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Coastal upwelling regions, as the Iberian margin, are highly productive and play an important role in the Earth climate regulation. To better understand the present-day climatic system and better estimate future climate, the knowledge of the past conditions is obligatory. The lack of instrumental records beyond 150 years requires the use of natural archives like marine sediments. Otherwise, to make optimal use of these sediments it is necessary to calibrate the sediment properties (e.g. diatom content and assemblages' composition) to the modern oceanographic conditions. This study aims to understand the present-day seasonal abundance and diversity of siliceous microorganisms, especially diatoms, how these microorganisms relate to hydrographic conditions, and their transference/preservation into the sediments.

Thus, we are studying the diatom flux between water column, sediment traps and surface sediment samples off Vigo, including the integration and comparison with other productivity and hydrographic data. Preliminary results show that the diatom assemblages observed in the water column and sediment traps samples evidence seasonal productivity. The major productivity/hydrographic features observed are: the spring bloom and late spring to summer coastal upwelling, which are associated with high diatom abundances and elevated percentages of *Chaetoceros spp.* and *Leptocylindrus spp.,* including resting spores.

Freshwater *genera* indicate major river input during autumn/winter/early spring.

Surface sediment samples are dominated by resting spores of the same groups, *Leptocylindrus spp.* and *Chaetoceros spp.,* which are very resistant to dissolution. These *genera* blooming capacity and spore resistance makes them especially effective productivity markers both in sediment traps and sediment samples.

**Palavras chave**: afloramento costeiro, diatomáceas, fluxo de microorganismos siliciosos, Margem Ibérica NW, produtividade primária.

***Keywords***: *coastal upwelling, diatoms, NW Iberian Margin, productivity, siliceous microorganisms flux.*

## The role of blocking events during the 8.2 ka event over the mid-latitudes of the eastern North Atlantic region

O papel dos bloqueios durante o evento 8.2 ka nas médias latitudes do Atlântico Norte

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Vegetation and climate changes in southwestern France/northern Spain are documented for the extreme climate event about 8200 years ago in a well-dated shelf core, KS05-10, retrieved in the southern margin of the Bay of Biscay (Basque country, 43°22'765N, 2°16'744W). The Bay of Biscay pollen record detects an abrupt cool and wet episode, between 8.3 and 8.1 ka, marked by the contraction of temperate trees (particularly hazel) and expansion of ubiquist plants (mainly *Cyperaceae*), respectively. The relatively cold conditions were probably the result of the weakening of the Meridional Overturnig Circulation (MOC) triggered by the final catastrophic drainage of the proglacial Laurentide lakes and consequent input of freshwater in the North Atlantic region. The cooling led to the strengthening of the thermal gradient between high and low latitudes and the southern migration of the Atlantic westerly jet stream to the European mid-latitudes. This atmospheric mechanism together with the prevalence of strong zonal flow and frequent low pressure systems (associated with less blocking events) over southwestern France/northern Spain would have favoured the increase in precipitation rate and therefore moister conditions in that region.

**Palavras chave**: evento 8.2 ka, Holocénico, sudoeste da Europa, Corrente de Jato Atlântica, eventos de bloqueio, *Corylus*, *Cyperaceae*.

***Keywords***: *8.2 ka event, Holocene, Southwestern Europe, Atlantic westerly jet stream, Blocking events, Corylus, Cyperaceae*.

## Planktonic foraminifera proxies calibration off the NW Iberian margin: temperature and nutrients view

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The NW Iberian upwelling system has been studied both in terms of physical, biogeochemical and geological processes. However there are few studies combining hydrographic and biogeochemical conditions with the past oceanic or climate conditions. This fact has special relevance since it will improve the prediction of future changes against possible climate alteration and anthropogenic influence. In order to minimize this lack of information from the upper water column