UK Space Weather and Space Environment Meeting II

Programme

Thursday 12 September 2024

Time	Session
8:30 AM - 9:00 AM	Arrival Refreshments
9:00 AM - 10:00 AM (Room: Exeter Suite 2)	**Funding of UK Space Weather** STFC, Chloe Woodcock and Robert Fear (9:00 AM – 9:20 AM) NERC, Ian McCrea (9:20AM – 9:30 AM) TBC, (9:30 AM – 9:40 AM) DSTL, Jennifer O'Kane (9:40 AM – 9:50 AM) Panel and Q&A (9:50 AM – 10:00 AM)
10:00 AM - 10:30 AM (Room: Exeter Suite 2)	**Upcoming Missions for Space Weather Science** **Colin Forsyth: Invited Speaker (10:00 AM - 10:15 AM)** Unique global viewing of Earth's dynamic magnetosphere with the Solar wind – Magnetosphere – Ionosphere Link Explorer (SMILE) **Jennifer Carter: Invited Speaker (10:15 AM - 10:30 AM)** Elfen: A novel CubeSat to understand plasma composition upstream and downstream of the Earth
10:30 AM - 11:00 AM	Morning Break
11:00 AM - 12:00 PM (Room: Exeter Suite 2)	**Parallel 1E: Ground & Infrastructure** **Andy Smith (11:00 AM - 11:15 AM)** Evaluating Solar Wind-Driven ML Models of Ground Level Space Weather in the UK **Gemma Richardson: Invited Speaker (11:15 AM - 11:30 AM)** Modelling Geomagnetically Induced Currents in high voltage power networks in the UK and beyond **Mark Clilverd (11:30 AM - 11:45 AM)** The May 2024 'Gannon' G5 storm: The application of GIC mitigation during a very large geomagnetic disturbance **Michael Aspinall: Invited Speaker (11:45 AM - 12:00 PM)** Design and implementation of the United Kingdom's first operational ground level neutron monitor for four decades
11:00 AM - 12:00 PM (Room: County Suite)	**Parallel 2E: The Solar Wind and Coupling to the Magnetosphere** **Mike Heyns (11:00 AM - 11:15 AM)** Global Simulations for Space Weather Forecasting: GorgonOps Forecasting Suite **Alexandra Ruth Fogg: Invited Speaker (11:15 AM - 11:30 AM)** Extreme Space Weather in the Earth's Space Environment **Gemma Bower: Invited Speaker (11:30 AM - 11:45 AM)** Solar cycle and solar wind control of the occurrence of large dB/dt events **Hua-Liang Wei (11:45 AM - 12:00 PM)** Detecting Potential Drivers of Geomagnetic Activity Using Nonlinear System Identification and Machine Learning Techniques

12:00 PM - 1:00 PM (Room: Exeter Suite 2)	**Parallel 1F: SWIMMR Outputs** **Ian McCrea (12:00 PM - 12:15 PM)** R202R – SWIMMR model validation and international collaboration **Simon Machin (12:15 PM - 12:30 PM)** Capability development - Aligning to better meet user needs **Ben Clewer (12:30 PM - 12:45 PM)** SAIRA Atmospheric Radiation Monitors Delivered for SWIMMR **Matthew Allcock (12:45 PM - 1:00 PM)** Recommendations to policymakers to improve space weather resilience of UK critical national infrastructure (SWIMMR S6)
12:00 PM - 1:00 PM (Room: County Suite)	**Parallel 2F: Solar** **Marianna Korsos: Invited Speaker (12:00 PM - 12:15 PM)** Harmonising Long-Term and Short-Term Solar Flare Predictions **Rami Qahwaji (12:15 PM - 12:30 PM)** Improved 24/7 Solar Flares Prediction using Deep Learning and Data Fusion Techniques **Sarah Matthews: Invited Speaker (12:30 PM - 12:45 PM)** Solar explosive energy release – what we still don't know and why we need to know it **Amrita Prasad (12:45 PM - 1:00 PM)** Solar Cycle 25: Forecasts vs. Reality – A Mid-Cycle Check-In
1:00 PM - 2:00 PM	Lunch
2:00 PM - 3:00 PM (Room: Exeter Suite 2)	**Parallel 1G: Instrumentation and Data** **Shane Maloney (2:00 PM - 2:15 PM)** SolarMonitor 2.0 **Jonathan Eastwood (2:15 PM - 2:30 PM)** Development of the MAGIC minaturized magnetometer sensor for measurements in low Earth orbit, cis-lunar space, and the upstream solar wind beyond L1 **Supriya Chakrabarti (2:30 PM - 2:45 PM)** A new technique designed to obtain ionospheric parameters from Very Low Earth Orbit (VLEO) **Neil Rogers (2:45 PM - 3:00 PM)** Near-real-time riometer measurements for nowcasting High Frequency radio wave absorption
2:00 PM - 3:00 PM (Room: County Suite)	**Parallel 2G: The Radiation Belts** **Richard Boynton (2:00 PM - 2:15 PM)** A system identification approach to modelling the electrons in the radiation belts measured by POES **Frances Staples: Invited Speaker (2:15 PM - 2:30 PM)** Evaluating the Performance of a Real-Time Electron Radiation Belt Specification Model **Peter Kirsch (2:30 PM - 2:45 PM)** From Research to Operation: Development of the SWIMMR N1 Radiation Belt Forecasts **Richard Horne (2:45 PM - 3:00 PM)** May 2024 magnetic storm: A comparison between radiation belt models and observations

3:00 PM - 3:30 PM	Afternoon Break
3:30 PM - 4:00 PM (Room: Exeter Suite 2)	Community Discussion: Next Steps for the UKSWSE Meeting
4:00 PM - 5:00 PM (Room: Exeter Suite 2)	Community Discussion: The Future of Space Weather in the UK and the Wider Community Ian McCrea (4:00 PM - 4:10 PM) SWIMMR Retrospective - The Good, the Bad and the Ugly Ian McCrea (4:10 PM - 4:20 PM) What might happen next? SWIMMR, SWOPPER and the NSS Panel Discussion (4:20 PM – 5:00 PM)
5:00 PM - 5:30 PM (Room: Exeter Suite 2)	Conference Close