



Core top calibration of temperature proxies along the Southern Adriatic coast – First results of the MOCCHA Project

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The MOCCHA Project (Multidisciplinary study of continental/ocean climate dynamics using high-resolution records from the eastern Mediterranean) aims at reconstructing climate change from high sedimentation rate sediments in the Gulf of Taranto. Here we present the results of an extensive set of sediment surface samples, taken during the CAPPUCINO cruise in 2006, along the southern Italian coast. The goal of this study is to calibrate multiple temperature proxies and evaluate their potential for reconstructing past temperature and hydrography conditions of the southern Adriatic Sea from sediment cores. We measured alkenones and the oxygen isotope composition of benthic and planktic foraminifers and compare them with seasonal satellite-based sea surface temperature maps and water column profiles, as well as with a set of water samples from the Gulf of Taranto, to estimate the effect of salinity on the oxygen isotope composition of foraminifera. - The alkenones closely reflect spring temperature conditions with a gradient to colder conditions near the coast, whereas planktic foraminifers give a signal for summer temperature conditions.

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