Argo Germany National Data Management Report 2012
November 2012

1. Status

Data acquired from floats.

Most of the floats deployed by Germany are operated by BSH but additional funding has been acquired by various research institutes. From November 2011 to October 2012, BSH deployed 38 floats, additional 52 floats will be deployed in the Atlantic Sector of the Southern Ocean and in the Weddell Sea during Polarstern cruise ANT-XXIX/2 between November 2012 and January 2013: 50 by AWI and 2 by BSH. The deployments in the Southern Ocean have started in 2010 and are still continuing. Currently (November, 1st 2012) 167 German floats are active. The total number of German floats deployed within the Argo program increased to 504 and the total number of received profiles is 37726. Most of the German floats are APEX floats purchased from Webb Research, but a smaller amount of floats are manufactured by the German company Optimare. Optimare has been working in close collaboration with the AWI and has developed a float type suitable for partially ice covered seas. These floats are equipped with an ice sensing algorithm which prevents the float from ascending to the surface under ice conditions and prevents it from being crushed. Float profiles are stored internally until they can be transmitted during ice free conditions. Most of the German floats are equipped with the standard Seabird CTD but occasionally additional sensors as Aanderaa optodes and Rafos acoustic receivers are installed.
In 2012 BSH deployed also two NOVA (New generation Oceanographic Variable-buoyancy Autonomous) profiling floats from MetOcean in Canada. The floats have been deployed in the western part of the North Atlantic in July 2012. The NOVA floats are equipped with Iridium satellite telemetry, which allows for quicker, bi-directional, and more cost effective data transmissions. Both floats work reliable and have provided up to now 20 high quality profiles.

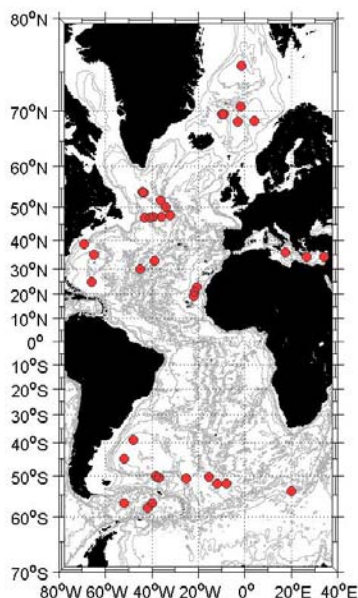There are currently no major technical problems

Fig.1: German deployments from November 2011 to October 2012: 38 floats

Two floats deployed in the Mediterranean were lost early in their mission: one with WMO-ID 6901083, deployed in April 2012 was found beached in Crete, Greece. The beaching was detected with the help of the AIC and the float was recovered by the Greek colleagues and send back to Germany and it will be re-deploy after requiring service. The second float has beached or it was picked up in shallow water close to Beirut.

Deployment plan for 2013

The deployment plans for 2013 will comprise 40-42 floats from BSH in the Atlantic, 8 floats from GEOMAR in the eastern subtropical Pacific and an unknown number of floats from AWI, which will be deployed in the Southern Ocean and in the Weddell Sea in the Antarctic summer season 2013/2014. The deployment will be performed in co-operation with the German research institutes. Germany owns deployment capabilities for all oceans including the ice covered areas but foreign research cruises will be used as well to cover all intended deployment areas.

The main goal is to support the global array in the Atlantic Ocean and will focus on data sparse regions, specifically in the Southern Ocean, the western North Atlantic, the Nordic Seas and the Mediterranean. The exactly deployment positions have not been determined yet.

Data issued to GTS

The profiles for all German floats are processed by Coriolis and are distributed on the GTS by way of Meteo-France.

Data issued to GDACs after real-time QC

The real-time data processing for all German floats is performed at the Coriolis Center in France. Data processing follows the procedures set up by the Argo Data Management Team.

Data issued for delayed QC

The delayed mode processing is distributed between the various German institutions contributing to Argo, depending on their area of expertise. AWI is responsible for the Southern Ocean, IfM-Hamburg together with BSH is processing the German floats in the Nordic Sea, and BSH is covering the tropical, subtropical Atlantic and subpolar Atlantic. The sharing of delayed-mode data processing will be continued in the coming years, but BSH will cover all the German floats which have not been assigned a PI. BSH also has adopted some European floats which did not have a DMQC operator assigned to them, such as national Argo programs from the Netherlands, Denmark, Norway, Finland and Poland. All German institutions have been working in close collaboration with Coriolis and delayed mode data have been provided on a 6 monthly basis. Delays in delayed-mode data processing have occurred occasionally due to changes in personal and delay in data transmission in the Southern Ocean due to ice coverage. Delayed-mode data processing follows the rules set up by the Data Management Team. The DMQC process is well underway and no major delays have been encountered.

Delayed data send to GDACs

All delayed mode profiles have been sent to GDACs. The total number of received profiles is 37726 (November,1st 2012, the number of DM profiles is 34190. The percentage of DM profiles with respect to the total number of profiles is about 90%.

Web pages

BSH is maintaining the Argo Germany Web site. The URL for the Argo Germany is:

http://www.german-argo.de/

It provides information about the international Argo Program, German contribution to Argo, Argo array status, data access and deployment plans. It also provides links to the original sources of information.

Statistics of Argo data usage

Currently no statistics of Argo data usage are available.

Products generated from Argo data

A key aspect of the German Argo program is to develop a data base for climate analysis from Argo data, to provide operational products for interpretation of local changes and to provide data for research applications.

Argo data are being used by many researchers in Germany to improve the understanding of ocean variability (e.g. circulation, heat storage and budget, and convection), climate monitoring and application in ocean models.

Germany contributes to the NARC and contributes recent CTD data to the Argo climatology.