

The May 17, 2012 solar event: back-tracing analysis and flux reconstruction with PAMELA

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The PAMELA space experiment is providing first direct observations of Solar Energetic Particles (SEPs) with energies from about 80 MeV to several GeV in near-Earth orbit, bridging the low energy measurements by other spacecrafts and the Ground Level Enhancement (GLE) data by the worldwide network of neutron monitors. Its unique observational capabilities include the possibility of measuring the flux angular distribution and thus investigating possible anisotropies associated to SEP events. The analysis is supported by an accurate back-tracing simulation based on a realistic description of the Earth's magnetosphere, which is exploited to estimate the SEP energy spectra as a function of the asymptotic direction of arrival with respect to the Interplanetary Magnetic Field (IMF). In this work we report the results for the May 17, 2012 event.

Presentation type

Section talk (10+5 min)

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