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

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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 INRIM in Torino.

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 <u>here</u>. 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 |
|--------|---------|--------------|--------|----------------------|-------------------|
| IENG | 2001/10 | 52199-52205 | BP0C | <u>307.7 − 317.4</u> | Report2001_IT.pdf |
| IENG | 2004/06 | 53184-53188 | BP0C | <u>305.6 – 315.6</u> | Report2004 IT.pdf |
| IENG | 2007/03 | 54169-54180 | BP0O | <u>303.8 − 314.0</u> | Report2007 IT.pdf |
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