GNSS calibration of UZ receivers with respect to TL G1 (1013-2025)

Summary

From April to August 2025, the Telecommunication Laboratories (TL) conducted a trip to calibrate GNSS equipment owned by the Uzbek National Institute of Metrology of Uzstandard Agency (UZ). The trip started and finished at TL, providing closure with respect to the LNE-SYRTE Group1 reference receiver TLT5. The operations and report of measurements are described in the report by TL.

- **Final results for the calibrated systems**

The INTDLY values of the receivers given in Table 1 have been computed by TL based on the results of the Group 1 trip 1001-2022 for TL (GPS and Galileo) and should not be updated to reflect later changes in the conventional INTDLY values of the reference receiver.

For a P3/E3/PPP UTC link A-B involving any Group 1 and any receiver in this trip, the uncertainty resulting from the calibration, U_B(A-B), is computed as

$$U_B(A\text{-}B) = (U_{CAL0}^2 + \Delta U_{CAL}(A)^2 + \Delta U_{CAL}(B)^2)^{1/2} \quad (1)$$

where U_{CAL0} = 2.5 ns is the conventional Group 2 value, and where ΔU_{CAL} (generally zero) is specified for each system.

Changes in the set-up of the receivers after the calibration must be accounted for as described in section A.3.6 of the most recent Calibration guidelines.

Table 1. Final P1/P2/E1/E5a INTDLY values from the 1013-2025 exercise. Values of REFDLY and CABDLY during the calibration are also indicated for reference. All values are in ns date in YYYY/MM/DD format. “Meas. Date” refers to the first day of the differential calibration, to which the calibration results can be applied. “Impl. Date” is the MJD when the results should be implemented in the receiver.

System	BIPM	Meas. date	INTDLY C1	INTDLY P1	INTDLY P2	INTDLY E1	INTDLY E5a	REF DLY	CABD LY	Note	ΔU_{CAL}	Impl. date
UZ__	UZ__	2025/07/29	31.0	28.2	36.0	31.7	37.7	15.0	185.7		0.0	61010

Notes:

Version history
V1.0 2025/11/DD: Publication of results from V2.1 of the TL report.