Medieval warmth confirmed at the Norse Eastern Settlement in Greenland

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APPENDIX

Figure DR1. Comparative North Atlantic Oscillation reconstructions.

Figure DR2. Age-depth model and scanned image for SL core 16-LOW-U2.

Figure DR3. Isotopes of precipitation and lake water in South Greenland.

Table DR1. Radiocarbon ages from Scoop Lake.
**Figure DR1**: Examples of North Atlantic Oscillation (NAO) reconstructions. Some records support the dominant positive NAO anomaly during the Medieval Climate Anomaly, while some do not. A: West Greenland lake-record-inferred NAO index (Olsen et al., 2012). B: A bi-proxy analysis using NAO sensitive climate archives (Trouet et al., 2009). C: A multi-proxy informed annual NAO simulation (Ortega et al., 2015).
**Figure DR2**: Age depth model and GEO-TEK scanned image of the top 80 cm of core 16-LOW-U2 from Scoop Lake, generated using the rbaco package in R (Blaauw and Christen, 2018). The top-most age is an inferred surface dating to August 2016. All other ages were calibrated using the IntCal13 curve, and plotted as the midpoint ± ½ of the 2σ range (Reimer et al., 2013). Ages in white were considered outliers after they fell outside the 95% confidence intervals of an initial model containing all ages. Thus, they were not included when running the final rbaco model. The red line is the mean of over 6 million iterations of the model and bounded in gray by 95% confidence intervals.
Figure DR3: Isotopes of precipitation from South Greenland. Closed gray circles are historical precipitation values collected at Kangilinnguit, Greenland (150 km NW of Scoop Lake) between 1961 and 1974 (IAEA/WMO, 2017). Colors correspond to season: June, July August (JJA) – red. September, October, November (SOM) – orange. December, January, February (DJF) – green. March, April, May (MAM) – blue. Open diamonds represent precipitation collected in August, 2016 near Narsaq, Greenland. Open circles are lakes sampled during August, 2016. The black closed circle is lake water from Scoop Lake, collected in August, 2016. The solid black line is the Global Meteoric Water Line, and the dashed line is the “Local” Meteoric Water Line for the historic Kangilinnguit samples.
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<th>$^14$C error</th>
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Ages not included in age-depth model

*16_LOW-U2 5 6 1460 13 1345 1311 1376 Aquatic and terrestrial material
*16_LOW-U2 18 19 1470 15 1355 1314 1387 Plant/Wood OS-139686 0.8325 -26

*Ages combined in OxCal

16_LOW-U2 5 6 1380 15 1298 1284 1310 Aquatic Moss OS-139684 0.8422 -29.13
16_LOW-U2 5 6 1670 25 1573 1528 1686 Leaf and wood fragments OS-139685 0.8127 -25.68

*2 ages from the same depth combined using the R_combine function in OxCal v.4.3 (Ramsey, 2009).
REFERENCES CITED


