

OCEANIC STATION

Name:	Western 1 – Mediterranean Moored Multi-sensor Array (W1M3A)
What:	Surface buoy with ocean mooring.
Location (lat-long):	North-Western Mediterranean Sea (Ligurian Sea), 43.8345 – 9.1182, 1200 m water depth.
Environment:	Open ocean.
Operational history:	2000 – present.
Scientific purpose:	To understand how ocean and atmosphere processes regulate our climate and influence marine ecosystems using an Eulerian approach.
Station description:	<p>The W1-M3A station is constituted of a large spar buoy and a sub-surface mooring periodically deployed close to the main buoy: it is located 80 Km offshore and moored on a 1200 m deep seabed.</p> <p>The W1-M3A station was specifically designed for air-sea interaction studies and for the collection of meteorological data even in rough sea. Almost negligible sensitivity to sea heave and height is the main feature of this marine station.</p> <p>The W1-M3A station hosts meteorological sensors and data acquisition and communication controllers on the upper mast and in the laboratory on top of the buoy, whereas marine sensors are deployed at different depths along the buoy's hull or on the subsurface mooring.</p>
Measured ICOS core parameters:	Sea temperature, sea salinity, pCO ₂ , dissolved oxygen.
Measured ICOS desirable parameters:	Atmospheric pressure, wind speed, air temperature, atmospheric pCO ₂ (in progress), pH (in progress), chlorophyll-a.
Other measured parameters:	Wind direction, relative humidity, short- and long-wave solar radiation, precipitation, significant wave height, underwater ambient noise, sea temperature and salinity along the water column, turbidity.
Website/data portal:	www.odas.ge.issia.cnr.it
Responsible organization:	National Research Council of Italy
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The W1-M3A buoy lifted by a crane for the launching.



The topside of the W1-M3A marine observatory.



The top trellis of the buoy with the meteorological equipment.



A diver working to install the pCO2 sensor along the buoy's hull.

