The Challenge of GTS message transmission in JARE 58

Takeshi Terui[1], Takeshi Sugimura[1], Yusuke Baba[2], Hiroyuki Ogihara[2], Jun Inoue[1], Naohiko Hirasawa[1], Takeshi Tamura[1], Hideaki Motoyama[1], Gen Hashida[1], Hironori Yabuki[1,3]

[1]*National Institute of Polar Research*
[2]*Japan Meteorological Agency*
[3]*Research Organization of Information and Systems*

The Global Telecommunication System (GTS) is a global network for the transmission of meteorological data from land-sea-and-air weather stations. A lot of GTS data are observed near city or along main cruise course, but data on polar region is less in particular Antarctic area are less. National Institute of Polar Research has some weather stations and whether observing plan in Antarctic region. These observed data are very important for filling a data blank area. Also these data are very useful to progress a meteorological model accuracy. In JARE 58, we tried to send weather observation data from Antarctic region to Japan, and these data were delivered to GTS network. Sent data were observed from a) an automatic whether station at H128, b) a radiosonde observation on M/V Shirase, and c) a radiosonde observation at point S17. We also tried setting up a POPS buoy on Lutzow-Holm Bay, but that observation was canceled. Observed data for 24 hours in H128 was sent by Argos system every day. Sending data method in b) and c) was used a plain text via e-mail. Arctic Data archive System servers received theses data automatically, and generated GTS format message from these. Finally these GTS message were pulled by Japan Meteorological Agency, those data were delivered to GTS network. In this study, we review the technical issues that we encountered until the end of these data transfer, and provide information on the transfer of weather observation data in the polar region.