

## Report from NESC meeting on Thursday 17th December 2020

The NESC held a meeting on Thursday 17th Dec on Microsoft Teams with 33 participants online.

**Clément Courde** presented a request for a Galileo campaign to support the GASTON investigation, which aims to use the atomic clocks onboard these GNSS satellites to look for dark matter passing the Earth. The campaign asks for continuous SLR tracking by at least one station to at least one Galileo satellite for a number of months. This represents a significant increase in tracking support. The NESC questioned Clément and discussed the needs of the mission in terms of orbital accuracy requirements and need for continuous tracking.

Comments will be summarised and feedback will be sent to the ILRS CB.

**Van Husson** presented the requirements for all stations to keep their *Station History Log* file up to date, which details all changes at the station over time. Not all stations are doing this as well as they should and as a result analysts cannot easily find the possible causes for any discrepancies in their time-series. Information on the Station History Logs can be found here

[https://ilrs.gsfc.nasa.gov/network/site\\_procedures/configuration\\_files.html](https://ilrs.gsfc.nasa.gov/network/site_procedures/configuration_files.html) And the files can be edited through the EDC website.

Van also set out common issues and best practices for station barometric measurements. These measurements are used to correct SLR ranges and so any errors or drifts in pressure accuracy impact our results directly. Recommendations included calibrations once a year and using a second barometer for regular comparisons.

This was followed by a presentation from **Wang Peiyuan** on the recent discovery of erroneous barometric measurements at the Graz station due to a faulty device. Erricos had alerted the Graz team to a bias and a trend in their most recent analysis results. A faulty met device was found by comparing the pressure values with those from a second device and to the local weather station values. A correction function has been calculated and new normal points and full-rate data files have been provided to the ILRS Data Centers.

Repeating a previous campaign of a travelling barometer that would visit SLR stations to compare the primary devices was discussed. It was suggested that the ILRS could mandate that stations operate two devices from two different manufacturers.

**Ulrich Schreiber** presented slides on the upcoming time transfer ACES mission. The Wettzell station has been approved to operate SLR to the ISS and Ulrich described the criteria that the station must meet in order to satisfy the eye-safety requirements. Other stations seeking approval to also track the ISS should contact Ulrich.

The presentation slides will be available here

[https://ilrs.gsfc.nasa.gov/network/newg/newg\\_activities.html](https://ilrs.gsfc.nasa.gov/network/newg/newg_activities.html)

**If you missed the meeting** and would like to catch up, please send me an email and I can provide the recording.