Inter-university Upper Atmosphere Global Observation NETwork (IUGONET)

Hiroo Hayashi[1], Tomoaki Hori[2], Yukinobu Koyama[3], Yoshimasa Tanaka[4], Masato Kagitani[5], Takahisa Kouno[2], Daiki Yoshida[3], Satoru UeNo[6], Naoki Kaneda[6], Shuji Abe[7], Yoshizumi Miyoshi[2], Masaki Okada[4], Takuji Nakamura[4], and Masahito Nose[3]

[1]*RISH, Kyoto University*
[2]*STE Lab., Nagoya University*
[3]*WDC/Kyoto, Kyoto University*
[4]*National Institute of Polar Research*
[5]*PPARC, Tohoku University*
[6]*Kwasan and Hida Observatories, Kyoto University*
[7]*SERC, Kyushu University*

To investigate the mechanism of long-term variations in the upper atmosphere (including the MLT region), we need to create integrated and organic links between a variety of ground-based observations made at various locations from the equator to the poles. The databases of such observations, however, have been maintained and made available to the community by each institution that conducted the observations. That is one reason that those data have been used only for studies of specific phenomena. For the same reason some of the observational data have been used by only a very few researchers who were involved in the observation campaign and have never been made available to other researchers.

A six-year research project, Inter-university Upper atmosphere Global Observation NETwork (IUGONET), was initiated in 2009 by the five Japanese universities and institutes (NIPR, Tohoku University, Nagoya University, Kyoto University, and Kyushu University) that have been leading ground-based observations of the upper atmosphere for decades. We are collaborating to build a database system for the metadata of our observational data. The metadata database (MDB) archiving information such as the observation location and period, type of instrument, data format, will be of great help to researchers in efficiently finding and obtaining various observational data spread across the member institutions. The MDB system will significantly facilitate the analyses of a variety of observational data, which we believe will lead to more comprehensive studies of the mechanisms of long-term variations in the upper atmosphere. Moreover this system will contribute to development of the MLT radar network in the Asia-Oceania region by making each radar database intercommunicative.