



Contribution ID : 924

Type : **Poster**

Upstream events and recurrent CIR-accelerated particle events observed by Stereo/SEPT

Wednesday, 4 July 2007 14:45 (0:00)

Abstract content

The twin observatories of the STEREO mission, launched on October 25, 2006, will perform comprehensive studies of Coronal Mass Ejections (CMEs) directed towards Earth from two vantage points which allow stereoscopic remote observations of CMEs and multi-point in-situ measurements of their interplanetary counterparts (ICMEs). The Solar Electron and Proton Telescope (SEPT), part of the IMPACT investigation onboard STEREO, is designed to measure energetic electrons from 30 to 400 keV and protons from 60 to 7000 keV. After successful commissioning, SEPT started its scientific observations in mid December 2006. During January and February 2007, the solar activity was very low, and only three small solar energetic electron events were observed by SEPT on January 23-24. Under these extremely quiet conditions, the enhancements of energetic proton fluxes are characterized by series of low energy (<1 MeV) bursts originating in the Earth's magnetosphere or the bow shock (upstream events) and by recurrent, several days long enhancements associated with corotating interaction regions (CIRs). During this period, two different high speed solar wind streams originating in coronal holes were present, and both of them produced recurrent series of energetic proton events. The first sequence of events was observed by SEPT in correlation with solar wind stream interfaces on January 1-2, January 29, and February 26. The second series was correlated with stream interfaces observed on January 15 and February 12. Multi-spacecraft observations of time-intensity histories and energy spectra during the events are presented and discussed.

If this papers is presented for a collaboration, please specify the collaboration

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 1 (SH), pages 371-374

Primary author(s) : Mr. MÜLLER-MELLIN, Reinhold (University of Kiel)

Co-author(s) : Dr. GÓMEZ-HERRERO, Raul (University of Kiel); Dr. BÖTTCHER, Stephan (University of Kiel); Dr. KLASSEN, Andreas (University of Kiel); Prof. HEBER, Bernd (University

of Kiel); Prof. WIMMER-SCHWEINGRUBER, Robert (University of Kiel); Dr. DUVET, Ludovic (ESA/ESTEC); Dr. SANDERSON, Trevor R. (ESA/ESTEC)

Presenter(s) : Mr. MÜLLER-MELLIN, Reinhold (University of Kiel)

Session Classification : Posters 1 + Coffee

Track Classification : SH.2.2