

ECORD - European Consortium for Ocean Research Drilling is a European management structure for scientific ocean drilling. ECORD's role will be to coordinate Europe's contribution in the Integrated Ocean Drilling Program - IODP commencing in October 03. This international effort involves the U.S.A. and Japan as principal partners operating two drilling vessels. ECORD aims to extend the scientific capability of IODP by providing, in addition, support for Mission Specific Platform (MSP) operations. MSPs will operate in key areas such as ice-covered regions and shallow seas. In 2002, IODP ranked 5 MSP proposals for drilling. The two proposals of highest scientific merit are being developed by ECORD into drilling projects: the Arctic Lomonosov Ridge and the South Pacific Sea Level. In preparation for its contribution to IODP, ECORD is presently providing managerial and logistical support for an EC funded proposal, PROMESS 1 (PROfiles across MEditerranean Sedimentary Systems. Part 1).

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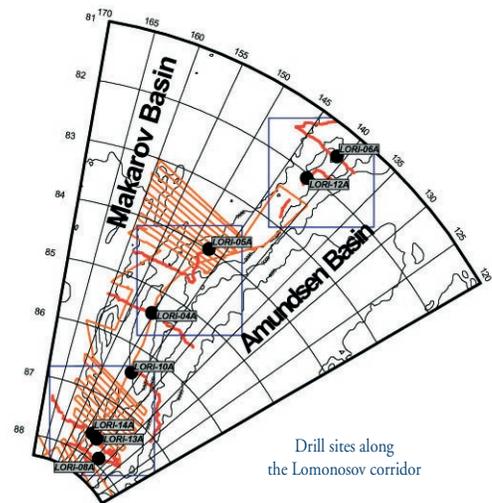
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Mission Specific Platforms - Proposal Planning

Arctic region : Paleooceanographic and tectonic evolution of the central Arctic Ocean - IODP Proposal 533

J. Backman et al.

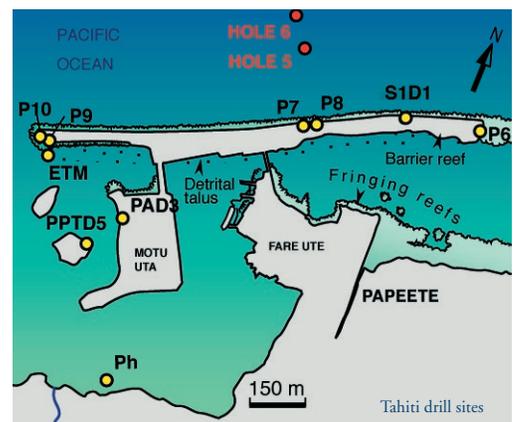
Five sites are proposed on the ridge crest of the Lomonosov Ridge in the central Arctic Ocean. The sites are distributed between 88°N and 81°N in water depths ranging between 794 and 1132 m, and are all located in international waters. The ridge was rifted from the Kara/Barents Sea shelves during early Paleogene time and subsequently subsided to its present water depth. Since that time sediments of biogenic, eolian and ice-rafted origin have accumulated on the ridge crest. In the primary target area between 87°N and 88°N these sediments are about 450 m thick, indicating an average rate of sedimentation of ~9 m/m.y. throughout the course of the Cenozoic. Sampling of these sediments would provide an unprecedented and unique opportunity to acquire a first-order knowledge about the paleoceanographic and climate history of the central Arctic Ocean. Sampling of the underlying bedrock provides a similarly unique opportunity to decipher the tectonic history of the Lomonosov Ridge and the formation of the Eurasian Basin.



The last deglacial sea level rise in the South Pacific : offshore drilling in Tahiti (French Polynesia) and on the Australian Great Barrier Reef - IODP Proposal 519

G. Camoin, E. Bard, B. Hamelin and P. Davies

IODP proposal 519 seeks to establish the course and effects of the last deglaciation in two reef settings developed in tectonically inactive areas at sites located far away from glaciated regions: in Tahiti and on the Australian Great Barrier Reef. At each site, it is proposed to undertake a transect of several offshore drill holes in combination with downhole measurements. The water depths for the proposed sites in the two areas range from 50-300 m and the drilling operations can only be achieved by a mission-specific platform. The proposal has three major objectives: a) to reconstruct the general pattern of sea-level rise during the last deglaciation events; b) to identify and to establish patterns of short-term paleoclimatic changes that are thought to have punctuated the transitional period between present-day climatic conditions following the Last Glacial Maximum; c) to analyse the impact of sea-level changes on reef growth, geometry and biological makeup.



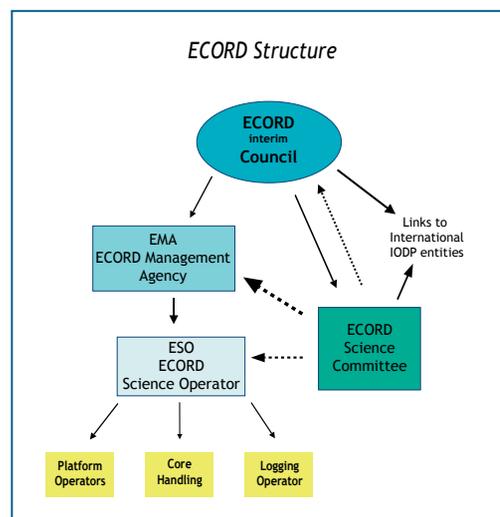
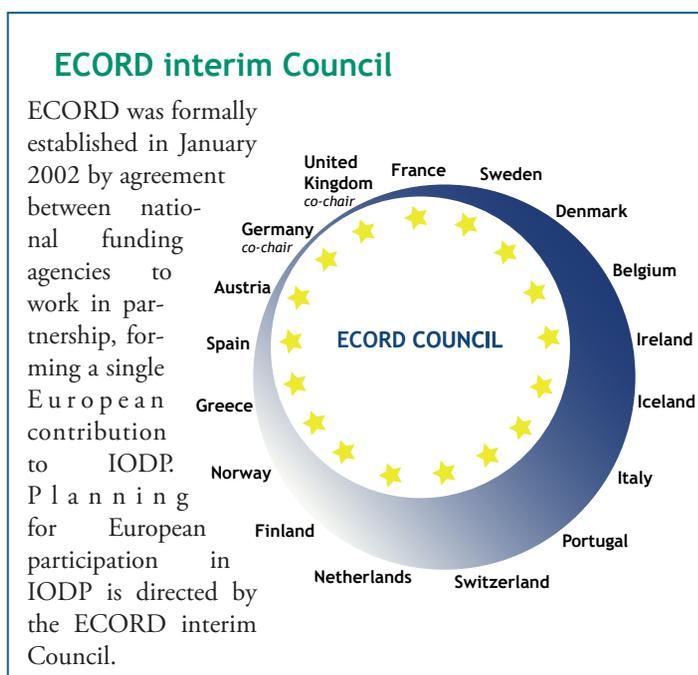
Preparing for Scientific Ocean Drilling in the Arctic : the Site Survey Challenge

This meeting was organized by N. Mikkelsen, J. Backman, W. Jokat, Y. Kristoffersen and J. Thiede in Copenhagen, January 13-14, 2003 and was attended by colleagues from the U.S.A, Canada, Russia and most Western European countries with an interest in Arctic deep-sea drilling. The workshop participants agreed on the following major recommendations with respect to a decadal program of dedicated expeditions to the central Arctic:

- ✓ create a geophysical working groups on the Yermak Plateau, the Chukchi Plateau-Northwind Ridge and Laptev sea continental margin to formulate and submit preliminary drilling proposals,
- ✓ establish a database to collect all data in a unified and easily accessible format,
- ✓ request from iSSP, iILP and iTAP the establishment of an IODP working group focussing on the development of site surveys strategies for the Arctic Ocean,
- ✓ encourage further developments of proposals for drillships capable to operate in the central Arctic.

ECORD Science Committee

A scientific committee has been established to organize and maintain the communication with the European scientific community, manage the participation of scientists on IODP cruises (including MSP operations) and select representatives on IODP science committees and panels.



ECORD Science Operator - iESO

A consortium led by the **British Geological Survey** has been awarded the role of ECORD interim Science Operator - iESO, building upon its unique experience in conducting Mission Specific Platform operations. BGS is joined by the **University of Bremen** which runs one of the current ODP core repositories and will organize all leg and post-cruise laboratory and core handling functions, and by the **European Petrophysics Consortium** (see below) that will organize all MSP logging.

European Petrophysics Consortium

In the context of drilling with Mission Specific Platforms (MSPs) in IODP, a European petrophysical structure is being set-up to cover activities ranging from in-situ logging to on-site and off-site physical properties measurements that cannot be deferred, such as those analysed on a Multi-Sensor track (MST). This structure is based on a network of institutions throughout Europe with extensive experience in scientific drilling, either in the ocean with the existing Ocean Drilling Program - ODP, or on land. The leading universities are Leicester (UK), Aachen and Potsdam (Germany), Amsterdam (Netherlands) and Montpellier (France). This structure will offer scientific and technical support to IODP in view of the highly variable environments and scientific contexts drilled by MSPs, and adapt to the periodic drilling and logging activities. This could imply repetitive and costly mobilization and demobilization of equipment and infrastructure, which will be reduced through the involvement of a network of academic institutions. It should also accommodate the required flexibility of logging operations, as constrained from the limited space available in many cases, potential drilling in unstable geological settings, and in many cases access to small diameter boreholes (slimhole).

ECORD website is now on line at



www.ecord.org providing information on MSPs in Europe related to the future IODP.

A **MSP science plan** is being compiled at the Federal Institute for Geosciences and Natural Resources (BGR) in Hannover. The document is based on the IODP Science Plan and the outcome of the APLACON conference in Lisbon in May 2001 and represents scientific topics which would be favourably drilled by MSP. The first of six chapters "Polar Oceans" is now available at:

www.bgr.de/ecord/