

# **Radiation Environment Measurements from SOHO/ERNE during the Solar Cycle 23**

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During its ten years of operation ERNE particle instrument (the Energetic and Relativistic Nuclei and Electron experiment) onboard the Solar Heliospheric Observatory (SOHO) has measured a large number of solar energetic particle (SEP) events. These unpredictable and highly variable bursts of high-energy particles are a major concern for space-systems as they cause both short-term and long-term damage to microelectronics and other satellite parts. We present our results from a survey, in which we studied proton, He and heavy ion (O, Fe and few others) fluencies for several events of different sizes in the energy range from 2 MeV/nucleon to few hundreds of MeV/nucleon. We were also able to study evolution of particle fluxes during some of the events, thanks to large geometric factors of two ERNE's particle telescopes. Linear energy transfer (LET) spectra were measured using one of the seven detector layers of the High Energy Detector (HED).