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Statistical Analysis of Outer Electron Radiation Belt Dropouts: Geosynchronous and Low Earth Orbit Responses During Stream Interfaces

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The OMNI-2 data set enables a correlation study of solar wind and geomagnetic parameters, allowing the stream Interfaces events (SIs) to be examined. A superposed epoch analysis of these events was performed to determine the threshold levels of IMF Bz and other geophysical parameters. Based on energy, temporal and spatial characteristics, statistical analysis of electron flux data from LANL-SOPA and NOAA-POES satellites were used to study outer zone electron dropouts and precipitation. The deepest minimum of electron flux was observed after the impact of a SI, which coincided with the time of slower-decaying peak of electron precipitation. Results suggest that the mechanism causing the precipitation could also be responsible for the observed electron flux dropout during Stream Interference.

**Level (Hons, MSc,
 PhD, other)?**

MSc.

**Consider for a student
 award (Yes / No)?**

YES

**Would you like to
 submit a short paper
 for the Conference
 Proceedings (Yes / No)?**

Yes

Primary author: Mr OGUNJOBI, Olakunle (University of KwaZulu-Natal)

Co-authors: Dr COLLIER, A. B (Hermanus Magnetic Observatory); Dr RODGER, C. J. (University of Otago, New Zealand)

Presenter: Mr OGUNJOBI, Olakunle (University of KwaZulu-Natal)

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