

Networks & Engineering SC

Report to the IWLR

Matthew Wilkinson

International Workshop On Laser Ranging, Guadalajara, Spain 2022

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- **Chair**

- Matthew Wilkinson, NERC Space Geodesy Facility, UK

- **Co-Chairs:**

- Clément Courde, Observatoire de la Côte d'Azur, France
 - You Zhao, National Astronomical Observatories, China

- Large email list of SC members

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- The NESC has continued to meet every 2 months virtually via Microsoft Teams.
- Approximately 40 attendees join the online meeting each time.
- The agenda for the meeting is shared in advance and NESC members are invited to contribute by presentation.
- I work with my co-Chairs to find items for the agenda and to invite speakers.

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- Here are some example contributions that were made to the NESC over the last year:
 - **Krzysztof Sośnica** presented an elevation dependent tropospheric bias estimation in orbit solutions.
 - **Michael Steindorfer** and **Daniel Kucharski** gave an update on the activities of the Space Debris SG.
 - The new station IZN-1, Tenerife was introduced by **Andrea Di Mira**.
 - **David Antal-Wokes** and **Sharon Sara Saji Mira** from Astroscale were invited to present an update on the ELSA-d space debris recovery demonstration mission.
 - **Ron Sigura**, CEO of GuideTech, was invited to speak to NESC about the available timing technologies from GuideTech that can be used in SLR.
 - **Daniel Hampf** presented the progress of the miniSLR system, which was recently officially accepted as an ILRS Engineering Station.
 - **David Arnold** discussed calculating the centre-of-mass offsets for the newly launched Lares-2 satellite, which are needed in precise orbit SLR analysis.

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- In addition, the NESC also:
 - Discussed the ILRS position on the Russian invasion of Ukraine. This followed statements for the IAG and ILRS.
 - Discussed the IRNSS tracking campaign in both design and results from the network efforts.
 - Discussed how to design and develop a travelling barometer that will visit every station in the ILRS network.

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- The NESC continues to operate an online forum.
- You are invited to join the forum and continue your conversations online.
- <http://sgf.rgo.ac.uk/forumNESC>



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- **NESC meeting:**

- The first in person meeting since 2019. Also accessible via Teams.
- Speakers invited to give their perspective on the challenges facing SLR. These included:
 - **Ivan Prochazka** - SLR Technology
 - **Frank Lemoine** - Geodesy and Earth Observation
 - **Graham Appleby** - SLR Analysis, Geodesy and Station Bias
 - **Adrien Bourgouin** - Lunar Laser Ranging
 - **Julien Chabé** - Atmospheric Delays
 - **Michael Steindorfer** - Debris Tracking
 - **Jan Kodet** – Timing and Time Transfer
- Thanks to all the speakers for contributing to the NESC meeting.
- Next meeting Thursday, February 2nd, 2023