Total Station Observations

<u>Referenced to circled letter (D) in Schematic Diagram</u>:

Local Geodetic Coordinate Differences Computed From Total Station Observations

$$\Delta e \;=\; s \, \sin z \, \sin \alpha \tag{32}$$

$$\Delta n \;=\; s \, \sin z \, \cos \alpha \tag{33}$$

$$\Delta u \;=\; s \, \cos z \tag{34}$$

Corrections to Total Station Observations:

s: **The EDM slope distance should be corrected for:**

　1.　**Geometrical configuration of set-up to accommodate reflector off-set and electrical center of EDMI.**

　2.　**Second term velocity and curvature of path, see page 24, Use of Calibration Baselines by Fronczek, (1980).**

　3.　**Delay of signal for atmospheric conditions of temperature and pressure, see pages 1-8, Fronczek.**

　4.　**Mark-to-mark slant distance.**

α: **For ultra-precise applications, an observed astronomic azimuth can be corrected for:**

　1.　**Polar motion and**
　2.　**Local deflection of the vertical.**

z: **The observed zenith (vertical) angle should be corrected for:**

　1.　**Refraction of line-of-sight in vertical plane.**
　2.　**Local deflection of the vertical.**

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