

Electron precipitation environment in low earth orbit observed by the GOSAT satellite

HIKISHIMA, Mitsuru^{1*}, OBARA, Takahiro², MATSUMOTO, haruhisa¹

¹Japan Aerospace Exploration Agency, ²Planetary Plasma and Atmospheric Research Center, Tohoku University

The GOSAT satellite was launched on January 2009 into sun-synchronous sub-recurrent orbit with an altitude of 666km and an inclination of 98 deg. The LPT (Light Particle Telescope) installed on the GOSAT measure electrons from tens of keV to MeV and can observe precipitation into the atmosphere. The precipitating electrons are steadily observed in the inner and the outer radiation belt. In the outer radiation belt, the energy of the flux reaches to a few hundreds keV. The flux increases drastically during the magnetic disturbance. We will introduce a global behavior of the electron precipitations.

Keywords: Electron precipitation, Radiation belt electron, wave-particle interaction