



Supplement of

The impact of the North American ice sheet on the evolution of the Eurasian ice sheet during the last glacial cycle

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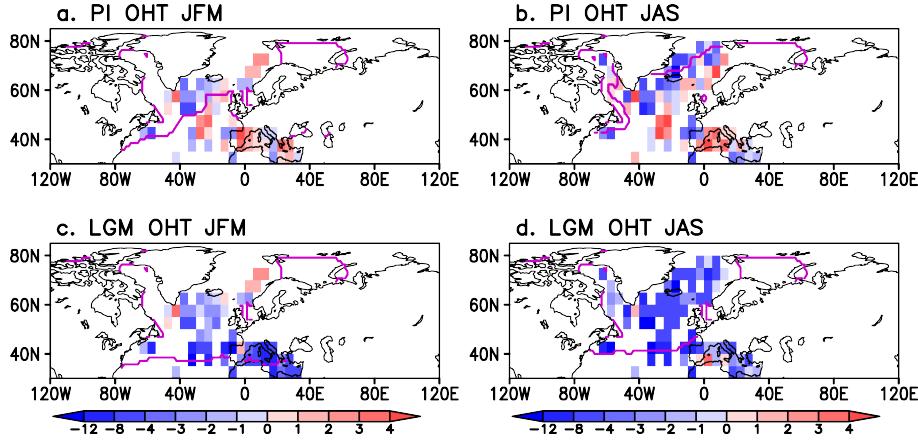


Figure 1. The shading displays the difference (in $^{\circ}\text{C}$) between the simulated SST anomalies (the difference between the fullGlacial LGM simulation and the pre-industrial simulation in Löfverström et al., 2014) and the LGM SST anomalies from the Multiproxy Approach for the Reconstruction of the Glacial Ocean Surface (MARGO; Margo Project Members et al., 2009) for the simulations with PI OHT (a,b) and LGM OHT (Brandefelt and Otto-Bliesner, 2009) (c,d). Panels (a,c) show the model-proxy difference in the boreal winter (January–March), and (b,d) in the summer (July–September). Red (blue) shading indicates that the model response for LGM is warmer (colder) than the proxy. The purple contour depicts the position of the simulated sea-ice margin. Note that the LGM OHT simulations yield too cold conditions in the North Atlantic in both the summer and winter seasons.

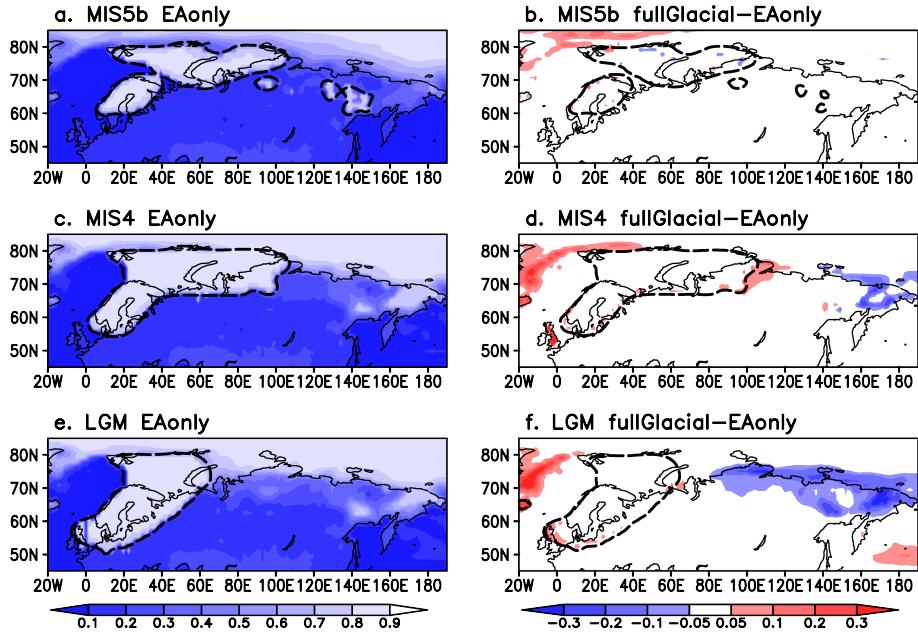


Figure 2. The JJA (June–August) surface albedo in Eurasia from the EAonly simulations (a,b,c), and JJA surface albedo anomalies induced by the North American ice sheet (the difference between fullGlacial and EAonly simulations; b,d,f) for MIS5b (a,b), MIS4 (c,d) and LGM (e,f).

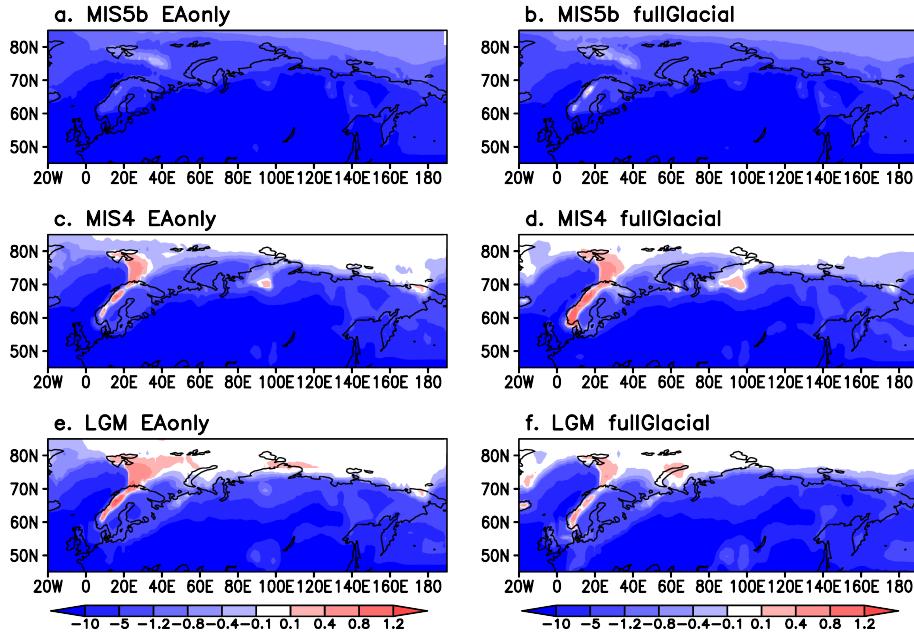


Figure 3. The initial surface mass balance in Eurasia (in m yr^{-1}) derived from the EAonly (a,c,e) and fullGlacial (b,d,f) simulations of MIS5b (a,b), MIS4 (c,d) and LGM (e,f).

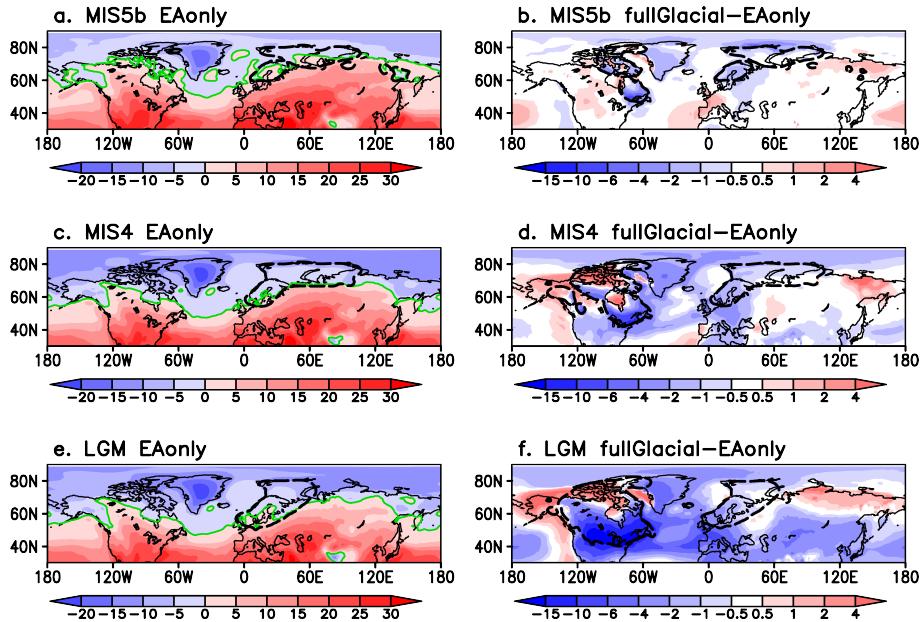


Figure 4. JJA surface temperature: same as Fig. 2c-h in the main paper, but with LGM OHT.

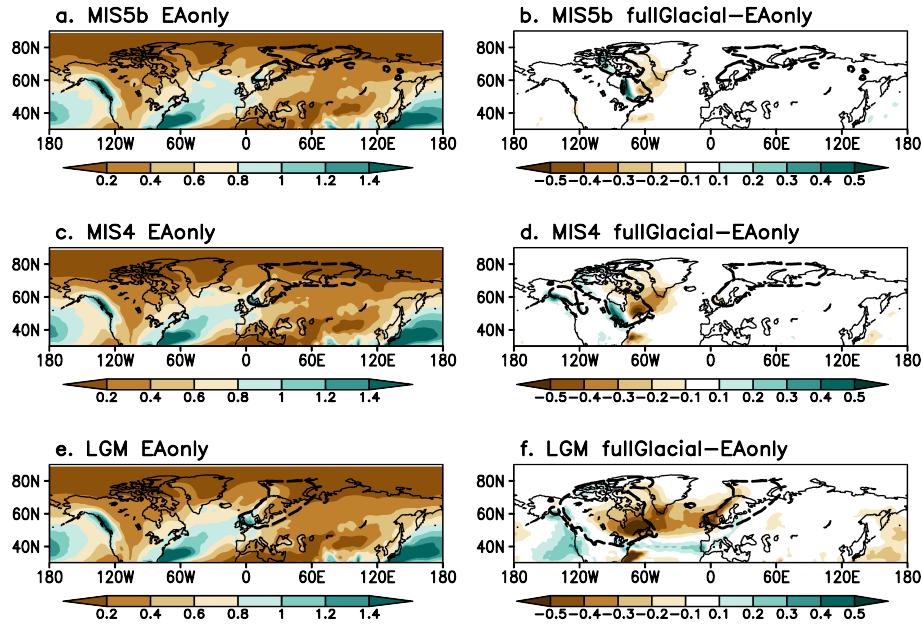


Figure 5. Annual precipitation: same as Fig. 3c-h in the main paper, but with LGM OHT.

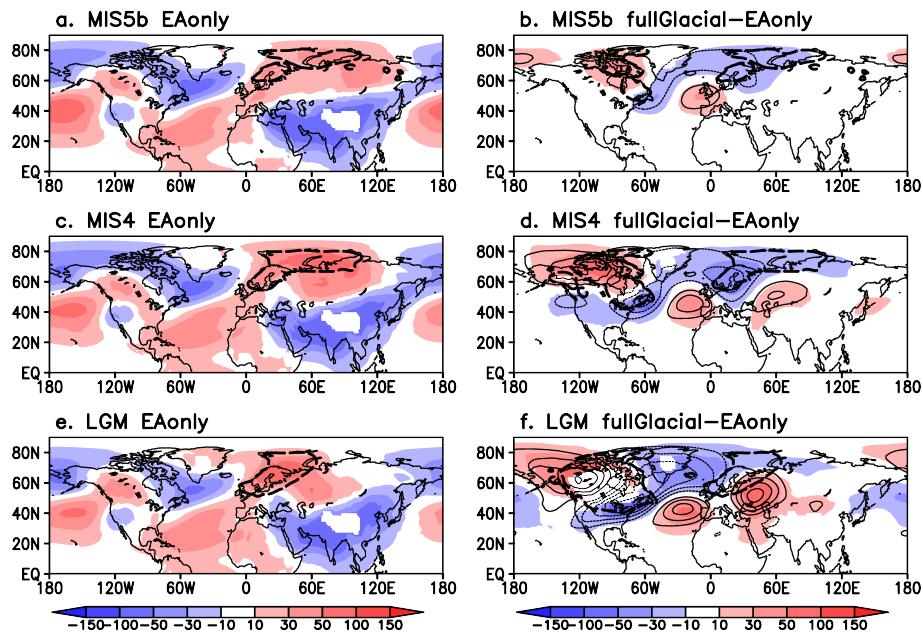


Figure 6. 700 hPa (shading) and 300 hPa (contours) geopotential height anomalies (zonal mean subtracted): same as Fig. 4c-h in the main paper, but with LGM OHT.

References

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