

NPL TWSTFT Status Report

**CCTF WG on TWSTFT
Bern, 17-19 September 2007**

Peter Whibberley

- Time scale & time transfer:
 - John Davis (Technical Leader; analysis methods)
 - Peter Whibberley (time scale & clocks, MSF & dissemination services, TWSTFT)
 - Peter Stacey (GNSS, time scale & services)
 - Deborah Baines (analysis methods & services)
- Primary & optical frequency standards
 - Around 15 people

- Time scale relocated to new NPL building, October 2006.
 - Clocks, UTC(NPL) generation & distribution, backup GPS receiver, public services.
 - Considerable work required into 2007.
- TWSTFT and primary GPS receivers remain in old building
 - Linked by 900 m cable to maser

- Have hardware for two independent earth stations
- Operational station: NPL01
 - 2.4m Era Ku-band dish
 - Miteq up & down converters
 - Satre 74 modem
 - Reference is active H-maser
 - 1PPS with known offset from UTC(NPL)
- Repeated equipment failures
 - Miteq upconverter, Miteq LNA

- Independent backup station: NPL02
 - not currently operational
 - 1.8m Channel Master Ku-band dish
 - KST 12000 Earth station terminal (external)
 - Satre 38 modem (upgraded)
- Ongoing efforts to find suitable location

TWSTFT objectives

- Restore operation of NPL01
 - Aim to maintain calibration status
- Install NPL02 on new building and bring into operation
 - Calibration required
- Relocate NPL01
 - Change to 1.8 m dish
- Operate both TWSTFT stations

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