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The CALorimetric Electron Telescope (CALET): a High-Energy Astroparticle Physics Observatory on the International Space Station JOHN KRIZMANIC, CRESST/USRA NASA/GSFC, FOR THE CALET COLLABORATION — CALET is a Japanese-led, multinational experiment that is scheduled to launch in 2014 to be attached to the Exposure Facility of the Japanese Experiment Module (JEM-EF) on the ISS. During its 5-year mission, CALET will measure the fluxes of electrons/positrons from 1 GeV to 20 TeV, gamma rays from 10 GeV to 10 TeV, and nuclei (Z=1 to 40) from 10 GeV to 1000 TeV. These measurements will address CALET's scientific goals to search for signatures of dark matter, investigate the mechanism of cosmic-ray acceleration and propagation in the Galaxy, and search for nearby astrophysical sources of high-energy electrons. The main CALET instrument (CAL) is comprised of three modules: 1) two layers of segmented plastic scintillators for cosmic-ray charge identification (CHD), 2) a 3 X0-thick tungsten-scintillating fiber imaging calorimeter (IMC), and 3) and a 27 X0-thick, segmented lead-tungstate calorimeter (TASC). The IMC and TASC provide measurements of the longitudinal and lateral shower development, yielding good electron/hadron separation. CALET also includes a dedicated Gamma-ray Burst Monitor (CGBM) instrument. This talk will review the status of the mission, describe the instrument configuration and performance, and discuss the CALET cosmic radiation measurement capability.

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