



Marine sedimentary record of Meltwater Pulse 1a along the NW Barents Sea continental margin

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The upper continental slope of the Storfjorden-Kveithola Trough Mouth Fans (NW Barents Sea) contains a several m-thick late Pleistocene sequence of plumites composed of laminated mud interbedded with sand/silt layers. Radiocarbon ages revealed that deposition occurred during about 130 years at a very high sedimentation rate of 3.4 cm a⁻¹, at about 7 km from the present shelf break. Palaeomagnetic and rock magnetic analyses confirm the existence of a prominent, short-living sedimentary event. The plumites appear laterally continuous and were correlated with the sedimentary sequences described west of Svalbard and neighbouring glacial depositional systems representing a major event at regional scale appointed to correspond to the deep-sea sedimentary record of Meltwater Pulse-1a. We also present new sedimentological and geochemical insights, and multi-beam data adding information on the palaeoenvironmental characteristics during MWP-1a and ice sheet decay in the NW Barents Sea.