



Geophysical Research Letters

Supporting Information for

The signature of oceanic processes in decadal extratropical SST anomalies

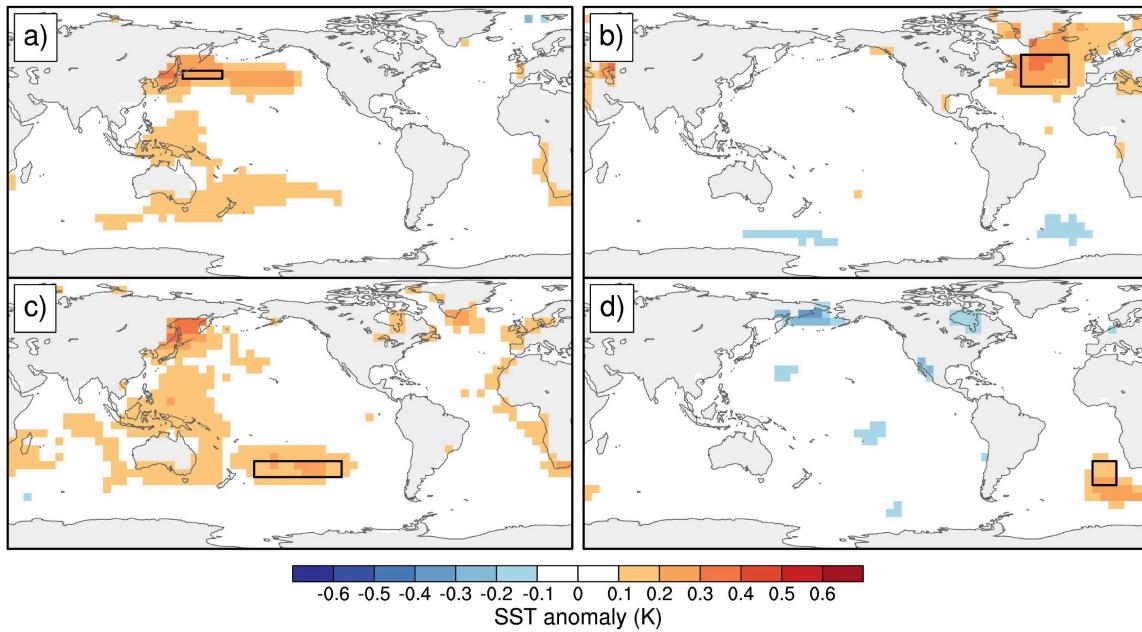
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SST regressed onto decadal SST indices - CMIP5

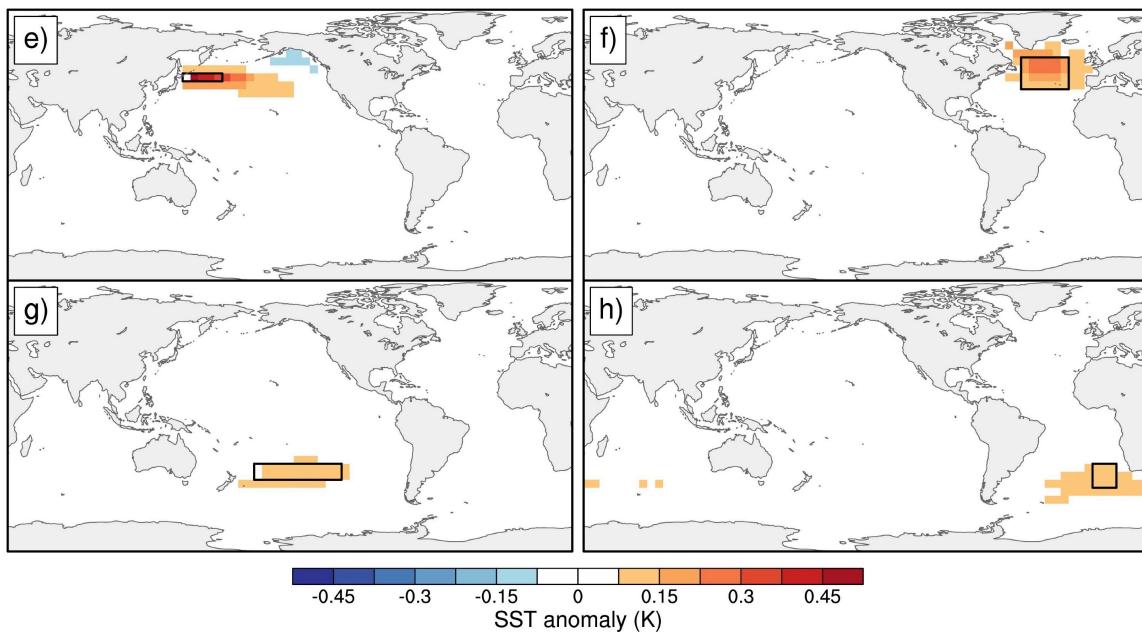
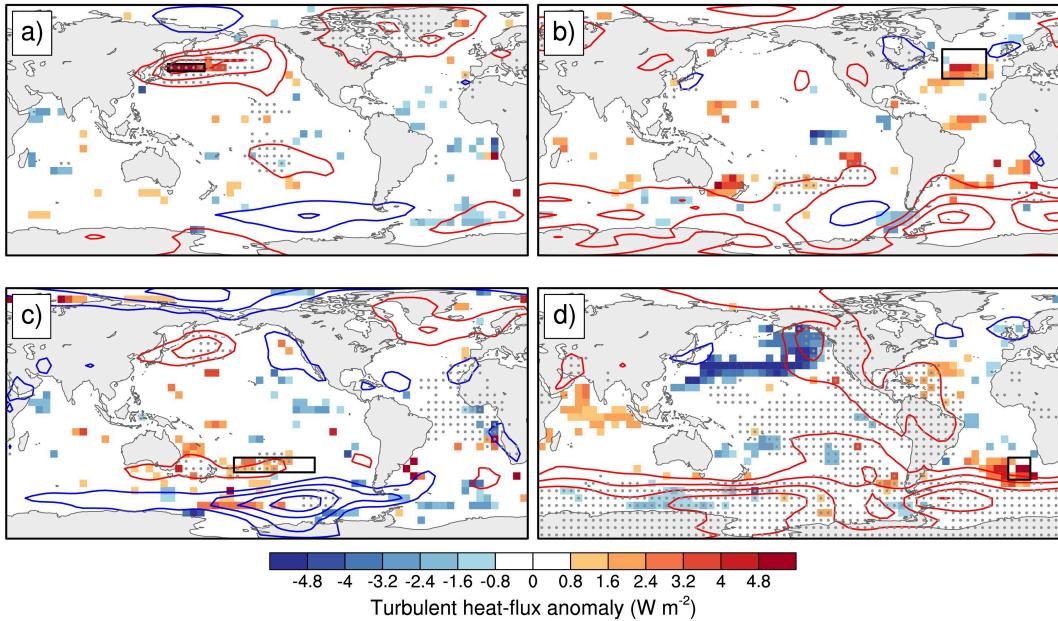


Figure S1. SST anomalies regressed onto the normalised decadal SST indices in (a,b,c,d) the reanalysis and (e,f,g,h) the CMIP5 pre-industrial control experiments. The SST anomalies in (a,b,c,d) are only shaded where they are significant at the 10% level and in (e,f,g,h) are only shaded where more than 80% of the models exhibit regression coefficients of the same sign. The black boxes indicate the region used to calculate the SST index in each panel.

SLP & Q regressed onto decadal SST indices (Reanalysis)



SLP & Q regressed onto decadal SST indices (CMIP5 historical)

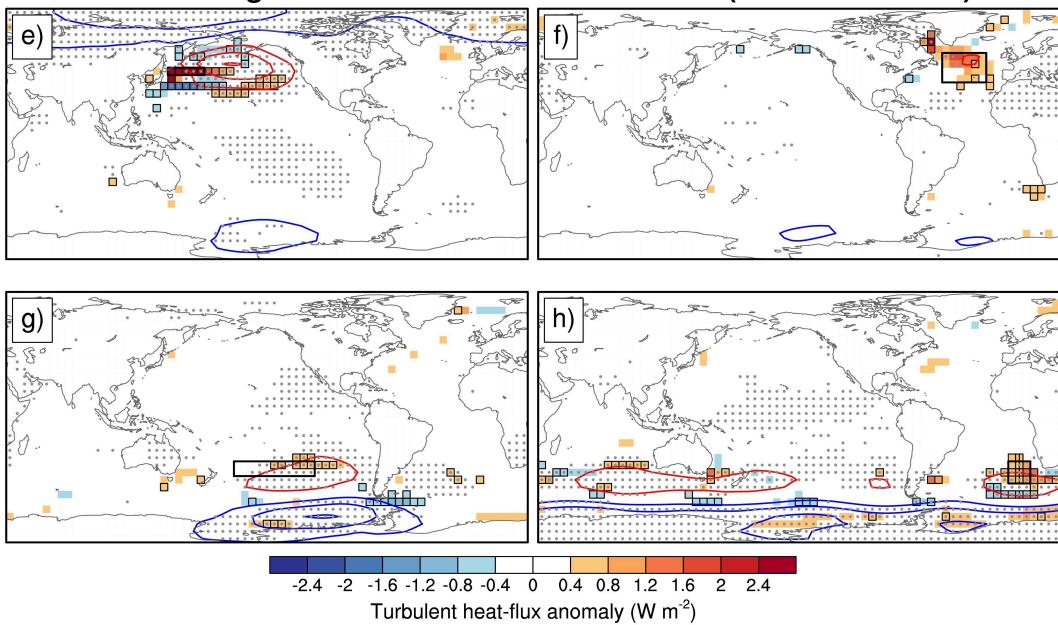


Figure S2: SLP (contours) and turbulent heat-flux (shaded) anomalies regressed onto the normalised decadal SST indices in (a,b,c,d) the reanalysis and (e,f,g,h) the CMIP5 historical experiments. The contour interval is 0.2 hPa for the reanalysis and 0.1 hPa for the CMIP5 models, where red contours are positive, blue contours are negative and the zero contour has been omitted. Stippling in (a,b,c,d) indicates where the SLP anomalies are significant at the 5% level, stippling in (e,f,g,h) indicates where more than 75% of the models exhibit regression coefficients of the same sign. The turbulent heat-flux anomalies in (a,b,c,d) are only shaded where they are significant at the 10% level and in (e,f,g,h) are outlined shaded where more than 75% of the models exhibit regression coefficients of the same sign. The bold black boxes indicate the region used to calculate the SST index in each panel.

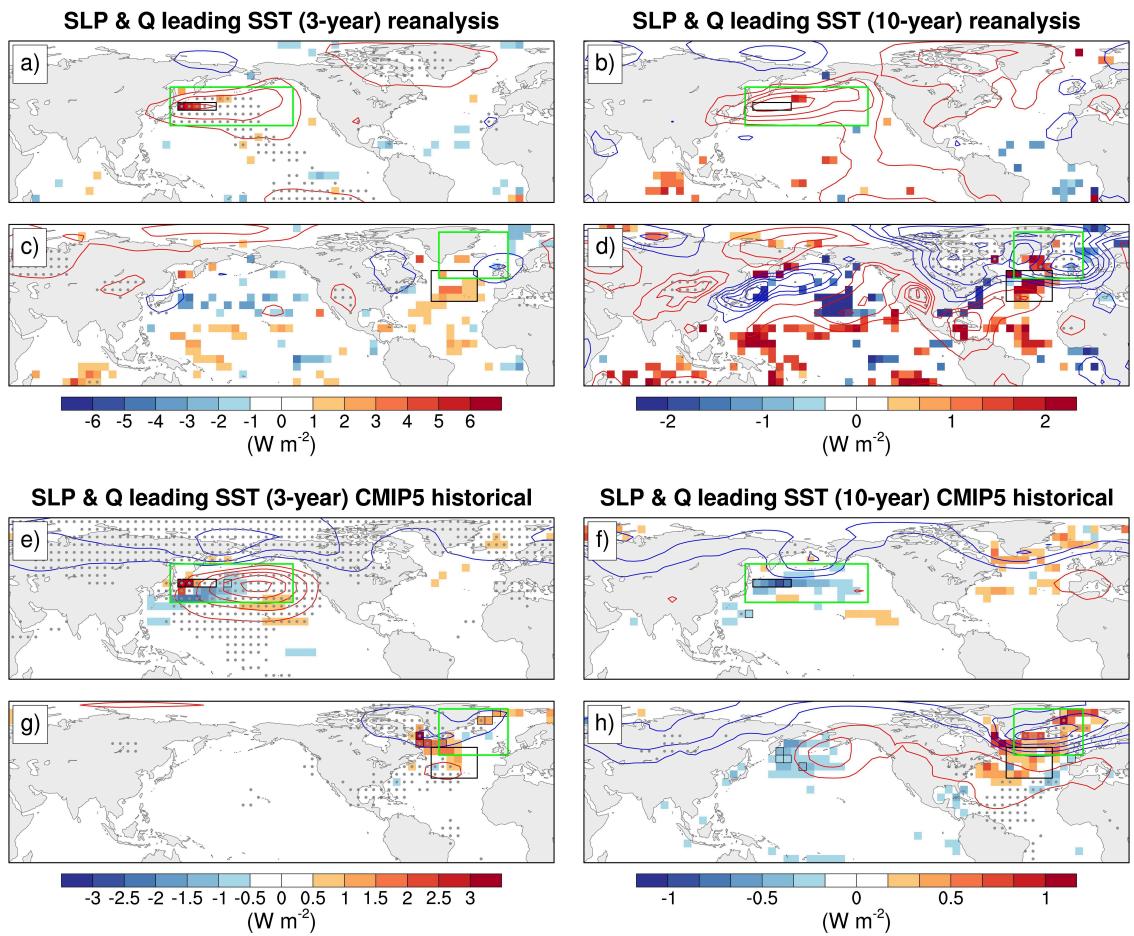


Figure S3. Lead-lag regression plots as in Figures 3a-h but for the CMIP5 historical experiments.

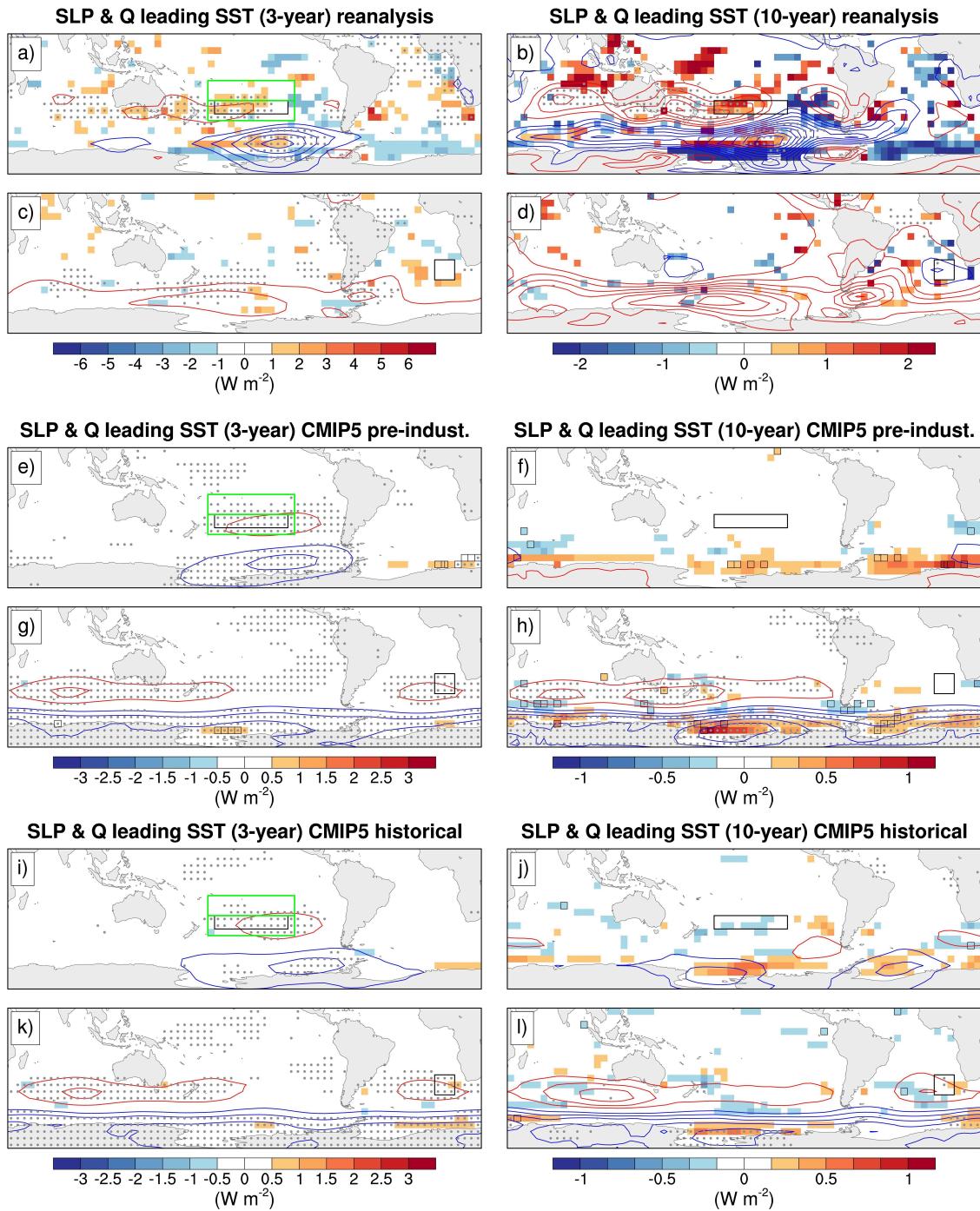


Figure S4. Lead-lag regression plots as in Figures 3a-h but for the South Atlantic and South Pacific indices in both the CMIP5 pre-industrial and CMIP5 historical simulations.

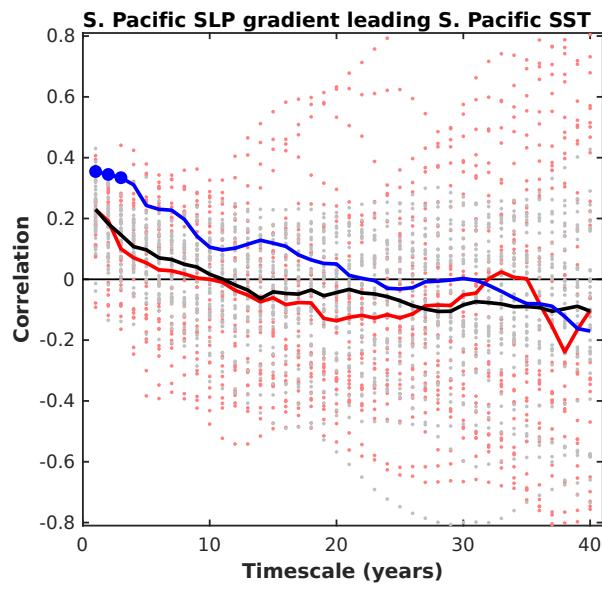


Figure S5. Correlation plots as in Figure 3i,j but for the South Pacific SST and SLP indices. The South Pacific SLP index was calculated over the green box shown in Figure S4.