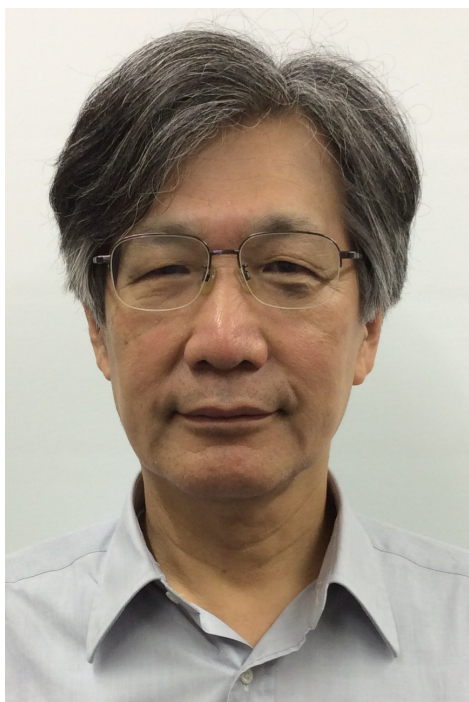


Preliminary status of the CALET observations



Shoji Torii
(RISE, Waseda University)

Wednesday, 23rd Mar, 17:00-
KMI Science Symposia (ES635)

Abstract:

The CALorimetric Electron Telescope (CALET) space experiment, which has been developed by Japan in collaboration with Italy and the United States, is a high-energy astroparticle physics mission to be installed on the International Space Station (ISS). The primary goals of the CALET mission include investigating possible nearby sources of high energy electrons, studying the details of galactic particle propagation and searching for dark matter signatures. During a two-year mission, extendable to five years, the CALET experiment will measure the flux of cosmic-ray electrons (including positrons) to 20 TeV, gamma-rays to 10 TeV and nuclei with $Z=1$ to 40 up to several 100 TeV. The instrument consists of two layers of segmented plastic scintillators for the cosmic-ray charge identification (CHD), a 3 radiation length thick tungsten-scintillating fiber imaging calorimeter (IMC) and a 27 radiation length thick lead-tungstate calorimeter (TASC). CALET has sufficient depth, imaging capabilities and excellent energy resolution to allow for a clear separation between hadrons and electrons and between charged particles and gamma rays. The instrument was launched on Aug. 19, 2015 to the ISS with HTV-5 (H-II Transfer Vehicle 5) and was successfully berthed to the Japanese Experiment Module-Exposure Facility (JEM-EF). After a functional check-out phase until the beginning of October, it started an initial operation phase which was completed on Nov. 17, whence it began its standard operation phase. This paper will review the preliminary status of the CALET observations.