Contribution ID : **769** Type : **Poster**

CALET measurements of cosmic ray electrons in the heliosphere

Monday, 9 July 2007 14:45 (0:00)

Abstract content

We have proposed the CALET(CALorimetric Electron Telescope) mission to observe galactic electrons and gamma rays on ISS/JEM. In this paper we present the measurements of long-term and short-term variations of electron intensities in the helisphere. Galactic electrons of 1-100GeV energy range mostly have negative charges and the spectrum largely varies with solar activities. Thus we expect the knowledge about the diffusion coefficient of cosmic rays and analyses with the neutron monitor data will inspect the effectiveness of modulation models or the charge sign dependence of modulation. We also schedule the measurements of Forbush decreases(Fds). The large geometric factor for CALET can compensate the low intensity of electrons and will make the first detection by negative particles. The ISS orbit severely restrict lower energy measurements, so that we estimate in detail the variation of geomagnetic cut-off rigidity.

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

for the CALET 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 441-444

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Session Classification : Posters 3 + Coffee

Track Classification : SH.3.1