

## Ground network measurements of the inner magnetosphere related to the ERG project

# Kazuo Shiokawa[1]; Nozomu Nishitani[1]; Takashi Kikuchi[2]; Yuichi Otsuka[1]; Ryoichi Fujii[3]; Kiyohumi Yumoto[4]; Hideaki Kawano[5]; Akimasa Yoshikawa[5]; Natsuo Sato[6]; Akira Sessai Yukimatu[7]; Hisao Yamagishi[6]; Akira Kadokura[6]; Makoto Taguchi[6]; Yasunobu Ogawa[6]; Keisuke Hosokawa[8]; Kumiko Hashimoto[9]

[1] STELAB, Nagoya Univ.; [2] STELab; [3] STEL, Nagoya Univ.; [4] Space Environ. Res. Center, Kyushu Univ.; [5] Earth and Planetary Sci., Kyushu Univ.; [6] NIPR; [7] NIPR (SOKENDAI, Polar Science); [8] Univ. of Electro-Communications; [9] Kibi International Univ.

<http://www2.nict.go.jp/y/y223/IM/index.html>

During magnetic storms, the circum-Earth space (Geospace) acts as an effective accelerator of electrons and ions. The ERG mission will achieve comprehensive plasma observations with magnetic/electric field, wave, and plasma detectors to capture acceleration, transport, and loss of charged particles in Geospace. The mission connects these in-situ satellite measurements with ground network measurements of the ionosphere, aurora/airglow, and geomagnetic field variations, by using several geospace modeling/simulation techniques. The ground networks give two-dimensional information of dynamically varying field and particle environments in Geospace on global scale. In this presentation we will review current situation and future plan of ground networks and their contribution to the ERG mission to elucidate the particle acceleration and loss mechanisms in the inner magnetosphere.