

## **Characteristics of travelling ionospheric disturbances observed by SuperDARN during various levels of geomagnetic activity**

Adrian Grocott<sup>1,2</sup>, Steve Milan<sup>1</sup>, Natsuo Sato<sup>2</sup>, Sessai Yukimatu<sup>2</sup>

<sup>1</sup>*Department of Physics and Astronomy, University of Leicester, Leicester, LE1 7RH, U.K.*

<sup>2</sup>*National Institute of Polar Research, 10-3 Midoricho, Tachikawa, 190-8518, Tokyo, Japan*

We present a survey of travelling ionospheric disturbances (TIDs) observed by the Falkland Islands radar (FIR) during a 12 month period between May 2010 and April 2011. Statistics of the FIR ground backscatter, in which the signatures of TIDs are manifest, will be presented along with an analysis of the TID frequency and propagation characteristics. These results will be discussed in terms of seasonal and diurnal variations as well as their relationship to the local topography and large-scale geomagnetic activity. A number of detailed case studies will also be presented in which the TID activity is compared to concurrent solar wind driving parameters and auroral ionospheric electrodynamics.