Supplementary Materials

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Figure S1. Spatial resolution of the ocean model FESOM. Units are km.



Figure S2. Top-of-atmosphere insolation anomalies between LGM and PI. Units are W/m²



Figure S3. Patterns of AMOC in LGM (a) and LGM_I (b), and their differences (c). Units are Sv.



Figure S4. Anomalies in DJF-mean 1,000 hPa zonal winds between LGM and LGM_I. The marked area has a significance level of greater than 95% based on Student's t-test. Units are m/s.



Figure S5. Anomalies in 925 hPa specific humidity for (a) LGM-PI, (b) LGM-LGM_G, (c) LGM-LGM_I, and (d) LGM-LGM_GI. Units are kg/kg.