



## **Evolution of Ekman pumping velocity along the western Iberian Peninsula from 2000 to 2006**

I. Alvarez, M. Gomez-Gesteira, M. DeCastro , I. Iglesias

Grupo de Fisica de la Atmosfera y del Oceano, Universidad de Vigo, Spain

The spatial variation of wind due to the presence of the coast produces a corresponding variation in the resulting Ekman transport, causing convergence in some places and divergence in other places. This leads to Ekman pumping. The Ekman pumping velocity along the area under study was calculated from wind vectors provided by the QuikSCAT satellite. Wind data were retrieved from the Jet Propulsion Laboratory web site ([http : //podaac.jpl.nasa.gov](http://podaac.jpl.nasa.gov)). The monthly evolution of Ekman pumping velocity was considered at 28 points situated along the coast at an approximate distance of 75 km from the nearest shore line. The highest positive values can be observed from April to September around 42.5°N, 38°N and 36°N with the maximum value (0.4-0.5 m/d) in June-July. These latitudes correspond to the location of Cape Finisterre (Galician coast), Cape Rocha and Cape Sao Vicente (southern Portuguese coast). Along the rest of the coast, it is also possible to observe positive values during spring and summer seasons although with a lower magnitude (around 0.2 m/d). In February and in November the Ekman pumping velocity also tends to be positive along the entire coast while for the rest of the year it is possible to observe negative or practically null values. Between 42°N and 43°N positive velocities can be observed basically along the year. This behavior could be explained by the presence of Cape Finisterre, where a stationary upwelling maximum and a recurrent upwelling filament is frequently observed.