

Ground effects of severe space weather events**

Royal Astronomical Society specialist discussion meeting

Date: March 9th 2018

Time: 10:30 - 15:30 GMT

Location: The Royal Astronomical Society, Burlington House, LONDON, W1J 0BQ

As a society, we are reliant on continuously available electricity supplies and technologies such as satellite communications in order to function safely and efficiently. However, this dependence increases our exposure to impacts from so-called severe space weather events. Space weather is usually defined as the response of Earth's magnetosphere and ionosphere to sudden rapid changes in the properties of the solar wind such as increases in speed, density and magnetic field strength. These changes in the magnetosphere and ionosphere cause the magnetic field at the Earth's surface to vary rapidly giving rise to geomagnetically induced currents (GICs) which can flow through conductive grounded equipment, such as high-voltage transformers, affecting the reliability of electricity supplies. As well as the impact on electricity grids, space weather events also have significant effects on HF radio propagation and GPS signals affecting the safe operation of aircraft and transport systems. Other unwanted effects are corrosion in pipelines and the potential for signalling or other faults to develop in rail networks.

This specialist discussion meeting will discuss the latest research on understanding and ameliorating these impacts in light of recent developments in the field. We invite contributions from academic and industry researchers, and relevant end users who are impacted by space weather events, with particular emphasis on research relevant to the UK.

Registration and abstract submission for the meeting is through the web-form below. The abstract deadline is 16th February 2018.

Please register and submit abstracts at the following link: [_https://tinyurl.com/RAS-GESSW_](https://tinyurl.com/RAS-GESSW)

Meeting Fee: £15, £5 for students, free for RAS fellows, payable on arrival.

Organisers:

Ciaran Beggan (_ciar@bgs.ac.uk_ <<mailto:ciar@bgs.ac.uk>>)

Jim Wild (_j.wild@lancaster.ac.uk_ <<mailto:j.wild@lancaster.ac.uk>>)

Mark Gibbs (_mark.gibbs@metoffice.gov.uk_ <<mailto:mark.gibbs@metoffice.gov.uk>>)