

TopoMathrix

Module de calcul topométrique

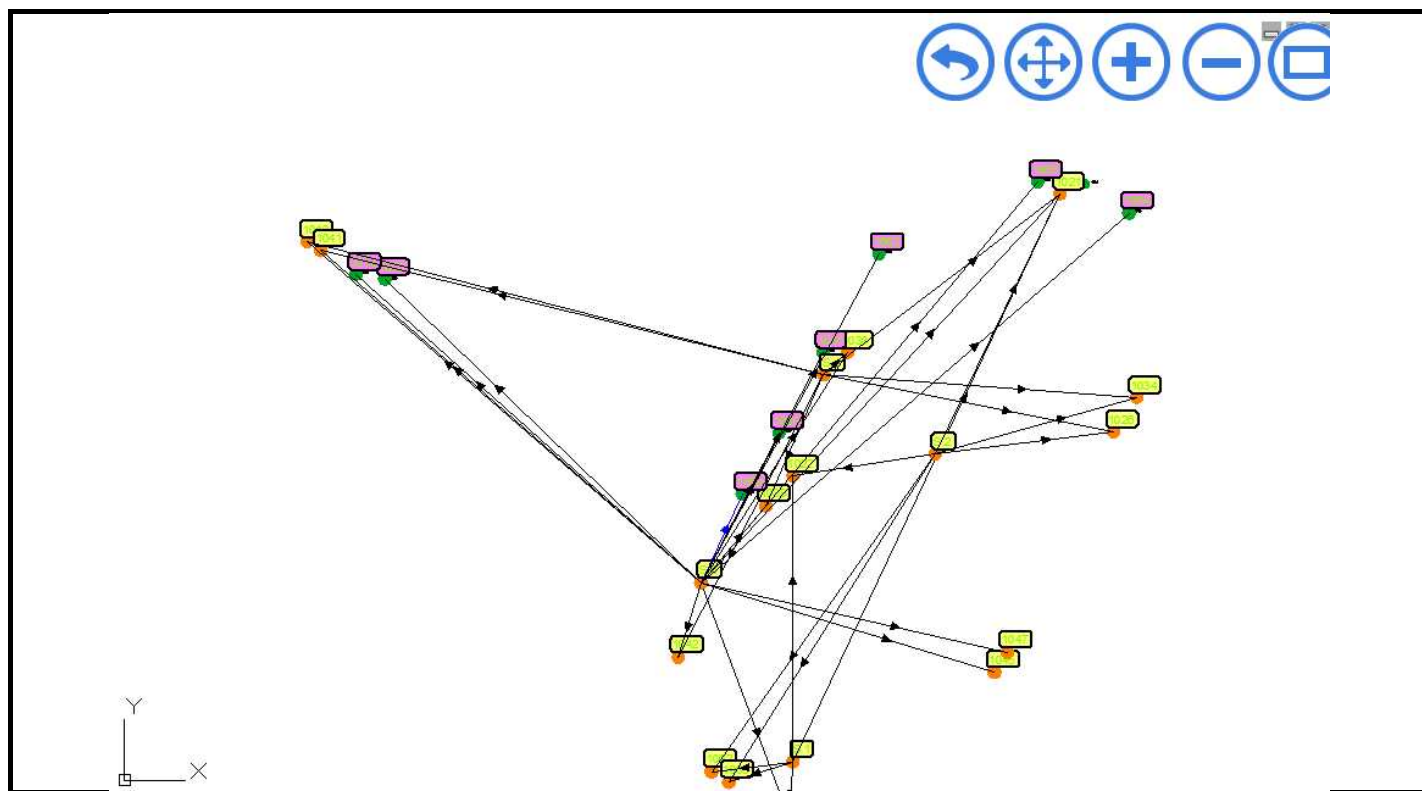
Nom du fichier traité : C:\DONNEES\hdvfv3_cal.mdb

Méthode : calcul en bloc par les moindres carrés

Date du calcul : 17/12/2013 14:05:56

Paramètres du calcul :

- Projection : Lambert Conique Conforme 46
- Altération linéaire : -8.2 cm/km
- Correction au niveau zéro de l'ellipsoïde : -0.9 cm/km
- Ecart-type sur les mesures d'angles : +/- 0.0010 gr
- Ecart-type sur les mesures de distances : +/- 0.005 m



Résultats des compensations sur les mises en station

| Station | V0 compensé (gr) | Emq V0 (gr) |
|---------|------------------|-------------|
| S.1 | 307.7524 | 0.0000 |
| S.2 | 372.3783 | 0.0000 |
| S.3 | 325.9338 | 0.0000 |
| S.4 | 145.4524 | 0.0000 |
| S.5 | 334.3181 | 0.0000 |

| Résultats des compensations sur les stations | | | | | | |
|--|-------------|-------------|--------|-----------|-----------|-----------|
| Station | X | Y | Z | Emq X (m) | Emq Y (m) | Emq Z (m) |
| S.1 | 1379513.180 | 5226092.933 | 6.879 | 0.000 | 0.000 | 0.000 |
| S.2 | 1379518.551 | 5226107.542 | 6.921 | 0.000 | 0.000 | 0.000 |
| S.3 | 1379509.273 | 5226100.582 | 14.472 | 0.000 | 0.000 | 0.000 |
| S.4 | 1379514.193 | 5226109.695 | 14.413 | 0.000 | 0.000 | 0.000 |
| S.5 | 1379509.288 | 5226100.586 | 14.439 | 0.000 | 0.000 | 0.000 |
| 1000 | 1379510.433 | 5226092.101 | 9.643 | 0.000 | 0.000 | 0.000 |
| 1001 | 1379509.717 | 5226092.570 | 9.638 | 0.000 | 0.000 | 0.000 |
| 1002 | 1379509.721 | 5226092.567 | 8.155 | 0.000 | 0.000 | 0.000 |
| 1003 | 1379510.434 | 5226092.097 | 8.158 | 0.000 | 0.000 | 0.000 |
| 1008 | 1379513.017 | 5226090.439 | 10.580 | 0.000 | 0.000 | 0.000 |
| 1021 | 1379524.665 | 5226117.071 | 13.977 | 0.000 | 0.000 | 0.000 |
| 1022 | 1379513.327 | 5226105.118 | 14.163 | 0.000 | 0.000 | 0.000 |
| 1026 | 1379526.041 | 5226109.055 | 9.036 | 0.000 | 0.000 | 0.000 |
| 1034 | 1379526.927 | 5226110.605 | 9.957 | 0.000 | 0.000 | 0.000 |
| 1038 | 1379515.580 | 5226110.371 | 15.306 | 0.000 | 0.000 | 0.000 |
| 1039 | 1379512.068 | 5226103.835 | 15.329 | 0.000 | 0.000 | 0.000 |
| 1040 | 1379492.586 | 5226115.183 | 12.777 | 0.000 | 0.000 | 0.000 |
| 1041 | 1379493.180 | 5226114.802 | 9.876 | 0.000 | 0.000 | 0.000 |
| 1042 | 1379508.303 | 5226097.391 | 17.678 | 0.000 | 0.000 | 0.000 |
| 1045 | 1379521.768 | 5226096.692 | 14.725 | 0.000 | 0.000 | 0.000 |
| 1047 | 1379522.321 | 5226097.537 | 14.725 | 0.000 | 0.000 | 0.000 |
| 1059 | 1379511.044 | 5226104.320 | 14.414 | - | - | - |
| 1060 | 1379512.608 | 5226106.914 | 14.421 | - | - | - |
| 1061 | 1379514.483 | 5226110.339 | 14.421 | - | - | - |
| 1062 | 1379516.868 | 5226114.533 | 14.423 | - | - | - |
| 1064 | 1379527.512 | 5226116.277 | 15.543 | - | - | - |
| 1065 | 1379523.626 | 5226117.597 | 16.035 | - | - | - |
| 1072 | 1379495.831 | 5226113.474 | 6.844 | - | - | - |
| 1073 | 1379494.605 | 5226113.668 | 6.873 | - | - | - |

Emq planimétrique moyenne : 0.000 m

Emq altimétrique moyenne : 0.000 m

| Ellipses d'erreur sur les stations | | | |
|------------------------------------|---------------|-------------------|-------------------|
| Station | Gisement (gr) | 1/2 grand axe (m) | 1/2 petit axe (m) |
| S.1 | 0.0000 | 0.000 | 0.000 |
| S.2 | 0.0000 | 0.000 | 0.000 |
| S.3 | 0.0000 | 0.000 | 0.000 |
| S.4 | 0.0000 | 0.000 | 0.000 |
| S.5 | 0.0000 | 0.000 | 0.000 |
| 1000 | 0.0000 | 0.000 | 0.000 |
| 1001 | 0.0000 | 0.000 | 0.000 |
| 1002 | 0.0000 | 0.000 | 0.000 |
| 1003 | 0.0000 | 0.000 | 0.000 |
| 1008 | 0.0000 | 0.000 | 0.000 |
| 1021 | 0.0000 | 0.000 | 0.000 |
| 1022 | 0.0000 | 0.000 | 0.000 |
| 1026 | 0.0000 | 0.000 | 0.000 |
| 1034 | 0.0000 | 0.000 | 0.000 |
| 1038 | 0.0000 | 0.000 | 0.000 |
| 1039 | 0.0000 | 0.000 | 0.000 |
| 1040 | 0.0000 | 0.000 | 0.000 |
| 1041 | 0.0000 | 0.000 | 0.000 |
| 1042 | 0.0000 | 0.000 | 0.000 |
| 1045 | 0.0000 | 0.000 | 0.000 |
| 1047 | 0.0000 | 0.000 | 0.000 |
| 1059 | - | - | - |
| 1060 | - | - | - |
| 1061 | - | - | - |
| 1062 | - | - | - |
| 1064 | - | - | - |
| 1065 | - | - | - |
| 1072 | - | - | - |
| 1073 | - | - | - |

| Résidus sur les observations en Angle Horizontal | | | | | |
|--|-----------|--------------|---------------|------------|-----------------|
| Station | Référence | AH obs. (gr) | AH comp. (gr) | Diff. (gr) | Equiv. dist (m) |
| S.1 | 1000 | 373.5230 | 373.5244 | 0.0015 | 0.000 |
| S.1 | 1001 | 385.6054 | 385.6052 | -0.0001 | 0.000 |
| S.1 | 1002 | 385.5421 | 385.5432 | 0.0011 | 0.000 |
| S.1 | 1003 | 373.4455 | 373.4471 | 0.0016 | 0.000 |
| S.1 | 1008 | 296.3984 | 296.3984 | 0.0000 | 0.000 |
| S.1 | 1021 | 120.5189 | 120.5188 | -0.0001 | 0.000 |
| S.1 | 1022 | 93.0169 | 93.0166 | -0.0003 | 0.000 |
| S.2 | 1000 | 258.4354 | 258.4354 | -0.0001 | 0.000 |
| S.2 | 1001 | 261.5564 | 261.5566 | 0.0001 | 0.000 |
| S.2 | 1002 | 261.5386 | 261.5387 | 0.0001 | 0.000 |
| S.2 | 1003 | 258.4272 | 258.4270 | -0.0002 | 0.000 |
| S.2 | 1022 | 299.9695 | 299.9687 | -0.0007 | 0.000 |
| S.2 | 1021 | 63.9347 | 63.9351 | 0.0004 | 0.000 |
| S.2 | 1026 | 114.9275 | 114.9282 | 0.0007 | 0.000 |
| S.2 | 1034 | 105.3028 | 105.3024 | -0.0003 | 0.000 |
| S.3 | 1021 | 121.8727 | 121.8753 | 0.0026 | 0.001 |
| S.3 | 1008 | 251.5532 | 251.5528 | -0.0004 | 0.000 |
| S.3 | 1038 | 110.5024 | 110.5018 | -0.0006 | 0.000 |
| S.3 | 1039 | 119.2640 | 119.2617 | -0.0023 | 0.000 |
| S.3 | 1040 | 19.8285 | 19.8286 | 0.0001 | 0.000 |
| S.3 | 1041 | 20.1379 | 20.1376 | -0.0003 | 0.000 |
| S.3 | 1042 | 292.8487 | 292.8457 | -0.0031 | 0.000 |
| S.3 | 1045 | 193.2773 | 193.2790 | 0.0017 | 0.000 |
| S.3 | 1047 | 188.6590 | 188.6605 | 0.0014 | 0.000 |
| S.4 | 1042 | 82.9692 | 82.9693 | 0.0001 | 0.000 |
| S.4 | 1039 | 76.6899 | 76.6907 | 0.0008 | 0.000 |
| S.4 | 1038 | 325.6649 | 325.6620 | -0.0029 | 0.000 |
| S.4 | 1021 | 315.4804 | 315.4798 | -0.0005 | 0.000 |
| S.4 | 1040 | 170.3818 | 170.3818 | 0.0001 | 0.000 |
| S.4 | 1041 | 169.7249 | 169.7249 | 0.0001 | 0.000 |
| S.4 | 1034 | 350.0069 | 350.0075 | 0.0006 | 0.000 |
| S.4 | 1026 | 357.9837 | 357.9832 | -0.0005 | 0.000 |
| S.5 | 1059 | 93.6393 | 93.6577 | 0.0184 | 0.001 |
| S.5 | 1060 | 96.4719 | 96.4382 | -0.0337 | -0.004 |
| S.5 | 1061 | 96.8591 | 96.8403 | -0.0189 | -0.003 |
| S.5 | 1062 | 97.3553 | 97.3739 | 0.0187 | 0.005 |
| S.5 | 1064 | 120.4480 | 120.4274 | -0.0206 | -0.008 |
| S.5 | 1065 | 110.2287 | 110.2660 | 0.0374 | 0.013 |
| S.5 | 1072 | 14.3101 | 14.3059 | -0.0042 | -0.001 |
| S.5 | 1073 | 12.0123 | 12.0152 | 0.0029 | 0.001 |
| S.5 | 1042 | 284.7160 | 284.7174 | 0.0014 | 0.000 |

| | | | | | |
|-----|------|----------|----------|---------|--------|
| S.5 | 1021 | 113.4699 | 113.4673 | -0.0025 | -0.001 |
| S.5 | 1039 | 110.7427 | 110.7444 | 0.0017 | 0.000 |
| S.5 | 1038 | 102.0583 | 102.0592 | 0.0009 | 0.000 |
| S.5 | 1039 | 110.7440 | 110.7444 | 0.0004 | 0.000 |
| S.5 | 1045 | 184.9380 | 184.9359 | -0.0021 | 0.000 |
| S.5 | 1047 | 180.3131 | 180.3117 | -0.0014 | 0.000 |

Ecart maximum constatés :

S.5 vers 1065 : résidu AH = 0.0374 gr / Equivalent distance = 0.013 m

S.5 vers 1064 : résidu AH = -0.0206 gr / Equivalent distance = -0.008 m

S.5 vers 1062 : résidu AH = 0.0187 gr / Equivalent distance = 0.005 m

S.5 vers 1060 : résidu AH = -0.0337 gr / Equivalent distance = -0.004 m

S.5 vers 1061 : résidu AH = -0.0189 gr / Equivalent distance = -0.003 m

| Résidus sur les observations en Distance | | | | |
|--|-----------|------------------|-------------------|-----------|
| Station | Référence | Dh réd. obs. (m) | Dh réd. comp. (m) | Diff. (m) |
| S.1 | 1000 | 2.870 | 2.870 | 0.000 |
| S.1 | 1001 | 3.490 | 3.481 | -0.009 |
| S.1 | 1002 | 3.490 | 3.478 | -0.013 |
| S.1 | 1003 | 2.867 | 2.870 | 0.003 |
| S.1 | 1008 | 2.495 | 2.498 | 0.003 |
| S.1 | 1021 | 26.744 | 26.729 | -0.015 |
| S.1 | 1022 | 12.183 | 12.185 | 0.003 |
| S.2 | 1000 | 17.439 | 17.443 | 0.004 |
| S.2 | 1001 | 17.382 | 17.382 | 0.000 |
| S.2 | 1002 | 17.382 | 17.382 | 0.000 |
| S.2 | 1003 | 17.439 | 17.446 | 0.007 |
| S.2 | 1022 | 5.764 | 5.758 | -0.006 |
| S.2 | 1021 | 11.329 | 11.321 | -0.008 |
| S.2 | 1026 | 7.651 | 7.640 | -0.010 |
| S.2 | 1034 | 8.914 | 8.918 | 0.004 |
| S.3 | 1021 | 22.556 | 22.555 | -0.001 |
| S.3 | 1008 | 10.815 | 10.811 | -0.004 |
| S.3 | 1038 | 11.647 | 11.644 | -0.002 |
| S.3 | 1039 | 4.288 | 4.288 | 0.000 |
| S.3 | 1040 | 22.171 | 22.171 | -0.001 |
| S.3 | 1041 | 21.478 | 21.473 | -0.005 |
| S.3 | 1042 | 3.333 | 3.334 | 0.001 |
| S.3 | 1045 | 13.087 | 13.085 | -0.002 |
| S.3 | 1047 | 13.399 | 13.398 | -0.002 |
| S.4 | 1042 | 13.640 | 13.640 | -0.001 |
| S.4 | 1039 | 6.237 | 6.233 | -0.004 |
| S.4 | 1038 | 1.544 | 1.543 | -0.002 |
| S.4 | 1021 | 12.809 | 12.808 | -0.001 |
| S.4 | 1040 | 22.290 | 22.291 | 0.001 |
| S.4 | 1041 | 21.626 | 21.623 | -0.004 |
| S.4 | 1034 | 12.743 | 12.766 | 0.022 |
| S.4 | 1026 | 11.869 | 11.864 | -0.005 |
| S.5 | 1059 | 4.145 | 4.126 | -0.019 |
| S.5 | 1060 | 7.174 | 7.145 | -0.028 |
| S.5 | 1061 | 11.086 | 11.049 | -0.037 |
| S.5 | 1062 | 15.903 | 15.872 | -0.031 |
| S.5 | 1064 | 24.041 | 24.046 | 0.005 |
| S.5 | 1065 | 22.271 | 22.245 | -0.026 |
| S.5 | 1072 | 18.617 | 18.631 | 0.014 |
| S.5 | 1073 | 19.637 | 19.663 | 0.027 |
| S.5 | 1042 | 3.343 | 3.343 | 0.000 |

| | | | | |
|-----|------|--------|--------|--------|
| S.5 | 1021 | 22.543 | 22.541 | -0.002 |
| S.5 | 1039 | 4.276 | 4.275 | -0.001 |
| S.5 | 1038 | 11.634 | 11.632 | -0.002 |
| S.5 | 1039 | 4.278 | 4.275 | -0.003 |
| S.5 | 1045 | 13.072 | 13.071 | 0.000 |
| S.5 | 1047 | 13.384 | 13.384 | -0.001 |

Ecarts maximum constatés :

S.5 vers 1061 : distance = -0.037 m

S.5 vers 1062 : distance = -0.031 m

S.5 vers 1060 : distance = -0.028 m

S.5 vers 1073 : distance = 0.027 m

S.5 vers 1065 : distance = -0.026 m

| Résidus sur les observations en Angle Vertical | | | | | |
|--|-----------|--------------|---------------|------------|-----------------|
| Station | Référence | AV obs. (gr) | AV comp. (gr) | Diff. (gr) | Equiv. dist (m) |
| S.1 | 1000 | 76.1859 | 76.1903 | 0.0044 | 0.000 |
| S.1 | 1001 | 80.1805 | 80.1531 | -0.0274 | -0.002 |
| S.1 | 1002 | 106.5826 | 106.5881 | 0.0054 | 0.000 |
| S.1 | 1003 | 107.9346 | 107.9210 | -0.0136 | -0.001 |
| S.1 | 1008 | 56.0097 | 56.0827 | 0.0730 | 0.004 |
| S.1 | 1021 | 87.1809 | 87.1728 | -0.0082 | -0.003 |
| S.1 | 1022 | 72.3731 | 72.3811 | 0.0080 | 0.002 |
| S.2 | 1000 | 95.9282 | 95.9194 | -0.0088 | -0.002 |
| S.2 | 1001 | 95.9279 | 95.9222 | -0.0057 | -0.002 |
| S.2 | 1002 | 101.3349 | 101.3475 | 0.0126 | 0.003 |
| S.2 | 1003 | 101.3217 | 101.3345 | 0.0128 | 0.004 |
| S.2 | 1022 | 50.6929 | 50.6405 | -0.0523 | -0.007 |
| S.2 | 1021 | 71.4530 | 71.4186 | -0.0344 | -0.007 |
| S.2 | 1026 | 95.7386 | 95.7340 | -0.0046 | -0.001 |
| S.2 | 1034 | 89.8524 | 89.8525 | 0.0002 | 0.000 |
| S.3 | 1021 | 105.7864 | 105.7923 | 0.0059 | 0.002 |
| S.3 | 1008 | 129.7436 | 129.7454 | 0.0019 | 0.000 |
| S.3 | 1038 | 103.9754 | 103.9807 | 0.0053 | 0.001 |
| S.3 | 1039 | 110.3860 | 110.3794 | -0.0066 | 0.000 |
| S.3 | 1040 | 109.2876 | 109.2859 | -0.0017 | -0.001 |
| S.3 | 1041 | 117.7772 | 117.7799 | 0.0028 | 0.001 |
| S.3 | 1042 | 70.8575 | 70.8430 | -0.0144 | -0.001 |
| S.3 | 1045 | 106.3472 | 106.3519 | 0.0047 | 0.001 |
| S.3 | 1047 | 106.2026 | 106.2031 | 0.0005 | 0.000 |
| S.4 | 1042 | 92.2851 | 92.2744 | -0.0107 | -0.002 |
| S.4 | 1039 | 106.9898 | 106.9744 | -0.0154 | -0.002 |
| S.4 | 1038 | 127.4795 | 127.4226 | -0.0570 | -0.002 |
| S.4 | 1021 | 110.0439 | 110.0460 | 0.0021 | 0.000 |
| S.4 | 1040 | 109.1751 | 109.1814 | 0.0063 | 0.002 |
| S.4 | 1041 | 117.6155 | 117.6087 | -0.0069 | -0.002 |
| S.4 | 1034 | 128.1877 | 128.2082 | 0.0205 | 0.005 |
| S.4 | 1026 | 133.8442 | 133.8491 | 0.0049 | 0.001 |
| S.5 | 1059 | 94.1399 | 94.1399 | 0.0000 | 0.000 |
| S.5 | 1060 | 96.6633 | 96.7236 | 0.0603 | 0.007 |
| S.5 | 1061 | 97.8952 | 97.8801 | -0.0151 | -0.003 |
| S.5 | 1062 | 98.6025 | 98.5159 | -0.0866 | -0.022 |
| S.5 | 1064 | 96.1053 | 96.0602 | -0.0451 | -0.017 |
| S.5 | 1065 | 94.3570 | 94.3428 | -0.0142 | -0.005 |
| S.5 | 1072 | 123.4640 | 123.5067 | 0.0427 | 0.013 |
| S.5 | 1073 | 122.3062 | 122.2837 | -0.0226 | -0.007 |
| S.5 | 1042 | 71.1851 | 71.1844 | -0.0007 | 0.000 |

| | | | | | |
|-----|------|----------|----------|---------|-------|
| S.5 | 1021 | 105.8471 | 105.8458 | -0.0013 | 0.000 |
| S.5 | 1039 | 110.6681 | 110.6700 | 0.0019 | 0.000 |
| S.5 | 1038 | 104.0769 | 104.0823 | 0.0054 | 0.001 |
| S.5 | 1039 | 110.6679 | 110.6700 | 0.0021 | 0.000 |
| S.5 | 1045 | 106.4460 | 106.4446 | -0.0014 | 0.000 |
| S.5 | 1047 | 106.2942 | 106.2938 | -0.0004 | 0.000 |

Ecart maximum constatés :

S.5 vers 1062 : résidu AV = -0.0866 gr / Equivalent distance = -0.022 m

S.5 vers 1064 : résidu AV = -0.0451 gr / Equivalent distance = -0.017 m

S.5 vers 1072 : résidu AV = 0.0427 gr / Equivalent distance = 0.013 m

S.5 vers 1073 : résidu AV = -0.0226 gr / Equivalent distance = -0.007 m

S.2 vers 1021 : résidu AV = -0.0344 gr / Equivalent distance = -0.007 m