

m e t

a s

metrologie und akkreditierung schweiz

TWSTFT at METAS



Bundesamt für Metrologie und Akkreditierung
Office fédéral de métrologie et d'accréditation
Ufficio federale di metrologia e di accreditamento
Swiss Federal Office of Metrology and Accreditation

Eidg. Justiz- und Polizeidepartement
Département fédéral de justice et police
Dipartimento federale di giustizia e polizia
Federal Department of Justice and Police

Content

- ◆ Highlights 2005
- ◆ Satellite change to IS 707
- ◆ Reception of remote stations
- ◆ Link comparisons
- ◆ Summary and outlook

Highlights 2005

- ◆ January Start orderliness measurements
- ◆ Mai Satellite change to IS 707
- ◆ Mai / June Transceiver under repair
- ◆ July Start measurements over IS 707
- ◆ Oct Change to bi-hourly schedule
- ◆ Oct Adjust transmitted power

Satellite change to IS 707

Problems on equipment

LO of Transceiver did not lock on the higher Ku-Band.

Performing 12 sessions / day was limited by the modem.

New antenna position

Nord 46° 55' 25"

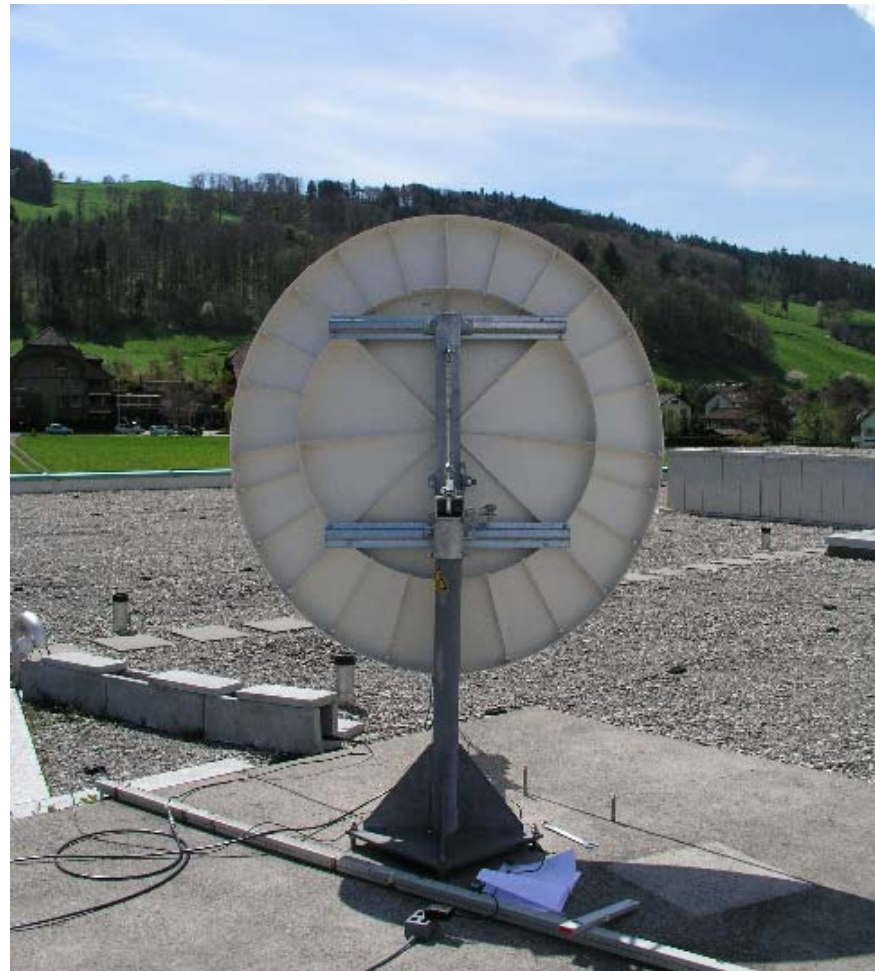
Ost 7° 27' 51"

New antenna direction

Azimuth: 247.5°

Elevation: 11.2°

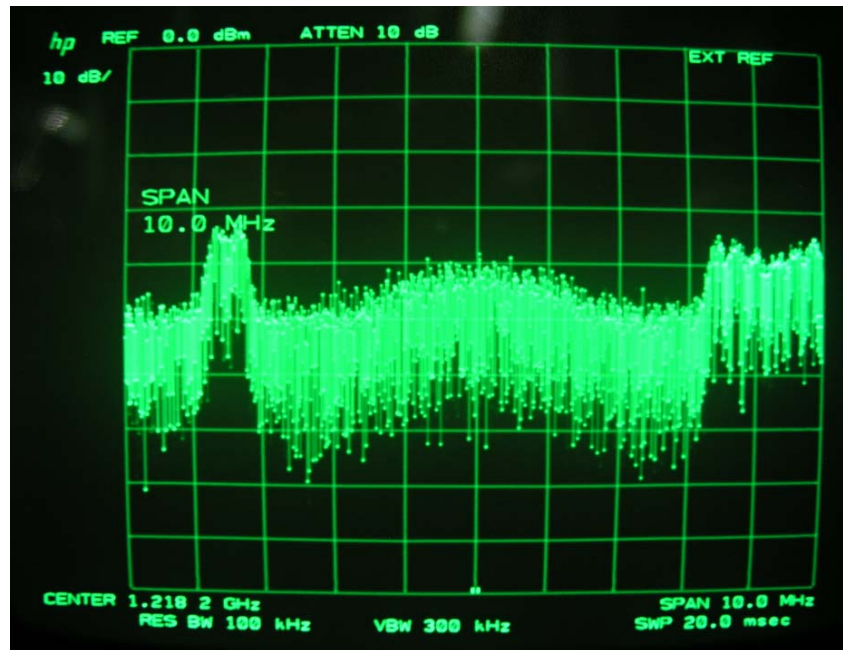
Polarization: 39.1°



Frequency Bands

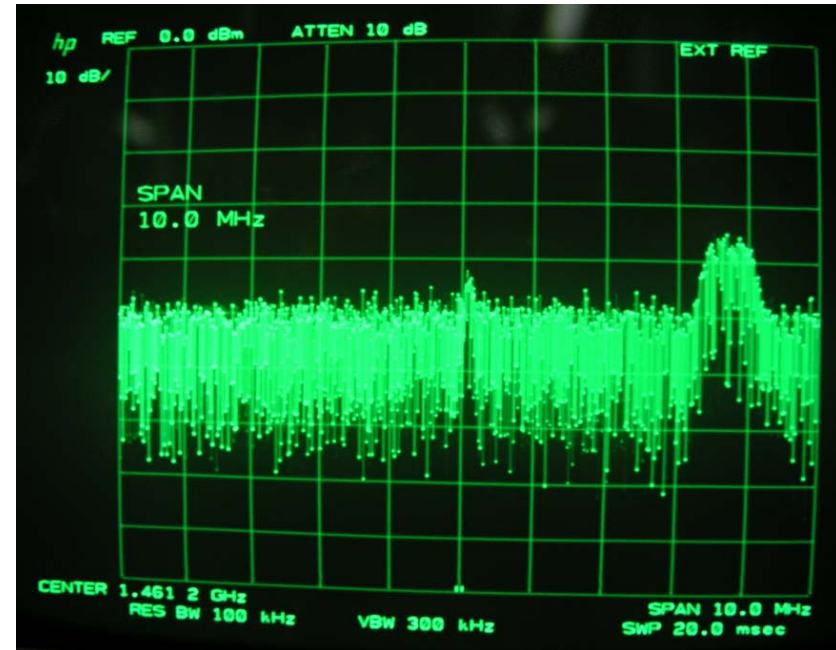
Link 07: Nov-09-2005 08:04 UTC

Ranging Signal in Europe
Center Frequency = 12518.2 MHz
Span = 10 MHz



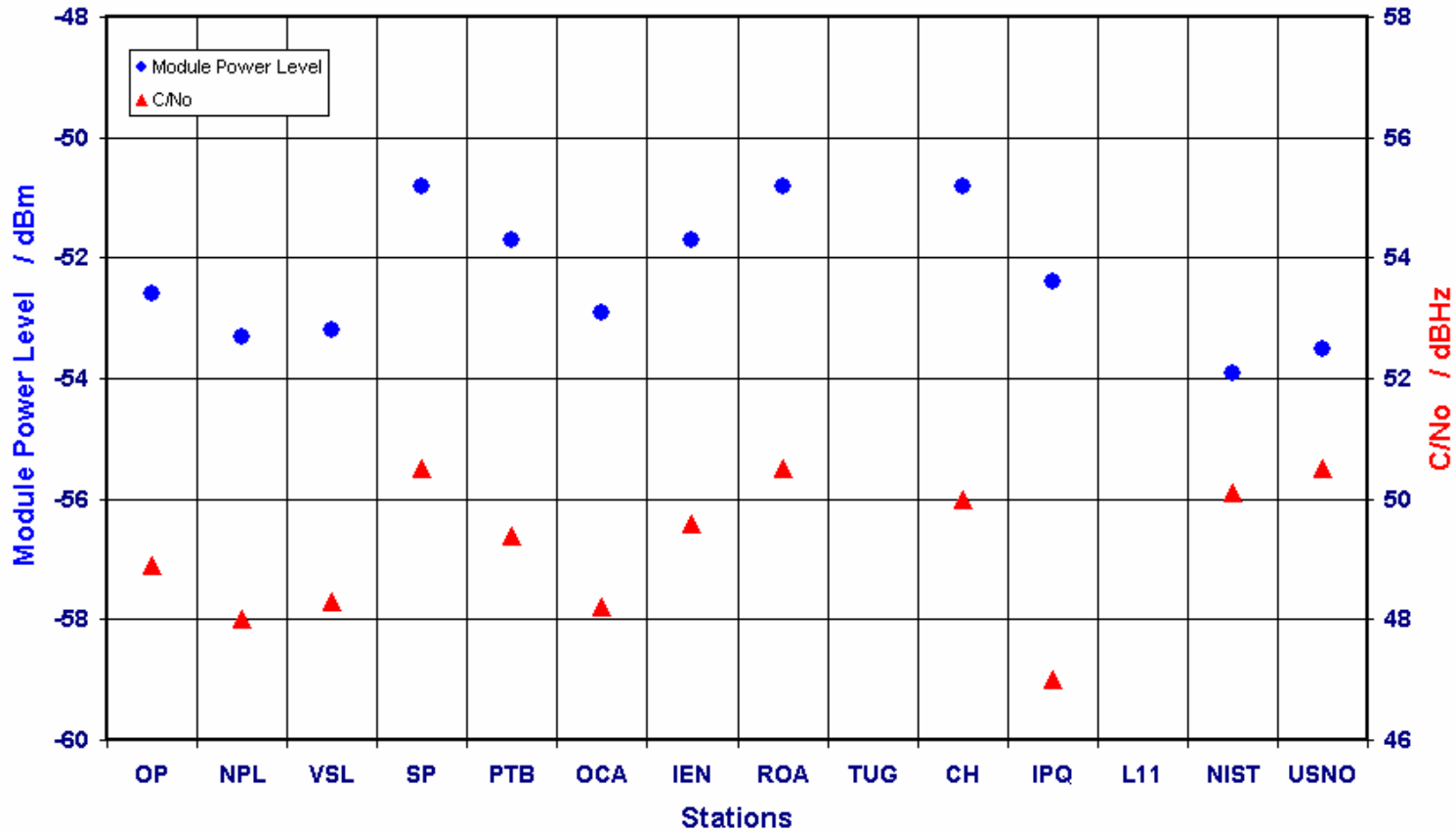
Link 08: Nov-09-2005 08:31 UTC

Clean Carrier from USA
Center Frequency = 12518.2 MHz
Span = 10 MHz



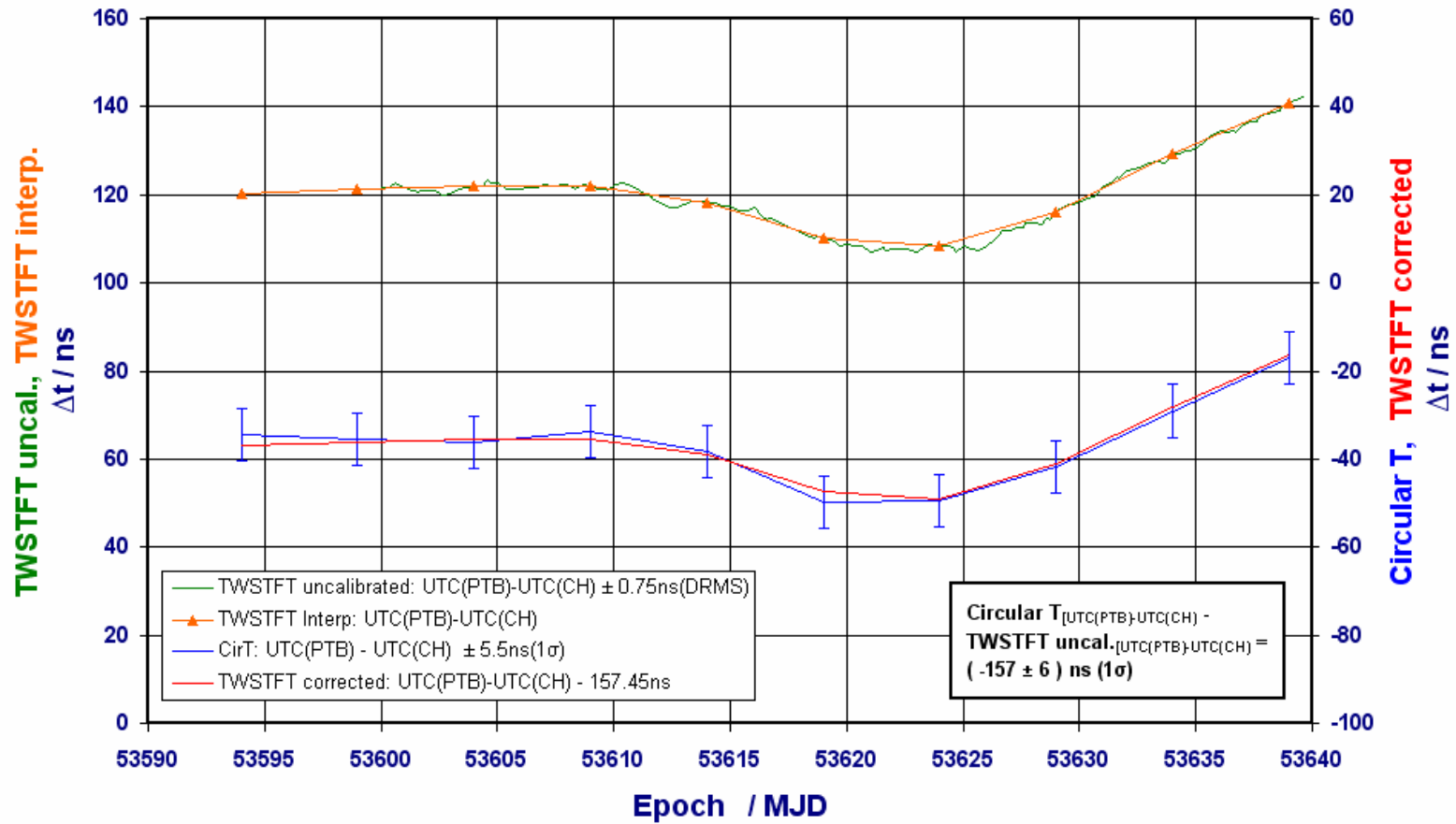
Reception at METAS via IS707

Reception from MJD 53657 to 53674



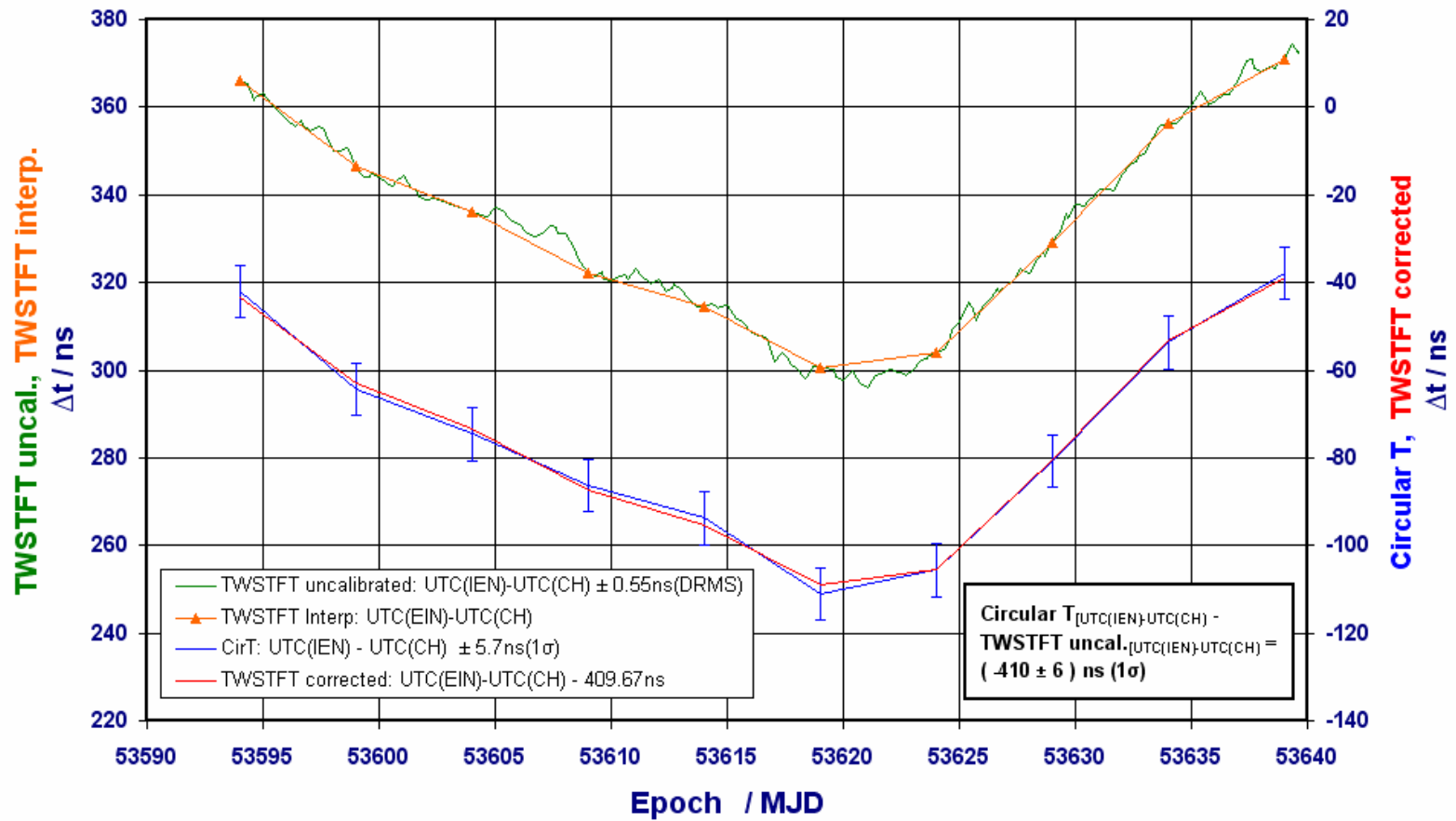
Link Comparison

UTC(PTB)-UTC(CH) from MJD 53594 to 53639



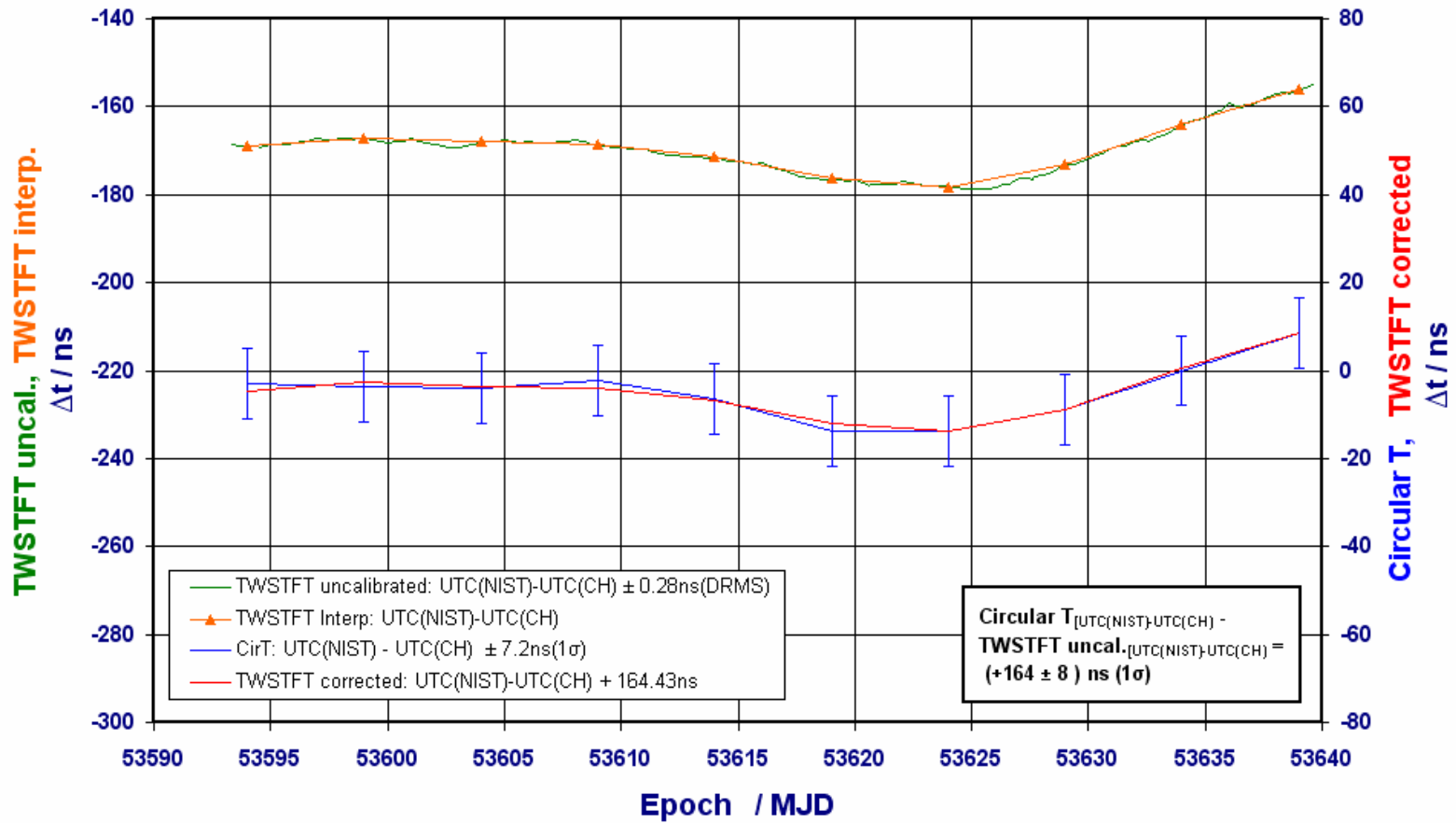
Link Comparison

UTC(IEN)-UTC(CH) from MJD 53594 to 53639



Link Comparison

UTC(NIST)-UTC(CH) from MJD 53594 to 53639



Summary and Outlook

- ◆ Successful (but delayed) satellite change
- ◆ Bi-hourly schedule and power adjustment implemented
- ◆ Timescale and clock comparisons possible

- ◆ Calibration with portable earth station
- ◆ Continuous realisation of UTC(CH)