



Glider data collected during the Algerian Basin Circulation Unmanned Survey since 2014

Yuri Cotroneo (1), Giuseppe Aulicino (1,2), Simon Ruiz (3), Antonio Sánchez Román (3), Marc Torner Tomàs (4), Ananda Pascual (3), Giannetta Fusco (1,5), Emma Heslop (6), Joaquin Tintoré (3,4), Giorgio Budillon (1,5)

(1) University of Naples Parthenope, Science and Technology Department, Napoli, Italy (yuri.cotroneo@uniparthenope.it), (2) Università Politecnica delle Marche, Ancona, Italy, (3) Instituto Mediterráneo de Estudios Avanzados, IMEDEA(CSIC-UIB), Esporles, Illes Balears, Spain, (4) Balearic Islands Coastal Observing and Forecasting System (SOCIB), Palma, Spain, (5) Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere, CINFAI, Tolentino (MC), Italy, (6) Intergovernmental Oceanographic Commission of UNESCO, Paris, France

We present data collected in the framework of the Algerian BASin Circulation Unmanned Survey - ABACUS project supported by the EU through the JERICO and JERICO-NEXT calls.

ABACUS main objective is the monitoring of the basin circulation and of the surface and intermediate water masses physical and biological properties in a key region of the Mediterranean Sea circulation. Data presented here have been collected through deep glider cruises in the Western Mediterranean Sea since 2014 during the fall season between the Island of Mallorca and the Algerian Coast.

Across the glider missions, several repeated transects were obtained which enabled us to investigate the basin scale circulation and the presence of mesoscale structures utilising both the adaptive sampling capabilities of the gliders and the higher resolution of the data.

After collection, all data passed a quality control procedure and were then made available through an unrestricted repository host by the SOCIB Data Centre at <https://doi.org/10.25704/b200-3vf5> also including a data visualization tool. The actual available dataset consists of 2415 multiparametric profiles between surface and 975 m depth collected from 2014 to 2016 providing an important contribution to the data collection in the chronically under-sampled Algerian Basin.

Temperature and salinity data collected in the first 975 m of the water column allowed us to identify the main water masses and describe their characteristics improving the understanding of the dynamics of the region. On the time scale of the project, data show a large variability at the surface layer and reduced variability at the intermediate and deep layers.

Our measurements have been successfully compared to data previously collected in the area from 1909 to 2011. Results showed similar overall distribution, ranges and variability as the historical data, with no outliers in the surface or deep layers.