

Abstract Submitted
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Solar Energetic Particle Spectra Measured with PAMELA¹

JAMES RYAN, Univ of New Hampshire, ALESSANDRO BRUNO, University of Bari, MIRKO BOEZIO, INFN, Sezione di Trieste, ULISSE BRAVAR, Univ of New Hampshire, ERIC CHRISTIAN, DE NOLFO GEORGIA, NASA/Goddard Space Flight Center, MATTEO MARTUCCI, MATTEO MERGE, University of Rome Tor Vergata, RICCARDO MUNINI, INFN, Sezione di Trieste, ROBERTA SPARVOLI, University of Rome Tor Vergata, STEVEN STOCHAJ, New Mexico State University, PAMELA COLLABORATION — We have measured the event integrated spectra from several SEP events from 2006 to 2014 in the energy range starting at 80 MeV and extending well above the neutron monitor threshold. The PAMELA instrument is in a high inclination, low Earth orbit and has access to SEPs when at high geographic latitudes. This means that the spectra have been assembled from regularly spaced measurements with gaps during the course of the event. Furthermore, the field of view of PAMELA is small and during the high latitude passes it scans a wide range of asymptotic directions as the spacecraft moves. Correcting for data gaps and solid angle effects, we have compiled event-integrated intensity spectra that typically exhibit power law shapes in energy with an exponential roll over. The events analyzed include two, maybe three, GLEs. In those cases the roll over energy lies above the neutron monitor threshold (1 GV) while the others are lower. We see no qualitative difference between the spectra of GLE vs. non-GLE events.

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