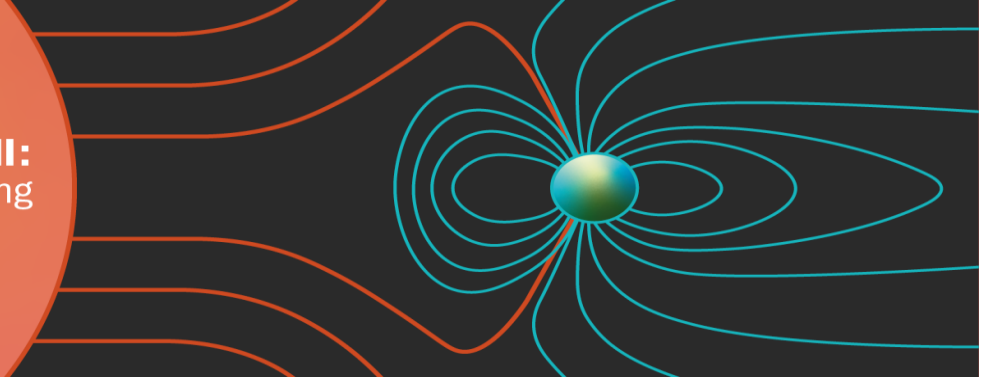
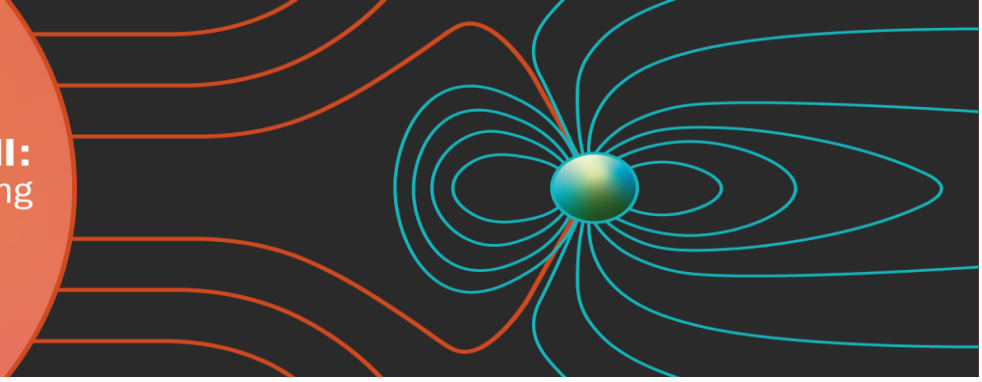
UK Space Weather and Space Environment Meeting III:
Global Challenges in Understanding the Space Environment & Space Weather at Solar Maximum



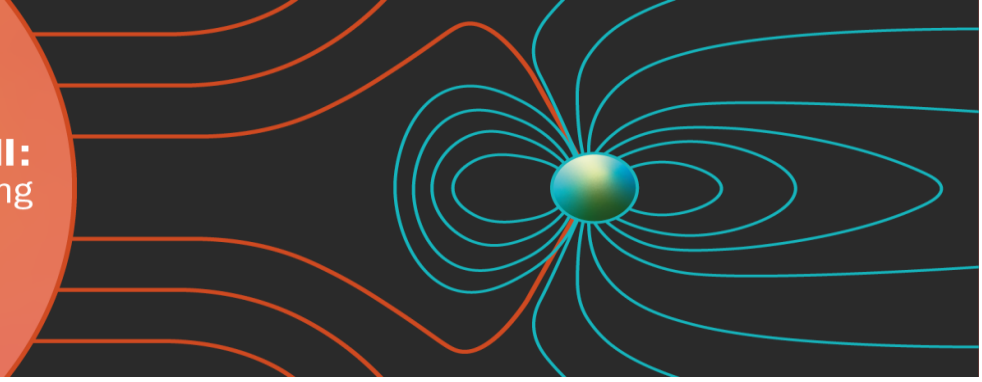
Programme Wednesday 10 September

8:45 AM - 10:00 AM	**Plenary Session 5: Missions** (Room: Main Hall) **8:45 AM Craig DeForest (Invited Speaker):** Tracking Space Weather with NASA's Polarimeter to UNify the Corona and Heliosphere (PUNCH) **9:00 AM Jorge Amaya:** A new mission to the far side of the Sun to improve space weather science and operations **9:15 AM Jonathan Eastwood (Invited Speaker):** HENON: The heliospheric pioneer for solar and interplanetary threats defence **9:30 AM Maria Federica Marcucci (Invited Speaker):** The ESA M7 Plasma Observatory mission and its impact for the space weather science **9:45 AM Ian Mann (Invited Speaker):** Investigating Space Radiation and Atmospheric Climate Impacts with the Canadian RADICALS Mission	
10:00 AM - 11:00 AM	**Parallel Session 1A: Forecasting Tools and Techniques** (Room: Main Hall) **10:00 AM Martin Archer:** First detection of field-aligned currents using engineering magnetometers from the OneWeb mega-constellation **10:15 AM Richard Boynton (Invited Speaker):** Assessing the performance of the NARMAX models developed for the SWIMMR SatRisk project **10:30 AM Paloma Jol:** Flare forecasting using Fully Convolutional Networks to gain insight into sunspot evolution **10:45 AM Peter Gallagher (Invited Speaker):** Solar Activity and Space Weather Monitoring at Radio Frequencies	**Parallel Session 1B: Ionosphere** (Room: Old Banqueting Hall) **10:00 AM Susanna Bekker:** Assessment of Vertical Redistribution of Electron Density in the Ionosphere During an X-Class Solar Flare Using GNSS Data **10:15 AM Emma-Claire Gurney:** Evaluating Ionospheric Model Performance at Mid- and High-Latitudes Using Long-Term Ionosonde Observations from 1950 – 2022 **10:30 AM Sam Lo (Invited Speaker):** Ionospheric effects on GNSS Investigated Using the EISCAT/ESR Radars **10:45 AM Gareth Chisham (Invited Speaker):** Can we use measurements of ionospheric vorticity to improve the representation of meso-scale ionospheric plasma flows in space weather models?
11:00 AM - 11:30 AM	**Morning Break** (Room: Hadfield Hall)	

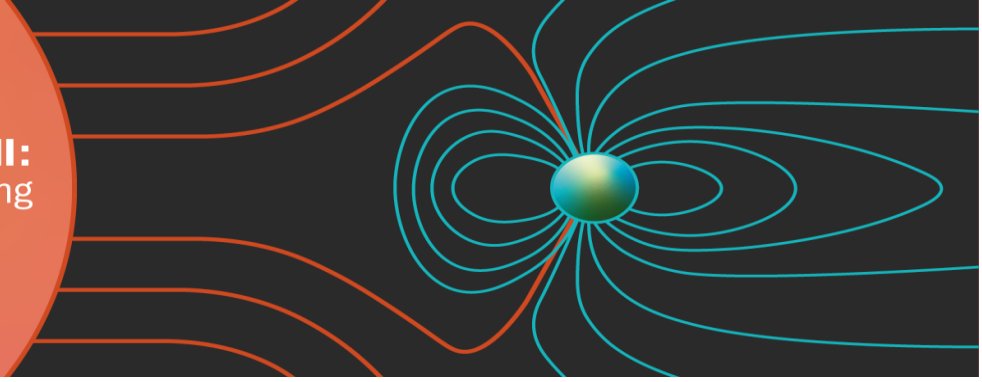


11:30 AM - 1:00 PM	**Parallel Session 2A: Space Weather Modelling and Computational Techniques** (Room: Main Hall) **11:30 AM Ping Li**: Modelling and Prediction of Electron Fluxes with NARMAX Approach Using Data Set with Missing Data Points **11:40 AM Prateek Mayank**: Next-Generation MHD Modeling of Solar Wind Using Neural Operators **11:50 AM Helen Norman**: Investigating the Structure of Magnetised Coronal Mass Ejection models **12:00 PM Benjamin Reid**: A Simple Method To Forecast The Ionosphere Using Effective Geophysical Indices **12:10 PM Tom Daggitt (Invited Speaker)**: Reproducing ultra-relativistic electron acceleration using a coupled density and radiation belt model **12:20 PM Panel Session**	**Parallel Session 2B: GICs** (Room: Old Banqueting Hall) **11:30 AM Daniel Mac Manus (Invited Speaker)**: Space Weather risk to New Zealand: the Solar Tsunami research programme **11:40 AM Andrew Smith:** Understanding and Modelling the Geomagnetically Induced Currents caused by Sudden Commencements **11:50 AM Gemma Bower**: Interhemispheric observations of geomagnetic disturbances **12:00 PM Rosie Hodnett (Invited Speaker)**: Omega bands as a source of large dB/dt in the dawn sector **12:10 PM Samuel Fielding (Invited Speaker)**: Improving nowcasts and forecasts of geomagnetically induced currents through analysis of ground-level magnetic field perturbations **12:20 PM Panel Session**
1:00 PM - 2:00 PM	**Lunch** (Room: Hadfield Hall)	
1:30 PM - 1:50 PM	**MIST/UKSP Lunch Session** (Room: Main Hall)	

UK Space Weather and Space Environment Meeting III:
Global Challenges in Understanding the Space Environment & Space Weather at Solar Maximum



2:00 PM - 3:00 PM	**Parallel Session 3A: Solar & Heliospheric Forecasting I** (Room: Main Hall) **2:00 PM Steph Yardley (Invited Speaker)**: Solar Orbiter & Parker Solar Probe: Multi-viewpoint messengers of the inner heliosphere **2:15 PM Matthew Billcliff (Invited Speaker)**: Extended Lead-Time Geomagnetic Storm Forecasting with Solar wind Ensembles and Machine Learning **2:30 PM Daria Shukhobodskaia**: Enhancing Space Weather Forecasting with Solar Orbiter Observations **2:45 PM Rami Qahwaji**: Cross-Dataset Solar Flare Forecasting: Combining GOES X-ray and SHARP Magnetic Parameters for Improved LSTM Predictions	**Parallel Session 3B: Remote Sensing and Sun-Earth** (Room: Old Banqueting Hall) **2:00 PM Luke Nugent:** Low-latitude scintillation forecasting using a proxy for vertical plasma drift at the magnetic equator: a comparison of forecasting skill for different physics-based ionospheric models **2:15 PM Alan Wood**: Dynamic Ionospheric Notifications for Operations and Scheduling (DINOS): Using Ionospheric Observations to Support LOFAR2.0 Operations **2:30 PM Aisling O'Hare**: Quasi-Periodic Pulsations in TEC Measurements Synchronised with Solar Flare EUV Emission **2:45 PM Bernard Jackson**: World-Wide Interplanetary Scintillation Stations (WIPSS) Analysis used with Thomson Scattering Brightness
3:00 PM - 3:30 PM	**Lightning Talks 2** (Room: Main Hall) Each talk lasts 2 minutes **1 Lucie Green**: Bayesian Inference for Automated 3D CME Characterization and Uncertainty Quantification **2 Jithu Jose Athalathil**: Investigating Nonlinear Quenching Effects on Polar Field Buildup Using Physics-Informed Neural Networks **3 Delores Knipp**: Mid-latitude Geomagnetically Induced Currents as a Manifestation of Penetrating Electric Fields **4 Timo Laitinen**: Multi-point Solar Energetic Particle observations and space weather forecasting **5 Emily Mottram**: Probing the characteristics of a pre-eruptive flux rope using novel techniques **6 Sirsha Nandy**: Solar Wind Density Pulse Effects on the Ionospheric Electrodynamics Under Variable IMF Orientations **7 Yiwei Ni**: Unravelling Filament Barb Dynamics through Pseudo-3D Hydrodynamic Simulations **8 Louisa Prattley**: Number Eight Wire: Building New Zealand's Approach to Managing Space Weather Risk **9 Ian Richardson**: Coronal Mass Ejections Associated with Solar Energetic Particle Events Observed in the Low Corona by the Mauna Loa Solar Observatory	



	10 David R. Themens: Statistical modelling of high latitude Sporadic-E climatology: A Sporadic-E module for E-CHAIM **11 Bhagyashree Waghule**: Very Near-Earth Reconnection (VNERX) and its connection to the 30A GIC spike in the Eastern US **12 Samuel Wharton**: Measuring the Magnetopause Position with SMILE-SXI
3:30 PM - 5:30 PM	**Poster Presentations and Afternoon Break** (Room: Hadfield Hall)
6:00 PM - 10:00 PM	**Drinks Reception** (Room: Hadfield Hall) **Conference Dinner** (Rooms: Drawing and Reception)