



Preliminary results from 2017 OGS Explora cruise to the Ross Sea continental slope

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OGS Explora is back to Antarctica for three projects focused on the Ross Sea eastern continental slope: EU/FP7-EUROFLEETS (<http://www.eurofleets.eu>) ANTSSS, PNRA (Programma Nazionale Di Ricerche in Antartide) ODYSSEA, and PNRA WHISPERS.

These projects employ three main methods: 1) geophysics (multichannel seismic reflection, sub-bottom and multibeam morphobathymetric survey); 2) geology (gravity corer and box-corer); oceanography (CTD, LADCP, turbulence). The general objective is to contribute to the understanding of past and present ocean dynamics and glacial history of this Antarctic sector. In particular, to find evidence (in the geometry and distribution of the stratigraphic sequences) of Miocene-Pleistocene West Antarctic Ice Sheet and East Antarctic Ice Sheet advances and retreats and of their effects on Ross Sea Bottom Water formation and dynamics. The gravity cores provide the chronological control for the Quaternary. Deep sea drilling (through IODP Exp. 374, whose additional alternative sites are surveyed during this cruise) will provide the chronological control for the pre-Quaternary seismic sequences.