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Orientation: Ocean Observation and Global
Change Specialization Area: Ocean Observation
Research Area: 1.1 Physical Oceanography



PhD project: Characterization of high spatial resolution wind fields in the Ría de Vigo and their relationship with the surface current.

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Summary: The study of wind on the Galician continental shelf has been addressed in multiple investigations. However, high spatial resolution wind characterization both in the region and in similar coastal environments is practically non-existent. This thesis aims to apply and validate different wind field interpolation techniques in the Vigo estuary, its adjacent shelf and the Canary Islands continental shelf, with the intention of extrapolating them to similar coastal areas. The wind produces an energy transfer from the atmosphere to the water surface that conditions the surface movement, exchanging energy across the interface. Knowing the wind with high resolution will allow us to assess the feasibility of energy use through offshore wind installations. From the point of view of energy use, the development of a wind resource estimation methodology using interpolations at high spatial resolution is key to assessing the location and potential of future installations. Our approach represents a significant improvement in knowledge, and a reduction in costs and study times.

