

# **Supplementary Online Material**

## **Paradoxical cold conditions during the medieval climate anomaly in the Western Arctic**

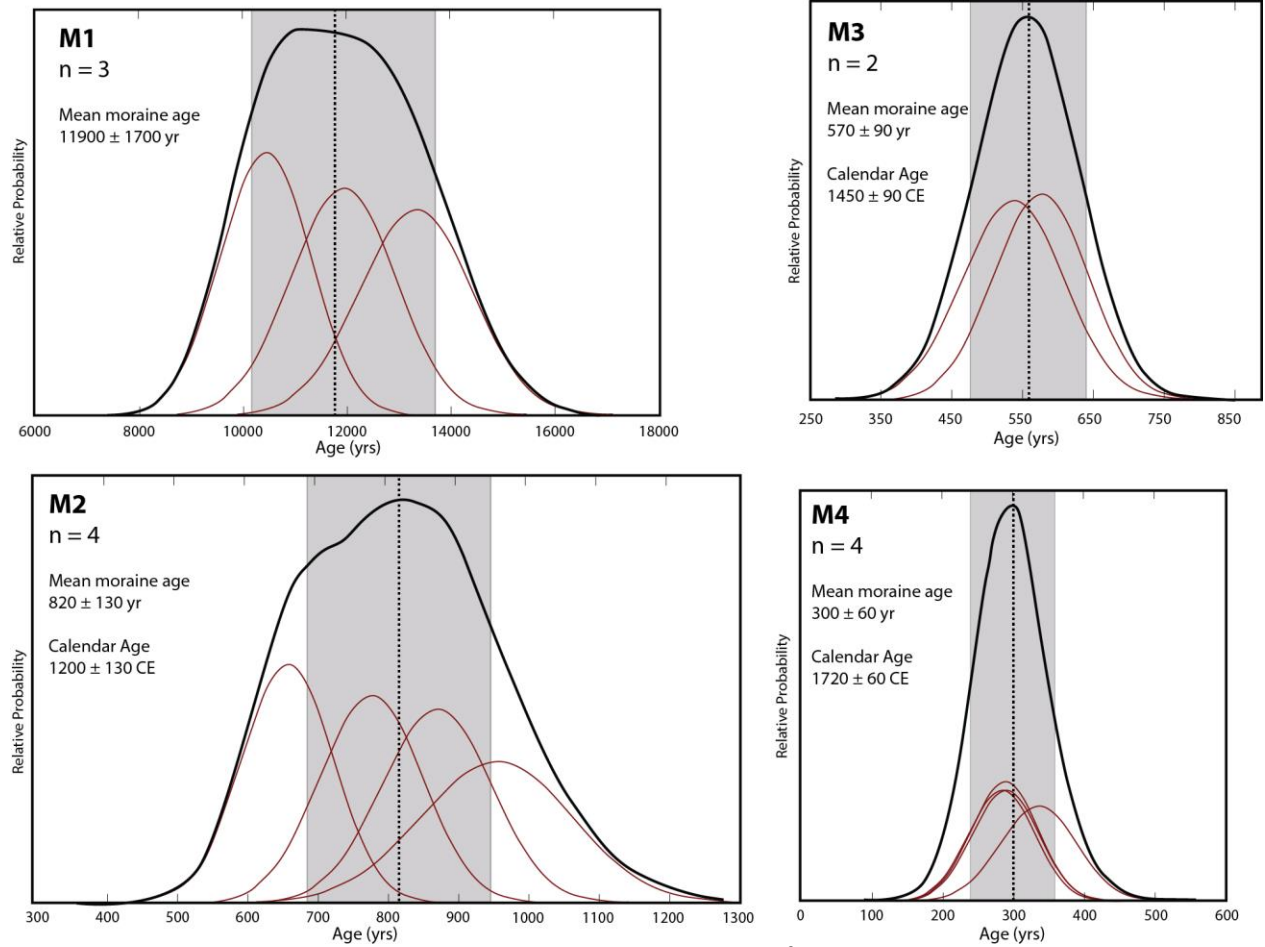
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The following pages include:

Figure S1

The list of extended tables 1-5

References



**Extended Data Figure 1.** Summed probability plots the  $^{36}\text{Cl}$  surface exposure ages for each moraine based on the “Schimmelpfennig” production rate set (Methods). Red gaussians are the individual boulder ages with  $1\sigma$  analytical uncertainty only. Dashed vertical lines are the arithmetic means. Grey bands represent the  $1\sigma$  errors including standard deviation, analytical and production rate errors.

**Table S1:** Sample locations and sample-specific information.

**Table S2:** Chemical compositions of two bulk rock samples before acid etching. Analysis performed at the SARM-CRPG (Nancy, France) by ICP-OES (major elements), ICP-MS (trace element), atomic absorption (Li), colorimetry (B) and spectrophotometry (Cl). The

**Table S3:** Concentrations of the  $^{36}\text{Cl}$  target elements, determined in splits taken from the samples after the acid etching to remove ~20% of the samples. Analysis performed at the SARM-CRPG (Nancy, France) by ICP-OES. Concentrations of the target element Cl

**Table S4:**  $^{36}\text{Cl}$  dating results, including measured  $^{35}\text{Cl}/^{37}\text{Cl}$  and  $^{36}\text{Cl}/^{35}\text{Cl}$  ratios, inferred  $^{36}\text{Cl}$  and Cl concentrations, individual sample ages, and landform mean ages. Data for the two procedural blanks (DIS-Bk\_01 and DIS-Bk\_02) are also included. DIS-Bk\_

**Table S5:** Climate models description

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