



New paleomagnetic data of a Quaternary deep-sea core from the northern slope of Chatham Rise, east of New Zealand

A. Venuti (1,2), F. Florindo (1), M. Cobianchi (3), V. Luciani (4), C. Lupi (3), E. Michel (5), J.L. Turon (6), P. Zerba (4)

(1) Istituto Nazionale di Geofisica e Vulcanologia, Roma, Italy (venuti@ingv.it), (2) Università degli Studi di Siena, Italy, (3) Università degli Studi di Pavia, Italy, (4) Università degli Studi di Ferrara, Italy, (5) Laboratoire des Sciences du Climat et de l'Environnement, Gif/Yvette cedex, France, (6) Département de Géologie et Océanographie, Université Bordeaux 1, France.

In order to study the Southwest Pacific source of intermediate and cold deep water a set of deep-sea piston cores was collected in 1997 during the oceanographic cruise of the French R/V Marion Dufresne (IMAGES program). In this study, we present new paleomagnetic data (magnetostratigraphy and rock magnetic analyses) from core MD97-2114. This site ($42^{\circ}22.32'S$; $171^{\circ}20.42'W$) is located on the northern slope of Chatham Rise, east of New Zealand, at 1,935 m water depth. It lies beneath the southwest Pacific Deep Western Boundary Current (DWBC) which represents the Lower Circumpolar Deep Water (LCDW) flowing north from the Antarctic. We have analysed u-channel samples collected for the entire 29 meters sequence using a pass-through cryogenic magnetometer with measurements at 1-cm intervals (4-cm spatial resolution) with the goals to develop a chronology and to explore whether a magnetic signature associated with climatic and bottom current variability is present in this record. Our preliminary data, integrated by new quantitative analyses carried out on calcareous nannofossils, planktonic foraminiferal assemblages and stable isotope records, indicate that core MD97-2114 records the past c. 1.1 Myr, with sedimentation rates in the order of 2.6 cm/kyr. The results are discussed in the light of the results recently obtained in the same region from other sediment cores.