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Coccolithophore biogeographic trends and export production in the Eastern Mediterranean and Black Seas [POSTER]

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The export production of coccolithophores has been measured from Black Sea, North Aegean Sea, Cretan Sea, South Cretan margin and Ionian Sea, and compared in order to define the spatial and seasonal variability in their assemblage composition.

A sediment trap mooring has been deployed for one year (10/2007- 9/2008) at 1000 m water depth, in western Black Sea. The maximum coccosphere fluxes, with almost monospecific assemblage of *Emiliania huxleyi*, have been recorded during May, June and September (max. 3.2 x10^8 coccospheres m^{-2} day^{-1}). The seasonally controlled coccolithophore patterns are strongly related to those of sea surface temperature and accumulated rainfall in the area, triggering riverine nutrient input

Coccosphere fluxes in North Aegean Sea have been calculated from a sediment trap deployment at 500 m (1/2011-12/2011). *E. huxleyi* is the dominant species, followed by *Rhabdosphaera* spp., *Syracosphaera* spp. and *Florisphaera profunda* as minor assemblage components. Maximum fluxes have been observed in February and June (max. summer 2.9 x10^5 coccospheres m^{-2} day^{-1}).

A single mooring with two sediment traps (500 and 1700 m) was deployed at the southern margin of the Cretan Sea (Triantaphyllou *et al*., 2004). The results obtained from 500 m depth show that the highest flux values were observed between late March to late June (max. 9.4 x10^5 coccospheres m^{-2} day^{-1}). The pattern was characterized by three main phases that correlate well with the gradual increase in SST from January till September. Coccosphere sinking assemblages were characterized by high abundances of *E. huxleyi*, followed by *F. profunda, Rhabdosphaera* spp. and *Syracosphaera* spp.

Six moorings have been deployed at different sites along the south–west margin of Crete, providing a total of eight sediment-trap time series (6/ 2005-5/2006), (Malinverno *et al*., 2009). Maximum coccosphere fluxes were recorded in between March to June (4.3 x 10^5–3.4 x10^6 coccospheres m^{-2} day^{-1}), featured by dominance of *E. huxleyi* and subordinate *Helicosphaera carteri, Umbilicosphaera* spp. and *Syracosphaera pulchra*; intermediate fluxes from June to November, with high abundance of the deep photic zone species *Algirosphaera robusta, F. profunda, Gladiolithus flabellatus*; low fluxes from November to February, with high flux of *A. robusta, S. pulchra* and *Syracosphaera* spp. These three periods correspond to the seasonal changes in sea surface temperature and surface mixed layer depth.

Coccolithophore fluxes from the central part of the Ionian Sea have been studied from a sediment trap mooring (9/1999-6/2001) at 500 m water depth (Malin-