Recent activities of i-SPES and MAGDAS project

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International research center for Space and Planetary Environmental Science(I-SPES), Kyushu University is the research institute for conducting research and education in in solar terrestrial physics.
"MAGDAS/CPMN (MAGnetic Data Acquisition System/Circum-pan Pacific Magnetometer Network)" (Principal Investigator: Dr. A. Yoshikawa) is world-wide observation array, which consists of over seventy fluxgate magnetometers, one induction magnetometer, and four FM-CW (Frequency Modulated Continuous Wave) radars. One of our research topics is Equatorial Electrojet (EEJ). To observe the temporal and long-term variation of EEJ, we installed many magnetometers around the magnetic equator, and calculate EE-index (Uozumi et al, 2008; Fujimoto et al., 2016) for space weather nowcast/forecast using realtime data along the magnetic equator. These results are published on our web, and updated at each hour. Furthermore, we are planning to extend our observation network to the region east of Java, Indonesia. By constructing an observation network extends to the longitude region, we expect to investigate the spatial and temporal evolution of space weather phenomena in detail and to understand their physical mechanisms. From the viewpoint of internal electromagnetics, the objective is to improve the observation accuracy by covering a wider area with higher density, and to detect local variation of internal electromagnetic phenomena early. This research will be conducted as international joint research between Japan, Indonesia, and Egypt.
To provide our observational information and data including old project is also important matter for us. We are one of the members of IUGONET (Inter-university Upper Atmosphere Observation NETwork), and users can access our information via IUGONET metadata database and data analysis software. In addition, we plan to work with the Kyushu University Library to obtain a DOI to make our data more widely available to the public. In this paper, we will introduce our current activities on observation, science, and informatics fields.

