

Japan-Taiwan collaboration for the ERG project toward its scientific goal

Tomoaki Hori[1]; Yoshizumi Miyoshi[2]; Yoichi Kazama[3]; T. F. Chang[4]; C.-Y. Chiang[4]; B.-J. Wang[4]; S. W. Y. Tam[4]; S.-Y. Wang[5]; Kunihiro Keika[6]; Yukinaga Miyashita[2]; Masafumi Shoji[7]; Kanako Seki[2]; Yoshiharu Omura[8]; Yusuke Ebihara[9]; Kazushi Asamura[10]; Takeshi Takashima[11]; Iku Shinohara[12]; Masaki Fujimoto[11]
[1] STE lab., Nagoya Univ.; [2] STEL, Nagoya Univ.; [3] PSSC,NCKU; [4] PSSC, NCKU, Taiwan; [5] ASIAA, Taiwan; [6] STEL, Nagoya Univ.; [7] STEL, Nagoya Univ.; [8] RISH, Kyoto Univ.; [9] RISH, Kyoto Univ.; [10] ISAS/JAXA; [11] ISAS, JAXA; [12] ISAS/JAXA

The Exploration of energization and Radiation in Geospace (ERG) is a scientific research project to explore geospace storms with a special focus on evolution of the Earth's radiation belt in the inner magnetosphere. The project consists of three cooperative research teams: the ERG satellite team, ground network observation team, and integrated studies/simulation team. This project proceeds as international collaboration. One of the most important efforts is the collaboration between Japan and Taiwan in terms of the development of the Low-Energy Particle electron (LEPe) instrument which is going to join the other scientific instruments onboard the ERG satellite. The LEPe instrument has been developed by the Taiwan ERG team primarily consisting of Academia Sinica, Institute of Astronomy and Astrophysics (ASIAA) and National Cheng Kung University (NCKU). In addition to the hardware development, our collaboration is extended to the scientific data management as well as scientific research activities. In this regard, ERG-Science Center (ERG-SC), a joint research center operated by Institute of Space and Astronautical Science/Japan Aerospace Exploration Agency (ISAS/JAXA) and Solar-Terrestrial Environment Laboratory (STEL), Nagoya University, works in close collaboration with the Taiwan team. We have been working together on the design and development of the scientific data format, data archive, and data analysis software for the upcoming LEPe data. Further, we have held annual scientific workshops in the past few years where scientists and students from both sides joined discussion of the scientific strategies using ERG project data as well as training session for the data analysis software developed by ERG-SC. We believe that these collaboration efforts will contribute to not only achievement of successful ERG science but also to our persistent, constructive relationship between the two communities.