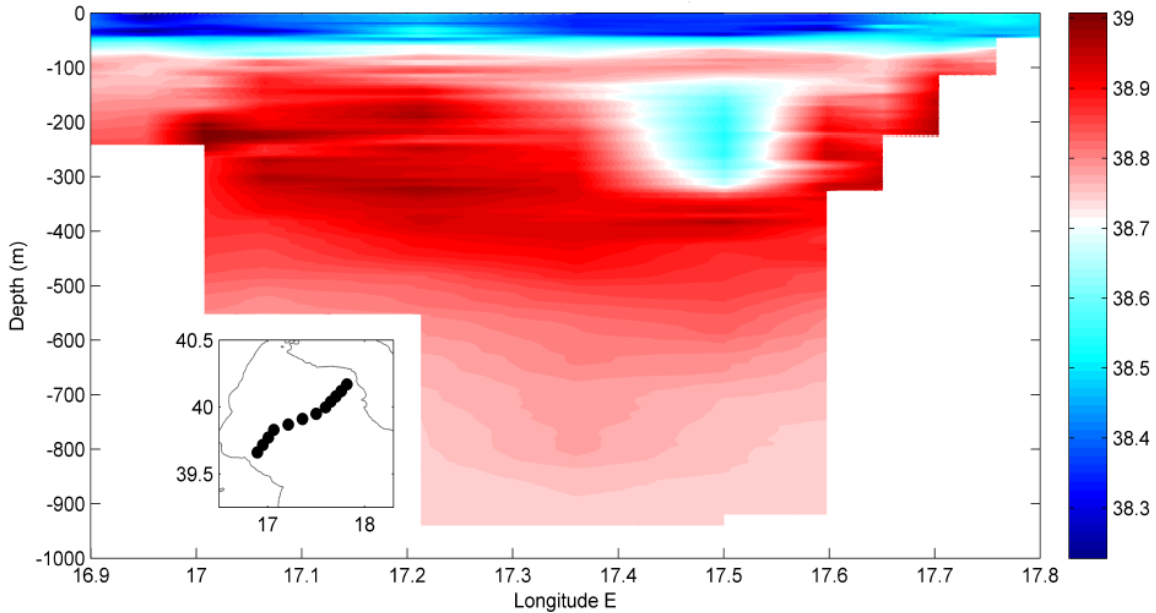


Recognized Environmental Picture 2011 (REP11)



Pool of low salinity Adriatic water observed in the eastern Gulf of Taranto during REP11A by fusing data obtained from autonomous and conventional platforms. Figure provided by REP11A Team.

REP11A was the first leg of a sea trial in the Gulf of Taranto dedicated to characterizing the environment in support of research in ocean forecasting and acoustic prediction capabilities, including uncertainties. REP11 is a major component to the Environmental Knowledge and Operational Effectiveness (EKOE) program at NURC. The objectives of REP11A were to collect data suitable for initializing, constraining, and validating ocean forecasting models. Initialization was provided by a wide-area survey of conductivity and temperature at depth (CTD) completed during the first days of the trial. For more persistent monitoring, two full depth environmental moorings (current, temperature, salinity, depth) were deployed, as well as three Barnys (with upward looking acoustic Doppler current profilers), and four drifters (measuring surface current and temperature). A wave rider buoy and meteorological station buoy were also deployed. The moorings will be left in place for a period of approximately seven weeks. In addition to the fixed assets, three gliders (all with CTDs) were deployed to survey conditions for the duration of the time on site. Two of the gliders were equipped with instruments to measure optical properties of the water column. Glider data were augmented by (almost) daily profiling of optical properties from the N.R.V. Alliance at times coinciding with remote sensing satellite overpasses (Modis and Meris). To complete the environmental characterization, detailed multi-beam and “chirp” seismic surveys were conducted in an area near Capo Trionto on the western side of the gulf. The detailed bathymetry and sub-bottom information provided by these data will be extremely useful in planning the acoustic research effort for the second leg of the trial beginning in late September - REP11B. They will also be provided to the CASW program to facilitate planning and execution of the GLINT/NGAS sea trial in the coming weeks. The sea trial was supported from shore by teams providing glider piloting and decision support, remote sensing data, and oceanographic modeling data. Contributing to REP11A at sea were partners from the Naval Research Laboratory Stennis Space Center (USA) and the Mediterranean Institute for Advanced Studies plus Balearic Islands Coastal Observatory System (ESP).