

SUPPLEMENTARY INFORMATION FOR:

LARGE-SCALE FEATURES OF PLIOCENE CLIMATE: RESULTS FROM THE
PLIOCENE MODEL INTERCOMPARISON PROJECT

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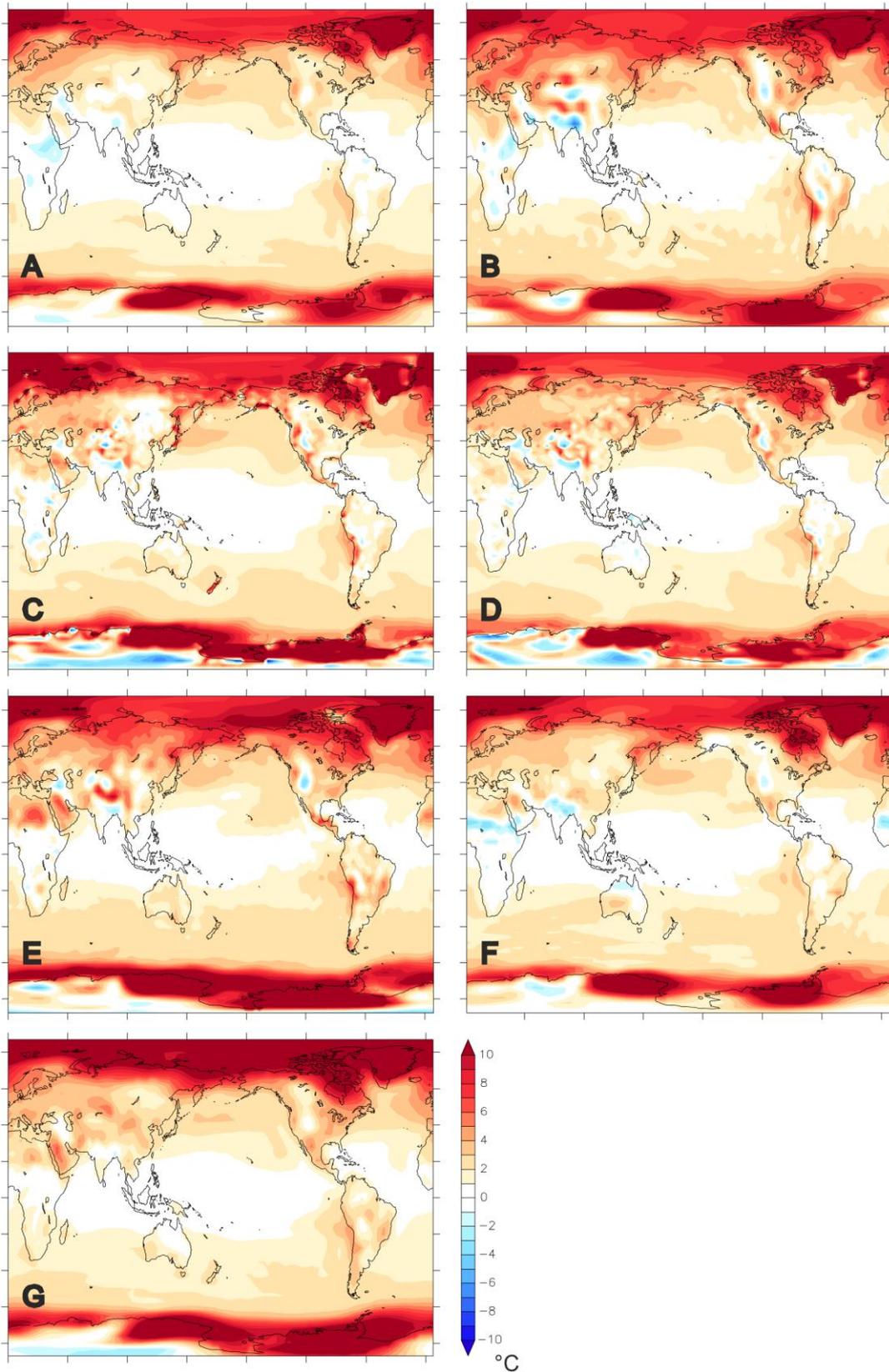


Figure S1: Annual mean surface air temperature anomalies for all models in the multi-model mean for Experiment 1 (a: CAM3.1, b: COSMOS, c: HadAM3, d: LMDZ5A, e: MIROC4m, f: MRI-CGCM2.3, g: NorESM-L (CAM4)).

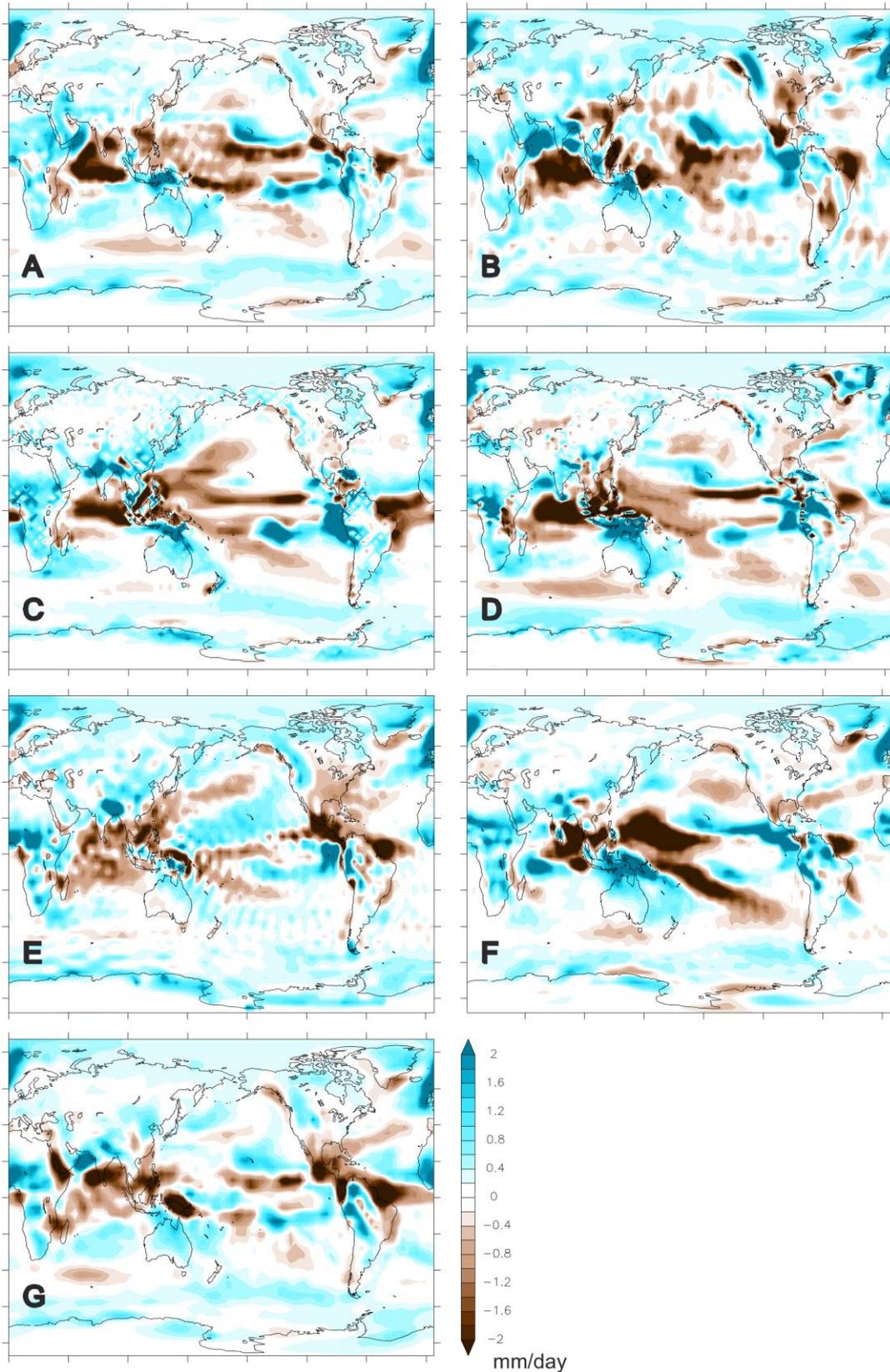


Figure S2: Annual mean total precipitation rate anomalies for all models in the multi-model mean for Experiment 1 (a: CAM3.1, b: COSMOS, c: HadAM3, d: LMDZ5A, e: MIROC4m, f: MRI-CGCM2.3, g: NorESM-L (CAM4)).

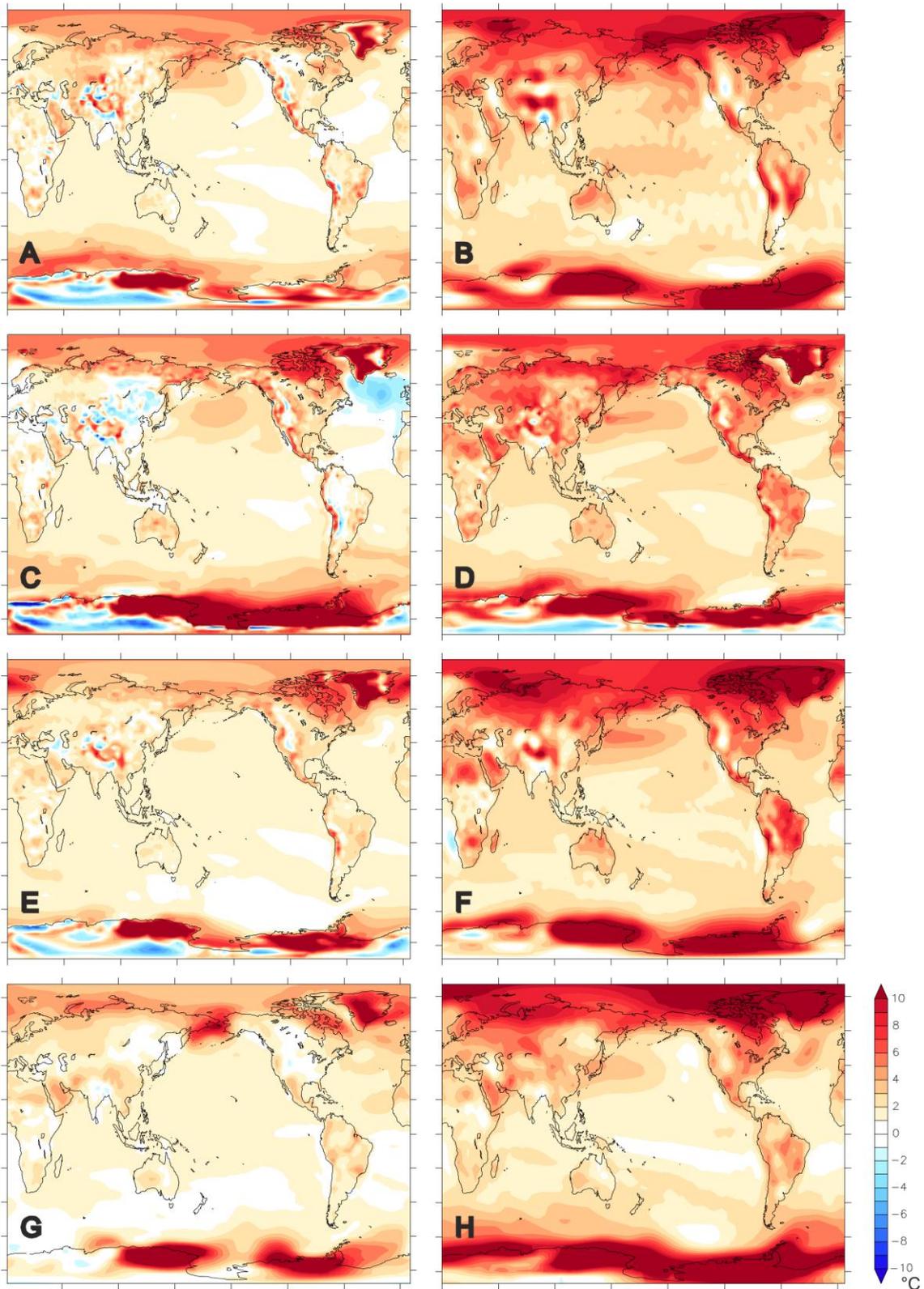


Figure S3: Annual mean surface air temperature anomalies for all models in the multi-model mean for Experiment 2 (a: CCSM4, b: COSMOS, c: GISS-E2-R, d: HadCM3, e: IPSLCM5A f: MIROC4m, g: MRI-CGCM2.3, h: NorESM-L). Spatial pattern of ESS estimates can be seen by multiplying this field by 1.88.

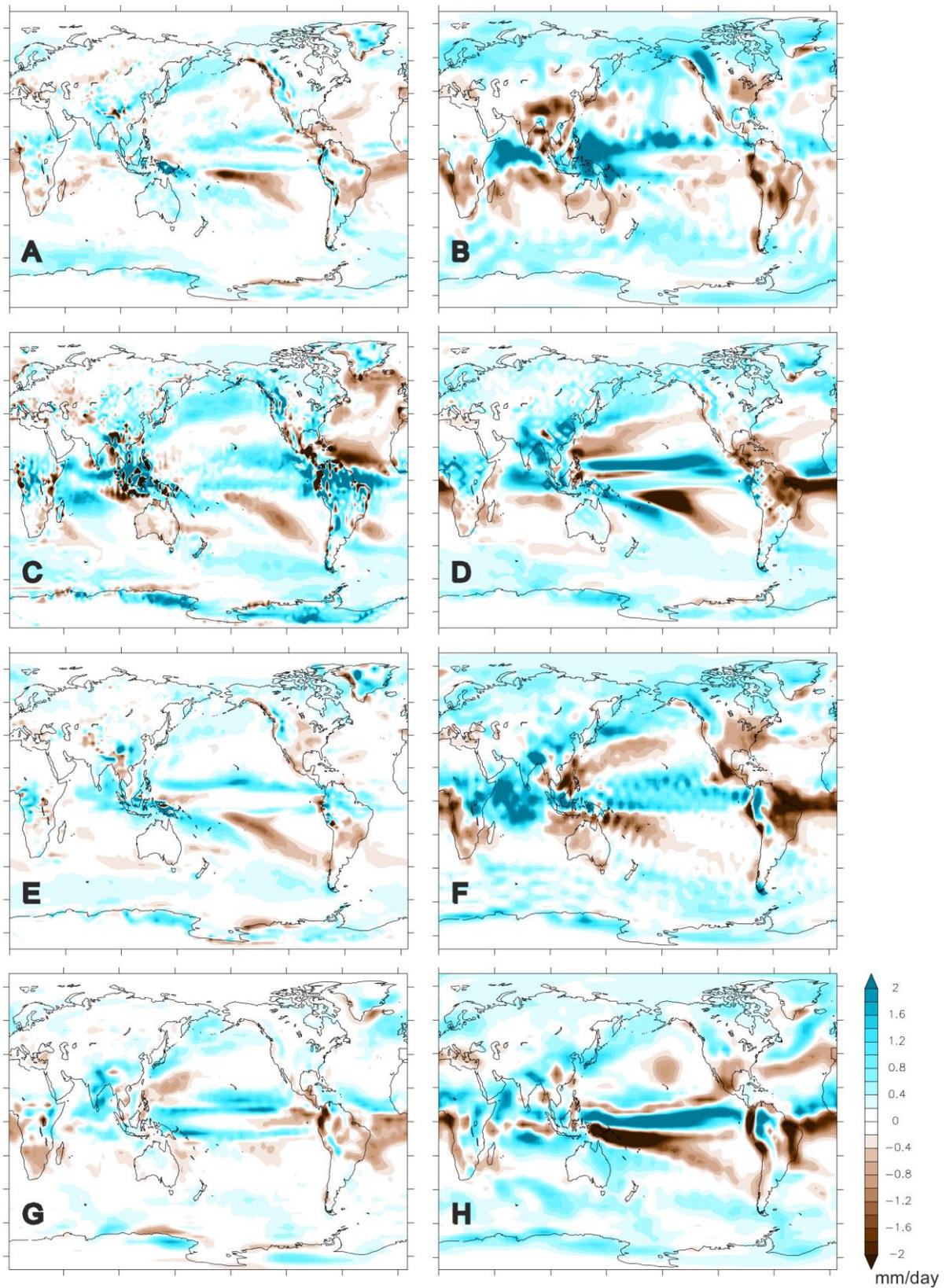


Figure S4: Annual mean total precipitation rate anomalies for all models in the multi-model mean for Experiment 2 (a: CCSM4, b: COSMOS, c: GISS-E2-R, d: HadCM3, e: IPSLCM5A f: MIROC4m, g: MRI-CGCM2.3, h: NorESM-L).

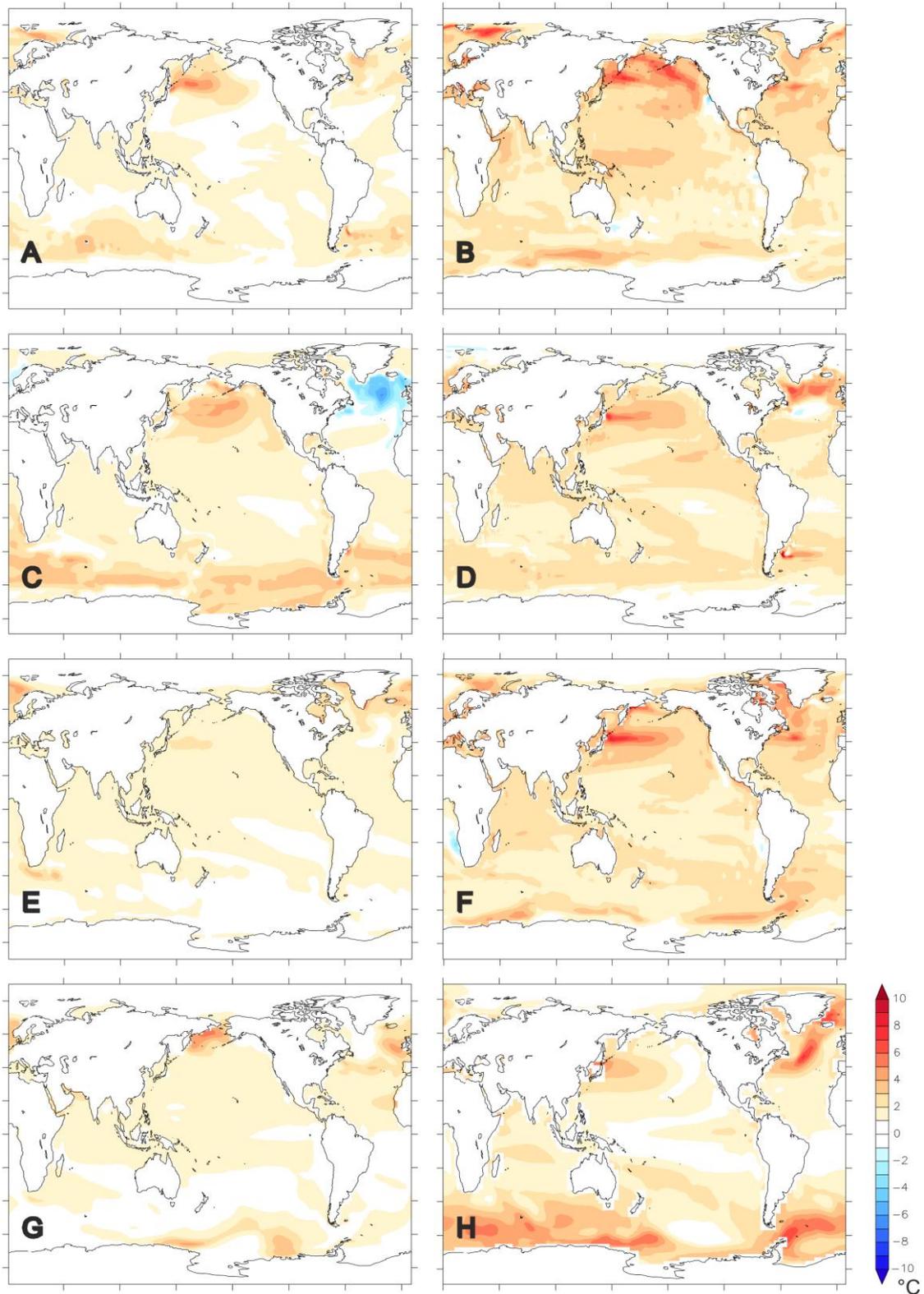


Figure S5: Annual mean sea surface temperature anomalies for all models in the multi-model mean for Experiment 2 (a: CCSM4, b: COSMOS, c: GISS-E2-R, d: HadCM3, e: IPSLCM5A, f: MIROC4m, g: MRI-CGCM2.3, h: NorESM-L).

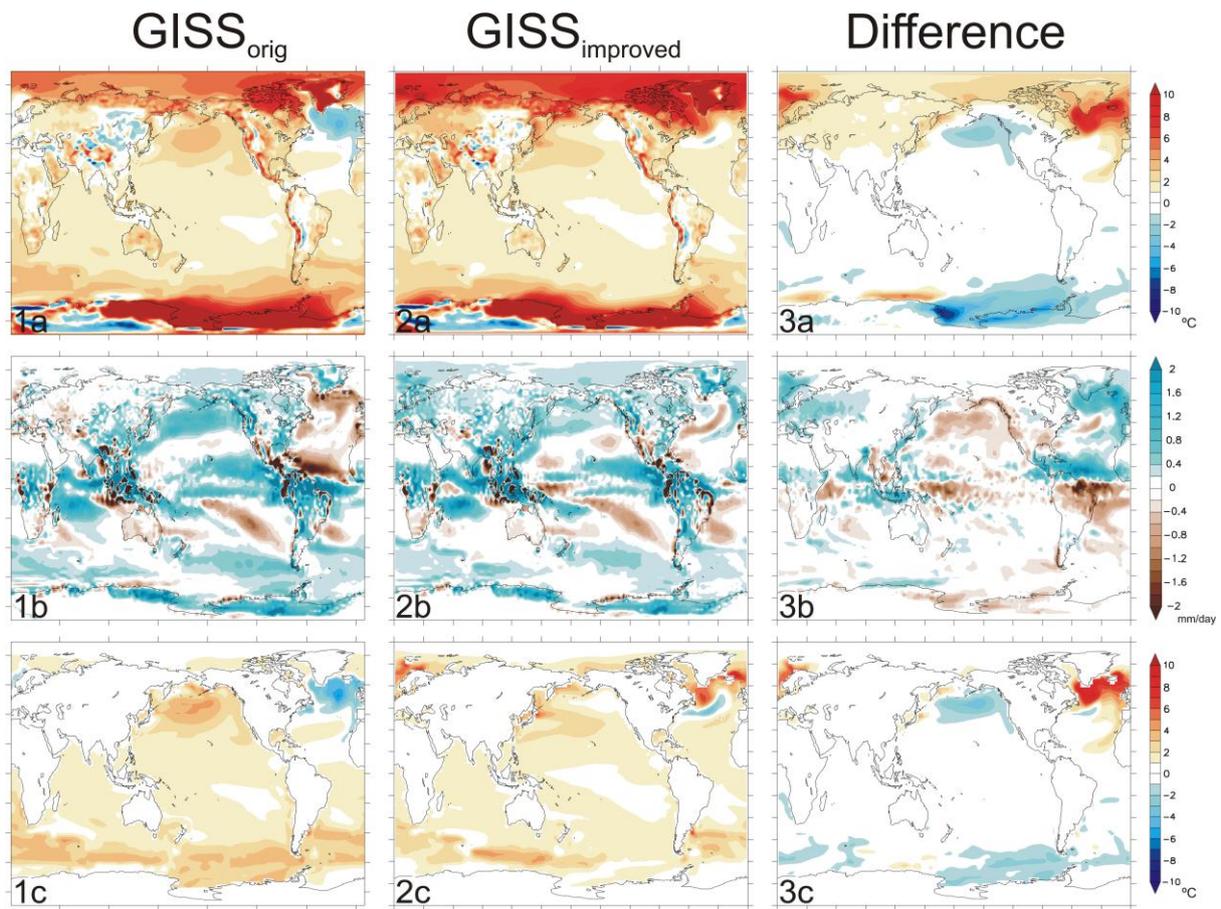


Figure S6: (1) Original and (2) improved PlioMIP Experiment 2 Pliocene minus pre-industrial simulations from the Goddard Institute for Space Studies (GISS-E2-R) and (3) the difference between the two for (a) annual mean surface air temperatures, (b) total precipitation rate and (c) annual mean sea surface temperature.

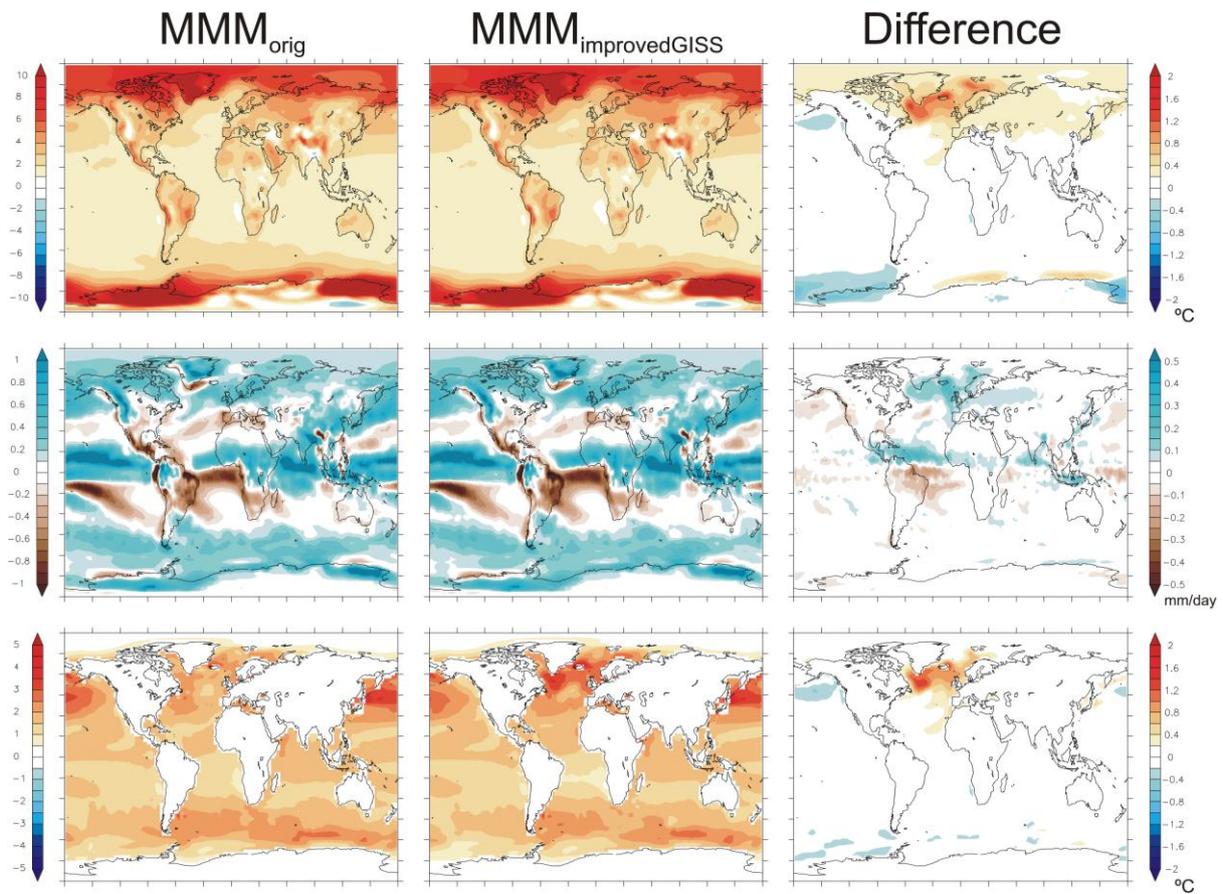


Figure S7: (1) Original and (2) improved PlioMIP Experiment 2 annual multi-model mean (MMM) Pliocene minus pre-industrial and (3) the difference between the two for (a) annual mean surface air temperatures, (b) total precipitation rate and (c) annual mean sea surface temperature. The improved multi-model means incorporate the improved GISS simulation (see Fig. S6), in place of the original, and minor changes due to the IPSL Pliocene simulation, which was continued for a further 300 years reaching a TOA energy balance of 0.763 Wm^{-2} (from original of 0.809). Annual and monthly mean data for this improved MMM and also the PlioMIP Experiment 1 MMM can be found in the Supplementary Information for this publication.