

# Supplementary Materials: A Comparative Study of the Applied Methods for Estimating Deflection of the Vertical in Terrestrial Geodetic Measurements

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**Table S1.** Measurements and derived values according to Section 2.1. The respective standard deviation is given in brackets.

| Site     | Baseline | $\Delta h$         | $\Delta H$         | $\Delta N$ | $\Delta S$       | $\alpha$            |
|----------|----------|--------------------|--------------------|------------|------------------|---------------------|
|          |          | (m)                | (m)                | (m)        | (m)              | (deg)               |
| Medicina | S-N      | 0.7972 (1.2E-03)   | 0.8317 (3.0E-03)   | -0.0345    | 1339.6 (1.0E-03) | 356.51008 (4.3E-05) |
|          | W-E      | 1.3632 (1.2E-03)   | 1.3753 (3.0E-03)   | -0.0121    | 1485.5 (1.0E-03) | 93.05774 (3.9E-05)  |
| Noto     | S-N      | -18.9243 (1.1E-03) | -18.8410 (3.0E-03) | -0.0833    | 1192.7 (1.0E-03) | 348.11478 (4.8E-05) |
|          | W-E      | 0.6467 (1.0E-03)   | 0.7093 (3.0E-03)   | -0.0626    | 919.4 (1.0E-03)  | 105.52558 (6.2E-05) |

**Table S2.** Results of the adjustment of the individual sets of measurements obtained from QDaedalus.

| Site     | Pillar | Set | $\xi$    | $\eta$   | $\sigma(\xi)$ | $\sigma(\eta)$ | # obs. |
|----------|--------|-----|----------|----------|---------------|----------------|--------|
|          |        |     | (arcsec) | (arcsec) | (arcsec)      | (arcsec)       |        |
| Medicina | m1     | 1   | -5.25    | -1.77    | 0.16          | 0.21           | 462    |
|          |        | 2   | -4.73    | -1.81    | 0.1           | 0.14           | 208    |
|          |        | 3   | -5.22    | -2.23    | 0.09          | 0.12           | 316    |
|          |        | 4   | -4.96    | -2.14    | 0.05          | 0.06           | 328    |
| Noto     | n1     | 1   | -12.15   | 11.93    | 0.14          | 0.17           | 282    |
|          |        | 2   | -12.43   | 11.8     | 0.12          | 0.21           | 576    |
|          |        | 3   | -11.1    | 11.76    | 0.17          | 0.21           | 338    |
|          | n2     | 1   | -12.81   | 12.09    | 0.11          | 0.13           | 224    |
|          |        | 2   | -13.67   | 11.65    | 0.12          | 0.14           | 252    |
|          |        | 3   | -13.44   | 10.6     | 0.13          | 0.17           | 234    |
|          | n3     | 1   | -12.23   | 11.85    | 0.08          | 0.09           | 214    |
|          |        | 2   | -12.16   | 11.85    | 0.07          | 0.08           | 252    |
|          |        | 3   | -12.01   | 12       | 0.08          | 0.09           | 206    |
|          | n4     | 1   | -12.47   | 12.52    | 0.08          | 0.09           | 256    |
|          |        | 2   | -12.24   | 11.91    | 0.07          | 0.08           | 188    |
|          |        | 3   | -12.06   | 12.16    | 0.07          | 0.07           | 290    |