



Late and Post-Glacial Dynamics in Kong Oscar Fjord, NE-Greenland

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Fjords are important depositional settings and sinks for a variety of geochemical cycles. Their very high resolution records provide the opportunity to relate terrestrial with marine paleo-records. Fjords can preserve morphological evidence of glacial and post-glacial dynamics of the coastal areas of glaciated continental margins. Only few initial studies have focused on fjord environments of NE-Greenland. Here, we present new hydro-acoustic data from inside and off Kong Oscar Fjord, indicating glacial dynamics during the Late and Post-Glacial times. Fast flowing ice filled the fjord and reached at least onto the middle shelf, probably the shelf edge during the LGM. The following retreat of the ice stopped at the mouth of Kong Oscar Fjord. A younger ice advance overrode the grounding line wedge deposited there. This advance may well correlate to the Younger Dryas. It was followed by rapid retreat and/or lift-off of the ice. Post-glacial sedimentation was characterised by high accumulation of glacio-marine sediments and is affected by recent tectonic activity and submarine mass-wasting in Kong Oscar Fjord.