

## Report from NESC meeting on Thursday 18<sup>th</sup> November 2021

The NESC held a meeting on Thursday 18<sup>th</sup> November on Microsoft Teams with 22 participants online.

### *CPF and CRD v2*

**Randy Ricklefs** reported that the deadline for stations to use CPF v2 was extended to the end of the year. The CRD v2 deadline is also the end of the year. Randy said that stations need to submit data in the preferred CRDv2 format or risk their data not being picked up by users.

### *Meteorological Measurements / Travelling Barometer*

**Clément Courde** presented outstanding questions about the planning of the travelling Vaisala PTU303 barometer campaign. The visiting device needs to be mounted next to the station devices, which may be in separate locations inside or outside. Power will be needed to be supplied by the station. Options for downloading the data were discussed and it was agreed that having a number of options (web server, automatic, ftp, SD card) would work best. Stations will also be asked to record data at the telescope axis intersection reference point. Data from the visiting device and the station devices will need to be safely stored afterwards and where to store the data was discussed. Matt agreed to contact EDC to ask if we could use their server.

**Nils Raymond** presented slides on the planned design so far, which includes a BeagleBone PC, an enclosure and a power converter. Nils shared a data file to show the format and Matt said that the meta data must also be recorded so that it is known where exactly the data was taken at any point in time. Nils and Clément suggested sharing the final design, with instructions and software, to the ILRS community via the NESC forum. They are also testing a very cheap DPS310 barometer.

Wetzell will be the first station the package will visit and any instructions can be updated following this experience. Graz and Potsdam were possible early destinations after this.

### *Data accuracy analysis of Chinese SLR stations in the first half of 2021*

**Yong Huang** presented his analysis assessment of the accuracy of stations in the Chinese network. He used the ILRS orbit products ilrsb for Lageos 1 during 2021 to look at the range residuals and found that some stations performed well, but Changchun could have a time bias issue and Kunming a range bias issue. He plans to extend this work using LAGEOS 2 and the Etalon satellites.

### *A novel picosecond-precision event timing device for SLR by integrating with high-repetition-rate RGG*

**Wu Zhibo** presented the new design event timer and range gate generator in use at a number of Chinese stations operating high-repetition rate SLR. It also controls the laser, the detector, CCD

camera and performs backscatter avoidance. It has a timing precision of 8ps and gives an SLR calibration RMS of 5-6mm. The RGG has a 5ns resolution.

The presentation slides from the meeting will be available here  
[https://ilrs.gsfc.nasa.gov/network/newg/newg\\_activities.html](https://ilrs.gsfc.nasa.gov/network/newg/newg_activities.html)

The date for the next NESC meeting was set as **Thursday 20th January 2022 1400 UTC**

**If you missed the meeting** and would like to catch up, please send me an email ([matwi@nerc.ac.uk](mailto:matwi@nerc.ac.uk)) and I can provide the recording.