

Geophysical Research Abstracts
Vol. 15, EGU2013-8804, 2013
EGU General Assembly 2013
© Author(s) 2013. CC Attribution 3.0 License.



Late Holocene sedimentation in coastal areas of the northwestern Ross Sea (Antarctica)

Ester Colizza (1), Furio Finocchiaro (1), Gerhard Kuhn (2), Leonardo Langone (3), Romana Melis (1), Karin Mezgec (1), Mirko Severi (4), Rita Traversi (4), Roberto Udisti (4), Barbara Stenni (1), and Martina Braida (1)

(1) Department of Mathematics and Geosciences, University of Trieste, Trieste, Italy, (2) Alfred Wegener Institut für Polar und Meeresforschung, Bremerhaven, Germany, (3) Institute of Marine Sciences, CNR, Bologna, Italy, (4) Department of Chemistry "Ugo Schiff", University of Florence, Florence, Italy

Sediment cores and box cores collected in two coastal areas of the northwestern Ross Sea (Antarctica) highlight the possibility of studying the Late Holocene period in detail.

In this work we propose a study on two box cores and two gravity cores collected in the Cape Hallett and Wood Bay areas during the 2005 PNRA oceanographic cruise. The two sites are fed by Eastern Antarctic Ice Shelf (EAIS) and previous studies have highlighted a complex postglacial sedimentary sequence, also influenced by local morphology.

This study is performed within the framework of the PNRA-ESF PolarCLIMATE HOLOCLIP (Holocene climate variability at high-southern latitudes: an integrated perspective) Project. The data set includes: magnetic susceptibility, X-ray analyses, ^{210}Pb , ^{14}C dating, diatoms and foraminifera assemblages, organic carbon, and grain-size analyses. Furthermore XRF core scanner analyses, colour analysis from digital images, and major, minor and trace element concentration analyses (ICP-AES) are performed. Data show that the box core and upper core sediments represent a very recent sedimentation in which it is possible to observe the parameter variability probably linked to climate variability/changes: these variation will be compared with isotopic record from ice cores collected from the same Antarctic sector.