

## Initial results of the extremely high-energy electron experiment (XEP) onboard the Arase satellite

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The extremely high-energy electron experiment (XEP) is one of the instruments onboard the Arase satellite (JAXA). Equipped with five solid-state silicon detectors (SSDs), one GSO single crystal scintillator, and an anti-scintillator, the XEP has one-way conic sight. Its energy range is from 400 keV to 20 MeV electrons. The Arase satellite was launched in December 2016. After the launch, the XEP began to measure relativistic electrons and successfully observed dynamical evolution of relativistic electrons of the outer belt during magnetic storms. During initial 3 months, Arase observed five magnetic storms driven by CIRs and CMEs. Relativistic electrons of the outer belt sharply decreased after the storm commencement, and then recovered to the pre-storm level. During some storms, Arase observed large flux enhancement during the recovery phase. In this presentation, we report overview of the XEP instrument and initial observation results.