

ERG project

MIYOSHI, Yoshizumi^{1*}; TAKASHIMA, Takeshi²; ASAMURA, Kazushi²; SHIOKAWA, Kazuo¹; SEKI, Kanako¹; SHOJI, Masafumi¹; SHINOHARA, Iku²; HIRAHARA, Masafumi¹; HIGASHIO, Nana²; MATSUMOTO, Haruhisa²; KASAHARA, Satoshi²; MITANI, Takefumi²; KASABA, Yasumasa³; MATSUOKA, Ayako²; KOJIMA, Hirotsugu⁴; FUJIMOTO, Masaki²; ONO, Takayuki³

¹STEL, Nagoya University, ²JAXA, ³Graduate School of Science, Tohoku University, ⁴RISH, Kyoto University

The ERG (Exploration of energization and Radiation in Geospace) is Japanese geospace exploration project. The project focuses on relativistic electron acceleration mechanism of the outer belt in the context of the cross-energy coupling via wave-particle interactions. The project consists of the satellite observation team, the ground-based network observation team, and integrated-data analysis/simulation team. The ERG satellite will be launched in FY2015. Comprehensive instruments for plasma/particles, and field/waves are installed in the ERG satellite to understand the cross-energy coupling system. In the ERG project, several ground-network teams join; magnetometer networks, radar networks, optical imager networks, etc. Cooperative observations between the in-situ satellite and ground-based observations are important. Some simulation codes including both macro-scale phenomena and micro-physics are developed in Japan, which are very helpful quantitatively to understand the observational results and to incorporate the observations. In this presentation, the overview of the projects will be presented and possible collaborations with other geospace satellite missions as well as the ground-based observations will be discussed.

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