

Supporting Information for “Circus tents, convective thresholds and the non-linear climate response to tropical SSTs”

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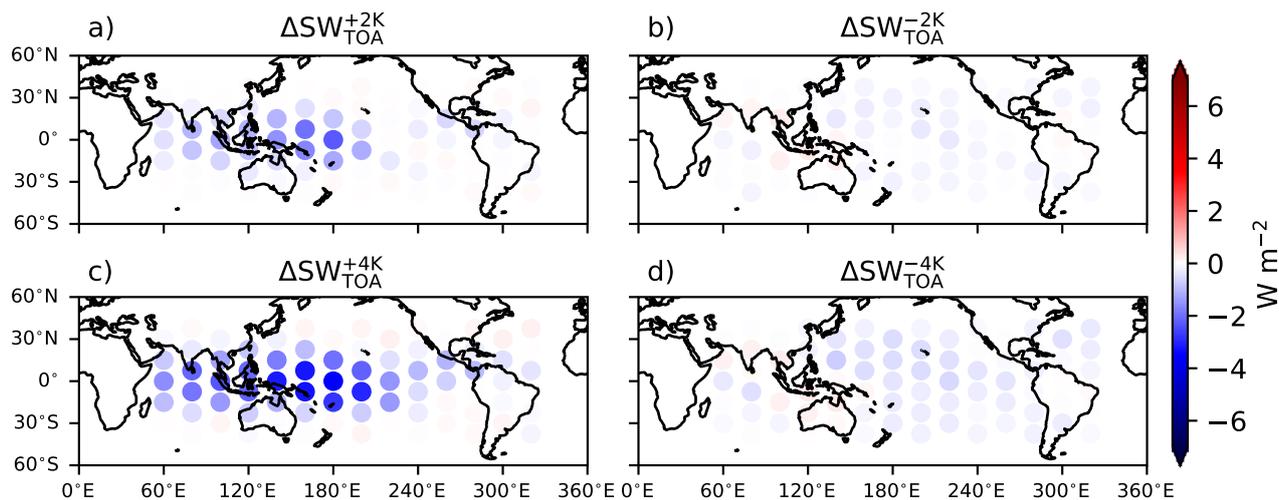


Figure S1. As in Figure 1 of the main text, but for SW TOA changes.

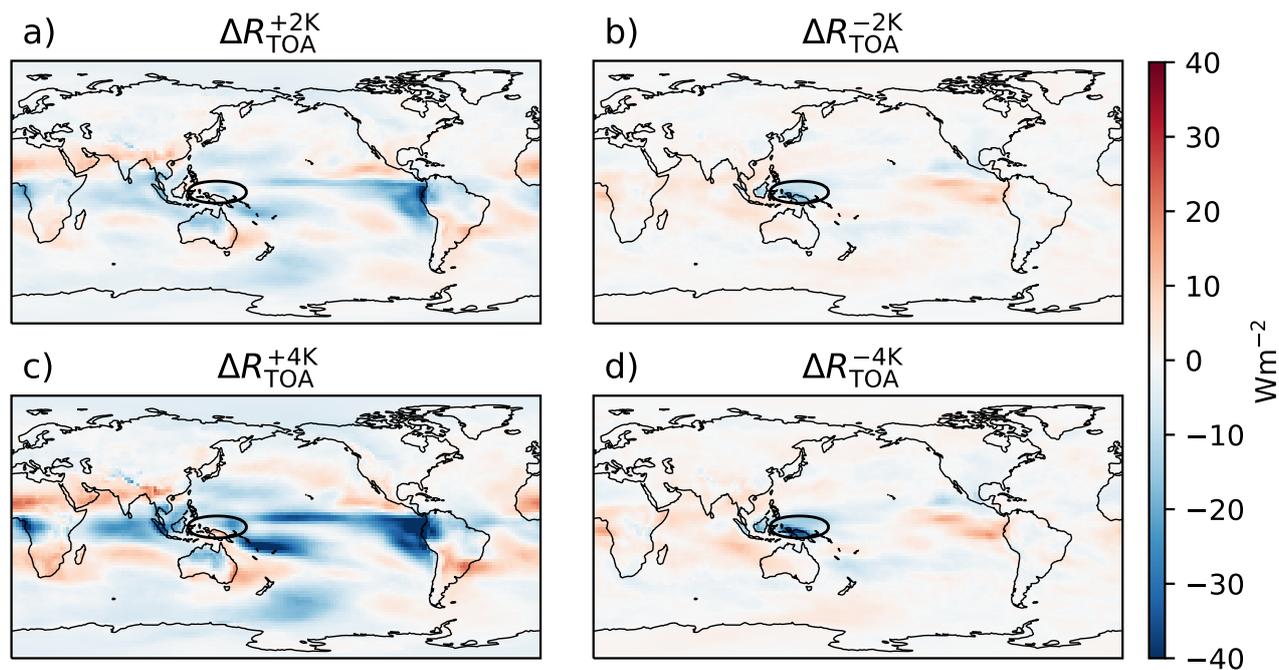


Figure S2. Spatial maps of the time-averaged ΔR_{TOA} for a patch in the Western Pacific warm pool (140E, 0N) for $\Delta \text{SST} = \pm 2\text{K}$ (a,b) and $\Delta \text{SST} = \pm 4\text{K}$ (c,d).

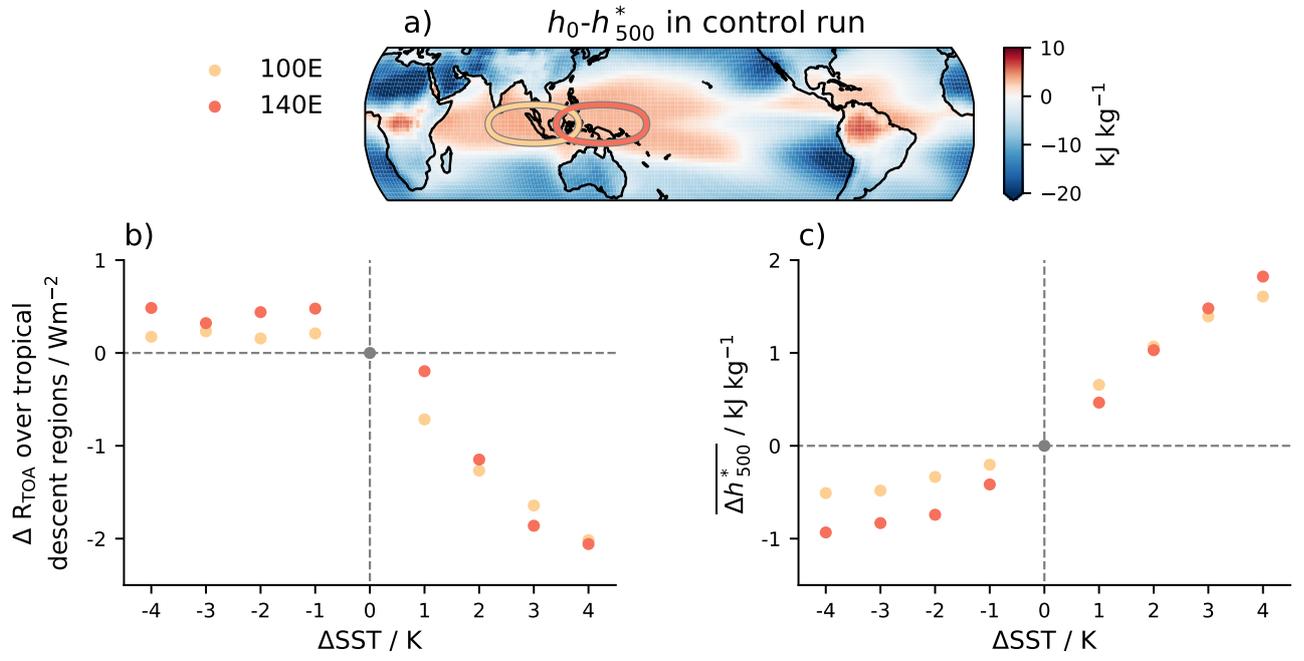


Figure S3. As in Figure 2 of the main text, but in panel b we plot the change in R_{TOA} averaged over tropical regions where $\omega_{500} > 0$ in the control run (to pick out low cloud subsidence regions). We also plot the two patches in deeply convective regions. This figure illustrates how the ΔR_{TOA} response to negative ΔSST anomalies in convective regions is linear over a very small region, but quickly saturates.

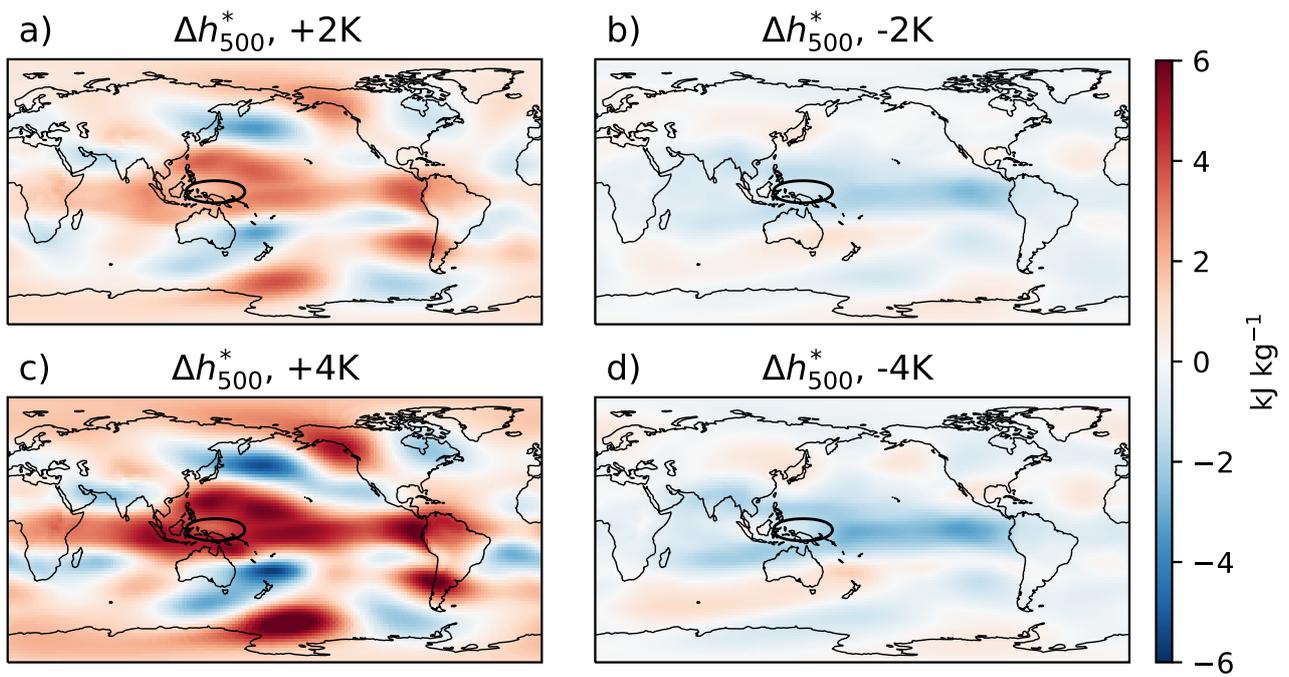


Figure S4. Spatial maps of the time-averaged Δh_{500}^* for a patch in the Western Pacific warm pool (140E, 0N) for $\Delta \text{SST} = \pm 2\text{K}$ (a,b) and $\Delta \text{SST} = \pm 4\text{K}$ (c,d).

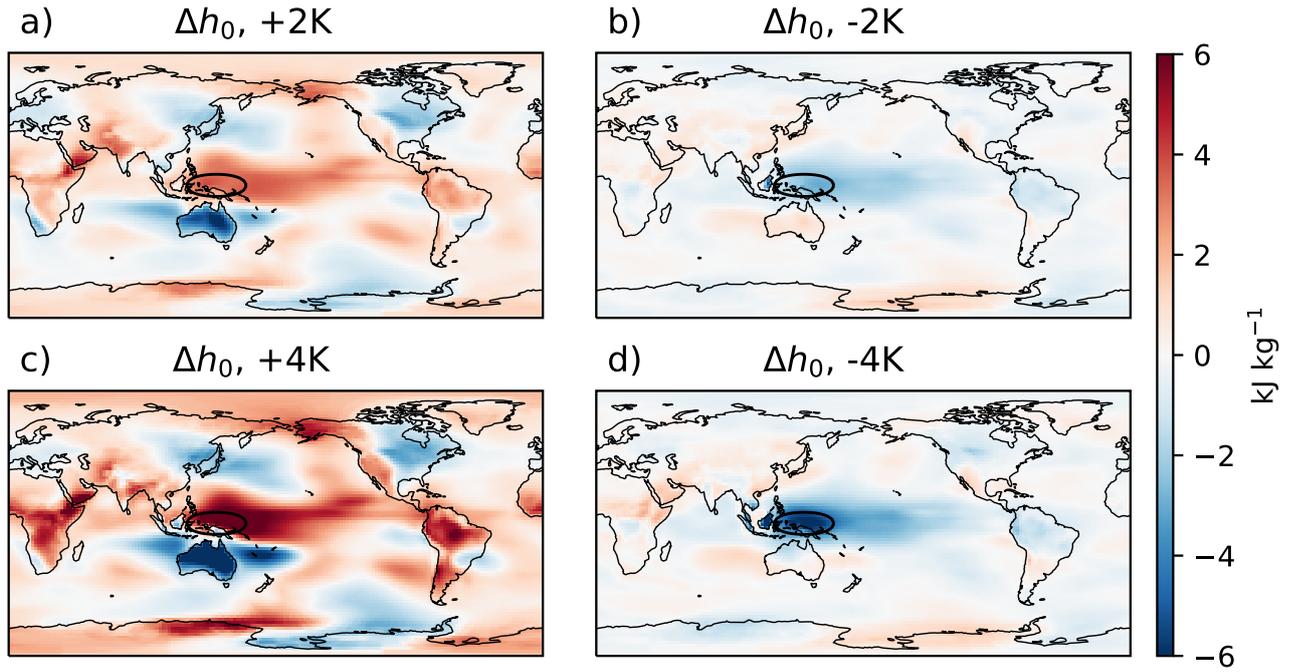


Figure S5. Spatial maps of the time-averaged Δh_0 for a patch in the Western Pacific warm pool (140E, 0N) for $\Delta SST = \pm 2K$ (a,b) and $\Delta SST = \pm 4K$ (c,d).