

The CALorimetric Electron Telescope (CALET): in-flight performance and preliminary results.

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The CALorimetric Electron Telescope (CALET) on the International Space Station is an experiment aimed at precise measurements of the various components of the cosmic-ray spectrum. Its main scientific goal is to measure the electron + positron flux above 1 GeV and to explore the TeV region where the energy resolution is of the order of 2-3%, which can provide valuable data for dark matter searches and also to investigate the presence of nearby sources of cosmic electrons and positrons. Secondary goals are the measurement of the fluxes of the various nuclear species with good energy resolution up to several hundreds of TeV and of the diffuse gamma ray emission.

The instrument includes a charge detector (CHD) to determine the absolute electric charge of impinging particles, an imaging sampling calorimeter (IMC) and a total absorption homogeneous calorimeter (TASC) for a total depth of about 30 radiation lengths.

CALET is a Japanese-led international collaboration that includes the participation of Italian and US members and the support of the respective space agencies JAXA, ASI and NASA. Launched on August 19th 2015, CALET has been successfully commissioned and is currently taking data at a regular pace. In this talk, the in-flight performance of the apparatus will be presented together with some preliminary analysis results.

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