



## **Last biogeochemical results from an integrated open-sea network in the northwestern Mediterranean Sea**

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Fixed point observatories in the northwestern Mediterranean Sea have a major contribution in monitoring physical and biogeochemical variables in the region. The capability of recording long-term, high quality time-series, using smart sensors, upgrades scientific knowledge regarding sea processes sensitive to climate change. Existing open sea multi-parametric moorings are located in the key areas where dynamic processes (e.g. convection, ventilation) and bio-regions (from high bloom to intermittent regimes) drive biogeochemical content that are essential to the carbon pump and the marine ecosystem (nutrients, oxygen, pH, pCO<sub>2</sub>). For the last 5 years, new biogeochemical sensors (O<sub>2</sub>, pCO<sub>2</sub> and pH) have been integrated in the open sea fixed moorings (ERIC EMSO and others), on gliders and Argo floats (MOOSE network) in this region to deliver integrated data relevant for marine environmental studies and monitoring services. We will present here the last biogeochemical O<sub>2</sub>, pCO<sub>2</sub> and pH time series that could be used to derive the net air-sea CO<sub>2</sub> flux and to estimate the acidification trend in the northwestern Mediterranean Sea, a crucial region for ventilation and anthropogenic CO<sub>2</sub> invasion.