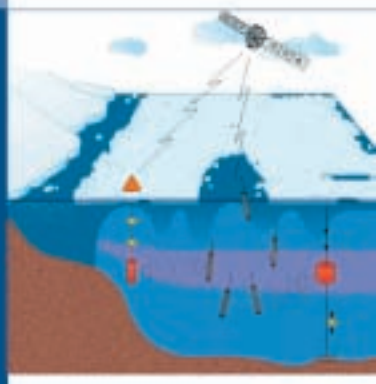
MARINE ENVIRONMENTAL TECHNOLOGY
UNDER ICE

Under-ice float deployment; the floats must sense whether ice is present or not when they ascent to the surface, stop ascend if ice is present and store data

Polar research vessel FS POLASTERN in Arctic ice

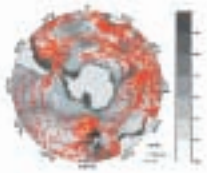


HAFOS consists of profiling floats under the ice, moored stations and drifting platforms on the ice

Marine climate research and operational oceanography require basin wide data in near real time. In ice-covered oceans location and data transmission is possible only by acoustic means.

OUR EYES AND HANDS IN THE COLD

A hybrid system of ice-resistant profiling subsurface floats, surface drifters on the ice and moored stations communicating acoustically (Hybrid Arctic/Antarctic Float Observation System; HAFOS)



Drift tracks of floats around Antarctica

RESEARCH NEEDS

- to improve endurance, depth range and reliability
- to add new sensors to measure biogeochemical parameters and ice thickness
- to integrate upcoming technologies as gliders in the ARGO system
- to develop operational products by assimilation as ocean current maps
- to develop high frequency acoustic data transfer by use of messenger platforms

Proposed ice-breaking research vessel with drilling capabilities AURORA BOREALIS

Ifremer KDM