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Radionuclide wiggle matching reveals a nonsynchronous early Holocene climate oscillation in Greenland and western Europe around a grand solar minimum

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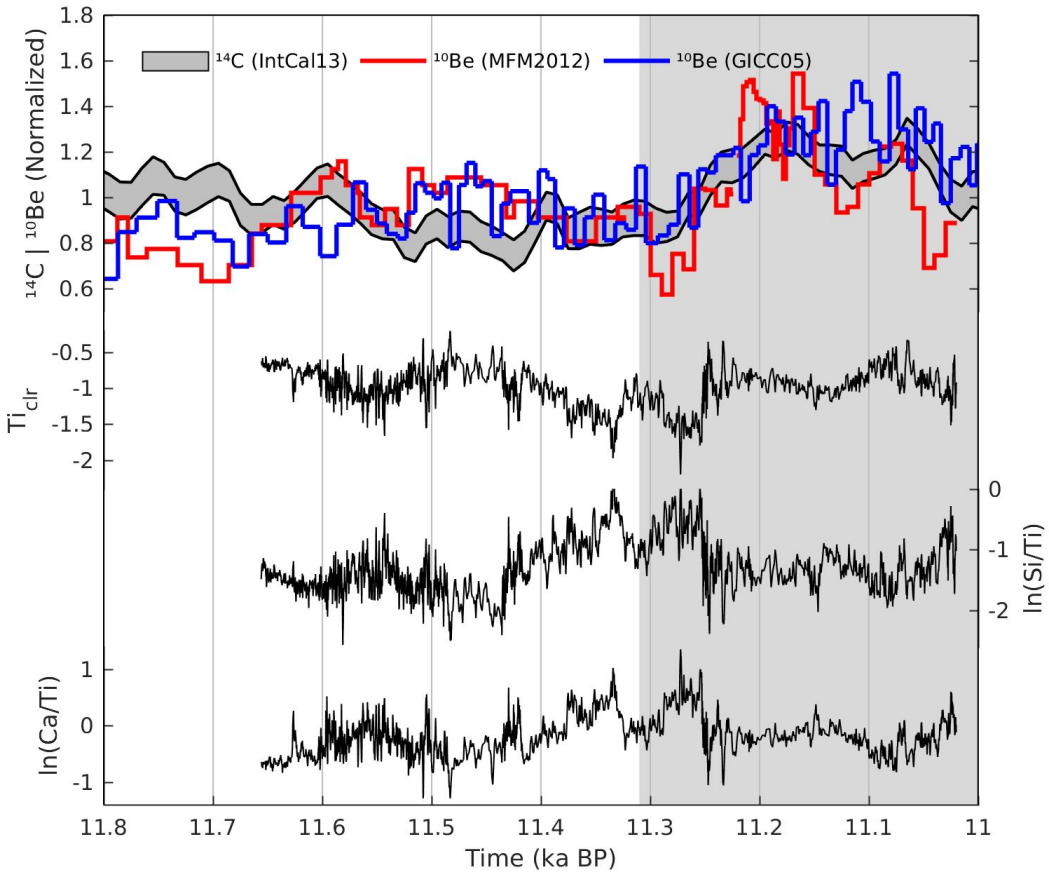
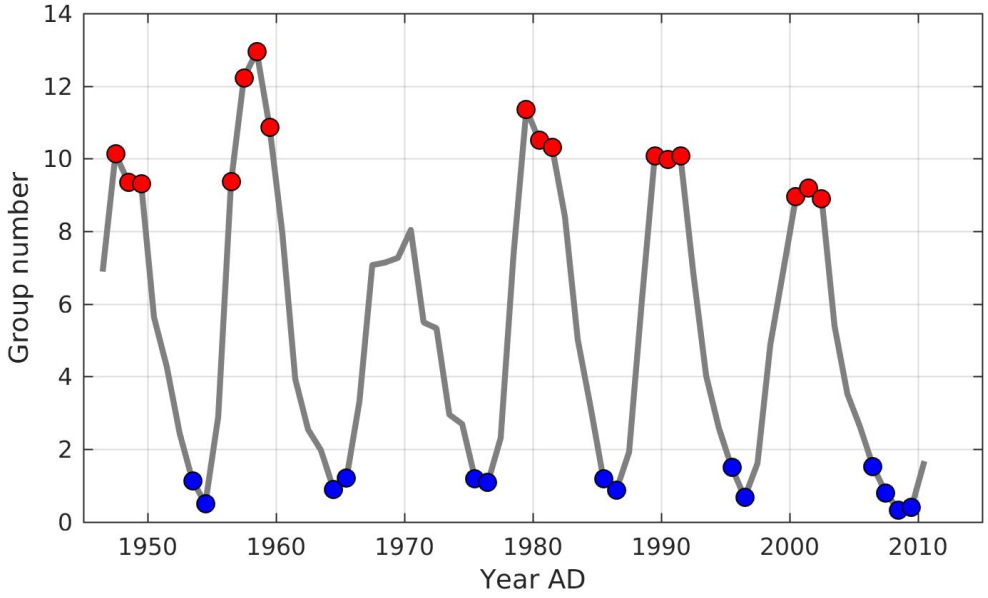
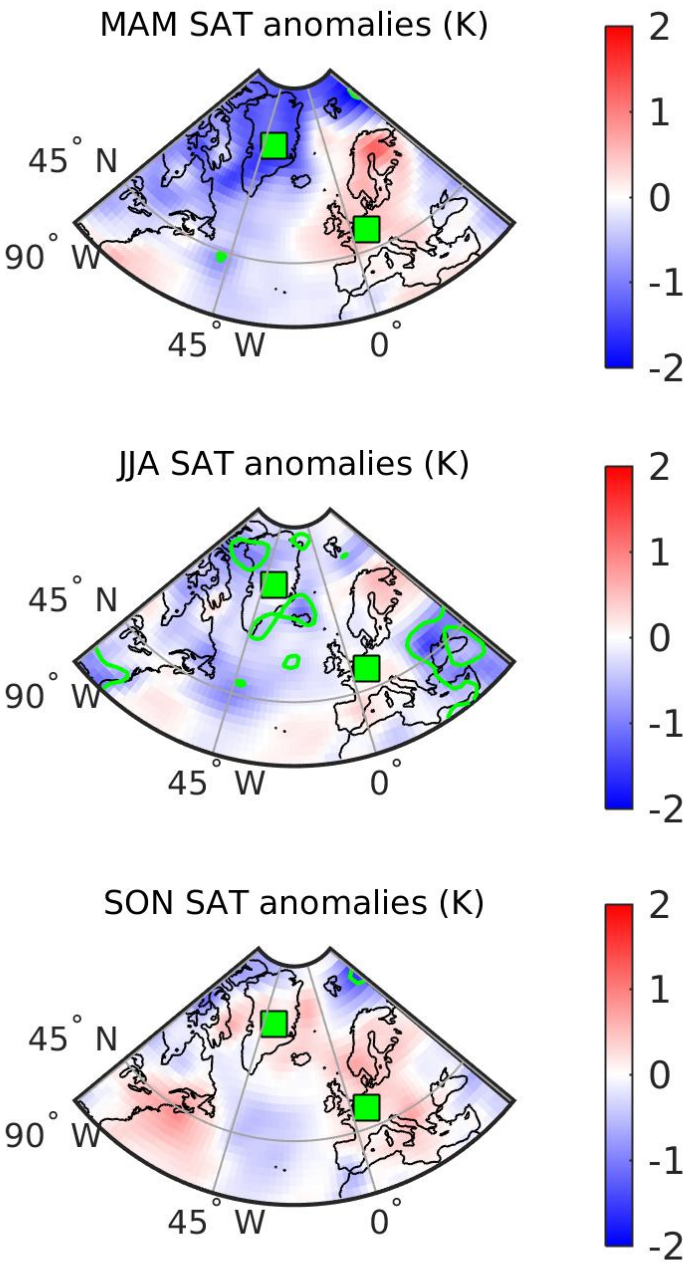


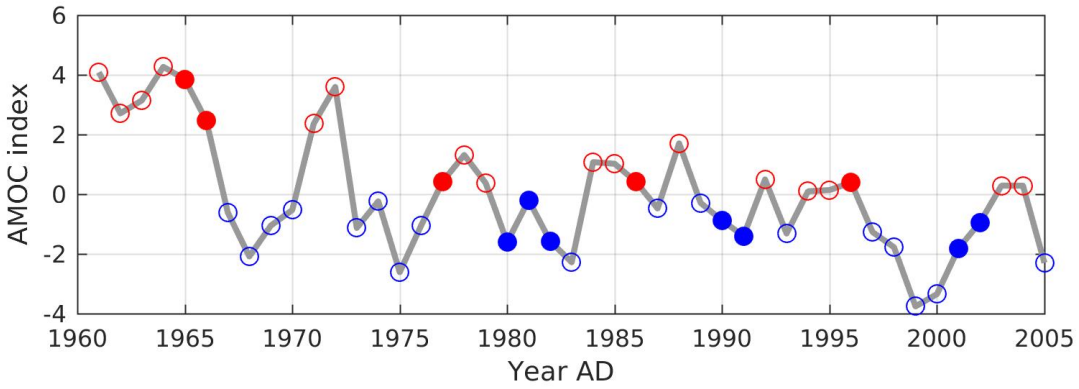
Sup. Figure 1: The three radionuclide records used in this study and the three µ-XRF series (in black) from Martin-Puertas et al. (2017) for the period 11,800-11,000 years BP. The grey band represents the interval used (11,310-11,000 years BP) used for the correlation analysis in Fig. 5.



Sup. Figure 2: The selection of years with high solar activity (red) and low solar activity (blue) for the investigation of 20th century climate reanalysis (Fig. 6). The group sunspot number record (Svalgaard and Schatten, 2016) is plotted in grey while the red and blue circles denote years where the record reaches +/- 1σ, respectively.



Sup. Figure 3: Seasonal surface air temperature (SAT) anomalies for solar maxima years compared to solar minima years for the period 1946-2011 in 20CR (as per Fig. 6 and Sup. Fig. 2). Spring months are on the top, Summer months are in the middle, and Fall months are on the bottom. Contour lines represent significance levels of p <0.1 (t-test).



Sup. Figure 4: Years with a positive AMOC index (red circles) and years with a negative AMOC index (blue circles) for the investigation of 20CR in Fig. 7a. The reconstructed AMOC index time-series (Duchez et al., 2014) is plotted in grey. Filled circles represent the years where both a positive/negative AMOC and a solar minimum/maximum occur in parallel, as investigated in Fig. 7b.