

アイスランド-昭和基地共役点と衛星でのプラズマ波動粒子相互作用の同時観測

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Simultaneous observation at conjugate points (Iceland-Syowa station) and satellites for wave particle interactions

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The ERG (Exploration of energization and Radiation in Geospace) satellite is planned to launch on December in 2015 for the investigation of the dynamics of the radiation belt. The electromagnetic ion cyclotron (EMIC) waves and the whistler mode chorus waves are key phenomenon for the loss and acceleration of particles in the radiation belt. Because conjugate points in Iceland and Syowa station will be near at footprints of the ERG satellite orbits, simultaneous observations both on the wave excited region by the satellite at equatorial plane in the magnetosphere and the wave reached region by ground stations on the Earth can be available. We focus on following two topics in order to clear the role of those waves, 1) MeV particle loss by the EMIC waves and 2) propagation paths of EMIC/chorus waves and interacted particles. We plan to install two VLF antennas and an EMCCD camera in Iceland and two induction magnetometer in the Antarctica. We also use instruments which is already settled in Iceland and the Antarctica, a VLF antenna, three induction magnetometers, six all-sky imagers, and two imaging riometers. Our detailed plan will be shown in the presentation.