

Geospace Exploration Project ERG

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The ERG (Exploration of energization and Radiation in Geospace) is a geospace exploration project in Japan. The mission is especially focusing on the 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 observation team, and integrated-data analysis/simulation team. The ERG satellite will be planned to launch in 2015. The comprehensive instruments for plasma/particles, field and waves are installed in the ERG satellite to elucidate the electron acceleration processes. The newly developed system will directly measure the energy exchange between particles and waves in the wave-particle interactions. The Japanese ground-network teams join the ERG project. The integrated data analysis and simulation team is now developing the simulation tools which can be compared directly with the observations. In this talk, we will present the science objectives and current status of the project and possible collaborations with other geospace satellite missions such as Van Allen Probes, THEMIS, RESONANCE, as well as the ground-based observations and simulation studies.

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