



Paleomagnetism of sedimentary cores from the Ross Sea outer shelf and continental slope (PNRA-ROSSLOPE II Project)

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We carried out a paleomagnetic and rock magnetic study of 4 gravity cores sampled in the Ross Sea continental slope of the area to the east of Pennell-Iselin banks. The cores (RS14-C1, C2, C3 and ANTA99-C20) consist of hemipelagic fine-grained (silty-clays) sediments with an IRD component. Rock magnetic and paleomagnetic measurements were carried out at 1-cm spacing on u-channel samples. The data indicate that the cored sediments carry a well-defined characteristic remanent magnetization (ChRM) and have a valuable potential to reconstruct dynamics and amplitude of the geomagnetic field variation at high southern latitudes (ca. 75°S) during the Holocene and the late Pleistocene. The paleomagnetic and rock magnetic data are integrated in a multidisciplinary context which includes previous geological, geophysical, oceanographic and morpho-bathimetric data obtained in the same area in the frame of the PNRA/ROSSLOPE (Past and present sedimentary dynamic in the ROSS Sea: a multidisciplinary approach to study the continental slope) Project. The main aim of the project is to investigate the relation between present and past water mass circulation and to provide a basis for paleoceanographic reconstructions and for the development of a depositional model of the modern processes active along the continental slope.