

## **The new Argo monitoring of the Black sea. The perspectives of the BulArgo national research infrastructure.**

E. Peneva, M. Milanova, A. Gencheva, N. Rachev

University of Sofia "St. Kliment Ohridski", Sofia, Bulgaria  
Department of Meteorology and Geophysics, Faculty of Physics

On 8th of December 2009 a new Argo float (named Kaliakra) was deployed in the deep part of the Black Sea not far from Varna as result of the joined efforts of Bulgarian and French scientists in the framework of the Euro-Argo project. This event initiated the new Bulgarian research infrastructure BulArgo with the main ambition to deploy continuously new autonomous profiling floats, measuring not only the water thermo-haline characteristics, but also the oxygen concentration and water optical properties.

BulArgo is a project funded by the Bulgarian National Science Fund and the Ministry of Education, Youth and Science with a key focus to monitor the Black Sea state from surface down to the stagnant deep layers. The partners in this project are the Bulgarian Institute of Oceanology, Sofia University "St. Kliment Ohridski" and the National Institute of Meteorology and Hydrology. The initial objective of BulArgo project will be to deploy and make operational an array of 5 floats during the 2 years of project execution.

After the procurement and deployment of the floats, an important task is to process and quality control the received data in order to use them for further analysis. That is why an inventory of the existing Argo data prior 2009 was done and conclusions about the data quality and usability were drawn. It was found that 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.

The data coming from more than one year functioning of the new Argo float are shown and their quality and usability is discussed. The errors found are corrected and general procedures to check the data are proposed.