

Results of differential calibration of geodetic-type receivers at the PTB

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1. General description of the calibration

This report concerns the calibration of the hardware delays incurred by time signals for different geodetic-type GPS systems operated at the PTB in Braunschweig.

The systems (receiver+antenna) are designated by a 4-letter acronym.

The link between acronym and actual hardware references may be found [here](#).

The results presented in Section 3 should be used for time transfer with other equipment calibrated using the same procedure. The standard uncertainty on such a link calibration is taken to be 5 ns (1 σ).

2. Calibration procedure

The calibration is a differential calibration with respect to a travelling receiver provided by the BIPM. The travelling receiver is referenced to the BIPM reference receiver, presently BPOC, an Ashtech Z12-T (see [TM116](#) for the original calibration of the reference receiver).

The calibration operational procedure is available [here](#). Note that different versions of the document were used, depending on the epoch of calibration; see the annex “Revision history” in the most recent version.

3. Calibration results

System	Period	Calib. dates	Travel	Results P1-P2/ns	Operations report
PTBB	2002/07	52471-52478	BPOC	304.1 – 318.5	Report2002_PTB.pdf
PTBB	2003/05	52778-52794	BPOC	305.0 – 319.3	Report2003_PTB.pdf
PTBB	2004/08	53221-53230	BPOC	304.0 – 319.0	Report2004_PTB.pdf
PTBB	2006/04	54213-54221	BPOC	303.9 – 319.3	Report2006_PTB.pdf
PTBB	2008/04	54566-54576	BPOC	303.2 – 317.4	Report2008_PTB.pdf
PTBG	2008/04	54566-54576	BPOC	554.3 – 576.2 ¹	Report2008_PTB.pdf

¹ Delay values include the antenna cable