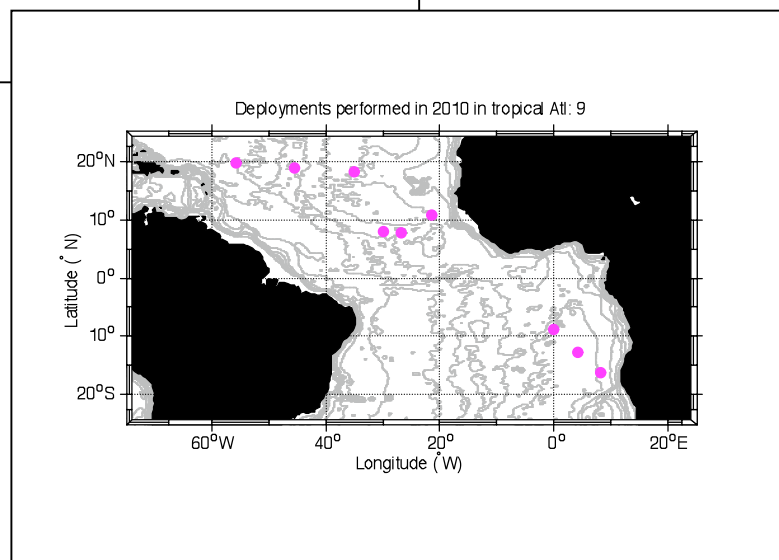
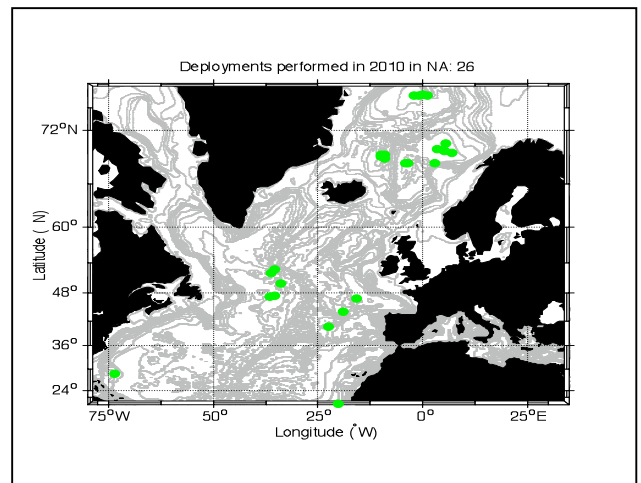
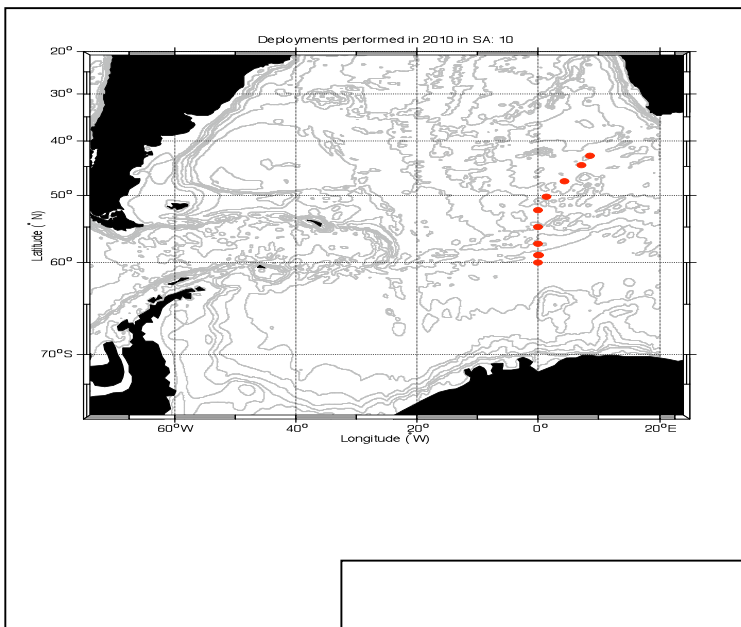


1. The status of implementation (major achievements and problems in 2010)

- floats deployed and their performance

Most of the floats deployed by Germany will be operated by BSH but additional funding has been acquired by various research institutes. Deployments in 2010 lagged behind the original plans due to time delays in float procurement. 21 floats purchased in 2010 by BSH which could not be sent to cruises in 2010 will be deployed early 2011. Since the price of floats increased due to the dollar exchange rate a slightly smaller amount of floats could be purchased. The float deployment from the science community is also lagging behind the original plans for 2010. The deployments in the Southern Ocean have started in 2010 and are continuing in 2011. Until the end of 2010 the deployments have reached 45 floats in the Northern, tropical and Southern Atlantic.



- technical problems encountered and solved

No major technical problems were encountered in 2010. Software problems associated with new firmware in NEMO floats encountered in 2009 seem to be solved.

- status of contributions to Argo data management (including status of pressure corrections, technical files, etc)

The majority of pressure corrections for German floats have been finished with the exception of floats operating in the Southern Ocean. DMQC for these floats will be performed by the Alfred-Wegener Institute after the field cruises in the Southern Ocean are finished in February 2011. BSH has adopted most orphaned floats in the Nordic Seas belonging to the national programmes from Denmark, Norway, Finland and Poland. The pressure corrections for these floats have also been performed. BSH has also adopted floats from the German research community from research projects for which funding has ceased. DMQC for these floats has been performed.

- status of delayed mode quality control process

The delayed quality control process is well underway and no major delays have been encountered.

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

The German Argo Project has been receiving its operational funding by the Ministry of Transportation from 2008 onwards. Overall the level of support is indicated in the table below. It is anticipated to contribute 40-50 floats per year to the global array by Germany, but the exact amount will depend on the actual purchase conditions. The research community has also secured funding for floats in the order of 20 floats per year for the next 3 years which will mostly be used for regional enhancements.

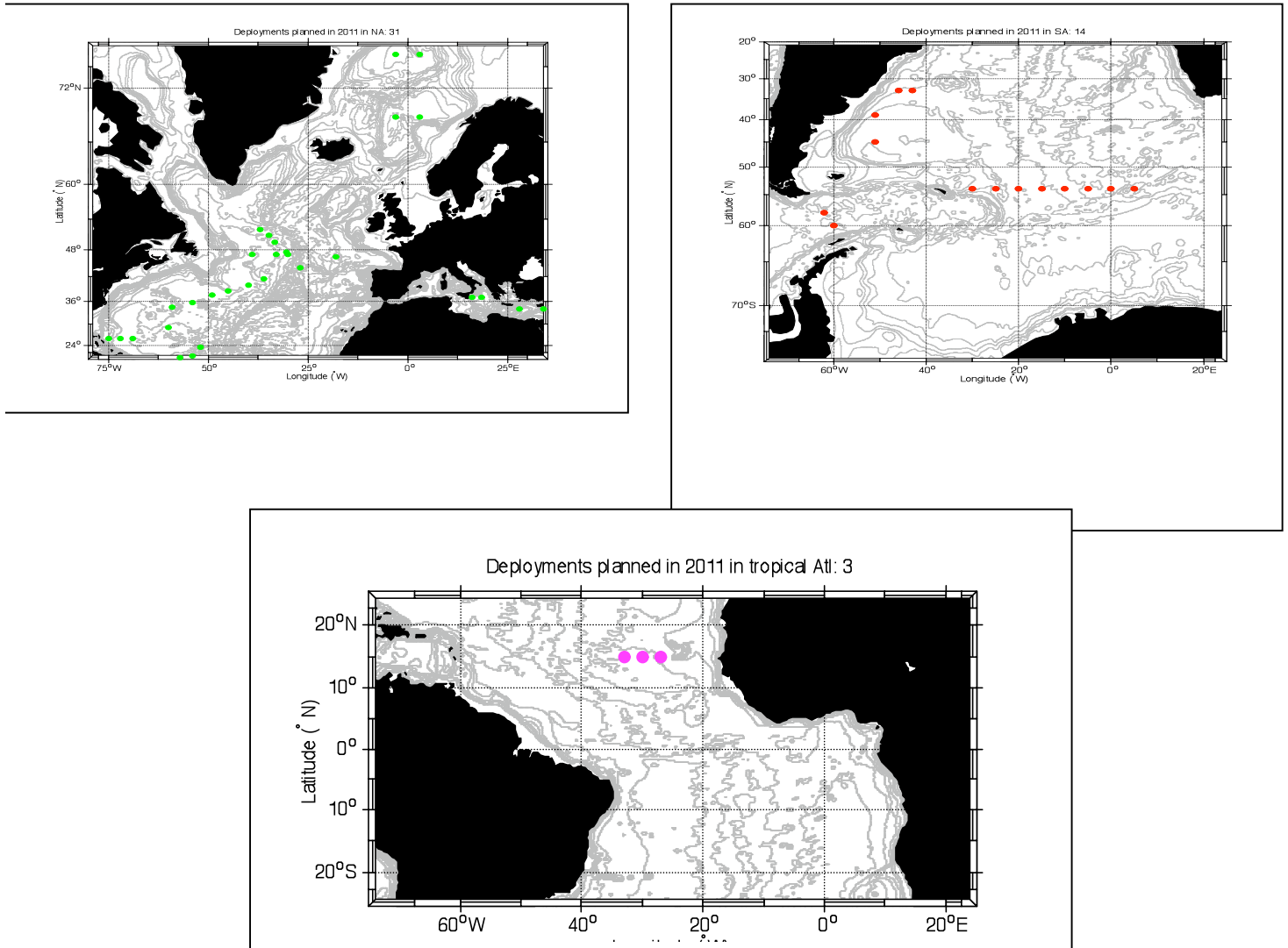
Float purchases in 2010 were marked by an increase in prices which can only be adjusted in the operational budgets after 2012. Funding from the Ministry of Transportation covers only costs related to float procurement and transmission costs, personnel will be provided by BSH. This will consist of 1 scientist and 1 technician.

Year	Float related costs	Manmonth/Year
2008	550k€	24
2009	600k€	24
2010	600k€	24
2011	600k€	24
2012	600k€	24
2013	650k€	24

Table 1. Previous and future operational funding for German Argo.

3. Summary of deployment plans (level of commitment, areas of float deployment) and other commitments to Argo (data management) for the upcoming year and beyond where possible.

Together with the remaining floats out of the 2010 budget the deployment plans for 2011 will comprise 48 floats. 8 additional floats will be purchased from research grants and will be deployed in the tropical Pacific. The main goal is to support the global array in the Atlantic Ocean and will focus on data sparse regions, specifically in the southern Atlantic. A map of the expected deployment positions is given below. 15 more floats will be purchased in 2011, but will remain in the storage facility for deployment in early 2012.



4. Summary of national research and operational uses of Argo data as well as contributions to Argo Regional Centers.

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 (assimilations, boundary conditions).

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

5. Issues to be considered:

The data transmission for almost all German floats is still using ARGOS. The few tests with Iridium floats showed mixed results probably due to antenna problems. It would be useful to receive continued updates about the technical progress with Iridium transmission from other programmes. A detailed cost analysis showing costs for the different Iridium transmission options (SBM, Rudics server) would be welcome.

6. Improve the CTD data base

A request has been send to the research community to list the recent CTD data uploaded to CCHDO.

7. Keeping the Argo bibliography

A request has been send out to the our national mailing list to update the Argo bibliography.