

Processing, Analysing and Visualisation of Multibeam Data from Different Systems Gathered during the AMORE-Expedition to Gakkel Ridge

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The Gakkel Ridge in the central Arctic Ocean was the object of an international expedition in the boreal summer 2001. This part of the mid-ocean ridge system is of particular geoscientific interest because of its extremely slow spreading rates and the variety of morphologic forms and features that are produced in this tectonic environment. Therefore, the multibeam bathymetric measurements were of special importance to the scientific goals of the exploration of this deep-sea ridge. The data was collected in the frame of a two-ship expedition by RV "Polarstern", equipped with the multibeam echosounder Hydrosweep DS-2, and by USCGC "Healy", which utilised a Seabeam-2112 multibeam system for the seafloor survey. This contribution deals with data editing and cleaning using CARIS HIPS. For the digital terrain modelling and mapping of the seafloor topography appropriate GIS tools (ArcInfo) were used. A comparison of the results from the two utilised multibeam systems will be presented. Finally products in form of bathymetric charts prepared with ArcMap in the western part of the Gakkel Ridge will be shown.

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