



Past Productivity conditions off SW Iberia at the transition from the 41 ky to the 100 ky world; The record of IODP Sites U1385 and U1391

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To investigate primary productivity conditions off SW Iberia and their relation to global climate variability between 1400 and 250 ka, a multi-proxy analysis, including primary production and terrestrial input indicators, is performed in Sites U1385 and U1391 that constitute an E-W transect at $\pm 37^{\circ} 34'$ N latitude, in a region influenced at Present by two upwelling filaments.

The data reveal a shift in timing and magnitude of the processe(s) leading to the production record, but no apparent change in its cyclicity. Within the 41ky world, both CaCO_3 and TOC records are coeval up to ± 1000 ka, time at which the two records reverse. Diatoms have maximum abundance at ± 950 ka followed by a sporadic occurrence of diatoms and low TOC contents. The 100ky world shows larger amplitude of variation for all proxies, higher diatom abundance as well as an increase in the concentration of total alkenones, CaCO_3 and TOC. Similarly, n-alkanes, scanning XRF Fe and C/N reveal higher values. Such results suggest an increase in both upwelling related primary production and hinterland precipitation and input of continental organic matter (stronger seasonality?). Furthermore Terminations IV and V and the transition MIS15.2 / MIS15.1 are marked by sharp productivity peaks. Its occurrence on Site U1391, backs a coastal upwelling related increase in primary production also suggested by the Si/Al record of NW African ODP Site 658. A preservation effect cannot be discarded, implying the presence of southern source waters.