



Boletim de Ciências Geodésicas

ISSN: 1413-4853

ISSN: 1982-2170

Universidade Federal do Paraná

### ERRATUM 3

Boletim de Ciências Geodésicas, vol. 27, Esp., e2021024, 2021  
Universidade Federal do Paraná

DOI: <https://doi.org/10.1590/s1982-21702021000s00024erratum>

Available in: <https://www.redalyc.org/articulo.oa?id=393968851012>

- How to cite
- Complete issue
- More information about this article
- Journal's webpage in redalyc.org

UNEM [redalyc.org](https://www.redalyc.org)

Scientific Information System Redalyc  
Network of Scientific Journals from Latin America and the Caribbean, Spain and  
Portugal

Project academic non-profit, developed under the open access initiative

**Erratum of the article:**

FRANÇA, R.M.; KLEIN, I.; VEIGA, L.A.K. The influence of the deflection of the vertical on geodetic surveys in Brazil. *Bulletin of Geodetic Sciences*. 27(spe): e2021020, 2021. DOI: 10.1590/s1982-21702021000s00020.

**On the first page, where it reads:**

A influência da deflexão da vertical nas pesquisas geodéticas no Brasil

**Should read:**

A influência do desvio da vertical nas medições geodésicas no Brasil

**On page 4, where it reads:**

Therefore, the transformation of observations between local systems to the global geocentric system without considering the rotation from deflection of the vertical, will result in a systematic error, and, consequently, will propagate in the geodetic positioning, generating errors of difficult identification and consistent adjustments (Ghilani 2010 p. 487 and 495).

**Should read:**

Therefore, the transformation of observations between local systems to the global geocentric system without considering the rotation from deflection of the vertical, will result in a systematic error, and, consequently, will propagate in the geodetic positioning, generating errors of difficult identification and inconsistent adjustments (Ghilani 2010 p. 487 and 495).

**On page 5, where it reads:**

As stated by Sabri, Sudarsono and Indriana (2019), the  $\theta$  can be determined by geometric and physical observations. For geometric observations, the  $\theta$  is obtained by comparing the astronomical and geodetic coordinates (astrogeodetic method). For physical observations, the deflection of the vertical is determined by gravimetric observations associated with GNSS observations.

**Should read:**

As stated by Sabri, Sudarsono and Indriana (2019), the  $\theta$  can be determined by geometric and physical observations. For geometric observations, the  $\theta$  is obtained by comparing the astronomical and geodetic coordinates (astrogeodetic method). For physical observations, the  $\theta$  is determined by gravimetric observations associated with GNSS observations.

**On page 7, where it reads:**

Since we have the  $g_1$  gravity vector in function of the  $W_1$  equipotential surface passing through the center of the equipment, and the  $g_2$  gravity vector in function of the  $W_2$  equipotential surface passing at the point above the terrestrial surface (Figure 1), we will have different values of the  $\theta$  considering the center of the instrument or the geodetic mark, which are at different heights.



**Should read:**

Since we have the  $g_1$  gravity vector in function of the  $W_1$  equipotential surface passing through the center of the instrument, and the  $g_2$  gravity vector in function of the  $W_2$  equipotential surface passing at the geodetic mark above the terrestrial surface (Figure 1), we will have different values of the  $\theta$  considering the center of the instrument or the geodetic mark, which are at different heights.

**On page 8, where it reads:**

Another important aspect that must be analyzed is the variation of the among the points occupied by the...

**Should read:**

Another important aspect that must be analyzed is the variation of the  $\epsilon$  among the points occupied by the...

**On page 8, where it reads:**

Table 2 shows that even at distances of 2 km (uncommon in measurements with total station), the variation of the was less than....

**Should read:**

Table 2 shows that even at distances of 2 km (uncommon in measurements with total station), the variation of the  $\epsilon$  was less than...

**On page 8, where it reads:**

Table 2: Variation of the as function of the distance between total station and reflector in maximum  $\theta$  region.

**Should read:**

Table 2: Variation of the  $\epsilon$  as function of the distance between total station and reflector in maximum  $\theta$  region.

**On page 9, where it reads:**

For the zenith angles, the closer to  $90^\circ$  (horizontal line of sight), the lower will be the influence of the  $\theta$ . Klein *et al.* (2017) show a real case of geodetic network implementation in an urban area...

**Should read:**

For the zenith angles, the closer to  $90^\circ$  (horizontal line of sight), the lower will be the influence of the  $\theta$ . Klein *et al.* (2017) show a real case of geodetic network densification in an urban area...

**On page 11, where it reads:**

In order to illustrate the behavior of the influence of the  $\theta$  on distance, and consequently on geodetic horizontal positioning for the entire Brazilian territory, it were calculated the values of in parts per million (ppm) for zenith angles of  $85^\circ$  and  $70^\circ$  (Figures 10 and 11)...

**Should read:**

In order to illustrate the behavior of the influence of the  $\theta$  on distance, and consequently on geodetic horizontal positioning for the entire Brazilian territory, it were calculated the values of  $\Delta LEDE$  in parts per million (ppm) for zenith angles of  $85^\circ$  and  $70^\circ$  (Figures 10 and 11)...