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Introduction of ERG project

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In order to investigate the acceleration mechanism of relativistic electrons of the outer radiation belt as well as the space storm dynamics, the ERG project is going in Japan. The ERG satellite will be launched in 2016. The apogee altitude is about 4.5 Re and the perigee is about 300 km. The satellite is designed to have a comprehensive set of plasma/particle sensors that measure electrons from 12 eV to 20 MeV and ions from 10 eV/q to about 1800 keV/q with a mass discrimination. The satellite also measures field and waves from DC to 10 MHz (electric field) and to 100 kHz (magnetic field) in order to observe several plasma waves that are essential for the particle acceleration, transportation, and loss.

Biography

Takeshi Takashima did his PhD in study of cosmic rays observed by satellites from Waseda University in Japan. He developed high energy particle instruments for several missions; Nozomi (Planet-B) for Mars, KAGUYA (SELENE) for the moon and BepiColombo MMO for Mercury that is the first collaboration missioin between ESA and JAXA. He is a Associate Professor at the Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency (JAXA). He is now the mission manager of ERG project in JAXA that is explorlation in radiation belts around the earth which is scheduled to be launched in 2016 by an epsion rocket from Japan.

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