Coccolithophorids from the eastern Mediterranean: linking surface and export production. Preliminary results.

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In the pelagic eastern Mediterranean, coccolithophorids represent the most important phytoplankton group for most of the year and contribute significantly to the carbonate flux to the bottom sediments. For time periods that are close to the present, coccolith species variability throughout the sediment layers is commonly used to derive paleoceanographic reconstructions, based on information from extant species ecology. Nevertheless, the actual correspondence between surface production and the sediment record is still not completely understood. In fact export production, that part of primary production that is exported from the upper photic zone and which determines the downward particle flux to the sediments, is highly variable on a seasonal scale, and is subject to variations with depth. This research presents an attempt of integration of coccolithophorid surface production data (surface water samples) with their flux at different depths in the water column (sediment trap samples collected throughout the year) and in the underlying bottom sediments. A comparison with satellite-derived chlorophyll data related to the sampling period will provide a further step in the understanding of such relation.