CCTF WG on TWSTFT meeting Oct. 2002
Summary of PTB activities for inclusion in the Report

Three fields of activities were identified.

1) TWSTFT in X-band

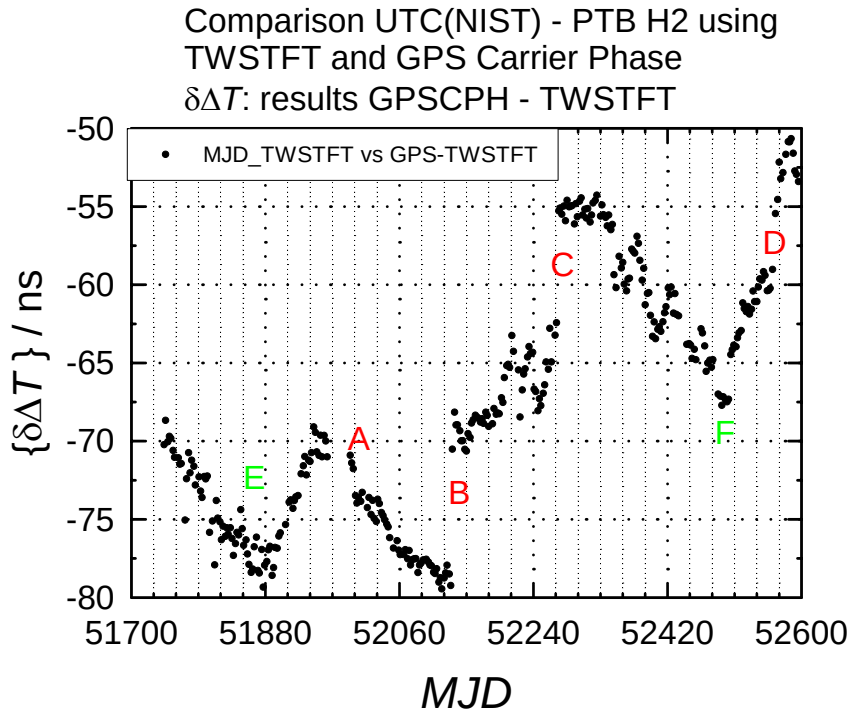
Set-up and routine operation of a permanent TWSTFT link between USNO and PTB, with substantial support of USNO and TimeTech, Stuttgart. The current measurement schedule comprises 24 TWSTFT sessions of 15 minutes per day via an US X-band satellite with PTB and USNO in the same spot beam, using SATRE modems. Over three months, the daily differences between X-band and standard KU-band measurements exhibited variations of 1,2 ns (1 σ).

2) Calibration activities

2.1) Calibration of the TWSTFT link PTB-VSL by portable clock (HP 5071 Opt.001). Due to the short travel time the calibration uncertainty was only 1,3 ns (1 σ).

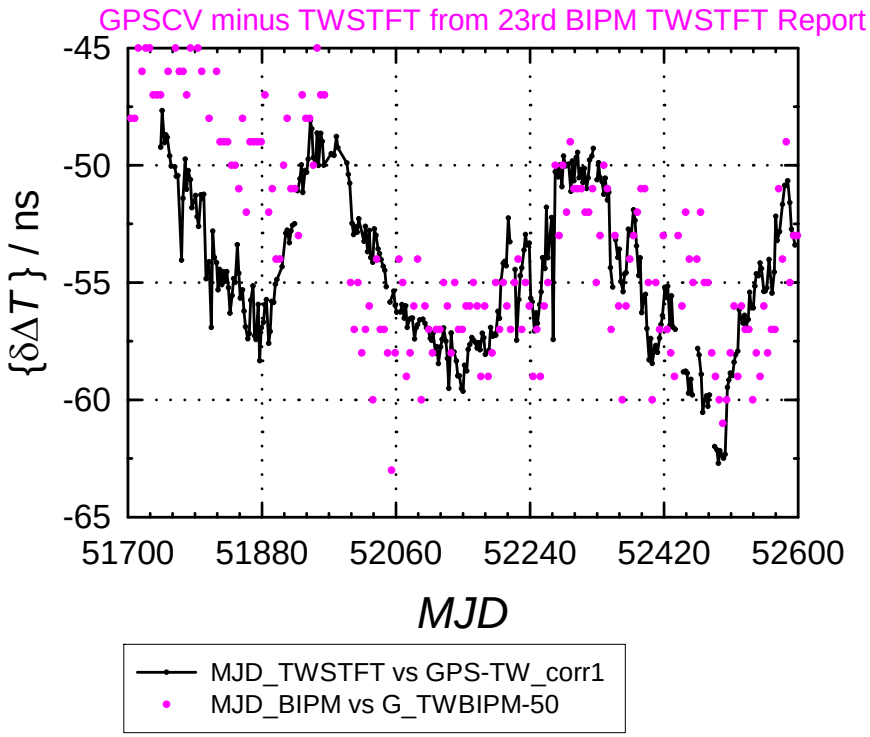
2.2) USNO-PTB joint activity: Calibration of the TWSTFT link USNO-PTB by a portable X-band station. Based on measurements on MJD 52435 the KU-band link has been re-calibrated with an uncertainty of 1 ns (1 σ)

3) Carrier phase GPS
The German BKG installed an Ashtec-Z12T receiver as receiver of the PTB IGS station. The receiver was calibrated with reference to a travelling receiver of the same kind provided by BIPM. Starting at the beginning of October 2002, BKG converts the PTB-RINEX data to standard BIPM format using the ROB software (P: Defraigne) and submits them to BIPM. Thereby PTB will participate in the BIPM experiment of using geodetic receivers for regular time scale comparisons. This will allow mutual intercomparison of the different time comparison techniques of highest accuracy.



SigmaPlot\CSF1_TAF\CSF1_NIST_GRAVI4.JNB\Sektion8\UTCNI - HMPTB_TW+GPSCPH

Comparison UTC(NIST) - PTB H2 using
TWSTFT and GPS Carrier Phase
$\delta\Delta T$: results GPSCPH - TWSTFT
Three Steps of known cause removed.



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