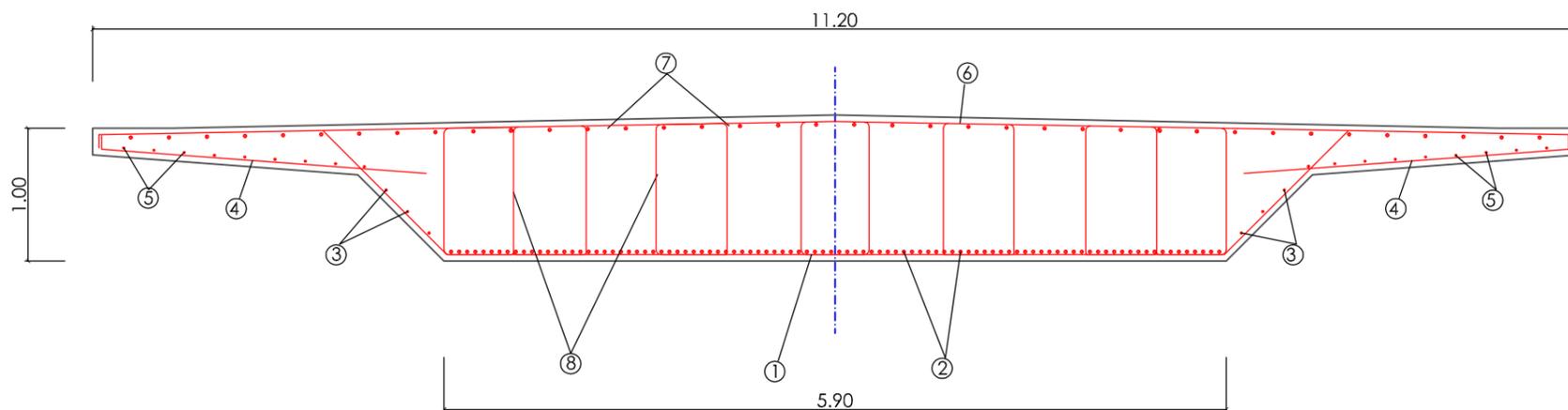
EN APOYO PILA 1 Y 2

| Número | Ø                            |
|--------|------------------------------|
| ①      | Ø16 c/30 cm                  |
| ②      | Ø25 c/20 cm                  |
| ③      | 6Ø16+ Refuerzo 6Ø16          |
| ④      | Ø16 c/30 cm                  |
| ⑤      | 14Ø16                        |
| ⑥      | Ø16 c/30 cm                  |
| ⑦      | Ø25 c/20 + Refuerzo Ø25 c/20 |
| ⑧      | Ø16 c/30 cm                  |

SECCIÓN C-L VANO 2

E: 1/50

Cotas en metros



EN CENTRO-LUZ VANO 2

| Número | Ø                     |
|--------|-----------------------|
| ①      | Ø16 c/30 cm           |
| ②      | Ø25 c/5 cm            |
| ③      | 6Ø16                  |
| ④      | Ø16 c/30 cm           |
| ⑤      | 14Ø16 + Refuerzo 2Ø16 |
| ⑥      | Ø16 c/30 cm           |
| ⑦      | Ø25 c/20 cm           |
| ⑧      | Ø16 c/30 cm           |

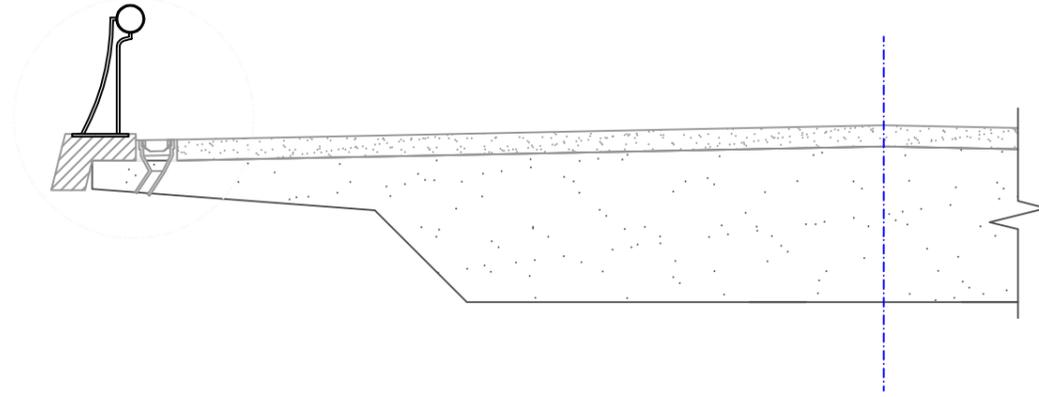
Se detallan las secciones críticas con cambios considerable

| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO |               |
|--|---------------|
| Diametros (mm)                             | Diametros (") |
| Ø12  | Nº4 1/2"      |
| Ø14  | Nº5 5/8"      |
| Ø16  | Nº6 3/4"      |
| Ø20  | Nº7 7/8"      |
| Ø25  | Nº8 1"        |
|  | Nº9 1-1/8"    |
| Ø32  | Nº10 1-1/4"   |

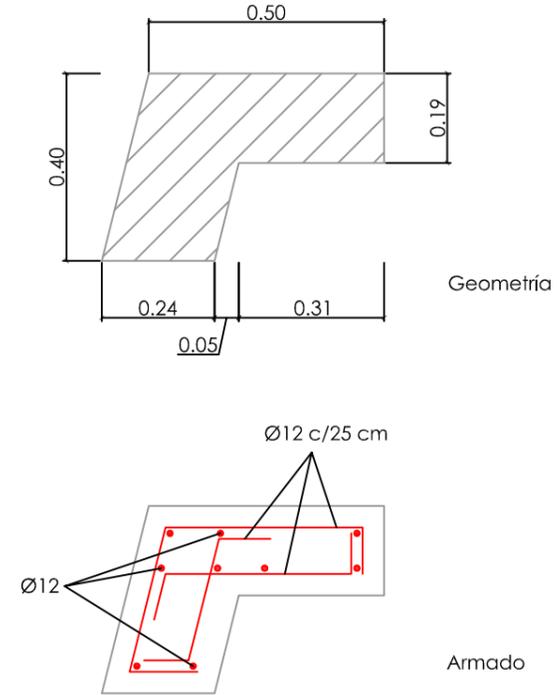
CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO

| HORMIGÓN              | LOCALIZACIÓN   | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE | fck N/mm2                 | NIVEL DE CONTROL   | COEF. DE SEGURIDAD Yc |
|-----------------------|--|--|---------------------------|--|-----------------------|
|                       | LIMPIEZA   | HM-20 / P / 25                                   | 20 (3000 PSI)             |  |                       |
| CIMENTACION           | HA-30 / P / 20 / XC2   | 30 (4500 PSI)                                    |                           | NORMAL   | 1,50                  |
|                       | ALZADOS  | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)             | NORMAL   | 1,50                  |
| ARMADURA              | TIPO   | DESIGNACIÓN                                      | LÍMITE ELÁSTICO fyk N/mm2 | NIVEL DE CONTROL   | COEF. DE SEGURIDAD Ys |
|                       | ACERO PASIVO   | B 400 S (Grado 60)                               | 400                       | NORMAL   | 1,15                  |
| RECUBRIMIENTO NOMINAL | RECUBRIMIENTO MÍNIMO   | Cimentaciones: 40 mm                             |                           | VIDA ÚTIL DE LA ESTRUCTURA: 100 años<br>CONTROL DE LA EJECUCIÓN NORMAL |                       |
|                       |  | 30 mm  |                           |  |                       |
|                       |  | 10 mm  |                           |  |                       |
| NOTAS                 | LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |  |                           |  |                       |

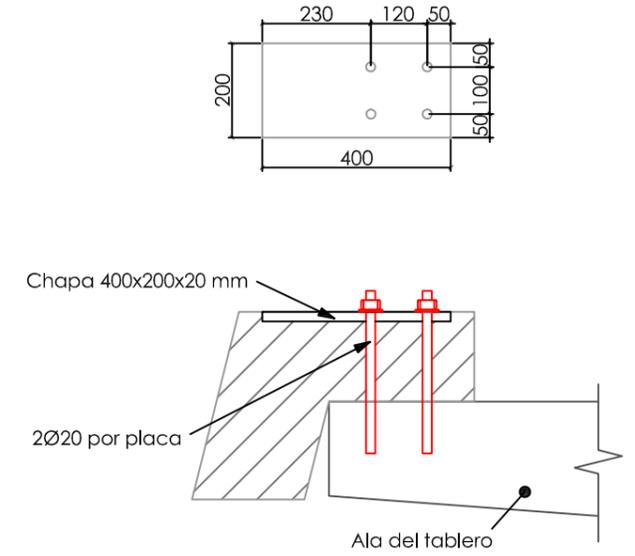
SECCIÓN DEL TABLERO  
E: 1/50



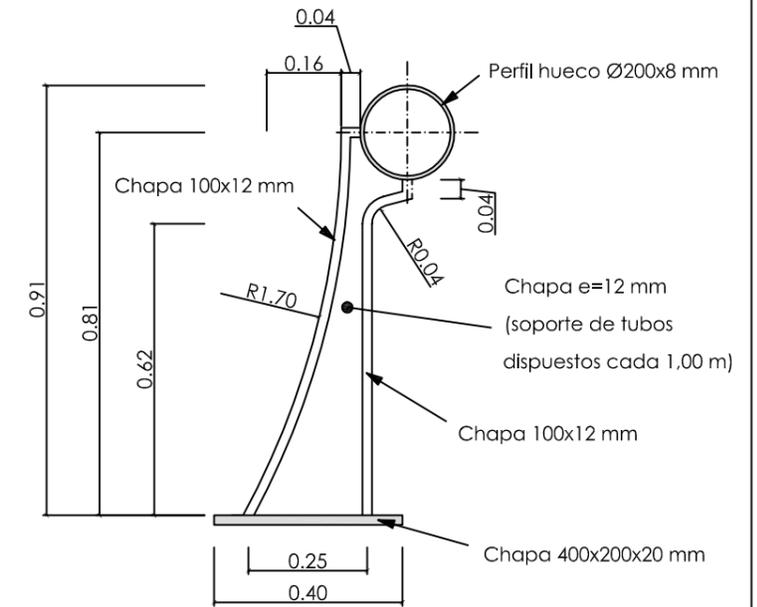
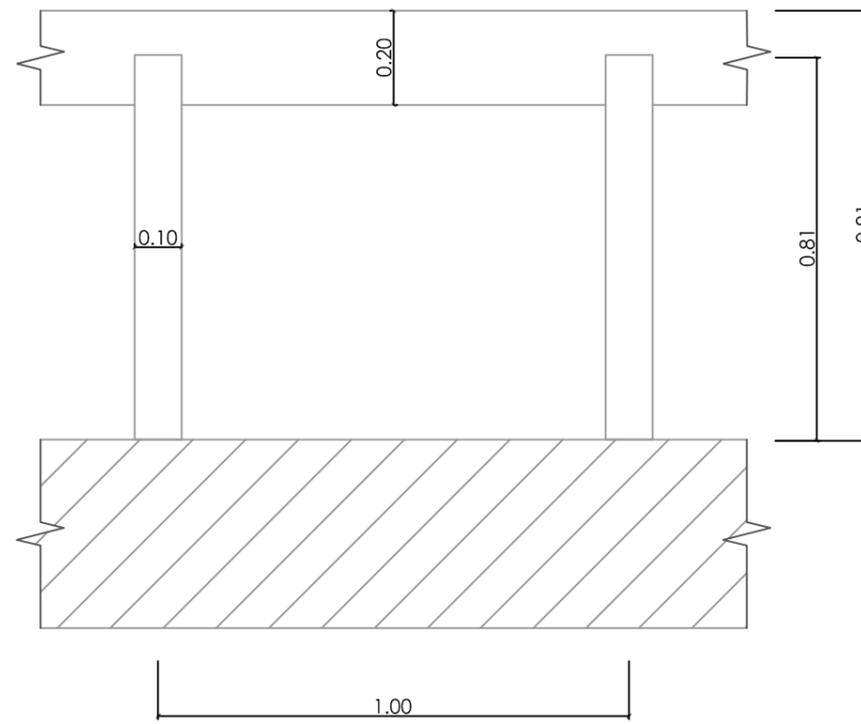
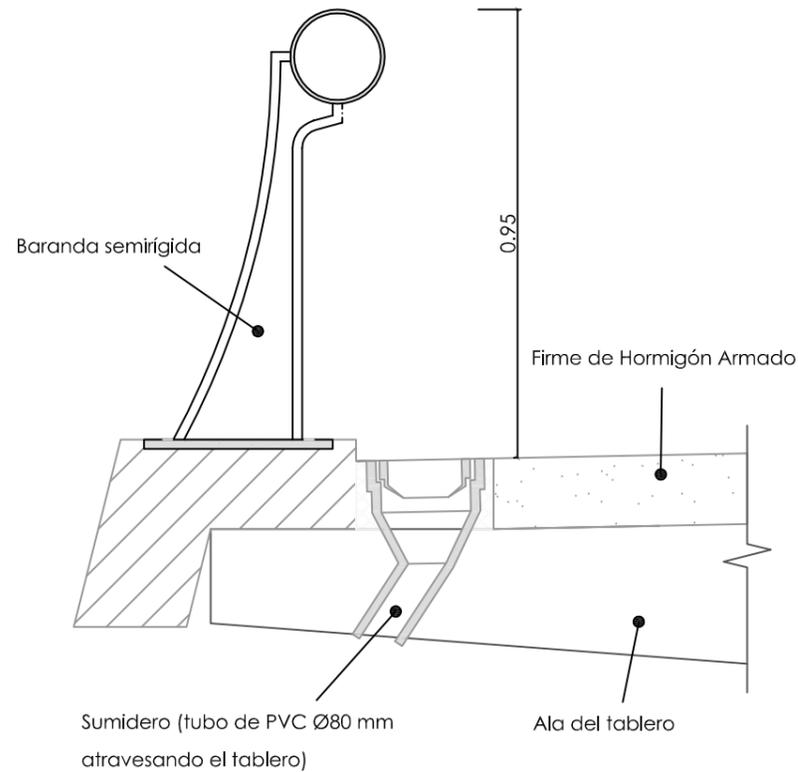
DETALLES  
E: 1/15  
Cotas en metros



DETALLES  
E: 1/15  
Cotas en milímetros



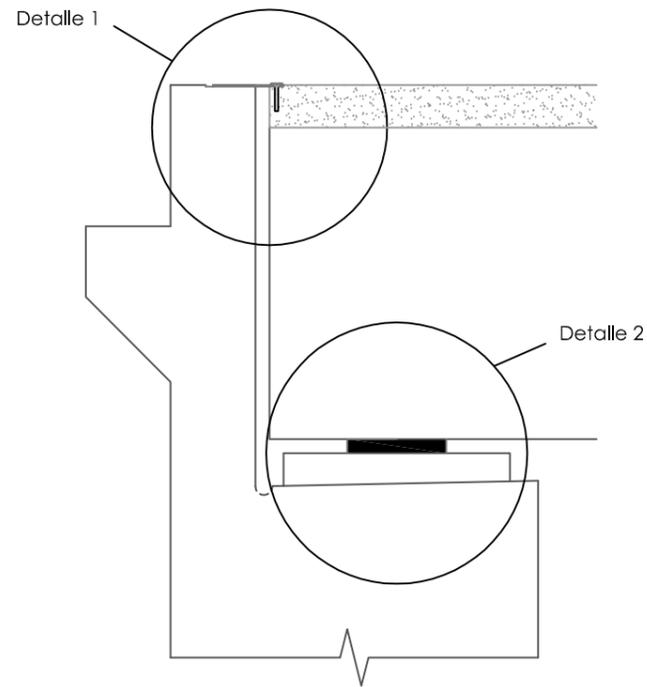
DETALLE BARRERA SEMIRÍGIDA Y SUMIDERO  
E: 1/15  
Cotas en metros



DETALLE BARRERA SEMIRÍGIDA  
E: 1/15  
Cotas en metros

Vista en alzado de la baranda

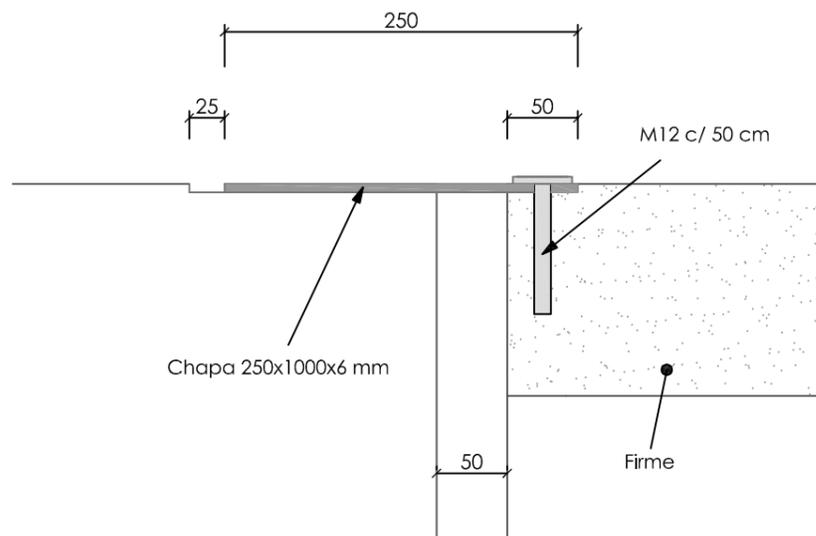
E: 1/25



DETALLE 1. JUNTA DE DILATACIÓN

E: 1/5

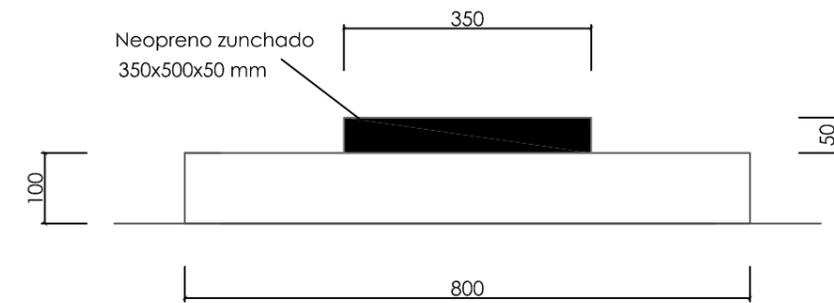
Cotas en milímetros



DETALLE 2. NEOPRENO SECCIÓN TRANSVERSAL

E: 1/10

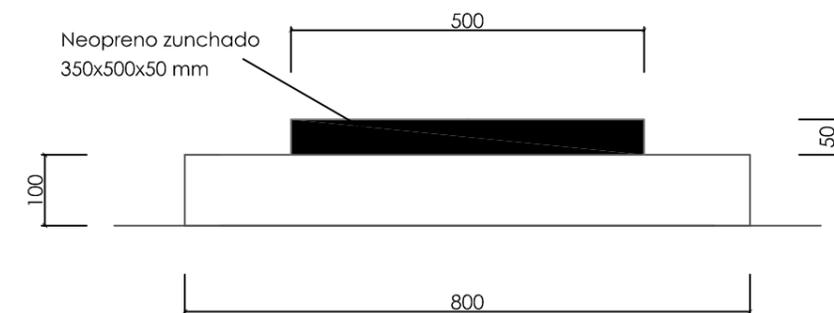
Cotas en milímetros



DETALLE 2. NEOPRENO SECCIÓN TRANSVERSAL

E: 1/10

Cotas en milímetros



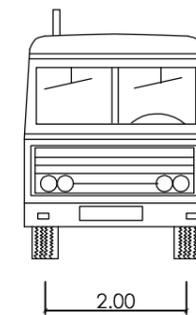
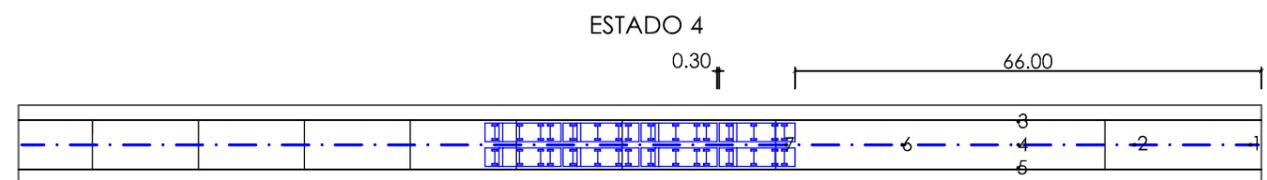
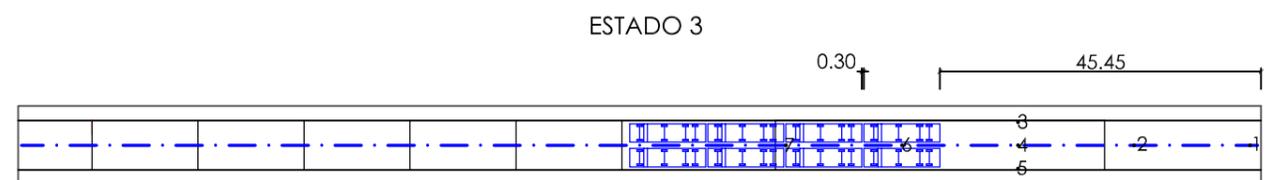
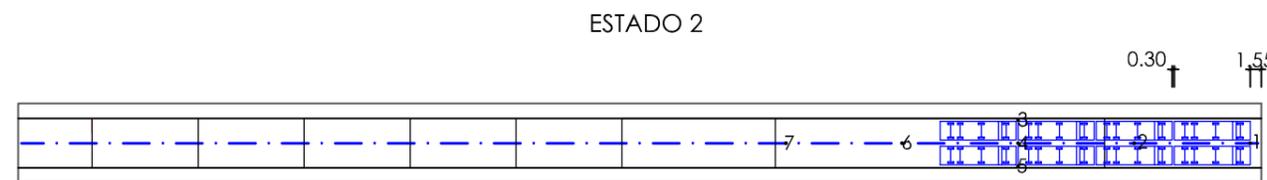
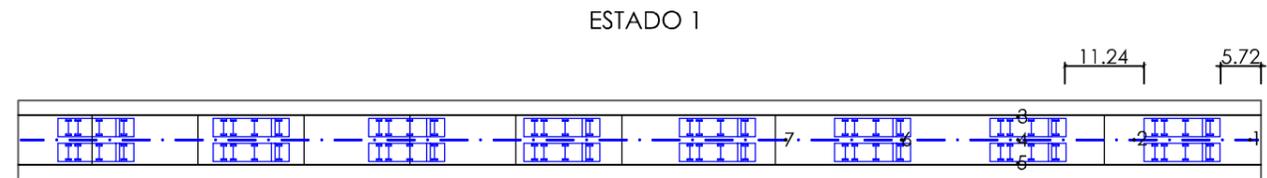
Los apoyos del tablero sobre las pilas y estribos serán apoyos elastoméricos zunchados.

Las dimensiones del neopreno zunchado propuesto para las pilas y estribos son de 350x500x50 mm, siendo el valor de su carga admisible de 2630 KN.

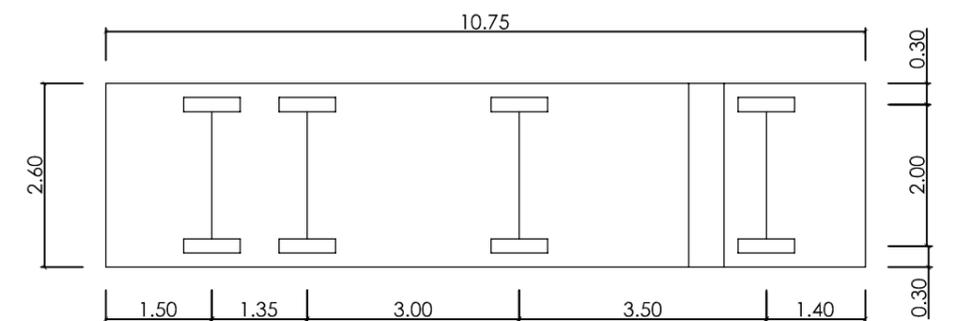
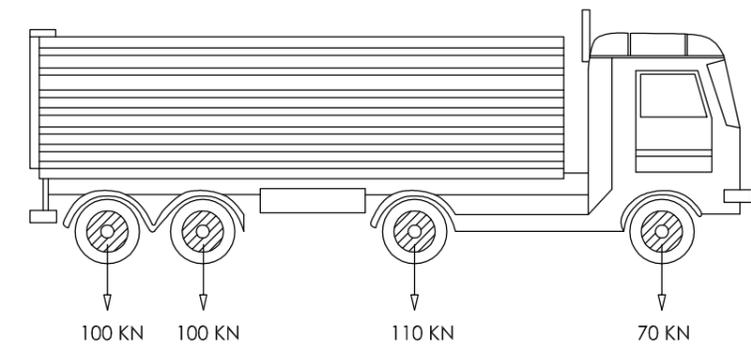
CUADRO DE CARACTERÍSTICAS SEGÚN EL EUROCODIGO

| DIAMETROS DE BARRAS CORRUGADAS DE REFUERZO |               |
|--|---------------|
| Diametros (mm)                             | Diametros (") |
| Ø12  | Nº4 1/2"      |
| Ø14  | Nº5 5/8"      |
| Ø16  | Nº6 3/4"      |
| Ø20  | Nº7 7/8"      |
| Ø25  | Nº8 1"        |
|  | Nº9 1-1/8"    |
| Ø32  | Nº10 1-1/4"   |

| HORMIGÓN   | LOCALIZACIÓN | RESISTENCIA/ CONSISTENCIA/ Ømáx. ÁRIDO/ AMBIENTE | fck N/mm2                              | NIVEL DE CONTROL   | COEF. DE SEGURIDAD Yc |
|--|--------------|--|--|--|-----------------------|
|  | LIMPIEZA     | HM-20 / P / 25                                   | 20 (3000 PSI)                          |  |                       |
|  | CIMENTACION  | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)                          | NORMAL   | 1,50                  |
|  | ALZADOS      | HA-30 / P / 20 / XC2                             | 30 (4500 PSI)                          | NORMAL   | 1,50                  |
| ARMADURA   | TIPO         | DESIGNACIÓN                                      | LÍMITE ELÁSTICO fyk N/mm2              | NIVEL DE CONTROL   | COEF. DE SEGURIDAD Ys |
|  | ACERO PASIVO | B 400 S (Grado 60)                               | 400                                    | NORMAL   | 1,15                  |
| RECUBRIMIENTO NOMINAL  |              | RECUBRIMIENTO MÍNIMO                             | Cimentaciones: 40 mm<br>30 mm<br>10 mm | VIDA ÚTIL DE LA ESTRUCTURA: 100 años<br>CONTROL DE LA EJECUCIÓN NORMAL |                       |
| NOTAS  |              |  |  |  |                       |
| LA DISTANCIA ENTRE CUALQUIER ARMADURA PASIVA Y EL PARAMETRO MAS PROXIMO NO SERA INFERIOR AL VALOR INDICADO. PARA GARANTIZARLO, SE EMPLEARAN LOS OPORTUNOS SEPARADORES. |              |  |  |  |                       |



CAMIÓN TIPO 4, EJES DE 380 KN  
E: 1/100

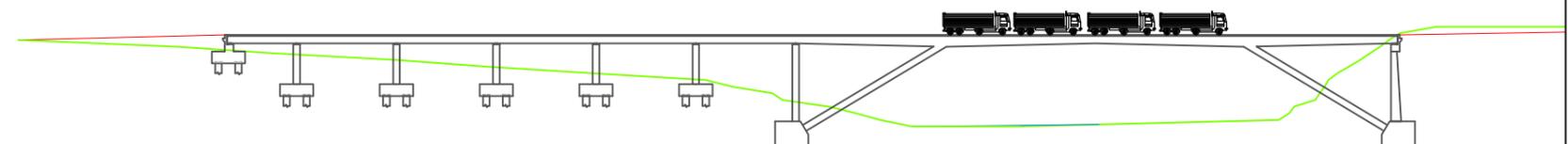


| MOVIMIENTO ( mm) |      | ESTADO DE CARGA |       |       |       |
|------------------|------|-----------------|-------|-------|-------|
| Punto de medida  | Nudo | 1               | 2     | 3     | 4     |
| 1                | 1939 | 0.30            | 2.20  | 2.20  | 0.90  |
| 2                | 1923 | 2.20            | 26.00 | 25.20 | 11.30 |
| 3                | 1385 | 15.30           | 36.00 | 7.30  | 9.90  |
| 4                | 1907 | 15.30           | 36.00 | 7.30  | 9.90  |
| 5                | 1211 | 15.40           | 36.10 | 7.30  | 9.90  |
| 6                | 1891 | 19.50           | 8.70  | 32.10 | 3.10  |
| 7                | 1874 | 1.5             | 24.00 | 30.10 | 13.60 |

El anejo de cálculo recoge los valores de las flechas teóricas y la tolerancia de las obtenidas

Para la medida de desplazamientos se utilizará un aparato con precisión mínima de 0.1 mm

E: 1/1000





# PLIEGO DE PRESCRIPCIONES TÉCNICAS PARTICULARES







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## 1. INTRODUCCIÓN Y GENERALIDADES

### 1.1. DEFINICIÓN

El presente Pliego de Prescripciones Técnicas Particulares tiene como objeto definir las condiciones singulares que complementan, concretan o modifican las establecidas en el Pliego de Especificaciones Generales para la Construcción de Caminos, Calles y Puentes (NIC-2000).

La NIC-2000, aprobada en abril de 2002, es el resultado de la revisión y actualización del libro del mismo nombre publicado en 1980, que había estado usando desde ese año el Ministerio de Construcción y Transporte y que posteriormente ha venido usando el Ministerio de Transporte e Infraestructura, en la construcción y rehabilitación de caminos, carreteras y puentes.

La revisión se realizó mediante la investigación y compilación de especificaciones modernas.

En la revisión, se mantiene en las NIC-2000, la distribución del contenido de las especificaciones anteriores en tres divisiones, a saber:

- DIVISIÓN I: Requisitos Legales, Administrativos y Ambientales.
- DIVISIÓN II: Especificaciones Técnicas (Detalles Constructivos).
- DIVISIÓN III: Especificaciones de Calidad de los Materiales.

### 1.2. CONDICIONES GENERALES

#### 1.2.1. PROPÓSITO DE ESTAS ESPECIFICACIONES

Estas Especificaciones Técnicas son Generales y se refieren a todos los aspectos de la construcción. En el caso que algún tipo de actividad no esté incluida en estas especificaciones, es deber del Contratista hacer la obra de manera técnicamente correcta y sin ninguna mala intención, es decir, no debe valerse del hecho que no esté incluida en las especificaciones.

El Contratista debe revisar el pliego de licitación e incluir en su oferta las actividades que considera necesarias para ejecutar la obra conforme lo detallan los planos suministrados por el Dueño.

## 2. DIVISIÓN I: REQUISITOS LEGALES, ADMINISTRATIVOS Y AMBIENTALES

### 2.1. SUBDIVISIÓN 100: REQUISITOS LEGALES, ADMINISTRATIVOS Y AMBIENTALES

#### 2.1.1. SECCIÓN 101: ABREVIATURAS Y DEFINICIONES

##### 2.1.1.1. Sección 101.01: Abreviaturas

Dondequiera que en las especificaciones, en los planos u otros documentos de licitación y contractuales se empleen las siguientes abreviaturas, se les dará la siguiente significación:

101.01 (a) Autoridades e Instituciones Estatales Reguladoras de Nicaragua.-

ALMA- Alcaldía de Managua.

DGV- Dirección General de Vialidad del MTI.

INETER- Instituto Nicaragüense de Estudios Territoriales.

MAG-FOR Ministerio Agropecuario y Forestal.

MARENA- Ministerio del Ambiente y Recursos Naturales.

MINGOB- Ministerio de Gobernación.

MINSA- Ministerio de Salud.

MITRAB- Ministerio del Trabajo.

MTI- Ministerio de Transporte e Infraestructura.

UE- Unidad Ejecutora del Proyecto (de la Institución Contratante).

UCP- Unidad Coordinadora del Proyecto (de la Institución Contratante).

101.01 (b) Instituciones Internacionales de Normalización Técnica.

AASHTO- "American Association of State Highway and Transportation Officials" (Asociación de Autoridades Estatales de Carreteras y Transporte de (EE.UU)).



ACI- "American Concrete Institute" (Instituto para el Concreto de EE.UU).

ACPA- American Concrete Pavement Association" (Asociación para Pavimentos de Concreto de EE.UU).

AGC- "Associated General Contractors of America" (Asociación de Contratistas Generales de EE.UU).

AISC- "American Institute of Steel Construction" (Instituto para las Construcciones de Acero de EE.UU).

AISI- "American Iron and Steel Institute" (Instituto para el Hierro y el Acero de EE.UU).

ANSI- "American National Standards Institute (Instituto Nacional de Normas de EE.UU).

APWA- "American Public Works Association" (Asociación para las Obras Públicas de EE.UU).

ARTBA- "American Road and Transportation Builders Association" (Asociación de Constructores de Caminos y de Transporte de EE.UU).

ASCE- "American Society of Civil Engineers" (Asociación de Ingenieros Civiles de EE.UU).

ASTM- "American Society for Testing and Materials" (Asociación para Ensayes y Materiales de EE.UU).

ATSSA- "American Traffic Safety Services Association" (Asociación para Servicios de Seguridad de Tráfico de EE.UU).

AWS- "American Welding Society" (Sociedad para la Soldadura de EE.UU).

CFR- "Code of Federal Regulations" (Código de Regulaciones Federales de EE.UU).

CRSI- "Concrete Reinforcing Steel Institute" (Instituto para el Acero de Refuerzo del Concreto de EE.UU).

EPA- "Environmental Protection Agency" (Agencia para la Protección Ambiental de EE.UU).

FTMS- "Federal Test Method Standard" (Norma Federal del Método de Prueba de EE.UU)

ISO- "International Standardization Organization" (Organización Internacional para la Normalización).

ITE- "Institute of Transportation Engineers" (Instituto de Ingenieros de Transporte de EE.UU).

PCA- "Portland Cement Association" (Asociación del Cemento Portland de EE.UU).

#### 2.1.1.2. Sección 101.02: Definiciones

CGC: Condiciones Generales de Contrato. Conjunto de disposiciones generales de carácter legal, administrativo y ambiental que regulan la ejecución del contrato.

CEC: Condiciones Especiales de Contrato. Son las adiciones, supresiones y modificaciones a las Especificaciones Generales y Especificaciones Suplementarias con el fin de cubrir las condiciones peculiares a un proyecto individual.

DLC: Documentos de Licitación y Contratación. Estos son el conjunto de documentos emitidos por el Contratante, que especifican detalladamente las obras, bienes o servicios cuya ejecución o adquisición desea contratar mediante el procedimiento de selección de contratistas conocido como licitación, describen el trámite a seguir en dicho proceso y en la adjudicación y formalización del contrato, así como las condiciones que regirán en la ejecución de las obras o el suministro de los bienes o servicios contratados.

IGO: Instrucciones Generales a los Oferentes. Estas proveen la información necesaria para que los Oferentes puedan preparar sus ofertas. También proveen información sobre la presentación, apertura y evaluación de las ofertas y sobre la adjudicación del Contrato.

IEO: Instrucciones Especiales a los Oferentes. Estas contienen las disposiciones que son propias de cada licitación y que complementan la información o los requisitos indicados en las IGO. Estas van incluidas en los DLC.

NABCV: Normas Ambientales Básicas para la Construcción Vial.

#### 2.1.2. SECCIÓN 105: ALCANCE DE TRABAJO

##### 2.1.2.1. Sección 105.02: Cambios, Condiciones Físicas Diferentes en el Lugar de la Obra.- Variaciones en las Cantidades de Obra

1.- **Cambios.-** Queda mutuamente convenido que es inherente a la naturaleza de la construcción de caminos, calles y puentes, la posibilidad de introducir alteraciones, desviaciones, adiciones y supresiones en los documentos contractuales posteriormente a la adjudicación y firma del Contrato, a fin de construir la obra en la forma más adecuada, técnica y económicamente, y de acuerdo con las conveniencias del Contratante, factores varían frecuentemente durante el curso de las operaciones constructivas, tanto por criterios técnicos o económicos como por el hallazgo de condiciones físicas desconocidas



previamente u ocultas en el lugar de las obras, diferentes a las consideradas en el Contrato. Por lo tanto, es natural y esencial en el Contrato considerar un margen normal y razonable de cambios con relación a lo indicado en los documentos contractuales originales sin que por ello quede invalidado el Contrato. En consecuencia:

1.1) El Contratante se reserva el derecho de, en cualquier oportunidad y sin necesidad de avisar al Garante, por medio de una orden escrita denominada Orden de Cambio, para hacer cualquier cambio en la obra, que esté dentro del objetivo general del Contrato, incluyendo, aunque sin limitarse a:

1.1.1) Cambios en las especificaciones, incluyendo planos y dibujos de trabajo;

1.1.2) Cambios en el método o manera de ejecutar los trabajos;

1.1.3) Cambios en las facilidades, equipo, materiales, servicios, Derecho de Vía y servidumbres que hubiera ofrecido suministrar el Contratante dentro de las condiciones de la licitación; y

1.1.4) Cambios en el avance programado para construir el total o parte de las obras.

1.2) Cualquier otra orden, escrita o verbal, emitida por el Contratante, que cause cualquier cambio de los mencionados en el inciso 1.1 de este artículo, deberá ser tenida como una **Orden de Cambio**, según los términos de este artículo, a condición de que el Contratista entregue al Contratante y al Ingeniero una nota escrita en un plazo máximo de 15 días después de recibida la orden escrita o verbal, en que además de especificar la fecha, circunstancias y origen de la orden, concuerde en que se trata de una **Orden de Cambio**. El vocablo **orden**, tal como se le deberá interpretar en este inciso, se refiere a dirección, instrucción, interpretación o determinación del Contratante.

1.3) Fuera de lo dispuesto en los incisos 1.1 y 1.2 que anteceden, respecto a la calificación de lo que constituye una Orden de Cambio, ninguna orden, declaración o conducta del Contratante podrá ser interpretada como "cambio", en el sentido indicado en esos incisos, o dará derecho al Contratista para reclamar un ajuste equitativo de conformidad con los términos del inciso 1.4 que sigue.

1.4) Si cualquier "cambio" de la índole señalada en los incisos anteriores causa un aumento o disminución en el costo del Contratista para ejecutar cualquier parte de la obra contratada o en el plazo de ejecución o en ambos, aun en el caso de que no hubiese sido ordenado por el Contratante, éste hará un ajuste equitativo, en el costo o en el plazo de

ejecución o en ambos, introduciendo la modificación pertinente en el Contrato, BAJO EL ENTENDIDO de que, exceptuando el caso de reclamos basados en especificaciones defectuosas, no se hará ajuste alguno en costos en que hubiera incurrido el Contratista si no cumple con entregar la nota de que se hace mención en el inciso 1.2 y, además, en el caso de reclamos por especificaciones defectuosas por las cuales es responsable el Contratante, el ajuste equitativo compense, exclusivamente, el incremento que el Contratista haya experimentado en sus costos en su intento de cumplir con dichas especificaciones defectuosas.

1.5) Si el Contratista tiene el propósito de reclamar un ajuste equitativo de los mencionados en el inciso anterior, deberá entregar por escrito al Contratante una PROTESTA, dentro de un plazo de QUINCE (15) días después de recibir por escrito una orden para efectuar cambios como los descritos en el inciso (1.1) de este artículo o de una orden de la naturaleza indicada en el inciso (1.2) del mismo; en dicha PROTESTA el Contratista dará a conocer al Contratante los fundamentos de su desacuerdo, citando condiciones contractuales, especificaciones, referencias, circunstancias, cantidades y posible monto del ajuste en dinero, extensión en el plazo o en ambos. El plazo para la entrega de esta protesta podría ser ampliado por el Contratante si hubiera justificación para ello, pero también podrá ser anexada a la nota a que se refiere el inciso (1.2) de este artículo.

1.6) El Contratante no considerará ningún ajuste equitativo del tipo mencionado en el inciso 1.4 que sea presentado por el Contratista después de efectuado el pago final de este Contrato de conformidad con el Artículo-110.08, Cláusula 11, de estas CGC.

## 2.- Condiciones Diferentes en el Lugar de las Obras.-

2.1) Si en el curso de las operaciones constructivas el Contratista encontrara en cualquier lugar del Proyecto:

2.1.1) Condiciones físicas subterráneas u ocultas que difieran considerablemente de las indicadas en el Contrato, o.

2.1.2) Condiciones físicas desconocidas, de naturaleza extraña y que difieran considerablemente de las que son generalmente reconocidas como inherentes a los trabajos de la índole de los amparados por este Contrato, deberá notificar sin demora al Ingeniero, antes de alterar las condiciones encontradas en el sitio. Al recibo de esta notificación, el Ingeniero investigará con toda prontitud las mencionadas condiciones y, si encuentra que, efectivamente, difieren considerablemente de las condiciones normales y que causarán un





aumento o disminución en los costos del Contratista para construir cualquier parte de la obra bajo Contrato, en el tiempo requerido para ello o en ambos, se hagan o no cambios en los planos o especificaciones como resultado de tales condiciones, se hará un ajuste equitativo, para lo cual el Contrato será modificado por escrito, de conformidad con los hechos.

2.2) El Contratante no considerará ningún reclamo de la naturaleza mencionada en el inciso (2.1) si:

a) El Contratista no notifica al Ingeniero en la forma allí indicada, aunque, si hay justificación para ello, el Contratante podrá extender el plazo prescrito.

b) El reclamo es presentado después de efectuado el pago final de este Contrato de conformidad con el Artículo-110.08, Cláusula 11, de estas CGC.

**3.- Variaciones en las Cantidades de las Obras.-** De conformidad con las estipulaciones contenidas en las Cláusulas 1 y 2 de este artículo, ha quedado establecido que durante el curso de la construcción de las obras bajo Contrato, por su misma naturaleza, o bien, por condiciones desconocidas y extrañas del terreno, es posible que el Ingeniero se vea obligado a introducir cambios, y que, aun sin que el Ingeniero introduzca cambio alguno en los documentos contractuales, en la medición final de las obras ya concluidas, se encuentren variaciones en las cantidades de obras realizadas y que éstas sean mayores o menores que las originalmente estimadas durante el diseño y que sirvieron de base para la contratación. De este riesgo es advertido el Oferente en el Artículo-103.08, y, además en el Artículo-103.05 de las IGO.

En consecuencia, el Contratante ha establecido que ninguna de las partes tiene derecho a reclamar ajustes en los precios unitarios de los conceptos afectados, si el margen de aumento o disminución en las cantidades finales de los Conceptos Mayores del Contrato o en los que se conviertan por cambios posteriores en mayores, está en un rango de un 25% con relación a las cantidades originales mostradas en el Pliego de Licitación.

El pago por el aumento o disminución de las cantidades de obra será efectuado de conformidad con lo establecido en el Artículo-110.05 de estas CGC. Si la magnitud de las variaciones es tal que justifiquen una extensión en el plazo contractual, el ajuste de éste será determinado de conformidad con lo establecido en el Artículo 109.06, de estas CGC.

Los ajustes considerados en esta Cláusula 3 se refieren exclusivamente a cantidades de obra. Cualquier ajuste equitativo por cambios en la **naturaleza** de los trabajos será efectuado de conformidad con la Cláusula 2 de este mismo artículo.

#### 2.1.2.2. Sección 105.03: Trabajo Extra

El Contratante se reserva el derecho de ordenar al Contratista, la ejecución de trabajos nuevos o no previstos en el Contrato original, dentro de márgenes razonables, ya sea para completar más adecuadamente las obras bajo contrato o bien, por motivos de conveniencia o necesidad pública (incluyendo los casos de emergencia nacional), sean trabajos dentro o fuera del Derecho de Vía o más allá de los límites establecidos para el Proyecto. Los trabajos de esta índole serán considerados como TRABAJO EXTRA, si el Ingeniero determina que no hay en el Contrato ningún concepto o combinación de conceptos de pago para compensar su ejecución. En el caso de que parte de tales trabajos estuviera amparada por un concepto o combinación de conceptos de pago existentes en el Contrato, la parte restante de dichos trabajos será la clasificada como TRABAJO EXTRA. También será considerado como extra, todo trabajo específicamente designado como tal en los planos o especificaciones.

El Contratista procederá a ejecutar todo trabajo extra y a suministrar la mano de obra, materiales, equipo, administración e imprevistos requeridos para completarlo, si ha recibido y aceptado una Orden de Cambio o cualquier orden escrita del Ingeniero; de no existir las órdenes aquí mencionadas, el Contratista no tendrá derecho a reclamar compensación alguna por el trabajo extra que haya efectuado.

En el caso de que una Orden de Cambio no haya sido aceptada o, en el caso de que el Ingeniero y el Contratista no estén de acuerdo sobre los precios, el pago por trabajo extra ordenado de conformidad con este artículo, será efectuado de conformidad con las estipulaciones del Artículo-110.06, de estas CGC.

#### 2.1.2.3. Sección 105.04: Otros Trabajos Públicos

Si en el área de un proyecto del Gobierno Central, hubiera otros trabajos públicos, que estuvieran siendo ejecutados directamente por el Gobierno Central (incluyendo sus Entes Descentralizados o Autónomos) o Municipalidades, por contrato con el mismo o con otros contratistas, que requirieran que el Contratista suministrara materiales de construcción tales como roca natural o procesada, arena, tierra, madera, etc., o servicios de transporte para los mismos, o el alquiler de maquinaria de construcción, entonces, el Contratista podrá suministrar



tales materiales o servicios, sin causar atrasos o de otra manera afectar desfavorablemente a las obras incluidas en este Contrato, si el Ingeniero lo aprueba u ordena por escrito, sin que tales trabajos adicionales sean interpretados como base para reclamar ajustas en los precios o en el plazo del Contrato.

#### 2.1.2.4. Sección 105.04: Cambios Propuestos por el Contratista

1.- **Definición.-** Es posible que el Contratista, por su experiencia, recursos y otros factores, encuentre y proponga al Contratante una manera de construir una obra, de iguales o mejores características que la propuesta en el Contrato, a un costo total más bajo que el estimado por el Contratante, introduciendo cambios en los documentos contractuales originales, bajo la condición de compartir con el Contratante las utilidades adicionales a obtener. Es este el tipo de "CAMBIOS" a que se refiere el presente artículo y sólo serán considerados por el Contratante si la solicitud del Contratista se acoge a las disposiciones específicas aquí contenidas y no deberán ser confundidos con otros tipos de cambios menores que estén considerados en cualquier otra parte de estas CGC.

2.- **Información Requerida.** El Contratista deberá adjuntar a su propuesta, como mínimo, la siguiente información:

2.1) Una descripción de la diferencia entre los requerimientos del Contrato y los del cambio propuesto, así como de las ventajas y desventajas de unos y otros;

2.2) Una enumeración detallada de los requerimientos del Contrato que deberían ser cambiados al ser aceptada la propuesta, y una recomendación sobre la manera de efectuar cada uno de dichos cambios en el mismo, o sea, sugerir la redacción de los cambios;

2.3) Una estimación de la reducción en los costos totales de ejecución que sería obtenida al adoptar la propuesta, tomando en consideración los costos del Contratista en la preparación de los cambios en los planos, las especificaciones o en ambos y en las condiciones, y en la puesta en obra de los mismos, incluyendo cualquier suma atribuible a subcontratos a que se refiere la Cláusula 5 de este mismo artículo, así como los fundamentos del estimado de costos;

2.4) Un pronóstico sobre cualesquier efectos que el cambio tendría en los costos colaterales que recaerían sobre el Contratante, los costos de conceptos involucrados, en el Impacto Ambiental y costo de mitigación, y en los costos de mantenimiento y operación;

2.5) Una exposición sobre la fecha aproximada en que debería ser emitida la Orden de Cambio pertinente en que se adoptaría la propuesta, con el objeto de obtener la máxima reducción en el costo a través de lo que falte para concluir todas las obras bajo Contrato, haciendo notar cualquier efecto que se produciría en el plazo contractual o programa de entrega;

2.6) Las fechas de similares propuestas hechas en otras oportunidades o simultáneamente, al Contratante (si acaso las hubiera hecho), los números de los contratos con el Contratante en que dichas propuestas fueron presentadas, y las acciones tomadas por el Contratante, en esas oportunidades, si es que le son conocidas.

#### 3.- Tramitación de las Propuestas.-

3.1) Las propuestas de **cambios** para reducción de costos presentadas por el Contratista al amparo de este artículo, serán tramitadas con la debida premura; sin embargo, el Contratante no será responsable por cualquier demora que se produjera durante el proceso de su tramitación. El Contratista tendrá el derecho de retirar, en su totalidad o en parte, cualquier propuesta de esta naturaleza que no haya sido aceptada y aprobada por el Contratante, dentro del plazo especificado en ella. La decisión del Contratante en cuanto a aceptar o no esta clase de propuestas será definitiva y terminante y no estará sujeta a las disposiciones del CGC.

3.2) Antes de que las obras incluidas en el Contrato hayan sido totalmente concluidas, el Contratante podrá aceptar, en su totalidad o en parte, cualquier propuesta para reducción de costos, que haya sido sometida por el Contratista al amparo de las disposiciones de este artículo y que no hubiere sido retirada por él de acuerdo con el inciso 3.1 que antecede, dando al Contratista una notificación por escrito de su aceptación. Esta notificación podrá ser hecha simplemente emitiendo la Orden de Cambio respectiva en la cual se modifique el Contrato Original al amparo de las disposiciones de este artículo. A menos que hubiera sido aprobada por el Contratante una Orden de Cambio u otro tipo de modificación al Contrato Original (Acuerdo Suplementario, por ejemplo), relativas a cambios propuestos para lograr rebajas en el costo, objeto de este artículo, el Contratista estará obligado a ejecutar las obras de conformidad con el Contrato Original;

3.3) Cualquier documento de respaldo a una modificación introducida en el Contrato Original, que haya sido aceptada por el Contratante al amparo de las disposiciones de este artículo, deberá especificarlo así clara y explícitamente.



#### 4.- Procedimiento de Valuación de las Rebajas.-

4.1) Si el Contratante acepta y aprueba una propuesta de cambios hecha por el Contratista con el propósito de rebajar los costos de la obra, se hará un ajuste equitativo en el valor original del Contrato y en cualesquier otras disposiciones contractuales que resultaren afectadas, de conformidad con lo estipulado en este y otros artículos del Contrato que sean aplicables. El ajuste equitativo será calculado determinando el efecto de la propuesta en los costos totales del Contratista para ejecutarla, tomando en consideración los costos en que incurrirá en la investigación y desarrollo de la propuesta, siempre que estos costos sean directamente causados por el cambio y no estén reembolsados en otra forma bajo este Contrato, y los costos de ejecución de las obras sujetas al cambio, incluyendo cualquier suma atribuible a subcontratistas, según lo dispone la Cláusula siguiente. El valor original del Contrato será entonces reducido en un monto que será determinado así: A la disminución total estimada en el costo del Contratista se le restará el cincuenta por ciento (50%) de la diferencia entre el monto de dicha disminución total estimada y cualquier aumento neto en los costos colaterales determinables en que pudiera haber razonablemente incurrido el Contratante como resultado de la aplicación de la mencionada propuesta al Contrato.

5.- **Subcontratos.**- El Contratista deberá realizar sus mejores esfuerzos para incluir arreglos adecuados y consecuentes con los objetivos del cambio propuesto, de obtener una disminución en el costo, en cualquier subcontrato que, a su juicio, sea de tal naturaleza y magnitud que se preste razonablemente a esta clase de rebajas. Con el propósito de calcular un ajuste equitativo en el valor original del Contrato, de conformidad con la Cláusula anterior, se considerará que el costo del Contratista por el desarrollo y puesta en obra de una propuesta de cambios de esta naturaleza, que sea aceptada y aprobada por el Contratante, incluye cualesquier costos de desarrollo y ejecución de los subcontratistas, más el costo de los incentivos hechos efectivos a los mismos o la participación de los subcontratistas en la rebaja en costos claramente involucrados en la propuesta y en los que se incurra o sean pagados o se acumulen en virtud de la realización de un subcontrato según los términos de este Contrato.

6.- **Restricciones.**- El Contratista podrá restringir el derecho del Contratante de hacer uso de cualquier pliego de una propuesta de cambios presentada por el Contratista de acuerdo con las disposiciones de este artículo, o de la información que le sirve de soporte, si aparece claramente marcada o impresa sobre dicho pliego u hoja de información, la siguiente constancia:

..."Estos datos suministrados de conformidad con el Artículo sobre Cambios Propuestos por el Contratista del Contrato No. \_\_\_\_\_, no serán dados a conocer a nadie fuera del Contratante ni copiados ni usados ni revelados, total o parcialmente, con ningún otro propósito que el de evaluar la propuesta sometida ante el Contratante al amparo del artículo antedicho. Esta restricción no pretende limitar el derecho del Contratante de usar información contenida en esos documentos, si es o ha sido obtenida del Contratista o de otra manera puesta a su disposición por éste y obtenida de otra fuente, sin limitaciones. Si dicha propuesta es aceptada por el Contratante de acuerdo a los términos del antedicho Contrato, después de haber hecho uso de esta documentación en la mencionada evaluación, el Contratante tendrá el derecho a reproducir, copiar, usar y revelar cualquier parte de la documentación que sea razonablemente necesaria para la plena utilización de la propuesta, tal como ha sido aceptada, de cualquier manera y con el propósito que fuere, y ordenar que otros lo hagan".

En el caso de que una propuesta de esta naturaleza sea aceptada, queda aquí entendido que el Contratista cede al Contratante todos los derechos para usar, reproducir, copiar o revelar, en su totalidad o en parte, de cualquier manera y con el propósito que fuere, y ordenar o permitir que otros lo hagan, cualquier documento que sea razonablemente necesario para utilizar plenamente dicha propuesta.

7.- **Modificaciones a la Propuesta.**- Cualquier modificación de una propuesta para rebajar costos, por medio de la cual sean aumentadas o disminuidas las cantidades de obra posteriormente a su aceptación y formalización por parte del Contratante, deberá estar condicionada a un ajuste equitativo en el costo, de conformidad con lo estipulado en la Cláusula (4) de este artículo.

8.- **Aclaración de Términos.**- Para los fines de este artículo, se entenderá como **desarrollo** de una propuesta de cambios para reducción de costos, a las investigaciones, estudios de campo y oficina, cálculos, rediseño y preparación de planos, modificaciones a las especificaciones técnicas y a las condiciones contractuales originales, para su presentación al Contratante con fines de evaluación y aceptación o rechazo.

Por **ejecución o puesta en obra** se entenderá la construcción de las obras de conformidad con la propuesta, si ésta es aceptada y formalizada por el Contratante.



#### 2.1.2.5. Sección 105.09: Derecho a Usar Materiales Encontrados Dentro de los Límites del Proyecto

El Contratista, con la aprobación del Ingeniero, podrá usar en la construcción de las obras del Proyecto, materiales como piedra, grava, arena u otro material que, a juicio del Ingeniero y sin afectar negativamente al Medio Ambiente, sea aceptable para ello y que sea encontrado en la excavación, y recibirá pago por la excavación de dichos materiales al precio unitario contractual correspondiente sin que se le haga ninguna deducción del precio unitario de otras obras en las cuales sean incorporados. Por su parte, El Contratista quedará obligado a reemplazar, a sus expensas, con otro material aceptable, todo el volumen de materiales así removido y usado que luego hiciere falta para la construcción de terraplenes, rellenos de estructuras, accesos a puentes y propiedades y otros tipos de obras. No se cobrará nada al Contratista por los materiales así usados.

El Contratista, sin embargo, no deberá excavar ni remover ningún material existente dentro del emplazamiento de la vía que no esté dentro de los límites de excavación y terraplenado indicados por las estacas de talud, sin la autorización u orden escrita del Ingeniero.

En el caso de que el Contratista haya producido o procesado materiales existentes en tierras del Contratante, en exceso de las cantidades requeridas para la construcción de las obras, el Contratante podrá tomar posesión de tales excedentes, incluyendo todo material de desperdicio resultante como subproducto, sin la obligación de reembolsar al Contratista el costo de su producción, o podrá ordenar al Contratista la remoción de dichos materiales y restaurar los lugares de almacenaje a una condición satisfactoria, sin costo adicional para el Contratante.

La anterior disposición no será aplicable a los casos en que el Contratante convenga con el Contratista en la producción o procesamiento de materiales en volúmenes que excedan a las necesidades del Proyecto, mediante pago acordado entre ambos, sea para las necesidades futuras del mantenimiento, para trabajos extras o para otros trabajos del Contratante.

Salvo disposición en contrario, todo el material proveniente de una estructura abandonada, podrá ser usado temporalmente por el Contratista en la erección de la estructura que la reemplazará o en cualquier otra del Proyecto. El Contratista no podrá modificar dicho material sin la previa autorización del Ingeniero.

#### 2.1.2.6. Sección 105.10: Derechos sobre Materiales de Valor Cultural o de Carácter Bélico

Cuando dentro de los límites del Proyecto o en operaciones con él relacionadas sean encontrados objetos de arte o de valor histórico o materiales de guerra, el Contratista deberá notificar inmediatamente al Ingeniero y solicitar instrucciones acerca de la línea de acción a seguir.

Cuando las operaciones de excavación a cargo del Contratista ponga al descubierto fósiles, vestigios de poblados prehistóricos o de artefactos de valor histórico o arqueológico, o de objetos explosivos, todas las operaciones en el área circundante serán temporalmente suspendidas y el Ingeniero notificará al Contratante para que éste ponga el hallazgo en conocimiento de las autoridades competentes, según el caso, para que ellas dispongan lo que haya que hacer con los objetos descubiertos y con el área del hallazgo. Bajo la inmediata dirección del Ingeniero, el Contratista proseguirá con las excavaciones en el sitio de tal manera que no resulten dañados los artículos encontrados o cualquier otro que pudiera existir oculto y para removerlos y entregarlos a la custodia de las autoridades competentes. Cuando sea necesario ejecutar este tipo de excavaciones, el pago será efectuado como **Trabajo Extra**.

Todo artefacto y objeto así encontrados y recuperados serán de la exclusiva propiedad y posesión del Gobierno Central. La apropiación de tales objetos que hiciera el Contratista o su personal, será considerada como una acción ilegal.

El Contratista es responsable de notificar a sus empleados y subcontratistas, de estas disposiciones y de este derecho de posesión del Gobierno Central.

#### 2.1.2.7. Sección 105.11: Limpieza Final del Lugar de la Obra

De conformidad con el avance de los trabajos, y antes de la aceptación final del Proyecto, el Contratista deberá despejar paso a paso el sitio de la obra y restaurarlo a su situación original, incluyendo aquellos terrenos de propiedad pública o privada que hayan sido usados como **bancos de préstamo** o en cualquiera otra forma para la construcción de las obras. Para ello removerá los materiales sobrantes y las instalaciones provisionales y limpiará las cunetas, zanjas o cauces que hayan quedado obstruidos durante la ejecución de los trabajos, además **cumplirá con los requerimientos de las NABCV**.

El Contratista podrá solicitar una autorización temporal para guardar equipo y materiales en alguna área despejada del Derecho de Vía del Proyecto, hasta que éste último sea aceptado. Antes de la aceptación final del Proyecto todo equipo, material y otras propiedades del Contratista deberán ser removidos de esas áreas.

Todos aquellos pilotes que ya no sean necesarios en la obra, deberán ser recortados, por lo menos, sesenta centímetros (0.60 m.) por debajo de la superficie del terreno o al ras con el fondo del canal, si está situado en alguna vía de agua. Todos los recortes de pilotes y residuos deberán ser removidos del Derecho de Vía del Proyecto y desechados en sitios indicados por el Ingeniero y en la forma que él apruebe.

Si el Contratista no cumpliera con alguna de las disposiciones de este Artículo, el Ingeniero le notificará por escrito su incumplimiento. Treinta días (30) después de la entrega de esta notificación, el Contratante hará remover todo equipo, material u otro objeto que pertenezca al Contratista y que se encuentre dentro de los límites del Proyecto. Esta remoción será hecha a expensas del Contratista, quien será, además responsable de cualquier consecuencia que tuviera tal remoción. Esta acción no impedirá al Contratante tomar otras medidas o aplicar otras sanciones contra el Contratista, según esté previsto en las CEC.

Todo el trabajo de limpieza final será considerado como necesario y auxiliar de la ejecución de las obras bajo contrato y no recibirá compensación adicional.

### 2.1.3. SECCIÓN 106: CONTROL DEL TRABAJO

#### 2.1.3.1. Sección 106.01: Autoridad del Ingeniero

El Ingeniero decidirá acerca de todos los aspectos que puedan presentarse respecto a la calidad y aceptabilidad de los materiales entregados, al trabajo ejecutado el ritmo de avance de la obra; la interpretación de los planos y especificaciones y las relativas al cumplimiento del Contrato por parte del Contratista.

La decisión del Ingeniero se fundará en un criterio técnico, tomando en consideración todos los hechos, las variaciones inherentes al procesado y ensaye de los materiales para obras viales, disponibilidad financiera, experiencias obtenidas en el pasado, resultados de investigaciones y otros factores que tengan que ver con el aspecto examinado, incluyendo todos los reglamentos, instrucciones y normas establecidas por el Contratante para la administración de obras bajo contrato. Deberán hacerse todas las pruebas o ensayos que el

Ingeniero juzgue necesarios basados en los planos y las especificaciones correspondientes, para determinar el grado de concordancia del material o el trabajo en cuestión.

#### 2.1.3.2. Sección 106.03: Conformidad con los Planos y Especificaciones

Todo trabajo efectuado y todos los materiales suministrados deberán estar sustancialmente de conformidad con las alineaciones, rasantes, secciones transversales y requisitos sobre dimensiones y materiales que aparezcan en los planos o se indiquen en las especificaciones.

Las dimensiones mostradas en los planos y los valores requeridos por las especificaciones contractuales deberán ser considerados como dimensiones que se tratará de alcanzar y valores con que habrá que cumplir como **valores de diseño**, para los cuales hay ciertas tolerancias permitidas. La intención de las especificaciones es que los materiales y la ejecución sean de carácter uniforme y que se ajusten, lo más realísticamente posible, a las dimensiones y valores de los planos y especificaciones o a la parte media de los rangos de tolerancia, si estuvieran indicados. El propósito de los rangos de tolerancia es el de considerar aquellas desviaciones menores ocasionales con respecto a la zona media, que resultan inevitables por razones prácticas. Cuando se especifican valores máximos o mínimos o ambos, la producción y proceso del material y la ejecución del trabajo, deberán ser controlados por el Contratista, de tal manera que los materiales y la obra estén dentro de los límites extremos permitidos para dimensiones o calidad, pero no preponderantemente cerca de ellos. (Ver Artículo 106.12).

En caso de que el Ingeniero encuentre que los materiales suministrados, el trabajo realizado o el producto acabado, no estén sustancialmente conforme con los planos y las especificaciones, tal obra o materiales deberán ser removidos y reemplazados o corregidos de cualquiera otra manera por el Contratista, a sus expensas, de conformidad con el Artículo 106.12 de estas CGC.

#### 2.1.3.3. Sección 106.08: Replanteo y Medición de la Obra

El Contratista deberá replantear la vía y sus estructuras y colocar todas las estacas de construcción, con base en los planos, referencias y los puntos de control primario tanto horizontal (PC, PI, POT y PT) como bancos de nivel para control vertical autorizados previamente por el Ingeniero en el terreno. Con base en las marcas de control primario autorizadas por el Ingeniero, el Contratista establecerá en el terreno el eje de la vía,



demarcará el Derecho de Vía, colocará las estacas de talud, los ejes de puentes, cajas, alcantarillas y sus obras accesorias, así como los niveles y rasantes necesarios para construir las obras de acuerdo con el Contrato.

El Contratista será responsable de la preservación de todos los puntos de control primario establecidos por el Ingeniero, y de todas las estacas de construcción colocadas por él mismo. Si cualquiera de ellos fuera destruido o alterado por el Contratista u otras personas o instituciones, el costo de su reposición será por cuenta del Contratista y su valor cobrado o deducido de los pagos que hubiera que hacerle por trabajo efectuado, según lo determine el Ingeniero.

El Contratista será responsable por los daños y perjuicios resultantes de cualquier falta de exactitud en sus replanteos. El Ingeniero podrá, si lo estima conveniente, comprobar la exactitud de tales replanteos; sin embargo, una falta de comprobación por parte del Ingeniero no relevará al Contratista de su responsabilidad. El Contratista suministrará al Ingeniero sin costo alguno, con todo esmero y prontitud, toda la ayuda y materiales que fueren requeridos para la comprobación del replanteo.

El Contratista deberá poner en conocimiento del Ingeniero los errores aparentes que fueren descubiertos en el replanteo básico inicial, antes de comenzar el trabajo afectado. En caso de ejecutar el trabajo de acuerdo con un replanteo inicial errado, el valor de tal trabajo y cualquier corrección ordenada del mismo, será asumido por el Contratista, a menos que dicho trabajo difiera sustancialmente del descrito en los planos o en las especificaciones, en cuyo caso se aplicarán las disposiciones del Artículo-110.05 o Artículo-110.06 de estas CGC.

El Contratista avisará por escrito al Ingeniero, con no menos de 48 horas de anticipación, cada vez que vaya a comenzar a trabajar en partes de la obra que requieran la medición de secciones transversales originales para fines de pago; de no mediar este aviso, el Contratista no recibirá pago alguno por los trabajos que hayan sido iniciados sin la previa autorización y medición del Ingeniero.

El Ingeniero efectuará, las mediciones que crea convenientes para determinar las cantidades de obra realizadas y, con base en ellas, autorizar los pagos parciales o el pago final. Las mediciones original y final realizadas para el pago final, será hechas conjuntamente por el Ingeniero y el Contratista, a menos que éste rehusara o no pudiera hacerlo al ser notificado; con tal objeto se procederá a conformar una brigada integrada con personal de ambos, que llevará sus anotaciones en libretas de campo que permitan entregar al Contratista

copias al carbón de cada hoja, rubricada por los representantes del Ingeniero y del Contratista. Dichas libretas serán suministradas por el Contratista sin costo adicional para el Contratante.

En caso de que el Contratista rehusara o no pudiera integrar la brigada conjunta o suministrar las libretas requeridas en su oportunidad, las mediciones efectuadas por el Ingeniero serán finales y las únicas que se tomarán en cuenta para el pago.

#### 2.1.3.4. Sección 106.10: Autoridad y Obligaciones de los Inspectores

Los inspectores de obras tendrán las siguientes obligaciones:

- Mantener informado al Ingeniero sobre el avance de las obras y la manera en que están siendo ejecutadas.

- Informar al Ingeniero cada vez que los materiales suministrados o el trabajo efectuado por el Contratista no llenen los requisitos de los documentos constitutivos del Contrato, Artículo 106.04 de esta CGC.

- Hacer del conocimiento del Ingeniero acerca de cualquier desviación o incumplimiento con los planos y especificaciones, equipos, mano de obra, etc., por parte del Contratista.

- Con la autorización del Ingeniero llevar a cabo ensayos analíticos en todas las obras y materiales e informarle los resultados al Ingeniero.

Además los inspectores estarán autorizados para inspeccionar toda o cualquier parte de la obra hecha y materiales suministrados y para ejercer aquella autoridad adicional que el Ingeniero les delegue por escrito ante el Contratistas. Estarán autorizados para rechazar materiales inadecuados y para suspender cualquier trabajo que esté siendo llevado a efecto en forma defectuosa, sujetos a la decisión final del Ingeniero.

La inspección no relevará al Contratista de ninguna de las obligaciones de suministrar materiales aceptables o de ejecutar el trabajo estrictamente de acuerdo con los requerimientos de los planos, especificaciones y del Contrato.

Los inspectores no estarán autorizados para revocar, alterar, aumentar, hacer menos estricto u obviar ningún requerimiento de las especificaciones ni para aprobar o aceptar parte alguna de la obra ni para girar instrucciones contrarias a los planos y especificaciones.



Los inspectores, en ningún caso, actuarán como capataces ni efectuarán tareas para el Contratista, ni interferirán con la administración del trabajo por parte de éste. Ningún consejo u opinión que los inspectores pudieran dar al Contratista podrá ser tomado, de manera alguna, como compromisorio para el Ingeniero o el Contratante o como relevando al Contratista de la obligación de cumplir con los términos del Contrato.

#### 2.1.3.5. Sección 106.11: Inspección del Trabajo

##### A.- Generalidades.

1.- Exceptuando cualquier otra disposición específica en el Contrato, todo material o trabajo requerido para las obras en él comprendida, estará sujeto a la inspección y prueba por parte del Ingeniero, con frecuencia razonable y en el sitio del trabajo, a menos que el Contratante hubiera determinado que tal inspección o prueba del material que va a ser incorporado en el trabajo pueda ser hecha en el lugar de producción, manufactura o embarque. El Ingeniero determinará, cada vez que se decida permitir inspecciones o pruebas fuera del sitio, hasta qué grado tales inspecciones son decisivas acerca de si los materiales en cuestión llenan los requisitos del Contrato. Tales inspecciones y pruebas fuera del sitio del trabajo, no relevarán al Contratista de la responsabilidad por daños o pérdidas del material antes de la aceptación final de la obra, ni en forma alguna afectarán a la continuidad de los derechos ininterrumpidos del Contratante después de la aceptación del trabajo, de acuerdo con los términos del Artículo 106.17, Cláusula 2, con excepción de los previstos anteriormente en estas CGC.

2.- El Contratista deberá reemplazar, sin costo adicional para el Contratante, toda obra mal ejecutada o que, según lo determine el Ingeniero, no cumple con los requisitos fijados en este Contrato, a menos que, en interés del público, el Contratante aceptara tal material o tal obra mal ejecutada con un ajuste adecuado en el precio del Contrato.

3.- El Contratista deberá, con la mayor brevedad, separar y remover del área de la obra todo material que haya sido rechazado. Si el Contratista no reemplazará prontamente el material rechazado o no corrigiere la obra mal ejecutada, el Contratante podrá:

3.1) Reemplazar tal material o corregir la obra defectuosa, por Contrato o bajo cualquier otro procedimiento, cargando el costo de ello al Contratista; o

3.2) Cancelar el derecho del Contratista a continuar la construcción de la obra de acuerdo con el Artículo-109.08, de estas CGC.

4.- El Contratista deberá suministrar, prontamente y sin costo adicional para el Contratante, todas las facilidades, personal y material razonablemente necesarios para efectuar las inspecciones y pruebas que el Ingeniero considere seguras o convenientes. Toda inspección y prueba será efectuada en forma que no atrase el trabajo innecesariamente. El Contratista pagará todo el costo adicional ocasionado por la inspección, si el material o la obra ejecutada no están listos en la fecha u hora especificada por el Contratista para su inspección y prueba.

5.- Si el Contratante considerase necesario o recomendable en cualquier oportunidad, antes de la aceptación de toda la obra, hacer un examen de trabajos ya terminados por medio de remoción o destrucción parcial de los mismos, el Contratista, a solicitud del Ingeniero, deberá suministrar prontamente todas las facilidades, personal y materiales necesarios para ello. Si se encuentra que tales trabajos son defectuosos o no se ajustan a las normas de calidad prescritas en el Contrato, por falta del Contratista o de sus subcontratistas, serán por cuenta del Contratistas los gastos de tal examen y de su reconstrucción satisfactoria.

Pero, si se encuentra que dichos trabajos llenan los requisitos del Contrato, se compensará al Contratista por el costo de los servicios adicionales requeridos para el examen mencionado, así como para la adecuada reconstrucción, y si por tal motivo se atrasare la terminación del trabajo total, el Contratante le reconocerá una extensión justa en el plazo del Contrato.

En casos de obras públicas, si algún Ministerio, Ente Autónomo, Municipalidad o Entidad a cargo de servicios públicos, va a pagar parte del costo de las obras amparadas por este Contrato, o, simplemente, tiene responsabilidades involucradas en ellas, dicha entidad tendrá el derecho de inspeccionar los trabajos y de velar porque las obras o su ejecución, sean llevadas a cabo sin daños ni menoscabo a las obras o instalaciones a su cargo. Tal inspección no convertirá en forma alguna, a dicha dependencia gubernamental, Ente Autónomo, Municipalidad o Entidad a cargo de servicios públicos, en parte del Contrato ni le dará derecho para interferir con los derechos de alguna de las partes signatarias del mismo. En casos de salvaguardar los intereses del público (protección de cables telefónicos, líneas de transmisión, cañerías de agua potable, etc.), las CEC determinarán el alcance de la autoridad e inspección que ejercerían estas entidades ajenas al Contrato.



## B.- Control de Calidad.

Existen cuatro métodos para determinar la conformidad de las obras con los planos y especificaciones y su aceptabilidad. El método de aceptación es especificado en cada Sección de las Especificaciones Técnicas. Sin embargo, la obra podrá ser rechazada en cualquier oportunidad en que se encuentre, por cualquiera de dichos métodos, que no cumple con el Contrato.

Estos métodos son los siguientes:

**I. Inspección Visual.** En éste, la aceptación se basa en la inspección visual del trabajo en cuanto al cumplimiento con el Contrato y las normas de la industria.

**II. Certificación.** Para materiales fabricados fuera del Proyecto, se usa un Fabricante que cuente con una certificación ISO 9000 o un sistema efectivo de ensayos y de inspección. Se requerirá que el Fabricante marque claramente el material o su empaque con una identificación única del producto o de la especificación estándar bajo la cual es producido.

El material aceptado por medio de certificación podrá ser muestreado y ensayado en cualquier momento. Si se encuentra que no está conforme con el Contrato, el material será rechazado sea que esté colocado en la obra o no.

Se podrá exigir cualquiera de los certificados siguientes:

**(a) Certificado de Producción.-** El material que requiera un certificado de producción es identificado en el artículo de aceptación de cada sección. Se requerirá que el Fabricante suministre un certificado de producción por cada embarque de material. Con cada certificado de producción, se deberá incluir lo siguiente:

(1) Fecha y lugar de fabricación.

(2) Los resultados de ensayo del material del mismo lote y la documentación sobre el sistema de inspección y ensayo.

(3) Número del lote u otros medios de referenciación cruzada del sistema de inspección y ensayo del Fabricante.

(4) Declaración del Fabricante afirmando que el material cumple con todos lo requerido en el Contrato.

(5) Firma del Fabricante u otro medio de demostración de la responsabilidad del certificado.

(6) Firma de aceptación del material por parte del Contratista.

**(b) Certificación Comercial.-** Cuando se necesite certificación, pero no un certificado de producción, se deberá suministrar un certificado comercial para todo material similar del mismo Fabricante. Un Certificado Comercial es una indicación del Fabricante o Contratista asegurando que el material cumple con todas las exigencias del Contrato. Esa indicación puede ser por medio de marbetes, datos de catálogo, especificaciones estándar estampadas o certificaciones autenticadas del suplidor que indiquen que el material es producido de acuerdo con ciertos estándares comerciales o especificaciones.

**III. Conformidad por medio de Mediciones o Ensayes.-** Provéase toda la producción y procesamientos necesarios del trabajo y la ejecución de los controles, de manera que todas las obras cumplan con los requerimientos del Contrato.

Los resultados de la inspección o de los ensayos deberán tener valores que queden dentro de las tolerancias especificadas o los límites de las especificaciones. Cuando no estén identificados en el Contrato los valores de las tolerancias, el trabajo será aceptado con base en las tolerancias acostumbradas en la fabricación y la construcción.

**IV Evaluación Estadística del Trabajo y Determinación del Factor de Pago (Valor del Trabajo).-** La evaluación estadística del trabajo es un método de análisis de los resultados de la inspección o de los ensayos para determinar su conformidad con los requerimientos del Contrato, que será aplicable únicamente cuando así lo establezcan los acuerdos o convenios de financiamiento con organismos internacionales. El trabajo será aceptado de acuerdo con lo siguiente:

**(a) Generalidades.-** Para trabajo evaluado con base estadística, tanto el Contratante como el Contratista asumen algún riesgo.

El riesgo del Contratante es la probabilidad de que sea aceptado trabajo con nivel de calidad rechazable. El riesgo del Contratista es la probabilidad de que trabajo producido con un nivel de calidad aceptable (NCA) sea rechazado o aceptado a un precio contractual reducido.

El nivel de calidad aceptable es el porcentaje más alto de trabajo fuera de los límites especificados que es considerado aceptable para ser pagado al precio del Contrato. Hay 2 categorías. La categoría I está basada en un NCA de 5%. La categoría II está basada en un NCA del 10 por ciento. En ambos casos, el riesgo del Contratista es del 5 por ciento.



Como un incentivo para producir un trabajo de calidad uniforme y disminuir el riesgo del Contratista, es posible obtener un pago final mayor que el del precio contractual, bajo ciertas condiciones.

**(1) Características de Calidad.-** Las características de calidad a ser evaluadas aparecen listadas en el artículo de Aceptación de cada sección de las Especificaciones Técnicas.

**(2) Tamaño del Lote.-** Un lote es una cantidad discreta de trabajo a la cual se aplican los procedimientos de evaluación estadística. Un lote normalmente representa la cantidad total de trabajo producido. Puede ocurrir más de un lote si se piden por escrito y se aprueban, cambios en los valores meta, fuentes de materiales o en las fórmulas de control de la mezcla de trabajo, o se exigen ajustes de acuerdo con lo estipulado en el inciso (b) más adelante.

**(3) Frecuencia del Muestreo.-** La frecuencia del muestreo aparece listada en el artículo de Aceptación de cada sección de las Especificaciones. La tasa de la frecuencia mostrada normalmente resulta en un mínimo de 5 muestras, que es el mínimo número requerido para realizar una evaluación estadística. El máximo factor de pago obtenible con 5 muestras es 1.01. Para obtener un factor de pago de 1.05 se requiere un mínimo de 8 muestras.

Si las frecuencias de muestreo y la cantidad del trabajo resultaran de otra manera en menos de 8 muestras, será necesaria una solicitud por escrito para aumentar la frecuencia del muestreo a fin de proveer un mínimo de 8 muestras. Esta solicitud del Contratista deberá ser entregada, por lo menos 48 horas antes de empezar la producción. Un aumento en la frecuencia del muestreo podría resultar en una reducción del factor de pago.

**(4) Lugares de Muestreo.-** Los lugares de muestreo aparecen listados en el artículo de Aceptación de cada sección. El lugar exacto del muestreo será modificado por el Ingeniero con base en números al azar.

**(5) Métodos de Ensayo.-** Los métodos de ensayo usados para probar la muestra aparecen listados en el artículo de Aceptación de cada sección.

**(6) Límites de las Especificaciones.-** Los límites de las especificaciones para las características de calidad son listados en las especificaciones para el trabajo en cuestión.

**(7) Categoría.-** La categoría para las características de calidad a ser analizadas aparecen mostradas en el artículo de Aceptación de cada sección.

**(b) Aceptación.-** El trabajo en el lote será pagado de acuerdo con el factor final de pago, una vez que se han completado y evaluado todos los resultados de la inspección o de los ensayos.

Antes de determinar el factor final de pago, el trabajo podrá ser incorporado en el Proyecto siempre que el factor de pago corriente (no ajustado) no sea menor de 0.90. Si un lote es concluido con menos de 5 muestras, el material será evaluado según lo establecido en la cláusula B (III) de este artículo.

Si el factor de pago corriente de un lote es menor de 0.90, se deberá suspender la producción. Esta podrá reanudarse después de que el Contratista haya tomado medidas efectivas y aceptables para mejorar la calidad de la producción. Si se determina que la reanudación de la producción exige un cambio significativo en el proceso de la producción, se dará por terminado el lote corriente y se iniciará un nuevo lote. Un lote que contenga un porcentaje no satisfactorio de material fuera de la especificación (factor de pago menor de 1.00), será aceptable siempre que el menor factor de pago simple no haya caído en la porción de rechazo del Cuadro 106-2.

CUADRO 106-2  
Factores de Pago

| Factor de Pago | Categoría | Máximo Porcentaje Permisible de Obra Fuera de los Límites de la Especificación para un Factor de Pago Dado ( $P_A + P_B$ ) |       |       |       |       |        |        |        |        |        |        |        |          |
|----------------|-----------|--|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|----------|
|                |           | n = 5  | n = 6 | n = 7 | n = 8 | n = 9 | n = 10 | n = 12 | n = 15 | n = 18 | n = 23 | n = 30 | n = 43 | n = 67   |
| I              | II        |  |       |       |       |       | a      | a      | a      | a      | a      | a      | a      | a        |
|                |           |  |       |       |       |       | n = 11 | n = 14 | n = 17 | n = 22 | n = 29 | n = 42 | n = 66 | infinito |
| 1.05           |           |  |       |       | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0        |
| 1.04           |           |  |       | 0     | 1     | 3     | 5      | 4      | 4      | 4      | 3      | 3      | 3      | 3        |
| 1.03           |           |  | 0     | 2     | 4     | 6     | 8      | 7      | 7      | 6      | 5      | 5      | 4      | 4        |
| 1.02           |           |  | 1     | 3     | 6     | 9     | 11     | 10     | 9      | 8      | 7      | 7      | 6      | 6        |
| 1.01           |           | 0  | 2     | 5     | 8     | 11    | 13     | 12     | 11     | 10     | 9      | 8      | 8      | 7        |
| 1.00           |           | 22   | 20    | 18    | 17    | 16    | 15     | 14     | 13     | 12     | 11     | 10     | 9      | 8        |
| 0.99           |           | 24   | 22    | 20    | 19    | 18    | 17     | 16     | 15     | 14     | 13     | 11     | 10     | 9        |
| 0.98           |           | 26   | 24    | 22    | 21    | 20    | 19     | 18     | 16     | 15     | 14     | 13     | 12     | 10       |
| 0.97           |           | 28   | 26    | 24    | 23    | 22    | 21     | 19     | 18     | 17     | 16     | 14     | 13     | 12       |
| 0.96           |           | 30   | 28    | 26    | 25    | 24    | 22     | 21     | 19     | 18     | 17     | 16     | 14     | 13       |
| 0.95           | 1.00      | 32   | 29    | 28    | 26    | 25    | 24     | 22     | 21     | 20     | 18     | 17     | 16     | 14       |
| 0.94           | 0.99      | 33   | 31    | 29    | 28    | 27    | 25     | 24     | 22     | 21     | 20     | 18     | 17     | 15       |
| 0.93           | 0.98      | 35   | 33    | 31    | 29    | 28    | 27     | 26     | 24     | 22     | 21     | 20     | 18     | 16       |
| 0.92           | 0.97      | 37   | 34    | 32    | 31    | 30    | 28     | 27     | 25     | 24     | 22     | 21     | 19     | 18       |
| 0.91           | 0.96      | 38   | 36    | 34    | 32    | 31    | 30     | 28     | 26     | 25     | 24     | 22     | 21     | 19       |
| 0.90           | 0.95      | 39   | 37    | 35    | 34    | 33    | 31     | 29     | 28     | 26     | 25     | 23     | 22     | 20       |
| 0.89           | 0.94      | 41   | 38    | 37    | 35    | 34    | 32     | 31     | 29     | 28     | 26     | 25     | 23     | 21       |
| 0.88           | 0.93      | 42   | 40    | 38    | 36    | 35    | 34     | 32     | 30     | 29     | 27     | 26     | 24     | 22       |
| 0.87           | 0.92      | 43   | 41    | 39    | 38    | 37    | 35     | 33     | 32     | 30     | 29     | 27     | 25     | 23       |
| 0.86           | 0.91      | 45   | 42    | 41    | 39    | 38    | 36     | 34     | 33     | 31     | 30     | 28     | 26     | 24       |

Nota: Para obtener un factor de pago cuando el valor de ( $P_A$  y/o  $P_B$ ) del Cuadro 106-2 no corresponde a un valor de ( $P_A + P_B$ ) de este Cuadro, úsese el valor cercano más alto de ( $P_A + P_B$ )

CUADRO 106-2 (Continuación)  
Factores de Pago

| Factor de Pago |      | Máximo Porcentaje Permisible de Obra Fuera de los Límites de la Especificación para un Factor de Pago Dado ( $P_A + P_B$ ) |       |       |       |        |        |        |        |        |        |        |        |          |
|----------------|------|--|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| Categoría      |      | n = 5  | n = 6 | n = 7 | n = 8 | n = 9  | n = 10 | n = 12 | n = 15 | n = 18 | n = 23 | n = 30 | n = 43 | n = 67   |
| I              | II   |  |       |       |       | a      | a      | a      | a      | a      | a      | a      | a      | a        |
|                |      |  |       |       |       | n = 11 | n = 14 | n = 17 | n = 22 | n = 29 | n = 42 | n = 66 | n = 66 | infinito |
| 0.85           | 0.90 | 46   | 44    | 42    | 40    | 39     | 38     | 36     | 34     | 33     | 31     | 29     | 28     | 25       |
| 0.84           | 0.89 | 47   | 45    | 43    | 42    | 40     | 39     | 37     | 35     | 34     | 32     | 30     | 29     | 27       |
| 0.83           | 0.88 | 49   | 46    | 44    | 43    | 42     | 40     | 38     | 36     | 35     | 33     | 31     | 30     | 28       |
| 0.82           | 0.87 | 50   | 47    | 46    | 44    | 43     | 41     | 39     | 38     | 36     | 34     | 33     | 31     | 29       |
| 0.81           | 0.86 | 51   | 49    | 47    | 45    | 44     | 42     | 41     | 39     | 37     | 36     | 34     | 32     | 30       |
| 0.80           | 0.85 | 52   | 50    | 48    | 46    | 45     | 44     | 42     | 40     | 38     | 37     | 35     | 33     | 31       |
| 0.79           | 0.84 | 54   | 51    | 49    | 48    | 46     | 45     | 43     | 41     | 39     | 38     | 36     | 34     | 32       |
| 0.78           | 0.83 | 55   | 52    | 50    | 49    | 48     | 46     | 44     | 42     | 41     | 39     | 37     | 35     | 33       |
| 0.77           | 0.82 | 56   | 54    | 52    | 50    | 49     | 47     | 45     | 43     | 42     | 40     | 38     | 36     | 34       |
| 0.76           | 0.81 | 57   | 55    | 53    | 51    | 50     | 48     | 46     | 44     | 43     | 41     | 39     | 37     | 35       |
| 0.75           | 0.80 | 58   | 56    | 54    | 52    | 51     | 49     | 47     | 46     | 44     | 42     | 40     | 38     | 36       |
| RECHAZO        | 0.79 | 60   | 57    | 55    | 53    | 52     | 51     | 48     | 47     | 45     | 43     | 41     | 40     | 37       |
|                | 0.78 | 61   | 58    | 56    | 55    | 53     | 52     | 50     | 48     | 46     | 44     | 43     | 41     | 38       |
|                | 0.77 | 62   | 59    | 57    | 56    | 54     | 53     | 51     | 49     | 47     | 45     | 44     | 42     | 39       |
|                | 0.76 | 63   | 61    | 58    | 57    | 55     | 54     | 52     | 50     | 48     | 47     | 45     | 43     | 40       |
|                | 0.75 | 64   | 62    | 60    | 58    | 57     | 55     | 53     | 51     | 49     | 48     | 46     | 44     | 41       |
| Rechazo        |      | Valores mayores que los mostrados arriba   |       |       |       |        |        |        |        |        |        |        |        |          |

Nota: Para obtener un factor de pago cuando el valor de ( $P_A$  y/o  $P_B$ ) del Cuadro 106-2 no corresponde a un valor de ( $P_A + P_B$ ) de este Cuadro, úsese el valor cercano más alto de ( $P_A + P_B$ )

Un lote que contenga un porcentaje no satisfactorio de material fuera de la especificación, con un factor de pago simple mínimo que caiga en la porción de rechazo del Cuadro 106.2, será rechazado. El material rechazado deberá ser removido de la obra.

Cuando lo apruebe el Ingeniero, será permisible remover voluntariamente el material defectuoso y reemplazado con material nuevo, a fin de evitar o minimizar un factor de pago menor de 1.00. El nuevo material será muestreado, ensayado y evaluado de acuerdo con lo establecido en esta Cláusula (IV).

Cualquier cantidad de material que esté defectuosa, podrá ser rechazado mediante inspección visual o según los resultados de ensayos. No se deberá incorporar en la obra material rechazado. Los resultados de ensayos realizados en material rechazado serán excluidos del lote.

(c) Evaluación Estadística.- Se usará el Método de Variabilidad / Desviación Estándar Desconocida para determinar el porcentaje estimado del lote que está fuera de los límites de las especificaciones.

El número de cifras significativas usado en los cálculos será de conformidad con la norma AASHTO R11, método absoluto.

El porcentaje estimado de trabajo que está fuera de los límites de las especificaciones para cada característica de calidad será determinado en la forma siguiente:

(1) Calcular la media aritmética ( $\chi$ ) de los valores de los ensayos:

$$\chi = \sum x/n$$

Donde:

$\Sigma$  = Sumatoria de valores individuales de los ensayos

x = Valor individual del ensayo

n = número total de los valores de los ensayos

(2) Calcular la desviación estándar (S):

$$S = [n (\sum x^2) - (\sum x)^2] / n(n-1)$$

Donde:

$(\sum x^2)$  = Sumatoria de los cuadrados de los valores individuales de los ensayos.

$(\sum x)^2$  = Cuadrado de la sumatoria de los valores individuales de los ensayos.

(3) Calcular el índice de calidad más alto

$$(Q_A) : Q_A = (LAS - \chi) / S$$

Donde:

LAS = límite superior (o último) de la especificación.

NOTA: El LAS es igual al límite contractual de la especificación o valor meta más la desviación permisible.

(4) Calcular el índice de calidad más bajo.

$$(Q_B) : Q_B = (\chi - LBS) / S$$

Donde:



**LBS** = Límite más bajo de la especificación.

**NOTA:** El LBS es igual al límite contractual de la especificación o valor meta menos la desviación permisible.

(5) En el Cuadro 106-2 determinar  $P_A$  (Porcentaje estimado de la obra que está fuera del LAS).  $P_A$  corresponde a un  $Q_A$  dado. Si no está especificado un LAS,  $P_A$  es 0.

(6) En el Cuadro 106-2, determinar  $P_B$  (el porcentaje estimado de la obra incluida en el lote, que está fuera del LBS).

$P_B$  corresponde a un  $Q_B$  dado. Si no está especificado un LBS,  $P_B$  es 0.

(7) Calcular el porcentaje estimado total de obra que está fuera del LAS y del LBS (porcentaje deficitario):  $P_A + P_B$ .

(8) Repítanse del (1) al (7) para cada característica de calidad listada para ser evaluada estadísticamente.

**d) Determinación del Factor de Pago (Valor de la Obra).** El factor de pago para un lote será determinado como sigue:

(1) En el Cuadro 106-2, determinar el factor de pago para cada característica de calidad usando el número total de valores de los ensayos y el porcentaje estimado total que está fuera de los límites de la especificación obtenido mediante el paso (c) (7).

(2) Cuando todas las características de calidad de un lote son de Categoría I, el factor de pago del lote estará basado en el factor de pago simple más bajo de todos para cualquier característica de calidad de Categoría I. El máximo factor de pago obtenible es 1.05 (con un mínimo de 8 valores de ensayos).

(3) Cuando las características de calidad para un lote son de ambas categorías, I y II, el factor de pago del lote será basado en lo siguiente:

(a) Cuando todas las características de calidad de Categoría II son de 1.00, el pago del lote se basará en el factor de pago simple más bajo de todas las características de calidad de categoría I. El máximo factor de pago obtenible es 1.05 (con un máximo de 8 valores de los ensayos).

(b) Cuando cualquier característica de calidad de Categoría II, es menor de 1.00, el pago del lote se basará en el factor de pago simple más bajo para cualquier característica de calidad.

(4) Cuando todas las características de calidad de un lote son de Categoría II, el factor de pago del lote se basará en el factor de pago simple más bajo de todos los de cualquier característica de calidad de Categoría II. El máximo factor de pago obtenible será de 1.00.

(5) El ajuste en el pago para material en un lote será hecho a un precio determinado multiplicando el precio unitario contractual de la oferta por el factor de pago del lote determinado en la forma aquí explicada.

#### 2.1.3.6. Sección 106.12: Remoción de Obras Inaceptables o no Autorizadas

Toda obra que no llene los requerimientos del Contrato será considerada como inaceptable.

Ningún trabajo podrá ser hecho antes de que el Ingeniero haya comprobado las líneas y niveles. Toda obra hecha contra las instrucciones del Ingeniero o construida fuera de las líneas mostradas en los planos o marcadas por las estacas de construcción, o cualquier obra extra hecha sin previa autorización escrita del Ingeniero, será considerada como **Obra no Autorizada**; además, el Ingeniero podrá ordenar su remoción o reemplazo, a expensas del Contratista.

El Contratista no deberá incurrir en responsabilidades por causa de direcciones verbales dadas por el Contratante, el Ingeniero o su representante autorizado, ni el Contratante estará obligado a pagar por materiales extra o por trabajos realizados, a menos que tales materiales o trabajos hayan sido requeridos del Contratista por medio de una orden escrita del Ingeniero Contratante.

Si el Contratista no cumple, dentro de diez (10) días calendario después del recibo de una orden del Ingeniero expedida bajo las disposiciones de este Artículo, el Ingeniero tendrá la autoridad de emplear otros medios para hacer la corrección, reemplazo o remoción de obras inaceptables o no autorizadas. Todos los costos en que incurra el Contratante por la adopción de estas medidas serán deducidos de los pagos pendientes o de cualquier suma que se le llegue a deber al Contratista en el futuro.

#### 2.1.3.7. Sección 106.13: Restricciones sobre las Cargas y Dimensiones de los Vehículos

El Contratista deberá cumplir con todas las leyes que restringen las cargas y dimensiones de vehículos que circulan sobre las vías públicas en relación con el acarreo de materiales o de equipo dentro o fuera de los límites del Proyecto. Un permiso especial no

relevará al Contratista de su responsabilidad por los daños que pudiesen resultar por el traslado de material o equipo.

No será permitida la operación de equipo de tal peso o tan cargado, que pueda dañar las estructuras de la vía o la calzada, o cualquier otro tipo de construcción. El acarreo de materiales sobre la capa de base o sobre la superficie de rodamiento o carpeta de una vía en construcción, será limitado según las instrucciones emitidas. No será permitida la aplicación de cargas sobre un pavimento, base o estructura de concreto, antes de la terminación del período de curado. Los límites de la carga permisible dentro de la obra, no excederán los límites establecidos para las vías adyacentes, a menos que sea permitido por escrito por el Ingeniero. El Contratista será responsable, en todos los casos, de los daños causados por su equipo de acarreo.

El Contratista bajo ninguna circunstancia, puede alegar desconocimiento sobre la Ley de Pesos y Dimensiones, en la cual se indican las cargas y dimensiones legales para circular en las carreteras de Nicaragua. El MTI tiene un sistema de básculas fijas y ambulantes para obligar el cumplimiento de esa ley.

#### 2.1.3.8. Sección 106.14: Mantenimiento de la Obra durante la Construcción

**1.- Generalidades.-** El Contratista deberá mantener constantemente y por su propia cuenta las partes construidas o instaladas de la obra hasta que el Proyecto sea aceptado finalmente por el Contratante. Este mantenimiento significa la ejecución de trabajo continuo y efectivo, día a día, con suficiente equipo y mano de obra, a fin de mantener la vía y sus estructuras en condiciones de operación satisfactorias.

El trabajo de mantenimiento incluirá, entre otras actividades, las siguientes:

- 1.1) Mantenimiento de la superficie de la vía en condiciones satisfactorias y utilizables;
- 1.2) Afinamiento y reconfiguración de la rasante, taludes, cunetas y capas de base o carpeta cuando y donde sea necesario, a criterio del Ingeniero;
- 1.3) Limpiar la basura y escombros de los canales de drenaje, puentes, alcantarillas, tragantes, pozos de visita y otras estructuras de drenaje.
- 1.4) Remoción de los escombros y basura dejados por las actividades de construcción;

1.5) Reparación o reemplazo de aquellas partes de las obras o instalaciones que hayan sido dañadas;

1.6) Mantenimiento de los desvíos y los abastos de agua para riego;

1.7) Mantenimiento especial;

1.8) Provisión de acceso a residencias, negocios y a otras vías, y manteniendo los senderos de acceso abiertos y transitables;

1.9) Mantenimiento y preservación de la vía y estructuras construidas en su condición de nuevas;

1.10) Eliminación de todo material sobrante o suelto.

En el caso de un Contrato para colocar una o varias capas adicionales de base o de carpeta sobre una superficie previamente construida o existente, el Contratista deberá mantener la superficie existente en condiciones satisfactorias en toda su longitud, dentro de los límites del Proyecto, durante el tiempo que dure la construcción de las obras bajo contrato.

El costo del mantenimiento de la obra, con excepción del Mantenimiento Especial y del Control de Tráfico, deberá ser incluido dentro del costo de los varios conceptos de pago del Contrato, el Contratista, por lo tanto, no recibirá pago adicional por el trabajo a menos que las CEC lo establecieran de otra manera.

El Contratista quedará liberado de toda la responsabilidad de mantenimiento de la obra, tan pronto el Contratante acepte finalmente el total de la obra terminada, según queda estipulado en el Artículo 106.17, Cláusula 3.

**2.- Mantenimiento Especial.-** El Ingeniero podrá ordenar la ejecución de trabajos de Mantenimiento Especial para beneficio del público o para llevar a cabo reparaciones de daños extensivos resultantes de causas fuera del control del Contratista. El pago del mantenimiento especial será hecho por medio de los varios conceptos de pago del Contrato, o como Trabajo Extra, de acuerdo con las estipulaciones del Artículo-110.06 de estas CGC.

**3.- Mantenimiento de Secciones Aceptadas.-** Cuando así lo consideren las CEC, el Ingeniero podrá aceptar tramos terminados del Proyecto, de las longitudes especificadas. Si dichos tramos de vías fueran abiertos al tráfico público por orden del Ingeniero, el Contratista tendrá la responsabilidad de mantener tales tramos y será compensado de acuerdo con las

estipulaciones del Artículo-110.06, de estas CGC. La aceptación de estos tramos se ajustará a lo prescrito en el Artículo 106.17 de estas CGC.

**4.- Operaciones de Abastecimiento de Combustible y Lubricantes.-** No será permitido el abastecimiento de combustible o lubricantes a maquinaria sobre la vía que está en construcción, sea en la superficie de la base que está a punto de recibir aplicaciones asfálticas, en la superficie terminada del pavimento. Cualquier descuido en este particular obligará al Contratista a sustituir la superficie afectada, de acuerdo con las instrucciones del Ingeniero. El costo de dicha sustitución será por cuenta del Contratista. Al efectuar estas operaciones fuera de la vía, el Contratista tomará las precauciones pertinentes para evitar derramar productos de petróleo que contaminen corrientes de agua, superficiales o subterráneas o el suelo.

#### 2.1.3.9. Sección 106.15: Falta de Mantenimiento de la Vía o de las Estructuras

Si el Contratista, en cualquier oportunidad, dejase de cumplir con alguna de las disposiciones del Artículo 106.14, el Ingeniero advertirá inmediatamente al Contratista sobre tal incumplimiento por escrito. Si el Contratista no atendiera a ese mantenimiento dentro de las 24 horas de haber recibido dicho aviso, el Ingeniero podrá proceder a llevar a cabo el mantenimiento del Proyecto y todo el costo de este trabajo será descontado de pagos pendientes o de sumas que se le lleguen a deber o que estén próximos a entregarse al Contratista en virtud de su Contrato.

#### 2.1.3.10. Sección 106.16: Aceptación de la Obra

##### 1.- Aceptación Parcial.

En cualquier oportunidad durante la ejecución del Proyecto que el Contratista complete sustancialmente una unidad o parte importante del Proyecto, tales como una estructura de gran magnitud, un paso a desnivel o una sección de vía o pavimento, no menor de cinco (5) kilómetros, a solicitud del Contratista, se procederá de acuerdo a lo estipulado en las Cláusulas 2, 3, 5, 6 y 7 de este Artículo.

##### 2.- Aceptación Provisional de las Obras.

(a) La aceptación provisional tiene por objeto controlar la conformidad de las obras con el conjunto de obligaciones establecidas en el Contrato, en particular con las condiciones técnicas particulares y los anexos técnicos.

La aceptación podrá efectuarse por etapas, si así lo establecen las CEC, en cuyo caso, la aceptación de la última etapa constituirá la aceptación provisional del Proyecto.

El Contratista notificará, por escrito, simultáneamente al Contratante y al Ingeniero, sobre la fecha en la cual considera que los trabajos fueron o van a estar terminados.

El Ingeniero, luego de haber convocado al Contratista, procederá a efectuar las operaciones previas a la recepción de las obras, dentro de un plazo que, salvo que las CEC establezcan otra cosa, será de cinco (5) días calendario, contados a partir de la fecha en que el Ingeniero recibió la notificación del Contratista antes mencionada, o de la fecha indicada en ella para la terminación de los trabajos, si esta última fecha fuese posterior.

El Contratante, habiendo sido notificado por el Ingeniero sobre la fecha de tales operaciones, podrá asistir a ellas o hacerse representar a tal efecto. En el acta prevista en el inciso (2) de la siguiente Cláusula se mencionará, ya sea la presencia del Contratante o su representante, o de su ausencia, si el Ingeniero confirma que le dio el aviso oportunamente.

Si el Contratista no asiste, se dejará constancia de su ausencia en el acta y se le enviará copia de la misma.

(b) Las operaciones previas a la recepción provisional de las obras comprenderán:

(1) la inspección física de las obras ejecutadas;

(2) la ejecución y registro de las pruebas especificadas en las CEC;

(3) la constatación de posibles omisiones en el cumplimiento de obligaciones con el Contratante, los empleados y suplidores del Contratista, los propietarios de tierras o edificios aledaños al Proyecto, compromisos con comunidades afectadas, etc.,

(4) la constatación de posibles imperfecciones o defectos de construcción;

(5) salvo que las CEC establezcan otra cosa, la constatación del retiro de las instalaciones del lugar de trabajo y de la restauración de los terrenos y lugares a su estado normal;

(6) la constatación de la terminación de los trabajos que estuvieron incompletos.

Los resultados de las operaciones previas se registrarán en un acta redactada en el sitio de las obras por el Ingeniero, la cual será firmada por él mismo y por el Contratista; si este último se negara a firmar, se hará mención de ello en dicha acta.



En el plazo de quince (15) días calendario siguientes a la fecha del acta, el Ingeniero informará al Contratista si ha propuesto o no al Contratante que declare la aceptación provisional de las obras y, en caso afirmativo, la fecha límite fijada para la terminación de los trabajos incompletos que propone no aceptar, así como las reservas que pudiera tener a la fecha de la recepción provisional de las obras.

(c) Teniendo en cuenta el acta de las operaciones previas a la recepción provisional y de las propuestas del Ingeniero, el Contratante decidirá si procede o no efectuar la aceptación provisional, con o sin reservas. Si se procede a aceptar las obras, fijará la fecha que elija para la terminación de los trabajos pendientes. La decisión así tomada le será notificada al Contratista dentro de los cuarenta y cinco (45) días calendario siguientes a la fecha del acta.

Si el Contratante no toma una decisión en el plazo arriba especificado, se considerará que ha aceptado la propuesta del Ingeniero.

Si el Contratante acepta explícitamente, o si se considera que está de acuerdo con la aceptación provisional, dicha aceptación surtirá efecto en la fecha fijada para la terminación de los trabajos incompletos

(d) En caso de que ciertas obligaciones o compromisos a que se refiere el inciso 2(b)(3) de este Artículo, que puedan aún ser objeto de liquidación, no hubieran sido satisfechas, el Contratante podrá proceder a dar la aceptación provisional, a reserva de que el Contratista se comprometa a cumplir con ellos en un plazo no mayor de tres (3) meses. La constatación del cumplimiento del Contratista con dichas obligaciones o compromisos será registrada por el Ingeniero en un acta preparada en la misma forma que el acta sobre las operaciones previas a la aceptación provisional.

(e) Cuando la aceptación provisional esté sujeta a reservas, el Contratista deberá remediar las imperfecciones y defectos de construcción en el plazo que fije el Contratante, o bien, a falta de tal plazo, a más tardar tres (3) meses antes de la fecha prevista para la aceptación final. En caso de que el Contratista no termine tales trabajos en el plazo prescrito, el Contratante podrá hacerlos ejecutar por cuenta y riesgo del Contratista.

(f) Si ciertas obras o parte de obras no están enteramente conformes con las especificaciones del Contrato, sin que las imperfecciones constatadas sean de tal naturaleza que pongan en peligro la seguridad, el funcionamiento o la utilización de las obras, el Contratante, considerando la escasa importancia de las imperfecciones y las dificultades que

representaría ponerlas en debida conformidad, podrá renunciar a ordenar la reparación de las obras consideradas defectuosas y proponer al Contratista una reducción de los precios.

Si el Contratista acepta la reducción de los precios, las imperfecciones que la motivaron serán consideradas como inexistentes para los efectos de la aceptación provisional.

En caso contrario, el Contratista estará obligado a reparar dichas imperfecciones y se declarará la aceptación provisional bajo reserva de que se efectúen las reparaciones correspondientes.

(g) Toda toma de posesión de las obras por el Contratante deberá estar precedida por la aceptación de las mismas.

Sin embargo, si hubiera urgencia, la toma de posesión podrá ocurrir antes de la aceptación, bajo reserva de la preparación y firma previas por las partes de un documento en que se haga constar el estado de las obras.

(h) La aceptación provisional implica la transferencia de la propiedad y de los riesgos al Contratante y constituye el punto de partida de la vigencia de la fianza o garantía de calidad la fecha de aceptación provisional del proyecto es la fecha que se usará para cuantificar las multas o premios del proyecto.

(i) Tan pronto como reciba un certificado de aceptación provisional, el Contratista deberá despejar y retirar de la parte del sitio de las obras que han sido aceptadas, todos los equipos, suministros, materiales y excedentes, así como todo desperdicio y obras provisionales de cualquier naturaleza y dejar esta parte del sitio de las obras y trabajos, limpia y en buen estado de funcionamiento. No obstante, queda entendido que el Contratista estará autorizado para mantener en el sitio, hasta el final del período de garantía, todos los equipos, suministros, materiales y obras provisionales que necesitará para cumplir con sus obligaciones durante el período de vigencia de la fianza o garantía de calidad.

### 3.- Aceptación Final del Proyecto.

(a) La aceptación final tendrá lugar un año después del acta de aceptación provisional, sin perjuicio de lo estipulado en el inciso (b) de esta Cláusula. Durante el período de garantía, el Contratista tendrá las obligaciones contractuales descritas más ampliamente en la Cláusula

6. Por otra parte, a más tardar diez días (10) después de la aceptación provisional, el Ingeniero enviará al Contratista las listas detalladas de defectos de construcción localizados

por él, con excepción de los daños resultantes del uso normal, del uso impropio de las obras o de daños causados por terceros.

El Contratista dispondrá de un plazo de dos (2) meses para efectuar las reparaciones del caso, conforme a las condiciones del Contrato.

El Contratista devolverá al Ingeniero las listas de defectos señalados por éste junto con el detalle de los trabajos efectuados para corregirlos.

El Contratante emitirá, al final de dicho período de dos (2) meses, el acta de aceptación final, luego de haber verificado que las reparaciones fueron correctamente realizadas.

(b) Queda entendido que, si el Contratista no remedia los defectos de construcción dentro de los plazos acordados, la aceptación final será declarada solamente después de la realización completa de tales reparaciones. En caso de que tales trabajos no sean realizados dentro de los dos (2) meses inmediatamente siguientes al término del período de garantía contractual, el Contratante declarará de todos modos, la aceptación final de las obras al término de dicho período. En tal caso, el Contratante hará realizar los trabajos pendientes por empresas de su elección, por cuenta y riesgo del Contratista.

(c) La aceptación final significará el final de la ejecución del Contrato y liberará a las partes contratantes de sus obligaciones.

Ambas partes se extenderán mutuamente finiquito amplio y suficiente, declarando terminadas las obligaciones del Contrato.

#### **4.- Disposición Anticipada de Ciertas Obras o Partes de Obras.**

(a) La presente Cláusula se aplicará cuando el Contrato, o una orden escrita del Ingeniero o Contratante, exija que el Contratista ponga a disposición del Contratante, durante un período determinado, ciertas obras o parte de obras aún no terminadas y sin que el Contratante tome posesión definitiva de ellas, con el fin de que pueda ejecutar, o hacer ejecutar por otros contratistas, trabajos distintos de los que son el objeto del Contrato.

(b) Antes de la puesta a disposición de ciertas obras o de partes de obras, se preparará un informe acerca de la situación en que ellas se encuentran, en el cual participarán el Ingeniero y el Contratista.

El Contratista tendrá el derecho a ser preferido para ejecutar tales trabajos no comprendidos en su Contrato, y que interesen a las obras o partes de obras puestas a la disposición del Contratante, si hay acuerdo entre ambos. El Contratista podrá expresar reservas si estima que las características de las obras ejecutadas por él bajo el Contrato no permiten ejecutar estos trabajos accesorios o que tales trabajos podrían deteriorarlas. Estas reservas deberán expresarse por escrito y ser dirigidas al Ingeniero.

Una vez terminado el período de puesta a disposición del Contratante, de la parte o partes de la obra, se preparará un nuevo informe sobre el estado de las obras del contrato original con la participación de las partes.

(c) A excepción de las consecuencias de los defectos de ejecución que le sean imputables, el Contratista, el Contratante será responsable de la custodia de las obras o partes de obras durante todo el tiempo que ellas estén a su disposición.

#### **5.- Expiración de las Garantías de Cumplimiento y de Pago.**

##### **(a) Período de Garantía.**

Salvo que el Contrato establezca otra cosa, el período de garantía será igual al período comprendido entre la aceptación provisional y la aceptación final.

Durante el período de garantía, el Contratista tendrá, independientemente de las obligaciones que puedan resultar de la aplicación de la Cláusula 3 de este Artículo, la "obligación de completa terminación" en virtud de la cual deberá, por su cuenta:

(1) ejecutar los trabajos o reparación previstos en los incisos (d) y (e) de la Cláusula 2 de este Artículo.

(2) remediar todas las imperfecciones señaladas por el Contratante o el Ingeniero de tal manera que la obra se mantenga en conformidad sustancial con el estado en que se encontraba en el momento de la aceptación provisional o después de corregidos los defectos detectados durante ella;

(3) ejecutar, si fuere el caso, los trabajos de refuerzo o modificación que el Ingeniero juzgue necesarios y le exija realizar durante el período de garantía; y

(4) entregar al Ingeniero los planos finales de las obras actualizados, conforme a la ejecución final de las obras, en las condiciones previstas en la Cláusula 7 más adelante.



Los gastos correspondientes a los trabajos complementarios exigidos por el Contratante o el Ingeniero y que tengan por objeto dar mantenimiento o mejorar las estipuladas en los incisos (2) y (3) anteriores, serán por cuenta del Contratista.

La obligación del Contratista de realizar los trabajos de completa terminación por su cuenta, no es extensiva a los trabajos necesarios para corregir los efectos del uso o desgaste ordinarios, quedando entendido que la limpieza y conservación corrientes durante el período de garantía corresponden al Contratante.

Al inicio del período de garantía, el Contratista quedará libre de sus obligaciones contractuales y las Garantías de Cumplimiento y de Pago cesarán de derecho, excepto en el caso previsto en la Cláusula 6 a continuación.

#### **6.- Documentos que deberá entregar el Contratista después de la ejecución de las obras.**

Salvo otras disposiciones del Contrato e independientemente de los documentos que está obligado a suministrar antes o durante la ejecución de los trabajos, el Contratista entregará al Ingeniero tres (3) ejemplares de lo siguiente:

(b) dentro de los dos (2) meses siguientes a la aceptación, los planos finales de la obra realizada y los demás documentos de ejecución;

(c) planos de detalle de las instalaciones ejecutadas;

(d) cantidades de obra, a nivel de conceptos ejecutados; e

(e) informe final sobre el costo total del Contrato, detallando los ajustes de precios y, de ser el caso, convenios adicionales y gastos financieros recibidos por concepto de retrasos en los pagos.

#### **2.1.4. SECCIÓN 107: CONTROL DE LOS MATERIALES**

##### **2.1.4.1. Sección 107.01: Fuentes de Materiales y Requerimientos sobre su Calidad**

A menos que hubiera en el Contrato otra disposición en contrario, el

Contratista suministrará todos los materiales que serán usados en la construcción de la obra, de fuentes de su propia elección, excepto otros suministrados por el Contratante y los bancos de materiales que deberán ser indicados en los Documentos de Licitación. El Contratante obtendrá para el Contratista el uso gratis de bancos de suelo, arena, grava o

roca sólida, para uso exclusivo en el Proyecto, que se encuentren dentro del Derecho de Vía o en terrenos de su propiedad y realizará todas las gestiones o trámites para adquirir los derechos de explotación de los bancos ubicados propiedades de terceros.

Salvo que las CEC lo establezcan de otro modo, todos los materiales y artículos que vaya a ser incorporados en la obra deberán ser nuevos y llenarán todos los requerimientos de los planos, de las especificaciones generales y de cualquier Especificación Suplementaria o Condición Especial aplicable. La fuente o yacimiento de cada uno de los materiales deberá estar indicada en los documentos de licitación, previamente el ingeniero verificara si los datos mostrados por el diseñado del contratante y/o los procedimientos para que los mismos cumplan con las normas, ahí indicados son válidos antes de que comiencen a ser usados en el sitio de la obra. Una fuente de materiales aprobada permanecerá aprobada mientras los materiales obtenidos sean aceptables. Si se encuentra, después de efectuar pruebas, que fuentes de materiales previamente aprobadas no suplen materiales uniformes y satisfactorios, o si el producto de cualquier fuente aprobada dejara de ser satisfactorio en cualquier oportunidad, el Contratista a través del ingeniero deberá suministrar los materiales requeridos de otras fuentes aprobadas y reconocerá los ajustes en los precios contractuales.

La aprobación de materiales por parte del Ingeniero no relevará al Contratista, en forma alguna, de la responsabilidad de corregir o reemplazar obras inaceptables debido a deficiente ejecución, materiales defectuosos u otras causas.

Corrientemente, el Contratante ha localizado y examinado yacimientos de materiales que presentan condiciones aparentemente favorables para su posible uso en las obras. Las CEC contienen información pertinente sobre estas fuentes de materiales.

##### **2.1.4.2. Sección 107.02: Marcas de Fábrica y Alternativas**

Por conveniencia, en los planos o en las especificaciones, ciertos artículos o materiales a ser incorporados en la obra, podrán ser designados bajo la marca de fábrica o por el nombre del fabricante y la información contenida en su catálogo.

Salvo disposición en contrario, estas referencias deberán ser consideradas como una manera de establecer un funcionamiento básico o una norma de calidad y no como una limitación de la competencia. El Contratista podrá usar un equipo, material, artículo o proceso que, a juicio del Ingeniero, sea de igual calidad y tenga las características requeridas para el propósito perseguido, siempre que llene los siguientes requisitos:





1.- El costo de la prueba sobre la calidad y funcionalidad de las alternativas correrá por cuenta del Contratista, quien deberá suministrar toda la información necesaria requerida por el Ingeniero. Este será el único juez sobre la calidad y funcionalidad de los artículos o materiales alternativos y su decisión será definitiva y concluyente.

2.- Siempre que las especificaciones permitan la sustitución de un artículo o material por otro similar o equivalente no será hecha ninguna prueba o se tomará acción alguna relacionada con la aprobación del material sustituido, hasta que el Contratista haya hecho la solicitud por escrito, adjuntando los datos completos que identifiquen la calidad y funcionalidad del artículo o material propuesto. Dicha solicitud deberá ser hecha con suficiente anticipación para permitir llevar a cabo los trámites de aprobación sin demorar el trabajo.

#### 2.1.4.3. Sección 107.03: Muestras, Ensayes y Especificaciones de Referencia

Todos los materiales deberán ser aprobados por el Ingeniero previamente a su incorporación en la obra y estarán sujetos a inspección, muestreo, ensayos y aprobación o rechazo en cualquier oportunidad antes o durante su incorporación en la obra.

Cualquier obra en la que sean empleados materiales que no cuenten con la aprobación o permiso por escrito del Ingeniero, según el Artículo-106.12, de estas CGC, será hecha a riesgo del Contratista, a menos que hubiera otra disposición en contrario. Todo material que resulte inaceptable y que no ha sido autorizado, no será pagado y, si así lo indica el Ingeniero, será removido a costa del Contratista.

A menos que se haya indicado lo contrario, cuando se haga referencia en el Contrato a una especificación, norma o método de ensaye adoptado por la AASHTO, ASTM, u otra asociación técnica reconocida, se entenderá que se trata de la especificación, norma o método de ensaye, incluyendo normas provisionales o tentativas, que estén en vigor en la fecha del Aviso de Licitación publicado en los diarios.

A solicitud del Contratista, el Ingeniero suministrará copias de todos los informes de ensayos al representante del Contratista.

##### 1.- Certificación (Ver Artículo-106.12)

#### 2.1.4.4. Sección 107.04: Inspección en Planta

El Ingeniero podrá inspeccionar los materiales en su punto de origen. Las plantas de manufactura podrán ser inspeccionadas periódicamente para comprobar su cumplimiento con los métodos especificados de fabricación, y tomará muestras de material para ser ensayadas en el laboratorio, a fin de comprobar su cumplimiento con los requerimientos de calidad del material. Esta podrá ser la base para la aceptación en cuanto a calidad de lotes de artículos manufacturados o fabricados. En el caso de que tal inspección se efectúe en la planta, se deberán llenar los siguientes requisitos:

1.- El Ingeniero deberá contar con la cooperación y ayuda del Contratista y del productor con quien éste hubiese contratado los materiales.

2.- El Ingeniero deberá tener libre acceso en todo momento a aquellas partes de la planta que tengan relación con la fabricación o la producción de los materiales que estén siendo suministrados.

3.- Si fuese requerido en las CEC, el Contratista deberá contar con un edificio aprobado para uso de la Inspección; dicho edificio estará ubicado convenientemente cerca de la planta, independientemente de cualquier edificio utilizado por el productor del material, y de acuerdo con los requisitos del Artículo 107.07, de estas CGC.

#### 2.1.4.5. Sección 107.05: Materiales Importados

Salvo disposición en contrario de las CEC, todo material, artículo o proceso patentado a ser importado del extranjero para uso o incorporación en las obras del Proyecto, deberá contar con la aprobación previa del Contratante, en lo relativo al cumplimiento con los requisitos de fuente y origen (si esto fuera aplicable). El Contratista suministrará al Ingeniero, para su aprobación, el nombre del Fabricante, el número del modelo y demás datos de identificación, así como toda la información relativa a su composición, diseño, uso y precauciones sobre su manipulación.

Si así lo disponen las CEC, todo artículo y material fabricado en el extranjero será entregado en lugares aprobados dentro del país, donde serán almacenados hasta que sean efectuados su muestreo y ensaye.

El Contratista, sin costo adicional para el Contratante, hará los arreglos para la ejecución de las pruebas que el Contratante no pueda realizar. Las pruebas deberán ser ejecutadas en el país y serán presenciadas por un representante autorizado del Ingeniero.



Los materiales estructurales que requieran informes de análisis químico y físico sólo serán aceptados de aquellos fabricantes que hayan previamente establecido, a satisfacción del Ingeniero, la aceptabilidad del control de calidad de manufactura, para garantizar un material uniforme que llene los requisitos del Contrato. No serán aceptados materiales estructurales que no puedan ser claramente identificados con informes de análisis químico y físico y Certificados de Cumplimiento.

#### 2.1.4.6. Sección 107.06: Materiales Locales

**1.- Generalidades.-** Se entenderá por materiales locales, aquellos como roca, arena, grava, tierra u otros materiales minerales, fuera del material de préstamo y material selecto locales, obtenidos o producidos de fuentes vecinas al Proyecto, para uso específico en el mismo. No estarán incluidos dentro de esta denominación aquellos materiales obtenidos de fuentes comerciales establecidas.

Los materiales locales serán suministrados por el Contratista de alguna fuente de su propia elección, excepto para el concepto de Préstamo Caso 1, que será obtenido de fuentes designadas en los planos o descritas en las CEC.

El suministro de materiales locales de todo yacimiento está sujeto a las disposiciones del Artículo-103.05 y a las contenidas en el Artículo-105.02.

A menos que una fuente de materiales esté indicada en los planos o descrita en las CEC o que sea aprobada por escrito como tal por el Ingeniero, las fuentes de materiales locales no podrán ser excavadas en lugares donde los cortes, desechos y túmulos resultantes, ofrezcan vistas desagradables desde alguna parte de la vía o representen un peligro para la seguridad del público o de los animales. No será pagado ningún material obtenido con violación de esta disposición. A menos que así lo haya ordenado el Ingeniero.

El Contratante podrá ordenar al Contratista hacer todos los arreglos necesarios para la obtención de los derechos, las servidumbres de acceso y para el acarreo de materiales sobre alguna vía pública o privada, reembolsando los costos incurridos al contratista.

A solicitud escrita del Contratista, el Ingeniero ensayará los materiales de cualquier yacimiento local de su elección que no haya sido ensayado antes. Si se encuentra que el material de dicha fuente es satisfactorio y es usado en el Proyecto, no se cargará a la cuenta del Contratista el costo de los ensayos. En caso contrario, ese costo será deducido de cualquier suma que se le deba o se le llegue a deber al Contratista.

Para todo yacimiento de materiales locales localizado o propuesto por el Contratista, que resulte satisfactorio para la construcción de obras del Proyecto, el Contratista deberá realizar las gestiones para adquirir, los derechos para la extracción y acarreo de los materiales, dicho costo será reembolsable al contratista.

La compensación total por el suministro de la mano de obra, materiales, herramientas, equipo e imprevistos, y por la ejecución de todo el trabajo involucrado en el cumplimiento de las disposiciones de este artículo, para la provisión y producción de materiales de cualquier fuente (con excepción de los derechos de explotación), será considerada como incluida en el precio pagado por el concepto de obra en que dicho material sea usado y no habrá compensación adicional alguna por el mismo.

**2.- Posibles Fuentes de Materiales Locales.-** Los planos, las CEC o ambos, suelen mostrar o describir posibles fuentes de materiales locales ubicadas en terrenos nacionales o privados, dentro o fuera de la zona del Proyecto. En casos de yacimientos localizados en terrenos privados, el Contratante hará arreglos preliminares con el Propietario del terreno donde está localizado el yacimiento o banco, para que, si es escogido definitivamente para extraer materiales para el Proyecto, entrar en tratos de arriendo o de compra (según su importancia y magnitud), entendiéndose que, de acuerdo con la Ley, los materiales de yacimientos o bancos son propiedad del Estado aunque el terreno sea privado.

Los arreglos preliminares entre el Contratante y el Propietario del terreno, legalizados de acuerdo con la Ley, incluirán el precio del terreno del banco y del camino de acceso o de acarreo, áreas de acopio y de instalaciones conexas, prevención de daños y perjuicios en el resto de la propiedad colindante (terrenos, cercas, corrientes o depósitos de agua, estructuras, ganado, cultivos, sistemas de riego, tanques, casas, etc.). El objeto de estos arreglos preliminares es el de dar a todos los oferentes una base para la preparación de las ofertas. El Contratante pondrá a disposición de los oferentes, a solicitud por escrito de los interesados, la documentación sobre los arreglos o convenios celebrados con los Propietarios de los terrenos para cerciorarse de los términos, condiciones, limitaciones y obligaciones acordados entre el Contratante y los Propietarios que, en caso de tener que usar dichos materiales, correrán por cuenta del Contratante.

En casos en que el Contratante haya levantado "Información sobre Materiales" como la mencionada en el Artículo-103.05, que podrá incluir los convenios preliminares con los Propietarios de los terrenos en cuanto a la extracción de los materiales. La inclusión de tales



documentos en modo alguno descargará la responsabilidad del Contratante o del Contratista con respecto a alguna de las disposiciones contenidas en este artículo en cuanto a esos documentos.

El Oferente o Contratista deberá hacer en forma independiente y bajo su propia responsabilidad, todas las investigaciones y exámenes necesarios para satisfacerse en cuanto a la calidad y cantidad de los materiales aceptables disponibles en cada yacimiento, sobre el tipo y grado de procesamiento que puedan ser requeridos, incluyendo trituración, lavado de agregados o eliminación de finos, secamiento, estabilización mecánica o química, cribado, etc., a fin de producir materiales que llenen satisfactoriamente los requisitos de las especificaciones, y sobre los arreglos preliminares celebrados entre el Contratante y los Propietarios de los terrenos en que se encuentra el material, en los cuales se establecen las condiciones, obligaciones y limitaciones a ser asumidas por el Contratista antes, durante y después de la explotación.

El Ingeniero podrá autorizar el uso de material de cualquier parte de un yacimiento o banco y rechazar materiales inaceptables existentes en otra parte del mismo yacimiento. En general, el Ingeniero podrá rechazar yacimientos o bancos cuando se detecte la coexistencia de materiales aceptables con otros inaceptables.

Aunque el Contratista haya decidido obtener materiales de algunos de los terrenos elegibles (indicados por el Contratante, o no), no podrá proceder a la explotación de los mismos sin antes el Contratante haya realizado los siguientes trámites:

2.1) Firma de un documento legalizado que libre al Propietario del terreno del yacimiento (público o privado) de reclamos por accidentes a personas, animales o a la propiedad (incluso el medio ambiente y los recursos naturales) resultantes de las operaciones del Contratista dentro de los límites del terreno sujeto a explotación. En el mismo documento, el Contratista deberá obligarse a cumplir con todas las demás disposiciones y responsabilidades contenidas en el Convenio Preliminar celebrado entre el Contratante y el Propietario del terreno (que podrá considerar el arriendo o la compra del terreno a un precio determinado).

Si el Contratista prefiere obtener el material bajo las condiciones estipuladas en el párrafo 2.1) de este Artículo, la explotación del terreno quedará sujeta a los términos, condiciones y limitaciones contenidos en el Convenio Preliminar celebrado entre el Contratante y el Propietario (que podrán ser de arriendo o de compra del terreno). En caso de

violación de tales términos, condiciones y limitaciones por parte del Contratista, el Contratante deducirá los valores requeridos para cumplirlos, de cualquier suma que le deba o le llegue a deber al Contratista. Es entendido que los llamados términos, condiciones y limitaciones se refieren únicamente a daños y perjuicios resultantes de las operaciones de la explotación del yacimiento ya que no será necesario pagar "derechos de explotación" del material o regalías por su extracción.

2.2) Si el Contratista decide obtener el material de fuentes de su propia elección, aprobadas por el Ingeniero, se aplicará lo estipulado en el párrafo siguiente:

Legalizar un convenio con el Propietario del terreno donde yace el material, bajo los mismos términos, condiciones, limitaciones y obligaciones a que se refiere el Artículo 2.1, excepto que el Contratante no quedará obligado a deducir, a favor del Propietario, el costo de los términos, condiciones, limitaciones y obligaciones, en casos de violación del Convenio por parte del Contratista. La redacción de este Convenio deberá ser aprobada previamente por el Contratante.

En cualquiera de los dos casos, (2.1 ó 2.2), antes de la aceptación final del Proyecto, el Ingeniero podrá demandar del Contratista la presentación de evidencias de que ha cumplido con todos los compromisos contraídos en relación con los convenios celebrados con los propietarios de terrenos de donde haya sido extraído material para uso en el Proyecto, sin perjuicio de las demás obligaciones relativas a la protección del paisaje, del medio ambiente y de los recursos naturales.

La compensación por el cumplimiento con lo estipulado en los convenios con los propietarios de los terrenos en que están localizados los yacimientos de materiales explotados para uso en el Proyecto, y por el suministro de toda la mano de obra, materiales, equipo, herramientas, la administración e imprevistos, y por ejecutar todos los trabajos involucrados en la explotación, producción y uso de los materiales especificados provenientes de yacimientos o bancos naturales, incluyendo el abra y destronque, descortezado (destape) del área, la construcción de caminos de acceso, cercas, portones, drenaje, etc., excepto cuando el Pliego de Licitación incluya conceptos de pago para estos trabajos, y por toda la excavación (y/o voladura, en su caso) y el procesamiento del material, de la naturaleza y grado que fueran necesarios, será considerada como incluida en el precio pagado por el concepto o conceptos de pago en que se usen tales materiales, sin que el Contratante tenga que pagar compensación adicional alguna.



**3.- Préstamo, Caso I.-** Cuando el Contratante designe en los planos o describa en las CEC, yacimientos de materiales locales para uso en las obras, el Contratista, por su cuenta, hará todos los trabajos y procesamientos que sean necesarios para obtener y producir de tales yacimientos, materiales que cumplan con las especificaciones.

Si el Ingeniero determina que las fuentes de materiales locales de este tipo ya no seguirán siendo usadas debido a que se agote el material aceptable o por otras razones, designará una o más fuentes alternativas de las cuales podrá el Contratista obtener el material faltante, bajo las mismas condiciones ya señaladas, en la Cláusula 2 de este Artículo.

En este último caso, el Contratante pagará al Contratista el costo de movilización y erección de sus instalaciones y equipos en las nuevas fuentes como Trabajo Extra, según el Artículo-105.03 de estas CGC, al igual que la construcción de caminos de acceso, cercas, abra y destronque y descortezado que fueran requeridos, según lo determine el Ingeniero. El Contratante pagará o deducirá, según sea el caso, el aumento o disminución en los costos de acarreo resultante de la nueva ubicación del yacimiento. Ese pago sería hecho como Trabajo Extra. También será reconocida compensación adicional por tiempo perdido o demora en la conclusión de las obras, causados por la movilización de las instalaciones y equipos del Contratista de la fuente original a la fuente alternativa, y modificar si fuese necesario el plazo del Contrato de conformidad con el Artículo-109.06, de estas CGC. Todo procesamiento del material de la fuente alternativa que sea requerido y que exceda el que estuviere indicado en las CEC para el material de la fuente original y que, en opinión del Ingeniero, sea necesario para producir material aceptable de la fuente alternativa, será pagado como Trabajo Extra.

El Contratista deberá firmar con el Propietario del terreno del yacimiento alterno, los convenios señalados en la Cláusula 2 de este Artículo, ya que estará sujeto a los términos, condiciones, obligaciones y limitaciones mencionados en ella.

La compensación total por el suministro de toda la mano de obra, materiales, herramientas, equipo, administración e imprevistos, y por ejecutar todo el trabajo involucrado en la extracción y producción de materiales especificados de fuentes señaladas por el Contratante, incluyendo la construcción de caminos de acceso, cercas, portones, será considerada como incluida en el precio pagado por el concepto o conceptos de obra en que se use tales materiales y no será pagada compensación adicional alguna.

#### **2.1.4.7. Sección 107.07: Laboratorio de Campo - Tablero de Avisos**

Todas las instalaciones y estructuras provistas por el Contratista bajo este Artículo continuarán siendo de su propiedad y deberán ser retiradas por él cuando ya no sean necesarias según el Ingeniero. No será hecho ningún pago adicional por las estructuras y servicios, sino que se considerará que su costo ha sido incluido en los conceptos de pago del Contrato.

El Contratista deberá proveer una caseta a prueba de intemperie o una casa remolque para uso exclusivo del Ingeniero como laboratorio de campo.

La estructura deberá tener un espacio de trabajo adecuado para realizar las operaciones de los ensayos que sean requeridos y deberá tener los servicios de agua potable, energía y demás servicios indispensables para cumplir sus funciones. Las dimensiones y características mínimas de dicha caseta, de ser necesaria, serán indicadas en los planos o en las CEC. Además, el Contratista deberá suministrar en cada uno de los lugares en que instale una planta de trituración, una caseta para laboratorio de campo con techo impermeable, con dimensiones externas de 6 metros por 12 metros y 2.40 metros de altura al cielo raso y que tenga, por lo menos, dos ventanas que puedan ser abiertas y una puerta con cerradura. La caseta estará provista de una mesa de trabajo con dimensiones de, por lo menos, 75 centímetros por 2.40 metros. La mesa contará con una piletta que desagüe al exterior y cañería para suministro de agua con su correspondiente grifo. El abastecimiento de agua podrá ser hecho por medio de un tanque alimentado por gravedad, con una capacidad mínima de 54 galones. El Contratista está obligado a proveer agua en cantidad suficiente para que se puedan realizar los ensayos. La caseta deberá estar equipada también con instalaciones eléctricas que suministren corriente alterna de 110 voltios y 60 ciclos, para iluminación y la operación del equipo de laboratorio. La caseta deberá estar lista y en condiciones de permitir efectuar ensayos, antes de que las operaciones del Contratista exijan la ejecución de los mismos en el campo.

El Contratista, asimismo, deberá proveer y conservar un tablero macizo, de buen tamaño y a prueba de intemperie y de vandalismo, para la continua exhibición de boletines, avisos, de carteles y otras informaciones requeridas en el Contrato, el cual deberá estar colocado en un lugar conspicuo y accesible en el sitio del Proyecto, hasta la aceptación final de la obra.



#### 2.1.4.8. Sección 107.08: Acopiamiento de Materiales

Los materiales deberán ser acopiados de tal manera que se asegure la conservación de sus cualidades y propiedades para la obra. El equipo y los métodos usados para el apilamiento de agregados y para retirar éstos de las pilas, serán tales que no impliquen pérdida o segregación perjudicial del agregado, que no se le incorpore ninguna cantidad regular de materia extraña al mismo y no se revuelvan materiales de pilas diferentes. Las pilas se formarán por capas de no más de un metro (1.00 m) de espesor. Cuando los materiales sean acopiados por medio de bandas transportadoras, los conos no deberán exceder de un metro y ochenta centímetros (1.80 m) de altura.

Los materiales acopiados, aun cuando hayan sido aprobados antes de ser acopiados, podrán ser inspeccionados otra vez antes de ser incorporados en la obra. Los materiales acopiados serán ubicados de modo que se facilite su rápida inspección. Se podrá hacer uso de áreas del Derecho de Vía para fines de acopiamiento y para la instalación de la planta y equipo del Contratista, pero todo el espacio adicional necesario para tales fines deberá ser procurado por el Contratista por su propia cuenta. No se hará uso de terrenos de propiedad particular para fines de acopiamiento, a menos que se cuente con permiso por escrito del Propietario o arrendatario y, en caso de solicitarlo el Ingeniero, le serán entregadas copias de dicho permiso escrito. Todos aquellos lugares de los cuales se hubiere removido material acopiado, deberán ser restaurados a sus condiciones originales por el Contratista, a sus expensas.

#### 2.1.4.9. Sección 107.09: Manejo de Materiales

Todos los materiales deberán ser manejados en tal forma que conserven sus cualidades y características propias para el trabajo a que estén destinados. Los agregados deberán ser acarreados del lugar en que estén depositados hasta la obra, en vehículos bien cerrados, contruidos de tal modo que eviten la pérdida o la segregación después de haber sido medidos y cargados, con el fin de que no surjan contradicciones respecto a las cantidades efectivamente recibidas en el lugar de las operaciones. Los materiales inflamables o explosivos, en particular los combustibles de petróleo, productos petroquímicos altamente volátiles o tóxicos, o dinamita, gelatina y similares, serán manejados de acuerdo con las regulaciones vigentes de salubridad nacional, de seguridad del público y las NABCV.

#### 2.1.4.10. Sección 107.10: Materiales Inaceptables

Todos los materiales que no estén en conformidad sustancial con los requisitos de las especificaciones al ser ensayados para su aceptación, serán considerados como inaceptables y rechazados de acuerdo con el Artículo 106.03, de estas CGC y, por tanto, retirados inmediatamente del lugar de la obra, a menos que los defectos sean corregidos y el material fuere aprobado posteriormente por el Ingeniero.

Los materiales rechazados cuyos defectos hubieren sido corregidos, podrán ser utilizados una vez que el Ingeniero lo autorice.

#### 2.1.4.11. Sección 107.11: Materiales Suministrados por el Contratante

El Contratante, a veces, pone a disposición del Contratista, para uso en las obras bajo Contrato, aquellos materiales descritos en las CEC, si fuera el caso (por ejemplo, piedra triturada por otros). Cualquier material que sea suministrado por el Contratante será entregado o puesto a la disposición del Contratista, en los lugares indicados en las CEC o mostrados en los planos. Se considerará que el costo del manejo y la colocación de todos esos materiales, después de entregados al Contratista, está incluido en el precio del Contrato para las obras en que serán usados, con las siguientes excepciones y aclaraciones:

1.- En el caso de que los materiales a ser suministrados por el Contratante no pudieran ser puestos a disposición del Contratista en la fecha y lugar estipulados y convenidos, el Ingeniero, a solicitud del Contratista, determinará la magnitud de la demora ocasionada por tal hecho y hará un ajuste equitativo en el plazo y valor del Contrato, si fuera necesario, por medio de un Acuerdo Suplementario.

Si los materiales a ser suministrados por el Contratante fueran recibidos por el Contratista en condiciones no apropiadas para el uso pretendido, el Contratista notificará al Ingeniero sobre tal hecho dentro de diez (10) días después del recibo de dichos materiales. El Ingeniero en tal circunstancia, reemplazará los materiales inadecuados o los adecuará por medio del Contratista. En este caso, el Ingeniero hará un ajuste equitativo en el plazo contractual y en los costos, asimismo revisará para pago los daños y perjuicios.

2.- Por medio de nota dirigida al Contratista, el Ingeniero podrá disminuir, en cualquier cantidad, el volumen estipulado de materiales a ser suministrados por el Contratante según las CEC, y el Contratista no tendrá derecho a ningún ajuste en el valor del Contrato.



En esta eventualidad, el Contratista suplirá los materiales necesarios al precio unitario fijado en el Contrato para esta circunstancia. El Ingeniero, a solicitud del Contratista, hará un ajuste equitativo en el plazo contractual por alguna demora que le fuere causada por este hecho compensará económicamente los daños y perjuicios.

3.- Los materiales suministrados por el Contratante, a menos que se disponga de otra manera en las CEC, serán usados únicamente para las obras consideradas en el Contrato.

4.- El Contratista mantendrá y administrará, de acuerdo con prácticas técnicas sanas, un programa de transporte, manejo, acopiamiento, protección y preservación de los materiales suministrados por el Contratante y será responsable de tales materiales, excepto en los casos de Fuerza Mayor.

Por aquellos faltantes, deficiencias o daños que no sean justificados o para los cuales no haya explicación, se deducirán al Contratista los valores correspondientes de cualquier suma que se le deba o se le llegue a deber. En el caso de pérdidas o destrucción de tales materiales a causa de falta o negligencia del Contratista, éste reemplazará los materiales perdidos o destruidos o pagará al Contratante, en concepto de indemnización, una suma igual al valor de tales materiales que aparezca especificado en las CEC. Esta indemnización será deducida de cualquier suma que se le deba o se le llegue a deber al Contratista.

5.- El Ingeniero, en toda oportunidad razonable y con fines de inspección, tendrá libre acceso a los lugares en que estén acopiados o guardados los materiales suministrados por el Contratante.

6.- A la conclusión de las obras bajo contrato, o en fechas más tempranas, a criterio del Ingeniero, el Contratista entregará, en documento aceptable para el Ingeniero, una lista de todos los materiales suministrados por el Contratante que no hayan sido utilizados en la ejecución de las obras contratadas, incluyendo cualquier material recuperado.

7.- El Contratista devolverá los materiales suministrados por el Contratante que no hayan sido usados en las obras bajo contrato, en condiciones similares a las que tenían cuando le fueron entregados considerando su deterioro normal o adecuados de conformidad con lo estipulado en la Cláusula (1) de este Artículo.

## 2.1.5. SECCIÓN 108: RESPONSABILIDADES ANTE LA LEY Y EL PÚBLICO

### 2.1.5.1. Sección 108.01: Conocimiento de las Leyes y Reglamentos

Es entendido que el Oferente tiene conocimiento de todas las leyes y reglamentos de la República de Nicaragua que sean aplicables a este Contrato. El Contratante considerará que este conocimiento es un hecho y, por consiguiente, los Oferentes no podrán alegar ignorancia en ningún caso. Aunque el Contratante sea una entidad gubernamental, habrá otras dependencias del Gobierno que tendrán relación con el Contrato, especialmente en la concesión de licencias, exenciones, permisos, etc. El Contratista deberá conocer y cumplir con los trámites y regulaciones establecidas en cada una de estas dependencias. Las excusas de malos entendidos o ignorancia de parte del Contratista, no servirán en modo alguno para modificar las condiciones del Contrato.

El Contratista deberá conocer, obedecer y cumplir con todas las leyes de la República de Nicaragua, códigos, reglamentos sobre seguridad, sobre protección del medio ambiente, ordenanzas y regulaciones gubernamentales y municipales, y con todas las órdenes y decretos emanados de autoridades que tengan jurisdicción en el Proyecto y que en alguna forma afecten al personal que trabajará en la obra, a los materiales y al equipo que será usado. El Contratista deberá proteger e indemnizar al Contratante y a sus Representantes contra cualquier reclamación o responsabilidad originada por la violación de cualquiera de tales leyes, códigos o reglamentos antes mencionados, cometida por él mismo o por sus empleados durante la ejecución de las obras bajo contrato. Es por ello obligatorio que el Contratista esté respaldado por un seguro de responsabilidad civil.

Asimismo, se da como un hecho que el contratista conoce todas las leyes y regulaciones de la institución crediticia o donante que esté financiando la obra, si fuera el caso.

### 2.1.5.2. Sección 108.02: Impuestos, Derechos, Gravámenes y Cotizaciones

(a) El Precio del Contrato incluirá los impuestos, derechos, gravámenes y cotizaciones de toda índole exigibles fuera del país, en relación con la realización de los trabajos objeto del Contrato, en particular los correspondientes a fabricación, venta y transporte de suministros y equipos que vayan o no a ser incorporados en las obras, así como los correspondientes a todos los servicios suministrados, cualquiera que sea su naturaleza.



(b) Salvo disposición contraria en las presentes CGC y en las CEC, el Precio del Contrato comprenderá igualmente, todos los impuestos, derechos, gravámenes y cotizaciones de toda índole exigibles en el país, los cuales se calcularán teniendo en cuenta las modalidades de base tributaria y de tasas fiscales vigentes 28 días calendario antes de la fecha límite para la presentación de las ofertas.

(c) Los precios comprenderán también los impuestos, derechos y gravámenes exigibles en el momento de la importación, tanto definitiva como temporal, de los suministros, materiales y equipos necesarios para la realización de las obras. Comprenderán igualmente el conjunto de impuestos, derechos y gravámenes exigibles al personal del Contratista y a sus proveedores, abastecedores o Subcontratistas.

(d) Cuando la reglamentación del país lo establezca, el Contratista pagará las cotizaciones; impuestos, derechos y gravámenes que adeude directamente a los organismos competentes del país y presentará al Contratante, en caso de que sea requerido, la evidencia de los pagos correspondientes.

(g) Las CEC describen con mayor amplitud los principales impuestos, derechos, gravámenes y cotizaciones vigentes en el país, veintiocho (28) días calendario antes de la fecha límite para la presentación de las ofertas, a cargo del Contratista, sus proveedores, abastecedores y Subcontratistas.

(h) En caso de que el Contratante obtenga de la autoridad aduanera un régimen de exoneración o de suspensión no previsto originalmente para los impuestos, derechos y gravámenes exigibles en el momento del ingreso definitivo o temporal de los suministros, materiales y equipos, se efectuará una disminución igual al valor exonerado deducible la parte pagadera en moneda nacional, y dicha disminución se hará constar en una Orden de Cambio. En el caso de que, para obtener tal ventaja, deba presentarse a la autoridad fiscal y aduanera una fianza o garantía, el costo de la misma será por cuenta del Contratante.

(i) En caso de modificaciones en la reglamentación fiscal, aduanera o social con respecto a la reglamentación aplicable veintiocho (28) días calendario antes de la fecha límite para la presentación de las ofertas, cuyo efecto sea un aumento de los costos del Contratista, éste último tendrá derecho a un aumento correspondiente del Precio del Contrato. Con este fin, el Contratista notificará al Ingeniero, dentro de los dos (2) meses siguientes a cualquier modificación, las consecuencias de la misma. Dentro del plazo de un (1) mes después de recibida la notificación, el Ingeniero, propondrá al Contratante la redacción

de una Orden de Cambio en la que se preverá, en cualquier caso, un pago en moneda nacional. En caso que el Contratista y el Contratante no lleguen a un acuerdo sobre los términos de la Orden de Cambio un (1) mes después de la notificación del Ingeniero al Contratante, se aplicará el procedimiento de arreglo de diferencias estipulado en el CGC.

(j) Monedas y tasas de cambio. Propositiones de Monedas.

Cuando las IEO especifiquen que la oferta se cotizará en moneda nacional pero que el pago se puede hacer en más de una moneda y el Contratista en su oferta haya especificado las proporciones del Precio del Contrato a pagar en moneda(s) extranjera(s), la(s) tasa(s) de cambio aplicable(s) para el cálculo será(n), salvo que se estipule otra cosa en las CEC, la(s) que figuran en la oferta.

#### 2.1.5.3. Sección 108.03: Permisos

A menos que se dispusiera de otra manera en las CEC, el Contratante, deberá obtener las licencias y permisos requeridos por leyes y decretos de la República, de los Municipios, etc., que tengan jurisdicción, para proceder a ejecutar los trabajos de conformidad con el Contrato. Ejemplos de tales licencias y permisos son, entre otros, los siguientes: los Permisos Ambientales Especiales, los permisos de construcción. El Contratista obtendrá las licencias y permisos de las placas de circulación de los vehículos, derecho de uso de acera, revisado mecánico de vehículos y permisos de permanencia de personal extranjero.

#### 2.1.5.4. Sección 108.04: Uso de Dispositivos, Materiales y Procesos Patentados

Al aceptar y firmar el Contrato, el Contratista acepta en liberar al Contratante de toda responsabilidad sobre quejas y reclamos por daños y perjuicios resultantes del uso por parte del Contratista de cualquier diseño, dispositivo, material o proceso que esté respaldado por una patente, derechos de autor o marca registrada. Cuando fuere necesario, el Contratista obtendrá las autorizaciones o permisos necesarios de los dueños de tales patentes, derechos de autor o marcas de fábrica y pagará la compensación, impuesto o indemnización por daños y perjuicios a que estuviere sujeto de acuerdo con la ley. La evidencia del cumplimiento con esta disposición deberá el Contratista entregarla por escrito al Ingeniero.

Si un tercero demandara al Contratante por causa del uso ilegal por parte del Contratista de diseños, dispositivos, materiales o procesos sujetos a patentes o derechos de autor, el Contratista será responsable por el pago de las costas, daños y perjuicios legales involucrados. (Ver Artículo 108.20)

#### 2.1.5.5. Sección 108.05: Certificación sobre Honorarios Condicionales

El Contratista deberá certificar que no ha recurrido a ninguna persona o agencia promotora de negocios para obtener la adjudicación del Contrato, mediante el pago de una comisión, porcentaje, corretaje u otro tipo de remuneración condicional. Este requerimiento no será aplicable a los casos de empleados permanentes del Contratista o de agencias de buena fe establecidas por él con el objeto de promover sus negocios.

La violación de esta disposición dará al Contratante el derecho de rescindir el Contrato, sin que por ello tenga el Contratista derecho a reclamo por la vía judicial.

#### 2.1.5.6. Sección 108.06: Traspaso de derechos

El Contratista no podrá transferir, traspasar, subcontratar, cambiar o modificar el Contrato sin la aprobación previa y por escrito del Contratante.

#### 2.1.5.7. Sección 108.07: Participación de Funcionarios Públicos

La participación de funcionarios públicos en el suministro de bienes y servicios relacionados con la construcción de las obras bajo contrato, estará limitada por las disposiciones de la Constitución de la República y la Ley.

#### 2.1.5.8. Sección 108.08: Empleo de Trabajadores Convictos

Para la ejecución de los trabajos contemplados en este Contrato, el Contratista no podrá emplear a ninguna persona que esté bajo auto de formal prisión.

#### 2.1.5.9. Sección 108.09: Idioma Contractual

El Contrato será redactado en idioma español, así como toda la documentación contractual, incluyendo los Certificados de Pago, Directivas, Órdenes de Cambio y correspondencia relativa a la obra.

#### 2.1.5.10. Sección 108.10: Uso de Personal Nicaragüense y Extranjero

A menos que el Contratista demuestre ante las autoridades laborales competentes la inexistencia o escasez de personal nicaragüense idóneo, para los trabajos de construcción previstos en este Contrato, podrá emplear no más del 10% de personal extranjero en cada una de las siguientes clasificaciones:

1) De Ingeniería (Ingenieros, Topógrafos, Dibujantes, etc.).

2) Oficinistas, mecanógrafos o equivalentes.

3) Especializados.

4) Semi- Especializados.

5) Trabajadores no Especializados.

Por lo menos, un 25% del personal directivo y profesional será de nacionalidad nicaragüense aceptable al Contratante. Dichos funcionarios deberán tener acceso y participación en las decisiones de carácter técnico y administrativo relacionadas con la ejecución de la obra.

#### 2.1.5.11. Sección 108.11: Discriminación en el Empleo

Al emplear trabajadores para las obras objeto de este Contrato, el Contratista no discriminará a ninguna persona por motivos de raza, color, sexo, nacionalidad, ancestro ni creencias políticas o religiosas, excepto en lo que se refiere a las estipulaciones del Artículo 108.10 Uso de Personal Nicaragüense y Extranjero. La violación de esta disposición, que es de orden constitucional, será puesta en conocimiento de las autoridades laborales competentes por el Contratante y expondrá al Contratista a las sanciones consideradas por las leyes.

#### 2.1.5.12. Sección 108.12: Rotura Autorizada de Superficies

El Contratante hace reserva del derecho de las Entidades a cargo de los servicios públicos con jurisdicción en la zona donde esté localizado el Proyecto, a construir o reconstruir obras de servicio público (agua, luz, teléfonos, gas, etc.) dentro del Derecho de Vía o de extender permisos para tal fin, en cualquier oportunidad, el Contratista tendrá derecho a reclamos por daños y ajuste en el plazo del Contrato por alguna demora causada por el trabajo así permitido.

Cuando un individuo, firma o corporación sea autorizada, por medio de un permiso sancionado por el Gobierno, el Contratista deberá permitir a las partes que muestren tal permiso, y solamente para uso de ellas, hacer aberturas en la vía construida o en proceso de construcción. Cuando lo ordene el Ingeniero, el Contratista deberá hacer, de una manera aceptable, todas las reparaciones necesarias para restaurar la parte de vía afectada. Ese trabajo será compensado de acuerdo con el Artículo-110.06, a menos que estuviere dispuesto de otra manera en las CEC, y estará sujeto a las mismas condiciones del trabajo original realizado.





#### 2.1.5.13. Sección 108.13: Disposiciones sobre Sanidad y Salubridad

El Contratista deberá proveer y mantener en condiciones sanitarias aceptables los servicios necesarios para uso de sus empleados y de los empleados del Contratante. La localización de tales instalaciones, en campamentos o en otro lugar, así como su condición estará sujeta a la aprobación del Ingeniero y deberá llenar los requisitos exigidos en las Normas Ministeriales del Código del Trabajo sobre el particular y las NABCV.

#### 2.1.5.14. Sección 108.14: Conveniencia y Seguridad Públicas

El Contratista deberá conducir sus operaciones constructivas permanentemente en tal forma que se eviten los riesgos de accidentes y se garanticen la conveniencia, seguridad y salud del público en general y la de los residentes aledaños a la vía en construcción o mejoramiento, asegurando la protección de las personas y de la propiedad.

##### 1.- Medidas de Seguridad Contra Accidentes en el Sitio de la Obra.-

1.1) El Contratista deberá conocer, antes de iniciar sus operaciones, todos los lugares que propone establecer como sitios de trabajo y tener bien definidas las entradas y salidas a tales sitios. El Contratista deberá observar todas las regulaciones e instrucciones del Contratante y las autoridades municipales o locales con jurisdicción en los lugares en que se lleva a efecto el trabajo, en relación con las molestias, los riesgos de accidentes de tráfico y de trabajo, así como con el resguardo de la propiedad. Todos los procedimientos puestos en práctica por el Contratista para resguardar la seguridad de sus trabajadores y del público estarán sujetos a la aprobación del Ingeniero;

1.2) El Contratista deberá llevar un registro minucioso de todos los accidentes ocurridos a sus trabajadores y al público durante el curso de las obras bajo contrato, especificando si han sido mortales o han dejado a personas incapacitadas para trabajar o con lesiones que requieren atención médica y ocasionen pérdidas de horas de trabajo. Todo accidente de trabajo deberá ser informado inmediatamente ante las autoridades laborales con jurisdicción. Los accidentes de tráfico deberán ser reportados, además, ante las autoridades de tráfico más cercanas;

1.3) El Contratista se abstendrá de importar, vender, dar, intercambiar o de cualquier otra manera hacer llegar a manos de otros, bebidas alcohólicas o licores, fuera de las disposiciones de las leyes o reglamentos nacionales y locales. Esta prohibición será igualmente aplicable a subcontratistas, empleados y trabajadores;

1.4) El Contratista se abstendrá de dar, intercambiar o de otro modo hacer pasar a manos de alguna otra persona, armas o municiones de cualquier clase que sean, ni tolerar tales transacciones a subcontratistas, empleados y trabajadores. Para fines de vigilancia con uso de armas, deberá cumplir con las disposiciones de las leyes y reglamentos nacionales y locales que regulen estas actividades.

**2.- Medidas de Seguridad Nacional.-** Si la Convocatoria o las CEC expresaran que el trabajo objeto del Contrato tiene aspectos que pueden afectar a la seguridad pública o la defensa nacional, se aplicarán las siguientes disposiciones:

2.1) Cuando sea necesario al interés nacional y, para proteger la seguridad de la obra, el Ingeniero tendrá la autoridad de ordenar al Contratista la suspensión del trabajo y retirar a todo su personal del sitio de la obra. El Contratante sumirá la responsabilidad por las consecuencias de esta orden; Las compensaciones serán las establecidas en la Sección-109.10 fuerza Mayor

2.2) Si el Contratista detectara alguna acción que está causando o amenazando causar daños a la obra, deberá notificar inmediatamente al Ingeniero. El no hacerlo podría dar lugar a acciones judiciales en contra suya, a la cancelación del Contrato, o a ambas;

2.3) Si después de recibir un informe de esa naturaleza, el Ingeniero determina que se necesitan medidas especiales de seguridad, El Ingeniero las ordenará como trabajo adicional, El Contratista pondrá en efecto tales medidas.

2.4) El Contratista será responsable de notificar las estipulaciones contenidas en los incisos (2.1), (2.2) y (2.3) que anteceden a subcontratistas y a su personal de supervisión en el sitio de la obra;

2.5) Resguardo del Sigilo.

2.5.1) Cuando el Contrato tenga carácter de confidencial, en su totalidad o en parte, o cuando el trabajo vaya a ser llevado a efecto en lugares en donde haya que tomar medidas preventivas especiales para asegurar el sigilo o de cualquiera otra manera proteger el interés nacional, el Gobierno, dando cumplimiento a lo prescrito en la ley 323 para estos casos, a través de la dependencia que corresponda, invitará a las compañías privadas calificadas para proyectos conectados con la defensa nacional a presentarse a las oficinas correspondientes a recibir instrucciones relativas al sigilo. Cada Oferente así instruido estará considerado como plenamente informado acerca de tales instrucciones;



2.5.2) Al ser adjudicado el contrato o contratos, el Contratante hará del conocimiento de los Contratistas cualquier medida o medidas preventivas especiales que deban ser tomadas;

2.5.3) El Contratista y sus subcontratistas deberán hacer uso de todo medio legal para salvaguardar y proteger cualquier material clasificado como de tipo confidencial que les fuera confiado y notificarán inmediatamente al Ingeniero sobre cualquier pérdida o incidente inesperado que pudiera ocurrir. Todas las partes involucradas deberán mantener en secreto toda información de tipo militar que llegue a su conocimiento durante la ejecución del trabajo;

2.5.4) El Contratista será responsable por la observancia de las instrucciones relativas al control de su personal y al resguardo del sigilo contenidas en órdenes recibidas para la puesta en práctica de medidas preventivas. Igualmente será responsable por las acciones de sus subcontratistas en este particular;

2.5.5) El Contratista no tendrá derecho a compensación adicional por los costos en que pudiera incurrir en relación con la protección del sigilo. Tales costos serán considerados como incluidos en los precios unitarios y globales correspondientes a los conceptos de pago del Contrato;

2.5.6) Si el Contratista, o cualquiera de sus subcontratistas, no cumpliera con las disposiciones relativas a la protección del sigilo, se considerará que ha violado el Contrato, en cuyo caso el Contratante entablará las acciones pertinentes contenidas en el Artículo-109.08 de estas CGC. El Contratista, en este caso particular, quedará sujeto, además a ser demandado criminalmente de acuerdo con la Ley.

#### 2.1.5.15. Sección 108.17: Protección y Restauración de la Propiedad y del Paisaje

El Contratista será el único responsable por todo daño, pérdida o inconveniencias ocasionadas en las propiedades, pública o privada, y por todas las demandas, acciones o reclamos de cualquier carácter entablados por causa de daños que pudieran resultar de su manera de conducir el trabajo. Cuando resulten daños o perjuicios, directos o indirectos, en las propiedades, pública o privada, por causa de cualquier acto, omisión, descuido o mala dirección en la ejecución del trabajo por parte del Contratista, éste será responsable de restaurar dichas propiedades, a sus expensas, hasta dejarlas en una condición similar a la existente antes de producirse el daño.

Cuando el sitio de la obra esté adyacente o dentro de la propiedad de ferrocarriles, puertos, aeropuertos, carreteras, sistemas telefónicos, eléctricos, semaforicos, de agua potable, y de aguas negras y de estructuras subterráneas, árboles, sembrados, cercas u otras propiedades e instalaciones que sean vitales para el público, el Diseñador deberá incluir en los planos toda la información necesaria relativa a tales propiedades o sistemas y dará aviso por escrito a los propietarios o a la autoridad correspondiente, con no menos de SIETE (7) días de anticipación al comienzo de sus operaciones. Él deberá proceder con el trabajo hasta que haya tomado las medidas de protección con la aprobación y bajo la autoridad de los dueños o instituciones involucradas.

Los mojones, monumentos, puntos de control y demás referencias fijadas por el INETER, el Contratante o por personas privadas, deberán ser cuidadosamente protegidos por el Contratista y no serán removidos o perturbados de ninguna manera, excepto siguiendo las instrucciones de los dueños de dichas marcas y bajo la supervisión de ellos.

El Contratante hará las gestiones y convenios necesarios con las instituciones respectivas para la remoción de las instalaciones de servicios públicos y otras propiedades que interfieran con las operaciones del Contratista. Este deberá cooperar con estas instituciones a fin de facilitar un progreso continuo en su trabajo y evitar interrupciones en la operación de los servicios públicos. Si ocurriera una interrupción en los sistemas de servicios públicos, el Contratista deberá notificar inmediatamente a la institución respectiva y cooperar de lleno para que las reparaciones necesarias sean realizadas en el menor tiempo posible.

Cuando se informe al Ingeniero sobre cualquier daño sufrido por la propiedad pública o privada, que no sea en los sistemas de servicio público, éste hará una inspección para determinar si el daño ha sido causado por cualquier acto del Contratista en la conducción del trabajo. Si encuentra que tal es el caso, el Ingeniero notificará al Contratista por escrito. Dentro de las cuarenta y ocho (48) horas de haber recibido tal notificación, el Contratista deberá mostrar al Ingeniero, evidencia concluyente de que ha hecho los arreglos para reparar los daños a satisfacción del propietario. Si no cumpliera el Contratista dentro de ese plazo, el Ingeniero podrá llevar a cabo las reparaciones a satisfacción del propietario y podrá deducir los costos resultantes de sumas que se le deban o se le lleguen a deber al Contratista. Si tales costos excedieran al monto de los pagos pendientes o a los que se le llegue a deber al Contratista, éste pagará la diferencia dentro de un plazo de SIETE (7) días después de recibido el cobro.



#### 2.1.5.16. Sección 108.19: Protección de Bosques, Parques, Terrenos y Propiedades Públicas

Al llevar a efecto trabajo dentro de bosques, parques nacionales, parques municipales y de otras tierras públicas o en zonas adyacentes a los mismos, el Contratista deberá cumplir con todas las regulaciones de MARENA, MAG-FOR, municipalidades y toda otra autoridad que tenga jurisdicción en la protección de bosques y parques y en la ejecución de tales trabajos, y observará las leyes, normas y regulaciones sanitarias establecidas para tales zonas de reserva. El Contratista mantendrá esas áreas en condiciones ordenadas, eliminará todos los desperdicios, obtendrá permisos para la construcción y mantenimiento de todos los campamentos, almacenes, bodegas, residencias, letrinas, tanques sépticos y otras estructuras a ser usadas en el Proyecto, de acuerdo con los requerimientos de las autoridades competentes.

**Incendios.-** La protección contra incendios recibirá especial atención, tal como se establece a continuación:

**1.- Regulaciones Contra Incendios.-** El Contratista acatará todas las reglas e instrucciones relativas a la prevención y control de incendios y a las fechas y lugares en que se permite quemar, emitidas por el MAG-FOR o por MARENA. El Contratista tomará todas las precauciones para impedir que sus empleados enciendan fuegos innecesarios en la construcción del Proyecto y será responsable del escape de fuegos provocados en trabajos del Proyecto, así como de extinguir los incendios que se produzcan.

El Contratista deberá instalar y mantener durante el período de las operaciones contractuales, pararrayos satisfactorios en todos los motores a vapor, motores de combustión interna, en todas las chimeneas usadas en sus operaciones y en los campamentos. Además, deberá mantener extinguidores adecuados y una brigada de apagafuegos en las vecindades de aquellas operaciones que conlleven el riesgo de incendios.

**2.- Guardafuegos.-** Si lo requieren las CEC, el Contratista deberá emplear a unos guardafuegos entrenados que sea aceptable al Ingeniero. El guardafuego deberá poner en efecto todas las instrucciones recibidas del Ingeniero y será de su responsabilidad la aplicación de todas las regulaciones y estipulaciones del Contratante, del MARENA, del MAG-FOR, la DGBN y autoridades locales competentes. Será suya la responsabilidad de proteger de incendios el área afectada por las operaciones del Contratista y de vigilar que el Contratista y

sus empleados cumplan con todas las regulaciones y estipulaciones relativas a la prevención contra incendios.

El guardafuego deberá contar con transporte adecuado para su uso exclusivo.

**3.- Equipo Requerido para Combatir Incendios.-** El Contratista deberá suministrar y mantener, a sus expensas, en el sitio de las obras, el equipo y herramientas adecuados para combatir incendios que exijan la DGBN y las autoridades que tengan jurisdicción en el área del Proyecto.

**4.- Regulaciones sobre la Quema.-** Si estuviera permitido en el Proyecto, antes de empezar una operación de quema, el Contratista deberá notificar al MAG-FOR, al MARENA, a la DGBN y a la municipalidad correspondiente. Durante las operaciones de quema deberá tener cuidados especiales de no chamuscar o dañar los árboles y arbustos cercanos al Derecho de Vía o áreas de servicio en que esta operación sea necesaria.

La acumulación de materiales a ser quemados serán de tal tamaño y colocados de tal manera, que durante la quema no se produzcan daños en objetos cercanos. La decisión en cuanto al tamaño máximo de seguridad de tales acumulaciones, la tomará el funcionario de la dependencia gubernamental que tenga jurisdicción, (MAG-FOR, MARENA, DGBN, municipalidad) y las instrucciones relativas a esto serán dadas al Contratista a través del Ingeniero. En defecto de alguna autoridad con jurisdicción sobre estos asuntos, la decisión será tomada por el Ingeniero.

La quema deberá ser suspendida cuando lo ordene la dependencia gubernamental que tenga jurisdicción o el Ingeniero y los rescoldos encendidos no deberán quedar desatendidos.

**5.- Responsabilidad del Contratista en la Extinción de sus Propios Incendios.-** El Contratista, bajo la dirección de la dependencia gubernamental competente, o en la ausencia de un funcionario de tal dependencia, actuando independientemente, deberá combatir, sin costo adicional para el Contratante, todos los incendios que se produzcan en el Proyecto o en sus vecindades, iniciados o causados por él o sus empleados, directa o indirectamente, como resultado de las operaciones de construcción. El Contratista podrá ser demandado por todos los daños resultantes de estos incendios ante la Delegación del MAG-FOR, MARENA, local o regional.



En el caso en que el Contratista es responsable de extinguir incendios sin costo adicional para el Contratante, según el párrafo anterior, si el número y capacidad del personal, equipo y materiales que el Contratista está en posibilidad de proveer prontamente para el combate del fuego, resultaran inadecuados para ese propósito, a juicio de la dependencia gubernamental o persona responsable de la extinción de incendios en el área, el funcionario de dicha dependencia o entidad, estará autorizado para proveer, a costas del Contratista, el personal, equipo y materiales adicionales y a hacer uso de las facilidades de transporte que él crea necesarias para la extinción del incendio.

**6.- Recursos del Contratista para Extinguir otros Incendios.-** Cuando sea requerido por la dependencia gubernamental con jurisdicción, o el Cuerpo de Bomberos local, el Contratista si lo estima conveniente pondrá los recursos que estime para extinguir incendios en las vecindades del Proyecto, que no sean los descritos en el párrafo 108.19 inciso (5). Es entendido que el Contratista recibirá compensación por tales servicios por parte de la dependencia gubernamental o Cuerpo de Bomberos que los haya solicitado, a los precios establecidos en el contrato para los recursos aplicados considerando los mismos como trabajos por administración. La extinción de los incendios será dirigida por la dependencia gubernamental o Cuerpo de Bomberos que haya solicitado la ayuda.

Todo reclamo por daños sufridos por los trabajadores en la extinción de incendios de esta naturaleza, que no estén cubiertos por los seguros exigidos bajo el Contrato, u otros daños resultantes de dichos siniestros, deberán ser reembolsados al contratista por la dependencia gubernamental, Cuerpo Bombero o entidad que haya solicitado la ayuda.

#### 2.1.5.17. Sección 108.20: Seguros

(a) El Contratista dejará a salvo la responsabilidad del Contratante, sus funcionarios y empleados y de los supervisores, contra demandas, acciones o reclamos de cualquier índole surgidos a causa de daños y perjuicios recibidos por cualquier persona, o propiedad por razón de las operaciones del Contratista, o como consecuencia de algún descuido en el trabajo o el uso de materiales inaceptables en la construcción de las obras; o bien, por cualquier acto u omisión, descuido o mala dirección de dicho Contratista, o por causa de cualquier reclamo o sumas a pagar por violación de patentes, marcas de fábrica o derechos de autor; o de reclamos o sumas a pagar al amparo de leyes laborales, ordenanzas o decretos.

(b) Si fuera necesario, del dinero que se deba o llegue a deber al Contratista, se podrá retener para uso del Contratante, el monto requerido para cubrir estas responsabilidades. En

caso de que no se le deba nada, será su garante quien deberá responder para que tales demandas, acciones o reclamos por los daños y perjuicios antes mencionados, sean satisfechos y liquidados, de lo cual se presentará suficiente evidencia al Contratante; sin embargo, no se retendrá ninguna suma cuando el Contratista presente evidencia satisfactoria de que está adecuadamente protegido por medio de seguros por daños a terceras personas, incluyendo muerte de sus trabajadores o de cualquiera otra persona, en su área de trabajo, daños a la propiedad de terceros y daños en la propiedad del Contratante y en la del Contratista mismo, por causa directa o indirecta de sus operaciones en el Proyecto.

(c) El Contratista deberá suscribir, todos los seguros obligados por la reglamentación vigente, pero incluirá, como mínimo, los siguientes seguros:

**c-1 Seguro contra Daños a Terceros.-** Este seguro comprenderá los daños corporales y materiales que puedan ser provocados a terceros como consecuencia de la realización de los trabajos, así como durante el plazo de garantía.

La póliza de seguros debe especificar que el personal del Contratante, el Ingeniero y resto del personal de supervisión así como el de otras empresas que se encuentren en el sitio de la obra se contarán como terceros a efectos de este seguro de responsabilidad civil.

**c-2 Seguro contra Accidentes de Trabajo.-** El Contratista suscribirá todos los seguros requeridos por la reglamentación vigente, necesarios para cubrir accidentes de trabajo. El Contratista será responsable de que sus sub-contratistas también cumplan con esta obligación.

El Contratista cumplirá, además, con lo establecido por la legislación y reglamentación aplicables en su país de origen (si se trata de empresas extranjeras) en lo que respecta a su personal extranjero que trabaje en Nicaragua.

**c-3 Seguro contra los Riesgos en el Sitio de las Obras.-** El Contratista suscribirá de conformidad con la reglamentación aplicable, un seguro contra todo riesgo en el sitio de la obra. Dicho seguro contendrá las garantías más amplias y cubrirá, por lo tanto, todos los daños materiales que puedan sufrir todos los bienes incluidos en el Contrato, en particular los daños debidos a un defecto de confección, del material de construcción o de la ejecución. Este seguro también deberá proteger contra los daños materiales ocasionados por fenómenos naturales.



**c-4 Seguro de Responsabilidad Profesional.-** El Contratista, si lo requieren las CEC, deberá suscribir un seguro de responsabilidad profesional, cuando haya trabajos que exijan la participación de profesionales de la ingeniería en diseños eventuales de estructuras que requieran diseño estructural u otro tipo de especialistas (por ejemplo en hincadura de pilotes, uso de geotextiles o geomallas, expertos en voladuras, etc.), por el monto indicado en las CEC.

**(d) Suscripción y Presentación de Pólizas.-** Los seguros obligatorios y como mínimo, los seguros c-1, c-2, c-3 y c-4 que anteceden, deberán ser presentadas por el Contratista para la aprobación del Ingeniero y ser suscritos antes de iniciar cualquier trabajo.

Los seguros contra daños a terceros y accidentes de trabajo deberán permanecer vigentes hasta la recepción provisional de las obras objeto del Contrato. El seguro contra riesgos en el Sitio de la Obra deberá permanecer vigente por un período de doce (12) meses después de la recepción provisional de las mismas.

Todas estas pólizas contendrán una disposición que subordina su cancelación a un aviso previo de la compañía de seguros al Contratante.

En caso de que las obras no sean concluidas dentro del plazo especificado en las pólizas de seguros originales, éstas serán renovadas con suficiente anticipación a la fecha de su vencimiento por los mismos montos, bajo las mismas condiciones de las pólizas originales y por un plazo adicional suficiente para la terminación satisfactoria de las obras.

El Contratista entregará al Contratante copia certificada de todas las pólizas de seguros obtenidas de conformidad con las disposiciones del Contrato, incluyendo el seguro que cubre a toda su maquinaria e instalaciones, contra los riesgos de incendios, robos, accidentes, motines, huelgas, problemas laborales, daños maliciosos, terremotos, inundaciones o huracanes. Los seguros deberán ser emitidos por compañías nicaragüenses o que estén autorizadas para operar en Nicaragua.

#### **2.1.5.18. Sección 108.22: Responsabilidad del Contratista con Respecto a la Obra**

Mientras el Ingeniero no haya notificado por escrito al Contratista que el trabajo ha sido aceptado, excepto por lo dispuesto en los Artículos-106.17 y 108.12, el Contratista, lo tendrá a su cargo y cuidado y deberá tomar todas las precauciones contra daños y perjuicios que pueda producir en él la acción de los elementos o toda otra causa originada por la ejecución de la obra o la no realización de la misma. El Contratista, por su propia cuenta, y antes de la

aceptación final, deberá reparar o restaurar todos los daños en cualquier parte de la obra producidos por causas como las aquí mencionadas, excepto los debidos a Fuerza Mayor.

Durante toda suspensión de los trabajos, que no sea motivada por incumplimiento del Contratista, el Contratista será responsable por la integridad del Proyecto y deberá tomar las precauciones que sean necesarias para evitarle daños, proveer el drenaje normal y levantar o colocar las estructuras provisionales, rótulos u otras medidas preventivas o de protección, a expensas del Contratante. Durante tal período de suspensión de los trabajos el Contratista mantendrá, adecuada y continuamente, en aceptables condiciones de crecimiento, toda cubierta vegetal viva (engramado, enzacatado, setos vivos, etc.) que haya sido plantada bajo el Contrato y deberá hacer todo lo necesario para protegerla contra daños. Todos los costos en que incurra el Contratista como resultado de la suspensión de las obras serán pagados por el contratante al contratista.

#### **2.1.5.19. Sección 108.23: Responsabilidad del Contratista con Respecto a los Servicios Públicos**

Cuando las operaciones del Contratista tengan lugar en terrenos cercanos a instalaciones de empresas de telégrafos, teléfonos, energía eléctrica, en las que un perjuicio podría redundar en gastos considerables, pérdidas o molestias, la obra deberá ser iniciada hasta que hayan sido hechos todos los arreglos necesarios para la protección de tales instalaciones.

El Contratista deberá cooperar con los propietarios de toda línea de transmisión, subterránea o aérea, en las operaciones de remoción y reinstalación, con el fin de que esas operaciones puedan avanzar de una manera razonable y que la duración del trabajo de reinstalación pueda ser reducida a un mínimo, sin que los servicios que prestan tales empresas lleguen a ser interrumpidos innecesariamente.

En el caso de interrupción en los servicios públicos, como resultado de alguna rotura accidental o de quedar la tubería al descubierto o sin apoyo, el Contratista deberá notificar, sin demora, a la empresa respectiva y también cooperar con ella en el restablecimiento del servicio.

En caso de que fuesen interrumpidos servicios públicos, el trabajo de reparación será continuo hasta que se restablezca el servicio. No se emprenderá ninguna obra alrededor de hidrantes contra incendios, hasta que hayan sido aprobadas por el Cuerpo de Bomberos las medidas tomadas para mantener la continuidad del servicio.

Los daños inevitables causados sin descuido por parte del Contratista a servicios públicos subterráneos que no figuren en los planos, deberán ser reparados, si lo ordena el Ingeniero, y el pago correspondiente será hecho de acuerdo con el Artículo-110.06 de estas CGC.

#### 2.1.5.20. Sección 108.24: Suministro del Derecho de Vía

El Contratante tendrá la responsabilidad de conseguir, con anticipación razonable al comienzo de la obra, el Derecho de Vía necesario para el emplazamiento de la obra, así como las servidumbres de paso, uso de terrenos, fuentes de agua, etc. requeridos para la ejecución de los trabajos, a menos que esté dispuesto de otra manera en las CEC.

#### 2.1.5.21. Sección 108.25: Responsabilidad Personal de los Funcionarios Públicos en Proyectos del Sector Público

Al requerir el cumplimiento de lo estipulado en estas CGC, o en el ejercicio del poder o autoridad delegada en ellos por el Contrato o dentro de sus alcances, no recaerá ninguna responsabilidad ni como personas ni como funcionarios oficiales del Contratante, sobre el Contratante o el Ingeniero, ni sobre sus representantes autorizados, siendo entendido que en tales asuntos actúan únicamente como agentes y representantes del Gobierno.

#### 2.1.5.22. Sección 108.27: Estadísticas sobre el Personal, el Equipo y las Transacciones – nóminas de pago

1.- El Contratista deberá mantener durante el curso del trabajo y conservar por cinco años más, registros de todo el personal que trabaja en el sitio de la obra. Tales registros deberán contener el nombre, dirección de cada empleado, su nacionalidad, su clasificación correcta y su salario, el detalle de las reservas para prestaciones sociales, así como de las prestaciones sociales hechas efectivas a cada uno.

Estos Registros de Personal deberán estar disponibles para su inspección por representantes autorizados del Contratante, a quienes será también permitido entrevistar a los trabajadores en horas hábiles de trabajo.

2.- A más tardar una semana después de cada pago, el Contratista enviará al Ingeniero una copia certificada de todas las Nóminas de Pago. El Contratista principal será responsable del envío de las copias certificadas de las Nóminas de Pago de todos los subcontratistas, si los hubiere. La certificación afirmará que las Nóminas son correctas y completas.

3.- El Contratista reportará diariamente al Ingeniero el número de horas trabajadas por cada una de sus unidades de equipo y las horas que dicho equipo no ha trabajado, indicando si el paro ha sido debido a reparación, mantenimiento u otras causas.

4.- El Contratista deberá establecer una contabilidad independiente y específica para el Proyecto, cuyos libros y registros serán llevados y mantenidos de conformidad con sanas prácticas de contabilidad generalmente aceptadas. Estos libros y registros deberán contener todas las transacciones hechas o relacionadas con el Contrato. El Contratante se reserva el derecho de auditarlos regularmente de conformidad con normas de auditoría establecidas y con la frecuencia que estime conveniente. Estos documentos serán mantenidos bajo resguardo por cinco años después del último desembolso efectuado.

#### 2.1.5.23. Sección 108.28: Pago de mano de obra

Las Nóminas de Pago del personal del Contratista y los subcontratistas estarán igualmente disponibles en cualquier momento para inspección del Contratante.

El salario de los obreros y empleados será pagado en moneda legal de la República de Nicaragua. La forma de pago de los salarios se regirá por lo estipulado en el Código del Trabajo.

Ni el Contratista ni ninguno de sus agentes o representantes cobrará o aceptará remuneración de ninguna persona como condición para conseguir empleo en el Proyecto.

El Contratista no deberá exigir a sus empleados el suministro o costo de las herramientas usadas en la ejecución de su trabajo, excepto por pérdidas o daños razonablemente evitables.

Ninguna persona podrá ser empleada para trabajar en las obras bajo este Contrato, si no es con base en un salario, pero esto no impedirá el alquiler de bestias de carga, camiones y otros equipos. Ningún convenio de alquiler de esta naturaleza o gastos por alimentación, combustible, suministros o reparaciones a cuenta del mismo, dará lugar a deducciones en los salarios acumulados de cualquier empleado, excepto en la forma autorizada por las regulaciones antes citadas.

#### 2.1.5.24. Sección 108.29: Alojamiento y Comida

El Contratista deberá suplir el alojamiento y facilidades donde pueda obtener alimentación todo personal del Proyecto que no sea de la localidad. A los trabajadores que



vivan en la localidad, el Contratista no estará obligado a suplirles estos servicios, pero sí a proveerles el transporte desde sus casas hasta el centro de trabajo y regreso.

Se consideran trabajadores de la localidad, a los que vivan dentro de un radio de 10 kilómetros de distancia del centro de operaciones del Contratista.

Cualquier empleado de los trabajos previstos en este Contrato podrá alojarse, alimentarse y comprar o negociar donde y con quien él elija. Ni el Contratista ni sus agentes ni sus empleados, podrán establecer, directa o indirectamente, como condición para trabajar, que el trabajador deba alojarse, alimentarse, comprar o negociar en un lugar o con una persona determinada.

Ni el Contratista ni sus agentes cobrarán a los empleados de su compañía por cualquier servicio de transporte que les suministraren.

El Contratista conviene en incluir estas condiciones en todos sus subcontratos.

#### 2.1.5.25. Sección 108.30: Reclamos a Favor de Terceras Personas

Queda específicamente convenido entre las partes contratantes, que no hay intención en ninguna parte del Contrato de constituir al público ni a ningún miembro de éste en tercera parte que se beneficie de sus disposiciones, como tampoco de autorizar a nadie que no sea una de las partes signatarias del Contrato, a presentar y enderezar una reclamación por lesiones personales o por daños en propiedad ajena, de acuerdo con las condiciones o estipulaciones en él contenidas.

#### 2.1.5.26. Sección 108.31: Protección Ambiental

El Contratista deberá cumplir con todas las leyes, decretos, reglamentos, sentencias judiciales y regulaciones locales relativas a la protección del Medio Ambiente y los Recursos Naturales en vigencia, en particular, con la Ley General del Medio Ambiente y los Recursos Naturales y su Reglamento, así como las normas y guías ambientales que sobre el particular promulguen o autoricen el MARENA, el MTI o ambos. El Permiso Ambiental que obtenga el Contratante indicará aspectos generales y específicos sobre los cuales deberá el Contratista tomar medidas preventivas o de mitigación.

El Contratante indicará en los planos, en las CEC o en ambos, las medidas de protección ambiental particularmente aplicables al Proyecto, de acuerdo con la clase de

camino, calle o puente, características naturales, alcance del trabajo, longitud de Proyecto y costo de las obras.

Las NABCV, emitidas por el MTI, proveen información suficiente para cubrir la gama de medidas de prevención y protección del Medio Ambiente en los Proyectos Viales construidos con base en las Especificaciones Generales NIC-2000, como de mitigación de los efectos negativos que las construcciones viales puedan tener sobre el entorno natural. Estos documentos forman parte de los DLC. (Artículo-103.03, Sección VI, 3)

A su vez, estas CGC contienen estipulaciones generales y especiales sobre la Protección Ambiental que el Contratista estará obligado a cumplir durante el desarrollo de sus operaciones constructivas, parte de las cuales ya han sido señaladas en algunos artículos anteriores de esta Sección.

En las Divisiones II y III de las Especificaciones Técnicas, aparecen, además de los detalles para la construcción de las obras viales, **las medidas de protección ambiental y las obras** que serían construidas si aparecen en el Pliego de Licitación, en los planos o son ordenadas por el Ingeniero.

Las medidas fundamentales son las siguientes:

#### 1.- Control de la Contaminación del Aire.-

1.1) Mantenimiento de los motores de la maquinaria de construcción en condiciones mecánicas tales, que se disminuyan al mínimo las emisiones de monóxido de carbono e hidrocarburos. Estas emisiones deberán ser controladas, además, vigilando el estado mecánico y de las prácticas de manejo del equipo motorizado, evitando aceleraciones frecuentes o innecesarias y estableciendo una velocidad promedio óptima para la conducción del mismo;

1.2) Eliminar, en todo lo posible, la práctica de quemar los residuos vegetales provenientes del Abra y Destronque del Derecho de Vía, de los bancos de préstamo, de las áreas para campamentos, etc., a menos que las condiciones en el Sitio de la Obra lo permitan, a criterio del MTI o MARENA.

1.4) Evitar, en todo lo posible, la formación de polvo en las operaciones de excavación y terraplenado por medio de riegos de agua en el material aflojado mediante el uso de paliativos contra el polvo;



1.5) Estabilizar los caminos de acarreo por medio de riego de agua o de paliativos contra el polvo;

1.6) Cumplir con las leyes y reglamentos aplicables al uso y manejo de solventes, incluyendo la fracción solvente de las pinturas, diluyentes, compuestos de curado de concreto y asfaltos rebajados usados en las obras.

Estas disposiciones serán de aplicación más estricta cuando la obra en construcción sea urbana o esté muy cercana a núcleos de población.

## 2.- Contaminación del Agua.-

El Contratista pondrá en práctica todas las precauciones necesarias para proteger las corrientes de agua, lagos, lagunas, estanques, humedales, bahías y aguas costeras, de la contaminación con combustibles, aceites, productos bituminosos, cloruro de calcio y otros materiales dañinos, y conducirá y programará sus operaciones de manera tal que se reduzcan al mínimo la sedimentación de tales masas acuáticas. Asimismo, tendrá sumo cuidado en la preservación de toda la vegetación existente en las zonas aledañas a la vía más allá de los límites de la construcción.

La intención del trabajo de control de la contaminación del agua es la de prevenir, controlar o atenuar la contaminación del agua de las corrientes, vías acuáticas y otras masas de agua, y consistirá en la construcción de aquellas obras necesarias que con tal objeto aparezcan en los planos o sean mencionadas en estas CGC o en las CEC o que sean ordenadas por el Ingeniero.

A fin de procurar un control efectivo y continuo de la contaminación del agua, puede ser necesario que el Contratista ejecute la obra bajo Contrato en unidades pequeñas o en unidades múltiples construidas en forma desfasada y con modificaciones en los procedimientos constructivos. El Contratista proveerá medidas provisionales de control de la contaminación, entre ellas, diques, estanques, zanjas, aplicación de paja y semilla de gramíneas, etc., las cuales se hacen necesarias como resultado de sus operaciones. El Contratista coordinará las obras de control de la contaminación del agua con cualquier otro trabajo que esté siendo realizado en el Proyecto.

Antes de iniciar los trabajos en el Proyecto, el Contratista someterá a la aprobación del Ingeniero, un programa para el control efectivo de la contaminación del agua. Este programa deberá mostrar el cronograma de la puesta en marcha de los trabajos de control de la erosión

que aparezcan incluidos en el Contrato y de todas las medidas de control de la contaminación del agua que el Contratista propone tomar en relación con la construcción del Proyecto. Su propósito es minimizar los efectos de sus operaciones en las cercanías de corrientes y otras masas de agua. El Contratista no podrá iniciar operaciones de abra y destronque ni de movimiento de tierras, mientras tal programa no haya sido aprobado. Asimismo, el Contratista deberá poner al día el mencionado programa en cualquier oportunidad que el Ingeniero lo solicite por escrito.

El Ingeniero notificará al Contratista la aceptación o rechazo del programa de control de contaminación del agua, en no más de cinco (5) días después de sometido. En caso de rechazo el Contratista no será responsable por el rechazo de todo o parte de un programa, pero deberá hacerle los ajustes para obtener su aprobación.

El Contratista podrá solicitar al Ingeniero obviar el requerimiento de someter por escrito un programa de control de la contaminación del agua, cuando la naturaleza de las operaciones sea tal que dicha contaminación sea muy improbable; sin embargo, la dispensa de este requisito no relevará al Contratista de la responsabilidad sobre el cumplimiento con los demás requisitos de esta sección. Igualmente esta dispensa no obstará para que, en toda oportunidad durante la ejecución de las obras bajo contrato, el Ingeniero pueda exigir la presentación de un programa de esa naturaleza, si lo considera necesario en vista de las operaciones que esté realizando el Contratista.

A menos que las CEC lo dispusieran de otra manera o lo ordenara por escrito el Ingeniero, el Contratista no deberá eliminar la corteza vegetal de un área de material férreo erosionable que exceda de diez (10) hectáreas por cada frente de trabajo, que pueda provocar la contaminación de aguas vecinas, si antes no ha tomado todas las medidas provisionales o permanentes de control de la erosión.

Donde los materiales erosionados puedan contaminar el agua, las operaciones del Contratista deberán ser programadas de tal manera que las obras permanentes para control de la erosión sean instaladas simultáneamente con el movimiento de tierras o inmediatamente después de concluido éste.

Los bancos de préstamo serán explotados de tal manera que los materiales que resulten erosionados no lleguen a contaminar las aguas. El yacimiento deberá ser conformado y acabado, en todo lo posible, de manera que el agua no se colecte o estanque en ellos, a menos que el Propietario del área solicite el aprovechamiento de las depresiones para la





construcción de lagunas para la cría de peces o que, de conformidad con normas del Contratante, éstas puedan servir para actividades de esparcimiento. La corteza vegetal deberá ser removida y almacenada fuera de los límites de los bancos para ser utilizada después en la restauración de los sitios de donde fue extraída. Después de que un banco de préstamo deje de ser explotado, todo material sobrante temporalmente almacenado fuera de él, deberá ser devuelto a su lugar de origen, donde será conformado de acuerdo a la topografía del sitio, con taludes suaves y seguros para las personas y los animales y propicios para el crecimiento de la vegetación.

En general, el Contratista atenderá a las siguientes disposiciones:

2.1) Donde las áreas de trabajo estén cruzadas por corrientes de agua o estén cercanas a ellas, se deberán construir y mantener, entre las áreas de trabajo y las corrientes, barreras o diques adecuados para impedir que el lodo llegue a contaminar las corrientes. Durante la construcción de dichas barreras o diques se deberá reducir al mínimo el enlodamiento de las aguas;

2.2) La remoción de material del fondo de corrientes de agua, cuando sea permitida, no deberá ser iniciada hasta que se hayan provisto los medios adecuados, tales como canales de desviación, para conducir la corriente libre de lodo o limo alrededor de las operaciones de remoción;

2.3) El transporte de materiales a través de corrientes de agua, deberá ser realizado sin enlodar las aguas. No se deberá operar equipo mecanizado en los cauces de corrientes de agua, excepto en los casos en que sea necesario para construir cruces o barreras y rellenos en los cambios de canal. El número de cruces de corrientes de agua por equipo de construcción deberá ser reducido al mínimo;

2.4) El agua de lavado de agregados que contengan lodo o limo, deberá ser tratada por filtración o retención en vasos de sedimentación, o en estanques adecuados, para impedir que el agua lodosa contamine las corrientes;

2.5) A las sustancias aceitosas o grasosas que se originen en las operaciones del Contratista, no se les permitirá que entren o sean depositadas en lugares de donde, más tarde, puedan descargar en corrientes de agua o infiltrarse en el suelo para contaminar las aguas subterráneas;

2.6) No se permitirá que el cemento Portland o concreto fresco de cemento Portland entre en las corrientes de agua. Este requerimiento exigirá controles estrictos en las operaciones de construcción de puentes, cajas y alcantarillas;

2.7) Una vez que las operaciones de construcción hayan terminado, toda corriente de agua que hubiese sido desviada, deberá ser devuelta a su cauce original, respetando, en todo lo posible, sus meandros y pendientes, a fin de no provocar posibles problemas futuros de erosión de riberas o cambios en los patrones naturales de drenaje.

2.8) El material sobrante derivado de la construcción de las obras viales, no deberá ser depositado en los cauces de corrientes de agua de donde podría ser arrastrado por las aguas durante las crecidas o por el flujo natural del río.

2.9) Donde exista la posibilidad de migración de peces anádromos en corrientes afectadas por la construcción de las obras bajo contrato, el Contratista deberá conducir sus operaciones de tal manera que haya pasada para dichos peces migratorios;

2.10) Antes de toda suspensión de las operaciones de construcción durante un período apreciable de tiempo, el Contratista deberá conformar la parte superior de las obras de terracería y darles cierto grado de compactación, y pendiente tal que permita el escurrimiento del agua de lluvia con un mínimo de erosión;

2.11) Mientras no estén construidas y en operación las estructuras de drenaje permanente ni las de control de la erosión, el Contratista deberá proveer y mantener o tomará las medidas preventivas provisionales que sean necesarias para controlar la erosión y la sedimentación, tales como bermas, diques, pretilos, zanjas de intercepción, etc.;

2.12) Las instalaciones sanitarias que el Contratista construya en campamentos y áreas de trabajo, además de llenar todos los requisitos en cuanto al diseño, quedarán ubicadas en lugares tales que no se produzca contaminación de pozos, corrientes, aguas subterráneas u otras masas de agua;

2.13) El Contratista deberá cumplir con todas las leyes, reglamentos y disposiciones del MTI, MINSA, MAG-FOR, del MARENA y de cualquier otra dependencia gubernamental que tenga autoridad para controlar el uso de pesticidas. Se considerarán incluidos dentro de este término, a todos los herbicidas, insecticidas, fungicidas, rodenticidas, germicidas, nematocidas, bactericidas, inhibidores, fumigantes, defoliantes, desecantes, esterilizadores de suelo y repelentes. En general, toda sustancia o mezcla de sustancias destinada a prevenir, repeler,



controlar o destruir hierbas malas, insectos, enfermedades, roedores o nematodos y cualquier sustancia o mezcla de sustancias destinadas a ser usadas como reguladores, defoliadores o desecadores de plantas, serán consideradas como pesticidas.

### 3.- Control del Ruido.-

El Contratista deberá establecer una reglamentación y control de todas las operaciones de su equipo moto propulsado, motores estacionarios, plantas eléctricas, trituradoras, plantas de concreto o de mezcla asfáltica, hincadura de pilotes, voladuras de roca con explosivos, perforación de roca, rotura mecánica de pavimentos y, en general, de toda operación que produzca ruido extraordinario que represente una molestia y una amenaza para la tranquilidad y salud de los trabajadores y de los residentes en áreas cercanas. Este requerimiento adquiere gran importancia en trabajos urbanos o semiurbanos o en zonas con núcleos poblacionales de alguna consideración. Las medidas a tomar varían, según las circunstancias. Entre ellas están la introducción de cambios en la secuencia de operaciones para evitar la simultaneidad, supresión de trabajo nocturno, uso de equipo especial, aplicación de técnicas especiales a las voladuras de roca con explosivos, uso intensivo de mano de obra, etc.

**4.- Revisión Ambiental de Áreas para Bancos de Préstamo y Botaderos de Desechos Propuestos por el Contratista.-** Las áreas propuestas por el Contratista para bancos de préstamo, botaderos de residuos y áreas de usos varios, antes de poder ser usadas, deberán ser aprobadas por el Ingeniero previa revisión ambiental de las mismas. (Las áreas de usos varios incluyen caminos de acceso, desvíos, retornos, sitios para plantas de trituración o para fabricar concreto de cemento o concreto asfáltico, áreas de acopio, polvorines, patios de estacionamiento de equipo, gasolineras, etc.).

El Ingeniero iniciará los levantamientos de reconocimiento de recursos culturales y biológicos del sitio, sin costo para el Contratista. Si el área propuesta está dentro de 45 metros del Derecho de Vía del Proyecto, el Contratista agregará a su solicitud escrita, un mapa topográfico.

**d) Áreas de Bosque, Praderas y Sabanas.-** Si los resultados del levantamiento de reconocimiento de recursos biológicos indicaran que las áreas de bosque, praderas o sabanas podrían ser negativamente afectadas por el área para banco de préstamo, área de usos varios o de desechos propuesta, el Ingeniero recomendará al Contratista minimizar el daño a tales áreas mediante la selección de sitios alternativos, cuando esto sea práctico, o mediante

la reforestación de reemplazo de árboles o de vegetación de pradera, según sea aprobado. Tal reforestación o revegetación para áreas de bancos de préstamo, área de usos varios o de desecho, podrán ser recomendadas previa aprobación del Propietario del terreno o dentro del Derecho de Vía de la carretera.

**5.- Tratamiento General de los Bancos de Préstamo, Áreas de Usos Varios de Desecho.-** (Ver Artículo-108.17, Sección-201, Sección-915 y Sección-916).

5.1) Los bancos de préstamo, las áreas de usos varios o de desecho deberían ser escogidos al inicio de la construcción, si no están mostrados en los planos o descritos en las CEC. Su localización debería ser preferiblemente, en lugares que no sean visibles desde el camino ya terminado. Su explotación debería ser hecha de tal manera que la excavación se integre armoniosamente al paisaje circundante. Las áreas que hayan sufrido remoción de material deberán ser reconformadas y sembradas con vegetación autóctona para asegurar buen control de la erosión y mejorar condiciones indeseables o antiestéticas. También, se deberá proveer espacio adecuado para permitir la conservación de cualquier pantalla vegetal o permitir su siembra.

5.2) Localización en tal forma que el área no quede por debajo del nivel de la vista de los conductores ni en lugares expuestos de manera que se dificulte la siembra de pantallas vegetales.

5.3) Los troncos, raíces y materiales de mal aspecto deberán quedar cubiertos cuando estén en áreas expuestas a ser vistas desde el camino.

5.4) Los bancos de préstamo, áreas de usos varios o de desecho que queden expuestos, deberán ser conformados y fertilizados para que crezca vegetación.

5.5) Los caminos de acceso o de acarreo no deberán quedar localizados a un ángulo que los haga visibles al tráfico sino que, por el contrario, en ángulo recto con la dirección del tráfico o a un ángulo de visibilidad en dirección opuesta a la del tráfico.

5.6) No se debe colocar tierra indiscriminadamente alrededor de los árboles ya que puede dañarseles o secarlos durante la vida del contrato o después de la aceptación del trabajo por parte del Contratante.

5.7) El material sobrante debe ser colocado en las área de desecho ("botaderos") aprobadas por el Ingeniero en forma que no interfiera con el drenaje superficial, lo cual puede



causar inundaciones y éstas pueden provocar la muerte de árboles existentes que se está queriendo conservar.

5.8) A todos los bancos de préstamo, áreas de usos varios o de desecho, se les construirán drenajes adecuados para que durante su explotación y al concluirla, se evite la formación de charcos de agua estancada que malogren el crecimiento de las plantas.

5.9) El material sobrante de las excavaciones será utilizado al máximo en el suavizado de los taludes de terraplenes o en el ensanchamiento de hombros.

5.10) Cuando se trate de bancos de préstamo nuevos, los suelos orgánicos existentes en la corteza deberán ser conservados acopiándolos apropiadamente para recubrir con ellos el banco y recuperar la vegetación autóctona.

5.11) Cuando su uso sea aprobado, se podrá extraer material de cauces de ríos y quebradas, manteniendo la pendiente natural del cauce y asegurando sus bordes contra el deslizamiento. No se permitirá la extracción de materiales con las máquinas dentro del curso de agua de los ríos, ni la extracción de materiales a distancias menores de 200 metros del centro de la vía al punto de extracción. Se requerirá que el Contratista obtenga de parte del MARENA, el Permiso Especial de extracción de bancos de materiales localizados en el fondo del cauce o riberas de ríos y quebradas.

5.12) En terrenos planos sujetos a estancamiento de aguas y de drenaje muy lento, el Contratista no podrá extraer materiales de préstamo.

5.13) El Contratista deberá botar o acumular los materiales sobrantes o inadecuados únicamente en los sitios aprobados por el Ingeniero, cuidando de no alterar el drenaje superficial o afectar de alguna manera los cultivos en los terrenos aledaños o el paisaje del lugar.

**6.- Control de la Erosión.-** Además de las medidas de Control de la Erosión que han sido señaladas a propósito de los controles de contaminación del agua y del tratamiento recomendado para Áreas de Bancos de Préstamo, Áreas de Usos Varios o de Desecho, y de otras medidas antes mencionadas en este Artículo, el Contratista tomará medidas específicas para evitar la erosión en todas las demás obras contratadas, incluyendo abra y destronque, movimiento de tierras, excavaciones varias, acarreo de materiales, obras de drenaje, puentes y capas superiores de la vía, aunque no aparezcan indicadas en los planos o especificaciones

ni sean ordenadas por el Ingeniero, así como las que se muestren en dichos documentos u ordene el Ingeniero.

Entre tales medidas están las siguientes, sin carácter limitativo:

6.1) Medidas temporales o transitorias y medidas permanentes. Entre las primeras están el uso de barreras, estanques de sedimentación, diques de tierra, cortinas de precipitación o sedimentación de limo hechas con geosintéticos, desvíos de corrientes superficiales, etc.; entre las segundas están las aplicables al material erosionable expuesto a cualquier actividad asociada a las obras e incluidas en el Pliego de Licitación.

Las medidas temporales de control de la erosión deberán ser coordinadas con las medidas permanentes para asegurar un control de erosión económico, efectivo y continuo.

6.2) El Contratista preparará y someterá un plan de implementación del control de la erosión para el Proyecto, incluyendo los bancos de préstamo, las áreas de usos varios y las de desecho.

6.3) El uso de las áreas de tierra erosionable será objeto de la aprobación del Ingeniero y estarán expuestas el menor tiempo posible a la acción de los elementos después de ser aflojadas por las operaciones de destronque, excavación, préstamo o relleno, antes de la conformación, acabado y siembra finales o la aplicación de medidas temporales para control de la erosión.

Las operaciones de destronque y terracedo deberán ser realizadas en secuencia apropiada con otro trabajo a fin de minimizar la erosión. Las zanjas y diques de intercepción deberán ser construidos tan pronto como sea práctico después de que las operaciones de abra y destronque hayan sido completadas y antes o durante la excavación de los cortes. Cuando sea previsible que la erosión vaya a constituir un problema, se deberá seguir con las medidas permanentes de control de la erosión inmediatamente después de las operaciones de terracedo, si lo permiten las condiciones, a menos que el Ingeniero autorice medidas temporales de control de la erosión.

6.4) Cuando haya que revegetar las áreas afectadas por obras de rehabilitación de la vía, se hará, de ser posible, al inicio de las primeras lluvias, para evitar al máximo la erosión.

6.5) El Contratista evitará la eliminación innecesaria de la vegetación en las áreas del Derecho de Vía situadas fuera del prisma de la vía. El Contratista deberá recuperar, en todo caso, la cobertura edáfica superficial. Cuando se disponga de suelos orgánicos en cantidad



suficiente y lo ordene el Ingeniero, el Contratista aplicará una capa sobre las zonas del Derecho de Vía no protegidas o se usará en el tratamiento de los taludes de corte o de terraplén.

6.6) El Contratista evitará compactar los suelos fuera del prisma de la carretera en aquellas zonas donde se pueda favorecer el resurgimiento de las diferentes especies vegetales.

**7.- Compensación.-** El cumplimiento con los requerimientos de protección ambiental no relevará en forma alguna al Contratista de su responsabilidad de cumplir con todas las otras disposiciones del Contrato, en particular, con las relativas a su responsabilidad por daños y preservación de la propiedad.

Todo trabajo requerido para proteger el ambiente, ejecutado de acuerdo con el programa aceptado, que no esté de otra manera requerido en el

Contrato (Pliego de Licitación) y que sea ordenado por el Ingeniero, será pagado al Contratista en la forma siguiente:

7.1) Aquellas obras de protección y control que puedan ser construidas bajo los varios conceptos de pago existentes en el Contrato, serán medidas y pagadas de conformidad con los precios contractuales correspondientes.

7.2) Aquellas obras de protección y control no cubiertas por conceptos de pago, serán pagadas como **Trabajo Extra** de acuerdo con el Artículo-105.03 de estas CGC.

Fuera de lo dispuesto en los incisos (7.1) y (7.2) que anteceden, la compensación total al Contratista por satisfacer todos los requerimientos de este Artículo, será considerada como incluida en los precios pagados por los varios conceptos de obra bajo contrato y no habrá compensación adicional alguna.

#### 2.1.6. SECCIÓN 109: EJECUCIÓN Y AVANCE DEL TRABAJO

##### 2.1.6.1. Sección 109.01: Subcontratos

El Contratista dedicará su atención personal al cumplimiento del Contrato y mantendrá todas las actividades bajo su control.

Ningún subcontratista será reconocido como tal, y todas las personas que estén a cargo de algún trabajo de construcción serán consideradas como empleadas del Contratista

y éste será tenido como responsable por el trabajo que ellos realicen, el cual estará sujeto a las estipulaciones del Contrato y las especificaciones.

El Contratista deberá ejecutar con su propia organización obras contractuales por un valor no menor del 50 por ciento del Valor Original del Contrato.

Cuando es subcontratado un concepto total de obra, por ejemplo, puentes, el valor total del trabajo subcontratado será computado usando los precios unitarios contractuales involucrados. Cuando el trabajo subcontratado solo es una parte de cierto grupo de conceptos de obra, el avalúo del trabajo subcontratado será basado en un porcentaje estimado del valor de licitación, computado con la información suministrada por el Contratista, sujeto a la aprobación del Ingeniero.

Si existen dentro de los trabajos contratados algunos que involucren el trabajo de especialistas y que no puedan ser ejecutados por personal del Contratista, el valor de tales trabajos, que serán conocidos como "Trabajos de Especialidades", podrá ser deducido del Valor Total Original del Contrato, antes de calcular el monto mínimo de obras que le será requerido al Contratista construir su propia organización.

Todo contrato, a ser firmado entre el Contratista y un subcontratista, deberá contar con la previa aprobación de la UCP del Contratante; para ello, el Contratista, si no lo ha hecho dentro del contenido de su oferta, presentará pruebas manifiestas de la capacidad de ejecución del subcontratista, incluyendo constancias de entrega satisfactoria de trabajos similares a los subcontratados. Sin embargo, la aprobación de la UCP del Contratante, no relevará al Contratista de su responsabilidad sobre el total de la obra y las garantías exigidas.

Ningún subcontrato, aprobación de subcontrato ni cualquier otra acción relacionada con subcontratos, creará relación contractual alguna entre los subcontratistas y el Contratante. El Contratista, en todo caso, tendrá plena responsabilidad y todas las obligaciones por las acciones u omisiones de sus subcontratistas. El Contratante considerará como un hecho que el Contratista y sus subcontratistas comparten el conocimiento directo, atribuido o presunto, que otros pudiesen tener de todo lo relacionado con el Contrato.

##### 2.1.6.2. Sección 109.02: Orden de inicio

La orden de iniciar los trabajos será emitida por el Ingeniero previa entrega del Anticipo, y del sitio de las obras sin restricciones. En dicha orden será indicada la fecha en que se espera que el Contratista inicie los trabajos. A partir de esa fecha se comenzará a contar el

tiempo contractual. El Contratista a su opinión podrá iniciar los trabajos previa autorización del Contratante, sin que cuente el plazo contractual.

Si el Contratista iniciara cualquier trabajo del Proyecto antes de la emisión de la Orden de Inicio, tales como movilización de equipo y trabajadores o suministro de materiales, el tiempo contractual comenzará igualmente a ser contado a partir de la fecha estipulada en la Orden de Inicio.

#### 2.1.6.3. Sección 109.03: Reunión de Preconstrucción

Después de firmado el Contrato y antes de emitir la Orden de Inicio, el Ingeniero citará por escrito al Contratista a la Reunión de Preconstrucción, con indicación del lugar, fecha y hora y a la cual asistirán, además, representantes del Contratante.

El propósito de dicha reunión es el de discutir los planos y especificaciones del Proyecto, condiciones muy especiales existentes en el campo, el programa y plan de ejecución propuestos por el Contratista, tipo, cantidad y ubicación del equipo propuesto, relación de documentos contractuales, fuentes y requerimientos de personal, programa de mantenimiento del tráfico, seguridad del público y los trabajadores, canales de comunicación y cualquier otro tópico que el Contratante o el Contratista considere conveniente discutir para un mejor entendimiento entre ambas partes. Los acuerdos a que se llegue en la Reunión de Preconstrucción se asentarán en un documento escrito y se le dará el carácter de Addendum, el cual de esta manera pasará a formar parte del Contrato.

**Programa de Trabajo.**- Durante la Reunión de Preconstrucción, el Contratista presentará al Ingeniero un Programa de Trabajo, incluidas las obras de Protección Ambiental, que muestre la Ruta Crítica de la programación y los detalles de la ejecución de las diferentes actividades, tales como el equipo y otros recursos disponibles, incluyendo personal e imprevistos necesarios para la realización de los trabajos, y el número estimado de días de atraso por mal tiempo. El equipo que incluya como parte de los recursos para la ejecución del Proyecto, deberá ser fácilmente identificable, indicando modelo, número de equipo y número de motor así como ubicación actual.

Dentro de los treinta (30) días de iniciados los trabajos, el Contratista deberá presentar un Programa de Trabajo Actualizado en que ya estén incorporados los ajustes previsibles. Este programa será usado como base para controlar el avance y desarrollo de la obra.

Si en el curso de la ejecución de las obras el Contratista se retrasara considerablemente en el cumplimiento del programa presentado, deberá entonces:

a) Presentar un programa revisado para la terminación de la obra dentro del plazo del Contrato, y

b) Modificar sus sistemas de trabajo para proporcionar adicionalmente los materiales, equipo y mano de obra que resulten indispensables para cumplir con los plazos señalados en el nuevo programa.

#### 2.1.6.4. Sección 109.04: Limitación de las Operaciones

El Contratista deberá conducir las operaciones constructivas de tal manera y con tal secuencia que en todo momento la interferencia con el tráfico sea mínima. Deberá dar la debida consideración a la localización de los desvíos y a las disposiciones sobre la dirección del tráfico. No deberá comenzar trabajos en perjuicio o detrimento de trabajos ya comenzados con anterioridad. El Ingeniero podrá exigir al Contratista que complete una sección de la obra en construcción, antes de iniciar los trabajos en cualquier otra sección, si la apertura de la que está en construcción fuese conveniente para el público.

Si los trabajos de construcción fuesen suspendidos por algún motivo, el Contratista deberá notificar al Ingeniero, cuando menos con 24 horas de anticipación, la reanudación de sus operaciones.

#### 2.1.6.5. Sección 109.05: Condiciones del Personal.- Métodos y Equipo

El Contratista deberá en todo momento disponer de supervisión propia, trabajadores capaces y de equipo adecuado para llevar las varias clases de trabajos a su completa terminación de la manera y dentro del plazo requeridos por estas CGC.

**1.- Condiciones del Personal.**- Todo trabajo amparado por el Contrato, deberá ser ejecutado con destreza y de acuerdo con la práctica normalmente aceptada dentro de cada uno de los oficios involucrados en la obra; por tanto, todos los trabajadores deberán tener suficiente habilidad y experiencia para realizar adecuadamente las tareas para las que estén asignados.

Toda persona empleada por el Contratista, o por cualquiera, de sus subcontratistas, que, a juicio del Ingeniero, no efectúe su trabajo de una manera apropiada y hábil, o que no se comporte debidamente durante las horas de trabajo, deberá ser expulsada del Proyecto, si



lo ordena por escrito el Ingeniero. Tal persona no podrá ser empleada de nuevo en el mismo Proyecto, a menos que el Ingeniero lo autorice por escrito. Si el Contratista no acata la orden de expulsión o no emplea personal adecuado para una satisfactoria ejecución de los trabajos, el Ingeniero podrá suspender las operaciones por medio de notificación escrita (Directiva), hasta que se dé cumplimiento a su orden. El Contratista no tendrá derecho a extensión alguna en el Plazo del Contrato por causa de esta suspensión ni a reclamar ajustes por costos adicionales que resultaren de la misma. No se permitirá la contratación de Personal Clave de Dirección de la obra, mientras esté laborando en otro tramo del mismo Proyecto, y ese otro tramo esté a cargo de otro contratista.

**2.- Condiciones del Equipo y Métodos de Construcción.-** Todo el equipo usado en el trabajo deberá tener suficiente capacidad y estar en buenas condiciones mecánicas para satisfacer los requerimientos del trabajo y producir una obra acabada de calidad ordenada.

Cuando los métodos y equipos a ser usados en la construcción no estén prescritos en el Contrato, se le permitirá al Contratista usar cualesquier métodos y equipos que permitan realizar la obra de acuerdo con los planos y las especificaciones.

Cuando los planos o las especificaciones estipulan el uso de ciertos métodos y equipos, el Contratista deberá usarlos de conformidad, a menos que el Ingeniero autorice el uso de otros. Si el Contratista deseara usar métodos o tipos de equipo diferentes a los especificados, deberá solicitar la autorización al Ingeniero. La solicitud deberá ser hecha por escrito con una descripción detallada de los métodos y equipos propuestos y las razones para el cambio. Si el cambio es autorizado, será bajo la condición de que el Contratista será plenamente responsable de producir resultados que estén de acuerdo con todos los requerimientos. Si después de probar el uso de métodos o equipos alternativos, el Ingeniero determina que la obra producida no llena los requerimientos, el Contratista discontinuará el uso de los métodos y equipos alternativos y completará el trabajo restante haciendo uso de los métodos y equipos especificados. El Contratista deberá remover y reemplazar cualquier trabajo deficiente o tomar las medidas correctivas que ordene el Ingeniero. No habrá cambio en la base de pago para los varios conceptos de trabajo ni extensiones en el Plazo del Contrato, como resultado de la autorización dada por el Ingeniero para emplear métodos o equipos alternativos.

Independientemente del recurso prescrito en el Artículo 109.08 de estas CGC, si el Contratista no suministrara como mínimo el equipo ofertado, en cantidad suficiente y en condiciones de operación que garanticen la ejecución satisfactoria de la obra dentro del

plazo estipulado en el Contrato, el Ingeniero podrá retener el pago del Estimado Mensual o suspender el trabajo, sin extender el Plazo del Contrato, hasta que tal equipo sea provisto.

Una vez que el Contratista haya provisto el equipo requerido, no podrá ser retirado del Proyecto sin la autorización escrita del Ingeniero.

Si por razones del origen de los fondos de financiamiento del Proyecto, las CEC estipularan que la adquisición de equipo deba llenar los requerimientos de la Fuente de Financiamiento, no será permitido el uso de equipo o accesorios que no hayan cumplido con tales exigencias. Este requerimiento deberá estar indicado en las CEC.

#### **2.1.6.6. Sección 109.07: Determinación y Extensión del Plazo Contractual**

El número de días acordados para la construcción de la obra será el indicado en la Oferta y el Contrato. Este plazo incluirá un cierto número de días, indicado en la Convocatoria o en las CEC, previsto para suspensiones del trabajo por causa de mal tiempo.

Durante la ejecución del Contrato, el Ingeniero podrá conceder ampliaciones del plazo por concepto de:

**1.- Ampliaciones por Concepto de Aumento de Cantidades.-** El plazo de entrega indicado en el Contrato, tienen su fundamento en las cantidades originales que se definieron en el Artículo-103.07. Si el cumplimiento satisfactorio del Contrato requiriese efectuar trabajos en mayores cantidades que las que se indicaron en la oferta, el Plazo del Contrato concedido originalmente podrá ser modificado en proporción a la cantidad del trabajo adicional, la dificultad de su ejecución y las disminuciones que puedan haber ocurrido en otros conceptos de trabajo.

En caso de que el Contratista encontrase imposible, por motivos fuera de su control, completar la obra dentro del plazo especificado en el Contrato o modificado de acuerdo con las disposiciones de este artículo, podrá en cualquier momento y por lo menos 30 días antes del vencimiento del plazo vigente del Contrato, presentar al Ingeniero un escrito solicitando la extensión del plazo, dando a conocer las razones y aportando las pruebas que, a su criterio, justifican la extensión solicitada. No será válido como justificación el argumento de que el plazo contractual era muy corto, ni será tomada en cuenta la solicitud que no cumpla con el tiempo mínimo definido para su presentación, o sea 30 días antes del vencimiento del plazo vigente.



Si el Ingeniero encontrase que la demora en el trabajo fue debida a condiciones fuera del control del Contratista, podrá ampliar el plazo hasta donde las circunstancias lo justifiquen. En este caso, la extensión del plazo deberá quedar por completo en vigor y efecto como si fuese el plazo original.

Solo serán consideradas en las extensiones del plazo aquellas demoras o modificaciones que afectan a las actividades críticas del Programa de Trabajo o que causen que ciertas actividades no críticas pasen a serlo. No se concederán extensiones de tiempo por demoras o modificaciones que hagan uso de las holguras disponibles en el tiempo de ejecución según aparezcan en la Lista de Actividades del Programa de Trabajo requerido como parte del Contrato.

Para solicitar una extensión en el Plazo de Ejecución, el Contratista citará los artículos y cláusulas aplicables del Contrato. La solicitud será por escrito y deberá incluir, por lo menos, lo siguiente:

a) Artículos y cláusulas del Contrato con base en las cuales se hace la solicitud.

b) Descripción narrativa detallada de las razones para reclamar el ajuste en el Plazo Contractual, incluyendo las siguientes:

- 1) Causa del atraso en el Plazo de Ejecución.
- 2) Fecha en que se inició el atraso.
- 3) Duración del atraso.
- 4) Actividades afectadas.
- 5) Métodos a ser empleados para compensar el atraso.

c) Sugerir una nueva fecha para completar la obra o indicar el número de días adicionales, soportados por los programas de construcciones originales y revisadas.

Toda extensión en el Plazo del Contrato será formalizada por medio de una Orden de Cambio en la cual se expondrán las razones que haya argumentado el Contratista y que el Ingeniero haya comprobado. Dicha Orden será firmada por el Contratista, el Ingeniero y el Director de la Unidad Ejecutora (o Coordinadora) del Proyecto, según corresponda.

Cuando la obra quede totalmente terminada y aceptada, cesará el cómputo diario del tiempo.

**2.- Extensiones por Concepto de Lluvia.-** El Contratista no tendrá derecho a reclamar aumento del Plazo Contractual a causa de suspensiones ordenadas u obligadas por concepto de lluvia, si el número de días de atraso está dentro del margen previsto para esa causa de demora. El Ingeniero podrá extender el plazo si comprueba, por medio de registros de precipitación y la Bitácora del Proyecto, que el tiempo lluvioso excedió al estimado en las CEC. Para los fines de una extensión de esta naturaleza, se considerará como día de lluvia aquél en que, por razones de la precipitación pluvial o de humedad de los materiales, haya necesidad de suspender el trabajo, por lo menos, del 60% del personal y equipo del Contratista, por más de cinco (5) horas normales de trabajo.

Durante el tiempo de suspensión en exceso sobre el estimado en las CEC, el Contratante reconocerá al Contratista los Costos de Posesión de la renta horaria del equipo de construcción ocioso por causa de la lluvia, de acuerdo con las rentas detalladas en la Oferta del Contratista, más la mano de obra y viáticos de los operadores del equipo inmovilizado.

#### **2.1.6.7. Sección 109.07: Incumplimiento en la Terminación de la Obra Dentro del Plazo Contractual.- Indemnización por Demoras**

En cumplimiento de las CGC, el Contratista indemnizará al Contratante los costos de daños y perjuicios por cada día de demora con relación al plazo actualizado de las obras, que se computará hasta la recepción sustancial de la obra. El monto total por daños será liquidado de conformidad con las sumas diarias indicadas en el cuadro 109-01, una suma igual y calculada de la misma manera entregara el Contratante al Contratista por cada día de entrega anticipada. Para efectos de la medición de la multa o premio se tomaran en cuenta en los atrasos que el contratante o sus agentes provoquen al contratista los que no contarán en el plazo:



**CUADRO 109-1**  
**Monto de la Indemnización por Daños y Perjuicios que Pagará el Contratista por Cada Día de Demora en la Terminación del Proyecto.**  
**O de Premio que pagará el Contratante al Contratista por cada día adelantado**

| Valor Original del Contrato (En Córdoba) * |                    | Indemnización a Cobrar por Día Calendario de Demora (En Córdoba) * |  |
|--|--------------------|--|--|
| Desde más de                               | Hasta e Incluyendo | Si el Plazo está estipulado en Días Calendario o Fecha Tope        | Si el Plazo está estipulado en Días de Trabajo |
| 0  | 500,000            | 250  | 300  |
| 500,000                                    | 1,000,000          | 500  | 600  |
| 1,000,000                                  | 5,000,000          | 1750   | 2100   |
| 5,000,000                                  | 10,000,000         | 3000   | 3600   |
| 10,000,000                                 | 20,000,000         | 5000   | 600  |
| 20,000,000                                 | 50,000,000         | 10000  | 12000  |
| Más de 50,000,000                          | ----               | 0.02 por cien  | 0.024 por mil                                  |

La deducción de los valores por daños y perjuicios aplicables, a partir de la fecha en que expire el plazo contractual original o el ampliado.

El permitir al Contratista continuar y completar la obra o cualquier parte de ella, después de que el plazo contractual haya expirado, en modo alguno constituirá una dispensa del Contratante de cualquiera de los derechos que le corresponden de acuerdo con el Contrato. La deducción que el Contratante haga al Contratista de las sumas por daños y perjuicios, no eliminará la posibilidad de aplicarle también las demás sanciones previstas en el Contrato. Los montos máximos o porcentajes máximos de multas o premios estarán indicados en las CEC y tendrán como limite el 10% del Valor del Contrato antes de Impuesto.

#### 2.1.6.8. Sección 109.08: Rescisión del Contrato

1.- Rescisión del Contrato por Incumplimiento del Contratista.-

1.1) El Contratista viola el Contrato si:

1.1.1) No inicia los trabajos dentro del tiempo especificado en la Orden de Inicio;

1.1.2) No suministra suficientes trabajadores, equipo o materiales para garantizar una construcción satisfactoria dentro del Plazo Contractual;

1.1.3) Ejecuta el trabajo insatisfactoriamente o descuidadamente o rehúsa remover y luego volver a construir obras o remover y reemplazar materiales rechazados por el Ingeniero como inaceptables;

1.1.4) Descontinúa el trabajo sin una orden de suspensión de parte del Ingeniero;

1.1.5) No reinicia el trabajo que haya sido suspendido, dentro de un período razonable de tiempo, después de recibir la orden del Ingeniero para hacerlo;

1.1.6) Si, por cualquier razón, no logra hacer avanzar las obras de conformidad con el Programa de Trabajo aprobado;

1.1.7) Rehúsa aceptar cualquier Orden de Cambio, emitida de conformidad con las disposiciones del Artículo-105.02 de estas CGC;

1.1.8) No cumple con todas las estipulaciones del Artículo- 108.14(2);

1.1.9) No cumple con los requerimientos del Artículo 109.03 de estas CGC;

1.1.10) No obedece las órdenes del Ingeniero;

1.1.11) Se vuelve insolvente o se declara en quiebra; y

1.1.12) Efectúa cualquier acto que evidencie estado de quiebra o insolvencia.

1.2) Si ocurre una violación del Contrato por parte del Contratista, el Ingeniero dará aviso por escrito a éste y a su Fiador o garante acerca del hecho, especificando las razones y dando instrucciones sobre las acciones a ser tomadas. El Contratista y su garante tendrán diez (10) días después del recibo de dicha notificación, para tomar las medidas correctivas de las condiciones que dieron lugar a la violación.

1.3) Si el Contratista o su Fiador o garante, no procediera dentro de ese plazo a efectuar las correcciones mencionadas, el Contratante tendrá plenos poderes y autoridad para aplicar cualquiera de los siguientes procedimientos.

1.3.1) Rescindir el Contrato y hacer efectiva la Fianza o Garantía de Cumplimiento en la proporción que permita el cumplimiento de las obligaciones contractuales del contratista. Hacer efectiva la fianza de adelanto en la proporción no amortizada del anticipo, hacer efectiva la fianza de pagos en la proporción que permita cumplir las obligaciones de pago que el contratista no haya cumplido y solicitará la fianza de calidad de las obras ejecutadas.

1.4) El Contrato será rescindido sin que el Contratista tenga derecho a reclamo alguno por daños y perjuicios, si;

1.4.1) Quiebra o llega al estado de suspensión de pagos, a menos que el Contratante aprobara una resolución de un Funcionario Judicial autorizando al Contratista para continuar su negocio;





1.4.2) El Contratista queda bajo liquidación judicial y no está autorizado a continuar su negocio;

1.4.3) El Contratista muere, excepto cuando el Contratante pueda aprobar alguna solicitud de sus herederos legales para continuar los trabajos.

1.6) En caso de que Contratante rescindiera al Contratista el derecho de proseguir con la ejecución de la obra, la liquidación del Contrato será hecha conforme a lo establecido en este mismo artículo, Cláusula 2, incisos del 2.1 al 2.9.

1.7) El derecho del Contratista a continuar los trabajos no será rescindido ni se le cobrarán daños y perjuicios, si:

1.7.1) La demora en la terminación de las obras provenga de causas imprevisibles fuera del control del Contratista y sin culpa ni negligencia de su parte, incluyendo, entre ellas, casos fortuitos, fuerza mayor y actos del Gobierno ya en el ejercicio de su soberanía o en la de su capacidad contractual; y

1.7.2) El Contratista, dentro de los 10 días de iniciada una demora de esta naturaleza (a menos que el Ingeniero conceda un período adicional que debe concluir antes de la fecha del pago final del Contrato), notificara por escrito al Ingeniero las causas de tal demora.

El Ingeniero hará la investigación de los hechos para lo cual determinará la magnitud de la demora, que le servirá para establecer la extensión correspondiente del Plazo del Contrato, además autorizará el pago de los costos incurridos por el Contratista cuando, su a su juicio, los resultados de la investigación de los hechos la justifiquen. El resultado de su investigación será final y concluyente para ambas partes, pudiéndose apelar solamente según lo previsto en el CGC.

## **2.- Rescisión del Contrato por Conveniencia del Contratante.**

2.1) El Contratante se reserva el derecho de rescindir el Contrato, o parte de él, en cualquier oportunidad, mediante notificación escrita dirigida al Contratista, indicando los motivos de dicha rescisión, que podrá ser por emergencia nacional o por fuerza mayor.

La rescisión se hará en la forma y de acuerdo con la información que se dé en la notificación y no invalidará ningún reclamo anterior que el Contratante tuviere contra el Contratista.

2.2) Al recibir dicha notificación, a menos que el Contratante se lo indicara de otra manera, el Contratista deberá:

2.2.1) Suspender los trabajos bajo contrato, o la parte de ellos objeto de la rescisión, en la fecha indicada en la notificación;

2.2.2) Anular pedidos de materiales, maquinarias, herramientas y otros suministros hechos en relación con las obras suspendidas;

2.2.3) Rescindir todos los subcontratos y arreglos por servicios para las obras suspendidas;

2.2.4) Transferir al Contratante, de la manera, en la oportunidad y al grado que indique el Contratante, todos los derechos, títulos e intereses del Contratista sobre los pedidos, de materia, subcontratos y obligaciones todos relacionadas con el contrato que sean anulados (excepto adquisición de maquinaria) en cuyo caso el Contratante deberá, de arreglar o pagar todos los reclamos que resultaren de dichas anulaciones.

2.2.5) Liquidar todas las obligaciones pendientes y todos los reclamos resultantes de la anulación de pedidos, subcontratos y arreglos, con la aprobación o ratificación del Contratante, hasta el grado que éste lo requiera. Esta ratificación será definitiva para todos los propósitos de este artículo;

2.2.6) Transferir títulos al Contratante y entregarle, en la forma, fecha y grado, si los hubiere, indicados por el Contratante, (a) elementos fabricados o no fabricados, trabajos concluidos, suministros y otros materiales producidos como partes del trabajo suspendido por la nota de rescisión del Contrato o relacionados con dicho trabajo, y (b) los planos, dibujos, información y toda otra propiedad acabada, o parcialmente acabada que, de haber sido concluidas todas las obras bajo contrato, habrían sido propiedad del Contratante;

2.2.7) Esforzarse para vender, en la forma, oportunidad y al grado y precio indicados o autorizados por el Contratante, toda propiedad de los tipos a que se refiere el inciso 2.2.6), siempre y cuando el Contratista (a) no sea obligado a conceder crédito a ningún comprador y (b) pueda adquirir cualquiera de dichas propiedades bajo las condiciones prescritas y a precios aprobados por el Contratante. Además, el producto de tal transferencia o disposición deberá ser aplicado a cuenta de algún pago que el Contratante tuviera que hacer al Contratista con fundamento en este Contrato o en cualquier otra forma que indicara el Contratista.



2.2.8) Completar aquellos trabajos que no hubiesen sido incluidos en la nota de rescisión del Contrato;

2.2.9) Tomar todas las medidas que sean necesarias, o que el Contratante indique, para proteger y conservar la propiedad relacionada con este Contrato, que esté en posesión del Contratista y sobre la cual el Contratante tenga o pueda adquirir algún derecho.

2.3.- Al ser rescindido el Contrato por conveniencia del Contratante, éste reembolsará al Contratista todos los gastos en que razonablemente y de buena fe haya incurrido en la ejecución de los trabajos considerados en el Contrato y que no hayan sido reembolsados dentro de algunos de los conceptos de pago. La misma disposición se aplicará a los gastos en que incurriera el Contratista después de la fecha de rescisión del Contrato por razón directa e inmediata del mismo.

Las compensaciones a que tendrá derecho el Contratista, de acuerdo con este artículo, serán liquidadas de la siguiente manera:

2.3.1) Valor de las obras terminadas satisfactoriamente a la fecha en que fue efectiva la rescisión, pagadas a los precios unitarios del Contrato, mas cualquier suma retenida si la hubiera.

2.3.2) Si el Contrato incluye el concepto de Movilización, no le será abonado el total de este concepto sino que serán pagados únicamente los gastos en que realmente haya incurrido en transportar el equipo al sitio del trabajo y en desmovilizarlo hasta guardarlo en su propio plantel. Además, se le pagarán los gastos en que el Contratista haya realmente incurrido en materiales y mano de obra para la instalación de campamentos, talleres y demás instalaciones requeridas para la construcción de las obras. Estas instalaciones pasarán a ser propiedad del Contratante. Dichos gastos deberán ser justificados satisfactoriamente mediante documentación aceptable. En caso de que ellos excedan al monto establecido para el concepto de Movilización, se le pagará, como máximo, el que aparece en el Pliego de Licitación;

2.3.3) Los materiales comprados u ordenados por el Contratista antes de recibir la nota de rescisión para ser incorporados en la obra o utilizados en la construcción, previa presentación de las facturas y gastos de transporte y los reclamos resultantes de la rescisión que hayan sido aceptados;

2.3.4) Los costos inevitables en que haya incurrido el Contratista por el retiro del personal a partir de la fecha de la rescisión del Contrato. Para el personal local, se reconocerán las indemnizaciones a que tenga derecho según la Ley; para el personal extranjero serán reconocidas las indemnizaciones fijados por la Ley más los gastos de repatriación, si hay evidencia documental de que estos últimos fueron costeados por el Contratista;

2.3.5) Los trabajos preparatorios ya realizados, serán compensados de acuerdo con lo convenido entre el Contratante y el Contratista;

2.3.6) El pago durante un mes de salario, prestaciones e indemnizaciones legales para el personal directivo y personal auxiliar necesario para preparar las cuentas finales del Proyecto;

2.3.7) No será reconocido ni habrá pago por lucro cesante.

### **3.- Rescisión del Contrato por Conveniencia del Contratista.-**

El Contratista podrá solicitar por escrito la rescisión del Contrato por cualquiera de las siguientes razones:

3.1) Atraso de sesenta (60) días en el pago del avalúo mensual después de la fecha de aprobación del mismo por parte del Ingeniero; u otro plazo indicado en las CEC, quedando siempre el dueño obligado al cumplimiento del contrato y en especial al pago de intereses y mantenimiento de valor prescrito en la ley.

3.2) Si el Contratante, por causas ajenas a la responsabilidad del Contratista, ordena la suspensión de los trabajos por más de tres (3) meses.

La liquidación final será hecha de conformidad con las estipulaciones de la Cláusula 2 de este mismo artículo.

#### **2.1.6.9. Sección 109.09: Suspensión de los Trabajos**

1.- El Ingeniero podrá ordenar al Contratista, por escrito (Directiva), la suspensión, aplazamiento o interrupción de toda o de una parte de las operaciones constructivas durante el período de tiempo que él considere pertinente, si así conviene al Contratante, con las limitaciones estipuladas en el Artículo 109.08 de estas CGC.

2.- En caso de que la ejecución de toda o alguna parte de la obra fuese suspendida, demorada o interrumpida durante un período excesivo de tiempo, por indicación del



Ingeniero, en relación con la administración del Contrato, o por lentitud o falta de actuación del Ingeniero dentro del tiempo estipulado o, en su defecto, dentro de un lapso razonable, se podrá hacer un ajuste en los precios unitarios contractuales, los que conservaran los mismos parámetros de la oferta o en el Plazo Contractual, o en ambos, si el Contratista demostrara que, por causa de la suspensión, hubo un aumento en el costo o en el tiempo de ejecución o en ambos. No obstante, no se hará ajuste alguno si:

2.1) El trabajo hubiera sido así suspendido, demorado o interrumpido por culpabilidad o negligencia del Contratista; o

2.2) Se hubiera estipulado un arreglo equitativo

3.- Además, ningún reclamo podrá ser presentado o aceptado bajo este artículo por alguna de las siguientes razones:

3.1) Por gastos que se hayan producido antes de 15 días de la fecha de presentación por escrito de la comunicación correspondiente, por parte del Contratista, al Ingeniero, sobre la acción u omisión objeto de reclamo;

3.2) Si el reclamo, que debe presentarse tan pronto como sea posible después de la terminación de tal suspensión, atraso o interrupción, es presentado con posterioridad a la fecha del pago final a que se refiere el Artículo 110.08 de estas CGC.

3.3) Si el reclamo tiene su origen en una orden de suspensión debidamente fundamentada.

4.- Además, el Ingeniero podrá, por orden escrita (Directiva), suspender la ejecución de la obra, total o parcialmente, por los períodos que juzgue necesarios:

4.1) A causa de condiciones de tiempo o suelos que considere inapropiados para la continuación de la obra; o

4.2) Porque el Contratista:

4.2.1) No haya corregido condiciones que son inseguras para los obreros o el público; o

4.2.2) No haya cumplido con alguna otra disposición del Contrato.

El cese de trabajo en algunos de los conceptos del Proyecto, será considerado como "Suspensión Parcial". El cese de trabajo en todos los conceptos será considerado como "Suspensión Total". Durante el período de suspensión total podrán ser efectuados trabajos de emergencia que fueren ordenados por el Ingeniero para dar facilidades a la circulación del

tráfico y operaciones menores que no sean afectadas por causa de la suspensión o no estén relacionadas con ella, si lo permite el Ingeniero.

Todo ajuste en el Plazo del Contrato por suspensión del trabajo será efectuado conforme al Artículo 109.06 de estas CGC.

No se hará ningún ajuste en el Valor del Contrato por suspensiones de trabajo ordenadas con fundamento en el inciso (4.2) de este artículo.

5.- En todo caso de suspensión por conveniencia del Contratante y **no por otra causa**, el ajuste por aumento en los costos del Contratista en la ejecución de las obras consideradas en este Contrato, será avaluado en la forma siguiente:

5.1) El Contratante pagará al Contratista el valor de los salarios del personal que permanezca sin trabajar por causa exclusiva de la orden de suspensión y que haya sido contratado específicamente para la operación afectada por dicha suspensión, más los viáticos y el valor de las prestaciones sociales legales. Además, el Contratista recibirá una suma igual al 20% de la compensación total por mano de obra, calculada como se acaba de indicar;

5.2) Por toda maquinaria o equipo especial, exceptuando herramientas pequeñas, cuyo uso haya sido autorizado por el Ingeniero para ese trabajo en particular y esté en el lugar de la obra en buenas condiciones de operación y se viese afectada por la suspensión, el Contratante pagará al Contratista los costos de posesión de las tarifas detalladas en la oferta.

5.3) En caso de que la suspensión por conveniencia del Contratante se vaya a extender por más de 30 días, el Contratante, a su discreción, podrá ordenar al Contratista el retiro de la cantidad de personal que el Ingeniero estime conveniente y permitirle el uso en otros trabajos, del personal restante y de la maquinaria y equipo, si esto fuera factible, en cuyo caso no se le reconocerá al Contratista pago adicional alguno por el personal y equipo usados en otros trabajos. El Contratista tendrá derecho a que se le reconozcan los costos del retiro de personal, de acuerdo con la Ley.

#### 2.1.6.10. Sección 109.10: Fuerza Mayor

Se entenderá como fuerza mayor, todo evento cuya ocurrencia esté fuera del control y responsabilidad del Contratista o sus empleados, entre los cuales (sin limitarse a ellos) están los desastres naturales como terremotos, erupciones volcánicas, marejadas, inundaciones, tornados, huracanes e incendios; actos de enemigos públicos, acciones de guerra, rebelión,

insurrección, motines, asonadas, huelgas, embargos de carga, epidemias, restricciones por cuarentenas, suspensiones del transporte de materiales o del personal, condiciones climatológicas excepcionalmente rigurosas, y acciones del Gobierno en el ejercicio de su soberanía o en el de su capacidad contractual y las demoras que sufra el Contratista en el progreso del trabajo como resultado de tales eventos.

Cuando en opinión del Contratista existan condiciones de fuerza mayor, deberá notificar por escrito al Ingeniero dentro de los diez (10) días siguientes a la ocurrencia de las causas de tales condiciones. El Ingeniero hará las investigaciones y contestará por escrito informando al Contratista si el Contratante está de acuerdo o no sobre la existencia de condiciones de fuerza mayor.

Si el Contratante no está de acuerdo en que se han presentado condiciones de fuerza mayor, dará a conocer al Contratista, por escrito y con todos los detalles, las razones que respaldan tal decisión y le ordenará continuar los trabajos de acuerdo con los términos y condiciones del Contrato.

Si el Contratante concuerda con el Contratista en la ocurrencia de condiciones de fuerza mayor, los trabajos serán inmediatamente suspendidos y serán aplicables las disposiciones del Artículo 109.09, mientras duren dichas condiciones, excepto que:

a) El Contratista podrá remover su personal, herramientas, equipo y materiales del lugar de la obra y llevarlos a lugar seguro;

b) El Contratista no será responsable por los daños que sufra la obra, a menos que ellos sean el resultado de su descuido o falta de supervisión y control adecuados;

c) El Contratista quedará libre de la responsabilidad del mantenimiento de la Obra, prescrito en el Artículo 108.22, mientras duren las condiciones mencionadas.

#### **2.1.6.11. Sección 109.11: Finiquito del Contrato**

Se considerará que el Contratista ha cumplido con el Contrato cuando toda la obra haya sido completada y aceptada de acuerdo con las disposiciones del Artículo 106.17. La fecha de aprobación por parte del Contratante del último Estimado de Pago, será considerada como la fecha de liquidación final del Contrato. Este acto no excluye que se tome en consideración algún reclamo que el Contratista presente en el futuro, si el Contratista hubiera dejado a salvo ese derecho en constancia asentada en el Estimado de Pago Final.

### **2.1.7. SECCIÓN 110: MEDICIÓN Y PAGO**

#### **2.1.7.1. Sección 110.01: Medición de Cantidades de Obra**

Las obras, concluidas de conformidad con el Contrato, serán medidas conjuntamente por el Ingeniero y el Contratista de acuerdo con lo establecido en el Artículo-106.09 de estas CGC.

En toda medición se deberá usar el Sistema Métrico Decimal, a menos que el Pliego de Licitación lo estableciera de otra manera para algún Concepto de obra.

En la medición y el cálculo de las cantidades de material suministrado y de trabajo según el Contrato, se deberán usar métodos ya sancionados por la práctica y en uso corriente en la ejecución de obras similares y que, además, concuerden con los requerimientos de las especificaciones aplicables al Contrato.

Previa autorización del Ingeniero, los reembolsos por avance de obra se harán de acuerdo con el estado de avance de la misma, mediante estimados o avalúos mensuales basados en las cantidades hechas de cada uno de los conceptos de pago estipulados en el Contrato y en los respectivos Precios Unitarios de los mismos.

#### **2.1.7.2. Sección 110.02: Pagos Basados en las Cantidades Mostradas en los Planos**

1.- Cuando el Contrato especifique el pago de una obra o parte de una obra con base en la cantidad indicada en los planos, las cantidades por pagar serán las mostradas en los planos con las deducciones o adiciones a tales cantidades que resultaren de modificaciones autorizadas con respecto a las mostradas en los planos.

2.- Si el Contratista opina que no es correcta una cantidad cuyo pago está especificado con base en la cantidad del plano, podrá solicitar por escrito que el Ingeniero compruebe la cantidad dudosa. La solicitud deberá ir acompañada de cálculos, dibujos u otra prueba que demuestre por qué considera errónea la cantidad del plano. Si se encuentra que la cantidad en cuestión está realmente equivocada, entonces, el pago se hará corrigiendo la cantidad del plano.

#### **2.1.7.3. Sección 110.03: Pagos Basados en Mediciones Directas**

Los métodos específicos a seguir para definir las cantidades de obra a pagar según el Contrato, serán detallados en el artículo sobre "Medición" de los diferentes conceptos de pago.



A menos que fuera especificado de otra manera en alguna otra parte de estas CGC o en los planos, las mediciones longitudinales para el cálculo de áreas, serán hechas horizontalmente y no se harán deducciones por dispositivos comprendidos en ellas que tengan un área de un metro cuadrado o menos. Asimismo, salvo disposición específica en contrario, las mediciones transversales para el cálculo de áreas serán hechas de conformidad con las dimensiones netas mostradas en los planos u ordenadas por escrito por el Ingeniero.

Las estructuras serán medidas de acuerdo con las líneas netas mostradas en los planos o según haya sido ordenado por el Ingeniero para acomodarlas a las condiciones en el campo.

Todos aquellos conceptos medidos por metro lineal, tales como alcantarillas tubulares, guardavías, subdrenes, etc., serán medidos paralelamente a la base o fundación sobre la cual estén colocadas dichas estructuras, a menos que los planos lo mostraren de otra manera.

En el cálculo de los volúmenes de excavación se hará uso del método del promedio de áreas extremas o de otro método aceptable que esté indicado en las CEC.

El espesor de planchas y láminas galvanizadas usadas en la manufactura de tubos de metal corrugado, tubería circular y arcos, así como de muros de retención de elementos metálicos, serán especificados y medidos en milímetros o centímetros y fracciones decimales.

El vocablo "calibre" se refiere al calibre de alambres especificado en la norma AASHTO M32, equivalente a la ASTM A82.

El vocablo "tonelada" se refiere a la "tonelada métrica", que tiene 1000 kilogramos. Todos los materiales que sean medidos o proporcionados por peso, deberán ser pesados en básculas exactas aprobadas u otros dispositivos de pesaje, por personal competente y calificado, en los lugares designados por el Ingeniero.

No se permitirá el uso de balanzas de resortes.

Para los materiales que vayan a ser pagados por peso y que sean transportados en camiones, se pesarán éstos vacíos, por lo menos, una vez al día, a menos que estuviese especificado de otra manera en las CEC o en otras secciones de las especificaciones técnicas CGC, y en las ocasiones que ordene el Ingeniero. Cada camión deberá llevar una placa de identificación claramente visible con indicación de su capacidad.

Los materiales que tengan que ser medidos por volumen en el vehículo de acarreo, deberán ser transportados en vehículos aprobados y medidos en ellos en el lugar de entrega.

Los vehículos para este objeto podrán ser de cualquier tamaño o tipo aceptable para el Ingeniero, con tal de que la caja tenga una forma que permita calcular el volumen fácilmente y con exactitud. Todos los vehículos deberán ser cargados, por lo menos, hasta su capacidad al ras. Toda carga específica deberá ser enrasada cuando el vehículo llegue al lugar de entrega, si así lo ordena el Inspector.

Si fuera convenido por escrito entre el Ingeniero y el Contratista, todo material cuya medición para fines de pago esté especificada por volumen, podrá ser pesado y su peso, convertido a unidades cúbicas. Los factores de conversión de peso a volumen serán determinados por el Ingeniero y aprobados por el Contratista antes de poder aplicar este método de pago.

Si se ha establecido que el pago de agregados pétreos será efectuado por peso, éste incluirá el contenido de humedad, salvo que se haya estipulado lo contrario en las CEC. Si fuera necesario determinar el contenido de humedad, se determinará el promedio diario secando al calor un mínimo de tres muestras representativas del agregado. Dichas muestras serán obtenidas de la producción de cada ocho horas a intervalos escogidos al azar.

Cuando se haya indicado el uso de escoria y piedra (o grava) como materiales sustitutos en algunos conceptos de pago del Pliego de Licitación y el pago tenga que ser hecho por peso, las cantidades estimadas estarán basadas en los pesos específicos brutos promedios estimados de los materiales alternos disponibles y no se hará ajuste alguno en el precio unitario de contrato por variaciones en las cantidades a causa de diferencias en el peso específico del material efectivamente usado.

Los materiales asfálticos serán medidos en litros, para ello, médase el volumen a 15°C ó corríjase el volumen a 15°C usando los factores de corrección estándar reconocidos.

Cuando el asfalto emulsionado es convertido de volumen a masa (peso), úsese un factor de 1000 litros por tonelada métrica independientemente de la temperatura.

Cuando los materiales asfálticos son embarcados por camión, se podrán usar para el cálculo de cantidades los pesos o volúmenes netos certificados, sujetos a corrección por pérdida o espumación.

Todo volumen de material asfáltico a ser pagado directamente por medio de un concepto de pago contractual, será medido y pagado ya colocado y aceptado en la obra, de conformidad con las tasas de aplicación estipuladas en las especificaciones u ordenadas



por el Ingeniero (considerando las tolerancias) y los ajustes y correcciones por temperaturas y pérdidas indicados en este artículo.

El cemento Portland será medido por bolsa. El vocablo "bolsa" significará 42.5 kilogramos de cemento.

La cal hidrata será medida por "bolsa". El vocablo "bolsa" significará 22.67 Kgs.

La madera será medida en metros cúbicos. Las mediciones se basarán en anchos y espesores nominales y en la longitud utilizable de cada pieza.

La expresión "suma global", cuando sea usada como concepto de pago, significará el pago completo por tal trabajo especificado en el Contrato, independientemente de las dimensiones y cantidad.

Cuando se especifique que una estructura completa o unidad estructural será pagada por "suma global", se entenderá que incluye todos los accesorios y herrajes necesarios.

Cuando sean especificados artículos manufacturados estándar, tales como cercas, alambre, láminas, perfiles laminados, tubos, conductos, etc., y esos materiales fuesen identificados por calibre, peso unitario, dimensiones de la sección, etc., se considerará que tal identificación se refiere a pesos o secciones nominales. A menos que fuesen más rigurosamente controladas por tolerancias en especificaciones determinadas, serán aceptadas las tolerancias de fabricación establecidas por las correspondientes industrias.

#### 2.1.7.4. Sección 110.04: Alcance de los Pagos

A menos que hubiera otra disposición específica en contrario, el Contratista deberá recibir y aceptar la compensación asignada en el Contrato para conceptos de pago, como pago total por el suministro de toda la mano de obra, materiales, equipo, administración e imprevistos y por ejecutar toda la obra considerada en el Contrato, de una manera completa y aceptable, así como por todo riesgo, pérdida, daño o gastos de toda clase que resultasen de la naturaleza del trabajo o de la ejecución del mismo.

Si el artículo titulado "Base de Pago" en las especificaciones relativas a cualquier concepto de obra en el Contrato, requiere que el precio unitario en el Contrato cubra y sea considerado como compensación por determinado trabajo o material esencial para dicha obra, ese mismo trabajo o material no será medido ni pagado bajo ningún otro concepto de pago que aparezca en otra parte de las especificaciones.

#### 2.1.7.5. Sección 110.05: Compensación por Cambios y Modificaciones en las Cantidades

Los ajustes en los precios por cambios serán efectuados de acuerdo a lo establecido en el Artículo-105.02. De acuerdo con ese artículo, no serán ajustados los precios unitarios como resultado de variaciones en las cantidades contratadas, excepto en los siguientes casos:

1.- Cuando la cantidad de trabajo o de material que tenga que ser suministrado bajo cualquier "Concepto Mayor" del Contrato, resulte incrementada en más de 25% sobre la cantidad mostrada en el Pliego de Licitación, entonces, cualquiera de las partes, si así lo reclama, tendrá derecho a un ajuste equitativo en el precio de las cantidades de obra adicionales al 125% de la cantidad mostrada en el Pliego de Licitación, si demuestra que hay variación en los costos.

2.- Cuando la cantidad de trabajo o de material que tenga que ser suministrado bajo cualquier Concepto Mayor resulta disminuida en más de 25% de la cantidad mostrada en el Pliego de Licitación, entonces cualquiera de las partes, si así lo reclama, tendrá derecho a un ajuste equitativo en el precio de la cantidad de obra realmente ejecutada, el cual estará limitado a un pago total no menor del 75% del monto originalmente licitado para tal Concepto Mayor, si demuestra que hay variación en los costos.

Todo ajuste equitativo en los precios acordados entre las partes como consecuencia de cambios y variaciones en las cantidades originales de los Conceptos Mayores de acuerdo con el Artículo-105.02, deberá ser incorporado en la orden escrita expedida por el Ingeniero, la cual estará redactada en tal forma que muestre la conformidad del Contratista por medio de su firma.

Si ambas partes no pudieran llegar a un acuerdo sobre los precios, el Contratante podrá ordenar al Contratista continuar el trabajo de conformidad con el Contrato, para lo cual emitirá una Orden de Cambio unilateral y, con respecto a un posible ajuste equitativo en los precios, proceder de una de las siguientes maneras:

2.1) Hacer uso de la facultad arbitral que tiene el Ingeniero para que determine si los precios originales del Contrato son aplicables o no y, en este último caso, calcule los ajustes equitativos de acuerdo con su criterio y las circunstancias que los afecten;

2.2) Determinar el ajuste equitativo mediante control de los costos reales del Contratista, para lo cual éste deberá dar todas las facilidades requeridas por el Ingeniero. Si el



Contratista se negara a permitir el control de sus costos, el Ingeniero aplicará el procedimiento descrito en (2.1) ó el descrito en (2.3), a continuación;

2.3) Ordenar que el trabajo sea llevado a cabo de acuerdo con las estipulaciones del Artículo 110.06, de estas CGC.

#### 2.1.7.6. Sección 110.06: Trabajos por Administración, (A Costo más Porcentaje)

Si en el Contrato está prevista una suma para llevar a cabo ciertos trabajos por el sistema de administración, cuando lo ordene el Ingeniero, el Contratista estará obligado a ejecutar dichos trabajos, cuya compensación estará basada en el costo más un porcentaje, de conformidad con las disposiciones establecidas en el presente artículo.

Este sistema de trabajo y de pago se limitará:

(1) a trabajos contingentes no cubiertos por precios unitarios respecto a los cuales las partes contratantes no logren ponerse de acuerdo acerca de la compensación por medio de una suma global o de precios unitarios negociados;

(2) a trabajos cubiertos por una "Orden de Cambio", en los que no se logre acuerdo en la negociación de precios unitarios,

(3) a trabajos efectuados por cambios en las condiciones, según se describió en el Artículo-105.02 de estas CGC, en los que no se llegue a un acuerdo satisfactorio sobre una compensación basada en precios unitarios.

En los casos antes mencionados, la compensación a que tendrá derecho el Contratista será determinada en la forma siguiente:

**1.- Mano de Obra.-** En trabajos por Administración efectuados de acuerdo con este artículo se pagará, en adición al costo efectivo de la mano de obra, el costo de las prestaciones sociales que la ley concede a los trabajadores. El Contratista obtendrá, además, un monto igual al 20% del total determinado para Mano de Obra, en concepto de costo indirecto más utilidad.

**2.- Materiales.-** Por los materiales aceptados por el Ingeniero y utilizados en la obra, el Contratista recibirá el costo efectivo de tales materiales entregados en la obra, incluyendo los gastos de transporte, excluyendo los costos del alquiler de maquinaria, según lo expuesto más adelante, a cuyo costo se añadirá un 12 por ciento por costos indirectos más utilidad.

**3.- Tarifas de Alquiler de la Maquinaria.-** Las tarifas de alquiler de la maquinaria que sea usada en cualquier Trabajo por Administración, de acuerdo con este artículo, serán las aceptadas en la oferta, si las CEC no han establecido tarifas de equipo. Si algún equipo no aparece en dicha lista, su tarifa será calculada de conformidad con el "CONSTRUCTION EQUIPMENT OWNERSHIP AND OPERATING EXPENSES SCHEDULE" (Lista de Costos de Posesión y Operación de Equipo de Construcción) publicado por el USCOE obtenible del "U.S. Superintendent of Documents, U.S. Government Printing Office, Washington D.C. 20402-9325.

Estos precios incluyen los siguientes conceptos y servicios sin compensación adicional:

Depreciación, combustible, aceites y grasas lubricantes, reparaciones en el campo, reacondicionamiento, reparaciones mayores, interés, impuestos, vigilancia, seguros y erección. No habrá pago adicional por la remoción de la maquinaria del lugar del trabajo a la terminación del Contrato.

En trabajos por Administración, el pago por el uso de la maquinaria se hará por las horas efectivamente trabajadas y autorizadas por el Ingeniero. El tiempo de espera, de acuerdo con instrucciones del Ingeniero, será pagado al 12% de la tarifa aprobada mientras dure tal espera durante las horas normales de trabajo. Para calcular la Tarifa Horaria de equipo no incluido en las ofertas ni en las CEC, el Contratista someterá al Ingeniero los documentos de soporte necesarios, tales como facturas, conocimientos de embarque terrestre y marítimo, facturas consulares, etc., o bien, según lo estipulado antes en esta Cláusula.

Se le pagarán al Contratista los gastos de transporte de las máquinas alquiladas desde el sitio en que se encuentran hasta el sitio en que serán utilizadas y de vuelta al punto de partida, a condición de que:

- 3.1) El equipo sea obtenido del lugar más cercano;
- 3.2) Que los gastos por el regreso no sean mayores que los de la entrega;
- 3.3) Que las tarifas del transporte no excedan a las tarifas establecidas por transportistas autorizados; y
- 3.4) Que tales gastos estén restringidos a aquellas unidades de equipo que no se encuentren ya disponibles en o cerca del Proyecto.

Quedará entendido que todo el equipo que se utilice debe encontrarse en buenas condiciones de funcionamiento.



No se agregará ningún porcentaje por ningún concepto a las tarifas de alquiler de equipo ni tampoco se pagará compensación adicional alguna por reparación del mismo.

**4.- Gastos Varios.-** No se dará ninguna compensación por superintendencia general ni por el uso de herramientas pequeñas ni otros gastos para los cuales no esté prevista en este artículo alguna asignación específica.

**5.- Registros.-** Diariamente, el Contratista y el Ingeniero, o sus respectivos encargados, deberán comparar sus propios registros sobre el costo del trabajo hecho en el día por el método de Administración en cumplimiento de una orden expedida por el Ingeniero. Se harán copias de dichos registros en machotes especiales proporcionados por el Contratista e impresos de acuerdo con diseño suministrado por el Ingeniero. Para legalizar estos documentos llevarán la firma de ambos, el Ingeniero y el Contratista, o de sus respectivos representantes autorizados, en dos copias, una para cada una de las partes.

**6.- Estados de Cuenta.-** No se hará ningún pago por trabajos realizados por Administración mientras no hayan sido preparados y firmados los registros exigidos en la Cláusula (5) que antecede, detallados en la forma siguiente:

6.1) Nombre, clasificación, fecha, horas trabajadas en el día, total de horas trabajadas, salario por hora y por día para cada obrero y capataz;

6.2) Descripción, fechas, horas diarias trabajadas, total de horas, tarifas de alquiler y total devengado por cada unidad de maquinaria y de equipo;

6.3) Cantidades de materiales, precios y valores totales;

6.4) Gastos en transporte de materiales;

6.5) Importe de las primas por seguros y prestaciones sociales del personal, en caso de que en las CEC no se hubiera señalado un porcentaje fijo.

Los Estados de Cuenta deberán ser acompañados y respaldados por las facturas firmadas ya pagadas, por todos los materiales utilizados, incluyendo los gastos de acarreo. Sin embargo, en caso de que los materiales empleados en los Trabajos por Administración no hubiesen sido comprados especialmente para tal obra, sino tomados de las existencias del Contratista, en vez de las facturas, el Contratista presentará una Certificación en la que confirme que tales materiales fueron obtenidos de sus propias existencias, que realmente se usó la cantidad declarada y que el precio y el flete declarados representan el costo verdadero para el Contratista.

**7.- Pago.-** El pago por trabajo autorizado y efectuado de acuerdo con este artículo, será hecho dentro de los avalúos mensuales según el avance de la obra. Las cantidades por pagar tendrán como base los informes diarios firmados sobre el trabajo llevado a cabo, y los estados del Contratista sobre los costos requeridos por las Cláusulas 5 y 6 que anteceden.

#### 2.1.7.7. Sección 110.07: Eliminación de Conceptos de Pago

En caso de que el Ingeniero determinase que algunos trabajos incluidos en el Contrato, con su concepto de pago correspondiente, no fuesen realmente necesarios para obtener una obra completa y satisfactoria, podrá, mediante notificación escrita dirigida al Contratista, eliminar tales conceptos de pago del Contrato, sin que por ello éste quede invalidado. Si el Contratista fuese notificado de la eliminación de algún tipo de trabajo y de su correspondiente concepto de pago, todo trabajo de ese tipo que a esa fecha hubiese completado, será compensado por medio de una Orden de Cambio. Esta considerará, además del trabajo completado, todos los trabajos preliminares, materiales adquiridos y procesados, etc., así como todos los gastos en que el Contratista hubiese incurrido con anterioridad a la fecha de la citada notificación, exceptuando utilidad y gastos generales.

#### 2.1.7.8. Sección 110.08: Pagos al Contratista

1.- El Contratante hará pagos parciales mensualmente de conformidad con el avalúo del avance de la obra, o a intervalos más frecuentes, si lo considera conveniente. Dichos pagos estarán basados en estimaciones, preparadas o aprobadas por el Ingeniero, del valor de las obras ejecutadas de acuerdo con el Contrato. En las estimaciones preparadas con fines de pago, podrá el Ingeniero, a su criterio, incluir trabajos preliminares efectuados y el valor de materiales no perecederos, ensayados y aceptados, entregados en el Proyecto y almacenados de acuerdo con sus instrucciones.

A fin de que se pueda autorizar pagos por materiales entregados y almacenados en el Proyecto, se deberán llenar los siguientes requisitos:

1.1) Los pagos por materiales entregados y almacenados en el Proyecto, deberán estar autorizados específicamente en el Contrato;

1.2) Los materiales deberán estar aceptados por el ingeniero para su incorporación en la obra;

1.3) La cantidad deberá ser certificada por el Ingeniero;





1.4) De la cantidad certificada por el Ingeniero se podrá pagar hasta el 75% en el estimado parcial;

1.5) El Contratista deberá demostrar que tales materiales son de su propiedad y que han sido adquiridos o producidos para uso exclusivo en el Proyecto.

1.6) No se harán pagos por materiales vivos para siembra, hasta que hayan sido plantados y estén sobreviviendo en el sitio.

1.a. En las estimaciones preparadas con fines de pago, también podrá el Ingeniero, a su criterio, incluir el valor de materiales importados tales como alcantarillas metálicas, gaviones, acero de refuerzo y acero estructural, antes de que lleguen al Proyecto.

A fin de que el Ingeniero pueda autorizar pagos por materiales importados, en el puerto de embarque, se deberán llenar los siguientes requisitos:

1.a.1) Los pagos por materiales importados, en el puerto de embarque, deberán estar autorizados específicamente en las CEC;

1.a.2) El Contratista deberá presentar evidencia de haber cancelado la Carta de Crédito correspondiente. En la Carta de Crédito se indicará que tales materiales son adquiridos por el Contratista para uso exclusivo en el Proyecto contratado, indicando el nombre del mismo;

1.a.3) La cantidad importada no deberá ser mayor que la mostrada en el Pliego de Licitación;

1.a.4) Los materiales importados para el Proyecto deberán estar amparados por el correspondiente Certificado de Calidad emitido por el Fabricante o un laboratorio independiente que hubiese escogido el Contratante;

1.a.5) De la cantidad certificada en la Carta de Crédito se podrá pagar hasta el 75% en el estimado parcial, siempre y cuando el Contratista de al Contratante una fianza o garantía aceptable por igual valor que el pago recibido; dicha fianza o garantía será devuelta al Contratista una vez que los materiales lleguen al sitio de trabajo;

2.- No se hará pago parcial alguno cuando el valor total del trabajo hecho posteriormente al estimado anterior sea inferior al 0.5 por mil del Valor del Contrato Original.

3.- Del monto total a ser pagado al Contratista en cada pago parcial, el Contratante retendrá el 10 por ciento como Retención Ordinaria, hasta la terminación satisfactoria de las

obras contratadas y haya quedado resuelto todo reclamo que el Contratante tuviera contra el Contratista. (La Retención Ordinaria afectará a los pagos parciales (excepto al pago por Movilización o Anticipo, si cualquiera de estas modalidades estuviera considerada en el Contrato). Sin embargo, si el Contratante, después de que el Contratista haya completado el 50 por ciento del trabajo contratado, en cuenta que tanto la calidad de la obra como el avance son satisfactorio y no hay reclamos por deudas de parte de los suplidores de bienes o servicios, podrá, si lo solicita el Contratista, autorizar el pago completo de cualquiera de los estimados parciales restantes hasta completar la obra. Asimismo, una vez que la obra estuviera sustancial y satisfactoriamente completa, el Contratante, sin necesidad de notificar a los fiadores o garantes, podrá autorizar el pago al Contratista de todo o parte del exceso retenido, si considera que el monto acumulado de la Retención Ordinaria es excesivo en comparación con la suma adecuada para la protección del Contratante.

4.- La Retención Ordinaria no podrá ser tomada como fundamento para reclamar reajuste en los precios contractuales contenidos en la Oferta.

5.- El pago de algún estimado parcial o del concepto de Movilización o Anticipo (si alguna de estas modalidades estuviera considerada en el Contrato), no relevará al Contratista de ninguna de las obligaciones contraídas en los términos del Contrato.

6.- Los estimados de pago o avalúos parciales, serán preparados en machotes impresos suministrados por el Contratista, diseñados de acuerdo con las disposiciones u órdenes del Contratante y con el número de copias requeridas por éste.

7.- En proyectos del Sector Público, debido a las regulaciones gubernamentales y a los trámites de la Fuente de Financiamiento, si hubiese alguna involucrada en el Proyecto, los pagos parciales al Contratista serán efectuados normalmente dentro de los treinta (30) días calendario siguiente a la firma de las facturas por el Contratista y el Ingeniero. El Contratante reconocerá el pago de intereses moratorios legales por cualquier atraso que exceda al plazo aquí mencionado.

8.- Todo el material y trabajos por los cuales el Contratante haya hecho pagos, pasarán a ser de su propiedad, sin que ello signifique que el Contratista quede relevado de su responsabilidad de conservar y mantener dichos materiales y obras, o de reparar cualquier parte de la obra que haya sufrido deterioro. Tampoco implicará que el Contratante renuncie al derecho de exigir el cumplimiento de todas las condiciones del Contrato ni al derecho de

comprobar, en cualquier oportunidad, si los pagos mensuales han sido efectuados correctamente según los conceptos de pago contractuales.

9.- El Ingeniero podrá retener todo pago al Contratista por trabajos hechos o materiales suministrados, si éste ha incurrido en alguna violación del Contrato, y ordenar hacer efectivo tal pago sólo después de que el Contratista haya corregido la falta que motivara la retención. Igualmente, el Contratante se reserva el derecho de retener, de todo pago mensual, el equivalente de cualquier reclamo de terceras personas por incumplimiento del Contratista en el pago de materiales, mano de obra o servicios. El hecho de que no se le retenga ninguna cantidad al Contratista, en modo alguno será interpretado como una exención de responsabilidad para él y el fiador o garante.

10.- Todos los estimados y pagos hechos anteriormente, estarán sujetos a corrección en cualquier estimado subsiguiente, incluyendo el estimado y pago finales.

11.- La liquidación final del Contrato será autorizada después de haber sido completado y aceptado el trabajo de acuerdo con lo dispuesto en el Artículo-106.17. La fecha de aprobación por parte del Contratante del estimado final de pagos, constituirá la fecha correspondiente a la liquidación final del Contrato.

En caso de que el Contratista tuviere reclamos contra el Contratante por pagos o liquidaciones consideradas por él como injustas o que no hayan estado de acuerdo con las estipulaciones del Contrato, deberá HACERLO CONSTAR por medio de una protesta suya, escrita al margen del Estimado Final, reservándose el derecho de presentar su reclamo de acuerdo con el Contrato. Estos reclamos podrán referirse únicamente a medidas o liquidaciones erróneas o injustas, ya que todo reclamo relativo a ajustes equitativos por cambios en las condiciones, deberá ser presentado de acuerdo con lo establecido en los Artículos-105.02 de estas CGC.

Los reclamos deberán ser presentados, a más tardar, 30 días después de LA FECHA DE LIQUIDACIÓN FINAL DEL CONTRATO, definida en este mismo artículo. Después de esta fecha límite, no se aceptará ningún reclamo. Este deberá ser presentado a la UCP o instancia equivalente del Contratante, la cual dará su decisión por escrito y suministrará copia de la misma al Contratista. En caso de que el Contratista considere que la decisión de la UCP es errónea, injusta o no ajustada a los términos del Contrato, podrá seguir el procedimiento para CONTROVERSIAS establecido en el CGC, siempre que apele dentro de los 30 días siguientes a la fecha en que le sea notificada la decisión.

12.- Una vez aceptada y terminada la obra y resueltos todos los reclamos, el Contratante devolverá al Contratista la suma que le hubiere sido retenida, previa deducción de cualquier cantidad a que el Contratante tuviere derecho por concepto de daños y perjuicios, por demoras o por cualquier otra causa (Reclamos de proveedores de bienes o servicios).

13.- Si después de la aceptación final de la obra se prevé que habrá un retraso considerable en el cómputo y comprobación del estimado y pago final, el Contratante podrá, a su criterio, si lo solicitara el Contratista y consintiera el fiador o garante, adelantar al Contratista una parte del pago pendiente.

#### 2.1.7.9. Sección 110.11: Movilización

Si el Pliego de Licitación incluye el concepto de Movilización, deberá entenderse como tal el pago por aquellos trabajos y operaciones preparatorias necesarias para el traslado de personal, equipo, suministros e imprevistos al lugar del trabajo; para el establecimiento de todas las oficinas, edificios y otras facilidades necesarias para el trabajo en el Proyecto; y todo otro trabajo y operaciones que tengan que ser efectuadas, o costos en los que el Contratista tienen que incurrir en el lugar de la obra, antes del inicio de los trabajos.

El monto de este concepto podrá ser fijado por el Contratante, o bien, si las CEC así lo establecen, cotizado por el Oferente en su oferta, cuyo valor en ningún caso excederá al 10% del monto del resto del trabajo incluido en el Contrato, o sea, excluido el monto de Movilización.

Los pagos parciales por el concepto de Movilización serán efectuados de la manera siguiente:

1.- Cuando el Contratista haya llevado a cabo obras por un valor igual al 5% del Valor Original del Contrato, se le pagará el 25% de la suma total asignada a Movilización, o bien el 2.5% del Valor Original del Contrato, según lo que resulte más bajo.

2.- Cuando el Contratista haya llevado a cabo obras por un valor igual al 10% del Valor Original del Contrato, se le completará el pago del 50% de la suma total asignada a Movilización, o bien, el 5% del Valor Original del Contrato, según lo que resulte más bajo.

3.- Cuando el Contratista haya llevado a cabo obras por un valor igual al 25% del Valor Original del Contrato, se le completará el pago del 60% de la suma total asignada a Movilización, o bien, el 6% del Valor Original del Contrato, según lo que resulte más bajo.



4.- Cuando el Contratista haya llevado a cabo obras por un valor igual al 65% del Valor Original del Contrato, se le completará el pago del 90% de la suma total asignada a Movilización, o bien, el 9% del Valor Original del Contrato, según lo que resulte más bajo.

5.- Cuando el Contratista haya llevado a cabo obras por valor igual al 80% del Valor Original del Contrato, se le completará el pago del 100% de la suma total asignada a Movilización, o bien, 10% del Valor Original del Contrato, según lo que resulte más bajo.

6.- Después de la Aceptación Final de las obras del Proyecto, se pagará al Contratista cualquier suma retenida por concepto de Movilización.

Lo anterior no impide que se pague la Movilización en pagos parciales repartidos de otra manera, si así lo establece el Contrato.

La suma global pagada en concepto de Movilización constituirá compensación total por el suministro de toda la mano de obra, materiales, herramientas, equipo, administración e imprevistos para efectuar el trabajo considerado dentro del concepto de Movilización.

La Retención Ordinaria del 10% sobre el Monto Devengado por el Contratista por obras efectuadas, no será aplicada al concepto de Movilización.

Las estipulaciones sobre ajuste en los precios del Artículo-105.02 no serán aplicables al concepto de Movilización, que es una Suma Global.

Cuando sean ajustados otros conceptos de pago del Contrato de acuerdo con el Artículo-105.02 de estas CGC, si los costos aplicables a tal concepto de pago incluyen costos de Movilización, se considerará que tales costos de Movilización han sido recuperados por el Contratista mediante los pagos que haya recibido por concepto de Movilización, y serán excluidos al determinar la compensación por los "Cambios" a que se refiere el citado Artículo 105.02.

Si el Contrato no incluye el concepto de pago por Movilización, de acuerdo con lo estipulado anteriormente en este artículo, la compensación total por toda la movilización que fuese requerida, será considerada como subsidiaria de los varios conceptos de pago involucrados y no habrá compensación adicional por ese concepto.

#### 2.1.7.10. Sección 110.11: Anticipos

Si el Pliego de Licitación no incluye el concepto de Movilización y las CEC consideran conceder al Contratista el anticipo de una suma fija o de un porcentaje determinado del

Valor Original del Contrato, suma que estaría destinada a financiar la movilización y gastos iniciales en que tiene que incurrir el Contratista para la ejecución de las obras, regirán las siguientes condiciones:

1.- El Anticipo no constituirá un Concepto de Pago, en contraposición al concepto de Movilización, cuando éste existe en las bases del Contrato.

2.- El Anticipo deberá ser utilizado exclusivamente para financiar los gastos de movilización e iniciación del Proyecto y no será aplicado a pagar deudas pasadas del Contratista ni a cubrir gastos del Proyecto hechos anteriormente a la adjudicación del Contrato ni a la compra de equipo o materiales a ser incorporados en la obra. El uso de este pago deberá ser comprobado con documentos entregados al Ingeniero.

3.- El Anticipo será autorizado por el Contratante después de que el Contratista haya firmado el Contrato y entregado las fianzas o garantías de Cumplimiento y Pago, además de una fianza o garantía especial por el valor del Anticipo, según lo requieren las leyes de la República (En Proyectos del Sector Público).

4.- El Anticipo será autorizado por el Contratante para ser entregado en su totalidad y no estará sujeto a la Retención Ordinaria aplicable a los pagos parciales. Su valor podrá ser fijado por el Contratante en las CEC o cotizado por el Contratista en su Oferta y, a menos que las CEC lo determinen de otra manera nunca podrá exceder al 10% del Valor Original del Contrato. El reembolso del Anticipo será efectuado por medio de deducciones (adicionales a la Retención Ordinaria) en los pagos parciales hechos al Contratista, de sumas equivalentes al porcentaje del Anticipo con respecto al Valor Total Original del Contrato, hasta completar la suma total anticipada.

#### 2.1.7.11. Sección 110.12: Tipos de cambios Monetarios

A menos que las CEC lo dispusieran de otra manera, los pagos al Contratista serán hechos en Córdoba por medio de cheques entregados por el Contratante.

El Contratante, (en proyectos del Sector Público) no reconocerá ningún ajuste en los precios del Contrato por razones de "deslizamiento" del Córdoba con respecto al dólar de los Estados Unidos o cualquier otra moneda extranjera. En proyectos del Sector Privado, las CEC indicarán si habrá o no habrá reconocimiento de ajuste por esta causa.



#### 2.1.7.12. Sección 110.13: Escalamiento de Precios

(a) Los precios serán fijados durante el plazo del Contrato, a menos que en las CEC se establezca que sean ajustable por escalamiento de precios.

(b) Los ajustes, por escalamiento de precios, una vez que hayan sido justificados, podrán ser hechos, a solicitud del Contratista, de conformidad con las siguientes disposiciones:

1.- Mano de Obra.- Los salarios y prestaciones sociales que el Contratista pague a sus empleados, no deberán ser más bajos del Mínimo establecido por el MITRAB para cada oficio. Si las CEC no incluyeran una Lista Básica de Salarios Mínimos aceptables para el Proyecto, el Contratista anexará a su Oferta la lista de salarios básicos y prestaciones sociales que haya usado en la determinación de sus costos.

1.1\_ El Contratante reembolsará al Contratista todo aumento en el costo de las obras que resultara por causa de nuevas leyes o disposiciones del Gobierno que aumentaran los salarios o las prestaciones sociales de los trabajadores y que hayan entrado en vigencia en fecha posterior a la de presentación de las ofertas;

1.2) El Contratante no reembolsará al Contratista ningún aumento en el costo de las obras por causa de un uso inadecuado o negligente de la mano de obra en la ejecución de los trabajos;

1.3) El Contratista entregará al Ingeniero regularmente (fuera de la documentación exigida para los Trabajos por Administración), copia fiel de las planillas de pago de salarios y prestaciones sociales para todo el personal que labora para el Proyecto. Esto lo hará, a más tardar, TRES (3) días después de la fecha del pago; el Contratista certificará que dichas planillas son completas y correctas;

1.4) Para los fines de ajustes en los precios del Contrato, por las causas antes señaladas, el Contratista entregará al Ingeniero, no menos de TRES (3) días antes de la Reunión de Preconstrucción, un análisis de los precios en que determine el número de hombre-horas por cada oficios que interviene en cada unidad de cada uno de los conceptos de trabajo. El ajuste será aplicado a las cantidades de obra aún pendientes de ejecución cuando se produzca un aumento.

**2.- Materiales.-** El Contratante reconocerá los aumentos por inflación en el precio de los materiales a ser usados exclusivamente en la construcción de la obra, siempre que se

compruebe que tales aumentos se produjeron posteriormente a la fecha de entrega de la oferta. Para ello:

2.1) El Contratista entregará, junto con su oferta, una lista de los materiales necesarios para la construcción, incluyendo los que serán incorporados en la obra y los que serán utilizados en las operaciones de construcción. La lista contendrá la fecha, la descripción, cantidad, precios unitarios, nombre y dirección de los proveedores, facturas pro-forma y tiempo de entrega de cada uno de los materiales;

2.2) El Contratista, en el Análisis de Precios a que se hace referencia en el párrafo 1.4) de este artículo, justificará el uso de los materiales de la lista y su calidad y cantidad. Asimismo, demostrará que no es posible obtener los mismos materiales, de calidad aprobada, por medio de otro proveedor o fabricante;

2.3) El ajuste de precios será aplicado únicamente a las cantidades de materiales que no estuvieran adquiridos en la fecha en que se produjera el aumento en precios, si la demora en la adquisición no fuera atribuible a negligencia u otra deficiencia del Contratista o de sus subcontratistas, y no será aplicado a aquellos materiales que no sean usados exclusivamente en el Proyecto.

**3.- Equipo.-** No será reconocido ningún ajuste en el precio del Contrato por escalamiento en el precio del equipo, incluyendo accesorios y herramientas menores; sin embargo, se harán ajustes por escalamiento en el precio de los combustibles y lubricantes, considerados como "materiales".

#### **4.- Varios.-**

4.1) Todo ajuste en el precio para un determinado concepto de trabajo, estará restringido a los casos en que el aumento total final comprobado no sea menor del 5% del total que aparece en la oferta para ese concepto;

4.2) En ningún caso será efectuado un ajuste en el precio de Contrato de un determinado concepto de pago, cuando el valor total final comprobado de dicho aumento sea inferior al 0.1% del Valor Total Original del Contrato;

4.3) No será efectuado ningún ajuste en el Valor del Contrato, por razones de escalamiento de precios, cuando el plazo total del Contrato sea igual o inferior a 180 días calendario, a menos que las CEC lo estipularan de otra manera;



4.4) En el caso de producirse un aumento en los precios de la mano de obra o de los materiales, el Contratista notificará por escrito al Ingeniero tal evento, a más tardar, TRES (3) días después de haberse producido, incluyendo la documentación que lo demuestre, el dato de los nuevos precios, las cantidades y tipo de mano de obra o materiales que serán afectadas por el aumento y el monto total estimado del ajuste. El Contratante estudiará la documentación, hará las investigaciones necesarias y verificará las cantidades de mano de obra o materiales afectados y el monto del ajuste reclamado. Si comprueba el aumento y el verdadero monto del ajuste, el Contratante pagará mensualmente las sumas ajustadas correspondientes al uso hecho de la mano de obra o de los materiales durante el período;

4.5) El Contratante podrá, en caso de que, posteriormente a la fecha de presentación de las ofertas, se produjera una disminución en los precios de la mano de obra o de los materiales, aplicar una disminución en el precio de los conceptos de obra afectados. Tal ajuste sería efectuado de conformidad con las mismas disposiciones aplicables a los aumentos;

4.6) El Contratante no aprobará ningún ajuste en el valor de las obras contratadas, por aumento en los precios de mano de obra o materiales, si los aumentos ocurren después de haber expirado el plazo original o el plazo ampliado para la conclusión de las mismas.

4.7) Si el Contratante considera conveniente a sus intereses y los de la obra, entonces, incluirá en el Pliego de Licitación, una suma estimada para compensar el escalamiento en los costos del Contrato; sin embargo, esta compensación se hará efectiva solamente si el Contratista puede demostrar la ocurrencia real del escalamiento.

4.8) El ajuste en el Valor del Contrato, en caso de que esté considerado el ajuste por escalamiento de precios, podrá ser determinado mediante fórmulas polinómicas indicadas en las CEC, tanto para la parte en moneda nacional como para la parte en moneda extranjera, si esta última estuviera autorizada en las CEC.

#### 2.1.7.13. Sección 110.13: Cambios en las Leyes y Reglamentos

(a) A excepción de los cambios en las leyes o reglamentos que pudieran alterar fundamentalmente la equidad del Contrato y ocasionar una pérdida manifiesta para el Contratista, imprevisible en la fecha de envío de la oferta, solamente los cambios en la legislación o reglamentación del país podrán tomarse en cuenta para modificar las condiciones financieras del Contrato.

(b) Se tomarán en cuenta casos de modificaciones de cualquier ley, decreto, reglamento o circular de la República que sea de carácter obligatorio (exceptuadas las modificaciones a las leyes fiscales o similares que se rigen por el Artículo-108.02 de estas CGC, y que causen para el Contratista un aumento o una reducción del costo de ejecución de los trabajos no tomados en cuenta en las demás disposiciones del Contrato, que sea igual por lo menos al uno (1) por ciento del valor del Contrato sólo por esta causa). En tales casos, se convendrá un Acuerdo Suplementario entre las partes, a fin de formalizar el aumento o disminución, según fuere el caso, del valor del Contrato. En caso de que las partes no puedan ponerse de acuerdo acerca de los términos del Acuerdo Suplementario en un plazo de treinta (30) días calendario, contados a partir de la fecha de la propuesta de Acuerdo enviada por una de las partes a la otra, se aplicarán las disposiciones del CGC.

#### 2.1.8. OTROS ARTÍCULOS A LOS QUE SE HACE REFERENCIA

##### 2.1.8.1. Sección 103.03: El Pliego de Bases y Condiciones o Documentos de Licitación y Contratación (DLC)

Sección VI- Especificaciones:

- 1 - Pliego de Licitación.
- 2 - Especificaciones Técnicas (Divisiones II y III de las NIC-2000).
- 3 - Normas Ambientales Básicas para la Construcción Vial (NABCV)
- 4 - Especificaciones Técnicas Suplementarias.
- 5 - Especificaciones Especiales (para el Contrato).
- 6 - Planos.
- 7 - Otros.

##### 2.1.8.2. Sección 103.05: Conocimiento Obligatorio de los Documentos de Licitación y Contratación y de las Condiciones que Afectan al Trabajo

1.- Conocimiento Obligatorio de los Documentos de Licitación y Contratación.- El Contratante ha preparado planos y especificaciones que describen la obra propuesta, los trabajos a realizar, los materiales requeridos y los posibles métodos constructivos aceptables para completar satisfactoriamente la construcción. Estos documentos van, además, acompañados de otros que contienen todas las condiciones bajo las cuales será administrado el Contrato y las instrucciones relativas a la presentación de ofertas y adjudicación de



contratos. Es obligación de todo Oferente estudiar detenidamente y a conciencia todos estos documentos ANTES de someter su oferta y pedir oportunamente y por escrito al Contratante, las aclaraciones e interpretaciones que considere necesarias así como la corrección de errores y omisiones por él detectadas en dichos documentos.

1.1) Datos del Subsuelo y de Materiales.- Cuando se disponga de información sobre las condiciones del subsuelo o sobre otros aspectos del Proyecto que puedan interesar a los Oferentes esta será puesta a su orden para su examen o estudio. La Convocatoria indicará qué tipo de información está disponible y el lugar en que los Oferentes podrán examinarla. Esta información podrá incluir datos geofísicos, tales como sismicidad o resistividad y sus interpretaciones. Sobre el particular se advierte a los Oferentes que las interpretaciones de datos geofísicos se basan en opiniones y criterios especializados y se les recomienda encargar a expertos calificados en este campo técnico para que evalúen independientemente dichos datos antes de ser usados en la preparación de la oferta, y que los informes sobre investigaciones del subsuelo no son parte del Contrato.

#### Obstáculos y Condiciones Físicas Adversas

No obstante, si durante la ejecución de las Obras, El Contratista se encontrase con obstáculos físicos o condiciones físicas o del subsuelo no esperadas, o con condiciones climatológicas en el Sitio, o cualquier evento o circunstancia que en su opinión, no eran previsible por el Contratista. El Contratista lo notificará de inmediato y por escrito al Ingeniero, enviando una copia a El Dueño. Al recibir tal notificación, El Ingeniero, si en su opinión dichos obstáculos o condiciones no podrían haber sido razonablemente previstas por el contratista, deberá determinar, la prorroga a que tiene derecho El Contratista, el importe de cualquier gasto en que pueda haber incurrido

El Contratista, a causa de la aparición de dichos obstáculos o condiciones, que se adicionara al Precio Contractual, esto deberá ser notificado a El Contratista, con una copia para el Dueño.

Dicha determinación tendrá en cuenta las instrucciones que El Ingeniero pueda dictarle a El Contratista al respecto y cualquier otra medida, adecuada y razonable, que El Contratista haya podido adoptar a falta de instrucciones específicas de El Ingeniero y que este considerase aceptable.

2.- Condiciones que Afectan al Trabajo.- El probable Oferente deberá inspeccionar por sus propios medios el lugar de la construcción y sus vecindades y familiarizarse con todas las

condiciones topográficas existentes y con las características climatológicas, de suelos y otros materiales así como de las condiciones generales y locales que puedan afectar al costo de los trabajos. La omisión de este paso por parte del Oferente no lo relevará de la responsabilidad de estimar adecuadamente las dificultades y el costo de la ejecución satisfactoria del trabajo.

El Contratante organizará, con bastante anterioridad a la apertura de las ofertas, viajes de inspección con carácter obligatorio para mostrar a los posibles Oferentes, el lugar de la obra, incluyendo yacimientos de materiales, condiciones ambientales y otros aspectos de interés. La fecha y horas de esas inspecciones serán hechas del conocimiento de todos los posibles Oferentes que se inscriban con tal objeto.

El Contratante no asume responsabilidad alguna por cualquier opinión, afirmación o suposición que sobre las condiciones que afectan al trabajo haga cualquiera de sus representantes antes de la presentación de las ofertas, a menos que estuviera incluida en la Convocatoria, especificaciones o cualquier otro documento de licitación.

3.- Evidencia de Cumplimiento.- La simple presentación de la oferta constituirá para el Contratante evidencia suficiente de que el Oferente ha estudiado y conoce a plenitud y perfectamente los DLC, y las condiciones que encontrará en el lugar en cuanto al clima y al tipo, calidad y cantidad del trabajo a ser ejecutado y las características relacionadas con la protección del medio ambiente y los recursos naturales.

#### 2.1.8.3. Sección 103.07: Interpretación de las Cantidades Mostradas en el Pliego de Licitación

Las cantidades mostradas en el Pliego de Licitación son aproximaciones a las cantidades reales y se muestran para poder comparar las ofertas recibidas. El Contratista recibirá pago con base en las cantidades reales del trabajo efectuado y aceptado, o por los materiales suministrados de acuerdo con el Contrato. Las cantidades individuales de trabajo indicadas en el Pliego pueden aumentar o disminuir, o aun ser suprimidas, según se estipula en otra parte de estas especificaciones. Las cantidades mostradas en el Pliego de Licitación serán consideradas como las "cantidades originales del Contrato".

#### 2.1.8.4. Sección 106.08: Gastos

Todos los gastos en que incurran los Oferentes con motivo de la licitación serán hechos por su propia cuenta y no serán reembolsados aunque a la postre sus Ofertas no resultaren aceptadas.

#### 2.1.8.5. Sección 106.02: Planos y Dibujos de Trabajo

Los planos del Proyecto suministrados por el Contratante son de naturaleza general y mostrarán los límites de la construcción, el alineamientos horizontal y vertical de la vía, las pendientes de los taludes, las pendientes del drenaje, las secciones transversales típicas, la ubicación y diseño de todas las estructuras, y un resumen de todos los conceptos de pago que aparecen en la Oferta o Pliego de Licitación. Los planos para puentes mostrarán el arreglo y características generales y aquellos detalles necesarios para la preparación de dibujos de trabajo, de taller o de fabricación.

Los planos serán suplementados mediante los dibujos de trabajo o de taller en la cantidad que fuere necesaria. Tales dibujos serán preparados y suministrados por el Contratista. En ellos se proveerá toda la información detallada necesaria para la fabricación y erección de obras de fábrica (acero estructural, elementos prefabricados, etc.), la erección de obra falsa y andamios, la construcción de ataguías y puentes provisionales y cualquier otro trabajo o detalle constructivo que no aparezca en los planos del Proyecto y para los cuales sean necesarios tales dibujos, a fin de controlar mejor el trabajo. Todos los dibujos de trabajo o de taller deberán ser aprobados por el Ingeniero antes de comenzar la construcción de las obras correspondientes. Tal aprobación en forma alguna eximirá la plena responsabilidad del Contratista sobre la construcción satisfactoria de las obras de conformidad con el Contrato. El Contratista será responsable por la exactitud de las dimensiones y detalles y por la concordancia de dichos dibujos con los planos y especificaciones contractuales.

El Contratista suministrará al Ingeniero, para su examen y aprobación, cuatro (4) copias de cada dibujo, diez (10) días antes del comienzo de la obra correspondiente, a menos que las CEC lo dispongan de otra manera. Estos dibujos serán presentados en hojas que no excedan de 55.9cmx91.4 cm. El Ingeniero los examinará y devolverá al Contratista una de las copias, con las anotaciones que indiquen los cambios o modificaciones requeridas. El Ingeniero no aprobará los dibujos hasta que todos los cambios o modificaciones requeridas hayan sido incorporados en los mismos. Después de haber cumplido con este requisito, el Contratista entregará al Ingeniero cuatro (4) juegos adicionales. Una copia de los dibujos aprobados le será devuelta al Contratista. Mientras estos dibujos no hayan sido aprobados por el Ingeniero, cualquier trabajo hecho o materiales ordenados para la estructura respectiva, serán de la entera responsabilidad del Contratista.

El costo de preparación y presentación de dibujos de trabajo o de taller se considerará incluido dentro de los precios unitarios o globales correspondientes a los varios conceptos de pago del Contrato.

#### 2.1.8.6. Sección 106.04: Documentos Constitutivos del Contrato.

A. Los documentos contractuales firmados por las partes y que forman parte integral del Contrato, son los siguientes:

(a) Formulario del Contrato;

(b) Condiciones Especiales del Contrato (CEC)

(c) Documentación Técnica que contiene la descripción de las obras y las Especificaciones Técnicas;

(d) Cuando se citen como documentos contractuales en las CEC: planos, memorias de cálculo, especificaciones de perforaciones necesarias o resultados de perforaciones ejecutadas y documentación geotécnica, el desglose y los análisis de los precios unitarios y de suma global;

(e) Pliego de Licitación;

(g) Las Condiciones Generales del Contrato (CCGC), y

Los documentos que forman parte del Contrato deberán ser considerados como mutuamente explicativos; en caso de contradicción o diferencia entre los documentos que forman parte integral del Contrato, la prioridad de los mismos será según el orden arriba enumerado.

El Contratista no deberá aprovecharse de errores u omisiones en los planos o en las especificaciones. En caso de que el Contratista descubriese tales errores u omisiones deberá notificar inmediatamente al Ingeniero. Este hará las correcciones e interpretaciones que considere necesarias para cumplir con la intención de los planos y especificaciones.

También quedará entendido que toda falta u omisión en los planos, especificaciones o CEC en relación con cualquier detalle, o descripción detallada sobre cierto aspecto, serán interpretados en el sentido de que prevalecerá la mejor práctica general de ingeniería y que sólo serán empleados materiales y ejecución de primera calidad. Toda interpretación de las especificaciones deberá ser hecha con base en este criterio.



**B. Documentos Contractuales posteriores a la formalización del Contrato.-** El Contrato, una vez formalizado, podrá modificarse sólo mediante convenios escritos sometidos al mismo procedimiento de aprobación que el Contrato. Este será conocido como Acuerdo Suplementario, será elaborado por el Contratista, autorizado por el Ingeniero y aprobado por el Contratante. Se entenderá por modificación todo cambio que no rebase los límites máximos establecidos para la aplicación de los términos del Contrato o de la reglamentación vigente cuyas modificaciones están, si es el caso, tomadas en cuenta bajo las condiciones previstas en el Artículo-110.13 de estas CGC.

#### 2.1.8.7. Sección 106.09: Designación del Ingeniero

Cada proyecto tendrá un Ingeniero designado como representante del Contratante, con autoridad para lo descrito en el Artículo 106.01 de estas CGC. El Contratista será notificado, antes de la iniciación de los trabajos, sobre el nombramiento del Ingeniero. El Ingeniero y el Representante del Ingeniero tendrán calificaciones al menos similares a las exigidas para el Superintendente del contratista.

#### 2.1.8.8. Sección 106.17: Reclamos por Ajustes-Controversias-Arbitramento

**2.- Controversias.-** En caso de controversias entre el Contratista y el Ingeniero con respecto a cualquier disposición del Contrato, se aplicarán y prevalecerán las siguientes regulaciones:

##### **A.- Caso de Proyectos del Gobierno Central, Entes Descentralizados o Autónomos y Municipalidades.**

1.- Exceptuando lo dispuesto en otra forma en el Contrato, cualquier controversia relacionada con un asunto de hecho que surgiere bajo sus disposiciones y sobre el cual no se alcance un acuerdo en el campo directamente con el Ingeniero, será resuelta por el Director de la Unidad Ejecutora o Coordinadora del Programa correspondiente al Proyecto de la Institución Contratante; el Director decidirá por escrito, con prontitud razonable y su decisión la enviará al Contratista por correo o le suministrará en cualquier otra forma, una copia de la misma.

Si lo solicita el Contratista, la decisión del Director de la Unidad Ejecutora o Coordinadora será revisada por el Director de la instancia inmediatamente superior, quien emitirá su resolución por escrito dentro de los QUINCE (15) días siguientes a la solicitud del Contratista para que se revisara el caso. Si el Contratista no quedara satisfecho con esta

decisión, podrá apelar ante la máxima autoridad de la Institución Contratante, quien emitirá su resolución dentro de los TREINTA (30) días siguientes y la comunicará por escrito al Contratista. Si éste no quedare aún satisfecho con la decisión, podrá invocar y acogerse a las disposiciones de este artículo en nota dirigida a la máxima autoridad del Contratante, solicitando el arbitramento de la controversia.

La institución Contratante designará en las CEC, las instancias ante las cuales podrá apelar el Contratista.

##### **B.- Caso de Instituciones no Incluidas en el Gobierno Central.**

Cada institución establecerá sus propias reglas para dirimir controversias, pero ajustándose a las Leyes de la República, si no adopta el procedimiento propuesto en estas CGC. El procedimiento a seguir lo establecerá el Contratante en las CEC.

##### **C.- Caso del Sector Privado.**

Las empresas o instituciones del sector privado, tales como Concesionarios, Organizaciones no Gubernamentales y otras, pueden seguir el procedimiento propuesto en estas CGC o establecer un procedimiento propio, siempre que se ajuste a la Ley.

##### **3.- Arbitramento.-**

3.1) Para los fines del Arbitramento, tanto el Contratante como el Contratista designarán a un Arbitrador de su confianza, si no fuera posible seleccionar a un sólo Arbitrador que decida por ambos. A su vez, los dos Arbitradores designarán a un tercer Arbitrador con el objeto de que dirima las discordias que pudieran surgir entre ambos en el curso de las discusiones y, en último caso, para que dirima unipersonalmente la controversia, si los dos Arbitradores iniciales no lograran alcanzar una decisión. Los Arbitradores tomarán posesión de sus cargos ante un Notario Público o ante un Juzgado competente para lo Civil.

3.2) Cada una de las partes en controversia preparará una exposición concisa y clara de los hechos y deberá acompañar la documentación de soporte que crea conveniente y la que sea solicitada por los Arbitradores. Cada uno de los Arbitradores deberá recibir una copia de estas exposiciones dentro de los SIETE (7) días siguientes a la toma de posesión de sus cargos. Los dos Arbitradores estudiarán la documentación y celebrarán reuniones en las fechas, horas y lugares en que convengan, incluso el sitio de las obras si fuere necesario.





Tendrán derecho a solicitar la actuación del Tercer Arbitrador en cualquier oportunidad. Levantarán y firmarán un Acta de cada reunión con la descripción de los asuntos discutidos.

El fallo o Laudo Arbitral deberá producirse dentro de un plazo de TREINTA (30) días a partir de la toma de posesión de sus cargos, concluyendo la intervención conciliadora o dirimente del Tercer Arbitrador.

Tratándose, como es el caso, de una controversia de índole técnica, en otras palabras, "de hechos" y no "de derechos", la decisión final de los Arbitradores será sin forma ni figura de juicio, según su leal saber y entender, obedeciendo únicamente a lo que su criterio, experiencia, ética profesional y espíritu de equidad les dicten. El Laudo Arbitral especificará las condenas y liquidaciones que resulten del análisis y que fueren necesarias para resolver en forma definitiva la controversia.

3.3) Las calidades personales y profesionales que deberán reunir los Arbitradores serán las siguientes:

3.3.1) Ser profesionales de la Ingeniería, graduados y con la suficiente experiencia y capacidad en el campo del diseño, construcción y supervisión de obras, preferiblemente del tipo vial;

3.3.2) Gozar de buena reputación profesional;

3.3.3) No estar involucrado, directa ni indirectamente, en el asunto bajo controversia; en otras palabras, que no haya conflicto de intereses que puedan influir en su decisión.

3.4) La parte que recurra al Arbitramento deberá depositar ante el Notario Público o en el Juzgado ante el cual hayan tomado posesión los

Arbitradores, el Monto Total de los honorarios de los Arbitradores, valor que será determinado de acuerdo al monto total de lo reclamado, según el Cuadro 106-3 y que será repartido por partes iguales entre ellos.

**CUADRO 106-3**  
**TARIFAS DE HONORARIOS PARA ARBITRAMENTO**  
(No incluye gastos)

| Monto Reclamado en Córdoba | Tarifa Fija | Más el % Indicado: | Sobre lo Reclamado en Exceso de: |
|----------------------------|-------------|--------------------|----------------------------------|
| Hasta 100,000              | 6,000       | .....              | .....                            |
| De 100,001 a 500,000       | 6,000       | 4.0                | 100,000                          |
| Más de 500,000             | 10,000      | 3.0                | 500,000                          |

Los honorarios de los Arbitradores serán costeados por la parte perdedora en caso de que el fallo sea totalmente en su contra. Si el fallo es dividido, los arbitradores determinarán el monto de honorarios que le corresponderá pagar a cada una de las partes en controversia.

3.5) Queda convenido entre el Contratante y el Contratista que al recurrir al Arbitramento como medio de dirimir una controversia de índole técnica, no habrá otro recurso de apelación contra el Laudo Arbitral y que ambas partes aceptarán y acatarán esa decisión como definitiva y que no estará sujeta ni siquiera al recurso extraordinario de CASACIÓN. Que la ejecución de la sentencia será pedida ante el mismo Notario Público o Juez ante quien hubieren tomado posesión los arbitradores, quien emitirá el Certificado Legal de la misma.

3.6) Si, antes de que los arbitradores emitan su fallo, dentro del plazo antes mencionado, las partes en conflicto llegaran directamente a un acuerdo mutuo sobre la controversia, independientemente de los arbitradores, harán constar su acuerdo por escrito en un Acta firmada por ambas partes y por los arbitradores. Los honorarios de los arbitradores serán pagados en su totalidad.

3.7) Los trámites del arbitramento no darán lugar a la suspensión o atraso, ni siquiera parcialmente, de la ejecución de los trabajos objeto del Contrato. La demanda de resolución de una controversia por medio de arbitramento, será presentada por la parte que decida acogerse a las disposiciones de este artículo, en nota escrita entregada por la otra parte; pero, bajo ninguna circunstancia ni pretexto se procederá a ese trámite si esa nota es entregada después de la fecha de Liquidación Final del Contrato, excepto que en la Convocatoria o en las CEC hubiera alguna salvedad al respecto.

### 3. DIVISIÓN II: ESPECIFICACIONES TÉCNICAS (DETALLES DE CONSTRUCCIÓN)

#### 3.1. SUBDIVISIÓN 200: MOVIMIENTO DE TIERRA

##### 3.1.1. SECCIÓN 201: ABRA Y DESTRONQUE

###### 3.1.1.1. Sección 201.01: Descripción

Este trabajo consistirá en la tala, desenraice, destronque, remoción y desecho de toda vegetación, basura, desperdicios y del material objetable existentes dentro de los límites designados del camino o calle, de las áreas de construcción de puentes, de las vías de acceso, de los yacimientos de materiales de construcción y de todas las otras áreas que sean designadas por el Ingeniero, con excepción de aquellos árboles, obstrucciones u objetos que estén destinados a quedar en su sitio o a ser removidos de conformidad con lo estipulado en otras secciones de estas especificaciones. Este trabajo también incluirá la protección contra daños y desfiguración de la vegetación u objetos destinados a permanecer en el sitio.

Debe entenderse que habrá áreas del Proyecto en que sólo se necesitará hacer el Abra; otras en que sólo se hará Destronque y otras en que se efectuarán ambas operaciones, según lo indiquen los planos o el Ingeniero, pero el Concepto de Pago será designado como Abra y Destronque.

El abra y destronque será llevado a efecto con anticipación a las operaciones de excavación y movimiento de tierras y de acuerdo con los requisitos estipulados en estas especificaciones.

###### 3.1.1.2. Sección 201.02: Requisitos para la Construcción: Generalidades

A menos que esté especificado de otra manera en las CEC o mostrado en los planos, el abra y destronque será efectuada en toda la longitud del Proyecto en los anchos especificados más adelante en esta sección. No será pagado ningún trabajo de abra y destronque efectuado fuera de estos límites, a menos que el Ingeniero lo haya autorizado. El Ingeniero designará y marcará los árboles, arbustos, plantas y objetos que no vayan a ser alterados y que el Contratista deberá preservar.

Con el fin de disminuir los daños a los árboles que quedarán en pie, los árboles a talar deberán ser tumbados hacia el centro del área que se esté despejando, si así lo ordena el Ingeniero. A los árboles y arbustos que vayan a ser conservados y que sufran cortes o

descascaramientos, se les aplicará en las superficies afectadas una pintura aprobada de base asfáltica especial para poda de árboles (Ver Artículo-1013.08 h).

Siempre que sea necesario, los árboles serán cortados en secciones de arriba hacia abajo, con el fin de evitar daños a estructuras, otros árboles, propiedades aledañas, trabajadores o el público en general.

###### 3.1.1.3. Sección 201.03: Abra y destronque

**(1) Límites Horizontales.-** El terreno será despejado de todos los objetos superficiales, árboles, troncos, raíces, obstrucciones (incluyendo concreto, mampostería, piedra, chatarra y cosas similares que no estén calificadas como estructuras u obstrucciones a ser removidas bajo la Sección 202) que sobresalgan del mismo y que no estén designados para quedar en su sitio. Estas operaciones serán efectuadas dentro de los siguientes límites:

1.1) Áreas de construcción de la vía, incluyendo estructuras, caminos o calles marginales, rampas, accesos, zanjas y canales con ancho en el fondo de 3.60 metros o más, y todo otro camino o calle accesoria y conexiones a ser construidas. Tales áreas se extenderán hasta un ancho de 1.50 metros hacia afuera de las estructuras y del pie de los taludes de excavaciones y terraplenes, exceptuando los casos en que los taludes vayan a ser redondeados, en los cuales estas áreas serán extendidas hasta los límites exteriores del redondeo;

1.2) Zanjas y canales que tengan un ancho en el fondo de menos de 3.60 metros. Tales áreas serán extendidas hasta un ancho de 50 centímetros más allá de la línea de quiebre del talud;

1.3) Áreas de yacimientos de materiales de construcción existentes dentro del Derecho de Vía;

1.4) Áreas encerradas por lazos y rampas de intercambios de tráfico.

###### **(2) Límites Verticales.**

2.1) No será necesario remover troncos ni raíces ya existentes que no hayan sido alterados ni objetos sólidos no perecederos que vayan a quedar a un mínimo de noventa centímetros (90 cm.) por debajo de la subrasante o taludes terminados;



2.2) En áreas situadas fuera de los límites de excavación y de terraplenado, todo tronco u objeto sólido no perecedero, será recortado a no más de quince centímetros (15 cm.) sobre la superficie del terreno natural o del nivel de aguas mínimas;

2.3) En áreas en que va a ser redondeada la parte alta del talud de cortes, los troncos serán recortados al ras o por debajo de la superficie final del talud.

2.4) El destronque de bancos de préstamo, cambios de cauce y zanjas será necesario solamente hasta la profundidad requerida dentro de dichas áreas.

Excepto en áreas a ser excavadas, los hoyos y depresiones resultantes de la extracción de troncos y obstrucciones, deberán ser rellenados y compactados de conformidad con el Artículo-203.11 de estas especificaciones.

Cuando la vía vaya a ser construida a través de áreas cultivadas y la cosecha de los productos vegetales pueda ser realizada sin ocasionar atrasos extraordinarios al Contratista, éste deberá reprogramar sus operaciones a fin de dar tiempo al propietario de las plantaciones para cosechar. Si esto va a ocasionar atrasos indebidos y costos adicionales al Contratante o al Contratista, a juicio del Ingeniero, no habrá espera y el Contratista hará el abra y destronque de acuerdo con los procedimientos aquí establecidos. Las indemnizaciones a que hubiere lugar serán costeadas oportunamente por el Contratante.

Se deberá evitar, en todo lo posible, la quema de materiales resultantes del Abra y Destronque, pero, si hay necesidad de quemar material perecedero y lo aprueba el Ingeniero, la operación deberá estar bajo la dirección y cuidado constante de un vigilante competente y realizada siempre de tal manera que la vegetación aledaña, las propiedades adyacentes o toda cosa que esté designada a permanecer dentro del Derecho de Vía, no resulte perjudicada. Si la quema de materiales fuera permitida deberá ser efectuada de conformidad con las disposiciones del Artículo-108.19 de estas especificaciones.

En toda quema el Contratista deberá hacer uso de procedimientos de quema de alta intensidad (es decir, incineradores, montones elevados, quema en hoyos y zanjas con aire forzado, etc.) que producen un quemado intenso con pequeña o poco visible emisión de humo durante el proceso de quema. A la conclusión de cada sesión de quemado, el fuego deberá ser completamente extinguido de tal manera que no queden escombros ardiendo.

En caso de que el Ingeniero dé instrucciones al Contratista de no comenzar operaciones de quema, o de suspender tales operaciones debido a condiciones atmosféricas

peligrosas, el material a ser quemado que estorbe subsiguientes operaciones de construcción, será acarreado por el Contratista a lugares provisionales, donde no estorbe dichas operaciones, y posteriormente, si así lo dispone el Ingeniero, será trasladado a un lugar designado donde será quemado.

Aquellos materiales y escombros que no puedan ser quemados y los materiales perecederos, podrán ser eliminados por métodos y en lugares aprobados por el Ingeniero, dentro del Proyecto o fuera de él. Si la eliminación es por entierro, los escombros deberán ser colocados en capas con el material distribuido de tal manera que se evite la formación de bolsas. Cada capa de éstas será cubierta o mezclada con tierra según el método conocido como relleno sanitario, tratando de que queden llenos todos los vacíos. La capa superior de material enterrado deberá quedar cubierta, por lo menos, con treinta centímetros (30 cm.) de tierra u otro material aprobado y deberá ser nivelada, conformada y compactada en forma tal que presente una apariencia agradable.

Si el sitio de desecho se encuentra fuera de la obra, el Contratista deberá hacer todos los arreglos legales necesarios con los dueños de las propiedades, por escrito, para obtener lugares apropiados que estén fuera del alcance de la vista del Proyecto. El costo involucrado será subsidiario de los otros conceptos de pago. Una copia de tales acuerdos será entregada al Ingeniero.

Si así está dispuesto en las CEC, las áreas de desecho deberán ser sembradas, fertilizadas y cubiertas con paja, estiércol, hojas, etc., para su protección, de acuerdo con la Sección-915 de estas especificaciones.

El material leñoso podrá ser desechado por astillamiento. Las astillas de madera pueden ser utilizadas para recubrir las áreas de desecho, control de erosión de taludes, o pueden ser esparcidas uniformemente sobre áreas seleccionadas de acuerdo con indicaciones del Ingeniero.

Toda madera comerciable que se encuentre dentro de la zona a ser despejada que no haya sido removida del Derecho de Vía con anterioridad al comienzo de la construcción, pasará a ser propiedad del Contratista, a menos que se hubiese estipulado de otra manera.

En caso de que en los contratos de adquisición del Derecho de Vía, el Contratante hubiese otorgado a los propietarios del terreno el derecho de propiedad de los árboles utilizables dentro del área cedida, tales arreglos tendrán precedencia sobre el derecho del

Contratista establecido en el párrafo anterior. El Ingeniero notificará al Contratista la existencia de tales compromisos.

Las ramas bajas colgantes, así como aquellas enfermas o de mal aspecto, en árboles o arbustos que han sido designados para quedar en su lugar, deberán ser podadas de acuerdo con las NABCV y las instrucciones del Ingeniero. Las ramas de árboles que se extiendan sobre la calzada de la vía, deberán ser podadas a fin de que dejen una altura libre de seis metros (6.00 m.) sobre la superficie de la calzada mencionada. La poda deberá ser hecha por obreros especializados y de conformidad con prácticas aprobadas.

Los árboles que sean removidas con base en pago individual deberán ser cortados, lo más que se pueda, al ras del terreno, sin eliminar los tocones, a menos que lo dispongan de otro modo las CEC.

#### 3.1.1.4. Sección 201.04: Descortezado (destape)

El Contratista descortezará las zonas indicadas en los planos, o indicadas por el Ingeniero, donde se vaya a hacer una excavación o un terraplén, excepto que no será necesario quitar el césped cortado cuando se vaya a construir un terraplén de más de un metro y cincuenta centímetros (1.50 m) de altura. El descortezado incluye la remoción de la superficie del terreno de materiales tales como maleza, raíces, césped, tierra vegetal, restos de cosechas agrícolas, aserrín y materiales vegetales descompuestos.

En yacimientos y bancos de préstamo, además del abra y destronque que fuere necesario, se realizará el descortezado del área de donde se va a extraer el material a usar en la obra. En estos casos, la profundidad del descortezado o "destape" será la necesaria para eliminar todo material inaceptable, tomando en cuenta que habrá que acopiar en un sitio aprobado el material que servirá posteriormente (incluyendo el material vegetativo) para restaurar el área excavada del yacimiento o banco, cuando lo apruebe u ordene el Ingeniero. El descortezado o "destape" de yacimientos o bancos de materiales será compensado directamente, si aparece el concepto de pago correspondiente en el Pliego de Licitación.

#### 3.1.1.5. Sección 201.05: Eliminación de Setos

Estos deberán ser arrancados o desarraigados en tal forma que se asegure su eliminación completa y permanente. Los arbustos dispersos, no clasificados como setos deberán ser eliminados en igual forma que la especificada para los setos.

#### 3.1.1.6. Sección 201.06: Aceptación

El Abra y Destronque será evaluada visualmente (Artículo-106.12).

El material para curar heridas de árboles será evaluado mediante certificados del Fabricante (Artículo-106.12).

El relleno y compactación serán evaluados bajo la Sección-207.

#### 3.1.1.7. Sección 201.07: Método de Medición

La medición se efectuará por medio de uno o más de los siguientes métodos alternativos:

**(1) Con Base en el Área.** El trabajo por el cual se pagará será el número de hectáreas y fracciones aceptablemente despejadas, destroncadas o en que se hayan hecho ambas operaciones dentro de los límites indicados en los planos, o marcado mediante estaqueo por el Ingeniero en el campo.

Las áreas que no estén mostradas en los planos dentro de los límites del abra y destronque y que no sean marcadas en el campo por el Ingeniero, no serán medidas para fines de pago.

El descortezado será medido en hectáreas.

**(2) Con Base en Suma Global.** Cuando el Pliego de Licitación indique que el Abra y Destronque será pagada con base en una Suma Global, no se medirá el área para fines de pago.

**(3) Con Base Lineal.** Cuando el Pliego de Licitación considere el pago de este concepto por unidad lineal, la medida será hecha a lo largo de la línea central de la vía en construcción, en estaciones de veinte metros (20 metros), o en kilómetros.

La medición de setos removidos será hecha horizontalmente en unidades de 20 metros lineales a lo largo de la línea de setos removidos.

**(4) Con base en Unidades Individuales (Abra Selectiva).** El diámetro de los árboles será medido a una altura de un metro y cuarenta centímetros (1.40 m.) sobre el terreno. Los árboles que midan menos de 30 centímetros de diámetro, no serán medidos para fines de pago.

Los tocones a ser removidos por pago específico serán medidos tomando el diámetro promedio al nivel del corte.



Cuando el Pliego de Licitación considere la medición de los árboles con base en unidades individuales, las unidades serán designadas y medidas de acuerdo con la siguiente lista de tamaños:

| Medida del Diámetro a una Altura de 1.40 m. Sobre el Terreno | Designación del Concepto de Pago |
|--|----------------------------------|
| Más de 30 cm. hasta 90 cm.<br>Más de 90 cm.                  | Pequeño<br>Grande                |

### 3.1.1.8. Sección 201.08: Base para el pago

Las cantidades aceptadas, medidas de acuerdo con lo estipulado en el artículo precedente, serán pagadas al precio de contrato por unidad de medida para los conceptos de pago listados más adelante que figuren en el Pliego de Licitación, precio y pago que serán compensación total por el trabajo prescrito en esta sección, de acuerdo con lo siguiente:

(1) **Con Base en el Área.** Las cantidades medidas serán pagadas al precio unitario de contrato por hectárea, respectivamente, por cada una de los conceptos de pago individuales que aparecen en el Pliego de Licitación.

(2) **Con base en Suma Global.** Cuando el Pliego de Licitación considera el pago de este concepto por suma global, se pagará este precio, el cual será la compensación total por las cantidades estimadas mostradas en el Contrato.

(3) **Con Base Lineal.** Cuando el Pliego de Licitación especifica el pago con base lineal, las cantidades correspondientes serán pagadas al precio unitario de Contrato para este concepto de pago.

(4) **Con base en Unidades Individuales.** Si el Pliego de Licitación establece que el pago será hecho con base en cantidades unitarias individuales, las cantidades aceptadas serán pagadas al precio del Contrato para los conceptos de pago respectivos.

(5) **Exclusiones.** Cuando el Pliego de Licitación no considere una cantidad estimada o un concepto por suma global, este trabajo no será pagado directamente, sino que será considerado como una obligación subsidiaria del Contratista incluida en los otros conceptos de pago del Contrato.

No se pagará por separado por Abra y Destronque ni por destape en bancos de préstamo, de acuerdo con lo estipulado en el Artículo 107.06 de las CGC, a menos que figuren en el Pliego de Licitación específicamente.

Ver los Artículo-106.03 y Artículo-110.04.

Los pagos serán efectuados bajo los siguientes conceptos:

| Concepto de Pago                                  | Unidad de Medida |
|---|------------------|
| 201(1) Abra y Destronque                          | Hectárea         |
| 201(2) Abra y Destronque                          | Estación         |
| 201(3) Abra y Destronque                          | Suma Global      |
| 201(4) Abra y Destronque de Bancos de Préstamo    | Hectárea         |
| 201(5) Destape de Bancos de Préstamo              | Hectárea         |
| 201(6) Remoción de Árboles Individuales Pequeños. | Cada Uno         |
| 201(7) Remoción de Árboles individuales Grandes.  | Cada Uno         |
| 201(8) Remoción de Tocones Individuales Pequeños  | Cada Uno         |
| 201(9) Remoción de Tocones Individuales Grandes.  | Cada Uno         |

### 3.1.2. SECCIÓN 202: REMOCIÓN DE ESTRUCTURAS Y OBSTÁCULOS

#### 3.1.2.1. Sección 202.01: Descripción

Este trabajo consistirá en la eliminación, total o parcial, y en la disposición satisfactoria de todas las construcciones, vallas, estructuras, pavimentos viejos, tuberías abandonadas, y cualesquiera otras obstrucciones que no están señaladas en los planos para permanecer en el sitio de la obra, exceptuando las obstrucciones que deban ser quitadas, disponiendo de ellas de acuerdo con otros conceptos del Contrato. También incluirá la recuperación de los materiales que se indiquen y el relleno de las zanjas, hoyos y fosos resultantes.

#### 3.1.2.2. Sección 202.02: Requisitos para la Construcción: Generalidades

El Contratista deberá ejecutar el trabajo descrito, en el espacio correspondiente al Derecho de Vía o zonas adyacentes que sean propiedad del Contratante o sobre las cuales tenga servidumbre de uso, de acuerdo con lo que muestren los planos u ordene el Ingeniero.

Todo el material designado, recuperable, será retirado, evitando maltrato innecesario, en secciones o partes que puedan ser transportadas fácilmente y, luego, ser almacenados por el Contratista en los lugares del Proyecto ya especificados, o donde fuese indicado en otra forma en las CEC. El material perecedero se manejará de acuerdo con lo que dispone el Artículo-201.03. El material no perecedero puede ser acarreado hasta fuera de los límites de vista del Proyecto, contando con el permiso escrito y legalizado del dueño del terreno donde se deposite dicho material. Al Ingeniero se le deberá entregar copia de todos los permisos concedidos por estos propietarios.

Los hoyos, zanjas o cavidades que deje la demolición de estructuras, se deberán rellenar con material aceptable hasta el nivel del terreno de los alrededores y, si quedasen dentro del prisma de construcción de la vía, el relleno deberá compactarse de acuerdo con el Artículo-203.11.

#### 3.1.2.3. Sección 202.03: Remoción de Puentes, Alcantarillas y otras Estructuras de Drenaje

Los puentes, alcantarillas y otras estructuras de drenaje que estén en servicio, no deberán removerse hasta que se hayan hecho arreglos satisfactorios para acomodar el tráfico.

A no ser que se dispusiera en otra forma, las subestructuras de las estructuras existentes, deberán ser demolidas hasta el fondo natural o lecho del río o arroyo, y las partes de la estructura que se encuentren fuera de la corriente, se demolerán por lo menos, 30 centímetros más abajo de la superficie del terreno natural. En los casos en que tales partes de las estructuras existentes se encontrasen por completo o en parte dentro de los límites de la nueva estructura, serán demolidas hasta donde fuese necesario para acomodar la construcción de la estructura proyectada.

Cuando lo requieran las CEC, todo el concreto que se demoliese, y que fuese de tamaño apropiado para revestimiento, pero que no se necesite en el Proyecto, deberá ser apilado en los lugares que muestren los planos o sean señalados por el Ingeniero.

#### 3.1.2.4. Sección 202.06: Aceptación

La remoción de estructuras y obstáculos será evaluada visualmente.

El rellenado y compactación de las cavidades dejadas por las estructuras serán evaluados bajo la Sección-207.

#### 3.1.2.5. Sección 202.07: Métodos de Medición

Cuando el Contrato estipule que el pago por la remoción de obstrucciones, será hecho sobre la base de una suma global, el concepto de pago incluirá todas las estructuras y obstrucciones que fuesen encontradas dentro del camino, de acuerdo con las disposiciones de esta Sección. Cuando el Contrato estipule que se pagará por la remoción de artículos específicos, la medición será hecha por la unidad estipulada en el Contrato.

Cuando el Pliego de Licitación no incluya conceptos de pago para cualquiera de las remociones mencionadas, dicho trabajo no se pagará directamente sino que será tomado en cuenta como una obligación subsidiaria del Contratista compensada bajo otros conceptos del Contrato.

#### 3.1.2.6. Sección 202.08: Bases para el Pago

Las cantidades aceptadas, medidas de acuerdo con lo estipulado en el artículo precedente, serán pagadas al precio de contrato por unidad de medida para los conceptos de pago que figuren en el Pliego de Licitación, precio y pago que serán compensación total por el trabajo prescrito en esta sección.

Los conceptos para obstrucciones específicas, incluyendo tubería, a ser removida y eliminada bajo conceptos de pago por precio unitario, se pagarán al precio propuesto y contratado por unidad especificada en el Contrato, y este precio será compensación total por remover y disponer de tales objetos, así como la excavación y subsiguiente rellenado inherentes a la remoción de las mismas. El precio también incluirá la recuperación de los materiales objeto de la remoción, su custodia, preservación, almacenamiento en el Derecho de Vía y su disposición, según lo estipulado anteriormente.

Ver los Artículo-106.03 y Artículo-110.04.

### 3.1.3. SECCIÓN 203: EXCAVACIÓN Y TERRAPLENADO

#### 3.1.3.1. Sección 203.01: Descripción

Este trabajo consiste en la excavación de material y la construcción de terraplenes. Esto incluye el suministro, acarreo, acopio, colocación, desecho, formación de taludes, conformación, compactación y acabado de material de tierra y rocoso.

#### 3.1.3.2. Sección 203.01: Definiciones

**a) Excavación.-** La excavación consiste en lo siguiente:

**(1) Excavación en la Vía.-** Se refiere a todo el material excavado dentro de los límites del Derecho de Vía o dentro de las áreas de servidumbre, exceptuando la subexcavación descrita en el numeral (2) más adelante y la excavación estructural tratada en la Sección- 207. La excavación en la vía incluye todo el material encontrado independientemente de su naturaleza o características.

**(2) Subexcavación.-** Se refiere al material excavado de abajo del nivel de la subrasante, en tramos de corte, o de abajo del terreno original, en tramos de terraplén. La subexcavación no incluye el trabajo requerido en los Artículos 203.05, 203.06 (b) y 203.06 (c).

**(3) Excavación de Préstamo.-** Este es material usado en la construcción de terraplenes y es obtenido de lugares fuera del prisma de la vía. La excavación de préstamo incluye **préstamo no clasificado, préstamo selecto y material selecto para la capa superior de la terracería o terraplén.**

**b) Construcción de Terraplenes.-** La construcción de terraplenes consiste en la colocación y compactación de los materiales excavados en la vía o en bancos de préstamo. Este trabajo incluye:

(1) Preparación de la fundación de terraplenes. (2) Construcción del terraplén de la vía. (3) Construcción de escalones (hamacas) para terraplenes a media ladera. (4) Construcción de diques, rampas, promontorios y bermas. (5) Rellenado de áreas subexcavadas, hoyos, fosos y otras depresiones.

**c) Material para Terraplenes.-** Los materiales para la construcción de terraplenes son:

**(1) Roca.-** Se entiende por roca el material que contiene 25 por ciento o más, en volumen, de pedazos de roca mayores de 100mm de diámetro. **(2) Tierra.-** Se le aplica este

término al material que contiene menos del 25 por ciento, en volumen, de pedazos de roca de más de 100mm de diámetro.

**d) Tierra Vegetal Conservada.-** Este es material excavado y conservado de la excavación en la vía y de las áreas de la fundación del terraplén, que es apropiado para el crecimiento de hierba, siembras de cobertura o vegetación nativa. Este material debe ser razonablemente libre de suelo duro, roca, arcilla, sustancias tóxicas, basura y otro material perjudicial.

**(e) Desperdicio.-** Se llama así a material sobrante (o extra) del balance entre excavación y terraplenado, o material inadecuado o material de subexcavaciones que no se puede usar en otro trabajo del Proyecto.

#### 3.1.3.3. Sección 203.03: Materiales

Los materiales deberán cumplir con lo estipulado en los siguientes artículos:

Material de Relleno-Artículo-1003.24 L

Agua- Artículo-1012.01

#### 3.1.3.4. Sección 203.04: Preparación para la Excavación en la Vía y la Construcción de Terraplenes

El área deberá ser despejada de vegetación y obstrucciones de acuerdo con las Sección-201 y Sección-202.

#### 3.1.3.5. Sección 203.05: Conservación de Tierra Vegetal

La tierra vegetal procedente de la excavación de la vía y de las áreas de la fundación de los terraplenes, deberá ser conservada. La tierra vegetal conservada será amontonada en camellones de baja altura ubicados inmediatamente más allá de los límites de redondeo de los taludes de cortes y terraplenes o en otros lugares aprobados. La tierra vegetal será separada de todo otro material excavado.

La tierra vegetal conservada será colocada sobre los taludes terminados, de acuerdo con la Sección-915.

#### 3.1.3.6. Sección 203.06: Excavación de la Vía

Excavar en la forma siguiente:

(a) **Generalidades.**- No perturbar el material o la vegetación existentes fuera de los límites de la construcción.

El material adecuado para rellenar estructuras, acabado de la superficie de la vía, coronamiento de la terracería u otros propósitos, se deberá excavar en una secuencia que permita la colocación del material excavado directamente en su posición final o en montones para su colocación posteriormente.

Incorporar en los terraplenes solo material adecuado. Reemplazar cualquier faltante de material adecuado causado por la disposición prematura de material excavado en la vía. Desechar material inadecuado o excavado en exceso de acuerdo con el Artículo 203.14.

Al final de cada día de operaciones, se deberán conformar y compactar las áreas trabajadas para proveer drenaje y una sección transversal uniforme. Eliminar todo surco y puntos bajos que pudieran retener agua.

(b) **Cortes en Roca.**- Los cortes en roca serán excavados hasta 150mm por debajo de la subrasante del Proyecto, dentro de los límites de la corona de la vía. Rellenar hasta el nivel de la subrasante con material de corona u otro material adecuado. Compactar el material de acuerdo al Artículo 203.11.

(c) **Cortes en Tierra.**- Los cortes en tierra serán escarificados hasta una profundidad de 150 mm debajo de la subrasante, dentro de los límites de la corona de la vía. Compactar el material escarificado de acuerdo con el Artículo 203.11.

#### 3.1.3.7. Sección 203.07: Subexcavación

Excavar el material existente dentro de los límites mostrados en los planos o designados por el Ingeniero. Cuando sea aplicable, tomar secciones transversales. Evitar que material inadecuado llegue a mezclarse con material de relleno. Desechar el material inadecuado de acuerdo con el Artículo 203.14.

#### 3.1.3.8. Sección 203.08: Excavación de Préstamo

Todo el material adecuado excavado en la vía deberá ser utilizado en la construcción de terraplenes. El Contratista no deberá usar excavación de préstamo si ello va a resultar en una excavación extra en la vía; Si el Contratista contraviene esta disposición, la excavación extra de préstamo que resulte, le será deducida de la cantidad total de excavación de préstamo.

El Contratista deberá obtener la aprobación del banco de préstamo de acuerdo con lo estipulado en el Artículo-107.06 y desarrollar y restaurar los bancos de préstamo según lo estipulado en el Artículo-108.31 y las NABCV. El Contratista no deberá excavar más allá de los límites establecidos. Cuando sea aplicable, el Contratista deberá conformar el banco de préstamo para permitir la medición exacta cuando la excavación haya sido completada.

#### 3.1.3.9. Sección 203.10: Construcción del Terraplén

Incorporar en el terraplén solamente material excavado en la vía que sea adecuado. Cuando se agote el material adecuado de la excavación en la vía, suministrar material de préstamo no clasificado para completar el terraplén. Construir el terraplén de la siguiente manera:

(a) **Generalidades.**- Al final de las operaciones de cada día, conformar y compactar la superficie del terraplén para que drene y quede con una sección transversal uniforme. Eliminar todo surco y puntos bajos que puedan retener agua.

Durante todas las etapas de la construcción fijar rutas y distribuir la circulación del equipo de acarreo y nivelación en todo el ancho y longitud de cada capa de material.

Compactar los taludes laterales del terraplén con un rodillo del tipo de impacto (apisonador) o con pasadas de una topadora. Para taludes de 1:1.75 ó más vertical, compactar los taludes a medida que progresa la construcción del terraplén.

(d) **Terraplenes.**- La tierra se deberá colocar en capas horizontales que no excedan de 300 mm de espesor compacto. Los bolones y fragmentos de roca de sobre- tamaño, se deberán incorporar en las capas de 300 mm mediante reducción de tamaño o colocándolos individualmente, según se indicó antes en (c).

Compactar cada capa de acuerdo al Artículo 203.11, antes de colocar la capa siguiente.

(e) **Terraplenes Fuera del Prisma de la Vía.**- Cuando se coloquen terraplenes a un lado de estribos, aleros, pilas o cabezales de alcantarillas, el material se deberá compactar usando métodos que eviten presiones excesivas contra la estructura.

Cuando se coloque un material de terraplén en ambos lados de un muro de concreto o estructura de una caja, conducir las operaciones de manera que el material del terraplén compactado, esté al mismo nivel en ambos lados de la estructura.



Cuando se hinquen pilotes estructurales en lugares de un terraplén, limitar el tamaño máximo de partículas a 100 milímetros.

#### 3.1.3.10. Sección 203.11: Compactación

**(b) Terraplenes.-** Clasificar el material de acuerdo a AASHTO M 145. Para material clasificado A-1 ó A-2-4, determinar la densidad máxima de acuerdo a AASHTO T 180, método D. Para otras clasificaciones de material, determinar el contenido óptimo de humedad y la densidad máxima, de acuerdo con AASHTO T 99, método C.

Ajustar el contenido de humedad del material clasificado A-1 hasta A-5 al contenido de humedad apropiado para la compactación. Ajustar el contenido de humedad del material clasificado como A-6 y A-7, dentro de un margen del 2% del contenido óptimo de humedad.

El material colocado en todas las capas del terraplén y el material escarificado en los tramos en corte se deberá compactar a, por lo menos, el 95% de la densidad máxima. La densidad y el contenido de humedad en el sitio, se deberán determinar de acuerdo a AASHTO T 238 u otros procedimientos de prueba aprobados.

#### 3.1.3.11. Sección 203.13: Taludes, Conformado Y Acabado

Antes de colocar las capas superficiales de agregados se deberán completar los taludes, cunetas, zanjas, alcantarillas, empedrados, zampeados y otras estructuras menores subterráneas. Cortar taludes, conformar y dar acabado de conformidad con lo siguiente:

**(a) Taludeo.-** Todos los taludes de tierra se deberán dejar con superficies ásperas uniformes, excepto lo que se describe en (b) más adelante, sin quiebres notables vistos desde la vía. Excepto en roca sólida, redondear las partes superior e inferior de todos los taludes, incluyendo los taludes de las cunetas y zanjas de drenaje. Redondear el material que recubre la roca sólida hasta el grado en que sea práctico. Descamar todo talud de roca.

Si ocurre un deslizamiento o derrumbe en un talud de corte o terraplén, remover o reemplazar el material y reparar o restaurar todo daño sufrido por la obra. Banquear o bloquear el talud para estabilizar el deslizamiento. Reconformar el talud del corte o terraplén a una condición aceptable.

**(c) Conformación.-** La subrasante se deberá conformar hasta dejar una superficie lisa y de acuerdo con la sección transversal requerida. Los taludes se deberán conformar siguiendo

una transición gradual realizando los acomodos de taludes sin quiebres apreciables. En los extremos de los cortes y en las intersecciones de cortes y terraplenes, acomodar los taludes en los planos horizontal y vertical a fin de fundirse el uno con el otro o con el terreno natural.

**(d) Acabado.-** Se deberá remover todo material de más de 150mm de tamaño de la superficie de la vía. Remover todo material inestable de la superficie de la vía y reemplazarlo con material adecuado. Acabar las superficies de tierra de la vía con una tolerancia de + 15 mm y, las superficies de roca, dentro de + 30 mm de la línea y rasante estaqueadas. Acabar la sección transversal de las cunetas dentro de + 30 mm de la línea y rasante estaqueadas. Mantener un drenaje adecuado de las cunetas y zanjas.

#### 3.1.3.12. Sección 203.14: Desecho de Materiales Inadecuados o Excedentes

Los materiales inadecuados o excedentes serán desechados legalmente fuera del Proyecto. Cuando existe un concepto de pago por desechos, el material de desecho se deberá conformar y compactar en su sitio final de depósito (botadero). El material de desecho no se deberá mezclar con el material proveniente del abra y destronque ni con otros materiales cuya disposición no tiene pago directo.

#### 3.1.3.13. Sección 203.15: Aceptación

El material para terraplenes y tierra vegetal conservada serán evaluados visualmente (Artículo-106.12) y mediante mediciones y ensayos (Artículo-106.12). Ver el Cuadro 106-1 que muestra los requisitos mínimos para muestreo y ensayo.

La excavación y construcción de terraplenes serán evaluados visualmente y mediante mediciones y ensayos (Artículo-106.12) respectivamente. El Cuadro 106-1 muestra los requisitos mínimos para muestreo y ensayo.

La limpieza será evaluada bajo la Sección-201 y Sección-203. La colocación de tierra vegetal conservada será evaluada bajo la Sección-915.

#### 3.1.3.14. Sección 203.16: Método de Medición

La medición será como se indica a continuación:

**(A) Excavación en la Vía.-** Cuando en el Pliego de Licitación aparece el concepto de pago por **excavación en la vía** y no aparece el concepto de pago por construcción de



terraplenes, el material excavado se medirá en metros cúbicos, en su posición original, como sigue:

(1) Incluir como Excavación en la Vía los siguientes volúmenes:

- (a) Excavación en el prisma de la vía definido por las secciones típicas del Proyecto.
- (b) Material rocoso excavado y removido de debajo de la subrasante en tramos de corte.
- (c) Cuando no exista en el Pliego de Licitación el concepto de pago para subexcavación, se incluirán el material inadecuado extraído de debajo de la subrasante y el material inadecuado de debajo de las áreas de terraplén.
- (d) Cunetas y zanjas, exceptuando las contracunetas, que son medidas bajo concepto de pago separado.
- (e) Tierra vegetal conservada.
- (f) Material de préstamo usado en la obra, cuando en el Pliego de Licitación no exista el concepto de pago para préstamo.
- (g) Rocas sueltas dispersas removidas y colocadas en la vía según se requiera.
- (h) Material conservado tomado de los montones y usado en las obras de la Sección 203, exceptuando la tierra vegetal medida bajo la Sección-915.
- (i) Material de deslizamientos y derrumbes no atribuibles al método de operación del Contratista.

(2) La Excavación en la Vía no deberá incluir lo siguiente:

- (a) Descortezado (descapote) y otros materiales de desecho de los bancos de préstamo.
- (b) Sobreexcavación en los taludes de corte en excavación en roca.
- (c) Agua u otro material líquido.
- (d) Material usado en trabajos diferentes a los requeridos en el Contrato.
- (e) Material de la capa superficial de la vía escarificado en su lugar y no removido.
- (f) Material excavado al escalonar los taludes de corte.
- (g) Material excavado al redondear los taludes de corte.

(h) Preparación de la fundación para la construcción de terraplenes.

(i) Material excavado al banquear el terreno para construir terraplenes ("hamacas").

(j) Material de deslizamientos o derrumbes atribuibles al método de operación del Contratista.

(k) Material conservado amontonado por opción del Contratista.

(l) Material excavado fuera de los límites establecidos para el talud.

**(B) Subexcavación.**- Cuando en el Pliego de Licitación aparece el concepto de pago para **subexcavación**, ésta será medida en metros cúbicos en su posición original.

**(C) Préstamo no Clasificado, Préstamo Selecto y Material Selecto para la Capa Superficial de la Corona de la Vía.**- Cuando en el Pliego de Licitación aparece el concepto de pago para **Excavación de Préstamo**, ya sea préstamo no clasificado, préstamo selecto y préstamo selecto para capa superficial, el volumen será medido en metros cúbicos en su posición original o en toneladas. No se medirá la excavación de préstamo cuando ésta haya sido hecha en vez de utilizar los excedentes de la excavación en la vía. Si la excavación de préstamo es medida en metros cúbicos, se tomarán las secciones transversales del terreno original después de descortezarlo (descapotarlo). Al completar la excavación y después de devolver al banco el material de desperdicio, se tomarán las secciones transversales finales antes de colocar de nuevo el material de descapote. Las secciones transversales finales serán tomadas en los mismos puntos de las originales.

**(D) Construcción de Terraplenes.**- Cuando en el Pliego de Licitación aparece el concepto de pago para la **construcción de terraplenes**, la medición se hará en metros cúbicos en su posición final. No se medirá la excavación en la vía, excepto según lo descrito en (3) más adelante. No se harán deducciones de la cantidad de construcción de terraplenes por el volumen ocupado por estructuras menores.

(1) Incluir en la cantidad por construcción de terraplenes, los siguientes volúmenes:

(a) Terraplenes de la vía.

(b) Material usado para rellenar áreas subexcavadas, hoyos, fosos y otras depresiones.

(c) Material usado para restaurar -a su relieve original- caminos o calles que estaban abandonados.



(d) Material usado en diques, rampas, promontorios y bermas.

(2) No incluir en el volumen de construcción de terraplenes, los siguientes:

(a) Volúmenes de preparación de fundaciones para la construcción de terraplenes.

(b) Ajustes por asentamiento del terraplén o de la fundación sobre la cual está colocado. (c) Material usado para redondear los taludes del relleno.

(3) Cuando en el Pliego de Licitación aparecen conceptos de pago para construcción de terraplenes y de excavación en la vía, medir la excavación en la vía en metros cúbicos en su posición original e incluir solamente los siguientes volúmenes:

(a) Material inadecuado subexcavado en cortes y material inadecuado extraído de debajo de los terraplenes, cuando en el Pliego de Licitación no existe concepto de pago para subexcavación.

(b) Material de deslizamientos y derrumbes no atribuibles al método de las operaciones del Contratista.

(c) Zanjas de drenaje, cambios de canal y zanjas de desviación.

**(G) Desecho.**- Medir el desecho o desperdicio en metros cúbicos en su posición final.

Tomar las secciones transversales iniciales de la superficie del terreno después de descapotar el área. Al concluirse la colocación del material de desecho tomar de nuevo las secciones transversales antes de volver a colocar el material de descapote. Las secciones transversales serán tomadas usando los mismos puntos antes y después.

**(H) Descamado de taludes.**-El descamado de taludes se medirá en metros cúbicos en los vehículos de acarreo.

### 3.1.3.15. Sección 203.17 : Base para el Pago

Las cantidades aceptadas, medidas según lo prescrito anteriormente, serán pagadas al precio contractual por unidad de medida para los conceptos de pago enlistados más adelante que aparezcan en el Pliego de Licitación. El pago será compensación total por el trabajo prescrito, en esta sección y de conformidad con Artículo-106.03 y Artículo-110.04.

CUADRO 203-1  
Muestreo y Ensayes

| Material o Producto  | Propiedad o Característica                   | Método o Especificaciones del Ensaye                          | Frecuencia  | Lugar del Muestreo                                     |
|--|--|---|---|--|
| Tierra proveniente de la excavación en la vía, material de relleno de estructuras y préstamo no clasificado. | Clasificación                                | AASHTO M 145  | 1 por cada tipo de material   | Banco del material                                     |
|  | Humedad - Densidad                           | AASHTO T 99 método C o AASHTO T 180 método D <sup>(1)</sup>   | 1 por cada tipo de material   | Banco del material                                     |
|  | Densidad en el sitio y contenido de humedad  | AASHTO T 238 y AASHTO T 239 u otros procedimientos aprobados. | 1 por cada 4000 m <sup>2</sup> pero no menos de 1 por cada capa         | Terraplén de la vía.                                   |
| Préstamo Selecto utilizado como Material de Acabado  | Clasificación                                | AASHTO M 145  | 1 por cada tipo de material   | Banco del material                                     |
| Material Selecto para la capa superficial de la subrasante   | Humedad - Densidad                           | AASHTO T 99 método C o AASHTO T 180 método D <sup>(1)</sup>   | 1 por cada tipo de material   | Material procesado antes de ser incorporado en la obra |
|  | Graduación Límite líquido                    | AASHTO T 27 y AASHTO 11 AASHTO T 89                           | 1 por cada 5000 m <sup>3</sup>  | Material procesado antes de ser incorporado en la obra |
|  | Densidad en el sitio y contenido de humedad. | AASHTO T 238 y AASHTO T 239 u otros procedimientos aprobados. | 1 por cada 300 m <sup>3</sup> (500 t) pero no menos de 1 por cada capa  | Terraplén de la Vía.                                   |
| Material de Superficie   | Clasificación                                | AASHTO M 145  | 1 por cada tipo de material   | Material procesado antes de incorporarlo en la obra    |
|  | Humedad - Densidad                           | AASHTO T 99 método C o AASHTO T 180 método D <sup>(1)</sup>   | 1 por cada tipo de material   | Material procesado antes de incorporarlo en la obra    |
|  | Densidad en el sitio y contenido de humedad. | AASHTO T 238 y AASHTO T 239 u otros procedimientos aprobados. | 1 por cada 300 m <sup>3</sup> (500 t) pero no menos de 1 por cada capa. | Terraplén de la Vía.                                   |

<sup>(1)</sup> Ver Artículo 203.11 (b)

### 3.1.4. SECCIÓN 206: SOBRECARRERO

#### 3.1.4.1. Sección 206.01: Definición

El sobre acarreo consistirá en el transporte autorizado de materiales de excavación más allá de la distancia de acarreo libre.

La distancia de acarreo libre es la distancia especificada que el material excavado deberá ser transportado sin compensación adicional. A no ser que se estipule otra cosa en los documentos del Contrato, la distancia de acarreo libre será de 300 metros.

#### 3.1.4.2. Sección 206.02: Métodos de Medición

Para determinar lo que constituye el sobre acarreo autorizado, debe asumirse que el material que se extrae de la excavación será depositado en el terraplén después de haber sido acarreado según la ruta más corta posible.

La distancia del sobre acarreo para material obtenido dentro de los límites de la vía en construcción y colocado dentro de estos límites, será medida sobre la línea central de la vía. No se reconocerá distancia por movimientos transversales o laterales a partir de la línea



central, exceptuando por los materiales trasladados hacia áreas designadas fuera de los límites de la vía o desde ellas, tales como las áreas de préstamo, Caso 1, áreas de desecho, etc., en cuyo caso las distancias serán medidas por la ruta más corta que sea factible y satisfactoria, según lo determine el Ingeniero, a menos que se indique de otra forma.

Si el Contratista elige acarrear el material por otra ruta y tal ruta es más larga, los cálculos para el pago serán basados en la distancia de sobre acarreo medida por la ruta elegida por el Ingeniero.

Cuando el Pliego de Licitación contenga un concepto de pago "para sobre acarreo sobre la base de metro cúbico - kilómetro o tonelada-kilómetro, la cantidad de metros cúbicos - kilómetros o de toneladas-kilómetros de sobre acarreo a ser pagada, será el número de metros cúbicos o de toneladas, según el caso, de material sobre acarreado multiplicado por la distancia de sobre acarreo medida en kilómetros. La unidad "metro cúbico - kilómetro", es la cantidad de acarreo que se requiere para trasladar un metro cúbico una distancia de un kilómetro más allá de la distancia de acarreo libre. La unidad "tonelada-kilómetro", es la cantidad de acarreo que se requiere para trasladar una tonelada, es decir, 1,000 kilogramos, una distancia de un kilómetro más allá de la distancia de acarreo libre.

Las cantidades aceptadas, medidas de acuerdo con lo estipulado en el artículo precedente, serán pagadas al precio de contrato por unidad de medida para los conceptos de pago listados más adelante que figuren en el Pliego de Licitación, precio y pago que serán compensación total por el trabajo prescrito en esta Sección, excepto lo siguiente:

a. No se hará ningún pago por Sobre acarreo de Préstamo, Caso 2, Relleno para Fundación, material de cimentación y material eliminado en el redondeado de taludes, cuando el redondeo sea un concepto de pago específico.

b. Cuando el Pliego de Licitación no muestre cantidades estimadas de sobre acarreo para los conceptos de pago, el sobre acarreo no será pagado directamente, sino que será considerado como una obligación subsidiaria del Contratista.

### 3.1.5. SECCIÓN 207: EXCAVACIÓN PARA ESTRUCTURAS

#### 3.1.5.1. Sección 207.01: Descripción- Generalidades

Este trabajo consistirá en la excavación necesaria para las cimentaciones de puentes, alcantarillas, subdrenes y otras obras, que de otro modo, no estén mencionadas en las especificaciones. Exceptuando lo estipulado de otra manera para las alcantarillas tubulares, el

relleno de las estructuras terminadas y la remoción de todo el material excavado, deben de hacerse de acuerdo con estas especificaciones y en razonable conformidad con los planos o con lo que disponga el Ingeniero. Este trabajo también incluye lo que fuere necesario para achicar, bombear, drenar, entibar, apuntalar, y la construcción necesaria de ademes y ataguías, así como el suministro de los materiales para tales obras y también la subsiguiente remoción de ademes y ataguías, y la colocación de todo el relleno necesario.

Este trabajo también deberá incluir, el proporcionar y colocar el material de relleno de cimentación necesario, para reponer el material inadecuado que se haya encontrado debajo del nivel de cimentación de las estructuras.

No se hará ninguna clasificación de los distintos tipos de materiales que fuesen encontrados en la excavación.

#### 3.1.5.2. Sección 207.02: Materiales

Los materiales deberán cumplir con lo estipulado de los siguientes artículos y secciones:

Material de Relleno- Artículo-1003.24L

Relleno Estructural- Artículo-.1003.20

Concreto- Sección-602

Relleno de Fundación- Artículo-1003.24A

Concreto para Sellar- Sección-602

Préstamo no Clasificado- Artículo-1003.24E

#### 3.1.5.3. Sección 207.03: Requisitos para la Construcción-Abra y Destronque

Antes de comenzar las operaciones de excavación en cualquier área, todas las operaciones de Abra y Destronque necesarias deberán haber sido llevadas a cabo de acuerdo con la Sección-201.

#### 3.1.5.4. Sección 207.04: Excavación

a) Para todas las Estructuras.- El Contratista deberá avisar al Ingeniero, con suficiente anticipación, del comienzo de cualquier excavación para que se puedan tomar las elevaciones y medidas de las secciones transversales del terreno original. El terreno natural contiguo a la estructura no deberá ser alterado sin permiso del Ingeniero.



Las zanjas o fosos de fundación para las estructuras o cimientos de las mismas, deberán ser excavados hasta los límites, rasantes o elevaciones mostradas en los planos, o según fuesen replanteados por el Ingeniero. Estas, deberán ser de suficiente tamaño para permitir la colocación de las estructuras o de los cimientos del ancho y longitud especificados. El nivel de desplante de los cimientos según se muestren en los planos, se deben considerar solamente aproximadas, y el Ingeniero puede ordenar por escrito los cambios en dimensiones o niveles de desplante de los cimientos que pudiese considerar necesarios para asegurar una cimentación satisfactoria.

Los peñascos, troncos y cualquier otro material objetable, que fuesen encontrados durante la excavación, deberán ser retirados del sitio.

El Contratista debe informar al Ingeniero cada vez que termine una excavación, y ningún cimiento, ni material de lecho, ni alcantarilla de tubo deberá ser colocada, hasta que el Ingeniero haya aprobado la profundidad de la excavación y la clase del material de cimentación.

**b) Estructuras que no sean Alcantarillas de Tubo.-** Todo el material suelto deberá ser extraído del área de cimentación, y el material duro deberá ser cortado hasta obtener una superficie firme, ya sea plana, escalonada o dentada, según lo ordene el Ingeniero. Todas las fisuras o hendiduras, deberán ser limpiadas y rellenadas con mortero. Toda piedra suelta y desintegrada y los estratos de pequeño espesor, deberán ser removidos. Cuando el cimiento tenga que apoyarse sobre material que no sea roca, la excavación hasta el nivel de desplante no deberá completarse sino hasta un poco antes de que vaya a ser colocado el cimiento. Cuando, a juicio del Ingeniero, el material en que vaya a desplantarse el cimiento fuese blando, fangoso o de otro modo inadecuado, el Contratista deberá remover el material inadecuado y rellenar con material granular aprobado (Ver Artículo-1003.24 A). Este relleno deberá ser colocado y compactado en capas de 15 centímetros de espesor cada una, hasta alcanzar nivel de cimentación.

Cuando se utilicen pilotes para la cimentación, la excavación de cada foso deberá estar terminada antes de ser hincados los pilotes, y cualquier relleno para cimentación deberá ser colocado después de que los pilotes hayan sido hincados. Una vez terminada esta operación, todo el material suelto, desplazado, deberá ser retirado, dejando un lecho liso y sólido para recibir el cimiento.

### 3.1.5.5. Sección 207.05: Utilización de los Materiales excavados

Todo el material excavado, siempre que sea adecuado, deberá ser utilizado como relleno o terraplén. El material excedente, aun cuando provisionalmente fuese permitido que quede dentro del cauce de la corriente, finalmente se deberá retirar de forma que no obstruya y contamine la corriente ni perjudique en modo alguno la eficiencia o apariencia de la estructura. En ningún momento se deberá depositar ningún material excavado de manera que ponga en peligro la construcción parcialmente terminada o provoque sedimentación en los cursos o reservorios de agua.

### 3.1.5.6. Sección 207.07: Relleno y Terraplenes para Estructuras que no sean Alcantarillas de Tubo

**(a) Rellenado.-** Las zonas excavadas alrededor de las estructuras, deben ser rellenadas con material granular permeable (Ver Artículo-1003.24 L), colocado en capas horizontales que no excedan de 15 centímetros de espesor, hasta alcanzar el nivel original del terreno. Cada capa deberá ser humedecida o secada, según sea necesario, y compactada totalmente con el equipo apropiado.

Al hacer rellenos o terraplenes detrás de estribos, pilas o muros, hasta donde sea posible, el material deberá ser colocado simultáneamente, aproximadamente, a la misma altura en ambos lados de la estructura. Si las condiciones exigiesen la colocación del relleno o terraplén hasta una altura notablemente más alta en un lado que en el contrario, el material adicional en el lado más alto no deberá ser colocado hasta que el Ingeniero haya otorgado su permiso y además, es preferible no hacerlo hasta que la estructura tenga 14 días de edad o hasta que los ensayos hechos por el laboratorio, bajo la supervisión del Ingeniero, permitan comprobar que el concreto ha alcanzado suficiente resistencia para soportar las presiones producidas por los métodos de construcción utilizados o que los materiales de relleno han sido colocados sin daños o deformaciones en la estructura que excedan un factor de seguridad adecuado.

No serán colocados ni rellenos ni terraplenes detrás de las paredes de cajas de concreto reforzado, estribos o estructuras de marcos rígidos, hasta que la losa superior haya sido colocada y curada adecuadamente. Detrás de estribos sostenidos en su parte superior por la superestructura y detrás de los aletones de cajas y puentes, los rellenos y terraplenes deberán ser levantados simultáneamente detrás de ambos estribos o aletones opuestos.



Todos los terraplenes adyacentes a estructuras, deberán construirse en capas horizontales, compactadas según se prescribe en el Artículo-203.10, excepto que se permitirá el uso de apisonadoras mecánicas para obtener la compactación exigida. Se deberá poner especial cuidado para evitar que los rellenos produzcan "acción de cuña" contra la estructura y los taludes que limitan o están dentro del área por rellenar, deberán ser escalonados o dentados para evitar la acción de cuña. La colocación del material para los terraplenes y el escalonado de los taludes, deberá hacerse en tal forma que continuamente haya una berma horizontal de material concienzudamente compactado en una longitud por lo menos, igual a la altura del estribo o muro contra el cual se coloque el relleno, exceptuando donde el suelo original, no alterado, interfiriese dentro de esta área.

El relleno estructural y el relleno de fundación serán evaluados de acuerdo con el Cuadro 207-1.

**(b) Compactación.-** El contenido óptimo de humedad y la densidad máxima serán determinados de acuerdo con la norma AASHTO T 99, método C. Se ajustará el contenido de humedad del material de relleno a un valor adecuado para la compactación.

El material será colocado en cada capa de relleno a, por lo menos, el 95 por ciento de la densidad máxima. La densidad y contenido de humedad **in situ** serán determinados de acuerdo con AASHTO T 238 y T 239 u otros procedimientos aprobados.

#### 3.1.5.7. Sección 207.09: Aceptación

Los materiales de relleno, de lecho y de relleno de fundación serán evaluados visualmente y por medio de mediciones y ensayos. El Cuadro 207-1 muestra los requisitos mínimos para el muestreo y ensayos. (Ver Artículo-106.12).

La excavación estructural y el rellenado serán evaluados visualmente y mediante mediciones y ensayos. (Ver Artículo-106.12).

El abra y destronque será evaluada bajo las Sección-201 y Sección-202.

El concreto para sellado será evaluado bajo la Sección-602.

#### 3.1.5.8. Sección 207.10: Métodos de Medición: Excavación para Estructuras

El volumen de excavación que se pagará, consistirá en la cantidad de metros cúbicos de material aceptablemente excavado de acuerdo con los planos o con las instrucciones por

escrito del Ingeniero, medidos en su posición original. En ningún caso la medición para pago incluirá los siguientes volúmenes:

1) El volumen excavado fuera de los planos verticales paralelos, situados a 45 centímetros de: a) Las líneas netas de los cimientos o fundaciones; y b) Las paredes interiores de las alcantarillas de tubo y de arco en su dimensión horizontal más ancha.

2) El volumen excavado fuera de las líneas netas de la excavación, mostradas en los planos para los subdrenes y el relleno colocado fuera de los límites de "relleno para fundación", que haya establecido el Ingeniero.

4) El volumen de agua u otro líquido resultante de las operaciones de construcción, y que pueda ser bombeado o drenado.

5) El volumen de cualquier excavación efectuada con anterioridad al levantamiento de las secciones transversales del terreno original sin alterar.

7) El, volumen de excavación para cimentación que se ordene a una profundidad mayor de 1.50 metros por debajo del nivel de desplante de tales cimientos mostrado en los planos originales del Contrato, a menos que el Pliego de Licitación incluya un concepto de pago para excavación ordenada por debajo de los niveles de desplante mostrados en los planos de los cimientos individuales.

9) La cuña de material que sea necesario para dar estabilidad a las paredes de las excavaciones y seguridad al personal que trabaja dentro de la excavación. El Contratista deberá incluir este costo como subsidiario en su oferta pues no habrá pago directo ni por la remoción de derrumbes ni por el entibamiento de la excavación.

#### 3.1.5.9. Sección 207.09: Excavación para Puentes

El volumen de excavación señalado en los planos o en las Especificaciones Especiales como "Excavación para Puentes", se medirá como se indica adelante, y para fines de pago se llevará cuenta separada de la excavación para todas las demás estructuras.

El volumen de excavación para puentes a pagar, será el volumen excavado dentro de los planos verticales paralelos, situados 45 centímetros hacia afuera de las líneas netas de los cimientos. Estos planos verticales definirán el volumen de excavación a pagar, independientemente de los volúmenes excavados dentro y fuera de ellos.



### 3.1.5.10. Sección 207.12: Relleno para Cimentación

El volumen del relleno para cimentación a pagar será la cantidad del material granular especial, efectivamente entregado y colocado bajo el nivel de desplante de las estructuras, medido en metros cúbicos en su posición final, según lo especificado y ordenado, completo en su lugar y aceptado.

### 3.1.5.11. Sección 207.13: Relleno Estructural

El relleno estructural será medido en metros cúbicos ya colocado y compactado. Se limitará el volumen de relleno estructural medido en su posición final, al colocado dentro de planos verticales a 45 centímetros afuera y paralelos a las líneas netas de zapatas o fundaciones. Se usarán estos planos verticales para determinar las cantidades de pago independientemente de la cantidad de relleno colocado fuera de estos planos.

### 3.1.5.12. Sección 207.15: Bases para el Pago

Las cantidades aceptadas, medidas de acuerdo con lo estipulado en el artículo precedente, serán pagadas al precio de contrato por unidad de medida para los conceptos de pago listados más adelante que figuren en el Pliego de Licitación, precio y pago que serán compensación total por el trabajo prescrito en esta sección, con las siguientes excepciones:

1) Cualquier excavación para cimentación de estructuras que fuese ordenada a una profundidad mayor de 1.50 metros por debajo del nivel de desplante mostrado en los planos originales del Contrato, será pagada según lo estipulado el Artículo-110.05, a no ser que se incluya en el Pliego de Licitación, un concepto de pago por excavación ordenada por debajo del nivel de desplante de la cimentación.

2) El concreto será medido y pagado de acuerdo con lo estipulado en la Sección-602 de estas especificaciones.

3) Cualquier excavación del camino o de préstamo que se necesite como excedente de la cantidad excavada para estructuras, será medida y pagada de acuerdo con lo estipulado en la Sección-203 de estas especificaciones.

Ver los Artículos-106.03 y Artículo-110.04.

CUADRO 207-1  
Muestreo y Ensayes

| Material o Producto          | Propiedad o Característica                      | Método o Especificaciones del Ensaye                          | Frecuencia  | Lugar del Muestreo  |
|------------------------------|---|---|---|---|
| Relleno Estructural          | Graduación                                      | AASHTO T 27 y AASHTO T 11                                     | 1 por cada tipo de material   | Banco de material o en el montón acopiado.                    |
| Préstamo no Clasificado      | Limite Líquido                                  | AASHTO T 89   | 1 por cada tipo de material   | En el material procesado antes de incorporarlo en la obra.    |
| Material de Lecho, Clase C   | Humedad - Densidad                              | AASHTO T 99 método C  | 1 por cada 200 m <sup>3</sup> pero no menos de 2 por cada instalación | En el material compactado.                                    |
|                              | Densidad <i>in situ</i> y Contenido de humedad  | AASHTO T 238 y AASHTO T 239 u otros procedimientos aprobados. |   |   |
| Material de Lecho, Clase B   | Graduación                                      | AASHTO T 27 y AASHTO T 11                                     | 1 por cada tipo de material   | Fuente del material.  |
| Relleno de Fundación         | Clasificación                                   | AASHTO M 145  | 1 por cada tipo de material   | Banco de material o en el montón acopiado.                    |
| Relleno Granular Selecto     | Humedad - Densidad                              | AASHTO T 99 método C<br>AASHTO T 27 y AASHTO 11               | 1 por cada tipo de material<br>1 por cada 5000 m <sup>3</sup>         | En el material procesado antes de ser incorporado en la obra. |
| Relleno para Muros Encabados | Densidad <i>in situ</i> y contenido de humedad. | AASHTO T 238 y AASHTO T 239 u otros procedimientos aprobados. | 1 por cada 200 m <sup>3</sup> pero no menos de 2 por cada instalación | En el material compactado.                                    |

## 3.2. SUBDIVISIÓN 500: PAVIMENTOS RÍGIDOS Y SEMI-RÍGIDOS

### 3.2.1. SECCION 501: PAVIMENTOS DE CONCRETO DE CEMENTO HIDRÁULICO

#### 3.2.1.1. Sección 501.01: Descripción

Este trabajo consiste en la construcción de un pavimento de concreto de cemento Portland, simple o reforzado, con inclusión de aire o no, según se especifique, de acuerdo con estas especificaciones y en conformidad sustancial con las líneas, rasantes, espesores, secciones transversales típicas, mostrados en los planos o establecidos por el Ingeniero.

#### 3.2.1.2. Sección 501.02: Materiales

Los materiales deberán llenar los requisitos estipulados en los artículos indicados a continuación:



| MATERIAL                            |                                   |
|-------------------------------------|-----------------------------------|
| Cemento Portland                    | <a href="#">Artículo-1001.01</a>  |
| Agregado fino                       | <a href="#">Artículo-1003.01</a>  |
| Agregado grueso                     | <a href="#">Artículo-1003.02</a>  |
| Rellenadores y Selladores de Juntas | <a href="#">Artículo-1005.01</a>  |
| Acero de refuerzo                   | <a href="#">Artículo-1009.01</a>  |
| Materiales para curar               | <a href="#">Artículo-1011.01</a>  |
| Aditivos para inclusión del aire    | <a href="#">Artículo-1011.02</a>  |
| Aditivos químicos                   | <a href="#">Artículo-1011.03</a>  |
| Agua                                | <a href="#">Artículo-1012.01a</a> |
| CFAH (Fly Ash)                      | <a href="#">Artículo-1012.10</a>  |
| Adhesivos de Resina Epóxica         | <a href="#">Artículo-1012.16</a>  |
| Lechada de Cemento                  | <a href="#">Artículo-1012.15</a>  |

### 3.2.1.3. Sección 501.03: Requisitos para la Construcción-Composición de la Mezcla (Diseño de la Mezcla de Concreto)

Diséñese la mezcla de concreto de acuerdo con lo estipulado en el Artículo-602.03. Ajustar el diseño a lo indicado en el Cuadro 501-1.

CUADRO 501-1  
DOSIFICACIÓN Y CONDICIONES DEL CONCRETO PARA PAVIMENTOS

| Relación Agua/Cemento (Máxima) | Temperatura de Concreto | Revenimiento | Contenido de Aire (%) | Tamaño del Agregado <sup>(1)</sup> (AASHTO M 43) | Resistencia a la Compresión a los 28 días (Mínima) |
|--------------------------------|-------------------------|--------------|-----------------------|--|--|
| 0.49                           | 20 ± 10°C               | 40 ± 20 mm   | 4 ½ mín.              | No. 57 ó 67                                      | 25 MPa   |

Se podrá usar en el diseño de la mezcla de concreto otros tamaños de agregado menores que el No. 57 ó 67 de la AASHTO M 43; sin embargo, si el tamaño nominal máximo del agregado es de 12.5 mínimo o menor, incorpórese, por lo menos, 5% de aire. Provéase cemento Portland de los Tipos I ó II.

### 3.2.1.4. Sección 501.04: Equipo

El equipo y las herramientas necesarias para el manejo de los materiales y la ejecución de todas las partes de la obra deberán ser aprobados por el Ingeniero en cuanto a diseño, capacidad y condición mecánica. El equipo deberá encontrarse en el sitio de trabajo con suficiente anticipación al comienzo de las operaciones de construcción, para que pueda ser examinado detenidamente y aprobado.

#### I. Planta y Equipo de Dosificación.-

1.1. **Generalidades.-** La planta de dosificación incluirá silos, tolvas pesadoras y básculas para el agregado fino y para cada tamaño de agregado grueso. Si va a usar cemento a granel, deberá incluirse un silo, tolva y báscula aparte para el cemento. Las tolvas pesadoras deberán estar debidamente selladas y provistas de troneras para evitar el levantamiento del polvo durante la operación. Se deberá contar con dispositivos de seguridad aprobados, que sean conservados en buen estado, para la protección de todo el personal empleado en la operación, inspección y prueba de la planta. La planta de dosificación deberá estar equipada de un medidor adecuado, no reajutable, que marque correctamente el número de bachadas dosificadas;

1.2. **Silos y tolvas.-** El equipo incluirá silos y tolvas con compartimientos separados para los agregados finos y para cada tamaño de agregado grueso;

1.3. **Básculas.-** Las básculas para pesar los agregados y el cemento podrán ser del tipo de brazo o de carátula sin resorte. Tendrán una precisión del 0.5 por ciento, dentro del margen establecido para su funcionamiento.

Cuando se utilice una báscula de brazo, deberá estar provista de una carátula de aviso que advierta al operador el momento en que se aproxima la carga requerida en la tolva pesadora. En el brazo de la báscula deberá haber dispositivos que indiquen claramente las posiciones críticas. El brazo y la carátula de aviso deberán estar bien a la vista del operador mientras esté cargando la tolva y éste deberá tener fácil acceso a todos los controles.

Las básculas deberán ser inspeccionadas y selladas con la frecuencia que el Ingeniero opine que sea necesario para asegurar su continua exactitud. El Contratista deberá tener disponibles no menos de 10 pesas de 25 kilogramos cada una para la comprobación frecuente de todas las básculas, y deberá proveer la manera de levantar las pesas, cuando esto sea necesario;





**1.4. Dispositivos Automáticos Para Pesar.-** A menos que las CEC lo estipulara de otra manera, para proporcionar los agregados y el cemento a granel, las plantas dosificadoras deberán estar equipadas de dispositivos pesadores automáticos de un tipo aprobado;

**2. Mezcladoras.-**

**2.1. Generalidades.-** El Concreto podrá ser mezclado en el sitio de la construcción, en una planta central o bien, total o parcialmente, en camiones mezcladores. Cada camión mezclador deberá tener fija, en un lugar prominente, una placa del Fabricante que indique la capacidad del tambor en términos del volumen de concreto mezclado y la velocidad de rotación del tambor mezclador o de las paletas;

**2.2. Mezcladoras Estacionarias.-** La mezcla deberá ser hecha en una mezcladora aprobada capaz de revolver los agregados, el cemento y el agua en una masa completamente homogénea y uniforme, dentro del período de revoltura especificado, y de descargar la mezcla sin segregación.

Cada pavimentadora o mezcladora estacionaria deberá estar equipada con un dispositivo aprobado de regulación del ciclo de revoltura que automáticamente tranque la palanca de descarga cuando el tambor haya sido cargado, y la suelte al final del período de revoltura. Este dispositivo deberá estar equipado con un timbre u otro sistema de aviso adecuado, que sea, ajustable para dar una señal claramente audible cada vez que la palanca de descarga quede suelta. En caso de falla de este dispositivo regulador del ciclo, la mezcladora podrá seguir siendo utilizada durante el resto del día mientras se repara la falla, siempre que cada bachada sea mezclada durante 90 segundos.

La mezcladora también deberá estar equipada con un contador de bachadas adecuado, no reajutable, que correctamente marque el número de bachadas mezcladas.

Las mezcladoras deberán ser limpiadas a intervalos apropiados. Las paletas que van dentro del tambor o tambores deberán ser reparadas o reemplazadas cuando se desgasten 2.0 centímetros o más. El Contratista deberá (1) tener disponible en el lugar de la obra una copia del diseño del Fabricante, que muestre las dimensiones y arreglos de dichas paletas con respecto a la altura y profundidad originales, ó (2) marcar señales permanentes en las paletas en el límite de 2 cm. hacia adentro del borde de la paleta de cuando está nueva, para indicar cuándo se ha llegado al desgaste máximo. Es recomendable taladrar agujeros de 6.3 milímetros cerca de cada extremo y en el punto medio de cada paleta, como referencia para medir el desgaste;

**2.3. Camiones Mezcladores y Camiones Agitadores.-**

Los camiones mezcladores empleados para la revoltura y transporte del concreto, y los camiones agitadores empleados para transportar concreto mezclado en una planta central, deberán llenar los requisitos aplicables de la Norma AASHTO M 157;

**2.4. Camiones no agitadores.-** Los cajones del equipo no agitador para transporte de concreto, deberán ser recipientes de metal lisos, que no dejen escapar el mortero, capaces de descargar el concreto a una velocidad controlada y satisfactoria, sin segregación. El concreto deberá ser descargado desde el fondo del recipiente. En caso de que la descarga se efectúe inclinando el cajón, la caída de la carga deberá ser retrasada por un deflector apropiado. Cuando fuesen necesarias para protección, el Contratista proporcionará cubiertas adecuadas.

**3. Equipo de Acabado.- 3.1. Máquina Acabadora.-** La máquina acabadora o terminadora, deberá estar equipada, por lo menos, con dos codales transversales del tipo oscilante u otros aditamentos comparables para alisar el concreto según se requiere en el Artículo-501.13.

**3.2. Vibradores.-** Los vibradores, para vibrar las losas del pavimento de concreto en todo su ancho, podrán ser del tipo superficial a batea o del tipo interno de tubo sumergido o de cabezas vibratoras múltiples. Los vibradores pueden estar fijos al esparcidor o máquina acabadora o estar montados sobre un vehículo separado. No deberán entrar en contacto con los dispositivos de transferencia de la carga a través de las juntas ni con las formaleas de subrasante o laterales. La frecuencia de los vibradores superficiales no deberá ser menor de 3,500 impulsos por minuto, y la frecuencia de los de tipo interno no deberá ser menor de 5,000 impulsos por minuto, para los vibradores de tubo, y no menor de 7,000 impulsos por minuto, para los de cabeza vibradora.

Cuando se usen vibradores internos del tipo de cabezas vibratoras, operados a mano o conectados a máquinas esparcidoras o acabadoras, cerca de los moldes, deberán tener una frecuencia de no menos de 3,500 impulsos por minuto.

**4. Sierra Cortajuntas.-** Cuando se ha determinado o especificado que las juntas sean aserradas, el Contratista deberá proveer equipo para este fin, en número adecuado y suficiente potencia para efectuar el aserrado de las juntas con una sierra de hoja con filo de diamante enfriada por agua, o con una rueda abrasiva de las dimensiones y velocidad requeridas. El Contratista deberá además, disponer de por lo menos, una unidad de reserva en



buen estado de funcionamiento. Durante todo el tiempo que tomen las operaciones de aserrado, el Contratista deberá mantener en el lugar de la obra una amplia existencia de hojas de repuesto. Para el aserrado durante la noche el Contratista deberá instalar un sistema de iluminación artificial eficiente. Todo este equipo mencionado deberá estar disponible en la obra desde antes del comienzo y durante la colocación del concreto.

**5. Formaletas.-** Las formaletas laterales rectas serán de metal con un espesor de, por lo menos 5.6 milímetros y serán suplidas en secciones de no menos de 3.05 metros de largo. Las formaletas tendrán una profundidad por lo menos igual al espesor prescrito para el borde de la losa de concreto sin la junta horizontal, y un ancho de la base, por lo menos, igual a la profundidad de dichas formaletas. Para las curvas con radio de 30 metros o menos, se emplearán formaletas flexibles o curvas que tengan el radio adecuado y un diseño aceptable.

Las formaletas deberán estar provistas de dispositivos adecuados para asegurar su fijación, de manera que cuando estén colocadas resistan, sin flexión ni asentamientos visibles, el impacto y la vibración que ocasione el equipo de compactación y acabado. Las formaletas que hayan sido reparadas no deberán ser utilizadas hasta que hayan sido inspeccionadas y aprobadas.

No será permitido el uso de formaletas compuestas de piezas ensambladas, excepto cuando el área total de pavimento de cualquier espesor especificado en el Proyecto, sea menor de 1,500 metros cuadrados. La cara superior de la formaleta no deberá tener diferencias de más de 4 milímetros en 3 metros con la superficie plana exacta y el costado no deberá variar en más de 6 mm. Las formaletas deberán contar con aditamentos para trabar herméticamente los extremos de empalmes y asegurar su inmovilidad.

#### **3.2.1.5. Sección 501.06: Colocación de las Formaletas**

**1.** La fundación de las formaletas laterales deberá ser dura y ajustada a las elevaciones de la subrasante, a fin de que dichas formaletas queden firmemente apoyadas en toda su longitud y en rasante.

Si en algún lugar a lo largo de las formaletas, la corona de éstas quedare por debajo de la rasante establecida, se escarificará la subrasante y se rellenará la depresión con material granular aprobado, en capas de centímetro y medio o menos de espesor, en anchos no, menores de 45cm. a cada lado de la formaleta y se compactará debidamente. Los

promontorios o áreas de la subrasante o subbase que rebasen el nivel requerido serán corregidos por medio de apisonado o corte a ambos lados de la base de la formaleta.

**2.** Las formaletas serán colocadas con suficiente anticipación a la colocación del concreto para así facilitar la ejecución y aprobación de todas las operaciones que hay que hacer a lo largo y a los lados de ellas. Después de que las formaletas hayan sido colocadas de conformidad con la rasante correcta, se deberá apisonar ampliamente la subrasante o subbase, a máquina o a mano, a ambos lados de la base de dichas formaletas.

#### **3.2.1.6. Sección 501.08: Manipulación, Medición y Dosificación de los Materiales**

El sitio de la planta de dosificación, el arreglo de la misma, el equipo y las disposiciones para el transporte del material deberán ser tales que se asegure un abastecimiento continuo de material para el trabajo. El acopio de los agregados deberá cumplir con lo dispuesto en el Artículo-107.08.

Todos los agregados lavados y los producidos o manipulados por medios hidráulicos, deberán ser acopiados o ensilados con tiempo suficiente para que drenen la humedad, por lo menos, durante 12 horas antes de su uso en la fabricación del concreto.

El agregado fino y cada tamaño de agregado grueso deberán ser pesados separadamente y descargados en tolvas en las cantidades respectivas fijadas por el Ingeniero en la dosificación de trabajo. El cemento será medido por peso. Para pesar el cemento se utilizarán básculas y tolvas separadas que cuenten con un dispositivo que indique con seguridad la descarga completa de la bachada de dicho material en la tolva de dosificación.

Cuando la mezcla sea hecha en el sitio de la obra, los agregados deberán ser transportados de la planta de dosificación hasta la mezcladora, en cajas que contengan bachadas completas, cajones (tinajas) de camiones u otros recipientes de capacidad y construcción adecuada para transportar debidamente el volumen requerido. Es apropiado el uso de camiones con tinajas de varios compartimientos que contienen cada uno el volumen correspondiente a una bachada y provistos de particiones que separen, una bachada de otra y eviten que el agregado se escurra de un compartimiento al otro durante el acarreo o volcadura.

Cuando sea usado cemento a granel, el Contratista deberá utilizar un método adecuado para la manipulación del cemento desde la tolva pesadora al recipiente de transporte o descargarlo en la bachada misma, para su traslado hasta la mezcladora, por



medio de una canaleta de descarga, manga u otro dispositivo aprobado, para evitar pérdidas de cemento y asegurar en cada bachada el contenido especificado.

El cemento a granel deberá ser transportado a la mezcladora en compartimientos herméticos que lleven la cantidad total de cemento requerido para cada bachada, o entre el agregado grueso y el fino, si no estuviese prohibido por las especificaciones especiales. Cuando el cemento sea puesto en contacto con los agregados, las bachadas podrán ser rechazadas a menos que sean mezcladas antes de que hayan transcurrido 1 1/2 horas después de producido dicho contacto. El cemento podrá ser transportado encima de los agregados, si va en sus bolsas originales en la cantidad correspondiente a cada bachada.

Las dosificaciones para cada bachada deberán ser entregadas en la mezcladora por separado e intactas. Cada bachada deberá ser vaciada dentro de la mezcladora sin derrame de cemento. La dosificación de cada bachada deberá ser efectuada en tal forma que los pesos de cada material se encuentren dentro de una tolerancia del 1% para el cemento y del 2% para los agregados.

El agua podrá ser medida por volumen o por peso. La exactitud en la medición del agua deberá estar dentro de un límite de error que no exceda el 1%. A menos que el agua vaya a ser pesada, el equipo medidor del líquido deberá incluir un tanque auxiliar desde el cual sea abastecido el tanque medidor. Este deberá estar equipado con una llave o válvula exterior para facilitar el calibrado, a menos que sean provistos otros medios que permitan constatar con rapidez y exactitud, la cantidad de agua que hay en el tanque.

El volumen del tanque auxiliar deberá ser, por lo menos, igual al del tanque de medición.

Los métodos y el equipo para añadir un agente inclusor de aire u otros aditivos a la bachada, cuando fuesen necesarios, deberán ser aprobados por el Ingeniero. Todos los aditivos deberán ser medidos en la mezcladora con una exactitud de 3%, en más o en menos.

Cuando las especificaciones especiales exijan el empleo de negro de humo en la capa superior, el tambor y el cucharón de carga de la mezcladora deberán ser muy bien lavados, o por lo menos, habrá que mezclar una bachada de concreto que contenga negro de humo para colocarla en la capa de abajo inmediatamente antes de que se vaya a colocar concreto coloreado en la capa superior.

### 3.2.1.7. Sección 501.09: Revoltura del Concreto

El concreto puede ser mezclado en el sitio de la obra, en una planta central de revoltura o en camiones mezcladores. El mezclador deberá ser de un tipo y capacidad aprobados. El tiempo de revoltura se computará desde el momento en que todos los materiales, excepto el agua, estén en el tambor. El concreto premezclado deberá ser mezclado y entregado de acuerdo con los requisitos de la norma AASHTO M 157, excepto que las revoluciones mínimas exigidas en la velocidad de la revoltura para el concreto mezclado en tránsito, no podrán ser rebajadas a menos de las recomendadas por el Fabricante del mezclador, cuyo número deberá estar indicado en la placa de serie fijada por la fábrica en el mezclador. El Contratista deberá suministrar datos sobre pruebas que sean aceptables para el Ingeniero, confirmando que la marca y modelo del mezclador producirán concreto uniforme conforme las especificaciones AASHTO M 157 utilizando el número reducido de revoluciones mostrado en la placa de serie.

Cuando la revoltura sea hecha en el sitio de trabajo o en una planta central, el tiempo de revoltura no deberá ser menor de 50 ni mayor de 90 segundos. Se aumentarán 4 segundos al tiempo especificado para la revoltura, cuando el plazo comience a contarse desde el momento en que el cucharón de carga llega a su máxima posición de alzado. El tiempo de revoltura termina cuando se abre la canaleta de descarga. En los mezcladores de tambores múltiples el tiempo de traslado está incluido en el tiempo de revoltura. Antes de cargar el tambor del mezclador con los componentes de una bachada, hay que vaciar la bachada anterior ya mezclada que contiene.

El tambor deberá ser operado a la velocidad mostrada en la placa del Fabricante del mezclador. Cualquier concreto mezclado en un tiempo inferior al especificado será descartado y desechado por el Contratista, a sus expensas. El volumen de concreto mezclado por bachada no deberá exceder la capacidad mostrada en la placa para capacidad nominal que el Fabricante fija en el mezclador, pero se permitirá una sobrecarga hasta del 10% sobre esa capacidad nominal del mezclador, siempre que los resultados de las pruebas de resistencia, segregación y consistencia del concreto sean satisfactorias y no ocurra desbordamiento del mismo.

La bachada deberá ser alimentada al tambor en tal forma que una parte del agua para la revoltura llegue antes que el cemento y los agregados. El agua deberá fluir uniformemente y toda ella deberá estar en el tambor al final de los primeros 15 segundos del



período de revoltura. La garganta del tambor deberá conservarse limpia de acumulaciones que puedan restringir el libre paso de los materiales a mezclar.

El concreto fabricado en una planta central de mezclar deberá ser transportado en camiones mezcladores, camiones agitadores o camiones no agitadores, según se especifica en el Artículo 501.04 (2.2). El tiempo que transcurra desde que el agua es agregada a la mezcla hasta que el concreto sea depositado en el sitio de la obra, no deberá exceder de 45 minutos, cuando el concreto sea acarreado en camiones no agitadores, ni de 90 minutos, cuando el acarreo sea hecho en camiones mezcladores o en camiones agitadores. En condiciones excepcionales de calor ambiental o bajo otras condiciones que contribuyan al endurecimiento rápido del concreto, el tiempo máximo permisible podrá ser reducido por el Ingeniero.

No se permitirá el reamasado del concreto agregándole agua, ni por otros medios, excepto en los casos en que el concreto es transportado en camiones mezcladores o agitadores y se necesita agua adicional a los materiales de la bachada y mezclar por más tiempo, a fin de aumentar el revenimiento requerido, si lo permite el Ingeniero y tales operaciones sean llevadas a cabo dentro de los 45 minutos siguientes al inicio de la revoltura y no es excedida la relación agua/cemento. No deberá utilizarse concreto que en el momento de su colocación no esté dentro de los límites especificados para el revenimiento. El uso de aditivos para aumentar la trabajabilidad del concreto o para acelerar el fraguado, sólo será permitido si está previsto en las especificaciones especiales del contrato.

#### **3.2.1.8. Sección 501.10: Limitaciones en la Revoltura**

No se deberá mezclar, colocar ni dar acabado a concreto alguno cuando la luz natural sea insuficiente, a menos que se cuente con un sistema de alumbrado artificial adecuado y aprobado.

Salvo disposición en contrario, la temperatura del concreto mezclado no deberá ser inferior a 10°C ni mayor de 32°C en el momento de ser colocado en las formaletas.

#### **3.2.1.9. Sección 501.11. Colocación del Concreto**

El concreto deberá ser depositado en la subrasante preparada, en tal forma que requiera un mínimo de manipulación. A menos que los camiones mezcladores, camiones agitadores o equipo no agitador para transporte de concreto estén equipados con medios para descargar el concreto sin segregación de los materiales, el concreto deberá ser

descargado dentro de un aparato esparcidor aprobado, y será esparcido mecánicamente sobre la subrasante, en tal forma que se evite la segregación de los materiales. La colocación será continua entre juntas transversales sin el uso inmediato de tabiques de retención.

La distribución manual que fuese necesaria, será efectuada con palas, no con rastrillos. Los obreros no deberán caminar sobre el concreto recién colocado con las botas o zapatos cubiertos de tierra o sustancias extrañas.

Donde el concreto tenga que ser colocado junto a un carril de pavimento previamente construido y el equipo mecánico tenga que ser manejado sobre éste, el concreto de dicho carril existente deberá haber alcanzado la resistencia especificada para los 14 días. Si es solamente el equipo de acabado el que va a circular sobre el carril existente, la pavimentación de los carriles adyacentes se podrá permitir después de 3 días.

El concreto deberá ser consolidado cuidadosamente a lo largo y contra las caras de todas las formaletas, en toda la longitud y en ambos lados de todas las juntas, por medio de vibradores sumergidos en el concreto. No se permitirá que los vibradores entren en contacto con la armazón de ninguna junta, la subrasante o las formaletas laterales. En ningún caso se deberá operar un vibrador en un mismo lugar durante más de 5 segundos.

El concreto deberá ser depositado tan cerca como sea posible de las juntas de expansión y contracción, sin perturbarlas, pero no deberá ser arrojado del cucharón o dispositivo de descarga sobre la armazón de una junta, a menos que dicho dispositivo se encuentre centrado sobre la misma.

En caso de que un poco de concreto cayese o fuese empujado sobre la superficie de una losa terminada, deberá retirarse inmediatamente por medio de métodos aprobados.

#### **3.2.1.10. Sección 501.12: Muestras para Ensayes de Campo**

El Contratista deberá proveer el concreto necesario para moldear viguetas y cilindros de ensaye. Será moldeado un juego de 3 viguetas y 3 cilindros por cada 2,500 metros cuadrados o fracción, de pavimento colocado, pero no menos de dos juegos de 3 viguetas y 3 cilindros por cada día de trabajo. Las viguetas y cilindros deberán ser preparados y curados de acuerdo con AASHTO T 23.

Los requisitos para el ensaye de cilindros deberán aparecer estipulados en las CEC (Ver Cuadro 501-2).

### 3.2.1.11. Sección 501.13: Enrase del Concreto y Colocación del Refuerzo

Después de colocado el concreto, será enrasado para que se ajuste a la sección transversal y elevación mostradas en los planos. Cuando se vaya a colocar un pavimento de concreto reforzado en dos capas, la capa inferior deberá ser enrasada y consolidada en una longitud y profundidad tales que permitan colocar sobre el concreto la malla o barras de refuerzo en toda su longitud en su posición final y sin necesidad de más manipuleo. Entonces se colocará directamente el refuerzo sobre el concreto, después de lo cual se colocará, enrasará y conformará con el escantillón. Toda parte de la capa inferior que haya estado colocada por más de 30 minutos sin ser cubierta por la capa superior, deberá ser removida y reemplazada con concreto recién mezclado, por cuenta del Contratista. Cuando el concreto armado sea colocado en una sola capa, el refuerzo podrá ser colocado firmemente en su lugar con anticipación a la colocación del concreto, o podrá ser colocado a la profundidad mostrada en los planos en el concreto en estado plástico, haciendo uso de dispositivos mecánicos o vibratorios.

Las varillas para el refuerzo deberán estar libres de tierra, aceite, pintura, grasa, costra de escamas y sarro suelto o compacto, que podría disminuir la adherencia del acero con el concreto.

### 3.2.1.12. Sección 501.14. Juntas

Las juntas deberán ser construidas del tipo, las dimensiones y en los lugares requeridos por los planos o especificaciones especiales. Todas las juntas deberán ser protegidas de la intrusión de material extraño dañino mientras no hayan sido selladas.

**2. Juntas Transversales de Expansión.-** El relleno para la junta de expansión deberá ser continuo, de formaleta a formaleta, conformado según la subrasante y la muesca a lo largo de las formaletas. El relleno premoldeado para juntas será suministrado en longitudes iguales al ancho del pavimento o al de un carril. No se podrá usar relleno para juntas que haya sido dañado o reparado, a menos que fuese aprobado por el Ingeniero.

El relleno de la junta de expansión deberá quedar fijo en posición vertical. Si fuese requerido por el Ingeniero, se hará uso de una barra instaladora aprobada, u otro dispositivo, para asegurar que el relleno premoldeado para juntas de expansión quede en su rasante y alineación correctos durante la colocación y acabado del concreto. Las juntas ya acabadas no deberán desviarse más de 6 mm. de su alineación horizontal. Si los rellenos de juntas son

ensamblados en secciones no deberán existir separaciones entre las unidades adyacentes. No se permitirán tapones de concreto en ninguna parte dentro del espacio disponible para la expansión.

**3. Juntas Transversales de Contracción.-** Las juntas transversales de contracción consistirán en secciones debilitadas creadas al moldear o al hacer cortes en la superficie del pavimento y, cuando lo indiquen los planos, incluirán unidades para transferencia de la carga.

**3.1. Juntas Transversales de Contracción de Tira.-** Estas juntas serán formadas instalando una tira separadora que se dejará en el espacio de la junta, según lo indiquen los planos;

**3.2. Ranuras Moldeadas.-** Estas juntas serán hechas insertando en el concreto plástico una herramienta o dispositivo aprobado, el cual deberá permanecer en su lugar, por lo menos, hasta que el concreto haya alcanzado su fraguado inicial; entonces, se sacará sin perturbar el concreto adyacente, a menos que el dispositivo esté diseñado para permanecer en la junta;

**3.3. Juntas de Contracción Aserradas.-** Estas juntas serán formadas aserrando ranuras en la superficie del pavimento, con el ancho, la profundidad, el espaciamiento y la alineación mostrados en los planos, utilizando una sierra para cortar concreto. Después de aserrar cada junta, esta deberá limpiarse cuidadosamente al igual que las superficies de concreto adyacentes.

El aserrado de dichas juntas deberá comenzarse de 4 a 24 horas después de haber colocado el concreto y cuando éste haya endurecido suficientemente para permitir el aserrado sin desmoronamiento excesivo.

Todas las juntas deberán ser aserradas antes de que ocurra un agrietamiento incontrolado debido a la contracción. Si fuera necesario, las operaciones de aserrado podrán efectuarse de día y de noche, sin importar las condiciones del tiempo. Se omitirá el aserrado de toda junta cerca de la cual se presenten grietas antes del momento del aserrado. También se suspenderá el aserrado cuando se presente una grieta adelante de la sierra. En general, todas las juntas deberán ser aserradas en secuencia. Si existieran condiciones climáticas extremas tales que sea imposible impedir el agrietamiento errático al aserrar tan pronto, la ranura de la junta de contracción deberá ser moldeada antes del fraguado inicial del concreto, de acuerdo con lo estipulado anteriormente;



**3.4. Juntas Transversales de Contracción Moldeadas.-** Estas juntas deberán satisfacer los requisitos del Artículo 501.14 (1) para juntas longitudinales moldeadas.

**4. Juntas Transversales de Construcción.-** Las juntas transversales de construcción serán construidas cuando haya una interrupción de más de 30 minutos en las operaciones de colocación del concreto. No se podrá construir una junta transversal a menos de 3 metros de distancia de una junta de expansión, junta de contracción o plano debilitado. Si no hay suficiente concreto mezclado para construir una losa que tenga, por lo menos, 3 metros de largo al ocurrir la interrupción, el concreto excedente hacia atrás hasta la última junta precedente, deberá ser removido y desechado de acuerdo con las órdenes del Ingeniero.

**5. Dispositivos para la Transferencia de Cargas.-** Cuando se usen espárragos para transferencia de cargas serán mantenidos en posición paralela a la superficie y la línea central de la losa por medio de un dispositivo de metal que se deja en el pavimento.

La parte de cada espárrago que va pintada con una mano de pintura de plomo o de alquitrán, según lo exige el Artículo 1009.01 de estas especificaciones, deberá ser recubierto con material bituminoso o un lubricante aprobado, a fin de evitar que el concreto se adhiera a esa parte del espárrago. En cada espárrago usado en juntas de expansión se proveerá una tapa o manguito que cumpla con los requisitos del Artículo 1009.01. Estas tapas o manguitos deberán quedar bien ajustados al espárrago y el lado cerrado deberá ser impermeable.

En vez de usar espárragos ensamblados en las juntas de construcción, será aceptable el uso de simples varillas colocadas en todo el espesor del pavimento por medio de algún dispositivo mecánico aprobado por el Ingeniero.

### 3.2.1.13. Sección 501.15: Esparcido, Consolidación y Acabado Finales

**1. Secuencia.-** La secuencia de las operaciones será la siguiente:

a. Colocación y Esparcido. b. Consolidación (Compactación o Vibrado). c. Conformación, Alisado Preliminar y Eliminación de Lechada. d. Verificación con Escantillón. e. Acabado Final.

El Contratista proveerá andamios de pasarela u otros dispositivos apropiados para que haya acceso a la superficie del pavimento y se faciliten las operaciones de verificación, acabado y corrección de deformaciones de acuerdo con lo especificado más adelante.

En general, no será permitido agregar agua a la superficie del concreto como ayuda en las operaciones de acabado; si esto fuera permitido, tendría que ser aplicada en forma de rocío por medio de algún dispositivo aprobado.

**2. Acabado de las Juntas.-** El acabado de las juntas será hecho de la manera siguiente:

2.1. El concreto contiguo a las juntas deberá ser densificado y colocado firmemente, sin vacíos ni segregación contra el material de las juntas lo mismo que alrededor y debajo de los dispositivos para la transferencia de cargas, unidades ensambladas para juntas, u otros aparatos diseñados para quedar embebidos en el pavimento. El concreto contiguo a las juntas deberá ser vibrado mecánicamente, según se exige en el Artículo 501.11;

2.2. Después de que el concreto haya sido colocado y vibrado a satisfacción en la parte adyacente a las juntas, según quedó estipulado en el Artículo 501.11, la máquina acabadora deberá adelantarse de modo que no cause daño o desviación en las juntas. Si la operación ininterrumpida de la máquina acabadora un poco antes, sobre e inmediatamente después de las juntas causara segregación del concreto, desalineamiento o daños en ellas, deberá detenerse su operación cuando la plantilla maestra delantera se encuentre, aproximadamente, a 20 cm., antes de la junta. El concreto segregado deberá ser eliminado del frente y fuera de la junta; la plantilla maestra delantera deberá ser levantada y colocada directamente encima de la junta y se reanudará entonces el movimiento hacia el frente de la máquina acabadora.

Cuando la segunda plantilla maestra se encuentre suficientemente cerca para permitir que el exceso de mortero al frente de la misma fluya sobre la junta, la plantilla maestra deberá ser levantada para que pase sobre la misma. De ahí en adelante la máquina acabadora podrá ser movida sobre la junta sin levantar las plantillas, siempre y cuando no haya concreto segregado inmediatamente entre la junta y la plantilla, ni encima de la junta.

**3. Acabado a Máquina.-**

**3.2. Método Vibratorio.-** Cuando esté especificada la vibración, el Contratista proveerá un tren de vibradores para trabajar en el ancho completo de las losas de concreto del pavimento, los cuales deberán satisfacer los requisitos del Artículo 501.04 (3.2). Si no se obtuviera por el método vibratorio una densidad uniforme y satisfactoria para el concreto en las juntas, a lo largo de las formaletas, en áreas adyacentes a estructuras y en cualquier lugar del pavimento, se le exigirá al Contratista que suministre equipo y métodos que puedan



producir un pavimento que satisfaga las especificaciones. Serán igualmente válidas todas las disposiciones del párrafo (3.1) que antecede, que no estén en contradicción con las especificadas para el método vibratorio.

5. **Allanado.**- Después de que el concreto haya sido enrasado y consolidado, será afinado y consolidado aún más, por medio de un codal longitudinal, empleando uno de los siguientes métodos, según esté especificado o permitido.

5.3. **Método Mecánico Alternativo.**- Como alternativa al procedimiento descrito en el párrafo (5.2) que antecede, el Contratista podrá emplear una máquina compuesta de uno o varios codales cortantes y alisadores, suspendidos y guiados desde un marco rígido. Este marco deberá ir montado sobre cuatro o más ruedas visibles, que corran sobre y constantemente en contacto con las formaletas laterales.

Si se fuera siguiendo uno de los métodos de conformación y afinado descritos anteriormente, se podrán usar codales de no menos de 1.50 metros de largo por 15 centímetros de ancho provistos de brazos largos para su manipulación, para alisar y rellenar pequeñas áreas de textura abierta que tuviese el pavimento. Estos codales con brazos largos no serán usados para afinar toda la superficie del pavimento en sustitución, o suplementando a alguno de los métodos para conformar y afinar antes descritos. Cuando el enrasado y la consolidación sean efectuados por el método manual, y la corona del pavimento no permita el uso del codal longitudinal, la superficie podrá ser afinada transversalmente por medio de un codal de brazos largos, teniendo el cuidado de no eliminar la corona del pavimento durante la operación. Después del afinado, los excesos de agua y lechada deberán ser eliminados de la superficie del pavimento por medio de un escantillón de 3 m o más de largo. Este escantillón será arrastrado sobre la superficie del pavimento, traslapando las pasadas la mitad del largo del mismo.

6. **Correcciones en la Superficie.**- Después de concluidos la reconfiguración y afinado y de eliminar el exceso de agua superficial, pero mientras el concreto está aún en estado plástico, se procederá a rellenar las depresiones con concreto fresco y a conformarlo, consolidarlo y reacabarlo. Las áreas altas serán recortadas y reacabadas. Se dará especial atención a que la superficie que cruzan las juntas llene los requisitos de lisura. Las correcciones en la superficie continuarán hasta que toda la superficie del pavimento esté libre de deformaciones apreciables y la losa se ajuste lo más exactamente posible a la rasante y sección transversal típica requerida.

7. **Acabado Final.**- El tipo de acabado final será el que indiquen los planos. En caso de que la textura de la superficie correspondiera a un acabado con escobón, éste deberá aplicarse cuando haya desaparecido prácticamente todo rastro de agua libre. El escobón, deberá arrastrarse de orilla a orilla del pavimento, sin dañar los bordes del pavimento y traslapando ligeramente las pasadas contiguas. La operación del barrido deberá ser realizada de modo que los surcos producidos en la superficie sean uniformes en su aspecto y de una profundidad aproximada a 1.6 mm. El barrido deberá estar terminado antes de que el concreto se encuentre en tal condición que la superficie pueda ser rasgada o ponerse demasiado áspera por la operación. La superficie así acabada deberá estar exenta de partes ásperas y porosas, irregularidades y depresiones resultantes de un inadecuado manejo del escobón. Estos deberán ser de una calidad, tamaño y construcción y operadas de tal manera que produzcan un acabado en la superficie, que pueda ser aprobada por el Ingeniero. A condición de que se obtengan resultados satisfactorios y que lo apruebe el Ingeniero, el Contratista podrá substituir con el barrido mecánico el trabajo de barrido manual descrito anteriormente.

Si la textura superficial requerida corresponde a un acabado con rastra, se usará una rastra hecha de una banda de una sola pieza de tela de bramante, lona o tela de algodón húmeda, la cual dejará una superficie uniforme de textura arenosa después de ser arrastrada longitudinalmente a lo largo de todo el ancho del pavimento. Para pavimentos de 4.80 metros o más de ancho, la rastra será montada en un puentecillo que corra sobre las formaletas. Las dimensiones de la rastra serán tales que durante la operación de la misma una faja de tela de, por lo menos, 90 centímetros de ancho se mantenga en contacto con el ancho total del pavimento. Las rastras deberán tener no menos de dos capas de tela o lona, con la capa de abajo 15 centímetros, por lo menos, más ancha que la de arriba. La rastra será mantenida en tales condiciones que la superficie resultante sea de apariencia uniforme, con corrugaciones de, aproximadamente, 1.6 milímetros de profundidad. Las rastras serán mantenidas limpias y libres de adherencias de mortero. Las rastras que no puedan ser limpiadas deberán ser descartadas y sustituidas por nuevas.

8. **Acabado de Bordes de Pavimento y Juntas.**- Después del acabado final y antes de que el concreto haya alcanzado su fraguado inicial, los bordes del pavimento en los costados de cada losa, y a cada lado de las juntas transversales de construcción y juntas de construcción de emergencia, deberán ser acabados mediante una herramienta apropiada, redondeándolas al radio estipulado en los planos. El redondeado deberá ser bien definido y



continuo, y se deberá obtener un acabado fino con base de mortero denso. La superficie de la losa no deberá ser maltratada indebidamente por la inclinación de la herramienta durante el uso.

Cualquier marca de herramienta que aparezca sobre la losa adyacente a las juntas, deberá eliminarse mediante el uso de un escobón. Durante la operación de barrido no debe maltratarse ni dañarse la parte redondeada de la esquina de la losa. Todo el concreto que se encuentre encima del relleno de las juntas deberá ser eliminado completamente.

Todas las juntas deberán ser revisadas con un escantillón antes de que el concreto haya fraguado, y si un lado de la junta estuviera más alto que el otro, o si ambos hubieran quedado más altos o más bajos que las losas contiguas, se harán las correcciones necesarias.

#### 3.2.1.14. Sección 501.18: Remoción de Formaletas

A menos que se hubiere dispuesto de otra manera, no se removerán las formaletas del concreto recién colocado, hasta que éste haya fraguado, por lo menos, 12 horas, exceptuando las formaletas auxiliares colocadas provisionalmente en áreas ensanchadas. Las formaletas deberán ser retiradas cuidadosamente, con el objeto de no causarle daños al pavimento. Después de que las formaletas hayan sido removidas, se someterán al proceso de curación los costados de las losas, de acuerdo con lo indicado en uno de los métodos descritos anteriormente.

Las áreas pequeñas que contengan ratoneras profundas cerca de las varillas del acero de refuerzo, deberán ser limpiadas, mojadas y parchadas con esmero, usando un mortero duro que contenga una parte de cemento por cada dos partes de agregado fino.

Las áreas grandes con ratoneras profundas serán consideradas como trabajo defectuoso, por lo que serán eliminadas y reconstruidas. Toda área o sección así removida no deberá tener menos de 3 metros de longitud ni menos del ancho total del carril afectado. Cuando sea necesario remover y reemplazar una sección de pavimento, toda parte restante de la losa adyacente a las juntas que tenga menos de 3 metros de longitud, deberá ser también removida y reemplazada.

#### 3.2.1.15. Sección 501.19: Selladura de Juntas

Las juntas deberán ser selladas después de completar el período de curación y, si fuera posible, antes de que el pavimento sea abierto al tráfico aun del equipo del Contratista. Un

poco antes de la selladura, se limpiará cada junta de todo material extraño incluyendo la membrana del compuesto para curación. Las caras de las juntas deberán estar limpias y con la superficie seca cuando sea aplicado el material de sellar.

El material de sellar será aplicado en la abertura de cada junta de acuerdo con los detalles mostrados en los planos o las órdenes del Ingeniero.

El sellador que deba ser aplicado en caliente, deberá ser agitado durante el proceso de calentamiento, a fin de evitar sobrecalentamiento localizado. El chorreado del material será hecho de tal manera que no se pringuen las superficies expuestas del concreto. Todo exceso de material que caiga sobre la superficie del pavimento de concreto deberá ser eliminado inmediatamente y la superficie, limpiada con esmero. No será permitido el uso de arena o material similar, como cobertura para sellar.

Todo empaque elastomérico premoldeado que se use en la selladura de juntas deberá tener una sección transversal con las dimensiones mostradas en los planos. Tales sellos serán colocados por medio de herramientas adecuadas, sin elongación, y asegurados en su sitio con adhesivos lubricantes aprobados que cubran ambos lados de la junta de concreto. Los sellos serán instalados bajo compresión y quedarán, al ser colocados, por debajo de la superficie del pavimento, aproximadamente, 6 milímetros.

Los sellos serán de una sola pieza para todo el ancho de cada junta transversal.

#### 3.2.1.16. Sección 501.20: Protección del Pavimento

El Contratista deberá proteger el pavimento y sus aditamentos del tráfico público y el de sus propios empleados. Esta obligación incluirá vigilantes que dirijan el tráfico, la erección y mantenimiento de señales de prevención, luces de aviso, puentes sobre la superficie o pasarelas, etcétera. Los planos o las CEC indicarán la ubicación y tipo de instalación o dispositivos necesarios para proteger la construcción y proporcionar adecuadas facilidades al tráfico.

Cualquier daño causado al pavimento que ocurra con anterioridad a la aceptación final, deberá ser reparado y el tramo, eliminado y repuesto, según lo dispuesto en el Artículo-108.22.



### 3.2.1.17. Sección 501.21: Apertura al Tráfico

El Contratista deberá proteger el pavimento y sus aditamentos del tráfico público y el de sus propios empleados. Esta obligación incluirá vigilantes que dirijan el tráfico, la erección y mantenimiento de señales de prevención, luces de aviso, puentes sobre la superficie o pasarelas, etcétera. Los planos o las CEC indicarán la ubicación y tipo de instalación o dispositivos necesarios para proteger la construcción y proporcionar adecuadas facilidades al tráfico.

Cualquier daño causado al pavimento que ocurra con anterioridad a la aceptación final, deberá ser reparado y el tramo, eliminado y repuesto, según lo dispuesto en el Artículo-108.22.

### 3.2.1.18. Sección 501.23: Lisura del Pavimento

Después de que el concreto haya endurecido lo suficiente, médase la lisura de la superficie.

**a) Mediciones con el Perfilógrafo.-** Médase las áreas excluidas de acuerdo con el inciso (b) a continuación. Las áreas defectuosas son topes en exceso de 10 mm en 7.62 metros, los índices de perfil en 0.1 de kilómetro que excedan de 160 mm por kilómetro, y las superficies con un factor de pago de menos de 0.75, determinado de conformidad con el Artículo-106.12.

**(b) Medición con Escantillón.-** Úsese un escantillón metálico de 3 metros de largo para medir en ángulo recto y paralelamente a la línea central de la vía. Las áreas defectuosas son aquellas que presentan desviaciones en exceso de 6 mm en 3 metros entre dos puntos de contacto cualesquiera del escantillón con la superficie.

**(c) Corrección de Áreas Defectuosas.-** Corrijanse las áreas defectuosas detectadas según los incisos (a) y (b) precedentes. Obténgase aprobación del método propuesto para corregirlas. Vuélvanse a medir las áreas corregidas de conformidad con lo estipulado en los incisos (a) y (b) que preceden. El factor de pago será recalculado después de estas nuevas mediciones.

### 3.2.1.19. Sección 501.24: Tolerancia en el Espesor del Pavimento

El espesor del pavimento será determinado midiendo el espesor promedio de los núcleos de ensaye, de acuerdo con AASHTO T 24. Con el propósito de establecer un precio unitario ajustado para el pavimento, se consideran unidades separadas de 300 metros por

cada carril de tráfico a partir del extremo del pavimento que tenga el estacionamiento más bajo. La última unidad en cada carril será de 300 metros más la fracción de 300 metros restantes. El Ingeniero tomará al azar un núcleo en cada unidad. Las deficiencias tolerables en el espesor del pavimento serán de 6 a 25 mm con respecto al espesor mostrado en los planos. Si la medida es deficiente en menos de 6 mm, se pagará el precio unitario completo. Si la medida es deficiente en más de 6 mm y no excede de 25 mm con respecto al espesor mostrado en los planos, se tomarán dos núcleos adicionales a intervalos no menores de 100 metros en el área correspondiente y se determinará el espesor promedio de estos tres núcleos y el precio unitario del área correspondiente será ajustado estadísticamente (Artículo-106.12).

Otras áreas, tales como intersecciones, entradas, vías elevadas, rampas, etc., serán consideradas como una unidad y el espesor de cada una de ellas se fijará separadamente. Las áreas con unidades pequeñas irregulares podrán ser incluidas como partes de otra unidad. En los puntos de cada unidad que el Ingeniero señale, se tomará un núcleo por cada 1,000 metros cuadrados de pavimento o fracción de los mismos. Se pagará el espesor total si el núcleo tomado de acuerdo al párrafo anterior, no fuese deficiente en más de 6 mm del espesor requerido. Si el núcleo fuese deficiente en más de 6 mm pero en menos de 25 mm del espesor requerido, se tomarán dos núcleos adicionales del área representada, y se calculará el promedio de los tres núcleos sacados.

Si la medida promedio de los espesores de estos tres núcleos no es deficiente en más de 6 mm ni en más de 25 mm del espesor requerido, el precio a pagar para el área representada será ajustado de conformidad con lo establecido en el Artículo-106.12.

Al calcular el espesor promedio del pavimento, las medidas que excedan del espesor especificado en más de 6 mm serán consideradas como del espesor especificado más 6 mm y las medidas que sean menores del espesor especificado en más de 25 mm, no serán incluidas en el promedio.

Cuando la medida de algún núcleo sea menor que el espesor especificado en más de 25 mm, el espesor efectivo del pavimento en esa área será fijado sacando núcleos exploratorios adicionales a intervalos no menores de 3 metros y paralelamente a la línea central en cada sección afectada, hasta que en cada dirección sea encontrado un núcleo que no sea deficiente en más de 25 mm de espesor. Las áreas que sean deficientes en espesor en más de 25 mm, serán evaluadas por el Ingeniero, y si de acuerdo a su criterio, estas áreas deficientes justifican su remoción, deberán ser removidas y repuestas con concreto del espesor

requerido. Los núcleos exploratorios sacados para investigar deficiencia de espesores no serán usados en la determinación de espesores promedios con fines de ajuste en el precio.

#### 3.2.1.20. Sección 501.25: Aceptación

El material (exceptuando el acero de refuerzo) para el pavimento de concreto de cemento hidráulico, será evaluado visualmente y mediante certificación (Artículo-106.12). Se deberá suministrar un certificado de producción para el cemento Portland.

El revenimiento, contenido de aire, peso unitario de masa y la temperatura de la mezcla de concreto, serán evaluados visualmente y mediante mediciones y ensayos (Artículo-106.12). El Cuadro 501-2 muestra los requisitos mínimos para el muestreo y ensaye. El acero de refuerzo será evaluado bajo la Sección-604.

La resistencia del concreto a la compresión, el espesor del pavimento y la lisura de la superficie del pavimento, serán evaluados estadísticamente (Artículo-106.12). El Cuadro 501-2 muestra los requisitos mínimos para el muestreo y ensayos.

(a) **Resistencia a la Compresión.**- El límite más bajo de la especificación es la mínima resistencia a la compresión requerida a los 28 días ( $f'_c$ ) especificada en el Cuadro 501-1. Un resultado simple de la resistencia a la compresión es el resultado promedio de 2 cilindros moldeados de la misma carga y ensayadas a los 28 días. El Cuadro 501-2 da la categoría de aceptación de las características de calidad.

(b) **Espesor de Pavimento.**- Ver Artículo-501.24. El límite más bajo de la especificación es el espesor requerido menos 6 milímetros. El Cuadro 501-2 da la categoría de las características de calidad.

(c) **Lisura del Pavimento.**- Ver Artículo-501.23. Un sublote es un tramo de vía de circulación y un lote es la superficie de todo el Proyecto. El límite superior de la especificación es de 80 mm por kilómetro. El Cuadro 501-2 da la categoría de aceptación de las características de calidad. La construcción (incluyendo la dosificación, colocación, acabado y curación del concreto) del pavimento de concreto de cemento Portland, será evaluada visualmente y mediante mediciones y ensayos (Artículo-106.12). El acero de refuerzo será evaluado bajo la Sección-604.

#### 3.2.1.21. Sección 501.26: Método de Medición

Mídase el pavimento de concreto de cemento hidráulico por metro cuadrado. Para fines de pago, mézase el ancho horizontalmente incluyendo el sobrecancho permisible en las curvas. La longitud será medida horizontalmente a lo largo de la línea central de la vía.

Mídase el sellamiento de juntas en metros, siguiendo el alineamiento de las juntas.

Mídase la remoción y disposición de materiales inadecuados en la subbase o subrasante, bajo la Sección-203.

Mídase el parcheo y el material de nivelación usado para reemplazar el material inadecuado del lecho de la vía, bajo las Secciones aplicables.

Mídase el acero de refuerzo colocado en la losa en los lugares mostrados en los planos o donde lo haya ordenado el Ingeniero, de acuerdo con lo dispuesto en el Artículo-604.08. Todo otro acero que se requiera para el trabajo de esta sección, no será objeto de pago.

#### 3.2.1.22. Sección 501.27: Base para el Pago

Las cantidades aceptadas, medidas de acuerdo con lo estipulado en el artículo precedente, serán pagadas al precio de contrato por unidad de medida para los conceptos listados más adelante que figuren en el Pliego de Licitación, excepto que el precio unitario del pavimento de concreto de cemento hidráulico será ajustado estadísticamente (Artículo-106.12). El pago será compensación total por el trabajo prescrito en esta Sección.

Ver Artículo-106.03 y Artículo-110.04.

El pago por el pavimento de concreto de cemento hidráulico será hecho a un precio determinado multiplicando el precio unitario de contrato por el factor de pago del material. El factor de pago del material es el factor de pago simple más bajo determinado ya sea por la resistencia a la compresión o por el espesor de pavimento.

El pago será hecho bajo los siguientes conceptos:



| Concepto de Pago |  | Unidad de Medida |
|------------------|--|------------------|
| 501(1)           | Pavimento de Concreto Hidráulico Reforzado, _____ mm de espesor.               | Metro Cuadrado   |
| 501(2)           | Pavimento de Concreto Hidráulico no Reforzado, _____ mm de espesor.            | Metro Cuadrado   |
| 501(3)           | Pavimento de Concreto Hidráulico de Alta Resistencia Inicial (Pago Adicional). | Metro cuadrado   |

El Cuadro 501-2 da los mínimos requisitos para Muestreo y Ensaye:

CUADRO 501-2  
Muestreo y Ensayes

| Material o Producto   | Propiedad o Característica                 | Categoría | Método de Ensaye o Especificaciones | Frecuencia  | Lugar del Muestreo  |
|-----------------------|--|-----------|-------------------------------------|---|---|
| Concreto              | Revenimiento                               | ---       | AASHTO T 119                        | 1 por carga <sup>(1)</sup>  | Chorro de descarga en el lugar de colocación <sup>(1)</sup> |
|                       | Contenido de aire                          | ---       | AASHTO T 152 o AASHTO T 196         | 1 por carga <sup>(2)</sup>  | Chorro de descarga en el lugar de colocación <sup>(1)</sup> |
|                       | Pesos Unitario                             | ---       | AASHTO T 121                        | 1 por carga <sup>(2)</sup>  | Chorro de descarga en el lugar de colocación <sup>(1)</sup> |
|                       | Temperatura                                | ---       | Termómetro                          | Primera carga   | Chorro de descarga en el lugar de colocación <sup>(1)</sup> |
|                       | Hechura de Especímenes de Ensayes          | ---       | AASHTO T 23                         | 1 Juego por 2000 m <sup>2</sup> pero no menos de 1 por día <sup>(2)</sup> |   |
| Pavimento de Concreto | Resistencia a la Compresión <sup>(4)</sup> | II        | AASHTO T 22                         |   |   |
|                       | Espesor de Pavimento <sup>(5)</sup>        | II        | AASHTO T 24                         | 1 núcleo por cada 2000 m <sup>2</sup>                                     | En el sitio, después de endurecido lo suficiente.           |
|                       | Lisura                                     | I         | FLH T 504                           | Ver Art. 501.23   | Ver Art. 501.16   |

(1) Muestrear según AASHTO T 141, excepto que no serán necesarias las muestras compuestas.

(2) Ver Artículo 502.03 (1) para el máximo contenido de aire.

(3) Moldear, por lo menos 4 cilindros de ensaye para resistencia a la compresión y transportarlos cuidadosamente al sitio de la obra donde hay facilidades para curarlos.

(4) Un resultado simple del ensaye de resistencia a la compresión es el resultado promedio de 28 cilindros moldeados de la misma carga y ensayados a los 28 días.

(5) El espesor no es un parámetro evaluado estadísticamente a menos que el pago del pavimento de concreto sea pagado en metros cuadrados.

### 3.3. SUBDIVISIÓN 600: PUENTES

#### 3.3.1. SECCIÓN 601: PILOTES

##### 3.3.1.1. Sección 601.01: Descripción

Este trabajo consiste en el suministro e hincadura de pilotes de acuerdo con estas especificaciones y en conformidad razonable con los planos o las órdenes del Ingeniero.

Los pilotes son designados como pilotes de acero con perfil en H, pilotes de cubierta de acero rellena con concreto, pilotes de tubos de acero relleno con concreto, pilotes de

concreto premoldeado, pilotes de concreto presforzado o pilotes de madera. Las pruebas de carga para pilotes son designadas como estáticas o dinámicas.

##### 3.3.1.2. Sección 601.02: Materiales

Los materiales deberán cumplir con lo establecido en las siguientes secciones y artículos:

Pilotes de Concreto-Artículo-1015.03

Zapatatas para Pilotes-Artículo-1015.08

Acero de Refuerzo- Sección-604

Cubiertas de Acero-Artículo-1015.04

Concreto Estructural- Sección-602

##### 3.3.1.3. Sección 601.11: Pruebas de Carga de Pilotes

Las pruebas de carga de pilotes no serán requeridas, a menos que estén especificadas en las CEC.

##### 3.3.1.4. Sección 601.12: Recorte de Pilotes

Se deberá recortar, a la elevación requerida, la parte superior de todos los pilotes y sus camisas. Los pilotes deberán ser recortados limpiamente en forma recta y paralelamente al nivel de desplante del miembro estructural en el cual van a estar empotrados.

Se deberá disponer de los trozos recortados de acuerdo con el Artículo-202.02.

##### 3.3.1.5. Sección 601.14: Colocación del Concreto en Pilotes de Camisa o Tubo de Acero

Después de la hincadura límpiase el interior de la camisa o tubo eliminando todo material suelto. La camisa o el tubo deberá ser mantenido sustancialmente hermético. Se deberá proveer equipo apropiado para inspeccionar plenamente la superficie interna de la camisa o tubo, un poco antes de colocar el concreto.

(a) **Acero de Refuerzo.**- Cuando sea requerido el uso de acero de refuerzo, el espaciamiento entre los elementos adyacentes de la jaula deberá ser, por lo menos, 5 veces el tamaño máximo del agregado que va en el concreto.

Se amarrarán firmemente los espaciadores de concreto u otros espaciadores aprobados en los quintos puntos, alrededor del perímetro de la jaula de acero de refuerzo. Los espaciadores deberán ser instalados a intervalos que no excedan de 3 metros medidos a lo largo de la longitud de la jaula.

La jaula de refuerzo deberá ser colocada dentro del pilote de camisa o tubo hincado cuando el concreto alcance la elevación planeada del fondo del refuerzo. Se deberá sostener de tal manera que permanezca dentro de 50 mm de la localización vertical requerida. La jaula deberá ser sostenida desde arriba hasta que el concreto alcance la parte superior del pilote.

**(b) Concreto.**- La preparación y colocación del concreto se regirá por lo estipulado en la Sección-602. El concreto deberá ser colocado en una operación continua desde el fondo hasta la parte superior del pilote. Antes del fraguado inicial del concreto, se deberá consolidar los 3 primeros metros de la parte superior del pilote de concreto usando equipo vibratorio aprobado.

#### 3.3.1.6. Sección 601.15: Aceptación

El material del pilote será evaluado visualmente y mediante certificados aceptables del Fabricante o laboratorios independientes Artículo-106.12. Con cada embarque, el Contratista deberá presentar certificados de producción de lo siguiente:

(a) Pilotes de concreto.

(b) Tablestacas de lámina de acero, pilotes de acero de perfil H, pilotes de camisa o tubo de acero.

El concreto para pilotes de camisa o tubos de acero rellenos con concreto, serán evaluados bajo la Sección-602.

El acero de refuerzo para pilotes de camisa o tubo de acero rellenos con concreto, serán evaluados bajo la Sección-604.

### 3.3.2. SECCIÓN 602: CONCRETO ESTRUCTURAL

#### 3.3.2.1. Sección 602.01: Descripción

Este trabajo consiste en el suministro, colocación, acabado y curación del concreto en puentes, alcantarillas y otras estructuras, de acuerdo con estas especificaciones y en

conformidad razonable con las líneas, rasantes y dimensiones mostradas en los planos u ordenadas por el Ingeniero.

La clase del concreto estructural es designada según lo indicado en el Cuadro 602-1.

#### 3.3.2.2. Sección 602.02: Materiales

Los materiales a usar deberán cumplir con lo estipulado en los siguientes artículos:

Aditivos Incluidores de Aire-Artículo-1011.02

Aditivos Químico-Artículo-1011.03

Agregado grueso - Artículo1003.02

Colorante para Revestir - Artículo-1012.04

Materiales para Curar-Artículo-1011.01

Almohadillas Elastoméricas de Apoyo - Artículo-1017.13

Sellos Elastoméricos para Juntas de Compresión - Artículo-1017.18

Agregado Fino - Artículo-1003.01

Ceniza Fina de Altos Hornos (CFAH) - Artículo-1012.10

Escoria de Hornos de Fundición de Hierro Molida - Artículo-1012.10

Rellenadores y Selladores de Juntas - Artículo-1005.01

Modificador de Látex - Artículo-1011.04

Aceite de Linaza - Artículo-1012.09

Cemento Portland - Artículo-1001.01

Humo Silíceo (Microsilíce) - Artículo-1012.10

Agua - Artículo-1012.01<sup>a</sup>

#### 3.3.2.3. Sección 602.03: Requisitos para la construcción: Composición (Diseño de la Mezcla de Concreto)

Diséñense y prodúzcanse las mezclas de concreto que se ajusten a lo indicado en el Cuadro 602-1 para la clase de concreto especificado. Determinéense los valores de la resistencia de diseño de conformidad con la norma ACI 214. El concreto estructural también deberá cumplir con las siguientes especificaciones:



- ACI 211.1, para concreto normal y de masa pesada.
- ACI 211.2, para concreto liviano.
- ACI 211.3, para concreto sin revenimiento.

**CUADRO 602-1**  
**Composición del Concreto**

| Clase de Concreto     | Contenido Mínimo de Cemento (kg/m <sup>3</sup> ) | Máxima Relación Agua/Cemento | Revenimiento <sup>(1)</sup> (mm) | Mínimo Contenido de Aire <sup>(2)</sup> % | Agregado Grueso AASHTO M 43 |
|-----------------------|--|------------------------------|----------------------------------|---|-----------------------------|
| A                     | 360  | 0.49                         | 50 to 100                        |   | No. 57                      |
| A (AE)                | 360  | 0.44                         | 25 to 100                        | 5.0                                       | No. 57                      |
| B                     | 310  | 0.58                         | 50 to 100                        |   | No. 357                     |
| B (AE)                | 310  | 0.58                         | 50 to 100                        | 4.0                                       | No. 357                     |
| C                     | 390  | 0.49                         | 50 to 100                        |   | No. 7                       |
| C (AE)                | 390  | 0.44                         | 25 to 75                         | 6.0                                       | No. 7                       |
| D (AE) <sup>(3)</sup> | 360  | 0.40                         | 25 to 75                         | 4.0                                       | No. 57                      |
| E (AE) <sup>(4)</sup> | 360  | 0.40                         | 100 to 150 <sup>(5)</sup>        | 3.0                                       | No. 7                       |
| P                     | 390  | 0.44                         | 0 to 100                         |   | No. 67                      |
| Sello                 | 390  | 0.54                         | 100 to 200                       |   | No. 57                      |

(1) El revenimiento máximo es de 200 mm, si el diseño aprobado por la mezcla incluye un reductor de agua de alto rango.

(2) Ver el Artículo 602.03 (t) para el máximo contenido de aire.

(3) Concreto con un aditivo reductor de agua y retardador conforme a AASHTO M 194 tipo D.

(4) Concreto modificado con látex con 0.31 litros de modificador por kilogramo de concreto.

(5) Mídase el revenimiento 4 ó 5 minutos después de que el concreto es descargado del mezclador.

Sómetanse los diseños de la mezcla. (Se recomienda un Formulario igual o similar al 608 de la FHWA.

Verifíquense los diseños de la mezcla por medio de mezclas de prueba preparadas con los materiales de la(s) misma(s) fuentes propuestas para uso en la obra. Sométanse los diseños de la mezcla de concreto por escrito para la aprobación del Ingeniero, por lo menos, 36 días calendario antes de iniciar la producción. Cada propuesta de diseño de mezcla deberá incluir todo lo enumerado a continuación:

(a) Identificación del Proyecto.

(b) Nombre y dirección del Contratista y de productor del concreto.

(c) Designación del diseño de la mezcla.

(d) Clase de concreto y el uso que se le va a dar.

(e) Proporciones del material.

(f) Nombre y lugar de las fuentes del agregado, el cemento, los aditivos y del agua.

(g) Tipo de cemento y tipo de sustituto del cemento si se usa. La CFAN, escoria de hornos de fundición de hierro molida, o humo silíceo, puede reemplazar parcialmente al cemento en cualquier diseño de mezcla tal como se indica a continuación, excepto en el concreto presforzado:

**(1) CFAH.**

**(1) Clase F.-** No más del 20% del peso mínimo de cemento Portland indicado en el Cuadro 602-1 puede ser reemplazado con CFAH clase F a una tasa de 1.5 partes de CFAH por una parte de cemento.

**(2) Clase C.-** No más del 25% del peso mínimo de cemento Portland indicado en el Cuadro 602-1, puede ser reemplazado con CFAH clase C a una tasa de 1 parte de CFAH por una parte de cemento.

**(2) Escoria de Horno de Fundición de Hierro Molida.-** No más del 50% del peso mínimo de cemento Portland indicado en el Cuadro 602-1 puede ser reemplazado con escoria de horno molida a una tasa de 1 parte de escoria por una parte de cemento.



(3) **Humo Silíceo (Microsilica).**- No más del 10 por ciento del peso mínimo de cemento Portland indicado en el Cuadro 602-1, puede ser reemplazado con humo silíceo a una tasa de 1 parte de humo silíceo por una parte de cemento.

La relación agua/cemento para concreto modificado es la relación del peso de la masa de agua de las masas combinadas de cemento Portland y sustituto del cemento.

(h) El contenido de cemento en kilogramos por metro cúbico de concreto.

(i) El peso de la bachada de agregados grueso y fino saturados con la superficie seca, en kilogramos por metro cúbico de concreto.

(j) Contenido de agua (incluyendo la humedad libre en el agregado más el agua en el tambor, excluyendo el agua absorbida en el agregado), en kilogramos por metro cúbico de concreto.

(k) Valor meta de la relación agua/cemento.

(l) Dosis de los Aditivos. La inclusión de aire puede ser obtenida ya sea usando cemento Portland con aire incorporado o mediante el uso de un aditivo inclusor de aire. No usar aditivos químicos de manufactureros diferentes. No usar aditivos reductores de agua de alto rango en losas de puentes.

(m) Análisis granulométrico del agregado fino y del grueso.

(n) Absorción de los agregados fino y grueso.

(o) Gravedad Especifica de Masa (seco y saturado con superficie seca) de los agregados fino y grueso.

(p) Peso unitario del agregado grueso varillado en seco, en kilogramos por metro cúbico.

(q) Módulo de finura (MF) del agregado fino.

(r) Certificaciones de material para el cemento, aditivos y los agregados.

(s) Valor meta para el revenimiento del concreto con aditivo reductor de agua de alto rango y sin el.

(t) Valores meta para el contenido de aire en el concreto. Incluir el rango propuesto del contenido de aire propuesto para ser incorporado en la obra. Describir los métodos mediante los cuales será monitoreado y controlado el contenido de aire. Provéase documentación

aceptable que asegure que el revenimiento y la resistencia a la compresión del concreto están dentro de los límites especificados a través del rango total del contenido de aire propuesto. En ausencia de dicha documentación aceptable, el máximo contenido de aire será 10 por ciento.

(u) Unidad de masa (peso) del concreto.

(v) Resistencias a la compresión del concreto a los 7 y a los 28 días. Pendiente de los resultados, de la resistencia a los 28 días, se podrá aprobar un diseño de mezcla, siempre que los resultados de la resistencia a la compresión a los 7 días sean iguales o excedan al 85 por ciento de los requerimientos mínimos de resistencia, cuando no sean usados aditivos aceleradores de fraguado o cemento de alta resistencia inicial.

(w) Muestras de los materiales, si son pedido por el Ingeniero.

Comenzar la producción solamente después de que el diseño de la mezcla haya sido aprobado.

Suministrar un nuevo diseño de la mezcla para aprobación, si hay un cambio en una fuente de los materiales o cuando el módulo de finura del agregado fino cambie en más de 0.20.

Los costos de las pruebas para diseñar la mezcla serán por cuenta del Contratista.

#### 3.3.2.4. Sección 602.04: Acopio y Manipulación del Material

Acópiense y manipúlense todos los materiales de manera que no se produzcan segregación, contaminación u otros efectos perjudiciales. No usar cemento y CFAH que contengan evidencia de contaminación con humedad. Acópiense y manipúlense los agregados de una manera que asegure un contenido de humedad uniforme en el momento de la bachada.

#### 3.3.2.5. Sección 602.05: Medición de los Materiales

Dosificar el concreto de conformidad con el diseño aprobado para la mezcla y las siguientes tolerancias:

Cemento  $\pm 1$  por ciento

Agua  $\pm 1$  por ciento

Agregados  $\pm 2$  por ciento

Aditivo  $\pm 3$  por ciento

Se podrá usar un sistema volumétrico calibrado si se mantienen las tolerancias especificadas.

### 3.3.2.6. Sección 602.06: Planta Dosificadora, Mezcladoras y Agitadores

Úsese una planta dosificadora, mezcladora y agitador que se ajusten a lo requerido por la norma AASHTO M 157. El equipo de revoltura volumétrico continuo se deberá ajustar a lo requerido por la norma AASHTO M 241.

### 3.3.2.7. Sección 602.07: Revoltura

Revolver el concreto en una planta de revoltura central o en camiones mezcladores. Todo el equipo deberá ser operado dentro de la capacidad recomendada por el Fabricante. Prodúzcase concreto de consistencia uniforme.

**(b) Camión Mezclador.-** No usar mezcladoras que tengan cualquier sección de las paletas desgastada más de 25 mm ó más por debajo de la altura original de fábrica. No usar mezcladoras y agitadores que tengan concreto o mortero acumulado en el tambor de revoltura.

Agregar los aditivos al agua de revolver antes o durante la revoltura.

Cargar la bachada en el tambor de manera que una porción del agua de revolver entre antes que el cemento.

Revolver cada bachada de concreto no menos de 70 ni más de 100 revoluciones del tambor o de las paletas a la velocidad de revoltura.

Comenzar a contar las revoluciones de revoltura tan pronto como todo el material, incluyendo el agua, este dentro del tambor de revolver.

### 3.3.2.8. Sección 602.05: Entrega

Prodúzcase y entréguese el concreto de manera que se permita una colocación continua sin que ningún concreto alcance el fraguado inicial antes que el concreto restante a ser colocado adyacente a él. Úsense métodos de entrega manipuleo y colocación que minimicen la remanipulación del concreto y evitar causar cualquier daño a la estructura.

No colocar concreto que haya desarrollado el fraguado inicial. Nunca se deberá ablandar el concreto agregando agua.

**(a) Camión Mezclador/Agitador.-** Úsese la velocidad de agitación para toda rotación después de la revoltura. Cuando se usa un camión mezclador o agitador para transportar concreto que está completamente revuelto en una mezcladora de construcción central estacionaria, revuélvase durante el transporte a la velocidad de agitación recomendada por el Fabricante.

El agua y los aditivos (si están aprobados en el diseño de la mezcla) pueden ser agregados en el Proyecto a fin de obtener el revenimiento o contenido de aire requeridos, siempre que el total de agua en la mezcla no exceda la relación agua/cemento máxima y que el concreto no haya obtenido un fraguado inicial. Si se necesita agua adicional, agréguese solamente una vez y revuélvase con 30 revoluciones a la velocidad de revoltura. Complétese la revoltura extra dentro de 45 minutos (45 minutos para cementos de los tipos I, IA, II ó IIA con aditivos reductores de agua/retardadores de fraguado) después de la introducción inicial del agua de revoltura al cemento o del cemento a los agregados.

Después de comenzar la adición del cemento, complétese la descarga del concreto dentro del tiempo especificado en el Cuadro 602-2:

**CUADRO 602-2**  
**Limites de Tiempo para la Descarga del Concreto**

| Tipo de Cemento<br>Con Aditivos o sin ellos                                 | Limite de Tiempo<br>(Hora) |
|---|----------------------------|
| Tipo I, IA, II ó IIA  | 1.00                       |
| Tipo I, IA, II ó IIA con aditivo reductor de agua o retardador de fraguado. | 1.50                       |
| Tipo III.   | 0.75                       |
| Tipo III con aditivo reductor de agua o retardador del fraguado.            | 1.25                       |

**(b) Equipo no Agitador.-** Se podrá usar equipo no agitador para entregar el concreto si la descarga del concreto es completada dentro de 20 minutos desde el comienzo de la adición del cemento en el tambor de revoltura.

Úsele equipo provisto de contenedores metálicos lisos y herméticos al mortero, capaces de descargar el concreto a una velocidad controlada sin segregación. Provéanse carpas cuando sea necesaria la protección.

### 3.3.2.9. Sección 602.09: Control de Calidad-Muestreo y Ensaye

Para asegurar la calidad del diseño de la mezcla y el control de calidad en las operaciones, se seguirá un plan de control de calidad que incluye el muestreo y ensaye de los materiales y la mezcla de acuerdo con las siguientes normas:

|   |       |
|---|-------|
| a. Muestreo de Concreto Recién Mezclado   | T-141 |
| b. Peso por Metro Cúbico, Rendimiento y Contenido de Aire (Gravimétrico) del Concreto.                                    | T-121 |
| c. Análisis Granulométrico de Agregados Fino y Grueso.  | T-27  |
| d. Revenimiento del Concreto de Cemento Portland.   | T-119 |
| e. Contenido de aire del Concreto Recién Mezclado por el Método de Presión.   | T-152 |
| f. Gravedad Específica y Absorción del Agregado Fino.   | T-84  |
| g. Gravedad Específica y Absorción del Agregado Grueso.   | T-85  |
| h. Contenido de Aire del Concreto Recién Mezclado por el Método Volumétrico.  | T-196 |
| i. Moldeo y Curado en el Campo de Especímenes de Concreto para los Ensayos de Resistencia a la Compresión y a la Flexión. | T-23  |
| j. Resistencia a la Compresión de Cilindros de Concreto Moldeado .  | T-22  |

Las siguientes disposiciones sobre Muestreo y Ensaye serán aplicables y prevalecerán en cualquier discrepancia que hubiere con los métodos estándar enumerados anteriormente:

A.- El control del concreto será hecho por medio de cilindros. Se tomará una muestra por cada 25 metros cúbicos, con un mínimo de tres muestras por elemento estructural (estribo, pila, losa, etc.).

El suministro de cilindros, las pruebas o ensayos, así como todo lo necesario para el muestreo y ensaye del concreto, serán subsidiarios del costo del concreto.

B.- El Ingeniero podrá ordenar un número adicional de cilindros de pruebas durante la ejecución de los trabajos, ya sea para someterlas a curado en las mismas condiciones en que el concreto es colocado en la estructura, para determinar el grado de eficiencia del curado del concreto en el sitio o para obtener testigos de pruebas adicionales para un mejor control.

C.- Las pruebas de resistencia serán realizadas a los 7 y a los 28 días de mezclado el concreto.

La cantidad de muestras para el control de resistencia será de, por lo menos, 2 cilindros para cada fecha en que se quiera conocer la resistencia del concreto.

D.- *Resistencia de Diseño.* Las resistencias promedio de diseño, serán obtenidas de acuerdo a las resistencias de la clase de concreto especificado, de conformidad con el siguiente cuadro:

**CUADRO 602-3**  
**Resistencia de Diseño**

| Condiciones Previstas para la Colada | Resistencia Media para Estructuras Diseñadas en Función del Esfuerzo de Trabajo | Resistencia Media para Estructuras Presforzadas o diseñadas en Función del Esfuerzo Ultimo |
|--------------------------------------|---|--|
| Medias                               | $f_m = f'_c \times 1.35$  | $f_m = f'_c \times 1.5$  |
| Buenas                               | $f_m = f'_c \times 1.28$  | $f_m = f'_c \times 1.35$   |
| Muy Buenas                           | $f_m = f'_c \times 1.20$  | $f_m = f'_c \times 1.25$   |

Donde:

$f_m$  = Resistencia media de diseño y

$f'_c$  = Resistencia especificada para el concreto a los 28 días de edad, denominada resistencia característica.

Las condiciones previstas de ejecución de la colada adoptadas en el cuadro anterior, corresponden a las siguientes:





Condiciones Medias. Cemento sin conservación adecuada y sin comprobaciones frecuentes de su estado. Agregados medidos por volumen por procedimientos aparentemente eficaces, pero de precisión no comprobada. Falta de correcciones en los volúmenes de arena utilizados cuando varía la humedad de esta y por tanto, su contracción. Cantidad de agua bien medida al ser alimentada a la mezcladora, pero sin ajustar por la humedad contenida en la arena.

Buenas Condiciones. Cemento bien conservado, con frecuentes comprobaciones de su calidad. Agregados cuidadosamente medidos por volumen, con corrección en los volúmenes de arena a causa de su contracción. Reajuste en la cantidad de agua alimentada a la mezcladora cuando varía notablemente la humedad de los agregados. Vigilancia al pie de la obra con el equipo mínimo necesario para efectuar las comprobaciones oportunas.

Condiciones Muy Buenas. Control estricto de la calidad del cemento y de la relación agua/cemento. Agregados medidos por peso con determinaciones periódicas de la graduación y la humedad. Control de la consistencia del concreto. Laboratorio al pie de la obra con el personal y las instalaciones necesarias en cada caso. Constante atención a todos los detalles de la operación, tales como la falta de calibración de las básculas, cambios en el contenido de cemento, etc.

E.- Evaluación de las resistencias. Para evaluar los resultados de la resistencia del concreto se hará uso de los siguientes criterios:

I. La resistencia del concreto para estructuras diseñadas en función del esfuerzo de trabajo y otras construcciones no consideradas en el inciso II que sigue, no deberá dar más de un 20 por ciento de valores más bajos que la resistencia característica y el promedio de seis pruebas consecutivas deberá ser igual o mayor que el esfuerzo promedio especificado.

II. Para concreto a ser usado en estructuras diseñadas en función del esfuerzo último y en estructuras presforzadas, no más del 10 por ciento de las pruebas de resistencia darán valores menores que la resistencia característica especificada, y el promedio de tres pruebas consecutivas deberá ser igual o mayor que el esfuerzo promedio especificado.

Cuando el número de pruebas realizadas en toda clase de concreto sea de 6 ó menos, el promedio de todas las pruebas deberá ser igual o mayor que el mostrado en el siguiente Cuadro:

**CUADRO 602-4**  
**Esfuerzo Promedio Requerido en Pruebas Consecutivas**  
**Como Fracción de la Resistencia Característica**

| Número de Pruebas | Inciso I | Inciso II |
|-------------------|----------|-----------|
| 1                 | 0.79     | 0.86      |
| 2                 | 0.90     | 0.97      |
| 3                 | 0.94     | 1.02      |
| 4                 | 0.97     | 1.05      |
| 5                 | 0.99     | 1.07      |
| 6                 | 1.00     | 1.08      |

Resistencia Mínima. Cuando el esfuerzo de compresión del concreto de una estructura o parte de ella sea menor que el 85 por ciento de la resistencia característica  $f'_c$ , especificada a los 28 días, dicha estructura, o la parte afectada, será demolida.

En caso de discrepancia de criterios sobre la resistencia del concreto colocado, se obtendrá un mínimo de cuatro núcleos del concreto cuya calidad está en duda, de acuerdo a la Norma AASHTO T-24, para verificar los resultados obtenidos y el costo de este trabajo adicional será por cuenta del Contratista.

### 3.3.2.10. 602.10: Condiciones de Temperatura y del Tiempo

Manténgase la temperatura de la mezcla de concreto un poco antes de sus colocación, entre 10 y 30° C, excepto que en las losas de puente se limitará entre 10 y 25° C.

**(a) Tiempo Frío.-** Se entenderá como tiempo frío cuando la temperatura ambiental en el sitio cae a menos de 10°C por un período de 12 horas o más. Prácticamente, esta condición no existe en Nicaragua.

**(b) Tiempo Caliente.-** Se entiende por tiempo caliente cualquier tiempo durante la colocación del concreto en que la temperatura ambiental en el sitio del trabajo es de más de 35°C.

En tiempo caliente, enfríense todas las superficies que van a entrar en contacto con la mezcla de concreto, a menos de 35°C. Cúbranse con tela de bramante o esterillas de algodón humedecidas, rociando con agua, cubriendo con toldos o mediante otros métodos aprobados.



Durante el colado del concreto, manténgase la temperatura del concreto, usando cualquier combinación de las siguientes medidas:

- (1) Dese sombra a áreas de acopio de material o al equipo de producción.
- (2) Enfríese el agregado rociándolo con agua.
- (3) Enfríese el agregado, el agua o ambos por refrigeración o reemplazando una porción o toda el agua de revoltura con hielo en hojuelas o triturado al grado de que el hielo se derrita completamente durante la revoltura del concreto.

Cuando se coloque concreto en losas de puentes u otras losas expuestas, límitese la tasa de evaporación esperada a menos de 0.5 kilogramos por metro cuadrado por hora determinada por la Figura 602-1 ó la siguiente fórmula:

Donde:

$$EVAP = \frac{1 + 0.2374VV}{2906} * \left[ TC^2 - 4.762TC + 220.8 - HR * \left[ \frac{AT^3 + 127.8TA^2 + 665.6TA + 34283}{20415} \right] \right]$$

EVAP = Tasa de evaporación (kg/m<sup>2</sup>/hr)

VV = Velocidad del viento (km/hr)

HR = Humedad relativa (%)

TA = Temperatura del aire (°C)

TC = Temperatura del concreto (°C)

Cuando sea necesario, tómese una o más de las siguientes acciones:

- (1) Constrúyanse cortinas rompe vientos o encierros en toda el área de la colada.
- (2) Úsense rociadores de agua en forma de niebla contra el viento de la operación de colocación del concreto a fin de aumentar efectivamente la humedad relativa.

(3) Redúzcase la temperatura del concreto de acuerdo con lo dicho en el inciso (b) que antecede.

**(d) Lluvia.-** Todo el tiempo durante e inmediatamente después de colada el concreto, protéjase de la lluvia.

### 3.3.2.11. Sección 602.11: Obras Falsa y Formaletas

**(a) Obra Falsa.-** Constrúyase la obra falsa sobre fundaciones de suficiente resistencia para soportar las cargas sin asentamiento apreciable. La obra falsa que no puede ser fundada en zapatas sólidas y firmes, deberá ser soportada por medio de pilotes al grado que sea necesario.

Diséñese y constrúyase la obra falsa para soportar las cargas totales aplicadas, con una deflexión que no exceda 1/500 del claro de la obra falsa y ajustada para dar a la estructura terminada las líneas y niveles mostrados en los planos u ordenados por el Ingeniero. Incorpórense a la obra falsa las gatas mecánicas o cuñas que sean necesarias para compensar cualquier asentamiento que ocurra en la obra falsa antes o durante la colocación del concreto. Constrúyanse las cimbras de tal manera que permitan ser bajadas gradual y uniformemente.

Prepárense de acuerdo con el Artículo-106.02, planos y dibujos de trabajo para la obra falsa.

**(b) Formaletas.-** Las formaletas deberán satisfacer los siguientes requisitos:

**1. Generalidades.-** Háganse las formaletas suficientemente rígidas para evitar su distorsión a causa de la presión del concreto y otras cargas eventuales durante las operaciones de construcción, incluyendo la vibración. Constrúyanse y consérvense las formaletas de manera que no se abran las juntas debido a la contracción de la madera.

**2. Superficies Visibles.-** Las formaletas para todas las superficies de concreto que vayan a quedar visibles serán de uno de los tipos siguientes:

- a) Revestidas con plywood, para exteriores, con el hilo de la cara paralelo a los soportes;

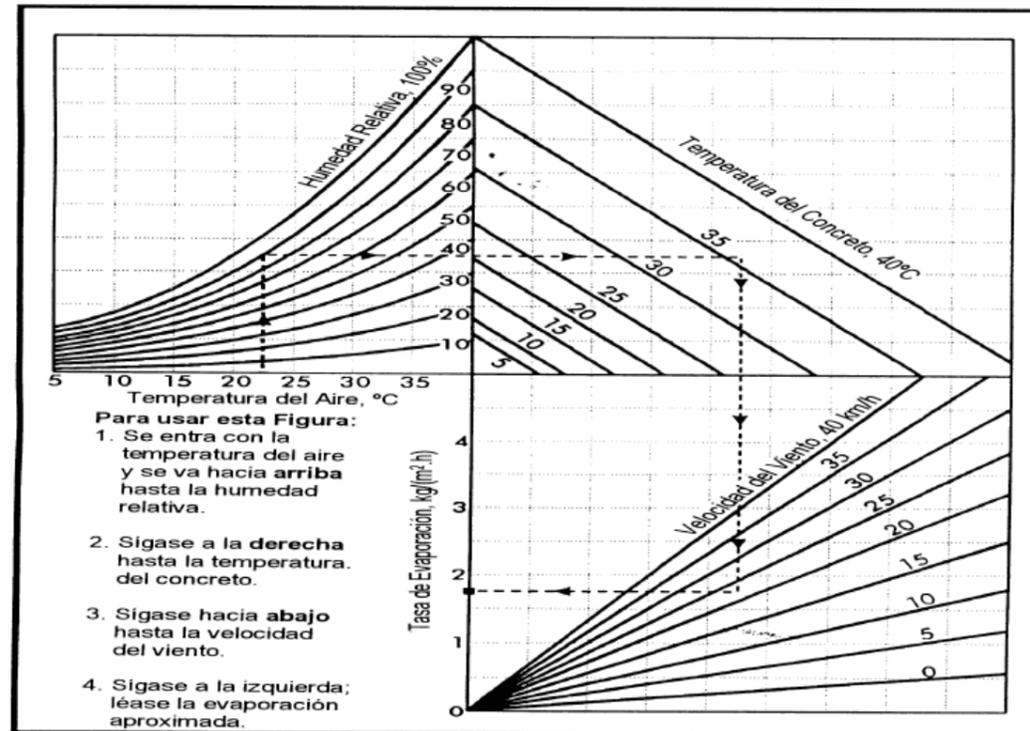


Figura 602-1  
Tasa de Evaporación de la Humedad Superficial

**Nota:** El ejemplo mostrado por la línea de rayas discontinuas es para una temperatura de aire de 22.5°C, humedad relativa de 90 por ciento, temperatura del concreto de 36°C y una velocidad del viento de 22.5 KPH. Esto da una tasa de evaporación de 1.75 kg/m<sup>2</sup>/hora.

b) Madera cepillada, por lo menos en un lado y dos bordes; No usar residuos o ripios de madera para completar las piezas.

c) De metal. (Sin abolladuras).

Fabriquense las formaletas con juntas herméticas al mortero y con superficies que produzcan caras lisas y uniformes en el concreto. Las formaletas serán achaflanadas y ochavadas, como lo indiquen los planos y déjese un bisel u ochava en todos los salientes, como en vigas y remates para facilitar su remoción.

**3. Amarres de Metal.-** Constrúyanse los amarres de metal o anclajes que van dentro de los moldes de manera que permitan su remoción hasta una profundidad de, por lo menos, 25 mm de la superficie sin dañar el concreto. Cuando sean permitidos los amarres de alambre, hágase uso de conos adecuados. Rellénense las cavidades con mortero de cemento, dejando la superficie lisa, pareja y de color uniforme.

**4. Muros.-** Cuando el fondo de las formaletas sea inaccesible, déjense las tablas del fondo sueltas o recúrrase a otro expediente que permita eliminar todo material extraño o suciedad inmediatamente antes de colar el concreto.

**5. Tratamiento de la Superficie.-** Trátense todas las caras internas de las formaletas con un aceite aprobado (no quemado), antes de colocar el refuerzo y, además, humidézcanse las formaletas de madera inmediatamente antes de colar el concreto. No permitir el uso de ningún material o tratamiento que deteriore, se adhiera o decolore el concreto.

**6. Formaletas de Metal.-** Las especificaciones para las formaletas de madera, en lo que se refiere a diseño, hermetismo al mortero, esquinas ochavadas, resaltes biselados, arriostamiento, alineación, remoción, reuso y aceitado, serán igualmente aplicables a las formaletas de metal.

No permitir el uso de formaletas permanentes con metal debajo de losas, a menos que se indique en los planos. El metal empleado para la formaleta deberá ser de tal espesor que mantenga su forma debida. Empótrense todas las cabezas de pernos y remaches. Las grapas, espigas y otros dispositivos de empalme serán de un diseño tal que mantengan las formaletas unidas rígidamente y permitan su remoción sin dañar el concreto. No permitir el uso de formaletas que no presenten una superficie lisa o que no dejen una alineación apropiada. Consérvense las formaletas metálicas libres de herrumbre, grasa y otras materias extrañas.

**7. Formaletas de Acero Permanentes para Losas de Puentes.-** No permitir el uso de formaletas metálicas permanentes, o sea, que queden formando parte de la estructura, bajo las losas del piso de puentes, vías elevadas o cajas de concreto, a menos que lo indiquen los planos.

Fabriquense las formaletas de este tipo y sus soportes de acero que llene los requisitos de la Norma ASTM A 446 (Grados A a E) con un recubrimiento de clase G165, de acuerdo a la Norma ASTM A 525.

Instálense todas las formaletas de conformidad con planos aprobados de fabricación y montaje.

No permitir que las planchas de las formaletas se apoyen directamente sobre las vigas longitudinales ni sobre los patines de las vigas de piso.

Asegúrense firmemente las planchas a los apoyos de las formaletas, con una longitud mínima de apoyo de 25 mm en cada extremo. Colóquense los apoyos de las formaletas en

contacto directo con el patín de las vigas de piso o las vigas longitudinales. Fijese todo accesorio por medio de soldaduras, pernos o grampas permisibles u otros medios aprobados; sin embargo, no permitir soldar los apoyos de las formaletas a bridas o patines de acero que no sean soldables ni a partes de bridas o patines que están sujetas a esfuerzos de tensión. La soldadura y el material usado deberán llenar los requisitos de la Norma AWS D1.1 del Código de Soldadura Estructural, en lo relativo a soldadura en filete, con la excepción de que serán permitidas soldaduras en filete de 3.2 milímetros.

Todo metal de formaleta que vaya a estar permanentemente expuesto al ambiente y en el que se haya dañado la capa de galván deberá ser muy bien limpiado y cepillado con cepillo de alambre y luego, pintado con dos manos de un imprimador compuesto de óxido de zinc y polvo de zinc que cumpla con la Norma TT-P-641, Tipo II, de las Especificaciones Federales de los Estados Unidos, sin agregar colorante, a satisfacción del

Ingeniero. No retocar las pequeñas decoloraciones causadas por el calor en las áreas de soldaduras.

Localizar las juntas transversales de construcción en el fondo de una acanaladura y taládranse en el campo agujeros de drenaje de 6.4 mm, espaciados a no menos de 31 mm, entre centros a lo largo de la línea de la junta.

Cuélese el concreto de acuerdo con estas especificaciones, poniendo especial énfasis en una vibración adecuada del mismo para evitar ratoneras y vacíos, especialmente en las juntas de construcción, juntas de expansión, limahoyas y extremos de las planchas de las formaletas. Las secuencias y procedimientos del colado así como de las revolturas, deberán ser previamente aprobados.

El Ingeniero hará las inspecciones y pruebas que crea necesarias para garantizar la buena calidad y adherencia del concreto.

Proveer todas las facilidades razonablemente requeridas para que el Ingeniero pueda dirigir en forma segura y conveniente las actividades y procedimientos de inspección.

**8.- Remoción de las Formaletas y la Obra Falsa.-** Remuévanse todas las formaletas exceptuando las siguientes:

(a) Las formaletas interiores del fondo de las losas de calzada de vigas maestras de caja coladas en el sitio.

(b) Las formaletas para los huecos interiores de miembros prefabricados.

(c) Las formaletas para estribos o pilas cuando no se dispone de acceso permanente a las celdas o huecos.

Las formaletas que no soportan la carga muerta de los miembros de concreto y las formaletas para barandas y barreras pueden ser removidas 24 horas después de haber sido colado el concreto. Protéjanse contra daños las caras expuestas del concreto. Cúrense todas las superficies de concreto expuestas de acuerdo con el Artículo-602.16, si las formaletas son removidas menos de 7 días después de colocado el concreto.

No remover formaletas ni obra falsa sino hasta que la resistencia y el tiempo requeridos hayan alcanzado los requisitos del Cuadro 602-5.

Remuévase la cimbra para puentes de arco uniforme y gradualmente. Comenzar en la corona y seguir hacia las impostas. Remuévase la cimbra de las luces de arcos adyacentes simultáneamente.

No remover la obra falsa que soporta la losa de piso de estructuras de marco rígido excluyendo las alcantarillas de caja de concreto, sino hasta que el material de relleno haya sido colocado y compactado contra las patas verticales del marco. Instálense un sistema de apuntalamiento si la obra falsa que sostiene los lados del alma de una viga maestra con pendientes mayores de 1:1 es removida antes de colar el concreto de la losa de la calzada. Diseñese el sistema de apuntalamiento con soportes laterales que resistan todas las fuerzas rotacionales que actúan sobre el alma, incluyendo los causados por la colocación del concreto de la losa de calzada. Instálense los soportes laterales inmediatamente después de que sea removido cada panel de formaleta y antes de aflojar los soportes del panel de la formaleta adyacente.



**CUADRO 602-5**  
**Criterios Mínimos para Aflojar las Formaletas o Soportes**

| Elemento Estructural   | Porcentaje de la Resistencia a los 28 días Especificada ( $f'_c$ ) | Mínimo Número de Días desde la Última Colada |
|--|--|--|
| (a) Columnas y Caras de Muros.<br>(Que todavía no soporten cargas)   | 50   | 3  |
| (b) Pilas y Estribos Masivos.<br>(Que todavía no soporten cargas)  | 50   | 3  |
| (c) Vigas Maestras de Caja.  | 80   | 14   |
| (d) Vigas Maestras de Claro Sencillo, vigas Maestra en T, puentes de losa, vigas transversales, coronamientos, coronamientos de pilas no soportados continuamente. | 80   | 14   |
| (e) Losas de puentes de caballetes donde estén apoyados sobre largueros de madera.   | 70   | 10   |

**CUADRO 602-5**  
**Criterios Mínimos para Aflojar las Formaletas o Soportes (Continuación)**

| Elemento Estructural  | Porcentaje de la Resistencia a los 28 días Especificada ( $f'_c$ ) | Mínimo Número de Días desde la Última Colada |
|---|--|--|
| (f) Losas y voladizos donde estén apoyados sobre largueros de acero o vigas maestras de concreto presforzado. | 70   | 10   |
| (g) Coronamientos de pilas apoyadas continuamente.  | 60   | 7  |
| (h) Arcos, puentes de claros continuos, marcos rígidos.   | 90   | 21   |

Remuévase todo el material de la obra falsa. Remuévanse los pilotes usados en obra falsa hasta por lo menos 0.5 metros debajo de la superficie del terreno original o lecho original del cauce.

Déjense en su lugar las formaletas para zapatas construidas dentro de una ataguía o encofrado cuando su remoción pueda poner en peligro la seguridad de la ataguía o encofrado y cuando las formaletas no van a quedar expuestas a la vista en la estructura terminada.

Remuévanse todas las demás formaletas arriba o debajo del nivel del terreno o del agua.

### 3.3.2.12. Sección 602.12: Manipulación y Colocación del Concreto

Efectúese todo el trabajo de excavación y relleno estructurales de acuerdo con la Sección-207. Colóquense el acero de refuerzo, el acero estructural, los dispositivos de apoyo, el material para juntas y rubros misceláneos de conformidad con las Secciones correspondientes.

**(a) Generalidades.-** Manipúlese, colóquese y consolídese el concreto con métodos que no causen segregación y den como resultado un concreto denso y homogéneo que esté libre de huecos y ratoneras. Los métodos de colar el concreto no deberán causar desplazamiento del acero de refuerzo u otro material que vaya empotrado en el concreto. Cuélese y consolídese el concreto antes del fraguado inicial. No reamasar el concreto agregándole agua a la mezcla.

No colar el concreto sino hasta que las formaletas, todos los materiales que van empotrados y la adecuación del material de la fundación hayan sido inspeccionados y aprobados por el Ingeniero.

Quítense todo mortero, desechos y material extraño de las formaletas y del acero de refuerzo antes de comenzar la colocación del concreto.

Humedézcase muy bien las formaletas y la subrasante inmediatamente antes de colocar el concreto sobre ellos. Los dispositivos temporales separadores de formaletas pueden ser dejados en su sitio mientras la colocación del concreto exija su uso, después de lo cual serán removidos.

Colar el concreto continuamente sin interrupción entre la construcción planeada o entre juntas de expansión. La tasa de entrega, secuencia de la colada y los métodos deberán



ser tales que siempre se esté colando y consolidando concreto recién hecho contra concreto previamente colocado antes de que se haya alcanzado el fraguado inicial en este último. No se permitirá que el tiempo transcurrido entre la colocación de bachadas sucesivas excede de 30 minutos.

Durante y después de la colada del concreto, no se deberá dañar el concreto previamente colocado ni romper la adherencia entre el concreto y el acero de refuerzo. Manténganse a los trabajadores fuera del concreto recién hecho. No apoyar plataformas para trabajadores y equipo directamente sobre el acero de refuerzo. Una vez que el concreto ha fraguado, no perturbar las formaletas o las varillas de refuerzo que sobresalgan del concreto sino hasta que éste alcance la resistencia suficiente para evitar daños.

**(b) Secuencia de la Colada.**

**(1) Subestructuras.-** No colocar cargas sobre caballetes, pilas o estribos terminados sino hasta que los ensayos de los cilindros tomados del mismo concreto y curados bajo las mismas condiciones que el elemento de la subestructura, indican que todo el concreto tiene, por lo menos, el 80 por ciento de su resistencia a la compresión requerida a los 28 días.

**(2) Miembros Verticales.-** Para los miembros verticales de más de 5 metros de altura, permítase que el concreto fragüe por lo menos 4 horas antes de colar concreto para los miembros horizontales que los integran. Para miembros verticales de más de 5 metros de altura, déjese que el concreto fragüe por lo menos 30 minutos. No aplicar las cargas de los miembros horizontales sino hasta que el miembro vertical haya alcanzado su resistencia requerida.

**(3) Superestructuras.-** No colar concreto en la superestructura sino hasta que las formaletas hayan sido suficientemente descubiertas para determinar la aceptabilidad del concreto de la subestructura que la soporta. No colar concreto en la superestructura sino hasta que la subestructura haya alcanzado la resistencia requerida.

**(4) Arcos.-** Colar el concreto en los anillos del arco de tal manera que la cimbra sea cargada uniforme y simétricamente.

**(c) Métodos de Colado.-** Usar equipo de suficiente capacidad que sea diseñado y operado para evitar la segregación de la mezcla y pérdida de mortero. No usar equipo que produzca vibraciones que puedan causar daños al concreto recién colado. No usar equipo

con partes de aluminio que entren en contacto con el concreto. Remover el mortero fraguado o secado de las superficies internas del equipo de colar concreto.

Colóquese el concreto lo más cerca posible a su posición final. No colar concreto en capas horizontales de más de 0.5 metros de espesor. No exceder la capacidad del vibrador para consolidar y fundir la nueva capa con la capa previa. No colocar el concreto a una tasa tal que, al ser corregido por temperatura, exceda la carga de diseño de las formaletas.

No dejar caer concreto no confinado más de 2 metros. El concreto podrá ser confinado usando un tubo equipado con una cabeza de tolva u otro dispositivo aprobado que evite la segregación de la mezcla y la salpicadura del mortero. Esto no se aplica a la hincadura de pilotes colados en el sitio cuando la colocación del concreto es completada antes de que alcance el fraguado inicial del concreto colado primero.

Operar las bombas de concreto en forma tal que se entregue en el tubo de descarga una corriente continua de concreto sin bolsas de aire. No usar sistemas de bandas transportadoras de más de 170 metros de largo medidos de extremo a extremo del conjunto total de la banda. Arréglese el conjunto de la banda de manera que cada sección descargue por medio de una tolva vertical en la siguiente sección sin que el mortero se adhiera a la banda. Úsense una tolva, una canaleta y deflectores en el extremo de descarga del sistema de banda transportadora a fin de hacer que el concreto caiga verticalmente.

**(d) Consolidación.-** Provéanse suficientes vibradores manuales de tipo interno, adecuados para las condiciones de la colada de concreto.

Los vibradores deberán cumplir con los requisitos indicados en el Cuadro 602-6. Provéanse vibradores recubiertos de hule cuando se use acero de refuerzo recubierto con epóxico.

**CUADRO 602-6**  
**Requisitos para Vibradores Manuales**

| <b>Diámetro de la Cabeza<br/>(mm)</b> | <b>Frecuencia<br/>(Vibraciones/minutos)</b> | <b>Radio de Acción<br/>(mm)</b> |
|---------------------------------------|---|---------------------------------|
| 19 a 38                               | 10,000 a 15,000                             | 75 a 125                        |
| 32 a 64                               | 9,000 a 13,500                              | 125 a 255                       |
| 50 a 89                               | 8,000 a 12,000                              | 180 a 485                       |



Provéase un número suficiente de vibradores para consolidar cada bachada a medida que se va colocando. Provéase un vibrador de repuesto en el sitio para casos de desperfectos. Usar vibradores externos de formaleta solamente cuando las formaletas hayan sido diseñadas para ser vibradas externamente y cuando no sea posible la vibración interna.

Consolidar todo el concreto por vibración mecánica inmediatamente después de ser colocado. Manipúlense los vibradores para conseguir que el concreto penetre completamente alrededor del acero de refuerzo, accesorios empotrados, esquinas y ángulos de las formaletas. No causar segregación. No consolidar el concreto colocado bajo agua. Suplementar la vibración con el varillado, según fuere necesario, para garantizar superficies lisas y concreto denso a lo largo de la superficie de las formaletas, en las esquinas y lugares imposibles de alcanzar con los vibradores.

Vibrar el concreto en el punto en que fue depositado y en puntos uniformemente espaciados no separados más de 1.5 veces el radio dentro del cual la vibración es visiblemente efectiva. Insertar los vibradores de manera que las áreas vibradas afectadas se traslapen. No usar los vibradores para desplazar el concreto. Insertar los vibradores verticalmente y sacarlos lentamente del concreto. La vibración deberá ser de suficiente duración e intensidad para consolidar completamente el concreto, pero sin causar segregación. No vibrar en ningún punto tanto tiempo que se formen áreas localizadas de lechada. No vibrar el acero de refuerzo. No vibrar áreas ya vibradas.

#### 3.3.2.13. Sección 602.13: Juntas de Construcción

Constrúyanse juntas de construcción en los lugares mostrados en los planos. Para juntas de construcción adicionales se requerirá aprobación escrita.

En las juntas de construcción horizontales, colóquense bandas calibradas dentro de las formaletas a lo largo de todas las caras expuestas, para producir líneas de junta rectas. Límpiense y satúrense las juntas de construcción antes de colocar mezcla de concreto. Manténganse las juntas saturadas hasta que el concreto adyacente haya sido colocado. Inmediatamente antes de colocar nuevo concreto apriétense las formaletas firmemente contra el concreto previamente colocado. Donde sea accesible, úntese completamente la superficie existente con una mano muy delgada de mortero de cemento. Extiéndanse las varillas de acero de refuerzo a través de las juntas de construcción.

#### 3.3.2.14. Sección 602.14: Juntas de Expansión y de Contracción

(a) **Juntas Abiertas.**- Fórmense las juntas abiertas con una faja de madera, plancha metálica u otro material aprobado. Quítense el material usado para moldear las juntas, sin cascar o quebrar las esquinas del concreto. No extender el acero de refuerzo a través de las juntas abiertas.

(b) **Juntas Rellenadas.**- Recórtese el rellenedor premoldeado de juntas de expansión hasta darle la forma y tamaño de la superficie que se va a juntar. Asegúrese el rellenedor de juntas en una de las superficies de la junta usando clavos galvanizados u otros medios aceptables. Traslápese siguiendo las recomendaciones del Fabricante. Después de quitar las formaletas remuévase y recórtese nítidamente todo el concreto o mortero que haya sellado a través de la junta. Rellénense todos los espacios vacíos que hayan quedado en la junta, de 3 mm ó más de ancho, con asfalto caliente u otro rellenedor aprobado. Colóquense todos los espárragos de conexión, los dispositivos de transferencia de carga y otros dispositivos tal como están mostrados en los planos o lo ordene el Ingeniero.

(c) **Juntas de Acero.**- Fabríquense las planchas, angulares y otros perfiles estructurales exactamente para que se ajusten a la superficie de concreto. Déjese la abertura de la junta de tal tamaño que se acomode a la colada del concreto. Fijéense firmemente los materiales de las juntas para mantenerlos en su posición correcta. Manténgase la abertura de la junta libre de obstrucciones durante la colada del concreto.

(d) **Tapajuntas.**- Constrúyanse los tapajuntas de acuerdo con la Sección-908 de estas especificaciones.

(e) **Sellos de Juntas de Compresión.**- Úsense sellos de juntas de compresión de una sola pieza en las juntas transversales y los más largos posible, en las juntas longitudinales. Límpiense y séquense las juntas y quítense todas las astilladuras e irregularidades. Aplíquese un adhesivo lubricante como una película cobertura a ambos lados del sello inmediatamente de la instalación. Comprímase el sello y colóquese en la junta de acuerdo con lo recomendado por el Fabricante. Asegurarse de que el sello está en pleno contacto con las paredes de la junta en toda su longitud.

Quítense y descártense todos los sellos que estén torcidos, encolochados, mellados o inadecuadamente moldeados. Quítense y repongáense los sellos de juntas que se alarguen más del 5 por ciento de su longitud original al ser comprimidos. Quítense todo el exceso de adhesivo lubricante antes de que se seque.



(f) **Sellos Elastoméricos para Juntas de Expansión.**- Instalar la junta de acuerdo con las recomendaciones del Fabricante y lo indicado en los planos.

### 3.3.2.15. Sección 602.15: Acabado del Concreto Plástico

Allánense todas las superficies de concreto que no hayan sido coladas en contacto con formaletas.

Acabar con llana de madera la superficie del concreto. Elimínese toda lechosis o lechada delgada. Piquetéense cuidadosamente todos los bordes no ochavados con un canteador. Déjense expuestos los bordes del rellenador de juntas. Protéjase la superficie de los daños de la lluvia.

Acábanse todas las superficies de concreto a ser usadas por el tráfico dándoles una textura resistente al deslizamiento. Provéanse, por lo menos, 2 puentes o pasarelas de trabajos adecuados y convenientes.

(a) **Enrase y Allanamiento.**- Para pisos de puentes y losas superiores de estructuras que van a servir como pavimentos acabados, úsese una máquina terminadora autopropulsada aprobada equipada con enrasador oscilatorio. Si se aprueba, úsese métodos de acabado manual en áreas irregulares donde el uso de una máquina sea impráctico.

Envásense todas las superficies usando equipo aprobado sobre rieles o largueros sobre los cuales se desplace. No apoyar los rieles dentro de los límites de colocación del concreto, sin aprobación.

Fíjense los rieles o largueros sobre apoyos que no cedan de manera que el equipo de acabado opere sin interrupciones sobre toda la superficie que está siendo acabada. Extiéndanse los rieles más allá de ambos extremos del tramo programado para la colada, una distancia suficiente para permitir a la máquina terminadora darle acabado al concreto que se está colocando.

Colóquense los rieles sobre toda la longitud de superestructuras de vigas maestras de acero.

Ajústense los rieles, largueros y el equipo de enrasar de acuerdo con el perfil y sección transversal requeridos, tomando en cuenta el asentamiento previsto, la contraflecha y la deflexión de la obra falsa.

Antes de iniciar la entrega y colado del concreto, opérese la máquina enrasadora sobre todo el área a ser acabada para comprobar si hay deflexiones excesivas de los rieles, el espesor de la losa superior, el recubrimiento del acero de refuerzo y verificar la adecuada operación del equipo. Háganse las correcciones necesarias antes de que comience la colocación del concreto.

Después de colocado el concreto, opérese la máquina enrasadora sobre el concreto lo que sea necesario para obtener el perfil y sección transversal requeridos. Manténgase un pequeño colcho de concreto excedente al frente de la cuchilla cortadora del enrasador todo el tiempo.

Manténgase este exceso de concreto hasta el final de la colada o de la formaleta y luego remuévase y deséchese. Ajústense los rieles o largueros lo necesario para corregir asentamientos o deflexiones no previstas.

Quítense todo el exceso de agua, lechosis o material extraño llevado a la superficie, por medio de una rastra de hule o codal arrastrado desde el centro de la losa hacia cada orilla. No aplicar agua a la superficie del concreto durante las operaciones de acabado.

(b) **Escantillón.**- Compruébense las superficies de la losa y la acera. Compruébese la superficie entera paralelamente a la línea central del puente con un escantillón metálico de 3 metros de largo. Traslápese el escantillón por lo menos la mitad de la longitud de la pasada anterior de dicho escantillón.

Corríjense las desviaciones en exceso de 3 mm desde el borde del escantillón usado en la prueba. Para superficies del piso del puente que vayan a recibir una carpeta, corrijanse las desviaciones en exceso de 6 milímetros.

(c) **Texturación.**- Prodúzcase una textura de la superficie que sea resistente al deslizamiento en todas las superficies destinadas a la circulación mediante ranuración. Úsese uno de los siguientes acabados o una combinación de ellos, para otras superficies según se requiera.

(1) **Acabado Ranurado.**- Úsese una allanadora de madera que tenga una fila simple de rebabas o aletillas o una máquina aprobada diseñada específicamente para aserrar ranuras en pavimentos de concreto. Espaciar las rebabas o aletillas de 10 a 20 mm de centro a centro. Háganse las ranuras de 2 a 5 mm de ancho y de 3 a 5 mm de profundidad. Ranúrese





perpendicularmente a la línea central sin rasgar la superficie de concreto o soltar el agregado de la superficie.

Si las ranuras son aserradas, córtense aproximadamente de 5 mm de ancho espaciadas de 15 a 25 milímetros.

En las calzadas de puentes, descontinúese la ranuración a 300 mm de la cara del bordillo y dese un acabado longitudinal con llana metálica en la superficie de las cunetas.

**(2) Acabado de las Aceras.**- Enrásese la superficie usando una tabla de enrasar y luego trabájese con llana de madera la superficie. Úsese una herramienta de cantear en los bordes y juntas de expansión. Cepílese la superficie usando un cepillo con cerdas tiesas. Cepílese perpendicularmente a la línea central de orilla a orilla traslapando ligeramente las corridas adyacentes. Produzcanse corrugaciones regulares de no más de 3 mm de profundidad sin rasgar el concreto. Mientras el concreto está plástico, corrijanse lugares porosos, irregularidades, depresiones, pequeñas cavidades y sitios ásperos.

Ranúrense las juntas de contracción al intervalo requerido usando una herramienta de ranurar aprobada.

**(3) Acabado con Llana Metálica y Cepillo.**- Úsese una llana de acero para producir superficie lisa y resbaladiza, libre de sangrado de agua. Cepílese la superficie usando un cepillo fino y corridas paralelas.

**(4) Acabado de Agregado Expuesto.**- Enrásese la superficie usando una tabla de enrasar y luego úsese una llana de madera.

Úsese una herramienta de cantear en todas las juntas transversales y longitudinales que están contra formaletas o pavimento existente.

No cantear las juntas transversales en una colada continua de un carril en juntas longitudinales en la colada continua de un carril doble.

Tan pronto como el concreto se endurece lo suficiente para evitar que las partículas de agregado sean desprendidas, cepílese la superficie. Úsense cepillos tiesos aprobados por el Ingeniero. Téngase cuidado de no estropear la superficie o de agrietar o descantillar los bordes de la losa o de las juntas. Si lo aprueba el Ingeniero, aplíquese un rocío ligero de retardador de fraguado a la superficie no acabada para facilitar el trabajo.

Primero, cepílese transversalmente a través del pavimento. Quítese enteramente el mortero semi-duro aflojado del pavimento. Quítese el mortero de todos los pavimentos adyacentes. Luego, cepílese paralelamente a la línea central del pavimento. Continúese esta operación hasta que una cantidad suficiente de agregado grueso haya quedado expuesta. Otros métodos de exponer el agregado, tales como el uso de un aditamento de rociar agua sobre un cepillo especial para exponer agregados, serán permitidos si se demuestran buenos resultados.

Después de curar el concreto de acuerdo con el Artículo-501-17, lávese la superficie con cepillos y agua para quitar toda lechosidad y cemento del agregado grueso expuesto.

**(d) Superficies debajo de Apoyos.**- Dese acabado a todas las superficies de apoyo dentro de 5 mm de la elevación indicada en los planos. Cuando se vaya a colocar una plancha de mampostería directamente sobre el concreto o sobre material rellenedor de menos de 5 mm de espesor, acábese la superficie con llana de madera a una elevación ligeramente arriba de la elevación indicada en los planos. Después de que el concreto ha fraguado, esmerílese la superficie lo necesario para proveer un apoyo completo y parejo.

Cuando se vaya a colocar una plancha de mampostería sobre material rellenedor de 5 a 15 mm de espesor, dese acabado a la superficie con llana de acero. Acábese y esmerílese la superficie de manera que no varíe con respecto a un escantillón, en cualquier dirección, en más de 2 milímetros.

Cuando se vaya a colocar una plancha de mampostería sobre material rellenedor de más de 15 mm de espesor o cuando se vayan a usar almohadillas elastoméricas de apoyo, acábese la superficie hasta obtener una superficie plana libre de crestas.

Cuando sea requerido debajo de una plancha de mampostería o almohadilla elastomérica de apoyo, úsese mortero en las proporciones de 1 parte de cemento Portland y 1.5 partes de arena limpia. Mézclense bien la arena y el cemento antes de agregar el agua. Mézclense mortero solamente en la cantidad suficiente para uso inmediato. Descártese todo mortero que haya sido revuelto más de 45 minutos antes. No reamasar el mortero.

Cúrese el mortero ya colocado durante, por lo menos, 48 horas. La arena para mortero se ajustará a lo requerido en la norma AASHTO M 45. Se podrán usar productos especiales patentados, con la aprobación del Ingeniero.



**(e) Superficie Debajo de Sello de Calzada Hermetizado al Agua con Membrana.-** Las superficies que van a ser cubiertas con sello de calzado hermetizadoras al agua con membrana, no deberán ser de textura áspera, sino que serán acabadas dejando superficies lisas y libres de crestas y otras protuberancias.

#### 3.3.2.16. Sección 602.14: Curación del Concreto

Comenzar la curación inmediatamente después de que el agua libre superficial se ha evaporado y se ha completado el acabado. Si la superficie del concreto comienza a secarse antes de que se haya escogido el método de curación que se va a implementar, manténgase la superficie de concreto húmeda usando un rocío como niebla sin dañar la superficie.

Las superficies a ser frotadas deberán ser mantenidas húmedas después de quitar las formaletas. Cúrense inmediatamente después de la primera frotada.

Cúrense las superficies superiores de las calzadas de puentes usando el método de compuesto de membrana líquida para curar combinado con el método a base de agua. Aplíquese el compuesto de membrana líquida inmediatamente después del acabado. Aplíquese la curación a base de agua dentro de 4 horas después del acabado.

Cúrese todo el concreto ininterrumpidamente por lo menos durante 7 días. Si en la mezcla se ha usado puzolana en exceso del 10 por ciento en peso del cemento, cúrese ininterrumpidamente por lo menos durante 10 días. **(a) Método con las Formaletas en su Lugar.-** Para superficies coladas con formaletas, déjense éstas en su lugar sin aflojarlas. Si las formaletas son quitadas durante el período de curación para facilitar la frotación, quítense únicamente las formaletas de las áreas que puedan ser frotadas durante el mismo turno de trabajo. Durante la frotación, manténgase húmeda la superficie de concreto expuesta. Después de completar la frotación, continúese el proceso de curación usando el método de aplicación de agua o un compuesto para curar que sea claro (tipo 1 ó tipo 1-D) por el período de curación restante.

**(b) Método a Base de Agua.-** Manténgase la superficie de concreto continuamente húmeda mediante agua empozada, rociada o cubriendo con un material que es mantenido constante y completamente húmedo. El material de cobertura puede consistir en esterillas de algodón, capas múltiples de tela de bramante u otro material aprobado que no decolore o dañe de cualquier otra manera al concreto.

Cúbrase el material de cobertura con un material laminado hermético al agua que impida la pérdida de humedad del concreto. Úsense láminas que sean lo más anchas posible. Traslápense las láminas adyacentes por lo menos 150 mm y séllense herméticamente todas las costuras con cinta sensible a la presión, mástique, goma u otros métodos aprobados. Fíjese bien todo el material de manera que no lo desplace el viento. Repárense inmediatamente las láminas que hayan resultado quebradas o dañadas.

**(c) Método Curación con Compuesto de Membrana Líquida.-** No usar el método de membrana líquida sobre superficies que van a recibir un acabado por frotación. Su uso en superficies de juntas de construcción será permitido solamente si el compuesto va a ser removido con chorro de arena antes de colocar el concreto contra la junta.

Úsese compuesto de membrana líquida del tipo 2, de pigmento blanco, solamente en las superficies de la calzada de puentes o sobre superficies que no van a quedar expuestas a la vista en la obra terminada. En las demás superficies úsese compuesto de curación del tipo 1 o del tipo 1-D, claro.

Mézclense las soluciones para curar por membrana que contengan pigmentos, antes de usarlas. Continúese agitándolas durante la aplicación.

Úsese equipo capaz de producir un rocío fino. Aplíquese el compuesto a una tasa mínima de 0.25 litros por metro cuadrado en una o dos aplicaciones uniformes. Si la solución es aplicada en dos pasadas, sígase la primera aplicación con la segunda dentro de 30 minutos y aplicándola en ángulo recto con respecto a la primera.

Si se daña la membrana por lluvia u otras causas durante el período de curación, inmediatamente aplíquese otra mano sobre el área dañada.

#### 3.3.2.17. Sección 602.17: Acabado de Superficies de Concreto Coladas en Formaletas

Elimínese o reemplácese o repárese, según lo apruebe el Ingeniero, todo concreto con huecos de roca o "ratoneras". Désele el acabado a las superficies de concreto sano colado mediante formaletas, de acuerdo con lo siguiente:

**(a) Clase 1 - Acabado Ordinario.-** Désele acabado ordinario, clase 1, a las superficies siguientes:



(1) Superficies debajo de claros de losas, vigas maestras de caja (doble alma), claros de arcos de enjuta rellena y las losas de calzada de la vía entre vigas maestras de la superestructura.

(2) La cara interna de las superficies verticales de vigas maestras en T de superestructuras.

(3) Superficies que van a quedar enterradas y superficies de alcantarillas de caja que quedan por encima del terreno acabado que no sean visible desde la vía de circulación o de una vía peatonal.

Comenzar el acabado tan pronto como sean quitadas las formaletas. Elimínense aletas y protuberancias irregulares de todas las superficies que quedan expuestas o van a ser impermeabilizadas. Elimínense las abombaduras y rebajaduras con piedras o discos de carborundum.

Elimínese concreto localizado con huecos de rocas o ratoneras que no hayan sido bien reparados y reemplácese con concreto sano o mortero empaçado de una manera aprobada. Límpiense y sanéense todas las cavidades dejadas por los tirantes de las formaletas, agujeros, concreto quebrado, filos y otros defectos. Satúrese el área con agua. Dese el acabado al área con mortero que tenga menos de una hora de mezclado.

Después de que el mortero haya fraguado, frótese (si fuera necesario) y continúese la curación. Déjense las áreas expuestas comparables al concreto que las rodea.

Piquetéese cuidadosamente y quítese el mortero y concreto libres de las juntas de construcción y de expansión. Déjese el rellenedor de juntas expuesto en toda su longitud con bordes limpios y bien alineados.

Frótense o esmeríense las superficies de apoyo de pilas y estribos a la elevación y pendiente especificadas.

Si la superficie acabada final no está exacta y uniforme, frótesela de acuerdo con lo indicado en (b) más adelante.

**(b) Acabado Clase 2 - Por frotación.**- Dese acabado de clase 2, por frotación, a las siguientes superficies:

(1) Todas las superficies de las superestructuras de puentes, excepto aquellas que estén designadas para recibir acabado de clase 1 u otro acabado.

(2) Todas las superficies de pilas, pilotes, columnas y estribos de puentes y muros de retención por encima del nivel del terreno acabado y a, por lo menos, 300 mm por debajo del terreno no acabado.

(3) Todas las superficies del anillo de arcos de enjuta abierta columnas de enjutas y torres de estribos.

(4) Todas las superficies de cruces peatonales bajo nivel, excepto los pisos y superficies que quedan cubiertos con tierra.

(5) Las superficies que quedan arriba del terreno acabado de cabezales de alcantarillas que sean visibles desde la vía de circulación o de cruces peatonales.

(6) Las superficies internas de cajas-alcantarillas de más de 7 metro de altura que sean visibles desde la vía de circulación.

Dese el acabado en una distancia del interior de la caja por lo menos igual a la altura de la misma.

(7) Todas las superficies de las barandas de los puentes.

Complétese el acabado de clase 1 de acuerdo con lo indicado en el inciso (a) precedente. Satúrese la superficie de concreto con agua. Frótese la superficie con piedra de carborundum de aspereza medio gruesa usando una pequeña cantidad de mortero sobre la superficie. Úsese mortero compuesto de cemento y arena fina mezclados en la misma proporción que en el concreto que está siendo acabado. Continúese frotando hasta que desaparezcan las marcas de las formaletas, las protuberancias e irregularidades y se haya obtenido una superficie uniforme. Déjese en su lugar la pasta producida por la frotación.

Después de que otros trabajos que pudieran afectar la superficie hayan sido concluidos, frótese con una piedra de carboundum fino y agua hasta que toda la superficie tenga una textura lisa y de color uniforme. Después de que haya secado la superficie, frótesela con tela de bramante para quitar el polvo suelto. Déjesela libre de parches no sanados, pasta, polvo y marcas objetables.

**(c) Acabado Clase 3 - Con Herramientas.**- Déjese al concreto fraguar por lo menos 14 días o más si fuera necesario para evitar que las partículas de agregado sean arrancadas de la superficie. Úsense herramientas a aire comprimido tales como martellina, piqueta y otras aprobadas.



Descascárese el mortero de la superficie y quiébranse las partículas de agregado para exponer agrupaciones de partículas de agregado quebrado en un patrón de mortero.

**(d) Acabado Clase 4 - Acabado a Chorro de Arena.-** Déjese al concreto fraguar por lo menos 14 días. Protéjase las superficies adyacentes que no vayan a ser acabadas de esta manera. Aplíquese el chorro de arena a presión con arena aguda y dura para producir una superficie de grano fino pareja de la cual es desprendido el mortero dejando expuesto el agregado.

**(e) Acabado Clase 5 - Con Cepillo de Alambre o Lavador.-** Comiéncese tan pronto como sean quitadas las formaletas. Lávese la superficie con cepillos de alambre tieso o de fibra dura usando una solución de ácido muriático. Mézclase la solución en la proporción de una parte de ácido a 4 partes de agua. Lávese restregando hasta que la película o superficie de cemento sea completamente removida y que las partículas de agregado queden expuestas. Déjese una textura apedregullada uniforme que tenga la apariencia de granito fino a conglomerado grueso, dependiendo del tamaño y graduación del agregado. Lávese toda la superficie con agua que contenga una pequeña cantidad de amoníaco.

**(f) Acabado Clase 6- A Color.-** Constrúyase un número suficiente de paneles de muestra de 0.5 por 1 metro de concreto a color, hasta obtener un color aceptado por el Ingeniero. Protéjase el panel de muestra a color aprobado todo el tiempo que dure el trabajo.

Colóreense todas las superficies designadas de acuerdo con el color del panel aceptado.

Complétese un acabado de clase 1 de acuerdo con lo estipulado en el inciso (a) precedente. No aplicar el acabado a color hasta que se haya completado la colada de concreto para toda la estructura. Quítese todo el polvo, material extraño, aceite de formaleta, grasa y compuesto de curar, con una solución al 5 por ciento de fosfato trisódico y luego lávese el concreto con agua limpia.

Úsese papel, tela u otros medios para proteger las superficies que no vayan a ser acabadas a color. Aplíquese el acabado a una superficie de concreto seca a la temperatura ambiental.

Aplíquese el acabado a color de acuerdo con las recomendaciones del Fabricante. Úsese un rociador, brocha o rodillo de pintar para aplicar la primera mano de sellador penetrante o base de color. La mano de color será aplicada de la misma manera después de

que la primera mano haya secado completamente. Aplíquese el acabado a las superficies de manera que se obtenga un color uniforme y permanente, libre de huellas y corridas.

Límpiese las áreas de concreto que no estén designadas para recibir esta clase de acabado, usando un método aprobado.

### 3.3.2.18. Sección 602.19: Cargas sobre Estructuras Nuevas de Concreto

No colocar ningún tipo de cargas sobre pilas de caballete o estribos acabados hasta que los ensayos de los cilindros moldeados del mismo concreto y curados bajo las mismas condiciones que el elemento de la subestructura, indiquen que el concreto ha alcanzado por lo menos el 80 por ciento de la mínima resistencia a la compresión a los 28 días especificada. Esta restricción no se aplica a las coladas de las capas superiores de los elementos de la subestructura coladas por etapas.

No permitir que vehículos o equipo de construcción circulen sobre un claro cualquiera hasta que el concreto de toda la superestructura haya alcanzado su resistencia de diseño a la compresión y haya sido construida por lo menos hace 21 días.

### 3.3.2.19. Sección 602.20: Aceptación

Los materiales para el concreto serán evaluados visualmente y mediante mediciones y ensayos Artículo-106.12.

Suministrar un certificado de producción para el cemento Portland.

El revenimiento, contenido de aire, peso unitario de masa y la temperatura de la mezcla de concreto serán evaluados visualmente y mediante mediciones y ensayos Artículo-106.12. Ver en el Cuadro 602-9 los requisitos mínimos para el muestreo y ensaye.

La resistencia a la compresión del concreto será evaluada estadísticamente Artículo-106.12. El Cuadro 602-9 da los requisitos mínimos para muestreo y ensaye. El límite inferior de la especificación es el mínimo requerido de la resistencia a la compresión a los 28 días ( $f'_c$ ) especificado en el Contrato. Un resultado sencillo de ensaye a la compresión es el resultado promedio de 2 cilindros moldeados de la misma carga y ensayados a los 28 días. Ver en el Cuadro 602-9 la categoría de aceptación de las características de calidad.

Remuévase y reemplácese el concreto representado por cilindros que tengan una resistencia a la compresión de menos del 90 por ciento de la mínima resistencia a la



compresión a los 28 días ( $f'_c$ ) y localizado de tal manera que cause efectos intolerablemente perjudiciales en la estructura.

La construcción (incluyendo la dosificación, la colocación, el acabado y la curación del concreto) será evaluada visualmente y mediante mediciones y ensayos Artículo-106.12.

La obra falsa y las formaletas (incluyendo el diseño, la construcción y la remoción) serán evaluadas visualmente, por certificaciones y mediante mediciones y ensayos Artículo-106.12.

Cuando la instalación de la obra falsa esté completa y antes de comenzar a colar o remover el concreto, hágase inspeccionar la obra falsa por un ingeniero estructural calificado con experiencia en este ramo. Certificar por escrito que la instalación cumpla con los requerimientos de las especificaciones y el Contrato, los planos de la obra falsa aprobados (incluyendo los cambios aprobados) y las prácticas de ingeniería aceptables.

Proveer una copia de la certificación antes de iniciar a colar el concreto.

### 3.3.2.20. Sección 602.21: Método de Medición

La medición del concreto estructural y el concreto para sellar, será hecha en metros cúbicos en la estructura terminada. La cantidad a ser pagada será la mostrada en el Pliego de Licitación, a menos que se hayan hecho cambios en el diseño que afecten a dicha cantidad, en cuyo caso la cantidad que aparece en el Pliego de Licitación, para los fines de pago, será ajustada en la cantidad afectada por el cambio. No se harán deducciones por el volumen ocupado por tubos con diámetro de 200 mm ó menos ni por el acero de refuerzo, anclajes, conductos, drenes de alivio o pilotes.

Ni las formaletas ni la obra falsa serán medidas con fines de pago.

Tampoco serán medidos con fines de pago los aditivos de cualquier tipo incorporados en la mezcla.

### 3.3.2.21. Sección 602.22: Base para el Pago

Las cantidades aceptadas, medidas de acuerdo con lo estipulado en el artículo precedente, serán pagadas al precio de contrato por unidad de medida para los conceptos de pago listados más adelante que figuren en el Pliego de Licitación, excepto que el precio de contrato del concreto estructural será ajustado estadísticamente Artículo-106.12. El pago será compensación total por el trabajo prescrito en esta Sección.

Ver Artículos-106.03 y Artículo-110.4.

El pago será hecho de acuerdo con los siguientes conceptos:

CUADRO 602-9  
Muestreo y Ensayes

| Material o Producto | Propiedad o Característica                 | Categoría | Método de Ensaye o Especificaciones | Frecuencia                              | Lugar del Muestreo                           |
|---------------------|--|-----------|-------------------------------------|---|--|
| Concreto            | Revenimiento                               | ----      | AASHTO T 119                        | 1 por carga (2)                         | Chorro de descarga en el lugar de colocación |
|                     | Contenido de aire                          | ----      | AASHTO T 152 ó AASHTO T 196         | 1 por carga (2)                         | Chorro de descarga en el lugar de colocación |
|                     | Pesos Unitario                             | ----      | AASHTO T 121                        | 1 por carga (2)                         | Chorro de descarga en el lugar de colocación |
|                     | Temperatura                                | ----      | Termómetro                          | Carga Final                             | Chorro de descarga en el lugar de colocación |
|                     | Hechura de Especímenes de Ensaye           | ----      | AASHTO T 23                         | 1 Juego por cada 25 m <sup>3</sup> pero | Chorro de descarga en el lugar de colocación |
|                     | Resistencia a la Compresión <sup>(1)</sup> | II        | AASHTO T 22                         | No menos de 1 juego por día.            | Chorro de descarga en el lugar de colocación |

(1) Muestrear de acuerdo con AASHTO T 141 excepto que no se requiere muestras combinadas.

(2) Verificar el cumplimiento con la especificación antes y durante cada operación de colado.

(3) Moldear, por lo menos, 4 cilindros para ensayos de resistencia a la compresión y trasladarlos con sumo cuidado al sitio de la obra donde están las facilidades para curación de cilindros.

(4) Un resultado sencillo de ensayo a la compresión es el resultado promedio de 2 cilindros moldeados de la misma carga y ensayados a los 28 días.

### 3.3.3. SECCIÓN 604: ACERO DE REFUERZO

#### 3.3.3.1. Sección 604.01: Descripción

Este trabajo consistirá en el suministro y colocación de acero de refuerzo de acuerdo con estas especificaciones y en conformidad sustancial con los planos.

#### 3.3.3.2. Sección 604.02: Materiales

El acero de refuerzo llenará los requisitos del Artículo-1009.01.

#### 3.3.3.3. Sección 604.03: Lista de Pedidos del Material

Antes de ordenar material, el Contratista someterá a la aprobación del Ingeniero todas las listas de la orden y diagramas de dobladura y no podrá ordenar tales materiales mientras el Ingeniero no haya aprobado las listas y diagramas citados; sin embargo, la aprobación de éstas, en modo alguno relevará al Contratista de su responsabilidad por su exactitud. Los

cambios en los materiales suministrados de acuerdo con dichas listas y diagramas, con el objeto de cumplir con lo requerido en los dibujos de diseño, serán por cuenta del Contratista.

#### 3.3.3.4. Sección 604.04: Protección de los Materiales

(a) **Varios.-** El acero de refuerzo deberá ser protegido constantemente contra daños resultantes de su almacenaje sobre bloques, rejillas o plataformas. Antes de colar el concreto, el acero de refuerzo que va a quedar embebido en el concreto deberá estar libre de costras de sarro, tierra, lodo, escamas sueltas, pintura, aceite y de toda otra sustancia extraña.

(b) **Acero de Refuerzo Recubierto con Epóxico.-** Las varillas recubiertas deberán ser soportadas sobre áreas de contacto acolchonadas. Se deberán acolchonar todas las bandas en paquete. Para el izaje se usará un respaldo fuerte con soportes múltiples o un puente de plataforma. Evites el desgaste de varilla contra varilla. No se deberá dejar caer o arrastrar los paquetes de varillas.

Antes de su colocación, se deberá inspeccionar las varillas recubiertas para ver si no está dañado el recubrimiento. Se parchará todos los defectos en el recubrimiento visibles al ojo desnudo por medio de un material adecuado para parcheo y reparación de acuerdo con AASHTO M 284 M. Se limpiarán las áreas que serán parchadas removiendo todos los contaminantes superficiales y recubrimiento dañado. El área a ser parchada deberá ser raspada antes de aplicar el material de parchar. Cuando haya sarro, quítese por medio de chorro de arena o herramienta a motor limpiando inmediatamente antes de aplicar el material de parchar.

Con toda prontitud, trátase la varilla de acuerdo con las recomendaciones del Fabricante de la resina y antes de que ocurra una oxidación perjudicial. El material de parchar deberá ser traslapado con la cobertura original en 50 mm o lo que recomiende el Fabricante. Provéase una película seca de no menos de 200 micrones de espesor sobre las áreas parchadas.

Se deberán tomar las medidas necesarias para minimizar los daños al recubrimiento epóxico de las varillas instaladas. Todo daño en el recubrimiento observado posteriormente a la instalación será limpiado y parchado según se describió anteriormente.

No serán permitidos las reparaciones de campo en varillas cuyo recubrimiento haya sido seriamente dañado; tales varillas deberán ser reemplazadas. Se dice que un

recubrimiento está seriamente dañado cuando el recubrimiento con un área total dañada en cualquier longitud de 50 cm de varilla, excede al 5% del área superficial de esa porción de la varilla. Se recubrirán los empalmes mecánicos después de la instalación de los empalmes de acuerdo con AASHTO M 284 M para el parcheo de recubrimientos epóxicos dañados.

#### 3.3.3.5. Sección 604.05: Dobladura

Todas las varillas de refuerzo que deban ser dobladas, serán dobladas en frío y de acuerdo con los procedimientos recomendados por el CRSI, a menos que los planos y especificaciones lo indicaran de otra manera. Las varillas que vayan a quedar parcialmente embebidas en el concreto no serán dobladas, a menos que lo indiquen los planos o lo autorice el Ingeniero. El corte y dobladura serán encargados a armadores calificados provistos de las herramientas adecuadas para tales trabajos.

#### 3.3.3.6. Sección 604.06: Colocación y Amarre

En losas de puentes y viaductos el acero de refuerzo será amarrado en intersecciones alternas, a menos que con este sistema los amarres queden espaciados a más de 30 centímetros, en cuyo caso, se amarrarán todas las intersecciones. Los dispositivos de apoyo para el acero de refuerzo no quedarán espaciados a más de 1.20 metros, transversal o longitudinalmente. La colocación del acero de refuerzo en calzadas no se apartará más de + 6.35 mm en dirección vertical, de la posición mostrada en los planos. No se podrá colar el concreto en ningún miembro de la estructura hasta que la colocación del refuerzo haya sido aprobada. Con este objeto, el Contratista notificará al Ingeniero, con no menos de 48 horas de anticipación, o más si el tamaño de la estructura fuera muy grande, al inicio propuesto de las operaciones de colado, cuando la armadura esté lista para inspección.

No serán permitidos los traslapes a menos que estén mostrados en los planos o lo autorice el Ingeniero. Las longitudes de los traslapes serán las indicadas en los planos o en las Especificaciones Especiales.

No se permitirá soldar el acero de refuerzo, a menos que así lo muestren los planos o lo autorice el Ingeniero. Toda soldadura llenará los requisitos de las "Especificaciones Estándar para Puentes de Carreteras" de la AASHTO.

No se usarán soportes de metal que se extiendan hasta la superficie. No será permitida la colocación de varillas en capas de concreto recién colado ni el ajuste de varillas mientras progresan las operaciones de colado.



Las varillas principales del refuerzo, que soportan determinados esfuerzos, serán traslapadas únicamente donde lo muestren los planos o dibujos de taller aprobados.

El mínimo espaciamiento de varillas paralelas de centro a centro, será 2.5 veces el diámetro de dichas varillas, pero en ningún caso la distancia libre entre varillas podrá ser menor de 2.5 veces el tamaño máximo del agregado grueso usado en el concreto.

Los paquetes de varillas serán amarrados a no más de 1.80 metros entre centros. Todo refuerzo tendrá un recubrimiento de 5 centímetros, a menos que los planos indiquen otro.

### 3.3.3.7. Sección 604.07: Aceptación

El acero de refuerzo y el material para recubrimiento epóxico serán evaluados visualmente y mediante certificados de producción y comerciales. Cada embarque de acero de refuerzo deberá ir acompañado de un certificado de producción Artículo-106.12.

La colocación del acero de refuerzo será evaluada visualmente y por medio de mediciones y ensayos Artículo-106.12.

### 3.3.3.8. Sección 604.08: Método de Medición

La cantidad de acero de refuerzo a ser pagada será la cantidad que figure en el Pliego de Licitación, a menos que se hagan cambios en el diseño que afecten a esa cantidad, en cuyo caso se ajustará la cantidad del Pliego de Licitación en la cantidad correspondiente al cambio.

Si el Pliego de Licitación considera el pago del acero de refuerzo mediante una Suma Global, no se medirá el acero colocado para los fines de pago. No se medirán ni se hará pago por traslapes introducidos por conveniencia del Contratista.

Cuando en el Pliego de Licitación no figure un concepto de pago para el acero de refuerzo, el costo de éste será considerado como subsidiario de los demás conceptos de pago.

### 3.3.3.9. Sección 604.09: Bases para el Pago

Las cantidades aceptadas, medidas de acuerdo con lo estipulado en el artículo precedente, serán pagadas al precio de contrato por unidad de medida para los conceptos de pago listados más adelante, precio y pago que serán compensación total por el trabajo prescrito en esta sección.

No se pagará adicionalmente por los traslapes, las grampas, alambre, silletas de apoyo, colgadores u otros materiales o dispositivos usados para amarrar y fijar el refuerzo en su lugar.

Ver Artículo-106.03 y Artículo-110.04. Los pagos serán hechos de acuerdo con los siguientes conceptos y unidades.

| Concepto de Pago         | Unidad de Medida |
|--------------------------|------------------|
| 604(1) Acero de Refuerzo | Kilogramo        |
| 604(2) Acero de Refuerzo | Suma Global      |

## 3.3.4. SECCIÓN 606: BARANDAS DE PUENTES Y VIADUCTOS

### 3.3.4.1. Sección 606.01: Extensión

Este trabajo consistirá en la colocación de barandas o parapetos en puentes y viaductos, suministro del material o combinación de materiales que indiquen los planos, en conformidad razonable con estas especificaciones, con las líneas, pendientes, dimensiones y diseños que figuren en los planos o fueren ordenados por el Ingeniero.

Las barandas para puentes incluirán las guarniciones construidas encima de la acera, de la cara superior de bordillos de más de 15 centímetros de ancho o encima de la calzada, cuando no hubiere acera, y bordillo.

### 3.3.4.2. Sección 606.02: Clasificación

Las barandas para puentes y viaductos serán clasificadas como: barandas de concreto, barandas de acero, barandas de aluminio y barandas de madera, de acuerdo con el material predominante que contenga cada una. El tipo de baranda a construirse se especificará en las CEC, o se mostrará en los planos.

### 3.3.4.3. Sección 606.03: Materiales

Los materiales deberán cumplir con los requisitos de las secciones y artículos siguientes:

Cabezas de Pernos y Tuercas de Aleación de Aluminio - Artículo-1017.17

Aleación de Aluminio para Barandas de Puentes - Artículo-1017.16

Alambre para Soldar Aluminio - Artículo-1017.18

Concreto - Sección-602



Pintura - Sección-610

Acero de Refuerzo - Artículo-1009.01

Acero Estructural - Sección-605

Madera - Sección-607

#### 3.3.4.4. Sección 606.04: Generalidades

Las barandas para puentes y viaductos deberán ser construidas de acuerdo con el alineamiento y niveles que muestren los planos, y no deberán reflejar ningún desnivel que tuviese la estructura. A no ser que fuese especificado de otro modo, todos los postes de la baranda deberán ser verticales. La baranda no deberá ser instalada en un claro hasta que la cimbra y obra falsa provisionales hayan sido retiradas y el tramo esté sostenido por sí solo.

#### 3.3.4.5. Sección 606.07: Barandas de Acero

El montaje de barandas de acero deberá satisfacer los requisitos aplicables de las Sección-902 y Sección-605. Las barandas de acero para puentes se construirán de perfiles de acero estructural, de secciones tubulares, de platinas y barras según lo indique el tipo de baranda mostrado en los planos. El montaje de las barandas de acero debe llenar los requisitos de la Sección-605. Los perfiles, platinas, placas, pernos y tuercas, serán de acero de grado estructural. Las secciones tubulares serán del tipo comercial estándar de acero estructural. Las secciones forjadas serán exactas en sus dimensiones, libres de torceduras y pandeos, y de una apariencia uniforme.

Toda la soldadura cumplirá con las especificaciones de la AWS D.2.0. La soldadura de las superficies expuestas será enrasada con las superficies adyacentes; cuando haya costura en los postes, éstas deberán ser localizadas en las caras de los postes normales al plano de la baranda.

Los elementos galvanizados dañados deberán ser regalvanizados, excepto cuando el Ingeniero permita reparar las superficies dañadas limpiándolas y pintándolas; la pintura deberá ser rica en zinc.

La tubería de acero para barandas de tubo, será del tipo comercial de acero estructural de calidad estándar; las piezas serán fabricadas de tubos de una sola pieza o de platinas forjadas a media caña soldadas con juntas longitudinales.

Las barandas serán alistadas en el lugar de fábrica o taller, y revisados sus alineamientos y pendientes; los paneles de la baranda serán alineados unos con otros con una tolerancia de 1.75 milímetros.

Los postes serán instalados verticales con una tolerancia de desplome que no exceda 6 centímetros en una longitud de poste de 3 metros.

Los postes serán colocados o empotrados en receptáculos sobre una base de mortero y mortereados a su alrededor, o bien anclados en elementos de concreto o acero. Los anclajes de acero se incrustarán en concreto hasta la profundidad de empotramiento mostrada en los planos; estos anclajes deberán resistir por 100 horas una carga de tensión de al menos 3,600 kilogramos para pernos de 16 a 19 milímetros; 1,360 kilogramos para pernos de 9.5 a 12.5 milímetros de diámetro, y 340 kilogramos para pernos de diámetro de 6.3 milímetros.

#### 3.3.4.6. Sección 606.11: Aceptación

Los materiales (exceptuando el concreto, la pintura, el acero de refuerzo, el acero estructural y la madera) para barandas de puentes y viaductos, serán evaluados mediante certificados de producción suministrado por el Contratista de parte del Fabricante o por parte de laboratorios independientes de control de calidad Artículo-106.12. Se deberá entregar un certificado de producción con cada embarque de barandas para puentes y viaducto.

El concreto será evaluado según la Sección-602.

La pintura será evaluada bajo la Sección-610.

El acero de refuerzo será evaluado según la Sección-604.

El acero estructural será evaluado según la Sección-605.

La construcción de barandas de puentes y viaductos será evaluada visualmente y mediante mediciones y ensayos para determinar el cumplimiento con los planos y especificaciones. Artículo-106.12.

#### 3.3.4.7. Sección 606.12: Medición

La cantidad por la cual se pagará bajo este concepto, será el número de metros lineales de baranda de puente o viaducto de los diversos tipos, colocados completos en su lugar y aceptados, medidos a lo largo del alineamiento y de extremo a extremo de los postes al nivel de la elevación final de la baranda. Incluirá todas las obras construidas arriba de la





parte superior del bordillo, o de la acera, y todos los fijadores y anclajes requeridos para fijar la baranda a la estructura. Incluirá la parte de acero de refuerzo para la baranda que se extiende dentro del bordillo. La medición en Suma Global, si así se fijó en el Pliego de Licitación, se hará de conformidad con el Artículo-110.01.

#### 3.3.4.8. Sección 606.13: Bases para el Pago

Las cantidades aceptadas, medidas de acuerdo con lo dispuesto en el artículo precedente, serán pagadas al precio de contrato por unidad de medida para los conceptos de pago listados más adelante que figuren en el Pliego de Licitación, precio y pago que serán compensación total por el trabajo prescrito en esta sección.

Cuando las CEC o los planos requieran la construcción de puente o viaducto con barandas pero en el Pliego de Licitación no figura un concepto estimada o Suma Global, dicha baranda será considerada como parte integrante de la estructura a la que está unida, y será pagada de acuerdo con lo estipulado en la sección aplicable que comprenda a la construcción del puente o viaducto.

Ver los Artículo-106.03 y Artículo-110.04. Los pagos serán efectuados bajo los siguientes conceptos:

| Concepto de Pago |   | Unidad de Medida |
|------------------|---|------------------|
| 606 (1)          | Barandas de Concreto para Puentes y Viaductos | Metro Lineal     |
| 606 (2)          | Barandas Precoladas para Puentes y Viaductos  | Metro Lineal     |
| 606 (3)          | Barandas de Acero para Puentes y Viaductos    | Metro Lineal     |
| 606 (4)          | Barandas de Aluminio para Puentes y Viaductos | Metro Lineal     |
| 606 (5)          | Barandas de Madera para Puentes y Viaductos   | Metro Lineal     |

#### 3.3.5. SECCIÓN 611: DISPOSITIVOS DE APOYO

##### 3.3.5.1. Sección 611.01: Descripción

Este trabajo consiste en el suministro e instalación de dispositivos de apoyo para puentes. Los dispositivos de apoyo son designados como planchas elastoméricas, de balancín, de rodillos y deslizantes.

##### 3.3.5.2. Sección 611.02: Materiales

Los materiales deberán cumplir con lo estipulado en los siguientes artículos:

Almohadillas Elastómericas de Apoyo - Artículo-1017.14

Superficies de Tetrafluoretileno (TFE) para Apoyos - Artículo-1017.20

##### 3.3.5.3. Sección 611.03: Generalidades

(a) **Dibujos de Taller.**- El Contratista deberá preparar y someter a la aprobación del Ingeniero los dibujos para los apoyos de acuerdo con el Artículo-106.02 y la Sección-18 de las "Especificaciones Estándar para Puentes de Carreteras" de la AASHTO, División II, Volumen II. En ellos deberá mostrar todos los detalles de los apoyos incluso el material que se propone usar. Antes de iniciar la fabricación, el Contratista deberá obtener por escrito la aprobación del Ingeniero.

(b) **Fabricación.**- Los apoyos deberán ser fabricados de acuerdo con las especificaciones indicadas en el párrafo precedente. El acabado superficial de los componentes de los apoyos en contacto uno con el otro o con el concreto, pero no embebidos en el concreto, se ajustarán a lo estipulado en el Artículo-605.05(2).

El conjunto de los apoyos deberá ser armado de previo en el taller, donde se deberá comprobar si está completo y si su geometría está correcta. Los componentes de los apoyos y pernos de anclajes de acero deberán ser galvanizados de acuerdo con lo estipulado en el Artículo-1017.11. No se deberán galvanizar los componentes de apoyos y pernos de anclaje de acero inoxidable.

**(c) Empaque, manipulación y almacenaje.-** Antes de embarcar en la fábrica, se deberá identificar claramente cada componente del apoyo y marcar en su parte superior su lugar y orientación en la estructura. Se deberán empernar, amarrar o fijar de cualquier otra manera los apoyos para evitar cualquier movimiento relativo.

Los apoyos deberán ser empacados para protegerlos de daños causados por el embarque, la manipulación, el clima u otros peligros. No se deberá desarmar el conjunto de los apoyos en el sitio de la obra, excepto para inspección e instalación.

Se almacenarán todos los dispositivos de apoyo y sus componentes en el sitio de la obra en un lugar que ofrezca protección contra los daños ambientales y físicos.

**(d) Construcción e Instalación.-** Se deberán limpiar los apoyos de todas las sustancias perjudiciales. Se deberá instalar en las posiciones mostradas en los dibujos. Ajustense los apoyos y sus componentes a las dimensiones mostradas en los dibujos o prescritas por el Fabricante; también deberán ser ajustados de acuerdo con las instrucciones del Fabricante para compensar por la temperatura de instalación y los futuros movimientos del puente.

Fíjese el nivel de los apoyos del puente en la elevación y posición exactas. Se deberá proveer apoyo completo y parejo en todas las superficies exteriores de contacto del apoyo. Si las superficies del apoyo están a elevaciones inapropiadas, no a nivel, o si los apoyos no pueden, por cualquier otra causa, ser fijados apropiadamente, el Contratista deberá notificar el hecho al Ingeniero y someter una propuesta por escrito para modificar la instalación en forma aceptable.

Los conjuntos de apoyos metálicos deberán ser asentados, no embebidos en el concreto, sobre el concreto con un rellenedor o material de tela aprobado.

Los apoyos de almohadillas elastoméricas deberán ser asentados directamente sobre superficies de concreto debidamente preparadas, sin material de lecho.

Se deberán fresar las superficies de los apoyos asentados directamente sobre acero para proveer una superficie plana y a nivel sobre la cual colocar el apoyo.

#### 3.3.5.4. Sección 611.04: Apoyos Elastoméricos

Los apoyos incluyen almohadillas no reforzadas (constituidas solamente por el elastómero) y apoyos reforzados con laminados de acero o de tela.

Se deberán reforzar los apoyos elastoméricos de más de 15 mm de espesor, con laminados a cada 15 mm a través de todo el espesor.

Si no está especificado, úsese un elastómero de 50 al durómetro, capaz de sostener un esfuerzo compresivo promedio de 7 MPa.

Los apoyos elastoméricos deberán ser fabricados de acuerdo con AASHTO M 251. Se deberá usar material que llene los requisitos de tolerancia a la inflamación, acabado y apariencia del "Manual sobre el Hule" ("Rubber Handbook") publicado por la Asociación de Manufactureros de Hule Inc., RMA F 3 y T.063 para apoyos moldeados y, RMA F 2, para apoyos extruidos. Se determinará el cumplimiento con los criterios de aceptación de AASHTO M 251, nivel I.

Cada apoyo reforzado deberá ser marcado con tinta indeleble o pintura flexible. Las marcas de información deberán incluir el número de la orden, número del lote, número de identificación del apoyo, el tipo del elastómero y número del grado. A menos que fuera especificado de otra manera, las marcas se pondrán en una cara que sea visible después del montaje del puente. Además, el Contratista deberá suministrar todos los números de los apoyos individuales.

Se deberán colocar los apoyos sobre una superficie a nivel. Se corregirá cualquier mala alineación en el apoyo hasta formar una superficie a nivel. No se deberán soldar vigas armadas o planchas de base de acero a las planchas exteriores del apoyo, a menos que hubiera más de 40 mm de acero entre la soldadura y el elastómero. No se deberá exponer el elastómero o el pegamento del elastómero a temperaturas instantáneas de más de 200oC.

#### 3.3.5.5. Sección 611.08: Pernos de Anclaje

Úsese pernos arponados o de rosca que cumplan con ASTM A 307 o los que se indique en los planos o en las Especificaciones Especiales.

Se deberán taladrar los agujeros para los pernos de anclaje y luego fijar los pernos en lechada de cemento Portland no contráctil o fíjeseles antes de colar el concreto.



Se deberán ajustar las posiciones de los pernos de acuerdo con la temperatura de la superestructura, según sea requerido. No se deberá restringir el movimiento de la superestructura en los apoyos móviles por medio de pernos o tuercas de anclaje.

**611.09 Lecho de la Mampostería.-** Se colocará relleno o tela como material de asiento o lecho debajo de las planchas de mampostería, si está requerido en los planos o Especificaciones Especiales. Úsese el tipo de relleno o tela especificada e instálese en forma tal que se provea un soporte pleno sobre las áreas de contacto. Límpiense bien las superficies de contacto del concreto y del acero inmediatamente antes de colocar el material de lecho y de instalar las planchas de apoyo o de mampostería.

**611.10 Aceptación.-** Los dispositivos de apoyo serán evaluados visualmente y mediante certificados de producción Artículo-106.12 y Artículo- 106.12. El Contratista deberá suministrar un certificado de producción por cada embarque de dispositivos de apoyo.

Las instalaciones de los dispositivos de apoyo serán evaluadas visualmente y mediante mediciones y ensayos Artículo-106.12.

**3.3.5.6. Sección 611.11: Método de Medición**

Los dispositivos de apoyo serán medidos por unidad (Cada Uno).

**3.3.5.7. Sección 611.12: Base para el Pago**

Las cantidades aceptadas, medidas de acuerdo con lo estipulado en el artículo precedente, serán pagadas al precio de contrato por unidad de medida para los conceptos de pago listados más adelante que aparezcan en el Pliego de Licitación, precio y pago que serán compensación total por el trabajo prescrito en esta sección.

Ver los Artículos-106.03 y Artículo-110.04. Los pagos serán efectuados bajo los siguientes conceptos:

| Concepto de Pago            | Unidad de Medida |
|-----------------------------|------------------|
| 611(1) Dispositivo de Apoyo | Cada Uno         |

**4. DIVISIÓN III: ESPECIFICACIONES DE CALIDAD DE LOS MATERIALES**

**4.1. SUBDIVISIÓN 1000: ESPECIFICACIONES DE CALIDAD DE LOS MATERIALES**

**4.1.1. SECCIÓN 1001: CEMENTO HIDRÁULICO**

**4.1.1.1. Sección 1001.01: Cemento Portland y Cemento para Mampostería**

El cemento deberá satisfacer los requisitos de las especificaciones que se mencionan a continuación para los tipos especificados o permitidos:

**CUADRO 1001-1  
TIPOS DE CEMENTO**

| Tipo                        | Especificación |
|-----------------------------|----------------|
| Cemento Portland            | AASHTO M 85    |
| Cemento hidráulico mezclado | AASHTO M 240   |
| Cemento para Mampostería    | ASTM C 91      |

A no ser que fuese autorizado por el Ingeniero, no se permitirá en la obra la utilización de diferentes marcas o tipos de cemento, o la misma marca o tipo de cemento de diferentes fábricas.

El Contratista deberá suministrar los medios adecuados para el almacenamiento y protección del cemento contra la humedad. Se rechazará el cemento que por cualquier causa hubiese llegado a fraguar parcialmente o que contenga terrones de cemento aglutinado. No se utilizará el cemento recuperado de bolsas desechadas o usadas.

**4.1.2. SECCIÓN 1003: AGREGADOS, SUELOS Y ROCA**

**4.1.2.1. Sección 1003.01: Agregado Fino para Concreto de Cemento Portland**

Suministrar arena que llene los requisitos de AASHTO M6 Clase B, incluyendo el requisito suplementario para el agregado reactivo, excepto las enmiendas o suplementos siguientes:

(a) Material que pasa el tamiz de 75  $\mu$ -m, AASHTO T 11 - 3.0% máx.

(b) Valor del Equivalente de Arena, AASHTO T 176 (método de testigo)- 75 mín.

Para agregado fino de peso liviano, cumplir con AASHTO M - 195.



El agregado fino no deberá contener sustancias perjudiciales en exceso de los siguientes porcentajes:

Terrones de arcilla - 1.0

Carbón de piedra y lignito - 1.0

Material que pase por el tamiz No. 200 (75µm) - 3.0

Otras sustancias, según lo indiquen las CEC.

#### 4.1.2.2. Sección 1003.02: Material Grueso para Concreto de Cemento Portland

De acuerdo con AASHTO M 80, Clase A, excepto las enmiendas o suplementos siguientes:

(a) Desgaste de Los Ángeles, AASHTO T 96 - 40% máx.

(b) Adherencias FLHT 512 - 1.0% máx.

Las graduaciones aceptables aparecen en el Cuadro 1003-2.

Para losas de puentes o capas superficiales, no usar agregado del que se sepa que se pule o agregados carbonatados que contengan menos del 25.0%, en peso, de residuo insoluble, determinado de acuerdo con AASHTO D 3042.

Para agregados gruesos de peso liviano, cumplir con AASHTO M 195.

#### 4.1.2.3. Sección 1003.20: Relleno Estructural

El Contratista deberá suministrar material granular drenante libre de todo exceso de humedad lodo, raíces, césped u otros materiales perjudiciales y cumplir con los siguientes requisitos:

(a) Dimensión máxima - 75 mm

(b) Material que pasa por el tamiz de 75 µm (AASHTO T 27 y T 11) - 15% máx.

(b) Límite Líquido, AASHTO T 89

#### 4.1.2.4. Sección 1003.24: Suelos

**(A) Relleno de Fundación.-** Suministrar material libre de humedad excesiva, raíces, césped u otros materiales perjudiciales que cumplan con lo siguiente:

(1) Material que pasa el tamiz de 50 mm - 100%

(2) Clasificación del suelo, AASHTO M 145 - A-1-a

(3) En ambientes húmedos, material que pasa por el tamiz de 75 µm,

AASHTO T 27 y T 11 - 6% máx.

**(E) Préstamo no Clasificado.-** Suministrar material granular libre de exceso de humedad, lodo, raíces, césped, zacate u otros materiales perjudiciales que cumplan con lo siguiente:

(1) Máxima Dimensión - 600 mm.

(2) Clasificación del suelo, AASHTO M 145 - A-1, A-3 ó A-2-4

**(F) Préstamo Selecto.-** Suministrar material granular libre de exceso de humedad, lodo, raíces, césped u otros materiales perjudiciales y cumpla con lo siguiente:

(1) Graduación - Cuadro 1003-14

(2) Límite Líquido, AASHTO T 89 - 30 máx.

**CUADRO 1003-14**  
**Graduación para Préstamo Selecto**

| Tamaño del Tamiz | Porcentaje en Masa que pasa el Tamiz designado (AASHTO T 27) |
|------------------|--|
| 75 mm.           | 100  |
| 25 mm.           | 70 - 100   |
| 4.75 mm.         | 30 - 70  |
| 150 µm           | 0 - 15   |

**(I) Relleno Granular Selecto para Estructuras.-** Suministrar material granular, sano, durable, libre de materia orgánica u otros materiales perjudiciales (tales como esquisto u otras partículas suaves con baja durabilidad) que cumpla con lo siguiente:

(a) Requisitos de Calidad

(1) Graduación - Cuadro 1003-17

(2) Angulo de corte de fricción Interna, AASHTO T 236 - 34° mín.

NOTA: Compactar las muestras para el ensaye AASHTO T 236 al 95% de la densidad máxima determinada de acuerdo a AASHTO T 99, método C o D y corregida por materiales de sobretamaño, según AASHTO T 99, Nota 7.



(3) Prueba de sanidad al sulfato de sodio, pérdida en 5 ciclos, AASHTO T 10 - 15% máx.

(4) Desgaste, Los Ángeles, AASHTO T 96 - 50% máx.

(5) Límite Líquido, AASHTO T 89 - 30 máx.

(b) Requisitos Electroquímicos

(1) Resistividad, AASHTO T 288 - 3000  $\Omega$  .cm. mín.

(2) pH, AASHTO T 289 - 5.0 a 10.0

(3) Contenido de sulfato, AASHTO T 290 - 1000 ppm. máx.

(4) Contenido de cloruro, AASHTO T 291-200 ppm. máx.

NOTA: Las pruebas para el contenido de sulfato y cloruro no son necesarias cuando el pH está entre 6.0 y 8.0 y la resistividad es mayor de 5000 ohm centímetros.

**CUADRO 1003-17**  
**Graduación para Relleno Granular Selecto para Estructuras**

| Tamaño del Tamiz | Porcentaje en Masa que pasa el Tamiz designado (AASHTO T 27 y T 11) |
|------------------|---|
| 100 mm.          | 100   |
| 75 mm.           | 75 - 100  |
| 75 $\mu$ m.      | 0 - 15  |

#### 4.1.3. SECCIÓN 1005: MATERIALES PARA JUNTAS Y GRIETAS

##### 4.1.3.1. Sección 1005:01: Rellenos para Juntas, Selladores, Sellos y Camisas

Se ajustarán a lo siguiente:

**(A) Selladores de Juntas y Rellenadores de Grietas.-** Suministrar un certificado comercial que identifique la bachada y/o el número del lote, material, cantidad de la bachada, fecha y tiempo de manufactura, y el nombre y dirección del Fabricante.

(1) Selladores de juntas de concreto vertido en caliente del tipo elástico - AASHTO M173

(2) Sellador de juntas, vertido en caliente, para pavimentos de concreto y asfálticos - AASHTO M 301

(3) Rellenador de grietas, aplicado en caliente, para pavimentos de concreto asfáltico y concreto de Cemento Pórtland - ASTM D 5078

(a) Fuente y grado del cemento asfáltico.

(b) Contenido y masa de hule granulado total, como porcentaje de la mezcla de asfalto y hule.

(c) Tipo (1) y contenido de cada tipo (1) (si van mezclados) de hule granulado.

(i) Masa, como porcentaje de hule combinado.

(ii) Graduación del hule granulado.

(d) Tipo de asfalto modificado (si contiene).

(e) Cantidad del modificador del asfalto y masa como porcentaje del cemento asfáltico.

(f) Otros aditivos.

(g) Temperaturas de manejo y aplicación.

(h) Procedimientos de aplicación recomendados por el Fabricante.

**(B) Rellenadores Premoldeados para Juntas de Expansión.-** Suministrarlos de una sola pieza para la profundidad y ancho requeridos por la junta.

(1) Rellenadores de juntas de expansión premoldeados para concreto (tipo bituminoso) - AASHTO M 33

(2) Rellenadores de juntas de expansión de goma esponjosa, premoldeados, para construcción de pavimentos y estructuras de concreto - AASHTO M 153

(3) Rellenadores de juntas de expansión, premoldeados, para construcción de pavimentos de concreto y estructuras <sup>(1)</sup> - AASHTO M 153

(4) Rellenadores de juntas de expansión, premoldeados, para construcción de pavimentos de concreto y estructuras (tipo bituminoso no extensible y elástico) - AASHTO M 213

NOTA: <sup>(1)</sup> No se use en estructuras de concreto muy importantes.

**(C) Sellos y Camisas Premoldeados para Juntas.-**



(1) **Aplicaciones en Pavimentos.-** Suministrar un sello elastomérico de policloropreno que cumpla con la Norma AASHTO M 220. Úsese un adhesivo lubricante que cumpla con lo siguiente:

- (a) Contenido de sólidos por masa, ASTM D 2369 - 22% mín.
- (b) Resistencia a la peladura, AASHTO D 903 - 10 MPa máx.
- (c) Edad de manufactura - 9 meses máx.

(2) **Aplicaciones en Pozos de Visita, Tragantes y Drenaje.-** Suministrar un sello multiseccional de hule neopreno y etileno propileno dimónomero (EPDM), con un espesor mínimo de 1.5 milímetros. Antes del embarque recúbrase el hule con un sellador de hule butil que no se endurezca para producir un sello impermeable al agua al ser instalado. Las propiedades y sus valores se muestran en el Cuadro 1005-1

**CUADRO 1005-1**  
**Sellos Preformados para Juntas**

| Propiedades Físicas           | Método de Prueba ASTM | EPDM | Neopreno | Mástique de Butil |
|-------------------------------|-----------------------|------|----------|-------------------|
| Tensión, MPa                  | D 412                 | 10   | 12       | ---               |
| Alargamiento, %               | D 412                 | 440  | 230      | 280               |
| Resistencia al Desgarre, N/mm | D 624 (Dado B)        | 40   | 20       | ---               |
| Rebote, %, 5 min.             | C 972                 | ---  | ---      | 11                |
| Rebote, %, 2 hrs.             | C 972 (Mod.)          | ---  | ---      | 12                |

(D) **Rellenador de Espuma.-** Suministrar un rellenedor de poliestireno expandido que tenga una resistencia a la compresión de no menos de 70 kilopascales.

(E) **Sellador Vertido en Frío.-** Suministrar un compuesto sellador de juntas, a base de hule de silicón de bajo módulo, de una sola parte, que cumpla con la Norma FSS TT-S-1543, clase A, con un alargamiento último de 1200 por ciento.

(F) **Sellador de Juntas de Silicón de Bajo Módulo.-** Suministrar una formulación de silicón de una parte, que cumpla con lo siguiente:

- (1) Flujo MIL S-8802 - 8 mm, máx.
- (2) Tasa de Extrusión, MIL S-8802 - 75 a 250 g/min.
- (3) Tiempo libre de Pegajosidad MIL S-8802 - 20 a 75 minutos
- (4) Gravedad Específica, ASTM D 792, método A - 1.010 a 1.515
- (5) Dureza al durómetro, shore A, ASTM D 2240 - 10 a 25
- (6) Fatiga a la tensión @ 150% de alargamiento, ASTM D 412 - 520 KPa máx.
- (7) Alargamiento, ASTM D 412 - 500% mín.
- (8) Peladura (adherencia), MIL S-8802 - > 9 Kg. con > 75% fallas a la cohesión
- (9) Edad de manufactura - 6 meses máx.

(G) **Varillas de Respaldo.-** Suministrar polietileno de celda cerrada que cumpla con ASTM D 3204, tipo 1. Usar un sellador compatible según lo recomiende el Fabricante de la varilla. Para el tamaño de la varilla de respaldo cúmplase con el Cuadro 1005-2.

#### 4.1.4. SECCIÓN 1009: ACERO DE REFUERZO Y CABLE DE ALAMBRE

##### 4.1.4.1. Sección 1009.01: Acero de Refuerzo

Este material debe satisfacer los requisitos de las siguientes especificaciones de la AASHTO:



| Material   | Especificación                         |
|--|--|
| Varillas de lingotes de acero para refuerzo de concreto.                         | AASHTO M 31 (A 615 Clase 40; Clase 60) |
| Varillas de rieles de acero para refuerzo de concreto.                           | AASHTO M 42 (A 616, Clases 50 y 60)    |
| Varillas de ejes de acero para refuerzo de concreto.                             | AASHTO M 53 (ASTM A 617)               |
| Armadura de malla fabricada con barras o varillas de acero, para refuerzo.       | AASHTO M 54 (ASTM A 184)               |
| Malla de tela de alambre de acero soldado, para refuerzo de concreto.            | AASHTO M 55 (ASTM A 184)               |
| Malla de tela de alambre de acero deformado y soldado para refuerzo de concreto. | AASHTO M 221 (ASTM A 497)              |

Las varillas de refuerzo para estructuras de concreto, exceptuando las varillas del número 2, deben ser deformadas de acuerdo con AASHTO M 42, M 31 y M 53, (ASTM A 616, A 615, A 617) para los números del 3 al 11.

Las barras de juntas y tirantes deben satisfacer los requisitos de AASHTO M 31 (ASTM A 615), o los de M 42 (A 616), excepto que no se debe emplear acero de rieles para las barras de conexión que tengan que ser dobladas y enderezadas durante la construcción. Las barras de conexión deben ser barras deformadas, y las de juntas, deben ser barras redondas, lisas. También deben estar exentas de rebabas u otra deformación que fuese restrictiva para el resbalamiento dentro del concreto. Antes de su entrega en el lugar de la obra, un mínimo de la mitad del largo de cada barra para juntas, debe pintarse con una mano de pintura aprobada, de plomo o de alquitrán.

Los casquillos para las varillas de juntas deben ser de metal, de un diseño aprobado para recubrir 5 cm más o menos 6 mm de la espiga, con un extremo cerrado y con un tope adecuado para sujetar el extremo del casquillo, por lo menos, 2.5 cm del extremo de la varilla de junta. Los casquillos deben ser contruidos de tal modo que no se aplasten durante la construcción.

#### 4.1.5. SECCIÓN 1011: MATERIALES PARA CURADO DEL CONCRETO Y ADITIVOS

##### 4.1.5.1. Sección 1011.01: Materiales para el Curado

Los Materiales para el curado del concreto deben satisfacer los siguientes requisitos, según fuesen especificados:

- (a) Tela de bramante hecha con yute o kenaf - AASHTO M 182
- (b) Papel impermeabilizante - AASHTO M 171
- (c) Película de polietileno - AASHTO M 171
- (d) Compuestos formadores de membranas líquidas - AASHTO M 148

##### 4.1.5.2. Sección 1011.02: Aditivos para Inclusión de Aire

Estos deberán satisfacer los requisitos de AASHTO M 154. No se debe combinar los aditivos químicos juntos en una mezcla, a menos que sean compatibles. Suministrar la documentación que respalde la compatibilidad de parte del Fabricante. No se podrá usar aceleradores clorados.

##### 4.1.5.3. Sección 1011.03: Aditivos Químicos

Los aditivos reductores del agua, retardadores del fraguado y aceleradores del fraguado, o combinaciones de éstos, deben estar conformes con los requisitos de AASHTO M194.

##### 4.1.5.4. Sección 1011.04: Modificados de Latex

Súplase una emulsión polimérica formadora de película, que sea homogénea y no tóxica con estabilizadores agregados en fábrica. Deberán cumplir con lo siguiente:

- (a) Color - Blanco
- (b) Tipo de polímero butadieno estireno - 68 + 4% de estireno32 + 4%debutadieno
- (c) Cloruros - 0%
- (d) Tamaño de la partícula del polímero - 0.15 a 0.25 µm promedio
- (e) Estabilizadores de la emulsión - Surfactante aniónico y no iónico
- (f) Sólidos - 6.5 a 49.0%
- (g) Masa - 1.00 a 1.02 kg/L



(h) Ph - 9 a 13

(i) Vida en desuso - 2 años mín.

#### 4.1.6. SECCIÓN 1012: MATERIALES VARIOS

##### 4.1.6.1. Sección 1012.01: Agua

**a) Agua para mezcla y curado de concreto de cemento.-** El agua que sea utilizada para mezclas y curado del concreto, u otras aplicaciones, debe estar razonablemente limpia y exenta de ácido, álcali, azúcar, materia vegetal o cualquier otra sustancia perjudicial para el producto final. El agua será analizada de acuerdo con AASHTO T 26 y deberá satisfacer los requisitos que señala dicha norma.

##### 4.1.6.2. Sección 1012.04: Colorante para Revestir Concreto

Suministrar un teneador coloreado semi-opaco que contenga resinas copolímeras de metil metacrilatoetil acrilatos u otras equivalentes, solventes y pigmentos para dar tono de colores suspendidos en solución por un agente químico para suspensión. Los pigmentos tonadores de color consistirán en silicatos laminares, dióxido de titanio y óxidos inorgánicos. Deberán cumplir con lo siguiente:

(a) Masa por litro, ASTM D 1475 - 38 Kg. min.

(b) Sólidos por masa (peso), ASTM D 2369 - 30% min.

(c) Sólidos por volumen - 21% min.

(d) Tiempo de secamiento, ASTM D 1640 - 30 min. a 21°C y 50% de humedad

(e) Cambio de color, ASTM D 822, 1000 hr. - No hay cambio apreciable

(f) Resistencia a los ácidos, álcalis, gasolina y esencias minerales, ASTM D 543 - Excelente

(g) Transmisión de vapor de agua del interior del concreto, ASTM D 1653 - Transmisible

(h) Absorción de la humedad del exterior en los poros de la superficie del concreto FSS TT-C-555 - Reduce la tasa

(i) Oxidación a través del tiempo – Ninguna

##### 4.1.6.3. Sección 1012.09: Recubrimientos Protectores del Concreto

Suministrar recubrimientos protectores para pisos de puentes, bordillos, cunetas, aceras y las partes de concreto de las barandas de puentes, que se ajusten a uno de los siguientes:

(a) Aceite de Linaza Heroida - ASTM 2 D 260, Tipo I ó II

(b) Esencias de Petróleo (Esencias Minerales) - ASTM D 235

##### 4.1.6.4. Sección 1012.10: Materiales Puzolánicos

Estos deberán cumplir con los siguientes requisitos:

(a) Ceniza Fina de Altos Hornos (CFAH) - AASHTO M 295

(b) Escoria de Horno de Fundición de Hierro Molida - AASHTO M 302 grado 100 ó 120

(c) Humo Silíceo (Microsilíceo) - AASHTO M 307

##### 4.1.6.5. Sección 1012.15: Lechada

Proveer mezclas de lechada que se ajusten a los siguientes según el tipo o tipos especificados:

**(a) Lechada de Cemento Hidráulico.-** Provéase una mezcla de cemento Portland, agregado fino, agua, aditivos expansivos y/o CFAH, que cumplan con lo siguiente:

(1) Resistencia a la compresión a los 7 días, AASHTO T 106 - 4 MPa mín.

(2) Flujo (tiempo de efusión), FLH T 502 ó ASTM C 939 - 16 a 26 seg.

**Nota:** Una mezcla más fluida que tenga un tiempo de efusión en el cono de flujo de 9 a 15 seg., puede ser usada durante la inyección inicial.

El Contratista deberá suministrar un certificado de producción con lo siguiente:

- Certificación de fábrica para el cemento.
- Análisis físicos y químicos para las puzolanas.
- Resultados de ensayos realizados por un laboratorio independiente calificado (resistencias, tiempos de flujo en el cono, contracción y expansión observadas y tiempo de fraguado inicial a 1 día, 3 días y 7 días).





**(b) Lechada y Mortero con Polímero.-** Proveer un aglutinante polimérico y agregado fino en las proporciones recomendadas por el Fabricante del polímero con una resistencia a la compresión mínima de 25 MPa en 4 horas.

**(c) Lechada no Contraible.-** De acuerdo con ASTM C 110.

**(d) Masilla (Lechada).-** Deberá cumplir con lo siguiente:

(1) Resistencia adhesiva a los 28 días método de ensaye de adherencia de arrufo aglutinado - 2 MPa mín.

(2) Resistencia al congelamiento y descongelamiento ASTM C 666, método B, 300 ciclos - No se producen grietas ni deslaminaciones

(3) Intemperismo acelerado, 5000 horas - No hay defectos visibles

(4) Resistencia al rociado en tablillas 300 horas - No hay deterioro o pérdida de adherencia

(5) Absorción, ASTM C 67 - 3.5% máx.

(6) Resistencia a la flexión, ASTM C 348, 28 día - 6.8 MPa mín.

(7) Resistencia a la compresión AASHTO T 106, 28 días - 27.5 MPa mín.

**(e) Lechada de Cemento Portland.-** Provéase una parte de cemento Portland y 3 partes de arena. Revolver completamente con agua hasta producir una pasta de consistencia espesa y cremosa.

#### 4.1.7. SECCIÓN 1013: MATERIALES PARA MEJORAS A LOS LADOS DE LA VÍA Y PARA CONTROL DE LA EROSIÓN

##### 4.1.7.1. Sección 1013.08: Materiales Misceláneos

**h) Curación de heridas de los Árboles.-** La curación para el tratamiento de heridas o cortaduras en los árboles, deberá ser como sigue:

1.- Una pintura negra antiséptica aprobada, con base de asfalto negro.

2.- Una pintura negra antiséptica aprobada, compuesta de caldo Bordelés, aceite crudo de linaza y negro de humo, o bien,

3.- Una pintura negra aprobada, compuesta de óxido de zinc, aceite crudo de linaza y negro de humo.

#### 4.1.8. SECCIÓN 1015: PILOTES

##### 4.1.8.1. Sección 1015.03: Pilotes de Concreto

Fabriquense los pilotes con concreto Clase A (AE) de acuerdo con la Sección-602. Las varillas de refuerzo de acero de lingote o de acero relaminado (para rieles), deberán cumplir con lo estipulado en el Artículo-1009.01.

Constrúyanse los pilotes de concreto premoldeado de acuerdo con la Sección-602.

Úsense moldes metálicos, de plywood o de madera cepillada que sean herméticos al agua, rígidas y exactamente alineados. Úsense una tira de ochavar de 25 mm en todas las esquinas.

Cuélense los pilotes por separado o, si se cuelan pilotes alternos de una camada, cuélense los pilotes intermedios, por lo menos, 4 días después de que los pilotes adyacentes hayan sido colados. Sepárense los pilotes colados en camadas con papel alquitranado u otro material separador adecuado.

Colóquese el concreto en cada camada en una operación continua para evitar la formación de bolsas de piedra ratoneras u otros defectos. Déjense los moldes en su lugar por lo menos 24 horas.

Háganse los pilotes rectos de manera que si se estira una cuerda entre la cabeza y la punta, en cualquiera de las caras, la cuerda no estará a más de 25mm de la cara del pilote en cualquier punto. Hágase la superficie del pilote exacta, lisa, pareja y libre de ratoneras y huecos.

Remuévanse los anclajes de izamiento a una profundidad de por lo menos 25 mm debajo de la superficie del concreto y rellénese con concreto el hoyo resultante. Dese el acabado a la superficie de cada pilote con un acabado superficial ordinario de Clase 1, de acuerdo con el Artículo-602.12. Cúrense los pilotes de acuerdo con las Sección-602, según corresponda.

Si no se preparan cilindros de concreto para ensayes, no se moverán los pilotes hasta que hayan sido curados, por lo menos, por 14 días a una temperatura mínima de 15°C. No se deberán transportar o hincar pilotes hasta que hayan sido curados durante 21 días a una temperatura mínima de 15°C. Cuando se haya usado cemento de alta resistencia inicial, no se muevan, transporten o hinquen los pilotes hasta que hayan sido curados, por lo menos, durante 7 días.

#### 4.1.8.2. Sección 1015.04: Cubiertas de Acero

Suminístrense cubiertas (camisas) de acero para pilotes ya sean cilíndricas o ahusadas, ya sean soldadas en espiral, soldadas con costura recta o de tubo sin costura. Úsese solamente un tipo de cubierta para pilotes a través de toda una estructura. Los espesores de pared de cubierta se ajustarán a los siguientes mínimos:

- Diámetro exterior del cilindro < 350 mm - 6 mm
- Diámetro exterior del cilindro > 350 mm - 10 mm
- Ahusado o aflautado - 4.5 mm

(a) **Cubiertas Hincadas sin Mandril.-** Para pilotes de concreto ahusados continuos o ahusados por peldaños, colados en el sitio, provéanse cubiertas que tengan un diámetro mínimo de 300 mm a nivel de recorte y una punta con un diámetro mínimo de 200mm. Para pilotes de concreto de diámetro constante colados en el sitio, provéanse cubiertas que tengan un diámetro nominal mínimo de 270 mm.

Fabriquense las cubiertas de una plancha de material de no menos de 4.5 mm de espesor y cumpla con AASHTO M 183 M. La cubierta podrá ser soldada en espiral o longitudinalmente, y ser ahusada o de sección constante. Séllese las puntas según lo muestren los planos.

(b) **Cubiertas Hincadas con Mandril.-** Provéanse cubiertas de suficiente resistencia y espesor para soportar la hincadura sin sufrir daños ni distorsiones ni torceduras perjudiciales debidas a la presión del suelo después de hincadas y que se haya quitado el mandril. Los diámetros de la cabeza y de la punta se ajustarán a lo especificado en las Especificaciones Especiales.

#### 4.1.9. SECCIÓN 1017: METAL ESTRUCTURAL

##### 4.1.9.1. Sección 1017.13: Almohadillas Elastoméricas de Apoyo

Las almohadillas elastoméricas de apoyo deberán cumplir con la Norma AASHTO M251.

##### 4.1.9.2. Sección 1017.14: Aleación de Aluminio Estructural

Ésta deberá cumplir con las "Especificaciones para Estructuras de Aluminio" publicadas por la AA. Para material de juntas de expansión de aluminio, suministrar aleación de aluminio extruido 6061-T6.

##### 4.1.9.3. Sección 1017.16: Cabezas de Pernos y Tuercas de Aluminio

Estas piezas deberán suministrarse de acuerdo con la Norma B18.2 de la ANSI, para exágonos pesados. Las roscas deberán ajustarse a la Norma B1.1 de la ANSI, Clase 2, para la serie de roscas de hilo grueso.

##### 4.1.9.4. Sección 1017.17: Alambre para Soldar Aluminio

El alambre para soldar aluminio deberá satisfacer los requisitos de las especificaciones siguientes:

CUADRO 1017-1  
ALAMBRE PARA SOLDAR ALUMINIO

| Serie de aleaciones : | Especificación | Alambre           |
|-----------------------|----------------|-------------------|
| 3xxx y 6xxx           | AWS 5.10       | ER 4043           |
| 3xxx, 5xxx y 6xxx     |                | ER 5356           |
| 5xxx y 6xxx           |                | ER 5556 ó ER 5183 |

##### 4.1.9.5. Sección 1017.18: Sellos Elastoméricos de Compresión para Juntas

Los sellos elastoméricos de compresión para juntas deberán cumplir con los requisitos de AASHTO M 220.

CUADRO 1017-2  
Aleaciones de Aluminio para Sistemas de Barandales para Puentes

| COMPONENTES BARANDAL DEL   | Designación de la Aleación (ASTM y AA) |                          |  |                                    |                    |                                 |   |                      |                                  |
|--|--|--------------------------|--|------------------------------------|--------------------|---------------------------------|---|----------------------|----------------------------------|
|  | Placas y Láminas                       | Tubos Estirados si Forma | Barras, Varillas y Alambre                       | Barras, Varillas, Perfiles y Tubos | Tubos              | Perfiles Estructurales Estándar | Remaches e Frio y Alambre y Varillas de Remachar e Frio | Fundiciones en Arena | Fundiciones e Moldes Permanentes |
| Especificaciones ASTM  | BB 29                                  | B 219                    | B 211  | B 211                              | B 241              | B 398                           | B 316   | B 26                 | B 198                            |
| Postes y Bases para Postes, Estructurales: Forjados Fundidos   |  |                          |  | 6061-T6                            | 6061-T6<br>6063-T6 | 6061-T6                         |   |                      | A444 0-T4                        |
| Postes Ornamentales Forjados Fundidos  |  |                          |  | 6063-T6                            | 6063-T6            |                                 |   | 356 0-T6<br>356 0-T6 | A356 0-T6<br>A356 0-T6           |
| Barandales y Camisas, Estructurales Forjados   |  | 6061-T6<br>6063-T6       |  | 6061-T6<br>6063-T6<br>6351-T5      | 6061-T6<br>6063-T6 | 6061-T6                         |   |                      |                                  |
| Pernos y Tornillos, Varios <sup>(4)(5)</sup><br>Aluminio Forjado<br>Acero Inoxidable<br>Acero Galvanizado<br>Acero Aluminizado |  |                          | 2024-T4 <sup>(4)</sup><br>6061-T6 <sup>(5)</sup> |                                    |                    |                                 |   |                      |                                  |
| Tuercas (6)<br>Forjadas<br>De 6 mm y menos (3)<br>De 5 mm y más  |  |                          | 2024-T4<br>6061-T6<br>6262-T9                    | 6061-T6 <sup>(7)</sup>             |                    |                                 |   |                      |                                  |

Notas Generales: El temple "F" se aplica a productos que adquieren algún temple en los procesos de fabricación.

CUADRO 1017-2 (Continuación)  
Aleaciones de Aluminio para Sistemas de Barandales para Puentes

| COMPONENTES BARANDAL DEL                    | Designación de la Aleación (ASTM y AA)                |                           |                            |                                    |       |                                 |   |   |                                  |
|---|---|---------------------------|----------------------------|------------------------------------|-------|---------------------------------|---|---|----------------------------------|
|   | Placas y Láminas                                      | Tubos Estirados sin Forma | Barras, Varillas y Alambre | Barras, Varillas, Perfiles y Tubos | Tubos | Perfiles Estructurales Estándar | Remaches en Frio y Alambre y Varillas de Remachar en Frio | Fundiciones en Arena                          | Fundiciones e Moldes Permanentes |
| Especificaciones ASTM                       | B 209   | B 210                     | B 211                      | B 211                              | B 241 | B 308                           | B 316   | B 26  | B 108                            |
| Arandelas Planas <sup>(1)</sup><br>Forjados | Alcald<br>2024-T4<br>Alcald<br>2024-T3 <sup>(9)</sup> |                           |                            |                                    |       |                                 |   |   |                                  |
| Arandelas de Presión: Forjadas              |   |                           | 7075-T6                    |                                    |       |                                 |   |   |                                  |
| Remaches: Forjados                          |   |                           |                            | 6061-T6                            |       |                                 | 6061-T6 <sup>(1)(9)</sup><br>6061-T4 <sup>(1)(9)</sup>    |   |                                  |
| Laminillas de Calza Forjadas Fundidas       | 1100-0  |                           |                            | 6063-F <sup>(1)</sup>              |       |                                 |   | 443 0-F                                       |                                  |
| Relleno de Soldadura Forjado                |   |                           |                            |                                    |       | 5356                            |   |   |                                  |
| Casquetas Terminales Forjadas Fundidas      | 6061-T6   |                           |                            | 6061-T6                            |       |                                 |   | 356 0-T6 <sup>(1)</sup><br>356 0-F<br>443 0-F |                                  |

Notas Específicas: (1) Solamente la composición química.  
(2) Usar tuercas y arandelas compatibles de acero inoxidable o recubiertas. No usar aluminio en pernos de anclaje.  
(3) Recubrir la aleación 2024-T4 con un espesor mínimo de 5 µm de recubrimiento anódico con un sello de dicromato o agua hirviendo.  
(4) Usar la aleación 2024-T4 para pernos que soportan carga y pernos menores.  
(5) Usar la aleación 6061-T6 como material alternativo para pernos menores.  
(6) Usar con pernos y tornillos de aluminio. No usar aluminio para tuercas y arandelas de pernos de anclaje.  
(7) Una alternativa deseable es la B 211.  
(8) Usar el temple T3 para espesores menores de 6 mm., y el temple T4 para espesores de 6 mm. y mayores.  
(9) Usar para remaches para remachar en frío.  
(10) Usar para remaches a calentar (530°C a 565°C). \*Alcald (Marca de Fábrica) = Aluminio revestido con Aluminio Duro.

#### 4.1.9.6. Sección 1017.20: Superficies de Tetrafluoretileno (TFE) para Apoyos

(a) Resina de TFE.- Suministrar resina TFE virgen conforme a la Norma ASTM D 1457 y lo siguiente:

(1) Gravedad Específica 2.13 a 2.19

(2) Punto de Fusión 328°C + 1°C

(b) Material de Relleno.- Suministrar fibras de vidrio hechas en fábrica, carbón u otro material inerte aprobado.

(c) Material Adhesivo.- Suministrar adhesivo de resina epóxica que cumpla con FSS MMM-A-134, película de FEP o uno igual aprobado.

(d) Lámina de TFE No Rellenada.- Suministrar lámina de TFE no rellena hecha de resina de TFE, que cumpla con lo siguiente:

(1) Resistencia a la Tensión, ASTM D 1457 - 19 MPa. mín.

(2) Alargamiento, ASTM D 1457 - 200% mín.

(e) Lámina de TFE Rellenada.- Suministrar lámina de TFE rellena hecha de resina de TFE uniformemente mezclada con material de relleno. Las láminas de TFE rellenas que contengan fibra de vidrio o carbón, deberán cumplir con lo mostrado en el Cuadro 1017-3.

CUADRO 1017-3  
LÁMINAS DE TETRAFLUORETANO RELLENADAS

| Propiedad  | Método ASTM      | 15% de Fibras de Vidrio | 25% de Carbón      |
|--|------------------|-------------------------|--------------------|
| Mecánicas:<br>Resistencia Mínima a la Tensión<br>Alargamiento Mínimo | D 1457<br>D 1457 | 14 MPa.<br>150%         | 9 MPa.<br>75%      |
| Físicas:<br>Gravedad Específica Mínima<br>Punto de Fusión            | D 792<br>D 1457  | 2.20<br>327 ± 10°C      | 2.10<br>327 ± 10°C |

(f) Tela con Fibras de TFE.- Suministrar tela hecha de fluorocarbono oriental de TFE multifilamentoso y otras fibras. Usar fibras de TFE que cumplan con lo siguiente:

(1) Resistencia a la Tensión, ASTM D 2256 - 165 MPa. mín.

(2) Alargamiento, ASTM D 2256 - 75% mín.

(g) Componentes de TFE Rellenado y Bronce Entrelazados.- Suministrar una plancha de bronce fosforado que cumpla con ASTM B 100 con una capa superficial de bronce poroso de



0.25 mm de espesor que cumpla con ASTM B 103 M, en la cual es impregnado un compuesto de TFE. Cubrir la superficie con una carpeta de un compuesto de TFE de no menos de 25  $\mu\text{m}$  de espesor.

**(h) Mixtura de Metal y TFE.-** Suministrar TFE virgen moldeado en cada lado y completamente a través de una lámina de acero inoxidable perforada de 33 mm de espesor que cumpla con ASTM A 240, tipo 304.

**(i) Tratamiento Superficial de Láminas.-** Para pegar con epóxico, tratar en fábrica un lado de la lámina de TFE con un proceso de naftalina de sodio o amoniaco sódico.

**(j) Superficies en Contacto con Acero Inoxidable.-** Cumplir con lo siguiente:

(1) Espesor 0.91 mm. mín.

(2) Acabado de la Superficie 0.5  $\mu\text{m}$ . raíz cuadrada de la media de los cuadrados, máx.

Pulir o rodillar las superficies que estarán en contacto con acero inoxidable para cumplir con las propiedades de fricción especificadas.



# PRESUPUESTO





## ÍNDICE

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| 3. CUADRO DE PRECIOS Nº1 .....     | 14            |
| 4. PRESUPUESTO.....                | 18            |
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## 1. MEDICIONES

| ETAPA                          | SUB ETAPA | RESUMEN  | UDS | LON   | ANC  | ALT  | PARCIAL | TOTAL         |
|--------------------------------|-----------|--|-----|-------|------|------|---------|---------------|
|                                |           |  |     |       |      |      | L       |               |
| <b>ETAPA 205: PRELIMINARES</b> |           |  |     |       |      |      |         |               |
| 205                            | 01        | <b>Construcciones temporales (campamento)</b>  |     |       |      |      |         |               |
|                                |           | m <sup>2</sup> Champa de madera blanca, incluso embaldosado y techo de lámina de zinc, para oficina galerón cerrado        |     |       |      |      |         |               |
|                                |           | Área de la champa  | 2   | 4.00  | 4.00 |      | 32.00   |               |
|                                |           |  |     |       |      |      |         | <b>32.00</b>  |
|                                |           | m <sup>2</sup> Champa de madera de pino, incluso embaldosado y techo de lámina de zinc para bodega galerón cerrado y tambo |     |       |      |      |         |               |
|                                |           | Área de la champa  | 3   | 6.00  | 5.00 |      | 90.00   |               |
|                                |           |  |     |       |      |      |         | <b>90.00</b>  |
| 205                            | 04        | <b>Construcción de obras preliminares (base cimbra)</b>  |     |       |      |      |         |               |
|                                |           | m <sup>3</sup> Concreto de 3000 PSI con mezcladora   | 1   | 64.00 | 6.00 | 0.10 | 38.40   |               |
|                                |           |  |     |       |      |      |         | <b>38.40</b>  |
|                                |           | m Alcantarilla de tubería perfilada de PVC de diámetro 78"   |     |       |      |      |         |               |
|                                |           | Alcantarilla para desagüe del cauce  | 6   |       | 6.00 |      | 36.00   |               |
|                                |           |  |     |       |      |      |         | <b>36.00</b>  |
|                                |           | m <sup>2</sup> Formaleta para muros  |     |       |      |      |         |               |
|                                |           | Longitudinales   | 2   | 64.00 | 2.20 |      | 281.60  |               |
|                                |           |  |     |       |      |      |         | <b>281.60</b> |
|                                |           | LBS Hierro en varillas corrugado de grado 60 de diámetro superior al N°4   |     |       |      |      |         |               |
|                                |           | Ver hoja de medición acero   |     |       |      |      |         |               |
|                                |           | m <sup>3</sup> Concreto de 4500 PSI con mezcladora   |     |       |      |      |         |               |
|                                |           | Volumen de la base   | 1   | 64.00 | 6.00 | 2.20 | 844.80  |               |
|                                |           | A deducir alcantarillas  | -1  |       |      |      | -113.10 |               |
|                                |           |  |     |       |      |      |         | <b>731.70</b> |

|  |    |  |   |       |       |  |          |                 |
|--|----|--|---|-------|-------|--|----------|-----------------|
| 205  | 05 | <b>Rótulos</b>   |   |       |       |  |          |                 |
|  |    | C/U Rótulo de 1.22 x 2.44 m de estructura metálica y zinc liso, con bases de concreto reforzado  |   |       |       |  |          |                 |
|  |    | Rótulos  | 2 |       |       |  | 2.00     |                 |
|  |    |  |   |       |       |  |          | <b>2</b>        |
| 205  | 06 | <b>Remoción de estructuras de concreto</b>   |   |       |       |  |          |                 |
|  |    | m <sup>3</sup> Demolición con retroexcavadora y martillo hidráulico a cielo abierto de estructura de concreto                                    |   |       |       |  |          |                 |
|  |    | Volumen puente vado  | 1 |       |       |  | 809.84   |                 |
|  |    | Volumen base cimbra  | 1 |       |       |  | 731.71   |                 |
|  |    |  |   |       |       |  |          | <b>1541.55</b>  |
| <b>ETAPA 207: SUB-ESTRUCTURA PARA PUENTE</b> |    |  |   |       |       |  |          |                 |
| 207  | 01 | <b>Limpieza inicial</b>  |   |       |       |  |          |                 |
|  |    | C/U Eliminar con moto sierra árbol existente de diámetro de 8", considerando una densidad de 0,3 árboles/m <sup>2</sup>                          |   |       |       |  |          |                 |
|  |    | Área estribo derecho   | 1 | 7.87  | 34.89 |  | 274.58   |                 |
|  |    | Número total de árboles  |   |       |       |  |          | <b>82</b>       |
|  |    | C/U Eliminar con machete árboles existentes de diámetro menos de 4", considerando una densidad de 0,1 árboles/m <sup>2</sup>                     |   |       |       |  |          |                 |
|  |    | Área estribo izquierdo   | 1 | 72.13 | 34.89 |  | 2516.62  |                 |
|  |    | Número total de árboles  |   |       |       |  |          | <b>126</b>      |
|  |    | m <sup>2</sup> Descapote con motoniveladora en terreno limo-arcilloso  |   |       |       |  |          |                 |
|  |    | Área de descapote estribo derecho  | 1 | 25.71 | 34.89 |  | 897.02   |                 |
|  |    | Área de descapote estribo izquierdo  | 1 | 96.69 | 34.89 |  | 3373.51  |                 |
|  |    |  |   |       |       |  |          | <b>4270.53</b>  |
| 207  | 03 | <b>Excavación principal</b>  |   |       |       |  |          |                 |
|  |    | m <sup>3</sup> Excavación con retroexcavadora para estructura de fundaciones de puente en terreno de material mixto de arcillas, limos y bolones |   |       |       |  |          |                 |
|  |    | Volumen limos y bolones  | 1 |       |       |  | 10968.79 |                 |
|  |    |  |   |       |       |  |          | <b>10968.79</b> |



|                |  |   |  |  |         |  |  |  |                |
|----------------|--|---|--|--|---------|--|--|--|----------------|
| m <sup>3</sup> | Excavación con retroexcavadora y martillo hidráulico a cielo abierto en roca |   |  |  |         |  |  |  |                |
|                | Volumen roca   | 1 |  |  | 2221.76 |  |  |  |                |
|                |  |   |  |  |         |  |  |  | <b>2221.76</b> |

**207 18 Acarreos**

|                |  |   |  |  |         |  |  |  |                |
|----------------|--|---|--|--|---------|--|--|--|----------------|
| m <sup>3</sup> | Botar con camión volquete tierra sobrante de excavación a 7.5 km incluido carga con equipo |   |  |  |         |  |  |  |                |
|                | Volumen de transporte terreno flojo (esp. 20%)   | 1 |  |  | 5349.31 |  |  |  |                |
|                | Volumen de transporte roca (esp. 40%)  | 1 |  |  | 2761.96 |  |  |  |                |
|                |  |   |  |  |         |  |  |  | <b>8111.27</b> |

**207 07 PILOTES Perforación**

|   |  |   |  |       |        |  |  |  |               |
|---|--|---|--|-------|--------|--|--|--|---------------|
| m | Perforación para pilote con máquina rotativa en terreno de formación consolidada |   |  |       |        |  |  |  |               |
|   | Pila 4   | 4 |  | 9.08  | 36.32  |  |  |  |               |
|   | Pila 5   | 4 |  | 9.87  | 39.48  |  |  |  |               |
|   | Pila 6   | 4 |  | 10.66 | 42.64  |  |  |  |               |
|   | Pila 7   | 4 |  | 11.44 | 45.76  |  |  |  |               |
|   | Pila 8   | 4 |  | 12.23 | 48.92  |  |  |  |               |
|   | Estribo 2  | 8 |  | 17.67 | 141.36 |  |  |  |               |
|   |  |   |  |       |        |  |  |  | <b>354.48</b> |

**207 14 Acero de refuerzo principal**

|     |  |  |  |  |  |  |  |  |  |
|-----|--|--|--|--|--|--|--|--|--|
| LBS | Hierro en varillas corrugado de grado 60 de diámetro superior al N°4 |  |  |  |  |  |  |  |  |
|     | Ver hoja de medición acero   |  |  |  |  |  |  |  |  |

**207 16 Concreto estructural**

|                |                                     |   |      |      |       |       |  |  |               |
|----------------|-------------------------------------|---|------|------|-------|-------|--|--|---------------|
| m <sup>3</sup> | Concreto de 4500 PSI con mezcladora |   |      |      |       |       |  |  |               |
|                | Pila 4                              | 4 | 1.00 | 1.00 | 9.08  | 28.53 |  |  |               |
|                | Pila 5                              | 4 | 1.00 | 1.00 | 9.87  | 31.01 |  |  |               |
|                | Pila 6                              | 4 | 1.00 | 1.00 | 10.66 | 33.49 |  |  |               |
|                | Pila 7                              | 4 | 1.00 | 1.00 | 11.44 | 35.94 |  |  |               |
|                | Pila 8                              | 4 | 1.00 | 1.00 | 12.23 | 38.42 |  |  |               |
|                | Estribo 2                           | 4 | 1.00 | 1.00 | 17.67 | 55.51 |  |  |               |
|                |                                     |   |      |      |       |       |  |  | <b>222.90</b> |

**ZAPATAS**

**207 02 Concreto de limpieza en fondo de cimentación (nivelación)**

|                |  |   |  |      |       |      |       |  |              |
|----------------|--|---|--|------|-------|------|-------|--|--------------|
| m <sup>3</sup> | Concreto de 3000 PSI con mezcladora            |   |  |      |       |      |       |  |              |
|                | Volumen bajo zapatas de 4 a 8                  | 5 |  | 5.00 | 5.00  | 0.10 | 12.50 |  |              |
|                | Volumen bajo zapatas estribo 1 y zapata pila 3 | 2 |  | 5.00 | 7.00  | 0.10 | 7.00  |  |              |
|                | Volumen bajo zapata estribo 2                  | 1 |  | 5.00 | 11.90 | 0.10 | 5.95  |  |              |
|                |  |   |  |      |       |      |       |  | <b>25.45</b> |

**207 15 Formaletas**

|                |  |    |      |       |      |  |       |  |               |
|----------------|--|----|------|-------|------|--|-------|--|---------------|
| m <sup>2</sup> | Formaleta para fundaciones                     |    |      |       |      |  |       |  |               |
|                | Zapatas de 4 a 8                               |    |      |       |      |  |       |  |               |
|                | Formaletas transversales                       | 10 |      | 5.00  | 1.75 |  | 87.50 |  |               |
|                | Formaletas longitudinales                      | 10 | 5.00 |       | 1.75 |  | 87.50 |  |               |
|                | Zapatas estribo 1 y pila 3                     |    |      |       |      |  |       |  |               |
|                | Formaletas transversales verticales exteriores | 2  |      | 7.00  | 4.00 |  | 56.00 |  |               |
|                | Formaletas transversales verticales interiores | 2  |      | 7.00  | 2.00 |  | 28.00 |  |               |
|                | Formaletas transversales inclinadas            | 2  |      | 7.00  | 2.33 |  | 32.62 |  |               |
|                | Formaletas longitudinales                      | 4  | 5.00 |       | 4.00 |  | 75.20 |  |               |
|                | Zapata estribo 2                               |    |      |       |      |  |       |  |               |
|                | Formaletas transversales                       | 2  |      | 11.90 | 1.75 |  | 41.65 |  |               |
|                | Formaletas longitudinales                      | 2  | 5.00 |       | 1.75 |  | 17.50 |  |               |
|                |  |    |      |       |      |  |       |  | <b>425.97</b> |

**207 14 Acero de refuerzo principal**

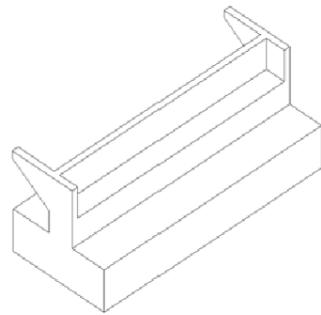
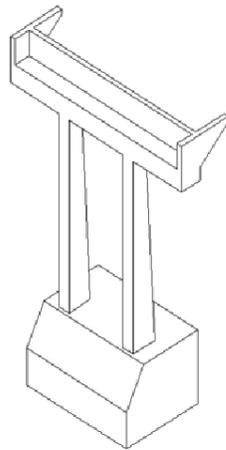
|     |  |  |  |  |  |  |  |  |  |
|-----|--|--|--|--|--|--|--|--|--|
| LBS | Hierro en varillas corrugado de grado 60 de diámetro superior al N°4 |  |  |  |  |  |  |  |  |
|     | Ver hoja de medición acero   |  |  |  |  |  |  |  |  |

**207 16 Concreto estructural**

|                |                                     |   |  |      |       |      |        |  |               |
|----------------|-------------------------------------|---|--|------|-------|------|--------|--|---------------|
| m <sup>3</sup> | Concreto de 4500 PSI con mezcladora |   |  |      |       |      |        |  |               |
|                | Zapatas de 4 a 8                    | 5 |  | 5.00 | 5.00  | 1.75 | 218.75 |  |               |
|                | Zapatas estribo 1 y pila 3          | 2 |  | 5.00 | 7.00  | 4.00 | 263.20 |  |               |
|                | Zapata estribo 2                    | 1 |  | 5.00 | 11.90 | 1.75 | 104.13 |  |               |
|                |                                     |   |  |      |       |      |        |  | <b>586.08</b> |



| ESTRIBOS |                            |                            |       |       |               |
|----------|----------------------------|----------------------------|-------|-------|---------------|
| 207      | 15                         | Formaletas                 |       |       |               |
|          |                            | m <sup>2</sup>             |       |       |               |
|          |                            | Formaleta para fundaciones |       |       |               |
|          |                            | Estribo 1                  |       |       |               |
|          | Frontal pilas              | 2                          | 0.70  | 10.47 | 14.66         |
|          | Lateral pilas              | 4                          | 1.20  | 10.47 | 50.26         |
|          | Trasero pilas              | 2                          | 0.70  | 10.49 | 14.69         |
|          | Apoyo inferior             | 1                          | 1.30  | 11.90 | 15.47         |
|          | A deducir huecos pilas     | -2                         | 0.90  | 0.70  | -1.26         |
|          | Frontal apoyo              | 1                          | 11.90 | 2.44  | 29.04         |
|          | Interior apoyo             | 2                          | 1.00  | 1.28  | 2.56          |
|          | Laterales apoyo            | 2                          | 1.30  | 2.28  | 5.93          |
|          | Lateral aletas             | 4                          | 2.00  | 1.04  | 8.32          |
|          | A deducir contacto ménsula | -2                         | 0.30  | 0.40  | -0.24         |
|          | Frontal aletas             | 2                          | 0.30  | 0.30  | 0.18          |
|          | Frontal aletas inclinado   | 2                          | 0.30  | 2.49  | 1.49          |
|          | Trasero apoyo              | 1                          | 11.30 | 0.38  | 4.29          |
|          |                            | 1                          | 11.30 | 0.85  | 9.61          |
|          |                            | 1                          | 11.90 | 0.60  | 7.14          |
|          | Ménsula                    | 1                          | 11.30 | 0.25  | 2.83          |
|          |                            | 1                          | 11.30 | 0.42  | 4.75          |
|          |                            | Estribo 2                  |       |       |               |
|          | Frontal apoyo              | 1                          | 11.90 | 2.44  | 29.04         |
|          | Interior apoyo             | 2                          | 1.00  | 1.28  | 2.56          |
|          | Laterales apoyo            | 2                          | 1.30  | 2.28  | 5.93          |
|          | Lateral aletas             | 4                          | 2.00  | 1.04  | 8.32          |
|          | A deducir contacto ménsula | -2                         | 0.30  | 0.40  | -0.24         |
|          | Frontal aletas             | 2                          | 0.30  | 0.30  | 0.18          |
|          | Frontal aletas inclinado   | 2                          | 0.30  | 2.49  | 1.49          |
|          | Trasero apoyo              | 1                          | 11.30 | 0.38  | 4.29          |
|          |                            | 1                          | 11.30 | 0.85  | 9.61          |
|          |                            | 1                          | 11.90 | 0.60  | 7.14          |
|          | Ménsula                    | 1                          | 11.30 | 0.25  | 2.83          |
|          |                            | 1                          | 11.30 | 0.42  | 4.75          |
|          |                            |                            |       |       | <b>245.62</b> |



| 207 | 14 | Acero de refuerzo principal  |  |
|-----|----|--|--|
|     |    | LBS  |  |
|     |    | Hierro en varillas corrugado de grado 60 de diámetro superior al N°4 |  |
|     |    | Ver hoja de medición acero   |  |

| 207 | 16                      | Concreto estructural                |      |       |              |        |
|-----|-------------------------|-------------------------------------|------|-------|--------------|--------|
|     |                         | m <sup>3</sup>                      |      |       |              |        |
|     |                         | Concreto de 4500 PSI con mezcladora |      |       |              |        |
|     |                         | Estribo 1                           |      |       |              |        |
|     | Pilas                   | 2                                   | 1.20 | 0.70  | 10.47        | 17.59  |
|     | Apoyo                   | 1                                   | 1.30 | 11.90 | 2.44         | 37.75  |
|     | A deducir hueco tablero | -1                                  | 1.00 | 11.30 | 1.34         | -15.14 |
|     | Aletas                  | 2                                   | 2.00 | 0.30  | 1.04         | 1.25   |
|     | Ménsula                 | 1                                   | 0.30 | 11.30 | 0.40         | 1.36   |
|     |                         | Estribo 2                           |      |       |              |        |
|     | Muro                    | 1                                   | 1.30 | 11.90 | 2.44         | 37.75  |
|     | A deducir hueco tablero | -1                                  | 1.00 | 11.30 | 1.34         | -15.14 |
|     | Aletas                  | 2                                   | 2.00 | 0.30  | 1.04         | 1.25   |
|     | Ménsula                 | 1                                   | 0.30 | 11.30 | 0.42         | 1.42   |
|     |                         |                                     |      |       | <b>68.09</b> |        |

| 211 | 05                 | Aparato de apoyo        |          |
|-----|--------------------|-------------------------|----------|
|     |                    | C/U                     |          |
|     |                    | Apoyo móvil para puente |          |
|     | Apoyos en estribos | 4                       | 4        |
|     |                    |                         | <b>4</b> |

| ZAPATAS Y ESTRIBOS |                                   |   |       |      |                 |         |
|--------------------|-----------------------------------|---|-------|------|-----------------|---------|
| 207                | 19                                | Explotación de banco  |       |      |                 |         |
|                    |                                   | m <sup>3</sup>  |       |      |                 |         |
|                    |                                   | Acarreo con camión volquete de material selecto a 10 km carga con equipo, incluido derecho de explotación |       |      |                 |         |
|                    |                                   | Volumen de relleno (compactado)   |       |      |                 |         |
|                    |                                   | 13190.55  |       |      |                 |         |
|                    |                                   | A deducir:  |       |      |                 |         |
|                    | Volumen zapatas 4 a 8             | -4  | 5.00  | 5.00 | 1.75            | -175.00 |
|                    | Volumen estribo 1                 | -1  |       |      |                 | -42.81  |
|                    | Volumen zapata pila 3 y estribo 1 | -2  | 5.00  | 7.00 | 4.00            | -263.20 |
|                    | Volumen pila 3                    | -1  | 1.00  | 3.00 | 2.94            | -8.82   |
|                    | Volumen pila 4                    | -1  | 1.00  | 3.00 | 0.74            | -2.22   |
|                    | Volumen pila 5                    | -1  | 1.00  | 3.00 | 1.61            | -4.83   |
|                    | Volumen pila 6                    | -1  | 1.00  | 3.00 | 2.57            | -7.71   |
|                    | Volumen pila 7                    | -1  | 1.00  | 3.00 | 3.65            | -10.95  |
|                    | Volumen pila 8                    | -1  | 1.00  | 3.00 | 4.46            | -13.38  |
|                    | Volumen pila 1                    | -1  | 11.17 | 5.34 | 1.00            | -59.65  |
|                    | Volumen pila 2                    | -1  | 5.64  | 5.68 | 1.00            | -32.04  |
|                    |                                   | Aumento por esponjamiento y compactación  |       |      |                 |         |
|                    |                                   |   |       |      | <b>3307.88</b>  |         |
|                    |                                   |   |       |      | <b>15877.82</b> |         |



|                |   |  |  |  |  |  |  |  |                 |
|----------------|---|--|--|--|--|--|--|--|-----------------|
| m <sup>3</sup> | Relleno y compactación con vibrocompactadora manual |  |  |  |  |  |  |  |                 |
|                | Volumen de relleno (compactado)                     |  |  |  |  |  |  |  | 12569.94        |
|                |   |  |  |  |  |  |  |  | <u>12569.94</u> |

**ETAPA 211: SUPER ESTRUCTURA PARA PUENTE**

|               |    |  |   |  |  |  |  |  |                |
|---------------|----|--|---|--|--|--|--|--|----------------|
| <b>CIMBRA</b> |    |  |   |  |  |  |  |  |                |
| 211           | 05 | <b>Cimbra cuajada para encofrado de pilas inclinadas y tablero</b>   |   |  |  |  |  |  |                |
|               |    | m <sup>3</sup> Cimbra con puntales, para sujeción del encofrado de pilas inclinadas y tablero, incluido transporte, montaje y desmontaje |   |  |  |  |  |  |                |
|               |    | Volumen cimbra   | 1 |  |  |  |  |  | 5804.04        |
|               |    |  |   |  |  |  |  |  | <u>5804.04</u> |

|                         |    |  |   |       |      |  |  |  |               |
|-------------------------|----|--|---|-------|------|--|--|--|---------------|
| <b>PILAS INCLINADAS</b> |    |  |   |       |      |  |  |  |               |
| 211                     | 09 | <b>Formaletas</b>  |   |       |      |  |  |  |               |
|                         |    | m <sup>2</sup> Formaletas de madera blanca para puente vehicular |   |       |      |  |  |  |               |
|                         |    | Superficie inferior pila 1 y 2                                   | 2 | 24.58 | 4.50 |  |  |  | 221.22        |
|                         |    | Superficie lateral pila 1 y 2                                    | 4 | 24.58 | 1.00 |  |  |  | 98.32         |
|                         |    |  |   |       |      |  |  |  | <u>319.54</u> |

|     |    |  |   |       |      |      |  |  |               |
|-----|----|--|---|-------|------|------|--|--|---------------|
| 211 | 08 | <b>Acero de refuerzo principal</b>                                       |   |       |      |      |  |  |               |
|     |    | LBS Hierro en varillas corrugado de grado 60 de diámetro superior al N°4 |   |       |      |      |  |  |               |
|     |    | Ver hoja de medición de acero.   |   |       |      |      |  |  |               |
| 211 | 16 | <b>Concreto estructural</b>  |   |       |      |      |  |  |               |
|     |    | m <sup>3</sup> Concreto de 4500 PSI con mezcladora                       |   |       |      |      |  |  |               |
|     |    | Volumen pilas 1 y 2  | 2 | 24.58 | 4.50 | 1.00 |  |  | 221.22        |
|     |    |  |   |       |      |      |  |  | <u>221.22</u> |

|                         |    |  |    |      |  |      |       |  |               |
|-------------------------|----|--|----|------|--|------|-------|--|---------------|
| <b>PILAS VERTICALES</b> |    |  |    |      |  |      |       |  |               |
| 211                     | 09 | <b>Formaletas</b>  |    |      |  |      |       |  |               |
|                         |    | m <sup>2</sup> Formaletas para columnas (área de contacto) |    |      |  |      |       |  |               |
|                         |    | Pila 3   |    |      |  |      |       |  |               |
|                         |    | Caras longitudinales                                       | 2  | 1.00 |  |      | 11.57 |  | 23.14         |
|                         |    | Caras transversales  | 2  |      |  | 3.00 | 11.57 |  | 69.42         |
|                         |    | Pilas de la 4 a la 8                                       |    |      |  |      |       |  |               |
|                         |    | Caras longitudinales                                       | 10 | 1.00 |  |      | 6.00  |  | 60.00         |
|                         |    | Caras transversales  | 10 |      |  | 3.00 | 6.00  |  | 180.00        |
|                         |    |  |    |      |  |      |       |  | <u>332.56</u> |

|     |    |  |  |  |  |  |  |  |  |
|-----|----|--|--|--|--|--|--|--|--|
| 211 | 08 | <b>Acero de refuerzo principal en pilas</b>                              |  |  |  |  |  |  |  |
|     |    | LBS Hierro en varillas corrugado de grado 60 de diámetro superior al N°4 |  |  |  |  |  |  |  |
|     |    | Ver hoja de medición de acero.   |  |  |  |  |  |  |  |

|     |    |  |   |      |      |  |       |  |               |
|-----|----|--|---|------|------|--|-------|--|---------------|
| 211 | 16 | <b>Concreto estructural</b>                        |   |      |      |  |       |  |               |
|     |    | m <sup>3</sup> Concreto de 4500 PSI con mezcladora |   |      |      |  |       |  |               |
|     |    | Pila 3   | 1 | 1.00 | 3.00 |  | 11.57 |  | 34.71         |
|     |    | Pilas de la 4 a la 8                               | 5 | 1.00 | 3.00 |  | 6.00  |  | 90.00         |
|     |    |  |   |      |      |  |       |  | <u>124.71</u> |

|     |    |                             |    |  |  |  |  |  |           |
|-----|----|-----------------------------|----|--|--|--|--|--|-----------|
| 211 | 05 | <b>Aparato de apoyo</b>     |    |  |  |  |  |  |           |
|     |    | C/U Apoyo móvil para puente |    |  |  |  |  |  |           |
|     |    | Apoyos en pilas             | 12 |  |  |  |  |  | 12        |
|     |    |                             |    |  |  |  |  |  | <u>12</u> |

|                |    |  |     |       |      |  |      |  |                |
|----------------|----|--|-----|-------|------|--|------|--|----------------|
| <b>TABLERO</b> |    |  |     |       |      |  |      |  |                |
| 211            | 09 | <b>Formaletas en tablero</b>                                     |     |       |      |  |      |  |                |
|                |    | m <sup>2</sup> Formaletas de madera blanca para puente vehicular |     |       |      |  |      |  |                |
|                |    | Tramo sección variable   |     |       |      |  |      |  |                |
|                |    | S1   | 2   | 90.00 |      |  | 0.20 |  | 36.00          |
|                |    | S2   | 2   | 90.00 | 2.01 |  |      |  | 361.80         |
|                |    | S3   | 2   | 90.00 |      |  | 1.28 |  | 230.40         |
|                |    | S4   | 1   | 90.00 | 5.40 |  |      |  | 486.00         |
|                |    | Tramo sección constante  |     |       |      |  |      |  |                |
|                |    | S1   | 2   | 85.00 |      |  | 0.20 |  | 34.00          |
|                |    | S2   | 2   | 85.00 | 2.01 |  |      |  | 341.70         |
|                |    | S3   | 2   | 85.00 |      |  | 0.92 |  | 156.40         |
|                |    | S4   | 1   | 85.00 | 5.90 |  |      |  | 501.50         |
|                |    | A deducir contacto apoyos  | -16 | 0.80  | 0.80 |  |      |  | -10.24         |
|                |    |  |     |       |      |  |      |  | <u>2137.56</u> |

|     |    |  |  |  |  |  |  |  |  |
|-----|----|--|--|--|--|--|--|--|--|
| 211 | 08 | <b>Acero refuerzo principal en tablero</b>                               |  |  |  |  |  |  |  |
|     |    | LBS Hierro en varillas corrugado de grado 60 de diámetro superior al N°4 |  |  |  |  |  |  |  |
|     |    | Ver hoja de medición de acero  |  |  |  |  |  |  |  |

|     |    |  |   |       |      |  |  |  |                |
|-----|----|--|---|-------|------|--|--|--|----------------|
| 211 | 16 | <b>Concreto estructural en tablero</b>             |   |       |      |  |  |  |                |
|     |    | m <sup>3</sup> Concreto de 4500 PSI con mezcladora |   |       |      |  |  |  |                |
|     |    | Volumen sección variable                           | 1 | 90.00 | 9.79 |  |  |  | 881.10         |
|     |    | Volumen sección constante                          | 1 | 85.00 | 8.44 |  |  |  | 717.40         |
|     |    |  |   |       |      |  |  |  | <u>1598.50</u> |



|                           |    |  |  |    |        |       |      |                |  |
|---------------------------|----|--|--|----|--------|-------|------|----------------|--|
| 211                       | 05 | <b>Otro tipo de obras</b>  |  |    |        |       |      |                |  |
|                           |    | m <sup>2</sup>   | Tela asfáltica para impermeabilización de tablero  | 2  | 175.00 | 5.00  |      | 1750.00        |  |
|                           |    |  |  |    |        |       |      | <b>1750.00</b> |  |
| 211                       | 05 | <b>Otro tipo de obras</b>  |  |    |        |       |      |                |  |
|                           |    | C/U  | Sumideros  | 24 |        |       |      | 24.00          |  |
|                           |    |  |  |    |        |       |      | <b>24.00</b>   |  |
| 211                       | 05 | <b>Otro tipo de obras</b>  |  |    |        |       |      |                |  |
|                           |    | m  | Baranda de tubo redondo de Ho. Go. Diámetro=8" y altura=0.90m, incluida pintura anticorrosiva          | 2  | 175.00 |       |      | 350.00         |  |
|                           |    |  |  |    |        |       |      | <b>350.00</b>  |  |
| <b>FIRME</b>              |    |  |  |    |        |       |      |                |  |
| 211                       | 09 | <b>Formaleta</b>   |  |    |        |       |      |                |  |
|                           |    | m <sup>2</sup>   | Formaleta symons con todos los accesorios de fijación  |    |        |       |      |                |  |
|                           |    |  | Superficie longitudinal  | 2  | 175.00 |       | 0.15 | 52.50          |  |
|                           |    |  | Superficie transversal   | 4  |        | 5.00  | 0.15 | 3.00           |  |
|                           |    |  |  |    |        |       |      | <b>55.50</b>   |  |
| 211                       | 08 | <b>Acero de refuerzo principal</b>                                       |  |    |        |       |      |                |  |
|                           |    | LBS  | Hierro en varillas corrugado de grado 60 de diámetro superior al N°4<br>Ver hoja de medición de acero. |    |        |       |      |                |  |
| 211                       | 16 | <b>Concreto estructural</b>  |  |    |        |       |      |                |  |
|                           |    | m <sup>3</sup>   | Concreto de 4500 PSI con mezcladora  |    |        |       |      |                |  |
|                           |    |  | Volumen firme  | 2  | 175.00 | 5.00  | 0.15 | 262.50         |  |
|                           |    |  |  |    |        |       |      | <b>262.50</b>  |  |
| <b>LOSA DE TRANSICIÓN</b> |    |  |  |    |        |       |      |                |  |
| 211                       | 02 | <b>Concreto de limpieza en fondo de losas de transición (nivelación)</b> |  |    |        |       |      |                |  |
|                           |    | m <sup>3</sup>   | Concreto de 3000 PSI con mezcladora  | 2  | 5.00   | 11.30 | 0.10 | 11.30          |  |
|                           |    |  |  |    |        |       |      | <b>11.30</b>   |  |

|  |    |   |   |   |        |       |      |               |  |
|--|----|---|---|---|--------|-------|------|---------------|--|
| 211  | 09 | <b>Formaletas en losas de transición</b>                  |   |   |        |       |      |               |  |
|  |    | m <sup>2</sup>  | Formaleta symons con todos los accesorios de fijación   |   |        |       |      |               |  |
|  |    |   | Superficie lateral  | 4 | 5.00   |       | 0.30 | 6.00          |  |
|  |    |   |   | 4 |        | 11.30 | 0.30 | 13.56         |  |
|  |    |   |   |   |        |       |      | <b>19.56</b>  |  |
| 211  | 08 | <b>Acero de refuerzo principal en losas de transición</b> |   |   |        |       |      |               |  |
|  |    | LBS   | Hierro en varillas corrugado de grado 60 de diámetro superior al N°4<br>Ver hoja de medición de acero |   |        |       |      |               |  |
| 211  | 16 | <b>Concreto estructural en losa de transición</b>         |   |   |        |       |      |               |  |
|  |    | m <sup>3</sup>  | Concreto de 4500 PSI con mezcladora   |   |        |       |      |               |  |
|  |    |   | Volumen   | 2 | 5.00   | 11.30 | 0.30 | 33.90         |  |
|  |    |   |   |   |        |       |      | <b>33.90</b>  |  |
| <b>ETAPA 213: SEÑALIZACIÓN HORIZONTAL Y VERTICAL</b>               |    |   |   |   |        |       |      |               |  |
| 213  | 01 | <b>Señales de información</b>                             |   |   |        |       |      |               |  |
|  |    | C/U   | Señal informativa estándar con paral de acero con base de concreto de 3000 PSI, incluida excavación   |   |        |       |      |               |  |
|  |    |   | Señales informativas  | 4 |        |       |      | 4.00          |  |
|  |    |   |   |   |        |       |      | <b>4.00</b>   |  |
| 213  | 02 | <b>Señales de reglamentación</b>                          |   |   |        |       |      |               |  |
|  |    | m   | Señalización horizontal pintada con equipo  |   |        |       |      |               |  |
|  |    |   | Total   | 1 | 175.00 |       |      | 175.00        |  |
|  |    |   |   |   |        |       |      | <b>175.00</b> |  |
| 213  | 03 | <b>Señales de prevención</b>                              |   |   |        |       |      |               |  |
|  |    | C/U   | Señal de tránsito de prevención estándar  |   |        |       |      |               |  |
|  |    |   | Señales de tránsito   | 2 |        |       |      | 2.00          |  |
|  |    |   |   |   |        |       |      | <b>2.00</b>   |  |
| <b>ETAPA 214: MEDIDAS DE MITIGACIÓN Y PREVENCIÓN DE ACCIDENTES</b> |    |   |   |   |        |       |      |               |  |
| 214  | 01 | <b>Anejo N°14: Estudio de Seguridad y Salud</b>           |   |   |        |       |      |               |  |
|  |    | GLB   | Anejo N°14: Estudio de Seguridad y Salud  |   |        |       |      |               |  |
|  |    |   | Presupuestos anteriores   |   |        |       |      | 1.00          |  |



**ETAPA 217: PRUEBA DE CARGA**

|     |    |  |      |
|-----|----|--|------|
| 217 | 01 | <b>Anejo N°9: Cálculos estructurales</b> |      |
|     |    | Prueba de carga                          |      |
|     |    | Presupuestos anteriores                  | 1.00 |

**ETAPA 218: CONTROL DE CALIDAD**

|     |    |                                       |      |
|-----|----|---------------------------------------|------|
| 217 | 01 | <b>Anejo N°15: Control de calidad</b> |      |
|     |    | Valoración de los ensayos             |      |
|     |    | Presupuestos anteriores               | 1.00 |



## 2. HOJA DE MEDICIÓN DE ACERO

| ETAPA  | SUBETAPA | RESUMEN  | N    | LONGITUD | PESOM | PARCIAL         | TOTAL      |
|--|----------|--|------|----------|-------|-----------------|------------|
| <b>ETAPA 205: PRELIMINARES</b>               |          |  |      |          |       |                 |            |
| 205  | 04       | <b>Construcción de obras preliminares (base cimbra)</b>                  |      |          |       |                 |            |
|  |          | LBS Hierro en varillas corrugado de grado 60 de diámetro superior al N°4 |      |          |       |                 |            |
|  |          | Longitudinal   | 155  | 12       | 0.994 | 1848.84         |            |
|  |          |  | 31   | 6.67     | 0.994 | 205.53          |            |
|  |          | Transversales  | 321  | 5.92     | 0.994 | 1888.92         |            |
|  |          | Aumento del 5% por pérdidas, despuntes y tolerancias                     |      |          |       | 197.16          |            |
|  |          |  |      |          |       | <b>4140.45</b>  | <b>kg</b>  |
|  |          |  |      |          |       | <b>9128.04</b>  | <b>lbs</b> |
| <b>ETAPA 207: SUB-ESTRUCTURA PARA PUENTE</b> |          |  |      |          |       |                 |            |
| <b>PILOTES</b>                               |          |  |      |          |       |                 |            |
| 207  | 14       | <b>Acero de refuerzo principal</b>                                       |      |          |       |                 |            |
|  |          | LBS Hierro en varillas corrugado de grado 60 de diámetro superior al N°4 |      |          |       |                 |            |
|  |          | Armadura vertical  |      |          |       |                 |            |
|  |          | Pila 7   | 60   | 10.88    | 3.973 | 2593.57         |            |
|  |          | Pila 8   | 60   | 11.67    | 3.973 | 2781.89         |            |
|  |          | Pila 9   | 60   | 12.00    | 3.973 | 2860.56         |            |
|  |          |  | 60   | 1.86     | 3.973 | 443.39          |            |
|  |          | Pila 10  | 60   | 12.00    | 3.973 | 2860.56         |            |
|  |          |  | 60   | 2.64     | 3.973 | 629.32          |            |
|  |          | Pila 11  | 60   | 12.00    | 3.973 | 2860.56         |            |
|  |          |  | 60   | 3.43     | 3.973 | 817.64          |            |
|  |          | Estribo 2  | 120  | 12.00    | 3.973 | 5721.12         |            |
|  |          |  | 120  | 8.87     | 3.973 | 4228.86         |            |
|  |          | Cercos   |      |          |       |                 |            |
|  |          | Pila 7   | 212  | 2.58     | 0.994 | 543.68          |            |
|  |          | Pila 8   | 228  | 2.58     | 0.994 | 584.71          |            |
|  |          | Pila 9   | 244  | 2.58     | 0.994 | 625.74          |            |
|  |          | Pila 10  | 260  | 2.58     | 0.994 | 666.78          |            |
|  |          | Pila 11  | 276  | 2.58     | 0.994 | 707.81          |            |
|  |          | Estribo 2  | 1064 | 2.58     | 0.994 | 2728.65         |            |
|  |          | Aumento del 5% por pérdidas, despuntes y tolerancias                     |      |          |       | 1582.74         |            |
|  |          |  |      |          |       | <b>33237.58</b> | <b>kg</b>  |
|  |          |  |      |          |       | <b>73275.57</b> | <b>lbs</b> |

| <b>ZAPATAS</b> |    |     |  |     |       |       |          |
|----------------|----|-----|--|-----|-------|-------|----------|
| 207            | 14 | LBS | <b>Acero de refuerzo principal</b>                                   |     |       |       |          |
|                |    |     | Hierro en varillas corrugado de grado 60 de diámetro superior al N°4 |     |       |       |          |
|                |    |     | <b>Zapatas de la 4 a la 8</b>  |     |       |       |          |
|                |    |     | Viga de atado  |     |       |       |          |
|                |    |     | Armadura inferior  | 260 | 5.15  | 3.973 | 5319.85  |
|                |    |     | Laterales  | 80  | 7.83  | 3.973 | 2488.69  |
|                |    |     | Cercos   | 680 | 6.06  | 2.235 | 9209.99  |
|                |    |     | Zapata   |     |       |       |          |
|                |    |     | Armadura longitudinal inferior                                       | 170 | 7.76  | 2.235 | 2948.41  |
|                |    |     | Armadura longitudinal superior                                       | 90  | 7.76  | 0.994 | 694.21   |
|                |    |     | Armadura transversal inferior  | 105 | 7.76  | 2.235 | 1821.08  |
|                |    |     | Armadura transversal superior  | 90  | 7.76  | 0.994 | 694.21   |
|                |    |     | <b>Zapatas estribo 1 y pila 3</b>                                    |     |       |       |          |
|                |    |     | Armadura longitudinal  |     |       |       |          |
|                |    |     | Armadura longitudinal inferior                                       | 136 | 10.44 | 6.404 | 9092.66  |
|                |    |     | Armadura longitudinal superior                                       | 136 | 11.52 | 6.404 | 10033.27 |
|                |    |     | Armadura transversal inferior  |     |       |       |          |
|                |    |     | Tramo horizontal   | 74  | 12.00 | 6.404 | 5686.75  |
|                |    |     |  | 74  | 4.80  | 6.404 | 2274.70  |
|                |    |     | Tramo inclinado  | 44  | 12.00 | 6.404 | 3381.31  |
|                |    |     | Armadura transversal superior  |     |       |       |          |
|                |    |     | Tramo horizontal   | 74  | 12.00 | 6.404 | 5686.75  |
|                |    |     |  | 74  | 4.84  | 6.404 | 2293.66  |
|                |    |     | Tramo inclinado  | 44  | 12.00 | 6.404 | 3381.31  |
|                |    |     | Laterales horizontales laterales                                     |     |       |       |          |
|                |    |     | Plano vertical   | 40  | 5.62  | 3.042 | 683.84   |
|                |    |     | Plano inclinado  | 40  | 5.02  | 3.042 | 610.83   |
|                |    |     | Laterales horizontales frontales                                     |     |       |       |          |
|                |    |     |  | 40  | 7.62  | 3.042 | 927.20   |
|                |    |     | Refuerzos  |     |       |       |          |
|                |    |     | Parrilla superior  |     |       |       |          |
|                |    |     | Transversales  | 22  | 6.81  | 3.042 | 455.75   |
|                |    |     | Longitudinales   | 38  | 3.86  | 3.042 | 446.20   |
|                |    |     | Parrilla intermedia  |     |       |       |          |
|                |    |     | Transversales  | 18  | 6.81  | 3.042 | 372.89   |
|                |    |     | Longitudinales   | 38  | 3.15  | 3.042 | 364.13   |
|                |    |     | Parrilla inferior  |     |       |       |          |
|                |    |     | Transversales  | 14  | 6.81  | 3.042 | 290.02   |
|                |    |     | Longitudinales   | 38  | 2.48  | 3.042 | 286.68   |



**Zapata estribo 2**

|                                |     |       |       |         |
|--------------------------------|-----|-------|-------|---------|
| Viga de atado                  |     |       |       |         |
| Armadura longitudinal inferior | 60  | 5.31  | 6.404 | 2040.31 |
| Armadura longitudinal superior | 28  | 5.31  | 6.404 | 952.15  |
| Cercos                         | 136 | 5.32  | 0.994 | 719.18  |
| Zapata                         |     |       |       |         |
| Armadura longitudinal inferior | 27  | 5.30  | 3.973 | 568.54  |
| Armadura longitudinal superior | 27  | 5.30  | 3.973 | 568.54  |
| Armadura transversal inferior  | 20  | 12.00 | 3.973 | 953.52  |
| Armadura transversal superior  | 20  | 12.00 | 3.973 | 953.52  |

Aumento del 5% por pérdidas, despuntes y tolerancias 3810.01

**80010.16 kg**  
**176390.40 lbs**

**ESTRIBOS**

**207 14 Acero de refuerzo principal**

**LBS** Hierro en varillas corrugado de grado 60 de diámetro superior al N°4

**Estribo 1**

|                                |     |       |       |         |
|--------------------------------|-----|-------|-------|---------|
| Pilas                          |     |       |       |         |
| Esperas zapata                 | 79  | 7.09  | 6.404 | 3586.94 |
| Armadura vertical frontal      | 52  | 12.00 | 6.404 | 3996.10 |
| Armadura vertical lateral      | 20  | 12.00 | 6.404 | 1536.96 |
| Cercos                         | 92  | 2.64  | 2.235 | 542.84  |
| Apoyo                          |     |       |       |         |
| Esperas                        | 12  | 2.90  | 3.042 | 105.86  |
| Armadura inferior longitudinal | 39  | 2.53  | 3.042 | 300.15  |
| Armadura superior longitudinal | 39  | 2.14  | 3.042 | 253.89  |
| Armadura transversal superior  | 30  | 12.00 | 3.042 | 1095.12 |
| Armadura espalda delantero     | 39  | 2.71  | 3.042 | 321.51  |
| Armadura espalda trasero       | 39  | 2.71  | 3.042 | 321.51  |
| Refuerzo ménsula               | 113 | 1.64  | 0.994 | 184.21  |
| Espera losa de transición      | 29  | 0.68  | 3.973 | 78.35   |
| Refuerzo en apoyos             |     |       |       |         |
| Parrillas                      | 96  | 0.80  | 0.994 | 76.34   |
| Grapas                         | 8   | 1.10  | 0.994 | 8.75    |
| Extremos                       |     |       |       |         |
| Aletas                         |     |       |       |         |
| Laterales                      | 8   | 6.26  | 3.042 | 152.34  |
| Cercos horizontales            | 10  | 3.66  | 2.235 | 81.80   |
| Cercos verticales              | 16  | 2.38  | 2.235 | 85.11   |
| Muro del apoyo                 |     |       |       |         |

|                     |    |      |       |        |
|---------------------|----|------|-------|--------|
| Laterales           | 8  | 4.35 | 3.042 | 105.86 |
| Cercos horizontales | 10 | 2.76 | 2.235 | 61.69  |
| Cercos verticales   | 6  | 2.84 | 2.235 | 38.08  |

**Estribo 2**

|                                |     |       |       |         |
|--------------------------------|-----|-------|-------|---------|
| Apoyo                          |     |       |       |         |
| Esperas                        | 78  | 2.90  | 3.042 | 688.10  |
| Armadura inferior longitudinal | 39  | 2.53  | 3.042 | 300.15  |
| Armadura superior longitudinal | 39  | 2.14  | 3.042 | 253.89  |
| Armadura transversal superior  | 30  | 12.00 | 3.042 | 1095.12 |
| Armadura espalda delantero     | 39  | 2.71  | 3.042 | 321.51  |
| Armadura espalda trasero       | 39  | 2.71  | 3.042 | 321.51  |
| Refuerzo ménsula               | 113 | 1.64  | 0.994 | 184.21  |
| Espera losa de transición      | 29  | 0.68  | 3.973 | 78.35   |
| Refuerzo en apoyos             |     |       |       |         |
| Parrillas                      | 96  | 0.80  | 0.994 | 76.34   |
| Grapas                         | 8   | 1.10  | 0.994 | 8.75    |

**Extremos**

|                     |    |      |       |        |
|---------------------|----|------|-------|--------|
| Aletas              |    |      |       |        |
| Laterales           | 8  | 6.26 | 3.042 | 152.34 |
| Cercos horizontales | 10 | 3.66 | 2.235 | 81.80  |
| Cercos verticales   | 16 | 2.38 | 2.235 | 85.11  |

**Muro del apoyo**

|                     |    |      |       |        |
|---------------------|----|------|-------|--------|
| Laterales           | 8  | 4.35 | 3.042 | 105.86 |
| Cercos horizontales | 10 | 2.76 | 2.235 | 61.69  |
| Cercos verticales   | 6  | 2.84 | 2.235 | 38.08  |

Aumento del 5% por pérdidas, despuntes y tolerancias 839.31

**17625.53 kg**  
**38857.24 lbs**

**ETAPA 211: SUPER ESTRUCTURA PARA PUENTE**

**PILAS INCLINADAS**

**211 08 Acero de refuerzo principal**

**LBS** Hierro en varillas corrugado de grado 60 de diámetro superior al N°4

**Pilas 1 y 2**

|           |    |       |       |         |
|-----------|----|-------|-------|---------|
| Laterales |    |       |       |         |
| Esperas   | 72 | 12.00 | 6.404 | 5533.06 |
| Tramo 2   | 56 | 8.00  | 6.404 | 2868.99 |
| Tramo 3   | 32 | 12.00 | 6.404 | 2459.14 |

**Longitudinales**





|  |          |     |       |       |                     |  |
|--|----------|-----|-------|-------|---------------------|--|
|  | Tramo 1  | 80  | 12.00 | 6.404 | 6147.84             |  |
|  | Tramo 2  | 64  | 8.00  | 6.404 | 3278.85             |  |
|  | Tramo 3  | 64  | 12.00 | 6.404 | 4918.27             |  |
|  | Refuerzo | 88  | 6.14  | 6.404 | 3460.21             |  |
| Armadura cortante                                      |          |     |       |       |                     |  |
| Verticales   |          |     |       |       |                     |  |
|  | Tramo 1  | 504 | 1.10  | 2.235 | 1239.08             |  |
|  | Tramo 2  | 820 | 1.10  | 2.235 | 2015.97             |  |
|  | Tramo 3  | 704 | 1.10  | 2.235 | 1730.78             |  |
| Horizontales   |          |     |       |       |                     |  |
|  | Tramo 1  | 168 | 5.58  | 2.235 | 2095.18             |  |
|  | Tramo 2  | 328 | 4.21  | 2.235 | 3086.27             |  |
|  | Tramo 3  | 128 | 3.05  | 2.235 | 872.54              |  |
| Aumento del 5% por pérdidas,<br>despunte y tolerancias |          |     |       |       | 1985.31             |  |
|  |          |     |       |       | <b>41691.49 kg</b>  |  |
|  |          |     |       |       | <b>91913.06 lbs</b> |  |

16515.25 lbs

| PILAS  |                |                                      |       |       |                   |  |
|--|----------------|--------------------------------------|-------|-------|-------------------|--|
| 211  | 08             | Acero de refuerzo principal en pilas |       |       |                   |  |
| LBS Hierro en varillas corrugado de grado 60 de diámetro superior al N°4 |                |                                      |       |       |                   |  |
| Pila 3   |                |                                      |       |       |                   |  |
|  | Esperas        | 46                                   | 6.09  | 3.973 | 1113.00           |  |
|  | Verticales     | 46                                   | 12.00 | 3.973 | 2193.10           |  |
|  | Cercos         | 75                                   | 3.42  | 2.235 | 573.28            |  |
|  |                | 50                                   | 7.58  | 2.235 | 847.07            |  |
|  | Parrillas      | 40                                   | 0.91  | 0.994 | 36.18             |  |
|  |                | 16                                   | 2.84  | 0.994 | 45.17             |  |
|  | Refuerzo apoyo | 8                                    | 1.10  | 0.994 | 8.75              |  |
| Pilas de la 4 a la 8   |                |                                      |       |       |                   |  |
|  | Esperas        | 46                                   | 3.70  | 3.973 | 676.20            |  |
|  | Verticales     | 46                                   | 4.76  | 3.973 | 869.93            |  |
|  | Cercos         | 36                                   | 3.42  | 2.235 | 275.17            |  |
|  |                | 24                                   | 7.58  | 2.235 | 406.59            |  |
|  | Parrillas      | 40                                   | 0.91  | 0.994 | 36.18             |  |
|  |                | 16                                   | 2.84  | 0.994 | 45.17             |  |
|  | Refuerzo apoyo | 8                                    | 1.10  | 0.994 | 8.75              |  |
| Aumento del 5% por pérdidas,<br>despunte y tolerancias                   |                |                                      |       |       | 356.73            |  |
|  |                |                                      |       |       | <b>7491.27 kg</b> |  |

| TABLERO  |   |  |       |       |                      |  |
|--|---|--|-------|-------|----------------------|--|
| 211  | 08  | Acero de refuerzo principal en tablero |       |       |                      |  |
| LBS Hierro en varillas corrugado de grado 60 de diámetro superior al N°4 |   |  |       |       |                      |  |
| Armadura cortante  |   |  |       |       |                      |  |
|  | Tipo 1 (desde P.K. 0+0 hasta P.K. 0+90)   | 301                                    | 8.71  | 2.235 | 5859.52              |  |
|  | Tipo 1 (desde P.K. 0+90 hasta P.K. 0+175) | 284                                    | 8.51  | 2.235 | 5401.64              |  |
|  | Tipo 4                                    | 1168                                   | 2.56  | 2.235 | 6682.83              |  |
|  | Tipo 6                                    | 584                                    | 11.30 | 2.235 | 14749.21             |  |
| Cercos   |   |  |       |       |                      |  |
|  | Tipo 8 (desde P.K. 0+0 hasta P.K. 0+90)   | 1806                                   | 3.50  | 2.235 | 14127.44             |  |
|  | Tipo 8 (desde P.K. 0+90 hasta P.K. 0+175) | 1988                                   | 2.90  | 2.235 | 12885.22             |  |
| Armadura longitudinal  |   |  |       |       |                      |  |
|  | Tipo 2                                    | 30                                     | 11.75 | 3.973 | 1400.48              |  |
|  |   | 434                                    | 12.00 | 3.973 | 20691.38             |  |
|  |   | 28                                     | 9.00  | 3.973 | 1001.20              |  |
|  | Tipo 7                                    | 57                                     | 11.75 | 3.973 | 2660.92              |  |
|  |   | 57                                     | 12.00 | 3.973 | 2717.53              |  |
|  |   | 57                                     | 9.00  | 3.973 | 2038.15              |  |
|  | Tipo 3                                    | 6                                      | 11.75 | 2.235 | 157.57               |  |
|  |   | 122                                    | 12.00 | 2.235 | 3272.04              |  |
|  |   | 10                                     | 9.00  | 2.235 | 201.15               |  |
|  | Tipo 5                                    | 14                                     | 11.75 | 2.235 | 367.66               |  |
|  |   | 14                                     | 12.00 | 2.235 | 375.48               |  |
|  |   | 14                                     | 9.00  | 2.235 | 281.61               |  |
| Refuerzo   |   |  |       |       |                      |  |
|  | Tipo 2                                    | 87                                     | 12.00 | 3.973 | 4147.81              |  |
|  |   | 27                                     | 12.00 | 3.973 | 1287.25              |  |
|  |   | 145                                    | 12.00 | 3.973 | 6913.02              |  |
|  |   | 29                                     | 12.00 | 3.973 | 1382.60              |  |
|  | Tipo 7                                    | 48                                     | 12.00 | 3.973 | 2288.45              |  |
|  | Tipo 3                                    | 20                                     | 12.00 | 2.235 | 536.40               |  |
|  | Tipo 5                                    | 4                                      | 11.75 | 2.235 | 105.05               |  |
|  |   | 40                                     | 12.00 | 2.235 | 1072.80              |  |
|  |   | 4                                      | 9.00  | 2.235 | 80.46                |  |
| Aumento del 5% por pérdidas,<br>despunte y tolerancias                   |   |  |       |       | 5634.24              |  |
|  |   |  |       |       | <b>118319.11 kg</b>  |  |
|  |   |  |       |       | <b>260846.31 lbs</b> |  |



| PAVIMENTO |     |  |      |       |                     |
|-----------|-----|--|------|-------|---------------------|
| 211       | 08  | <b>Acero de refuerzo principal en pavimento</b>                      |      |       |                     |
|           | LBS | Hierro en varillas corrugado de grado 60 de diámetro superior al N°4 |      |       |                     |
|           |     | Barras longitudinales  | 714  | 12.00 | 2.235 19149.48      |
|           |     |  | 51   | 6.92  | 2.235 788.78        |
|           |     | Barras transversales   | 1752 | 5.00  | 2.235 19578.60      |
|           |     | Aumento del 5% por pérdidas, despuntes y tolerancias                 |      |       | 1975.84             |
|           |     |  |      |       | <b>41492.70 kg</b>  |
|           |     |  |      |       | <b>91474.81 lbs</b> |

| LOSA DE TRANSICIÓN |     |  |     |       |                    |
|--------------------|-----|--|-----|-------|--------------------|
| 211                | 08  | <b>Acero de refuerzo principal en losas de transición</b>            |     |       |                    |
|                    | LBS | Hierro en varillas corrugado de grado 60 de diámetro superior al N°4 |     |       |                    |
|                    |     | Armadura longitudinal inferior                                       | 114 | 5.26  | 3.042 1824.10      |
|                    |     | Armadura longitudinal superior                                       | 114 | 5.23  | 0.994 592.64       |
|                    |     | Armadura transversal   | 100 | 11.56 | 0.994 1149.06      |
|                    |     | Aumento del 5% por pérdidas, despuntes y tolerancias                 |     |       | 178.29             |
|                    |     |  |     |       | <b>3744.09 kg</b>  |
|                    |     |  |     |       | <b>8254.22 lbs</b> |



### 3. CUADRO DE PRECIOS N°1

| ETAPA                          | SUBETAPA       | RESUMEN   | PRECIO            |
|--------------------------------|----------------|---|-------------------|
| <b>ETAPA 205: PRELIMINARES</b> |                |   |                   |
| <b>205</b>                     | <b>01</b>      | <b>Construcciones temporales (campamento)</b>   |                   |
|                                | m <sup>2</sup> | Champa de madera blanca, incluso embaldosado y techo de lámina de zinc, para oficina galerón cerrado.<br>SESENTA Y OCHO MIL NOVECIENTOS SETENTA Y NUEVE CÓRDOBAS                                      | <b>68979.00</b>   |
|                                | m <sup>2</sup> | Champa de madera de pino, incluso embaldosado y techo de lámina de zinc para bodega galerón cerrado y tambo.<br>DOSCIENTOS CUATRO MIL SEISCIENTOS CINCUENTA Y CUATRO CÓRDOBAS CON VEINTIOCHO CENTAVOS | <b>204654.28</b>  |
| <b>205</b>                     | <b>04</b>      | <b>Construcción de obras preliminares</b>   |                   |
|                                | m <sup>3</sup> | Concreto de 3000 PSI con mezcladora<br>CIENTO CINCUENTA Y CUATRO MIL NOVECIENTOS CINCUENTA CÓRDOBAS CON OCHENTA Y SEIS CENTAVOS   | <b>154950.86</b>  |
|                                | m              | Alcantarilla de tubería perfilada de PVC de diámetro 78".<br>SEISCIENTOS SESENTA Y CINCO MIL SEISCIENTOS TREINTA Y CINCO CÓRDOBAS CON SIETE CENTAVOS  | <b>665635.07</b>  |
|                                | m <sup>2</sup> | Formaleta para muros.<br>NOVENTA Y SEIS MIL CIENTO SESENTA Y UN CÓRDOBAS CON TRECE CENTAVOS   | <b>96161.13</b>   |
|                                | LBS            | Hierro en varillas corrugado de grado 60 de diámetro superior al N°4<br>DOSCIENTOS SESENTA Y CINCO MIL SEISCIENTOS TREINTA Y TRES CÓRDOBAS CON VEINTISIETE CENTAVOS                                   | <b>265633.27</b>  |
|                                | m <sup>3</sup> | Concreto de 4500 PSI con mezcladora<br>TRES MILLONES CUATROCIENTOS OCHENTA Y OCHO MIL SETECIENTOS OCHENTA Y SEIS CÓRDOBAS CON CATORCE CENTAVOS  | <b>3488786.14</b> |
| <b>205</b>                     | <b>05</b>      | <b>Rótulos</b>  |                   |
|                                | C/U            | Rótulo de 1.22 x 2.44 m de estructura metálica y zinc liso, con bases de concreto reforzado.<br>VEINTISIETE MIL CIENTO NOVENTA Y CINCO CÓRDOBAS CON OCHENTA Y SEIS CENTAVOS                           | <b>27195.86</b>   |

|  |                |  |                   |
|--|----------------|--|-------------------|
| <b>205</b>                                   | <b>06</b>      | <b>Remoción de estructuras de concreto</b>   |                   |
|  | m <sup>3</sup> | Demolición con retroexcavadora y martillo hidráulico a cielo abierto de estructura de concreto<br>TRESCIENTOS NOVENTA MIL SETECIENTOS DOCE CÓRDOBAS CON SETENTA Y OCHO CENTAVOS  | <b>390712.78</b>  |
| <b>ETAPA 207: SUB-ESTRUCTURA PARA PUENTE</b> |                |  |                   |
| <b>207</b>                                   | <b>01</b>      | <b>Limpieza inicial</b>  |                   |
|  | C/U            | Eliminar con moto sierra árbol existente de diámetro de 8", considerando una densidad de 0,3 árboles/m <sup>2</sup><br>SESENTA Y SEIS MIL CUARENTA Y SEIS CÓRDOBAS CON NOVENTA Y SIETE CENTAVOS  | <b>66046.97</b>   |
|  | C/U            | Eliminar con machete árboles existentes de diámetro menos de 4", considerando una densidad de 0,1 árboles/m <sup>2</sup><br>DIECISEISMIL SETECIENTOS CUARENTA Y CUATRO CON OCHENTA Y TRES CENTAVOS   | <b>16744.83</b>   |
|  | m <sup>2</sup> | Descapote con motoniveladora en terreno limo-arcilloso<br>TREINTA Y OCHO MIL NOVECIENTOS DOCE CÓRDOBAS CON SESENTA Y CUATRO CENTAVOS   | <b>38912.64</b>   |
| <b>207</b>                                   | <b>03</b>      | <b>Excavación principal</b>  |                   |
|  | m <sup>3</sup> | Excavación con retroexcavadora para estructura de fundaciones de puente en terreno de material mixto de arcillas, limos y bolones.<br>TRES MILLONES OCHOCIENTOS NOVENTA Y TRES MIL CUATROCIENTOS TREINTA Y UN CÓRDOBAS CON VEINTICUATRO CENTAVOS | <b>3893431.24</b> |
|  | m <sup>3</sup> | Excavación con retroexcavadora y martillo hidráulico a cielo abierto en roca.<br>QUINIENTOS SESENTA Y TRES MIL CIENTO QUINCE CÓRDOBAS CON SIETE CENTAVOS   | <b>563115.07</b>  |
| <b>207</b>                                   | <b>18</b>      | <b>Acarreos</b>  |                   |
|  | m <sup>3</sup> | Botar con camión volquete tierra sobrante de excavación a 7.5 km incluido carga con equipo<br>UN MILLÓN NOVECIENTOS VEINTISEIS MIL CIENTO ONCE CÓRDOBAS CON NOVENTA Y UN CENTAVOS  | <b>1926111.91</b> |
| <b>PILOTES</b>                               |                |  |                   |
| <b>207</b>                                   | <b>07</b>      | <b>Perforación</b>   |                   |
|  | m              | Perforación para pilote con máquina rotativa en terreno de formación consolidada<br>QUINIENTOS TRES MIL CIENTO VEINTISEIS CÓRDOBAS CON SESENTA Y OCHO CENTAVOS   | <b>530126.68</b>  |



|                 |    |  |  |            |
|-----------------|----|--|--|------------|
| 207             | 14 | <b>Acero de refuerzo principal</b>                               |  |            |
|                 |    | LBS  | Hierro en varillas corrugado de grado 60 de diámetro superior al N°4<br>DOS MILLONES CIENTO TREINTA Y DOS MIL TRESCIENTOS SETENTA Y SIETE CÓRDOBAS CON SETENTA Y UN CENTAVOS | 2132377.71 |
| 207             | 16 | <b>Concreto estructural</b>                                      |  |            |
|                 |    | m³   | Concreto de 4500 PSI con mezcladora<br>UN MILLÓN SESENTA Y DOS MIL SETECIENTOS NOVENTA Y NUEVE CÓRDOBAS CON CINCUENTA Y CINCO CENTAVOS                                       | 1062799.55 |
| <b>ZAPATAS</b>  |    |  |  |            |
| 207             | 02 | <b>Concreto de limpieza en fondo de cimentación (nivelación)</b> |  |            |
|                 |    | m³   | Concreto de 3000 PSI con mezcladora<br>CIENTO DOS MIL SEISCIENTOS NOVENTA Y CINCO CÓRDOBAS CON TREINTA CENTAVOS  | 102695.30  |
| 207             | 15 | <b>Formaletas</b>  |  |            |
|                 |    | m²   | Formaleta para fundaciones<br>CIENTO OCHENTA Y CONCO MIL SEISCIENTOS SESENTA Y SEIS CÓRDOBAS CON SETENTA Y OCHO CENTAVOS   | 185666.78  |
| 207             | 14 | <b>Acero de refuerzo principal</b>                               |  |            |
|                 |    | LBS  | Hierro en varillas corrugado de grado 60 de diámetro superior al N°4<br>CINCO MILLONES CIENTO TREINTA Y TRES MIL CIENTO UN CÓRDOBAS CON SETENTA Y CINCO CENTAVOS             | 5133101.75 |
| 207             | 16 | <b>Concreto estructural</b>                                      |  |            |
|                 |    | m³   | Concreto de 4500 PSI con mezcladora<br>DOS MILLONES SETECIENTOS NOVENTA Y CUATRO MIL CUATROCIENTOS SESENTA Y UN CÓRDOBAS CON NOVENTA Y UN CENTAVOS                           | 2794461.91 |
| <b>ESTRIBOS</b> |    |  |  |            |
| 207             | 15 | <b>Formaletas</b>  |  |            |
|                 |    | m²   | Formaleta para fundaciones<br>CIENTO SIETE MIL CINCUENTA Y SIETE CÓRDOBAS CON NOVENTA Y CONCO CENTAVOS   | 107057.95  |
| 207             | 14 | <b>Acero de refuerzo principal</b>                               |  |            |
|                 |    | LBS  | Hierro en varillas corrugado de grado 60 de diámetro superior al N°4<br>UN MILLÓN CIENTO TREINTA MIL SETECIENTOS SETENTA Y SEIS CÓRDOBAS CON SETENTA Y SIETE CENTAVOS        | 1130776.77 |

|  |    |  |  |            |
|--|----|--|--|------------|
| 207  | 16 | <b>Concreto estructural</b>  |  |            |
|  |    | m³   | Concreto de 4500 PSI con mezcladora<br>TRESCIENTOS VEINTI CUATRO MIL SEISCIENTOS CINCUENTA Y SEIS CÓRDOBAS CON OCHENTA Y NUEVE CENTAVOS  | 324656.89  |
| 211  | 05 | <b>Aparato de apoyo</b>  |  |            |
|  |    | C/U  | Apoyo móvil para puente<br>CUARENTA Y UN MIL QUINIENTOS NOVENTA Y TRES CÓRDOBAS CON NOVENTA Y TRES CENTAVOS  | 41593.93   |
| <b>ZAPATAS Y ESTRIBOS</b>                      |    |  |  |            |
| 207  | 19 | <b>Explotación de banco</b>  |  |            |
|  |    | m³   | Acarreo con camión volquete de material selecto a 10 km carga con equipo, incluido derecho de explotación<br><br>TRES MILLONES NOVECIENTOS SESENTA Y NUEVE MIL DOSCIENTOS OCHENTA Y SEIS CÓRDOBAS CON SETENTA CENTAVOS       | 3969286.70 |
|  |    | m³   | Relleno y compactación con vibrocompactadora manual<br>SEIS MILLONES TREINTA Y DOSMIL OCHOCIENTOS SESENTA Y SEIS CÓRDOBAS CON TRES CENTAVOS  | 6032866.03 |
| <b>ETAPA 211: SUPER ESTRUCTURA PARA PUENTE</b> |    |  |  |            |
| <b>CIMBRA</b>                                  |    |  |  |            |
| 211  | 05 | <b>Cimbra cuajada para encofrado de pilas inclinadas y tablero</b> |  |            |
|  |    | m³   | Cimbra con puntales, para sujeción del encofrado de pilas inclinadas y tablero, incluido transporte, montaje y desmontaje<br>NUEVE MILLONES NOVENTA Y OCHO MIL SEISCIENTOS SETENTA Y SEIS CÓRDOBAS CON SESENTA Y UN CÉNTAVOS | 9098676.61 |
| <b>PILAS INCLINADAS</b>                        |    |  |  |            |
| 211  | 09 | <b>Formaletas</b>  |  |            |
|  |    | m²   | Formaletas de madera blanca para puente vehicular<br>UN MILLÓN SESENTA Y OCHOMIL TREINTA Y OCHO CÓRDOBAS CON OCHENTA CENTAVOS  | 1068038.80 |
| 211  | 08 | <b>Acero de refuerzo principal</b>                                 |  |            |
|  |    | LBS  | Hierro en varillas corrugado de grado 60 de diámetro superior al N°4<br>DOS MILLONES SEISCIENTOS SETENTA Y CUATRO MIL SETECIENTOS CUARENTA Y TRES CÓRDOBAS CON CINCUENTA Y OCHO CENTAVOS                                     | 2674743.58 |
| 211  | 16 | <b>Concreto estructural</b>  |  |            |



|                         |    |                |   |            |
|-------------------------|----|----------------|---|------------|
|                         |    | m <sup>3</sup> | Concreto de 4500 PSI con mezcladora<br>UN MILLÓN CINCUENTA Y CUATRO MIL SETECIENTOS OCHENTA Y NUEVE CÓRDOBAS CON VEINTIDOS CENTAVOS   | 1054789.22 |
| <b>PILAS VERTICALES</b> |    |                |   |            |
| 211                     | 09 |                | <b>Formaletas</b>   |            |
|                         |    | m <sup>2</sup> | Formaletas para columnas (área de contacto)<br>CIENTO CINCUENTA Y SIETE MIL CIENTO NOVENTA Y NUEVE CÓRDOBAS CON NOVENTA Y CINCO CENTAVOS  | 157199.95  |
| 211                     | 08 |                | <b>Acero de refuerzo principal en pilas</b>   |            |
|                         |    | LBS            | Hierro en varillas corrugado de grado 60 de diámetro superior al N <sup>4</sup><br>CUATROCIENTOS OCHENTA MIL SEISCIENTOS SEIS CÓRDOBAS CON NOVENTA Y NUEVE CENTAVOS               | 480606.99  |
| 211                     | 16 |                | <b>Concreto estructural</b>   |            |
|                         |    | m <sup>3</sup> | Concreto de 4500 PSI con mezcladora<br>QUINIENTOS NOVENTA Y CUATRO MIL SEISCIENTOS VEINTI CUATRO CÓRDOBAS CON DIECINUEVE CENTAVOS   | 594624.19  |
| 211                     | 05 |                | <b>Aparato de apoyo</b>   |            |
|                         |    | C/U            | Apoyo móvil para puente<br>CIENTO VEINTICUATROMIL SETECIENTOS OCHENTA Y UN CÓRDOBAS CON OCHENTA CENTAVOS  | 124781.80  |
| <b>TABLERO</b>          |    |                |   |            |
| 211                     | 09 |                | <b>Formaletas en tablero</b>  |            |
|                         |    | m <sup>2</sup> | Formaletas de madera blanca para puente vehicular<br>SIETE MILLONES CIENTO CUARENTA Y CUATRO MIL SEISCIENTOS TREINTA Y SEIS CÓRDOBAS CON DOCE CENTAVOS                            | 7144636.12 |
| 211                     | 08 |                | <b>Acero refuerzo principal en tablero</b>  |            |
|                         |    | LBS            | Hierro en varillas corrugado de grado 60 de diámetro superior al N <sup>4</sup><br>SIETE MILLONES QUINIENTOS NOVENTA MIL OCHOCIENTOS TREINTA Y SEIS CÓRDOBAS CON TREINTA CENTAVOS | 7590836.30 |
| 211                     | 16 |                | <b>Concreto estructural en tablero</b>  |            |
|                         |    | m <sup>3</sup> | Concreto de 4500 PSI con mezcladora<br>SIETE MILLONES SEISCIENTOS VEINTIUN MIL SETECIENTOS TREINTA Y SEIS CÓRDOBAS CO CINCUENTA Y SEIS CENTAVOS                                   | 7621736.56 |
| 211                     | 05 |                | <b>Otro tipo de obras</b>   |            |

|                           |    |                |   |            |
|---------------------------|----|----------------|---|------------|
|                           |    | m <sup>2</sup> | Tela asfáltica para impermeabilización de tablero<br>TRECE MIL SEISCIENTOS CUARENTA Y UN CÓRDOBAS CON SETENTA Y TRES CENTAVOS   | 13641.73   |
| 211                       | 05 |                | <b>Otro tipo de obras</b>   |            |
|                           |    | C/U            | Sumideros<br>VEINTE MIL CUATROCIENTOS TREINTA Y OCHO CÓRDOBAS CON SETENTA Y CUATRO CENTAVOS   | 20438.74   |
| 211                       | 05 |                | <b>Otro tipo de obras</b>   |            |
|                           |    | m              | Baranda de tubo redondo de Ho. Go. Diámetro=8" y altura=0.90m, incluida pintura anticorrosiva<br>UN MILLÓN QUINIENTOS TREINTA Y OCHO MIL OCHOCIENTOS SESENTA Y NUEVE CÓRDOBAS CON CUARENTA CENTAVOS | 1538869.40 |
| <b>PAVIMENTO</b>          |    |                |   |            |
| 211                       | 09 |                | <b>Formaleta</b>  |            |
|                           |    | m <sup>2</sup> | Formaleta symons con todos los accesorios de fijación<br>CUARENTA Y CINCO MIL CIENTO TREINT Y SIETE CÓRDOBAS CON SESENTA CENTAVOS   | 45137.60   |
| 211                       | 08 |                | <b>Acero de refuerzo principal</b>  |            |
|                           |    | LBS            | Hierro en varillas corrugado de grado 60 de diámetro superior al N <sup>4</sup><br>DOS MILLONES SEISCIENTOS SESENTA Y UN MIL NOVECIENTOS NOVENTA CÓRDOBAS CON QUINCE CENTAVOS                       | 2661990.15 |
| 211                       | 16 |                | <b>Concreto estructural</b>   |            |
|                           |    | m <sup>3</sup> | Concreto de 4500 PSI con mezcladora<br>UN MILLÓN DOSCIENTOS CINCUENTA Y UN MIL SEISCIENTOS CATORCE CÓRDOBAS CON CINCUENTA Y CUATRO CENTAVOS   | 1251614.54 |
| <b>LOSA DE TRANSICIÓN</b> |    |                |   |            |
| 211                       | 02 |                | <b>Concreto de limpieza en fondo de losas de transición (nivelación)</b>  |            |
|                           |    | m <sup>3</sup> | Concreto de 3000 PSI con mezcladora<br>CUARENTAICINCO MIL QUINIENTOS NOVENTA Y SIETE CÓRDOBAS CON CINCUENTA Y DOS CENTAVOS  | 45597.52   |
| 211                       | 09 |                | <b>Formaletas en losas de transición</b>  |            |
|                           |    | m <sup>2</sup> | Formaleta symons con todos los accesorios de fijación<br>QUINCÉMIL NOVECIENTOS SIETE CÓRDOBAS CON NOVENTA Y CINCO CENTAVOS  | 15907.95   |
| 211                       | 08 |                | <b>Acero de refuerzo principal en losa de transición</b>  |            |
|                           |    | LBS            | Hierro en varillas corrugado de grado 60 de diámetro superior al N <sup>4</sup>   |            |



DOSCIENTOS CUARENTA MIL DOSCIENTOS CUATRO CÓRDOBAS CON CUARENTA Y UN CENTAVOS 240204.41

UN MILLÓN DIEZ MIL SEISCIENTOS TREINTA Y DOS CÓRDOBAS CON OCHENTA CENTAVOS 1010632.80

|     |    |  |           |
|-----|----|--|-----------|
| 211 | 16 | <b>Concreto estructural en losa de transición</b>                              |           |
|     |    | m³ Concreto de 4500 PSI con mezcladora   |           |
|     |    | CIENTO SESENTA Y UN MIL SEISCIENTOS TREINTA Y SIETE CÓRDOBAS CON OCHO CENTAVOS | 161637.08 |

**ETAPA 213: SEÑALIZACIÓN HORIZONTAL Y VERTICAL**

|     |    |   |          |
|-----|----|---|----------|
| 213 | 01 | <b>Señales de información</b>   |          |
|     |    | C/U Señal informativa estándar con paral de acero con base de concreto de 3000 PSI, incluida excavación |          |
|     |    | CATORCEMIL CIENTO VEINTE CÓRDOBAS CON NUEVE CENTAVOS  | 14120.09 |

|     |    |  |        |
|-----|----|--|--------|
| 213 | 02 | <b>Señales de reglamentación</b>                         |        |
|     |    | m Señalización horizontal pintada con equipo             |        |
|     |    | CUATROCIENTOS TREINTA Y OCHO CÓRDOBAS CON TRECE CENTAVOS | 438.13 |

|     |    |   |         |
|-----|----|---|---------|
| 213 | 03 | <b>Señales de prevención</b>  |         |
|     |    | C/U Señal de tránsito de prevención estándar                            |         |
|     |    | CUATRO MIL SEISCIENTOS NOVENTA Y OCHO CÓRDOBAS CON VEINTICINCO CENTAVOS | 4698.25 |

**ETAPA 214: MEDIDAS DE MITIGACIÓN Y PREVENCIÓN DE ACCIDENTES**

|     |    |  |           |
|-----|----|--|-----------|
| 214 | 01 | <b>Anejo Nº14: Estudio de Seguridad y Salud</b>  |           |
|     |    | GLB Anejo Nº14: Estudio de Seguridad y Salud   |           |
|     |    | TRESCIENTOS SETENTA Y CUATRO MIL NOVECIENTOS SETENTA Y UN CÓRDOBAS CON VEINTE CENTAVOS | 374971.20 |

**ETAPA 217: PRUEBA DE CARGA**

|     |    |  |          |
|-----|----|--|----------|
| 217 | 01 | <b>Anejo Nº9: Cálculos estructurales</b>   |          |
|     |    | Prueba de carga  |          |
|     |    | SETENTA Y DOS MIL CUATROCIENTOS NOVENTA Y OCHO CÓRDOBAS CON SESENTA Y CINCO CENTAVOS | 72498.65 |

**ETAPA 218: CONTROL DE CALIDAD**

|     |    |                                       |  |
|-----|----|---------------------------------------|--|
| 217 | 01 | <b>Anejo Nº15: Control de calidad</b> |  |
|     |    | Valoración de los ensayos             |  |



#### 4. PRESUPUESTO

| ETAPA | SUBETAPA | CÓDIGO | DESCRIPCIÓN DE LA ETAPA Y/O SUBETAPA   | UD  | CANTIDAD | COSTE SEGÚN GUÍA | COSTE UNITARIO | COSTE TOTAL |
|-------|----------|--------|--|-----|----------|------------------|----------------|-------------|
| 205   | 00       |        | Preliminares   |     |          |                  |                |             |
| 205   | 01       |        | Construcciones temporales (campamento)   |     |          |                  |                |             |
|       |          | 92204  | Champa de madera blanca, incluso embaldosado y techo de lámina de zinc, para oficina galerón cerrado.                              | m²  | 32.00    | 930.6351         | 2155.5938      | 68979.00    |
|       |          | 92205  | Champa de madera de pino, incluso embaldosado y techo de lámina de zinc para bodega galerón cerrado y tambo.                       | m²  | 90.00    | 981.7272         | 2273.9364      | 204654.28   |
| 205   | 01       |        | Construcción de obras preliminares (base cimbra)   |     |          |                  |                |             |
|       |          | 92005  | Concreto de 3000 PSI con mezcladora  | m³  | 38.40    | 1742.1088        | 4035.1786      | 154950.86   |
|       |          | 93675  | Alcantarilla de tubería perfilada de PVC de diámetro 78"   | m   | 36.00    | 7982.6338        | 18489.8631     | 665635.07   |
|       |          | 92371  | Formaleta para muros.  | m²  | 281.60   | 147.4278         | 341.4813       | 96161.13    |
|       |          | 94356  | Hierro en varillas corrugado de grado 60 de diámetro superior al N°4   | LBS | 9128.04  | 12.5637          | 29.1008        | 265633.27   |
|       |          | 94539  | Concreto de 4500 PSI con mezcladora  | m³  | 731.70   | 2058.5139        | 4768.0554      | 3488786.14  |
| 205   | 05       |        | Rótulo   |     |          |                  |                |             |
|       |          | 04277  | Rótulo de 1.22 x 2.44 m de estructura metálica y zinc liso, con bases de concreto reforzado  | C/U | 2.00     | 5870.6391        | 13597.9322     | 27195.86    |
| 205   | 06       |        | Remoción de estructuras de concreto  |     |          |                  |                |             |
|       |          | 93395  | Demolición con retroexcavadora y martillo hidráulico a cielo abierto de estructura de concreto                                     | m³  | 1541.55  | 109.4240         | 253.4545       | 390712.78   |
| 207   | 00       |        | Sub-estructura para puentes  |     |          |                  |                |             |
| 207   | 01       |        | Limpieza inicial   |     |          |                  |                |             |
|       |          | 95931  | Eliminar con moto sierra árbol existente de diámetro de 8", considerando una densidad de 0,3 árboles/m²                            | C/U | 82.00    | 347.7375         | 805.4508       | 66046.97    |
|       |          | 95463  | Eliminar con machete árboles existentes de diámetro menos de 4", considerando una densidad de 0,1 árboles/m²                       | C/U | 126.00   | 57.3750          | 132.8955       | 16744.83    |
|       |          | 95654  | Descapote con motoniveladora en terreno limo-arcilloso   | m²  | 4270.53  | 3.9339           | 9.1119         | 38912.64    |
| 207   | 03       |        | Excavación   |     |          |                  |                |             |
|       |          | 94654  | Excavación con retroexcavadora para estructura de fundaciones de puente en terreno de material mixto de arcillas, limos y bolones. | m³  | 10968.79 | 153.2450         | 354.9554       | 3893431.24  |
|       |          | 93395  | Excavación con retroexcavadora y martillo hidráulico a cielo abierto en roca.  | m³  | 2221.76  | 109.4240         | 253.4545       | 563115.07   |
| 207   | 18       |        | Acarreos   |     |          |                  |                |             |
|       |          | 95520  | Botar con camión volquete tierra sobrante de excavación a 7.5 km incluido carga con equipo   | m³  | 8111.27  | 102.5192         | 237.4612       | 1926111.91  |
|       |          |        | <b>PILOTES</b>   |     |          |                  |                |             |
| 207   | 05       |        | Perforación  |     |          |                  |                |             |

|     |    |       |   |     |           |           |            |            |
|-----|----|-------|---|-----|-----------|-----------|------------|------------|
|     |    | 92622 | Perforación para pilote con máquina rotativa en terreno de formación consolidada  | m   | 354.48    | 645.6549  | 1495.5052  | 530126.68  |
| 207 | 14 |       | Acero de refuerzo principal   |     |           |           |            |            |
|     |    | 94356 | Hierro en varillas corrugado de grado 60 de diámetro superior al N°4  | LBS | 73275.57  | 12.5637   | 29.1008    | 2132377.71 |
| 207 | 16 |       | Concreto estructural  |     |           |           |            |            |
|     |    | 94539 | Concreto de 4500 PSI con mezcladora   | m³  | 222.90    | 2058.5139 | 4768.0554  | 1062799.55 |
|     |    |       | <b>ZAPATAS</b>  |     |           |           |            |            |
| 207 | 02 |       | Concreto de limpieza en fondo de cimentación (nivelación)   |     |           |           |            |            |
|     |    | 92005 | Concreto de 3000 PSI con mezcladora.  | m³  | 25.45     | 1742.1088 | 4035.1786  | 102695.30  |
| 207 | 15 |       | Formaleta   |     |           |           |            |            |
|     |    | 92388 | Formaleta para fundaciones  | m²  | 425.97    | 188.1775  | 435.8682   | 185666.78  |
| 207 | 14 |       | Acero de refuerzo principal   |     |           |           |            |            |
|     |    | 94356 | Hierro en varillas corrugado de grado 60 de diámetro superior al N°4  | LBS | 176390.40 | 12.5637   | 29.1008    | 5133101.75 |
| 207 | 16 |       | Concreto estructural  |     |           |           |            |            |
|     |    | 94539 | Concreto de 4500 PSI con mezcladora   | m³  | 586.08    | 2058.5139 | 4768.0554  | 2794461.91 |
|     |    |       | <b>ESTRIBOS</b>   |     |           |           |            |            |
| 207 | 15 |       | Formaletas  |     |           |           |            |            |
|     |    | 92388 | Formaleta para fundaciones  | m²  | 245.62    | 188.1775  | 435.8682   | 107057.95  |
| 207 | 14 |       | Acero de refuerzo principal   |     |           |           |            |            |
|     |    | 94356 | Hierro en varillas corrugado de grado 60 de diámetro superior al N°4  | LBS | 38857.24  | 12.5637   | 29.1008    | 1130776.77 |
| 207 | 16 |       | Concreto estructural  |     |           |           |            |            |
|     |    | 94539 | Concreto de 4500 PSI con mezcladora   | m³  | 68.09     | 2058.5139 | 4768.0554  | 324656.89  |
| 211 | 05 |       | Aparato de apoyo  |     |           |           |            |            |
|     |    | 92549 | Apoyo móvil para puente   | C/U | 4         | 4489.3400 | 10398.4830 | 41593.93   |
|     |    |       | <b>ZAPATAS Y ESTRIBOS</b>   |     |           |           |            |            |
| 207 | 19 |       | Explotación de banco  |     |           |           |            |            |
|     |    | 92011 | Acarreo con camión volquete de material selecto a 10 km carga con equipo, incluido derecho de explotación                 | m³  | 15877.82  | 107.9280  | 249.9894   | 3969286.70 |
|     |    | 93278 | Relleno y compactación con vibrocompactadora manual   | m³  | 12569.94  | 207.2063  | 479.9439   | 6032866.03 |
| 211 | 00 |       | Super estructura para puentes   |     |           |           |            |            |
|     |    |       | <b>CIMBRA</b>   |     |           |           |            |            |
| 211 | 05 |       | Cimbra cuajada para encofrado de pilas inclinadas y tablero   |     |           |           |            |            |
|     |    |       | Cimbra con puntales, para sujeción del encofrado de pilas inclinadas y tablero, incluido transporte, montaje y desmontaje | m³  | 5804.04   | 676.8000  | 1567.6454  | 9098676.61 |
|     |    |       | <b>PILAS INCLINADAS</b>   |     |           |           |            |            |
| 211 | 09 |       | Formaletas  |     |           |           |            |            |
|     |    | 95068 | Formaletas de madera blanca para puente vehicular   | m²  | 319.54    | 1443.0265 | 3342.4260  | 1068038.80 |
| 211 | 08 |       | Acero de refuerzo principal   |     |           |           |            |            |
|     |    | 94356 | Hierro en varillas corrugado de grado 60 de diámetro superior al N°4  | LBS | 91913.06  | 12.5637   | 29.1008    | 2674743.58 |







## 5. RESUMEN DEL PRESUPUESTO

Burgos, Febrero de 2.012

AUTORES DEL PROYECTO

|  |                    |
|--|--------------------|
| 205 PRELIMINARES                                     | 5362708.39         |
| 207 SUB-ESTRUCTURA PARA PUENTES                      | 30051830.61        |
| 211 SUPER ESTRUCTURA PARA PUENTE                     | 44567739.56        |
| 213 SEÑALIZACIÓN HORIZONTAL Y VERTICAL               | 19256.47           |
| 214 MEDIDAS DE MITIGACIÓN Y PREVENCIÓN DE ACCIDENTES | 374971.20          |
| 217 PRUEBA DE CARGA                                  | 72498.65           |
| 218 CONTROL DE CALIDAD                               | 1010632.80         |
|  | <u>81459637.68</u> |
| 15% IVA  | 12218945.65        |

**TOTAL 93678583.33 Córdoba**

**4063811.80 Dólares**

**3091549.37 Euros**

D. Sergio Agustín Ratón Alomar

Dña. Miriam Sacristán Terradillos

Dña. Raquel Estrada Merino

D. Alfonso Cid González

Asciende el precio de ejecución del proyecto a la cantidad de:

- NOVENTA Y TRES MILLONES SEISCIENTOS SETANTA Y OCHO MIL QUINIENTOS OCHENTA Y TRES CÓRDOBAS CON TREINTA Y TRES CENTAVOS.
- CUATRO MILLONES SESENTA Y TRES MIL OCHOCIENTOS ONCE DÓLARES CON OCHENTA CENTAVOS.
- TRES MILLONES NOVENTA Y UN MIL QUINIENTOS CUARENTA Y NUEVE EUROS CON TREINTA Y SIETE CÉNTIMOS.