

PIATTAFORME2018

Principal Investigator
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RV G. Dallaporta

category: Regional
gross register tonnage (GT): 285
length overall (m): 35.3
breadth (m): 7.7
depth (m): 4.1
draft (m): 3.0
service speed (kn): 11.5

Cruise Location
Sicily Channel
Corsica Channel

Disciplines
Oceanography

Activities
Water sampling
Pretreatment and analysis of water samples
Stations recovery
Sea placement

Main Equipment
CTD SBE911 plus, Lowered ADCP, Dosimat for dissolved oxygen

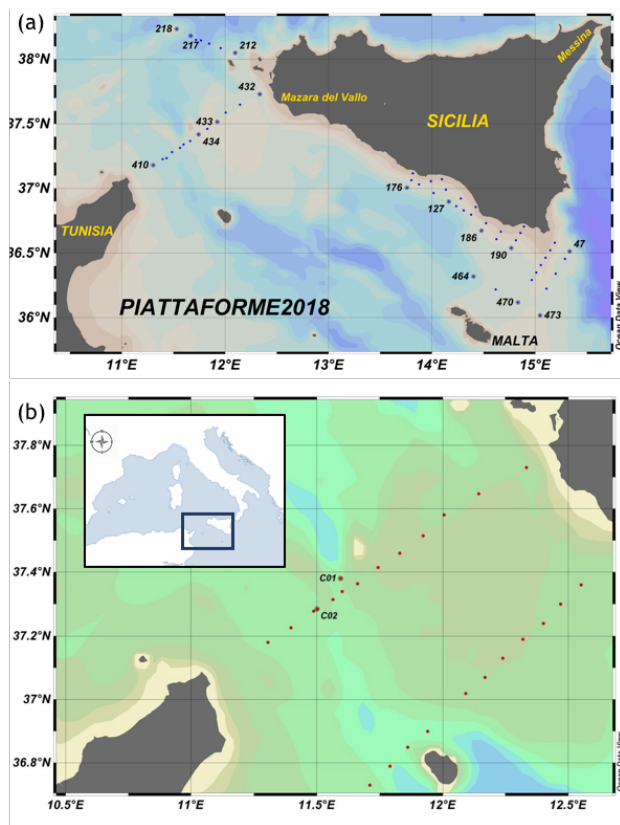
Scientific collaboration
Italian National Agency for New Technologies, Energy and Sustainable Economic Development - ENEA
IFREMER
University of Malta

The sampling plan of the PIATTAFORME2018 proposes the route already covered in previous cruises since 2000 to acquire data for the activities of Calibration/Validation (Cal/Val) of oceanographic ecosystem or forecasting numerical models at different scales. The aim is to study the inter-annual variability of biogeochemical and physical properties of the water masses in crucial areas for understanding the circulation and exchange between basins, in particular the transport of heat and salt in the Mediterranean. In particular, the researchers wish to study the exchange between the western and eastern Mediterranean.

The PIATTAFORME2018 is designed to approximately replicate the stations of previous cruises MedGOOS, MedCO or MedOc and ICHNUSSA from 2012 to 2017. It is part of the international strategy of GOOS and COPERNICUS, facing three phases of Ocean Forecasting and Operational Oceanography, (i.e. measures, monitoring and modeling). During the cruise, 56 CTD stations will be carried out in the Sicilian Channel, along the Sicily-Tunisia route and along the coast between Licata and Capo Passero, extreme south-eastern boundary of Sicily (Figure 1). Correntometry measurements will be carried out using ADCP in hull (SADCP) and launch drifter.

The oceanographic cruise is planned in order to collect an oceanographic dataset in the area between Sicily and Tunisia to: i) initialize, calibrate and validate ecosystem or operational hydrodynamic models at different scales with in situ and satellite data; ii) monitor the physical characteristics of the waters crossing the Strait; iii) evaluate the transport of water, salt and heat in the Mediterranean and analyze whether the interannual variability of water mass properties are due to climate change; iv) ordinary maintenance of deep water moored chains for the inclusion of the data in a 20 years old CNR dataset.

Figure 1: Investigated area: (a) 56 CTD/ADCP stations at a maximum depth of 550m; (b) correntometer chains



A Cucco, G. Quattrocchi, A. Olita, L. Fazioli, A. Ribotti, M. Sinerchia, C. Tedesco, R. Sorgente R. (2016) Hydrodynamic modelling of coastal seas: the role of tidal dynamics in the Messina Strait, Western Mediterranean Sea. Natural Hazards & Earth System Sciences 16 (7)