



## **Ice magnetization in the EPICA-Dome C ice core: implication for dust sources during glacial and interglacial periods**

**L. Lanci** (1), B. Delmonte (2), V. Maggi (2), J.R. Petit (3) and D.V. Kent (4)

(1) Istituto di Scienze della Terra, Urbino University, Urbino, Italy, (2) Dip. Scienze Ambientali, University of Milano-Bicocca, Milano, Italy, (3) Laboratoire de Glaciologie et de Géophysique de l'Environnement, Saint Martin d'Hères, France, (4) Earth and Planetary Sciences, Rutgers University, Piscataway, NJ 08854, USA & Lamont-Doherty Earth Observatory, Palisades, NY 10964, USA.

Isothermal remanent magnetization and insoluble dust content of ice samples from EPICA-Dome C ice core were measured to characterize the magnetic properties of atmospheric dust. Despite the larger concentration of aerosol dust during glacial stages, the magnetization of the terrigenous dust fraction was found to be higher during interglacials and exhibits a larger variability. Changes in magnetic mineralogy of aerosol dust in ice from different climatic stages were also characterized using coercivity of remanence. Variations of magnetic properties of dust from glacial to interglacial stages indicate changes in dust provenance, in agreement with previous results based on geochemical analysis. However, the extremely large magnetizations of some interglacial samples also suggest that episodical eolian deposition from highly magnetic deposits occurred during interglacial periods.