

RAS Specialist Discussion Meeting - Friday, 10 March
High-Latitude Magnetospheres: Earth, Jupiter, and Saturn

Location: RAS, Burlington House

10:00 **Coffee / Welcome**

Morning Session (10:30 - 12:00) - Chair: Sarah Badman

10:30 **Bob Ergun (CU-Boulder / LASP)**

Physical processes of the aurora at Jupiter and Earth: Similarities and differences (invited)

11:00 **Jonathan Nichols (Univ. of Leicester)**

Response of Jupiter's auroras to conditions in the interplanetary medium as measured by the Hubble Space Telescope and Juno

11:15 **Rosie Johnson (Univ. of Leicester)**

Jupiter's polar ionospheric flows: high resolution mapping of spectral intensity and line-of-sight velocity of H_3^+ ions

11:30 **Becky Gray (Lancaster Univ.)**

Comparison of UV and X-Ray auroral flares

11:45 **Rob Fear (Univ. Southampton)**

How much flux does a flux transfer event transfer?

12:00 **LUNCH & POSTERS**

You are welcome to eat your lunch in the library and take the opportunity to peruse the posters

Afternoon Session (13:00 - 14:30) - Chair: Jonathan Nichols

13:00 **Emma Bunce (Univ. of Leicester)**

MI coupling and aurora at Saturn (and Jupiter) (invited)

13:30 **Colin Forsyth (UCL/MSSL)**

When are FACs not facts: Testing single spacecraft assumptions with Swarm

13:45 **Julia Stawarz (Imperial College)**

Field-aligned Poynting flux in Earth's magnetotail

14:00 **Ewen Davies (Imperial College)**

Swept forward magnetic field variability in high latitude regions of Saturn's magnetosphere

14:15 **Emma Woodfield (British Antarctic Survey)**

Wave-Particle interactions with energetic electrons at Earth, Jupiter and Saturn

Posters & Discussion (14:30 - 15:30) - Chair: Jonathan Nichols

John Coxon (Univ. Southampton)

Energy accumulation, storage and release in the Earth's magnetotail lobes across the substorm cycle

Will Dunn (UCL/MSSL)

The Auroral Dynamic Duo: Jupiter's independently pulsating X-ray hot spots

Andrew Fazakerley (UCL/MSSL)

Cluster dual-spacecraft observations of Kinetic Alfvén Waves in the Plasma Sheet Boundary Layer

Patrick Guio (UCL)

Charged particle dynamics in a magnetodisc field structure

Greg Hunt (Imperial College)

Saturn's field-aligned currents: The roles of plasma angular velocity and effective Pedersen conductivity

Joe Kinrade (Lancaster Univ.)

Rotational modulation of Saturn's UV auroras in 2014

Joe Reed (Univ. Southampton)

Low Frequency Extensions of the Saturn Kilometric Radiation as a proxy for magnetospheric dynamics

Arianna Sorba (UCL)

Modelling the compressibility of Saturn's magnetosphere in response to internal and external influences

Tea & Coffee (15:30 - 16:00) - Geological Society, Burlington House

RAS Ordinary Meeting (16:00 - 18:00)

Dr John Armitage: *Can variations in the Earth's orbit create stratigraphic sequences?*

Ms Jane MacArthur: *The first regolith breccia meteorite from Mars*

Prof. Kathryn Johnston (Eddington Lecture): *Physical Manifestations of Evolution, Regularity and Chaos In and Around Our Galaxy?*