

## Results of differential calibration of geodetic-type receivers at the DLR

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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 DLR in Oberpfaffenhofen.

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  $\sigma$ ).

### 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 BP0C, 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
OBET	2006/07	53941-53947	BP0C	<a href="#">217.1 – 220.1</a> <sup>1</sup>	<a href="#">Report2006_DLR.pdf</a>
OBET	2007/02	54147-54153	BP0O	<a href="#">222.9 – 228.4</a>	<a href="#">Report2007_DLR.pdf</a>
OBE3	2006/07	53941-53947	BP0C	<a href="#">313.1 – 325.8</a> <sup>1</sup>	<a href="#">Report2006_DLR.pdf</a>
OBE3	2007/02	54147-54153	BP0O	<a href="#">319.0 – 330.4</a> <sup>2</sup>	<a href="#">Report2007_DLR.pdf</a>
UTC2	2006/07	53941-53947	BP0C	<a href="#">220.5 – 225.4</a> <sup>1</sup>	<a href="#">Report2006_DLR.pdf</a>
UTC2	2007/02	54147-54153	BP0O	<a href="#">218.6 – 225.4</a>	<a href="#">Report2007_DLR.pdf</a>

<sup>1</sup> Delay values include one antenna splitter.

<sup>2</sup> Values corrected by +50 ns.