



## RSPR seminars

# Dr. Colin Forsyth

## UCL/MSSL

### “Magnetosphere-Ionosphere Coupling Observations at Earth: FACs and Alternative FACs”

Field-aligned currents (FACs), also known as Birkeland currents, are the agents by which energy and momentum is transferred to the ionosphere from the magnetosphere and solar wind. On a large-scale, FACs tend to be controlled by the global dynamics of this highly coupled system, but at a small-scale this coupling may be more complex. Estimates of FACs largely come from the application of Ampere’s Law to measurements of magnetic field perturbations taken by polar orbiting spacecraft. In this talk, I will present results from the AMPERE dataset that show the controlling factors of different parts of the large-scale current systems during periods of enhanced geomagnetic activity (substorms). Using data from the Swarm mission, I will also show that FACs and not always FACs...



**Wednesday, February 22<sup>nd</sup> at 2 pm in Physics LTD**