

GPS calibration of CNES equipment with respect to OP G1 (1015-2018)

Summary

In June 2018, the LNE-SYRTE (OP) conducted a trip to calibrate GNSS equipment owned by CNES. 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 in the [report by OP](#).

- **Final results for the calibrated systems**

The INTDLY values of the CNES receivers 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 the reference receivers.

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

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

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/](http://ftp2.bipm.org/pub/tai/publication/gnss-calibration/guidelines/).

Table 1. Final P1/P2 INTDLY values from the 1015-2018 trip. Values of REFDLY with respect to UTC(CNES) and of CABDLY during the calibration are also indicated for reference. All values are in ns. “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	REFDLY	CABDLY	Note	ΔU_{CAL}	Impl. date
CS21	CS21	2018/06/15	58.5	56.6	149.0	166.2		0.0	58583
CS22	CS22	2018/06/15	57.9	56.0	149.0	176.1		0.0	58583

Notes:

Version history

V1.0 2019/08/01: Publication of results from Issue 1.0 of the Calibration report, as implemented in the receivers.

V1.1 2019/10/22: OP calibration report modified to Issue 1.1. No change to the results.