



Ground-based ELF-VLF observations at Kannuslehto during two years of ARASE

Jyrki Manninen (1), Claudia Martinez-Calderon (2), Yoshiya Kasahara (3), Shoya Matsuda (4), and Tauno Turunen (1)

(1) Sodankylä Geophysical Observatory, University of Oulu, Sodankylä, Finland (jyrki.manninen@oulu.fi), (2) Department of Geophysics, Graduate School of Science, Tohoku University, Sendai, Japan (claudia@stpp.gp.tohoku.ac.jp), (3) Kanazawa University, Kanazawa Japan (kasahara@is.t.kanazawa-u.ac.jp), (4) Institute for Space-Earth Environmental Research, Nagoya, Japan (matsuda@isee.nagoya-u.ac.jp)

The ERG (Exploration of energization and Radiation in Geospace) project is a mission to elucidate acceleration and loss mechanisms of relativistic electrons around the Earth during geospace geomagnetic storms. The project consists of the satellite observation team, the ground-based network observation team, and the integrated data analysis/simulation team. After the launch, ERG was nicknamed to ARASE.

All satellite projects observing the geospace are needing also are in need of reliable and high-quality ground-based data in order to contribute to the explain understanding of different kinds of events observed by the satellites. ARASE satellite is having has on board several particle instruments, plasma wave instrument, and magnetic field instrument. Often, Ideally we should be able to separate spatial and temporal features from our observations. In this case, we can often use ground-based data to find out the differences between these two features.

In this presentation, we will show ground-based ELF-VLF observations during the first two winters of ARASE operation. The first simultaneous observations are from the end of March and beginning of April in 2017, continuing until the first months of 2018 with at least a dozen of meaningful cases. Some good events have been observed on 10 Sep 2017, 30 Nov 2017, and 20 Jan 2018. The newest ground-based events are from spring 2019. Several highlights will be presented.