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Inter-university Upper atmosphere Global Observation NETwork (IUGONET)

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To investigate the mechanism of long-term variations in the upper atmosphere, we need to create integrated links between a variety of ground-based observations made at various locations from the equator to the poles because what we observe is the result of complicated processes. However, the databases of observations in Japan have been maintained and made available to the community by each institution that conducted the observations. The member institutes of the IUGONET project (http://www.iugonet.org/) have various kinds of observational data acquired so far by a global network of radars, magnetometers, optical sensors, helioscopes, etc., but these data are archived in individual databases at each site. Therefore, we encountered the problem that is difficult to look for various data.

In order to solve this problem, we built Metadata Database (DB) for upper atmosphere by using DSpace. Metadata DB give the location and other information about the observational data, it provides researchers with a seamless data environment linking databases spread across the member institutions. We adopted the IUGONET metadata format which is extended by SPASE (Space Physics Archive Search and Extract) Data Model/Metadata Format. We customized DSpace to handle our metadata format instead of Dublin Core. The Metadata DB is already opened to the public (http://search.iugonet.org/iugonet/).

We are also producing data analysis software, which is the plug-in software for THEMIS Data Analysis Software suite (TDAS), to help researchers easily download, visualize, and analyze data provided from the member institutions and cooperative organizations/persons
(http://www.iugonet.org/software/install.html).

We give the presentation about the above-mentioned details.

Keywords: Upper Atmosphere, Solar-Terrestrial Physics, Metadata, Database, Data