

1. Arctic Ocean

Deep probe of the Arctic Ocean by Autosub

Once the Autosub under Ice project is over in 2005 further uses for Autosub will be required. By then there will be (or may be) by then increased confidence in using it under sea ice. We have to find some way of replacing military submarines for Arctic oceanographic and ice thickness surveys and for doing satellite validation. A "deep probe" could comprise simply a N-S in-and-out from Fram Strait to the full range of the Autosub or, to make it more IPY-like, a longer probe where we set up an ice camp at an intermediate spot with the technical means for recovering the Autosub, charging its batteries and relaunching it to probe more deeply - a "refuelling stop".

A survey of biodiversity and biogeochemistry of the Gakkel Ridge using ISIS

Recent discoveries of hydrothermal activity on the Gakkel Ridge by the Germans could be followed up by detailed biodiversity and geochemistry studies. This work would complement the Census of Marine Life, and particularly the MarEco project based on the mid Atlantic Ridge ecosystems, and CHESS (chemosynthetic organisms). The new NERC deep sea ROV would be an ideal vehicle.

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