

Abstract Submitted
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The CALorimetric Electron Telescope (CALET): Continuing Operations on the ISS¹ BRIAN RAUCH, Washington University, St. Louis, FOR THE CALET COLLABORATION — The CALorimetric Electron Telescope (CALET) is a high-energy astroparticle physics experiment on the International Space Station (ISS) developed and operated by Japan in collaboration with researchers in Italy and the US. In extended observations the main calorimeter (CAL) can measure the cosmic-ray electron+positron spectrum up to 20 TeV, gamma rays up to 10 TeV, and nuclei from ${}^1\text{H}$ to ${}_{40}\text{Zn}$ up to 1,000 TeV. The CAL is comprised of a two-layer scintillator paddle charge detector, a scintillating fiber imaging calorimeter with 3 radiation lengths (RL) of tungsten plates, and a 27 RL deep lead tungstate total absorption calorimeter. There is also the CALET Gamma-ray Burst Monitor (CGBM) subsystem with two hard X-ray monitors (HXM) sensitive to 7-1000 keV photons and a soft gamma-ray monitor (SGM) sensitive to 100 keV-20 MeV photons utilizing two LaBr₃ (Ce) and one BGO scintillators, respectively. Major CALET results to date include measurements of the electron+positron energy spectrum to ~ 5 TeV, the spectra of protons and other nuclei, and gamma-ray observations including LIGO/Virgo counterpart searches. CALET began science operations in mid-October 2015 and is now approved to continue through March 2021 with the possibility that operations may be extended further.

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