

## MEDITERRANEAN SAPROPELS AND PLIO-PLEISTOCENE HIGH-LOW LATITUDES CONNECTIONS

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ABSTRACT: Colleoni *et al.* Mediterranean sapropels and Plio-Pleistocene high-low latitudes connections.  
(IT ISSN 0384-3356, 2011)

We present a comparison of the mediterranean stable isotopic planktic foraminifera record to analogous records in the Atlantic ocean in order to evidence the high-low latitude connections during the Plio-Pleistocene interval.

RIASSUNTO: Colleoni *et al.*, Sapropel del mediterraneo e connessione tra alte e basse latitudini nel Plio-Pleistocene.  
(IT ISSN 0384-3356, 2011)

Abbiamo confrontato uno studio del record isotopico dell'ossigeno ottenuto su foraminiferi planktonici nel mare mediterraneo con record analoghi provenienti dall'oceano Atlantico per evidenziare le possibili connessioni climatiche tra alte e basse latitudini durante il Plio-Pleistocene.

Key words: Mediterranean sea , Sapropel, High-low latitude connections

Parole chiave: Mare mediterraneo, Sapropel. Connessione alte-basse latitudini

During the Late Pliocene, a gradual cooling of the global climate led to the onset of Northern Hemisphere Glaciations toward 3 Million years ago (Ma). Through external forcings and internal climate feedbacks, the Mediterranean testifies of these large scale climate changes by means of rhythmic sediment, alternating marly limestone, marls and organic carbon rich sediments layers (sapropel). We consider the planktonic  $\delta^{18}\text{O}$  stack of four Mediterranean cores (Medstack, LOURENS *et al.*, 2004 ; WANG *et al.*, 2010) spanning the entire Plio-Pleistocene period. The Medstack is further compared with four North Atlantic high latitudes benthic  $\delta^{18}\text{O}$  records and North Atlantic tropical benthic  $\delta^{18}\text{O}$  and aeolian dust flux records. The time-evolutive power spectrum of these time-series were performed on the orbital bands at 100 kyr, 41 kyr and 23 kyr. Results show that the climate variability of the Mediterranean is tightly linked to that of the Tropical records prior the onset

of Northern Hemisphere Glaciations, being dominated by precession. After 3 Ma, all latitudes exhibit a similar variability with increasing power in the 41 kyr band, in both benthic and planktonic records. However, the Mediterranean seems to be still influenced by tropical climate dynamics which is in turn paced, after ~2.5 Ma, by high latitudes glacial/interglacial alternation.

### REFERENCES

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