

**DK-Proposal 40**

*Submitted by*

*Naja Mikkelsen [nm@geus.dk](mailto:nm@geus.dk)*

*GEUS*

*Øster Voldgade 10*

*DK-1350 Copenhagen Ø, Denmark*

*Co-submitters:*

*Yngve Kristoffersen, [yngve.kristoffersen@ifjf.uib.no](mailto:yngve.kristoffersen@ifjf.uib.no)*

*Institute of Solid Earth Physics*

*University of Bergen*

*Allégaten 41*

*N-5005 Bergen*

*Jan Backman [backman@geo.su.se](mailto:backman@geo.su.se)*

*Dept. of Geology & Geochemistry*

*Stockholm University*

*S-106 91 Stockholm*

*Wilfred Jokat [wjokat@awi-bremerhaven.de](mailto:wjokat@awi-bremerhaven.de)*

*AWI*

*Columbusstrasse*

*D-27568 Bremerhaven*

*Jörn Thiede [jthiede@awi-bremerhaven.de](mailto:jthiede@awi-bremerhaven.de)*

*AWI*

*Columbusstrasse*

*D-27568 Bremerhaven*

**Scientific drilling in the Arctic Ocean:**

**Tectonic, paleo-oceanographic and climatic evolution of the polar basin**

Place:

Arctic Ocean

Disciplines:

Geology, paleo-climatology

Motivation:

The scientific importance of retrieving data from the Arctic Ocean for understanding the climatic, paleo-oceanographic and tectonic development of the Arctic Ocean Basin and its influence on the global system is well understood. However, retrieving data from this area is a difficult task and requires drilling in the ice infested ocean basin. The IPY 2007 / 2008 offers a superb opportunity for operating an international and well co-ordinated suite of marine geological expeditions to the central Arctic Ocean to conduct systematic site surveys by employing suitable icebreakers from the US, Canada, Russia, Sweden, Finland and Germany and by drilling in selected areas. Potential survey areas and drilling locations are all major ridges (Gakkel Ridge, Lomonosov Ridge, Alpha-Mendeleev Ridge), marginal plateaus (Chukchi Plateau–Northwind Ridge, Morris Jessup Rise and Yermak Plateau) as well as continental margins (Laptev Sea).