!

Argo Steering Team Meeting (AST-8)

Paris, France, March 7-9, 2007

Korean National Report on Argo-2006[1]

Deployment in 2006 and Future Prospect

Korea Argo has kept its steady course, deploying 33 floats; 10 floats in the North Pacific, 5 floats in the Southern Ocean and 18 floats in the East/Japan Sea. Korea Ocean Research and Development Institute (KORDI) and Korea Meteorological Administration/Meteorological Research Institute (KMA/METRI) deployed 18 and 15 floats respectively, which are working properly at present.

In 2007 total of 27 floats are planned for deployment; 10 in the North Pacific, 3 in the Southern Ocean and 14 in the East/Japan Sea. However, there is a slight possibility that adjustment of funding due to restructuring of METRI may result in less number of float deployment. Korean Argo community is working hard with KORDI and METRI to secure the present level of funding and float deployment, but the future beyond 2007 is uncertain.

Argo RTQC

KORDI has some difficulties in decoding the PROVOR float data, hence its RTQC was delayed initially for a couple of months. Within 24 hours of data collection, all data of KORDI Argo floats are issued to GTS by CLS in France. KORDI started to send RTQC data to US GDAC from November 2006 onwards as a DAC role.

KMA RTQC system produces profile data, meta data, technical data, and trajectory data with TESAC and NetCDF format from raw data with 32byte Hexa format in real time. Those 4 types of data are transmitted into GTS network and GDAC. Now, the RTQC system is being upgraded by following the “Argo quality control manual ver. 2.2” and “user’s manual ver. 2.2”.

Delayed mode quality control

Korea Oceanographic Data Centre (KODC) is in charge of delayed QC and working on the DMQC for Korean floats in the East/Japan Sea and the North Pacific Ocean. Preliminary DMQC results were obtained in 2006 and will be sent to some experts on the East/Japan Sea and the North Pacific region for quality examination. Moreover, additional hydrographic data

---

[1] Prepared by Kuh Kim in collaboration with Moon-Sik Suk (KORDI) and Yong-Hoon Youn (KMA/METRI).

for the East/Japan Sea will be collected and processed for improvement of the reference dataset. However, KODC and KORDI cannot perform the DMQC for the Argo floats deployed in the Southern Ocean. It would be appreciated deeply if any other DAC is willing to do this work for the Southern Ocean floats.

Human Resources

Korea is short of human resources to take care of Argo program in general. Lack of technical personnel at KORDI and rotation of position at METRI have been major source of problems. As Argo is considered as a research project in Korea and an operational application of Argo data is still at a primitive stage, it is an uphill battle to justify long-term benefits of Argo.

Research and operational uses of Argo data

KORDI uses Argo data for scientific research and modeling for the East Sea region and its webpage (http://argo.kordi.re.kr) serves as a data distribution centre since 2004.

KMA has been developing the data assimilation system and has a long-term plan to work on the operational ocean climate forecast around the Korean peninsula as well as the global ocean. Argo float data and their management system in KMA also go well in gear with their operational climate forecasting system. METRI distributes global Argo data on its webpage (http://argo.metri.re.kr).

Researches on inertial currents in the surface mixed layer, data assimilation, typhoon passage and deep circulation in the East Sea are actively carried out at Seoul National University, Chunnam National University and Pusan National University as well

Argo bibliography

Park, Y.-G., K.-H. Oh, K.-I. Chang, and M.-S. Suk, 2005: Water masses and flow fields of the Southern Ocean measured by autonomous profiling floats (Argo floats), Ocean and Polar Research, Vol.27(2), 183p

Yong-Hoon Youn, Homan Lee, You-Soon Chang, Pankajakshan Thadathil, 2005: Validation of Salinity Data from ARGO Floats: Comparison between the older ARGO floats and that of later deployments, J of Korean Earth Science Society, Vol.26(2), 129-136.

Homan Lee, Tae-Hee Kim, Ji-Ho Kim, Jang-Won Seo and Yong-Hoon Youn, 2004: Mean flow and variability in the upper portion of the East Sea proper water in the

southwestern East Sea with APEX floats. J of Environmental Sciences, Vol.13(2), 135-141.