

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

Last updated 18 June 2009

## 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 ONRJ in Rio de Janeiro.

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 which is either a reference receiver from the BIPM or a receiver calibrated vs. a BIPM reference receiver. The BIPM reference receiver is 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

Results are presented in a computation sheet which is available through the link in the column “Results P1-P2/ns”. Explanatory information on the computation sheet is available [here](#).

System	Period	Calib. dates	Reference	Results P1-P2/ns	Operations report
RJEP	2009/06	54980-54984	<a href="#">BPOC</a>	<a href="#">229.0 – 231.7</a>	<a href="#">Report2009_ONRJ.pdf</a>