

GNSS calibration of UA receiver with respect to PTB G1 (1201-2022)

Summary

In April 2022, a GNSS receiver owned by the NSC IM (National Scientific Centre "Institute of Metrology", Kharkiv Ukraine, UTC acronym UA) was installed at the PTB and calibrated against the Group1 reference station PT13. The method of calibration is the “direct calibration” which comprises just one period of data taking at the PTB.

The operation and report of measurements at the PTB are described in the [report by the PTB](#).

• Results for the calibrated system

The INTDLY values of the UA04 receiver given in Table 1 have been computed by the PTB based on the results of the [1001-2020](#) Group 1 trip for PT13 and should not be updated to reflect later changes in the conventional INTDLY values of PT13.

The uncertainty for a P3/E3/PPP link or a C1 link involving UA04 is $U_{CAL0} = 4.0$ ns at the time of calibration, as given conventionally to “direct calibration”.

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 <https://webtai.bipm.org/ftp/pub/tai/publication/gnss-calibration/guidelines/>.

Table 1. Final P1/P2/C1/E1/E5a INTDLY values from the 1201-2022 trip. Values of REF DLY and CAB DLY during the calibration are also indicated for reference, see note 1 (all values 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	INTDLY C1	INTDLY E1	INTDLY E5a	REFDLY	CABDLY	Note	Impl. date
UA04	UA04	2022/04/12	-69.7	-70.1	-68.7	-69.1	-65.9	-66.2	203.9	(1)	No plan

Notes:

(1) The REF DLY and CAB DLY values represent the set-up during the measurements at the PTB. Antenna cable provided by UA.

Version history

V1.0 2022/05/12: Publication of results from V1.0 of the PTB calibration report.