



Contribution ID: 150

Type: Oral Presentation

Characterization of TRINNI events

Wednesday, 10 July 2013 14:30 (20 minutes)

Abstract content
 (Max 300 words)

“Tailward reconnection for interplanetary magnetic field (IMF) northward, non-substorm intervals (TRINNIs)”, is a term which was introduced by Milan et al. [2005], to describe the events when ionospheric flow bursts, with speeds usually greater than 1 km/s, are observed during extended non-substorm periods of quasi-steady northward interplanetary magnetic field. The first such event, though not identified as a TRINNI then, was reported by Walker et al. [1998, 2002]. This event was characterized by quasi-periodic plasma flow bursts, with speeds above 2 km/s corresponding to electric fields in excess of 0.1 V/m, in the nightside ionosphere during an extended extremely quiet solar wind period, from 8 March to 10 March 1997. Following the reports on this event, Grocott et al. [2003, 2004, 2005, 2007] performed a series of analyses on similar events using data for the northern hemisphere. However, the individual events analysed differed significantly from each other, especially in terms of the magnitude of the IMF and its components, as well as the direction of the By component. This led to varying suggestions regarding how the various components of the IMF contribute to the formation of a TRINNI. We attempt to clarify the properties that constitute a TRINNI event.

Apply to be
 considered for a student
 award (Yes / No)?

Yes

Level for award
 (Hons, MSc,
 PhD)?

PhD

Main supervisor (name and email)
and his / her institution

Dr. Heather McCreddie, mcreddie@ukzn.ac.za, School of Chemistry and Physics, University of KwaZulu-Natal

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

Yes

Primary author: Mr GARAPO, Kevin (School of Chemistry and Physics, University of KwaZulu-Natal, Westville)

Co-authors: Dr MCCREADIE, Heather (School of Chemistry and Physics, University of KwaZulu-Natal); Prof. RASH, Jon (School of Chemistry and Physics, University of KwaZulu-Natal)

Presenter: Mr GARAPO, Kevin (School of Chemistry and Physics, University of KwaZulu-Natal, Westville)

Session Classification: Space Science

Track Classification: Track D2 - Space Science