

Abstract Submitted
for the APR20 Meeting of
The American Physical Society

Observation of the Energy Spectra of Cosmic Ray Nuclei with CALET¹ YOSUI AKAIKE, NASA/GSFC/CRESST/UMBC, CALET COLLABORATION — The Calorimetric Electron Telescope, CALET, onboard the International Space Station has been collecting scientific data since October 2015. CALET is performing a precise measurement of the cosmic ray electron spectrum in the TeV region as well as measuring nuclear spectra from protons to iron in the range from a few tens of GeV to the PeV scale. These allow for the investigation of the details of their acceleration and propagation mechanisms in the Galaxy. The features of the CALET instrument include excellent charge resolution of $0.18e$ for carbon and $0.30e$ for iron based on the segmented scintillator paddles and scintillating fibers and energy resolution of 30 - 40 % for hadrons provided by its $30X_0$ thick calorimeter. The details about the analysis procedure of nuclei measurements, comparison with our Monte Carlo simulations and preliminary results of the energy spectra for nuclei up to 100 TeV with four years of operations will be presented.

¹This effort is supported by NASA in the United States, by JAXA in Japan and ASI in Italy

Yosui Akaike
NASA/GSFC/CRESST/UMBC

Date submitted: 10 Jan 2020

Electronic form version 1.4