



Supplement of

Seasonal extrema of sea surface temperature in CMIP6 models

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Supplementary materials

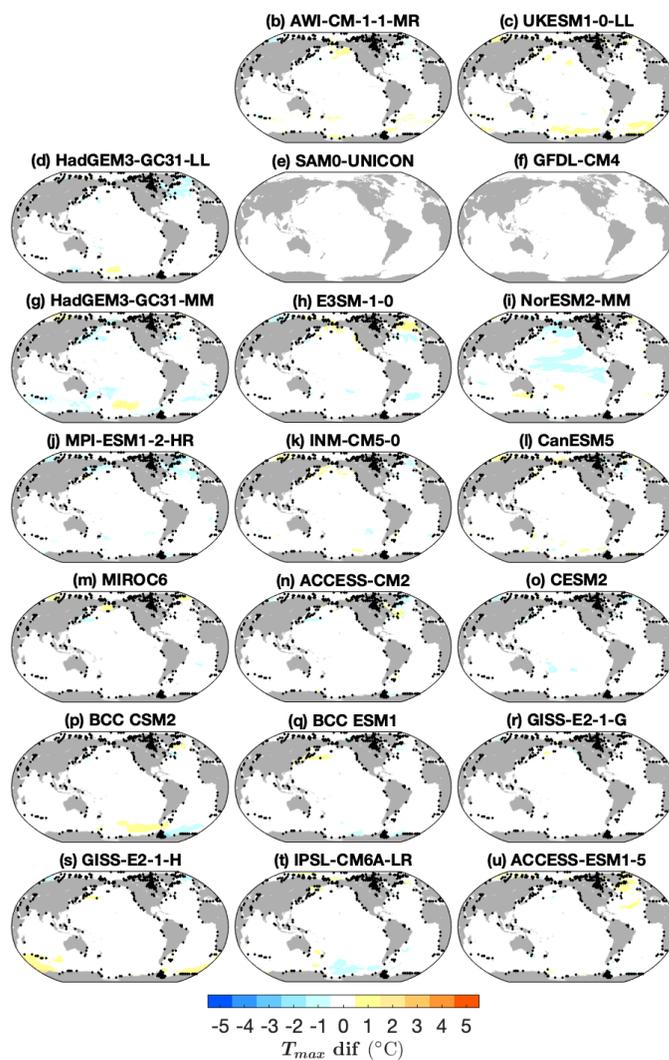


Figure S1. Differences between two ensemble members for T_{max} . Black dots mark grid points excluded from our analysis. r1i1p1f1 and r2i1p1f1 are compared when available; r1i1p1f3 and r2i1p1f3 are compared for HadGEM3-GC31-MM and HadGEM3-GC31-LL; r1i1p1f2 and r2i1p1f2 are compared for UKESM1-0-LL. There are no results for SAM0-UNICON and GFDL-CM4 as they have only one ensemble member.

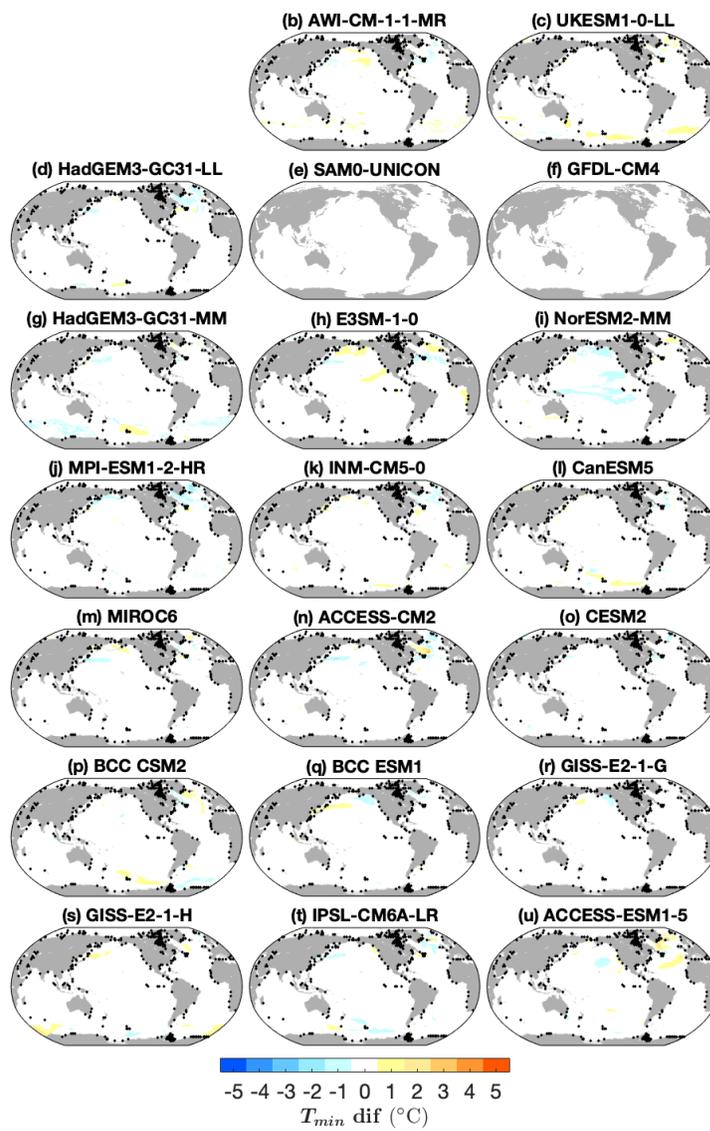


Figure S2. As Fig. S1, but for T_{min} .

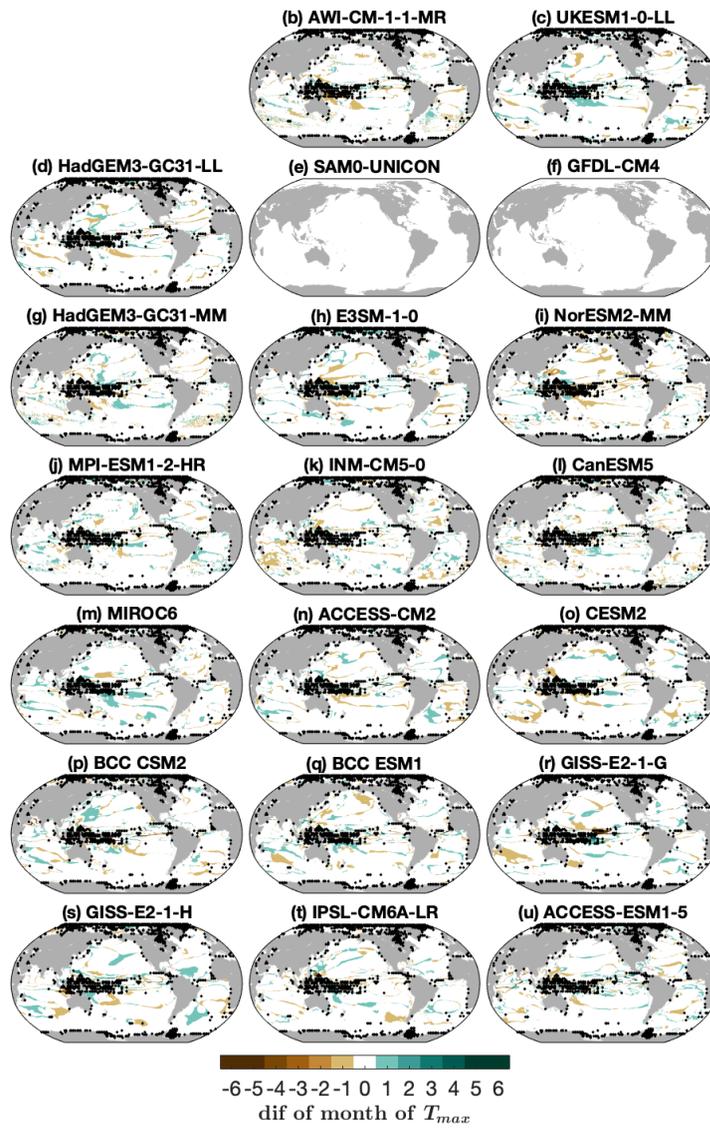


Figure S3. As Fig. S1, but for the month of T_{max} .



Figure S4. As Fig. S1, but for the month of T_{min} .

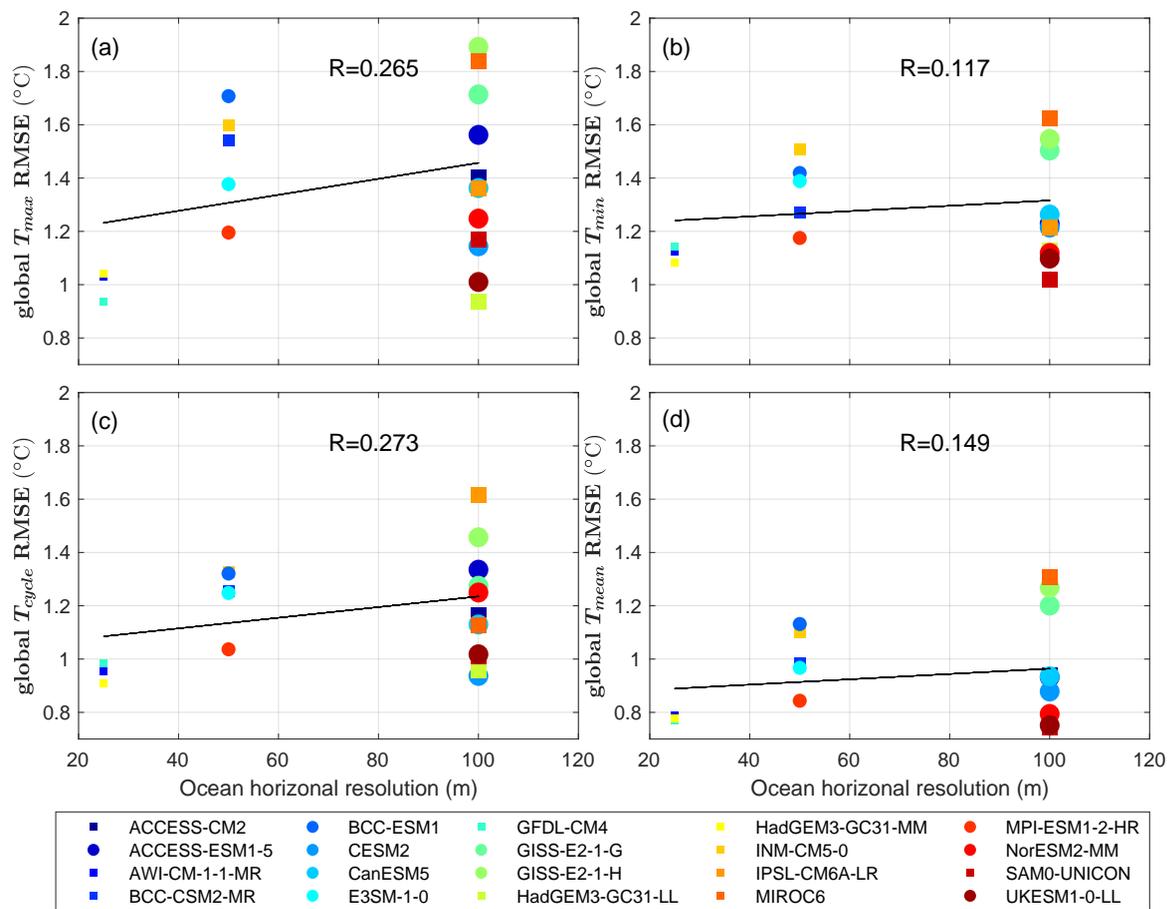


Figure S5. Global RMSE of (a) T_{max} , (b) T_{min} , (c) T_{cycle} and (d) T_{mean} , all against the ocean horizontal resolution.

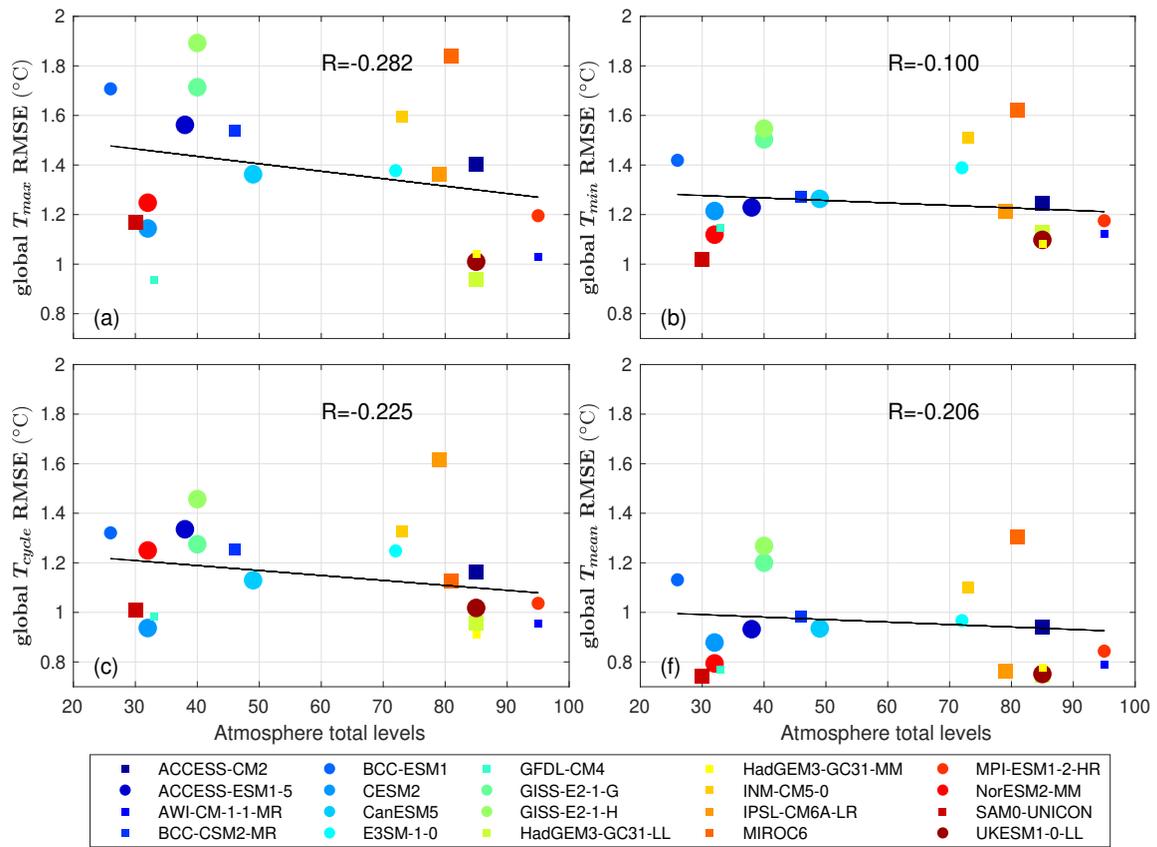


Figure S6. As Fig. S7, but for atmosphere vertical levels.

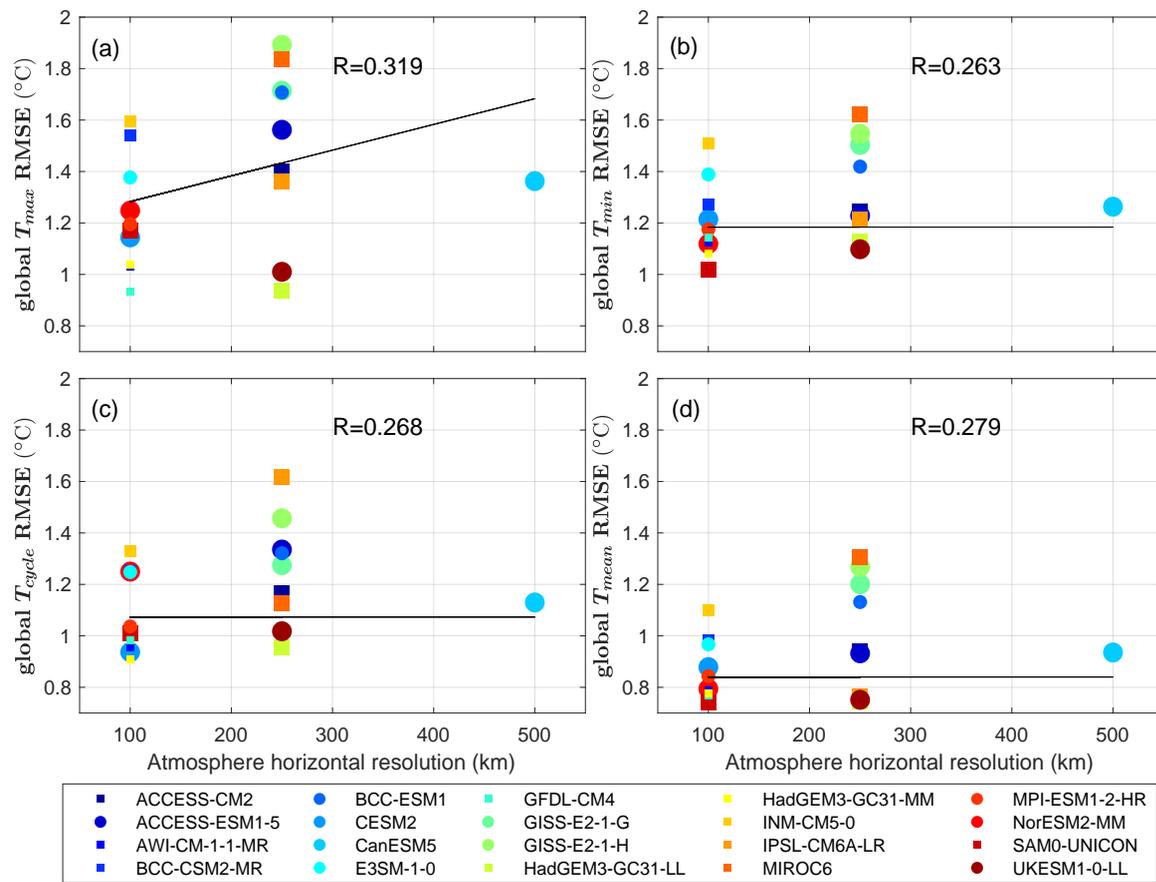


Figure S7. As Fig. S7, but for atmosphere horizontal resolution.

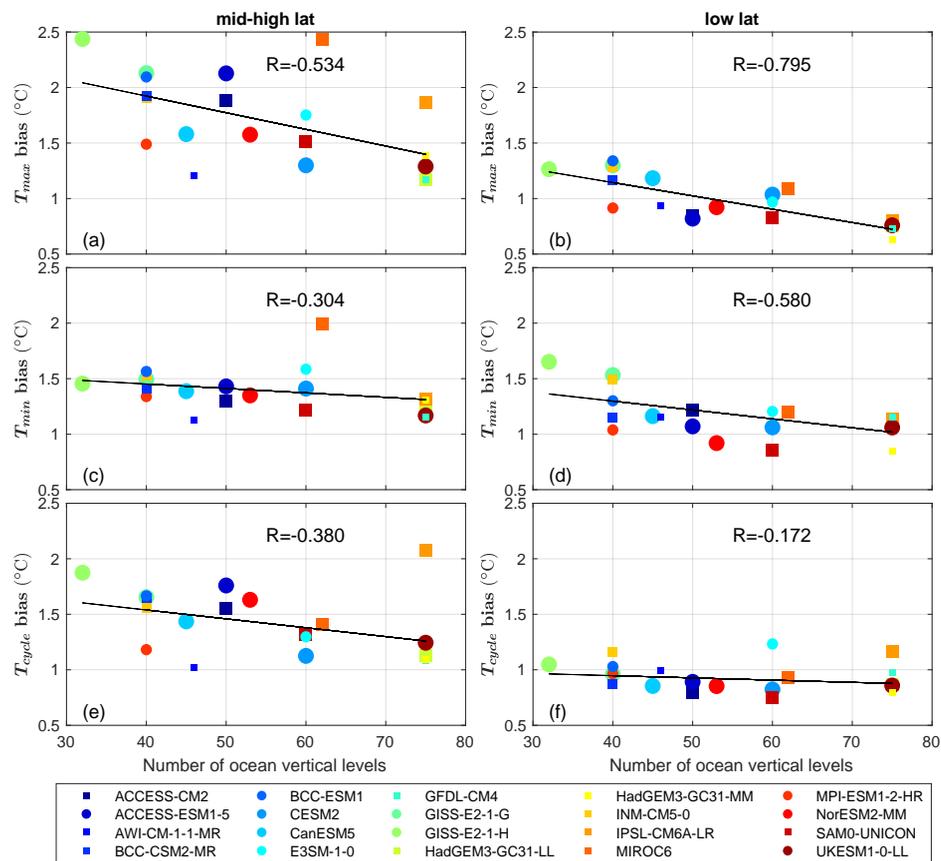


Figure S8. The area-weighted SST RMSE against total vertical levels for (a-b) mid-high latitudes (30°-90°) and (c-d) low latitudes 30°S-30°N.

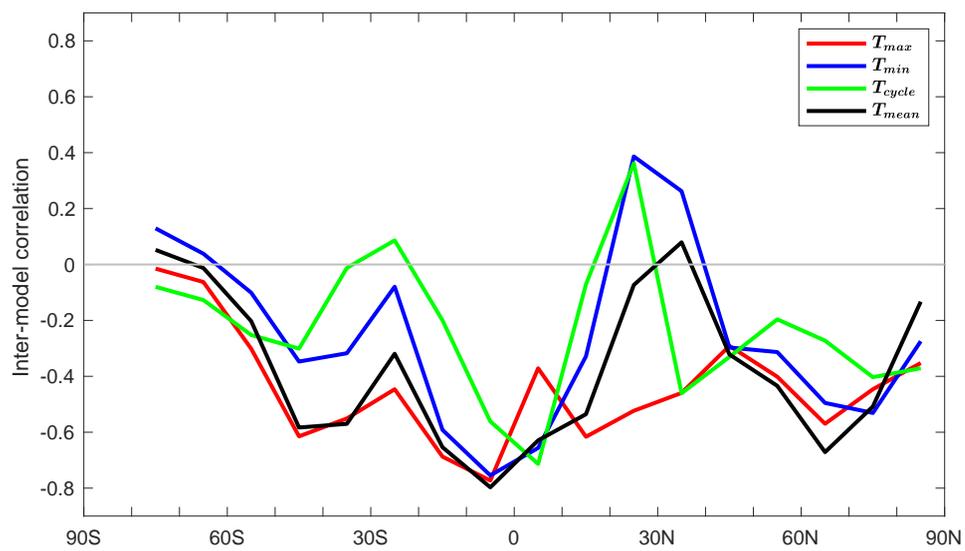


Figure S9. Inter-model correlation between number of ocean vertical levels and area-weighted RMSE in 10° latitude bands for T_{max} , T_{min} , T_{cycle} and T_{mean} .

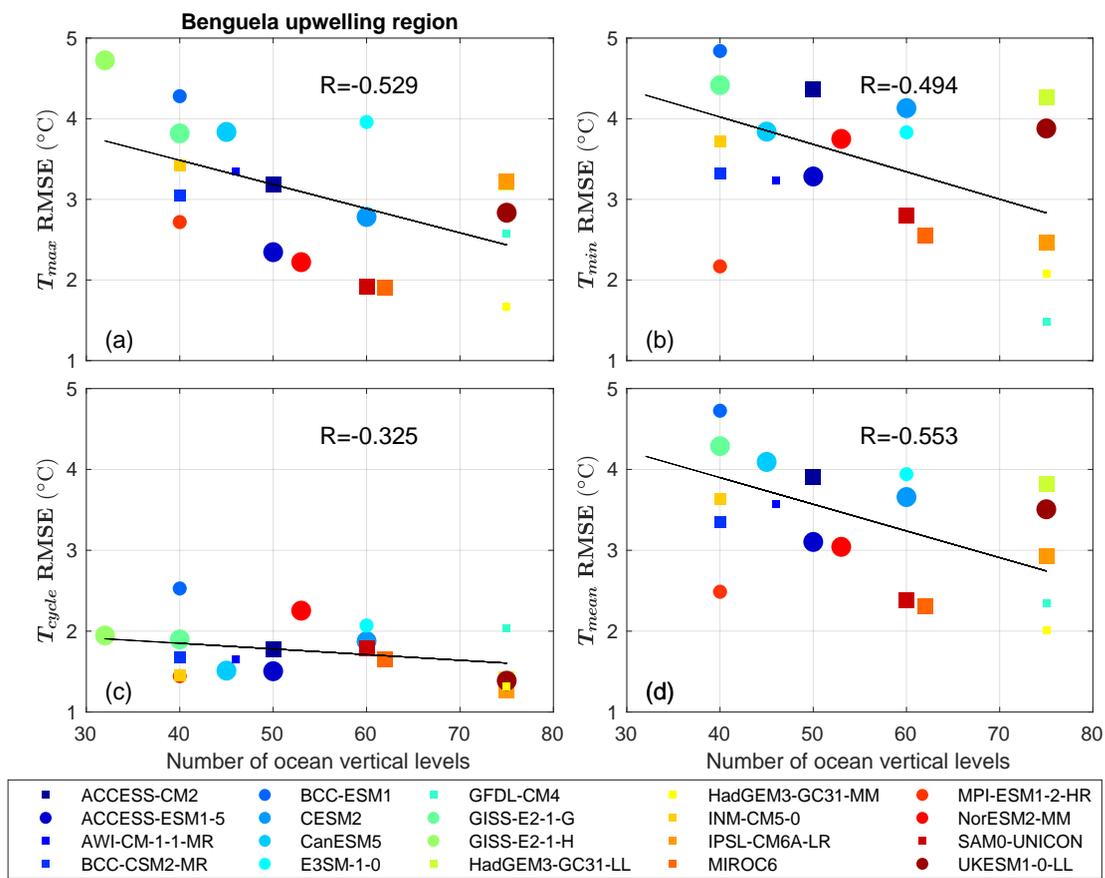


Figure S10. RMSE in Benguela upwelling region (18°S-28°S, from the coast to 500 km offshore) of (a) T_{max} , (b) T_{min} , (c) T_{cycle} and (d) T_{mean} , all against the number of ocean vertical levels.

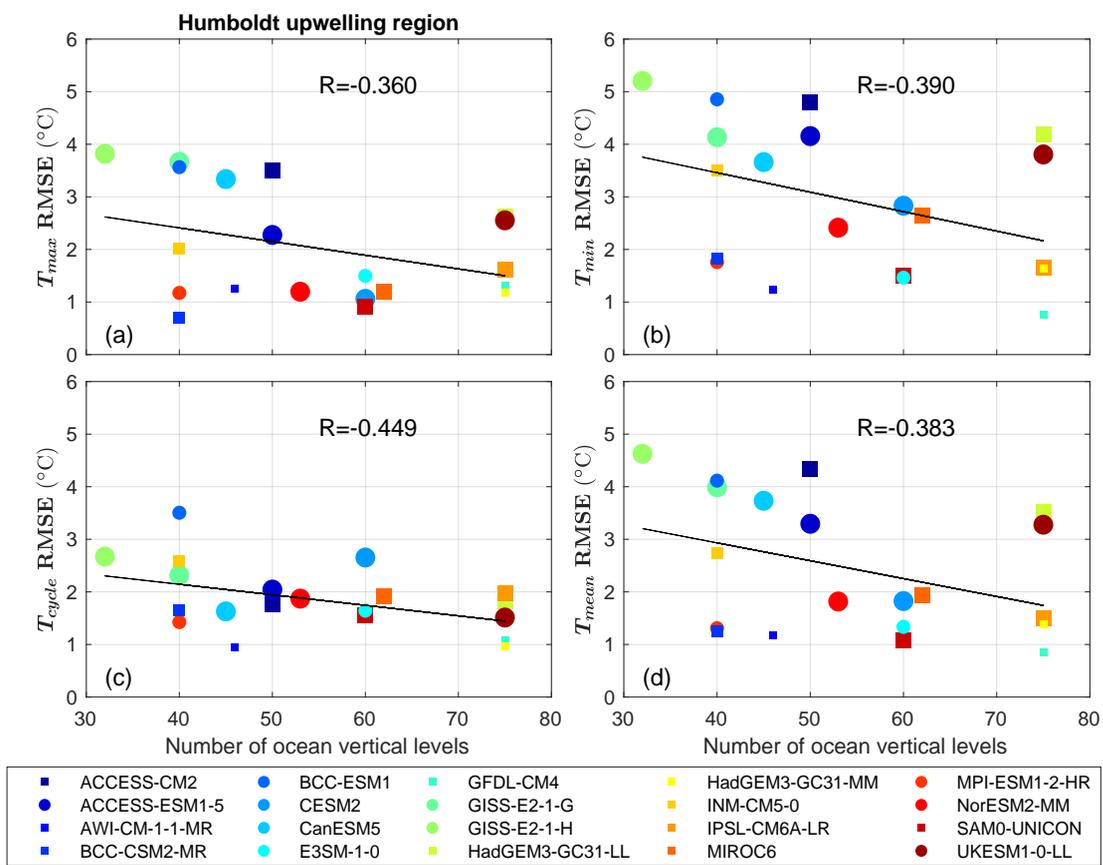


Figure S11. As in S10, but for Humboldt upwelling region (6°S - 16°S , from the coast to 500 km offshore).

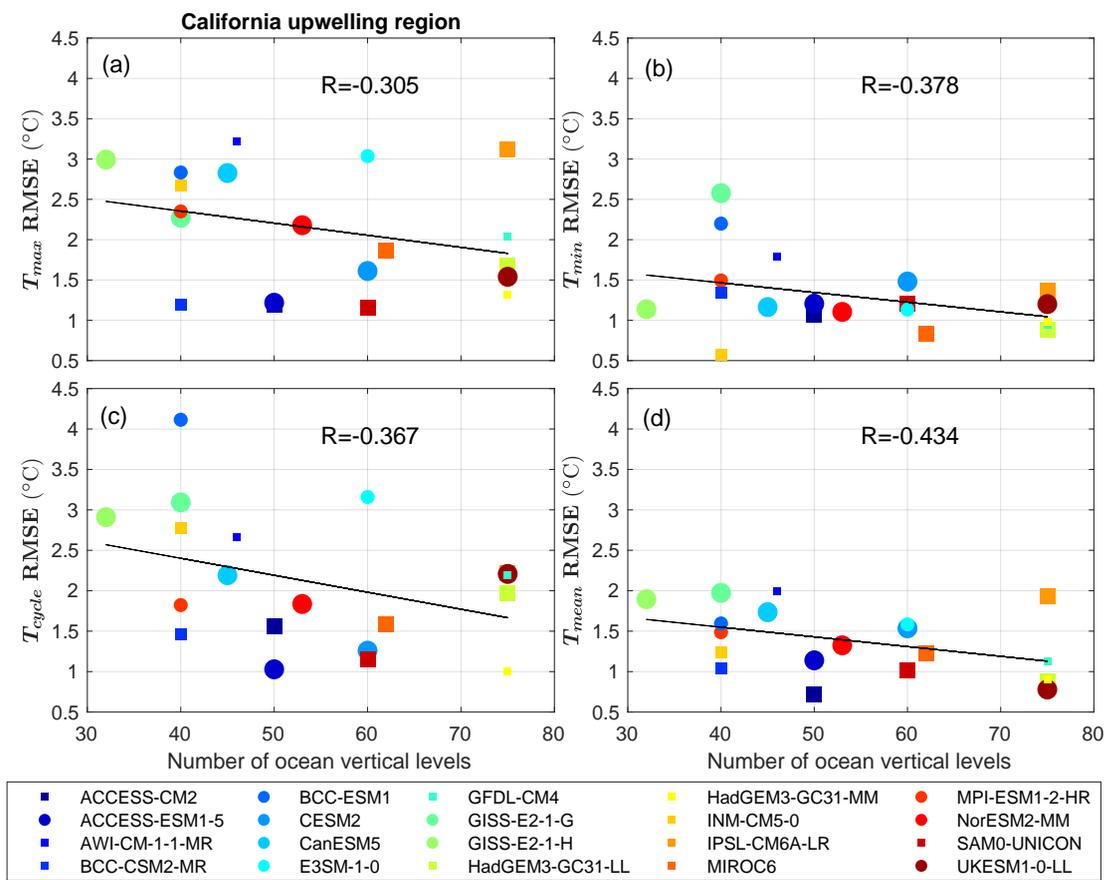


Figure S12. As in S10, but for California upwelling region (34°N-44°N, from the coast to 500 km offshore).

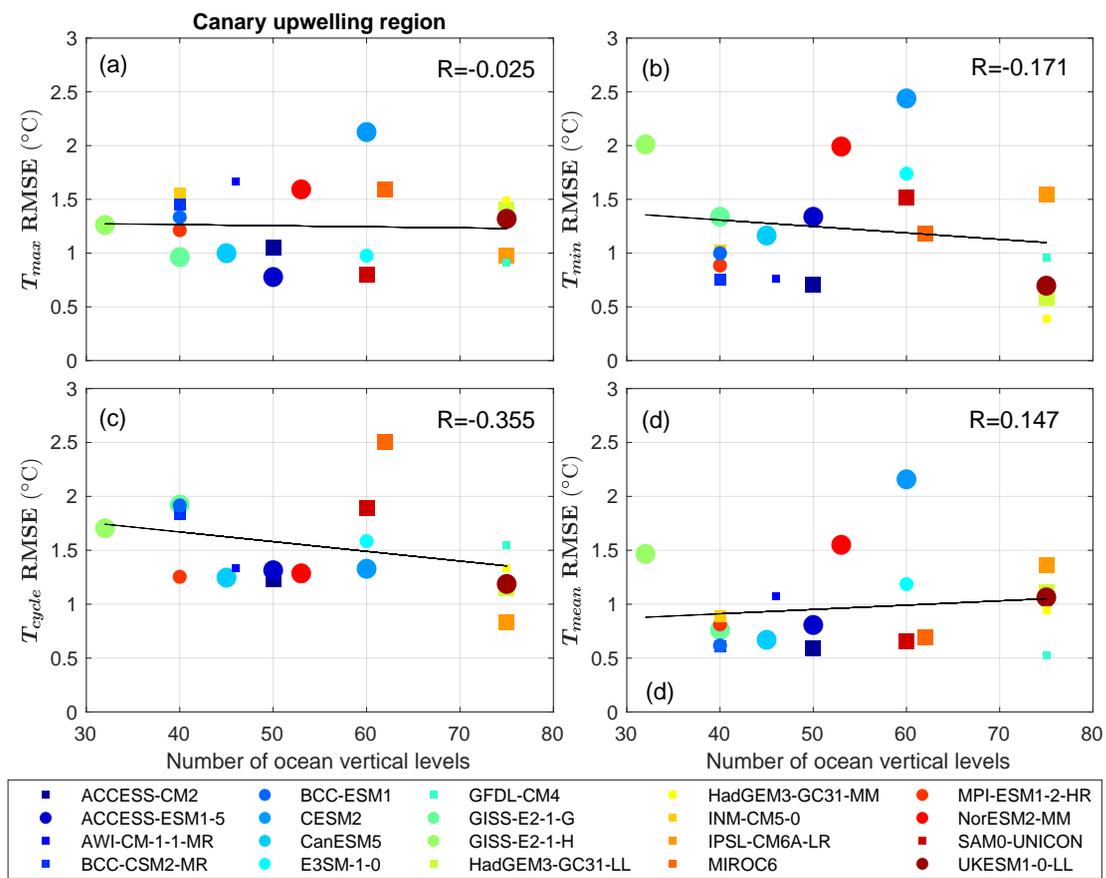


Figure S13. As in S10, but for Canary upwelling region (12°N - 22°N , from the coast to 500 km offshore).