Reconstruction of glacier variability from lake sediments reveals dynamic Holocene climate in Svalbard Willem G.M. van der Bilt ^{a b}, Jostein Bakke ^{a b}, Kristian Vasskog ^{b c}, William J. D`Andrea ^d, Raymond S. Bradley ^e, Sædis Ólafsdóttir ^{a b}

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Introduction

Context

- Amplified response to climate change in the Arctic
- Range of pre-instrumental natural variability poorly understood
- High-resolution paleoclimate records can fill knowledge gap
- Sediments from glacier-fed lakes generate such records
- Past glacier activity recorded by variations in glacial flour yield

Objectives

- Reconstruct Holocene glacier variability on Arctic Svalbard
- Resolve variations on centennial timescales
- Constrain the imprint of non-glacial processes (noise)
- Integrate findings in regional paleoclimate context



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