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Late Pleistocene Magnetostratigraphic Records from the Western Svalbard-Barents Sea Margin

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A b s t r a c t

Largely hemipelagic sediments intercalated with a few dropstones (IRD) have recently been collected from the western Svalbard-Barents Sea margins as long Calypso piston cores and MeBo drillcores. Using the automated 2G cryogenic magnetometer at the Geological Survey of Norway, these cores are used to develop a magnetostratigraphic framework for the late Pleistocene in this area. The lack of calcareous organisms in some of the sediment sequences makes it difficult to provide a continuous biostratigraphic framework based on stable oxygen and carbon isotopes. Instead, the available stable isotope stratigraphy is supplemented with new paleomagnetic results, including relative paleointensity variations in the time interval of ca. 10-200 ka. Relative paleointensity variation is obtained by dividing Natural Remanent Magnetization (NRM) intensities by suitable normalizers like derived from magnetic susceptibility, anhysteretic magnetization, or isothermal magnetization. The results indicate that the documented geomagnetic excursions are linked to large fluctuations of the relative paleointensity. The data indicate that paleointensity measurements are a useful additional stratigraphic tool in this climate-sensitive region of the high latitudes.