



New Holocene record of Relative Paleointensity of geomagnetic filed from the Adriatic Sea, Italy

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Two sedimentary marine sequences from Central and Southern Adriatic Sea were analyzed by means of paleomagnetic/rock magnetic analysis then integrated with micropaleontological data (planktonic foraminifera). Climatic and environmental changes and the occurrence of the sapropel S1 are, mostly, indicated by magnetic grain-size and concentration parameters, and by foraminifera associations. Magnetic grain size reflects changes in sediment supply between 2500-3000 yrs probably related to the formation of the High Stand Systems Tract (HST), accumulated on the western Adriatic shelf, and to changes in the water mass circulation. However, magnetic parameters vary within the range that fulfill the usual criteria for a relative geomagnetic paleointensity (RPI) study. RPI records were obtained at both the sites by normalizing the intensity of natural remanent magnetization (NRM_{20mT}) by anhysteretic remanent magnetization (ARM_{20mT}). The record of the last 7000 years from the Meso-Adriatic Depression (MAD) in the Central Adriatic Sea is in good agreement with the paleointensity record reconstructed by the geomagnetic model CALS10k.1b and with relative paleointensity records from cores collected in MAD, and in Augusta Bay (Sicily, Italy). It, however, lacks a prominent sharp peak in paleointensity at c. 1-1.2 ka present in the geomagnetic field model which is missing also in the record from Augusta Bay. The RPI record from P1 core is particularly significant and might be used in the future to improve geomagnetic field variations models for the past 7000 kyr (eg., Korte et al., 2011; Pavón-Carrasco et al., 2009).