

# The Global Response of the Terrestrial Magnetosphere during Storms and Substorms: Specialist Discussion Meeting Programme

|              |                                 |   |
|--------------|---------------------------------|---|
| <b>10:00</b> | <b>Coffee</b>                   |   |
|              | <b>Session 1</b>                | Chaired by Clare Watt   |
| <b>10:30</b> | <i>Elena Kronberg (invited)</i> | <i>Circulation of Heavy Ions and Their Impact on Magnetic Storms and Substorms</i>  |
| <b>11:00</b> | Sandra Chapman                  | Solar Cycle Dependence of Extreme Space Weather   |
| <b>11:15</b> | Andrei Samsonov                 | Variations of Solar Wind Parameters, Earth's Magnetospheric Size and Geomagnetic Activity over the Last Five Solar Cycles |
| <b>11:30</b> | Joseph Eggington                | Time-Varying Magnetopause Reconnection During Sudden Storm Commencement: Global MHD Simulations                           |
| <b>11:45</b> | Robert Shore                    | Comparing the Geomagnetic Precursors of Sawtooths and Substorms   |
| <b>12:00</b> | Steve Milan                     | Substorm Onset Latitude and the Steadiness of Magnetospheric Convection   |
| <b>12:15</b> | Lauren Orr                      | Directed Network of Substorms from SuperMAG Ground-based Magnetometer Data  |
| <b>12:30</b> | <b>Lunch</b>                    |   |
|              | <b>Session 2</b>                | Chaired by Maria-Theresia Walach  |
| <b>13:15</b> | John Coxon                      | Tailward Propagation of Magnetic Energy Density Variations With Respect to Substorm Onset Times                           |
| <b>13:30</b> | Richard Horne                   | Effects of Multiple Substorms on the Radiation Belts During a Fast Solar Wind Stream Event                                |
| <b>13:45</b> | Harneet Sangha                  | Bifurcating Region 2 Currents and Sub-Auroral Polarization Streams  |
| <b>14:00</b> | Martin Archer                   | Long-lasting Decreasing-frequency Poloidal Field Line Resonances Following Geomagnetic Storms                             |
| <b>14:15</b> | <b>Discussion</b>               |   |
| <b>15:00</b> | <b>Poster Session</b>           |   |
|              | Tea served at 15:30             |   |

## Poster Presentations

|                       |   |
|-----------------------|---|
| Hayley Allison        | Rebuilding the Earth's Electron Radiation Belts Following the 17 March 2013 Flux Drop-out Event   |
| Sarah Bentley         | Upper Bounds on the Wave Power Driving Radial Transport of Electrons in Earth's Radiation Belts   |
| Aisling Bergin        | Observational Constraints on the Distribution Long-tail for F10.7 and Geomagnetic Indices over the Last 5 Solar Maxima                      |
| Téo Bloch             | Towards the Objective Classification of Coronal Hole and Streamer Belt Solar Wind   |
| Yulia Bogdanova       | Comparison of the Most Intense Storms and Substorm Periods Since Year 2000  |
| Ravindra Tobias Desai | The role of Global MHD and Integrated Radiation Belt Models in Simulating Extreme Space Weather Events                                      |
| Colin Forsyth         | The Global Response of the Radiation Belts to Substorms   |
| Heather McCreadie     | Autonomous Curve Fitting of the Dst index during Geomagnetic Storms   |
| Lars Mejnertsen       | Determining the Effect of Carrington-level Events at the Earth's Magnetosphere using Global MHD Simulations                                 |
| Michaela Mooney       | Evaluating Auroral Forecasts Against Satellite Observations   |
| Michaela Mooney       | Examining Local Time Variations in the Gains and Losses of Open Magnetic Flux During Substorms  |
| Jonathan Rae          | Why are Storm-time ULF Waves Special?   |
| Neil Rogers           | Ionospheric and Magnetospheric Drivers of Extreme Geomagnetic Field Fluctuations  |
| John Ross             | On Electron Flux Decay in the Slot Region after Geomagnetic Storms  |
| Jasmine Kaur Sandhu   | The Variability in Substorm – Ring Current Coupling   |
| Andy Smith            | In situ Observations of Magnetotail Plasma Waves at Substorm Onset  |
| Frances Staples       | Estimating the Global Scale Response of the Magnetopause During Storm-times   |
| Rhys Thompson         | Characterising the Distribution of Uncertainty in Deterministic Radial Diffusion Coefficient Models During Geomagnetic Storms and Substorms |
| Maria-Theresia Walach | SuperDARN Observations During Geomagnetic Storms and Enhanced Solar Wind Driving  |