



High resolution integrated study of microfossil assemblages in Sapropel S1, S3 and S5: preliminary results

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The Eastern Mediterranean late Neogene to Quaternary sedimentary record is characterized by the widespread and distinctly periodical occurrence of organic carbon-rich layers, called sapropels. The deposition of sapropels is related to significant changes in climate, in the pattern of water circulation and in the biogeochemical cycles. The primary cause triggering the formation of sapropels has been debated ever since their discovery: productivity in the surface waters and organic matter preservation at the sea-floor due to hypoxia or anoxia have been indicated as the two major contributing factors operating either separately or combined. Moreover, each sapropel seems to have its own peculiar feature, likely attributed to the different climate forcing and the different response of productivity and preservation to the water column parameters.

Here we present preliminary data from core M25/4 12, located in the Ionian Sea, containing a continuous record of the sapropels deposited in the last 330 ka (S1 to S10, excluding S2).

We analysed the microfossil assemblages in sapropels S1 (10 ka BP), S3 (80 ka BP) and S5 (125 ka BP) at a multi-centennial time resolution to get insights into the climatic and oceanographical features leading to their deposition and the role of productivity and preservation.