



Preliminary results on core MD04 2760 from the southwestern Black Sea

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The main goal of the project is to reconstruct the hydrological evolution of the Black Sea and regional paleoclimatic conditions since the Last Glacial period. The work presented here is based on a piston core retrieved in the southwestern Black Sea from the upper continental slope off western Anatolia next to Sakarya River mouth. In a first step we focused on developing a detailed chronostratigraphy. ^{14}C AMS datings of ostracod and gastropod shells are combined with tephrochronology and evoke variable reservoir ages for the late glacial Black Sea. The comparison of our data with previously published records from the northwestern Black Sea suggest reservoir ages of ~ 1500 yrs for a rather homogenized water column during the LGM that started to decrease with the onset of Bølling/Allerød warm period most likely due to evaporation-driven saline deep water formation. During the YD the age of the surface water was close to 0 yrs, while deep waters were about 1000 yrs older. The beginning inflow of saline Mediterranean waters at about 9500 yrs B.P. probably shifted the surface water ages towards the recent values of 400 yrs.

Digital imaging, XRF- scanning, and physical property measurements were applied to the sediments in high resolution. Laminated sequences from the glacial, lacustrine stage of the Black Sea have a high potential for reconstruction the fluvial sediment supply on multidecadal to interannual timescales. At present, northwest Anatolian rainfall anomalies are significantly affected by the Arctic Oscillation/North Atlantic Oscillation (AO/NAO). Draining a wide part of this region, the terrigenous accumulation in the vicinity of the Sakarya River constitutes an important proxy for past changes in precipitation and hence allows testing the role of AO/NAO in the pre-Holocene period.