



Palaeosecular variation of Late Pleistocene and Holocene sediment, Gulf of Salerno, western Mediterranean Sea

J. Liddicoat (1), M. Iorio (2), F. Budillon (2), A. Incoronato (3), P. Tiano (3), R. Coe (4), B. D'Argenio (2) and E. Marsella (2)

(1) Department of Environmental Science, Barnard College, Columbia University, USA (jliddico@barnard.edu / Fax: 1 212 678 4149 / Phone: 1 212 663 7392), (2) Istituto Ambiente Marino Costiero–CNR, Naples, Italy, (3) Dip. Scienze della Terra, Univ. Federico II, Naples, Italy, (4) Earth Sciences Department, University of California, Santa Cruz, USA

Sediment in two six-meter gravity cores from the Gulf of Salerno in the western Mediterranean Sea records long-term change (secular variation) of the earth's magnetic field during the last approximately 40,000 years. The age of the sediment is based on tephrochronology and correlation of relative intensity to the NAPIS-75 (Laj, *et al.*, 2000). One core (GS1201, 40°28.92'N, 14°42.24'E, 300 m) is a continuous record to about 30,000 yrs B.P. (Buccheri, *et al.*, 2002). The other core (GS1202, 40°08.34'N, 14°43.57'E, 243 m) extends the record to about 40,000 yrs B.P. with a hiatus between about 14,000 and 24,000 yrs B.P. caused by slumping of the shelf margin sediments (Trincardi, *et al.*, 2003). Where the cores overlap in time, there is good agreement of palaeomagnetic directions and normalized intensity. Core GS1201 confirms very well the palaeomagnetic record for the last 8,000 years in core C836, also from the Gulf of Salerno (Iorio, *et al.*, 2004). One of the objectives of our investigation is a search for the Laschamp (LE) and Mono Lake (MLE) excursions, believed to be either a single excursion (Kent, *et al.*, 2002) or two that differ in age by 6,000 to 8,000 years (Benson, *et al.*, 2003). Unstable field directions in GS1202 occur during relative field minimums at about 34,000 and 40,000 yrs B.P.; these portions of the record that may represent the LE and MLE are being further investigated using the archive half of the core.