



Contribution to North Atlantic climate history from Lake Igaliku, South Greenland

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Lacustrine deposits from Lake Igaliku, South Greenland (N61°00'22", W45°26'28") were studied to investigate subarctic Holocene climate history. Analyses of the well dated sediment sequence used high-resolution grain size analysis, high-resolution geophysical (MSCL) and geochemical core scanning (XRF core scanner), X-ray radiography, DRX mineralogy, and organic geochemistry. The 4 meters long sequence recovered from Lake Igaliku comprises the entire lake history (last 10 000 years) following the last glaciation of the area, indicated by a succession from glaciolimnic to limnic sediment. The combination of the different proxies provides detailed information about the evolution of the lake system and documents changes in lake temperature and wind activity in South Greenland from 9500 BP to the present.

The intermediate geographical setting of Lake Igaliku, between the Greenland ice sheet and the Atlantic Ocean, provides also a unique opportunity to link the lake-sediment record to ice core records, fjord shelf marine records and deep Atlantic marine records in the wider context of oceanic and atmospheric circulation above the North Atlantic region.