

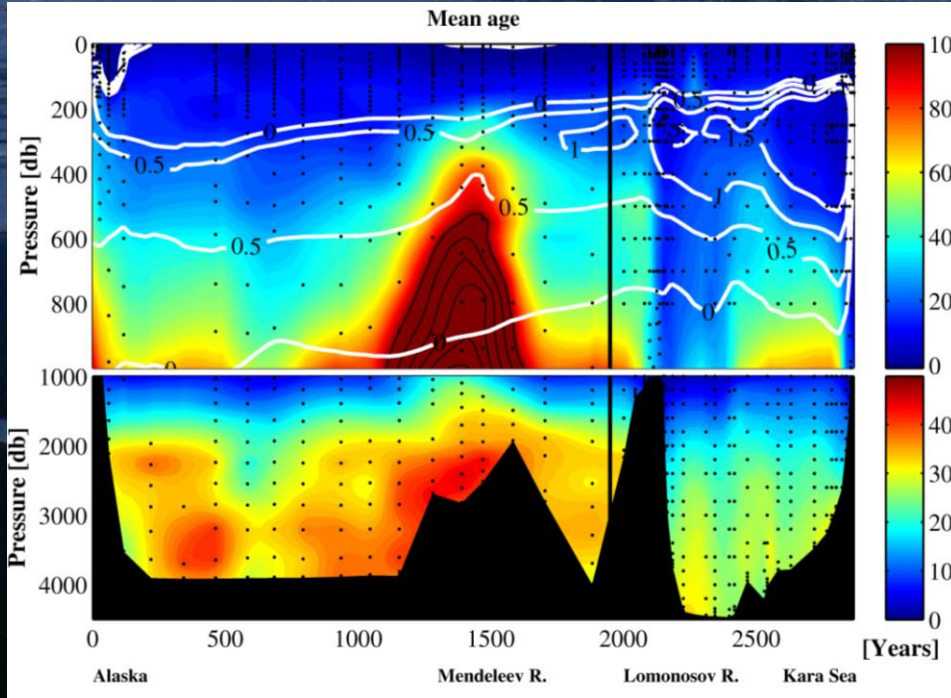
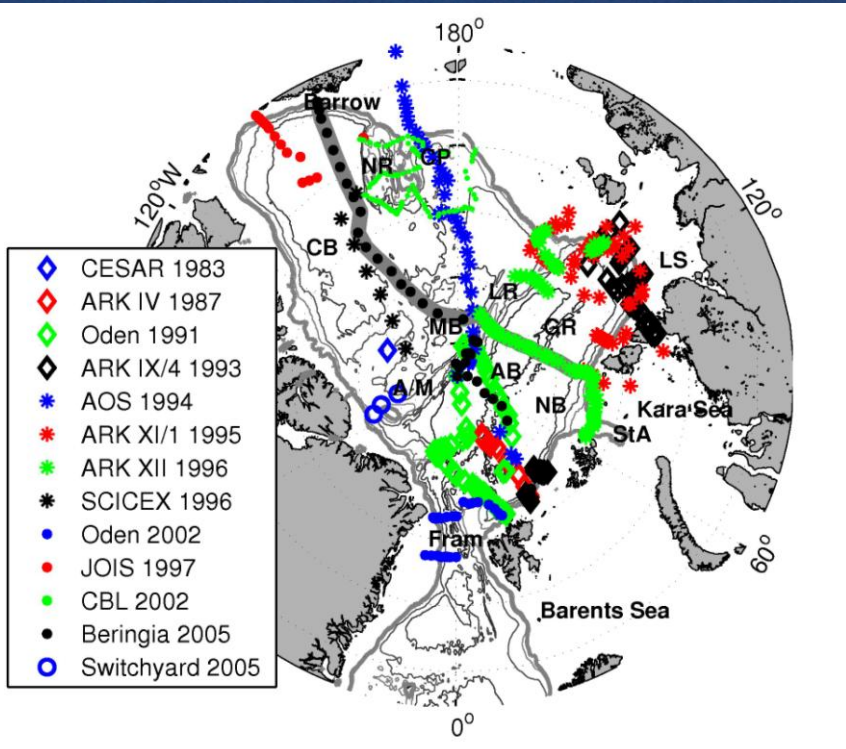
A photograph of the Arctic region at night, showing a vast expanse of sea ice under a dark blue sky. A single bright star is visible in the upper center of the frame, and its light is reflected on the water and ice below. The ice consists of numerous small, irregular floes scattered across the dark water.

Swedish plans for repeat Hydrography

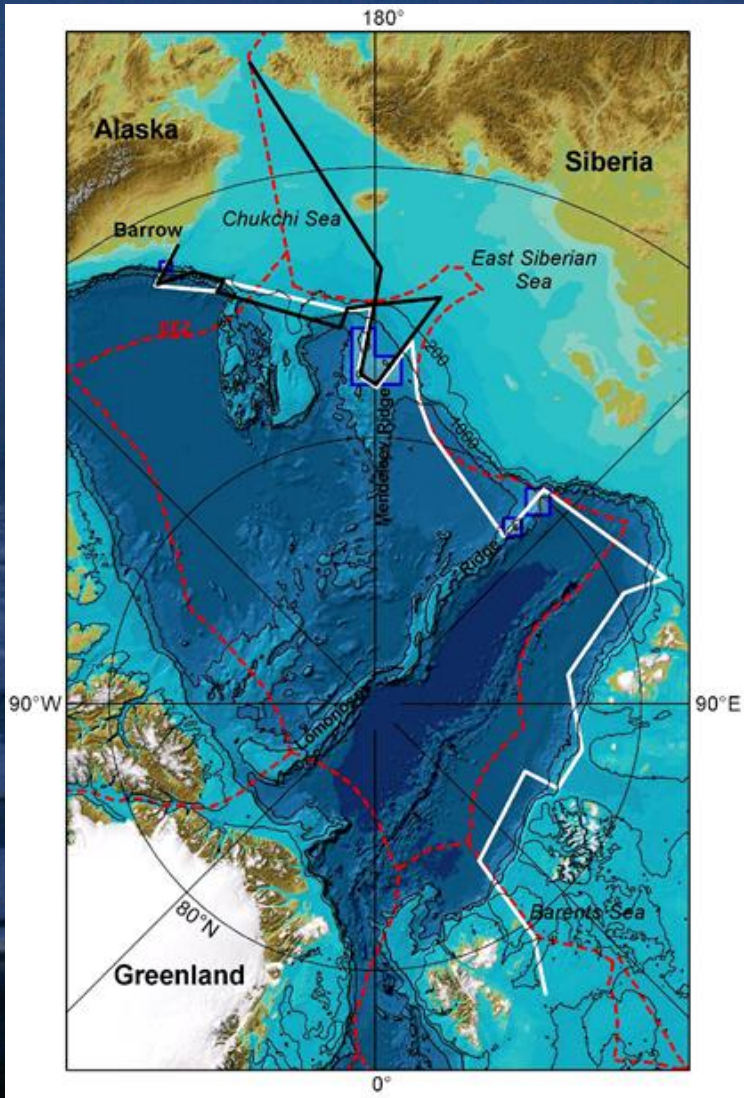
The Arctic

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Some historic Arctic cruises



2010



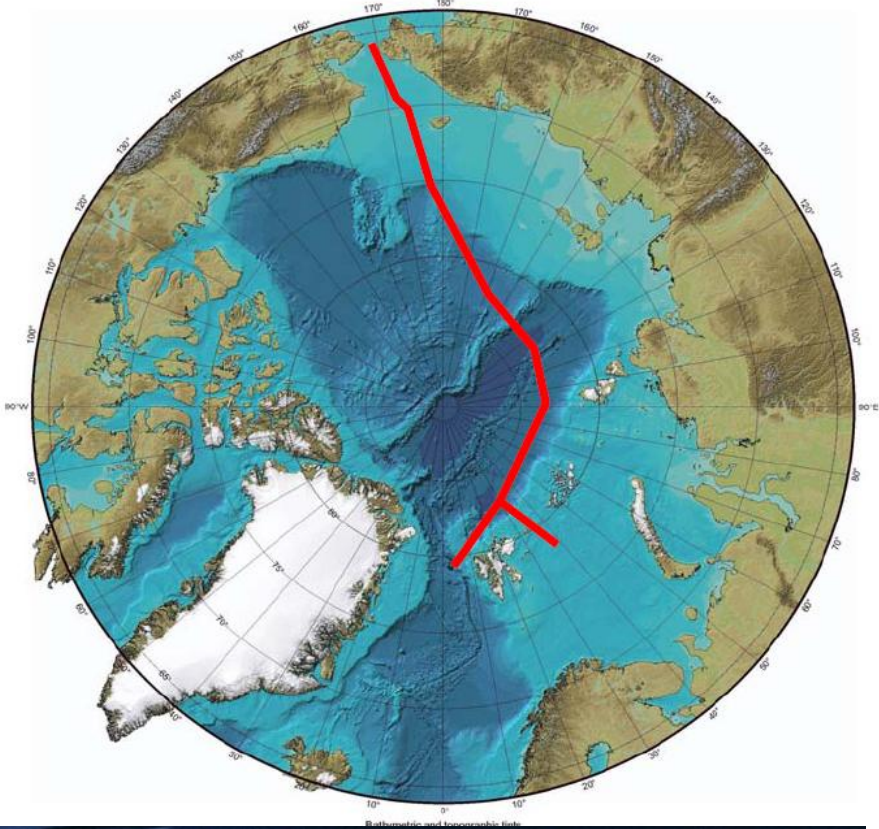
The overall objective of the proposed study is to investigate how the Arctic Ocean contributes to the ventilation of the global oceans and the resulting impact on the heat transport by the Global Oceanic Conveyor Belt. The study focuses on both the present situation and those during the nearest past glacial cycles.

Oceanography	Responsible for running the CTD/rosette sampler
6 persons	Two shifts running the winch and CTD/rosette sampler
2 persons	Determining bottle salinity, running LADCP and fine structure instruments.
2 persons	Data processing of ADCP, microstructure and multi-beam water column data
Marine chemistry	Responsible for determining the sampling and collection of water from the rosette sampler.
2 persons	One per shift in charge of water sampling
2 persons	Determining the inorganic carbon system
1 person	Determining oxygen
1 person	Determining nutrients
2 persons	Determining CFCs
2 persons	Determining methane
Geophysics/geology	Responsible for running the multibeam sonar and coring
6 persons	Running the multibeam sonar and subbottom profiler during 24 hour/7 days a week schedule. This group will also perform data post-processing already during the expedition.
4 persons	Sediment coring and post-processing including Multi Sensor Track Core Logging. A dirty sea ice sampling component is also included for this group's responsibility.

Leg1 – black; Leg2 - white

2011 or 2012

The proposed study comprises a number of sub-projects in marine biogeochemistry, marine chemistry and physical oceanography. The overall aim is characterization of key trace element and isotope distribution and their impact on biogeochemical processes in the Arctic Ocean and to establish the sensitivity of these distributions to changing environmental conditions. A part of the project is within the international GEOTRACES program (www.geotraces.com) and relies on using the icebreaker *Oden* as a research platform.



GEOTRACES

GEOTRACES	Responsible for the trace metal clean system and large volume sampling for short lived radionuclides and particles
4 persons	2 per shift running the trace metal clean system
2 persons	Water filtration and sampling handling
2 persons	Large volume pumps and counting systems for radionuclides
1 person	Aerosol sampling
Marine chemistry	Responsible for determining the sampling and collection of water from the rosette sampler.
2 persons	One per shift in charge of water sampling
2 persons	Determining the inorganic carbon system
1 person	Determining oxygen
1 person	Determining nutrients
2 persons	Determining CFCs
2 persons	Determining methane
Oceanography	Responsible for running the CTD/rosette sampler
4 persons	Two shifts running the winch and CTD/rosette sampler
2 persons	Determining bottle salinity, running LADCP and fine structure instruments.
2 persons	Data processing of ADCP, microstructure and multi-beam water column data