

Ground-based network observations for Space Weather study

Circum-pan Pacific Magnetometer Network Group

In order to understand the complexity in the solar wind-Earth's magnetosphere-ionosphere-the Earth's surface system, the Space Environment Research Center and the Department of Earth and Planetary Sciences, Kyushu University, Fukuoka, Japan will conduct coordinated collaborations for Space Weather study, in cooperation with the Space Weather group, the Communication Research Laboratory (CRL), Tokyo, Japan and also with about 30 organizations in the world during the period (2004-2013) of the international CAWSES (Climate and Weather of Sun-Earth System) program.

The Kyushu University group will take care of the CPMN (Circum-pan Pacific Magnetometer Network) observations at 54 stations in the CPMN region, and the FM-CW radar observations along the 210 deg.magnetic meridian to study dynamics of geospace plasma changes during storms and auroral substorms, the response of iono-magnetosphere to various solar wind changes, and the penetration and propagation mechanisms of DP2-ULF range electro-magnetic disturbances from the solar wind region into the equatorial ionosphere. And then we will establish the Space Weather studies.

In the present paper, we will introduce our CPMN and FM-CW radar systems, and preliminary results obtained from these systems.