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Supplement of

Modeling a modern-like $p\text{CO}_2$ warm period (Marine Isotope Stage KM5c) with two versions of an Institut Pierre Simon Laplace atmosphere–ocean coupled general circulation model

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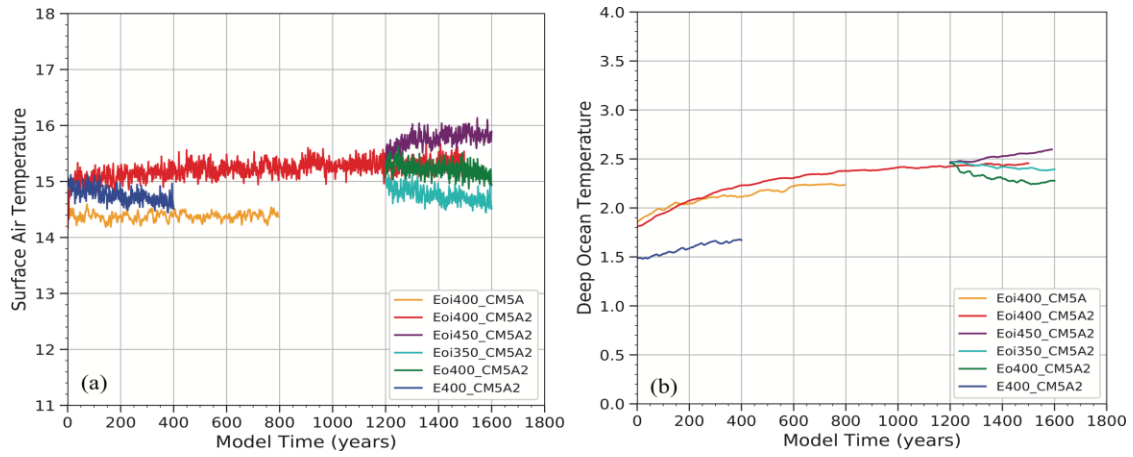


Figure S1: Time series of simulated mean annual surface air temperature and deep ocean temperature (2.3km depth) in each experiment.

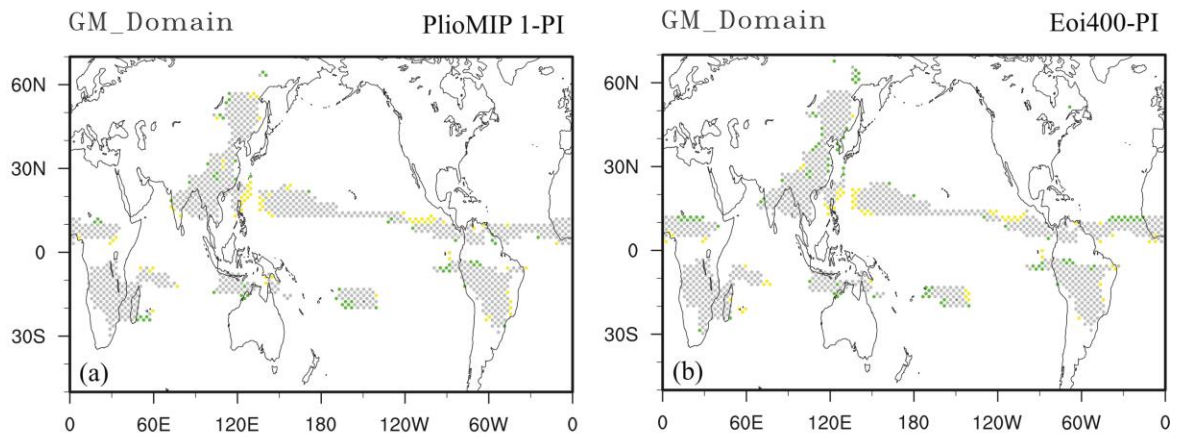


Figure S2: Global monsoon regions' changes in PlioMIP 1 and Eoi400 relative to PI control (yellow area indicates monsoon region retreat; green area indicates monsoon region expansion).

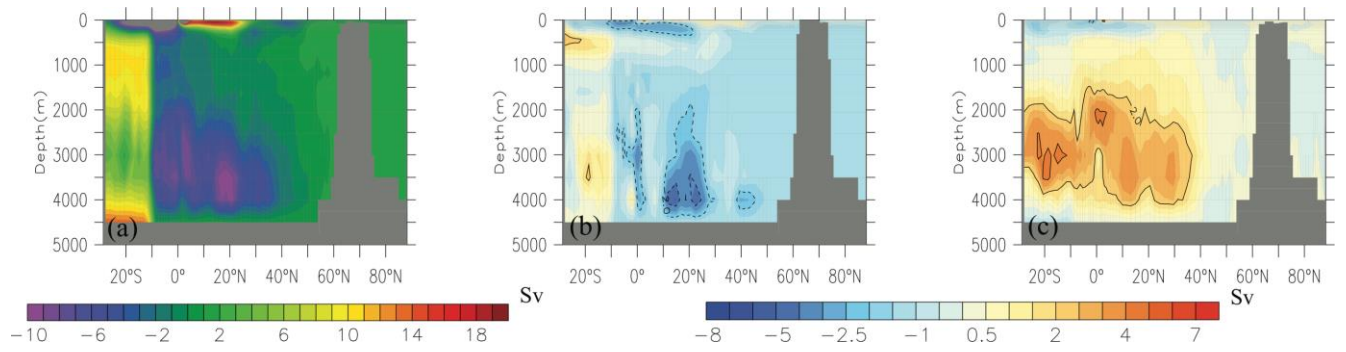


Figure S3: Pacific meridional overturning circulation (PMOC) in PI control (a) and the PMOC anomalies of Eoi400 (b) and PlioMIP 1 experiment in (c) comparison with PI control.

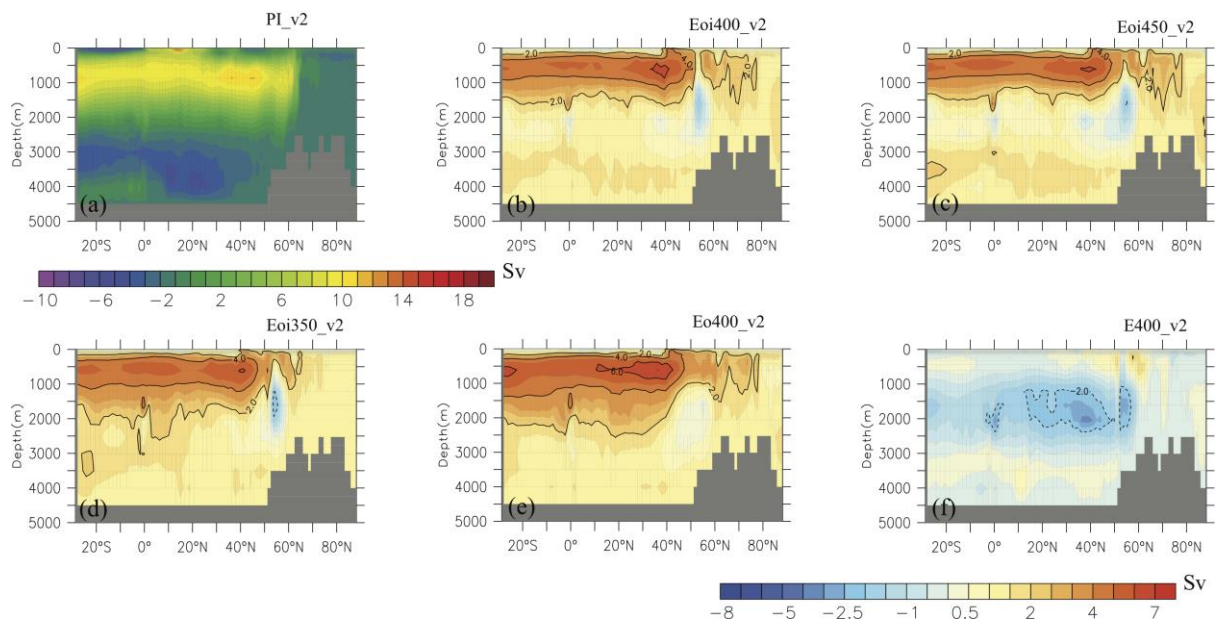


Figure S4: Mean annual AMOC of PI control experiment in IPSLCM5A2 (a) and AMOC anomalies of Eoi400_v2 (b), Eoi450_v2 (c), Eoi350_v2 (d), Eo400_v2 (e) and E400_v2 (f) in comparison with PI condition.

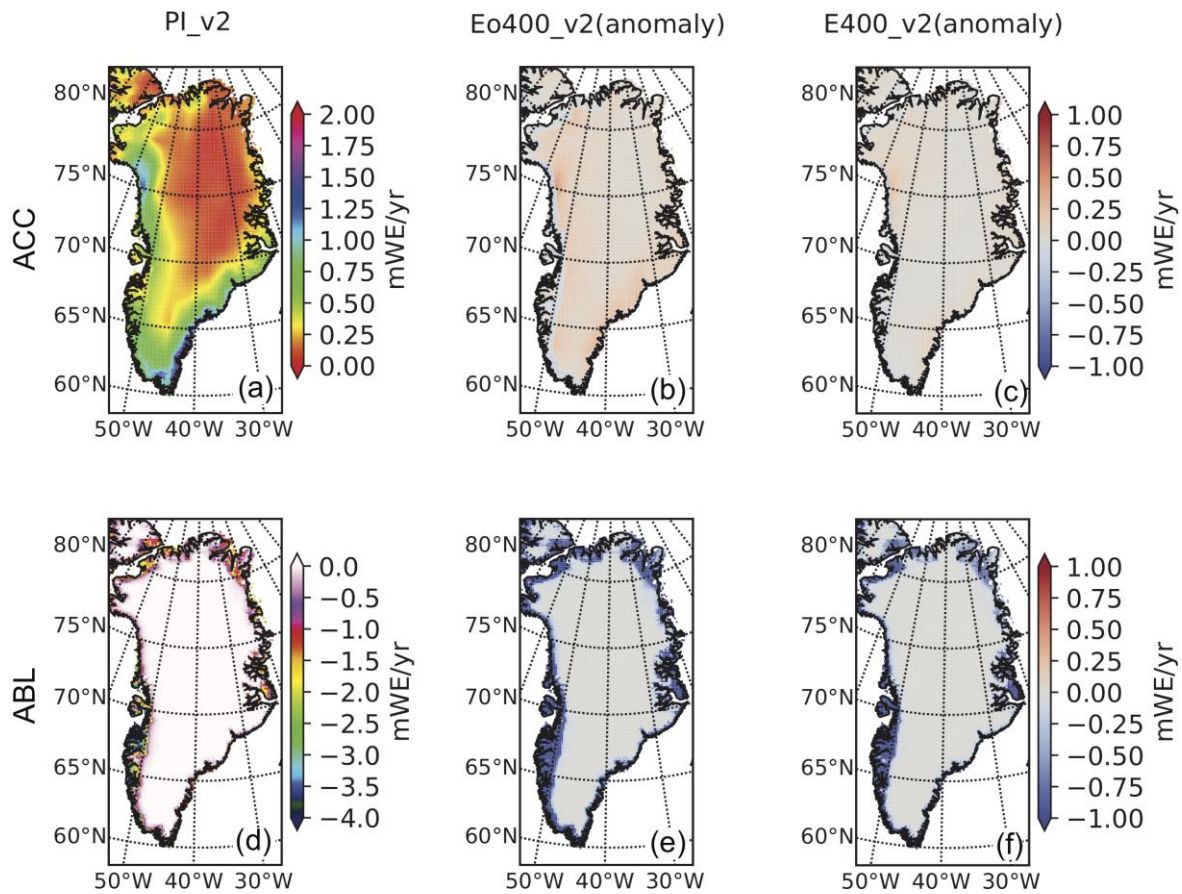


Figure S5: The mean annual accumulation (ACC) and ablation (ABL) in Greenland in PI control experiment (a, d), related anomalies of ACC and ABL in Eo400_v2 (b, e) and E400_v2 (c, f) experiments in comparison with PI control condition (unit: mWE(water equivalent)/yr).

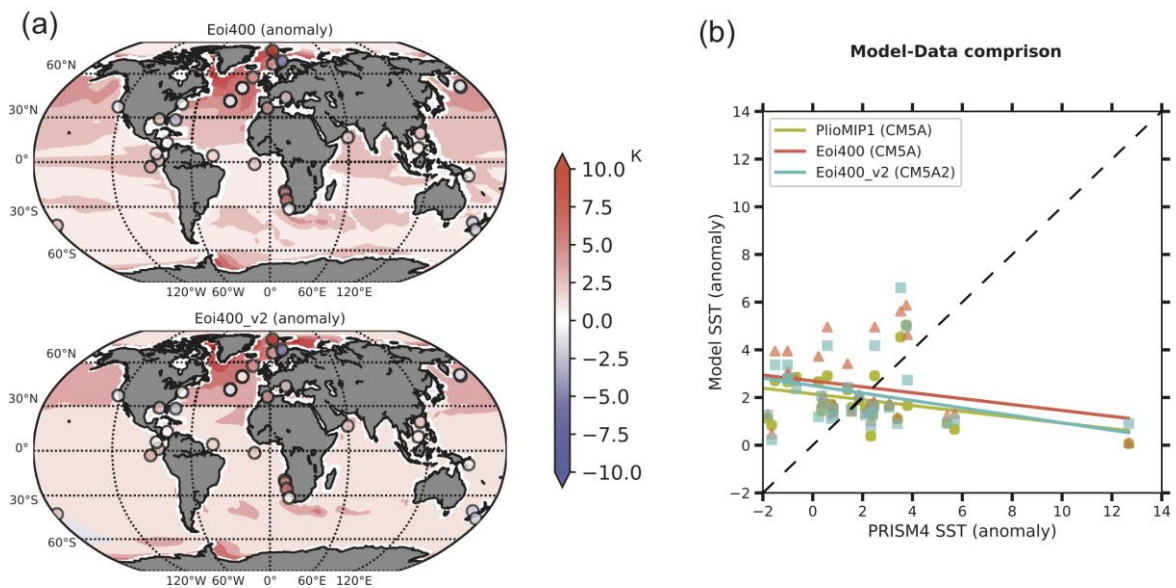


Figure S6: SST model data comparison. (a) Modelled warmest summer month SST anomalies of MIS KM5c (in relative to PI controls) and reconstructed MIS KM5c SST anomalies (in relative to near pre-industrial data). (b) The relationship between modelled SST anomalies and PRISM4 data anomalies.