



OSIL

Environmental Instruments
and Systems

Fulmar Buoy contributes to Ocean Observatory

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Application
Note

The Instituto de Investigaci3es Mari3as (CSI-IIM) have utilised an OSIL Fulmar Buoy for their contributions to the RAIA Iberian Margin Ocean Observatory.

An Ocean Observatory has been established along the Iberian margin of the Euro-region, Galicia-Northern Portugal, in order to obtain continuous meteorological, oceanographic and biological data, complemented by predictive models.

The operational nature of the institutes involved will guarantee the future sustainability of the observatory as well as the availability of data and models to all the other participants, present and future, and to the end users.

The local objective is to provide continuity to an existing series of measurements along the zonal line passing through the mooring site off Cabo Silleiro, which has been the focus of observations for several decades.



Marine observation grid (green: present grid; red: to be implemented during RAIA) - IIM Fulmar Buoy circled

OSIL worked closely with IIM participants to specify and develop a suitable platform. The platform selected was the 1.9 m OSIL Fulmar buoy, equipped with an ACDP, a wind speed and direction sensor, a string of Seabird CT sensors and a GPS watch circle. Data is transmitted from the buoy using an inductive modem (which sends data up any insulated wire using a modulated signal) and is transferred via Iridium satellite.

The buoy will provide coverage of the hydrographic properties and currents of the complete water column and local surface meteorological forcing in real time, which will enable IIM to place their process studies in context.





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OSIL's Fulmar Buoy is a versatile instrumentation platform ideally suited for collection and measurement of oceanographic, meteorological (metocean) and water quality data parameters in inshore coastal areas, as well as open water applications.

Instrumentation can be deployed anywhere from near surface to the seabed. The buoys can be moored in a fixed position with either single point, dual point or compliant mooring (where required).

The system is supplied with a range of sensors that can be specified by the customer. All buoys are fitted with solar panels, navigation/warning lights and other markings as necessary. A range of telemetry options are available (UHF/VHF, GSM, GPRS, Satellite), selected to suit both the location and application requirements. OSIL provide a complete data telemetry solution, including either desk top or web-based software packages to access the data.



The buoys have a total buoyancy of 2000 kg, and a reserve buoyancy of 1000 kg after fitting the equipment such as solar panels, battery packs and monitoring instrumentation, etc.

The OSIL range of buoys are manufactured using rotationally moulded polyethylene hulls, which are foam filled for added security. The hulls are constructed around a galvanised steel or welded polyethylene central structure, which has a large hole through the centre which allows the passage of instrumentation and cables from the tower down through the water column to

the seabed. By utilising a 'Moon Pool', instrumentation in the centre of the buoy is well protected from damage during deployment and operation.

For further information please contact:

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