Argo-KOREA Annual Report 2018

by National Inst. of Meteorological Sciences/KMA

20th Argo Steering Team Meeting (AST-20)
Hangzhuo, China, 11-15 March 2019

1. Status of Implementation

The National Institute of Meteorological Sciences of Korea Meteorological Administration (NIMS/KMA) has deployed 241 Argo floats around the Korea peninsula and the North Pacific Ocean since 2001, including 40 active floats as of February 2019. In 2018, NIMS/KMA deployed 11 Argo floats in the East Sea and Yellow Sea (Fig.1). Seven floats were deployed in the East Sea on July 18 and November 20, 2018 with 800 m of parking depth and seven-day profiling scheme, and four were in the Yellow Sea on July 25 and November 11, 2018, for the shallow sea observation with one-day profiling scheme and 60 m of parking depth. Especially all floats deployed at the Yellow Sea by using the Gisang1, the KMA'a research vessel, could obtain the one-day profile since the starting day, and those were lasted over three months.
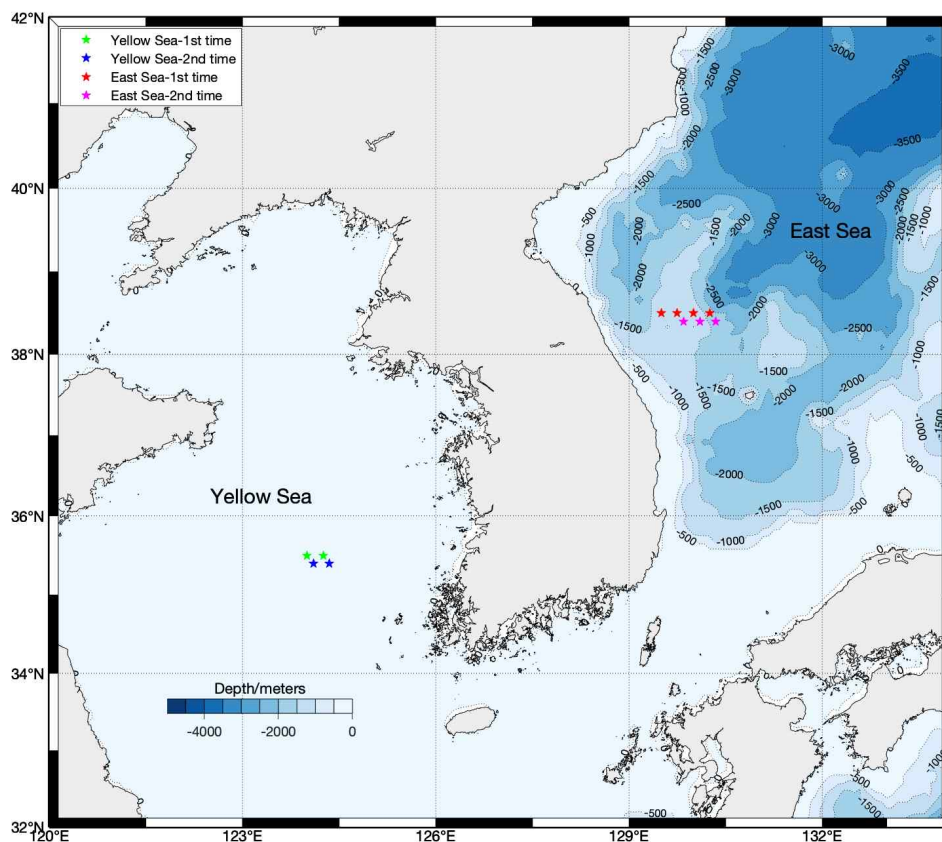

Fig. 1. Initial position of Argo floats deployed by the NIMS/KMA in 2018.

- Status of contributions to Argo data management
・Reproduction of NetCDF data of dead floats.
  - Meta, technical and trajectory files sent to GDAC (Dec. 2018)
・Transmission of converted NetCDF data to US-GDAC
  - solved the network issue (Trajectory files)
・Implementing the Argo data format check program (new version)
・CTD sensor serial number has been checked, as a result total 16 floats deployed (sensor error issue)

- Delayed Mode QC
・We thoroughly reprocessed all the previous D-files in the East Sea and sent 19,007 of the revised D-files with NetCDF format (ver. 3.1) to the GDAC in November 2018. A precise quality control precess is also being taken for the reference database in the East Sea at this moment. The new database will be applied for the DMQC in the next year, and total 1,791 of the new D-files for the floats in the western North Pacific will be uploaded, too.

2. Present level of (and future prospects for) national funding for Argo including summary of human resources devoted to Argo.

We purchased 11 floats in 2018 and successfully deployed all around Korea this year, however 6 floats could be possibly purchased due to the budget decrease in 2019
・Following persons contribute to the Argo-Korea program:
  - KiRyong KANG, Hyeong-Jun JO (KMA)
  - Sung-Dae KIM, Hyuk-Min PARK (KIOST)
  - Jong-Jin PARK (Kyungpook National University)

3. Summary of deployment plans

NIMS/KMA has a deployment plan for 6 floats (ARVOR or APEX float) in 2019: four will be deployed at the East Sea to keep the observation network and two at the Yellow Sea to continue the shallow sea observation scheme in the regional ocean. Continuing the last year's program in the Yellow Sea, observation program using the Argo float will be preformed to investigate the ocean environment variation in west coast of Korea.

4. Summary of National Research and Operational Uses of Argo data as well as contributions to Argo Regional Centers.

The shallow Argo observation was conducted on July and November 2018 in Yellow Sea, Korea. The daily temperature and salinity profiles obtained from this

observation campaign showed well the mixed layer fluctuation during summer and fall seasons, especially including typhoon Soulik(1819) passage on August 23, 2018 (Fig. 2). NIMS/KMA runs a Regional Data Assembly Center (RDAC) in order to provide the profile data, float-track, and number of acting float, and etc, which can be found at the home page: http://argo.nims.go.kr. And the main system of data processing including the file-checker program has been upgraded to automatically apply the real-time profile data on Nov. 2018.
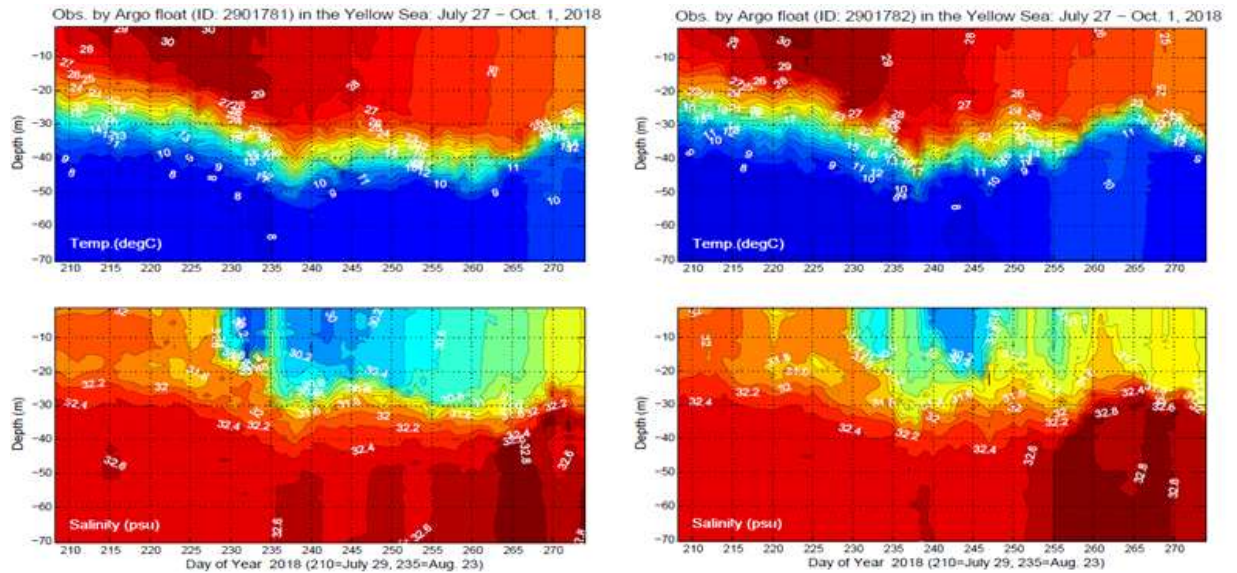

Fig. 2. Daily variation of temperature and salinity profiles from July 27 to Oct. 1(2901781, 2901782), 2018, in the Yellow Sea, Korea.

5. Issues that your country wishes to be considered (and resolved) by AST regarding the international operation of Argo.

- Regional ocean observation using the Argo floats.

6. CTD data uploaded to CCHDO
- No

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