



## **Study of early summer mesoscale structures and processes of the NW Iberian Margin**

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The hydrography and dynamics of NW Iberian margin in the neighborhood of Cape Silleiro were explored for July 2009, based on a set of in situ and remote sensing observations.

Usually, filaments develop near Cape Finisterre and at 42°N in July and grow until the end of August. During July 2009, anomalous atmospheric conditions brought southerly winds and precipitation. In this way upwelling was not sustained long enough to produce fully developed filaments in the region. Nonetheless, two periods of northerly winds were enough to form an upwelling front extending to the shelf edge, just south of Cape Silleiro.

Zonal sections of standard CTD casts, towed CTD (SeaSoar), Vessel Mounted Acoustic Doppler Current Profiler (VMADCP), and Lagrangian surveys were made, in order to characterize the early stages of upwelling in this region, which is key to the origin of filaments. High-resolution VMADCP and SeaSoar offshore surveys revealed a poleward flow with a signature in the satellite Sea Surface Temperature. This flow was associated with mesoscale eddies which interacted with the coastal waters and the shelf topography. Those interactions appear to be responsible for the main forcing mechanisms of the small scale filaments observed in this study. Ongoing numerical model simulations for the same period will contribute to further understanding of upwelling dynamics and filament development in this region.