

Relativistic Electron Precipitation Detections with CALET on the International Space Station

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The CALorimetric Electron Telescope (CALET) is a high-energy astroparticle experiment installed on the International Space Station and operating since October 2015. While conceived for the investigation of the origin and the propagation of galactic cosmic-rays, CALET has been also providing a continuous monitoring of space weather phenomena in the near-Earth environment, including solar energetic particle and relativistic electron precipitation (REP) events. In particular, the low-Earth orbit detections from CALET complement the equatorial observations made by other spacecraft at higher altitudes, such as the twin Van Allen Probes, enabling a more complete picture of energetic electron precipitation and its contribution to the radiation belt dynamics. In this work we present the preliminary results obtained over a four-year (2015-2019) acquisition time.

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