Report from NESC meeting on Thursday 8th June 2023

The NESC held a meeting on Thursday 8th June on Microsoft Teams with **30** participants online.

Amplitude Lasers for SLR

The NESC meeting welcomed guest speaker **Antoine Courjaud** from Amplitude (https://amplitude-laser.com) and he presented an overview of available lasers. Amplitude is a large company with 400+ employees and is based in France with other locations around the world. It specialises in ultrashort pulse laser technology and produces increasingly higher average power lasers. The laser product most suitable to SLR is the *Magma* range, which offers high energy, short pulses and high repetition rates. The laser pulses can also be synchronised with a common clock. Antoine presented some suitable laser specifications for SLR, LLR and debris systems. The SC discussed the large laser wavelength bandwidth of > 1nm, which would not be suitable for daylight SLR. Also discussed were high repetition rates, on-telescope mounting and the process of converting pulse lengths. Antoine can be contacted on antoine.courjaud@amplitude-laser.com.

Barometric Comparison Results from the 7105 GODL station

Van Husson talked about a new barometer installed at the Greenbelt NASA site, which is intended to travel to each site in the NASA SLR network, where comparisons will be made. The barometer is a Vaisala PTU303. All NASA SLR stations currently have a Paroscientific MET4 device. 6 days of data showed good agreement between the two devices.

Travelling Calibration Barometer

Nils Raymond reviewed the status and progress of the travelling barometer prototype under development at OCA. The instrument has protection from power interruption that will ensure all data collected is saved. A low cost DPS310 precision barometer is also included in the package. The device requires a plug-in ethernet connection (although this can be connected later, after data collection). Data is sent via email to a server that will upload the data to an archive on EDC. It was decided that this server would be hosted at OCA. An additional file called *stations.conf* is required for all datasets to record the corresponding location of the device. The final design will include a water tight fibreglass casing and a shipping container. A manual and clear instructions will need to be written.

Discussion on topics for upcoming ILRS Virtual Workshop

A virtual ILRS technical workshop is planned for October. All the details are to be determined, including the topics that the workshop will cover. The NESC was asked to suggest what topics the workshop should focus on. And any volunteers to help with the program and organisation should contact the ILRS CB.

The presentation slides from the meeting will be available here https://ilrs.gsfc.nasa.gov/network/newg/newg_activities.html

The date for the next NESC meeting was set as **Thursday 7th September at 1300 UTC**

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