Chinese Argo National Data Management Report

ADMT-21

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1. Status

(Please report the progress made towards completing the following tasks and if not yet complete, estimate when you expect them to be complete)

- Data acquired from floats

  This year China acquired 3,906 temperature and salinity (additionally 389 O2, 357 CHLA, 357 BBP, 295 CDOM, 741 DOWN _IRRADIANCE, 275 NITRATE, and 121 pH) profiles from 112 operational floats including 26 APEX, 53 PROVOR, 26 HM2000, 5 ARVOR_D and 2 NAVIS floats (Fig.1).

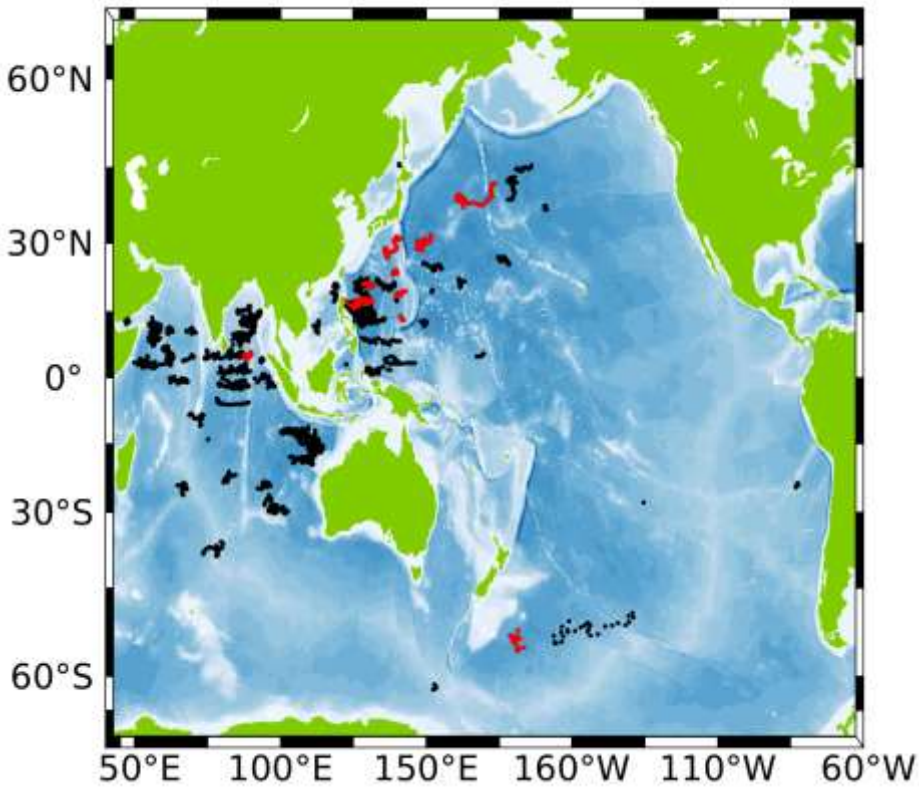

Fig.1 The geographic distributions of Core (black) and BGC (red) profiles

- Data issued to GTS

BUFR bulletins for Argo profile are generated by JMA perl script. Every day CSIO sends BUFR bulletins to GTS through Beijing node (038) from China Meteorological Administration (CMA). Besides T/S profiles, O2 profiles are able to be converted into BUFR and inserted into GTS.

- Data issued to GDACs after real-time QC

Meta, technical, trajectory and profile files are submitted to GDAC in netCDF format version 3.1 on an operational basis. The MEDD test was added into our RTQC procedure according to the latest QC manual. According to the decision from the BGC-Argo data management team, a real-time adjustment has been applied with a gain derived from the WOA climatology.

- Data issued for delayed QC

At CSIO, as a newcomer, Ms. Xiaofen Wu is in charge of DMQC for core profiles after she received a technical training at CSIRO last year. Zenghong and Jianping will help her handle decision-making. Moreover, DMQC team members at CSIRO (Dirk,Catriona, Jenny, etc.) keep helping her to be more familiar with the DMQC system, including codes update, troubling-shooting, etc. Xiaofen also gets help from professor Annie Wong on OWC applications. We are here to extend our warm gratitude to each of them.

- Delayed data sent to GDACs

About 10,250 D-files from 66 floats were sent to GDACs. Totally about 71.6% of the core profiles have been DMQC'd, and D files of some old floats have received the second DMQC processing.

- Web pages

The new website (http://www.argo.org.cn) of the China Argo Real-time Data Centre (Hangzhou) was released on 2 November, from which the latest progress on China Argo, the real-time observations from Chinese floats including data file and related plots are provided. Both the core Argo and BGC Argo data visualization website based on Web-GIS have been developed(http://www.argo.org.cn/index.php?m=content&c=index&a=lists&catid=103).

- Statistics of Argo data usage (operational models, scientific applications, number of National Pis…)

  Operational uses: NMEFC and NMDIS from MNR, IAP/Chinese Academy of Sciences have applied Argo data into their operational models.

  Scientific applications: The Argo data are mainly used in from seasonal to decadal ocean variations in global and regional scales, air-sea interactions, ocean's role in global climate change.
- Until now, about 12 PIs from 8 institutions and universities have deployed profiling floats and share data with Argo community.

- Products generated from Argo data …

  BOA_Argo: It is now a biannually updated gridded Argo product developed by CSIO (ftp://data.argo.org.cn/pub/ARGO/BOA_Argo/). The product is based on the post-QC'd Argo dataset maintained by CSIO.

  Post-QC'd global ocean Argo dataset: The dataset is based on a FAST post-QC toolbox developed by CSIO, with which we can make a synchronization with GDAC server twice a day and conduct a post-QC procedure to each profile (ftp://ftp.argo.org.cn/pub/ARGO/global/core/). The daily high-quality Argo data derived from this toolbox are now transferred to several operating departments.

  Global ocean BGC-Argo dataset: The dataset is derived from the B-files on the GDAC, and is separated into various txt files according to BGC parameters. The dataset is also expected to be quarterly updated depending on the CSIO resources (ftp://ftp.argo.org.cn/pub/ARGO/global/bgc/).

2. Delayed Mode QC

(Please report on the progress made towards providing delayed mode Argo data, how it's organized and the difficulties encountered and estimate when you expect to be pre-operational .)

CSIO is now using the DMQC system developed by CSIRO to process Chinese floats (mainly Core Argo and Deep Argo). By now, this system could not be used for HM2000 float. We therefore need to consider how to solve this problem because in the near future over 400 HM2000 floats will be deployed into the oceans.

3. GDAC Functions

(If your centre operates a GDAC, report the progress made on the following tasks and if not yet complete, estimate when you expect them to be complete)

None.

4. Regional Centre Functions

(If your centre operates a regional centre, report the functions performed, and in planning)

None.