

Invited talk: Status of the CALorimetric Electron Telescope on the International Space Station

Friday, 30 October 2015 11:15 (30 minutes)

The CALorimetric Electron Telescope (CALET) space experiment, which had been developed by Japan in collaboration with Italy and the United States, is a high-energy astroparticle physics mission 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 to 1000 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 payload is being prepared for launch on Aug. 16th, 2015 to the ISS with HTV-5 (H-II Transfer Vehicle5) and installed on the Japanese Experiment Module-Exposed Facility (JEM-EF). We will have the first report of the CALET observations on the ISS.

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