

Inventory of the Argo data in the Black Sea: usability and quality control

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The inventory of the Argo data in the Black Sea is done in close relation with the work in the Bul-Argo project in Bulgaria. This is a project funded by the Bulgarian National Science Fund and the Ministry of Education, Youth and Science, which aims to establish a national research infrastructure in the frame of Euro-Argo activities. The partners in this project are the Bulgarian Institute of Oceanology, Sofia University "St. Kliment Ohridski" and the National Institute of Meteorology and Hydrology. Monitoring the Black Sea state from surface down to the stagnant deep layers is a key focus of Bul-Argo, and the main ambition is to deploy continuously new floats, measuring not only the thermo-haline characteristics, but also the oxygen concentration and water optical properties. According to the experts' opinion at least 15 floats are necessary to obtain adequate picture of the Black Sea.

The initial objective of Bul-Argo project will be to deploy and make operational an array of 6 floats during the 3 years of project execution. The scientific team will procure and deploy the floats, as well as will process and quality control received data. This future work has to lie on a previous experience that is why a preliminary work on the existing Argo data and conclusion about the data quality and usability was done. The data referred to the Black Sea in the database of Coriolis centre are extracted and explored. There are 6 floats found since 2005 of which 4 are considered already dead. On average the lifetime of the floats is about 3 years but the quality of the data is not always high. There are frequently data missing. The errors coming from unrealistic values measured for the pressure, temperature, salinity or unstable stratification were identified. Problems often appear in summer time and in particular in August.

