GPS calibration of LUX equipment with respect to OP G1 (1012-2018)

Summary

In January 2018, the LNE-SYRTE (UTC acronym OP) conducted a trip to calibrate GPS equipment owned by the Bureau Luxembourgeois de Métrologie (UTC acronym LUX). The trip started and finished at the OP, providing closure with respect to OP Group1 reference receiver OP71.

The operations and report of measurements are described in the report by OP and its annexes.

- **Final results for the calibrated systems**

The INTDLY values of the LUX receiver given in Table 1 have been computed by OP based on the results of the 1001-2016 Group 1 trip for OP71 and should not be updated to reflect later changes in the conventional INTDLY values of OP71.

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

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

where U_{CAL0} = 2.5 ns at the time of calibration, as given conventionally to Group 2, 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 in ftp://ftp2.bipm.org/pub/tai/publication/gnss-calibration/guidelines/.

Table 1. Final P1/P2 INTDLY values from the 1012-2018 trip. Values of REFDLY (with respect to the indicated REF) and of CABDLY during the calibration are also indicated for reference. "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 P1	INTDLY P2	REF	REFDLY	CABDLY	Note	ΔU_{CAL}	Impl. date
LU01	LU01	2018/01/17	**25.8**	**22.5**	UTC(LUX)	53.7	118.0		0.0	58206

Notes:

Version history
V1.0 2018/03/30: Publication of results from Issue 1 of the OP calibration report, implemented in the LUX receiver: