Chinese Argo National Data Management Report
ADMT-19
San Diego, USA, 6-7 December 2018

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
  From the last ADMT (Dec 2017- Oct 2018) China acquired 5,433 TS profiles (additionally 140 O2, 233 CHLA, 233 BBP, 156 CDOM, 231 DOWN_IRRADIANCE and 77 NITRATE profiles) from 132 operational floats (Fig.1). The total number of various float models is seen from Table 1. The data service for Chinese iridium floats was moved from CLS America to CLS France this year.
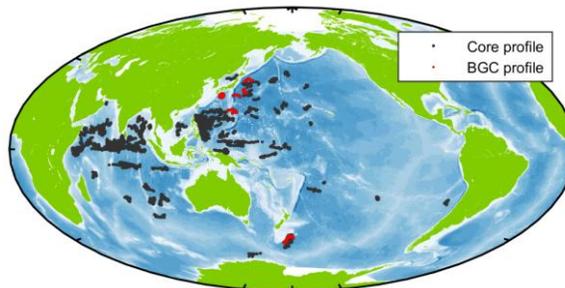

Fig.1 The geographic distributions of Core (black) and BGC (red) profiles

Table 1. The total number of various float models during Dec 2017-Oct 2018

Float model	Number
APEX	43
PROVOR	71
HM2000	13
ARVOR_D	3
NAVIS	2

- Data issued to GTS
  Every day CSIO sends BUFR bulletins to GTS through Beijing node (038) at China Meteorological Administration (CMA). With the perl script developed by JMA, CSIO is able to convert TS & O2 profiles into BUFR.

- Data issued to GDACs after real-time QC

The meta, technical, trajectory and profile files are submitted to GDAC in netCDF format version 3.1 on an operational basis. This November, CSIO updated the historical old version of monoprofile files to version 3.1. To minimize the back-log of profile submission, the daily frequency of downloading RUDICS messages from the CLS's remote host has been increased to 8 times. Some new decoders were developed and used for decoding message reported by PROVOR-III with DO sensor and PROVOR-IV with DO, ECO3, OCR and SUNA sensors. The RT-QC procedures for DOXY, CHLA and BBP are being applied.

- Data issued for delayed QC
  The situation of the severe backlog for DMQC is still not improved due to the lack of operational funding for DAC to support this work. CSIO is applying an operational funding from the Ministry of Science and Technology.

- Delayed data sent to GDACs

  No D-files were submitted to GDACs this year from CSIO.

- Web pages

  Currently the China Argo Real-time Data Centre (Hangzhou) maintains a website (http://www.argo.org.cn) from which the latest progress on China Argo, the real-time observations from Chinese floats including data file and related plots are provided. Some Argo products and a Web-GIS based global Argo data inquiry system are also provided and updated to users.

  NMDIS maintains the China Argo Data Centre (Tianjin) website (http://www.argo-cadc.org.cn).Since NMDIS will unify the website style, a new Argo website will be developed and released in the coming year.

- Statistics of Argo data usage (operational models, scientific applications, number of National Pis…)
  Operational uses: NMEFC and NMDIS from SOA, IAP/Chinese Academy of Sciences have applied Argo data into their operational models.

<u>Scientific applications</u>: 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 11 PIs from 7 institutions have deployed profiling floats and share data with Argo community.

- Products generated from Argo data
BOA_Argo: It is a yearly updated gridded Argo product developed by CSIO (ftp://data.argo.org.cn/pub/ARGO/BOA_Argo/). The product is based on the post-QCed Argo dataset maintained by CSIO.

Post-QCed global ocean Argo dataset: It is a nominally yearly updated Argo dataset after a careful screening (ftp://ftp.argo.org.cn/pub/ARGO/global/). The observational parameter includes PRES, TEMP, PSAL, DOXY, CHLA and NITRATE.

China Argo Data Center has developed distribution maps of global surface currents and mid-depth currents (from Jan. 2000~ Sep.2018) by global Argo trajectory data. At present, the surface current distribution maps are released. The distribution maps and corresponding data of the surface currents and mid-depth currents will be released monthly.

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.)

Now OW tool is used to conduct DMQC for Argo salinity observations. Prior to this, a surface pressure adjustment and thermal mass correction will be conducted. The main difficulty encountered is the lack of stable funding and fixed DMQC operators.

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