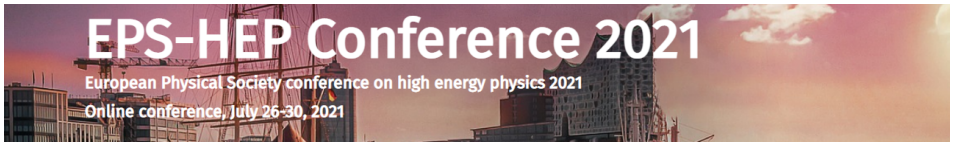

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Measurement of the all-electron spectrum through 1 TeV region with the CALET experiment.

The CALorimetric Electron Telescope (CALET) is a space experiment installed aboard the International Space Station (ISS). The instrument has been accumulating data since October 2015, searching for nearby cosmic-ray sources and dark matter signatures with accurate measurements of the cosmic electron+positron spectrum up to the TeV region. The CALET main detector consists of a charge detector, imaging calorimeter and a total absorption calorimeter: the total depth of the instrument for vertical incidence is about 30 radiation lengths. This design offers excellent performances in terms of the reconstruction of: the particle charge up to and above Iron, the primary track with an angular resolution better than 1 degree, the incident energy with a resolution better than 2% for electrons up to 1 TeV and a good proton/electron identification corresponding to a proton rejection factor of about 10^5. In this contribution the analysis steps for the measurement of the electron flux are discussed and, by exploiting the full statistics accumulated by the CALET experiment, the measurement of the electron+positron spectrum is presented.

Collaboration / Activity

CALET

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