

Supplement of ‘The role of the QBO for tropical high-cloud variability in CMIP6 models and observations’

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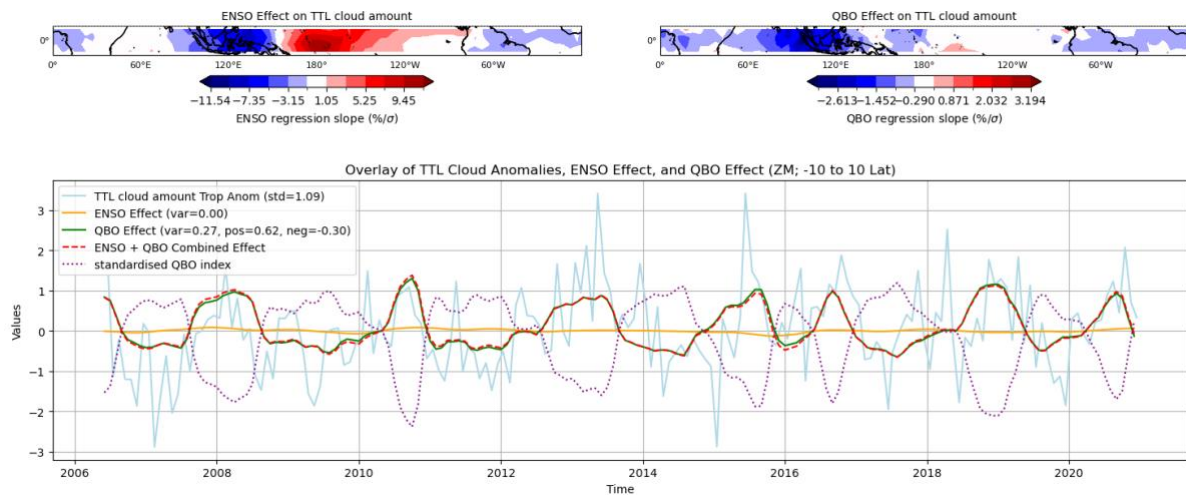


Figure S1: Tropical TTL cloud amount anomalies over time. ENSO and QBO contributions are shown as yellow and green line respectively.

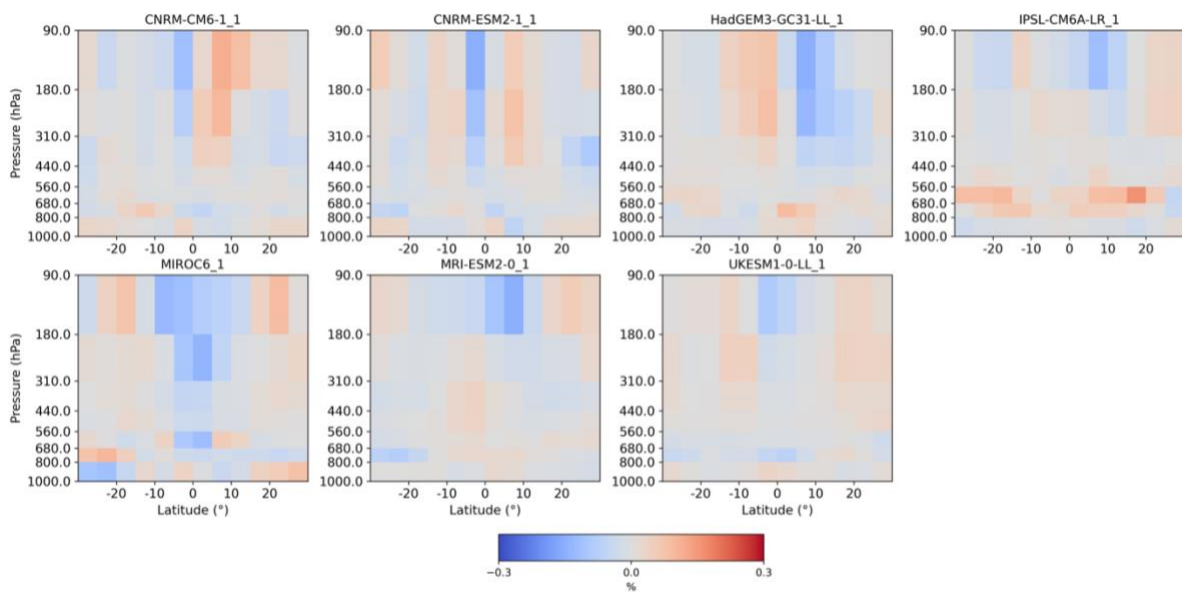


Figure S2: Same as figure 1i but for individual models.

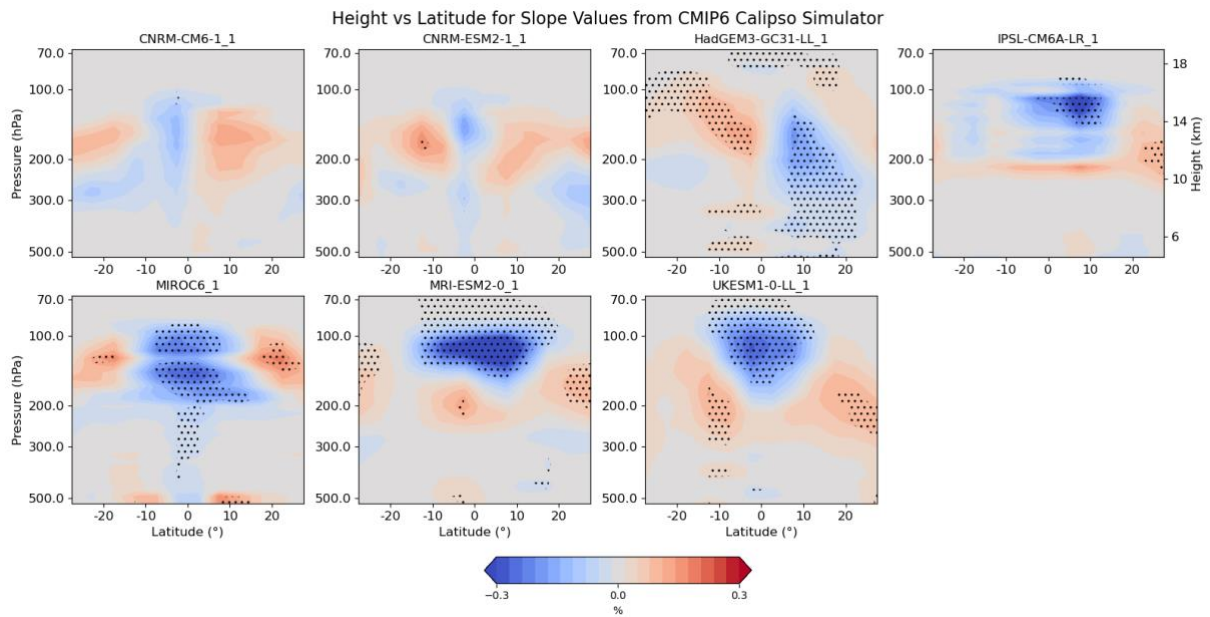


Figure S3: Same as figure 1j but for individual models. Stippling marks statistically significant results (95% confidence).

QBO-regression of high cloud amount (ENSO removed)

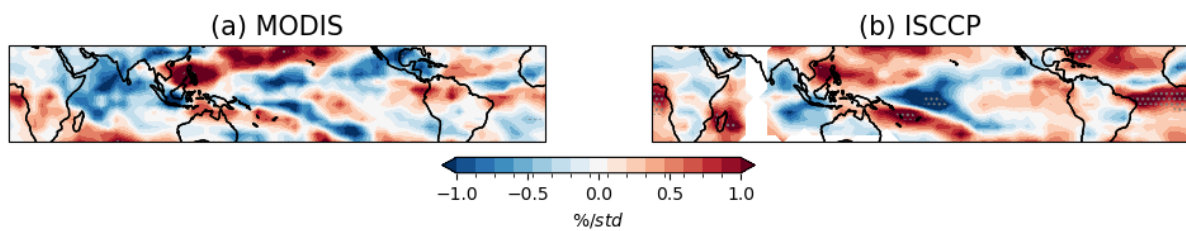


Figure S4: QBO regressed high-cloud fraction (<440hPa) from (a) MODIS and (b) ISCCP

QBO-regression of high cloud amount (ENSO removed); stdQBOE5

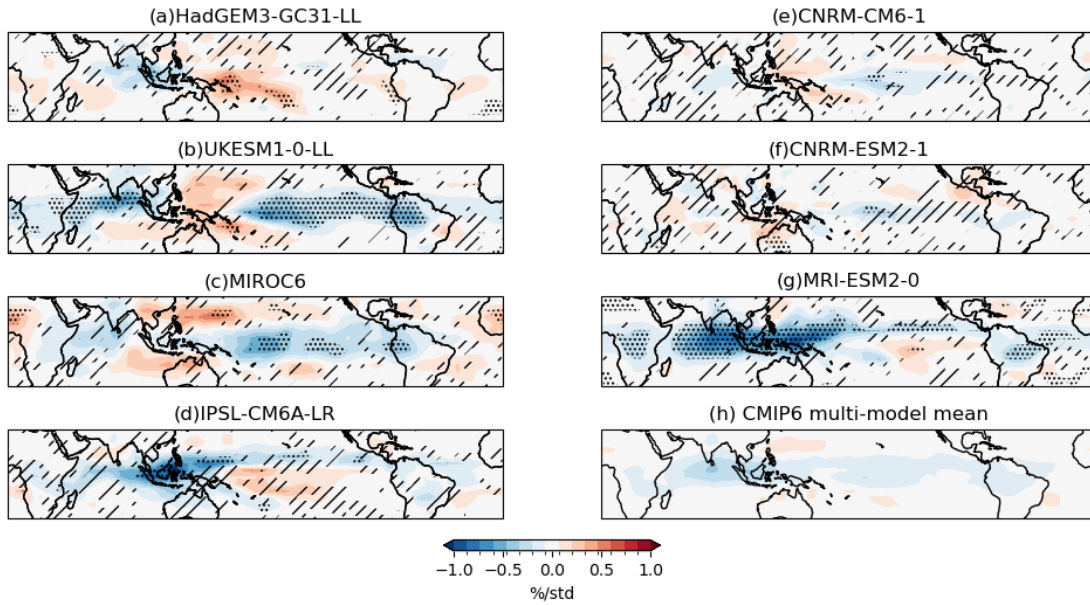


Figure S5: Same as figure 2d but for individual models. Hatching denotes regions from QBO regression on 20-year segments did not agree on sign in 5 out of 8 segments.

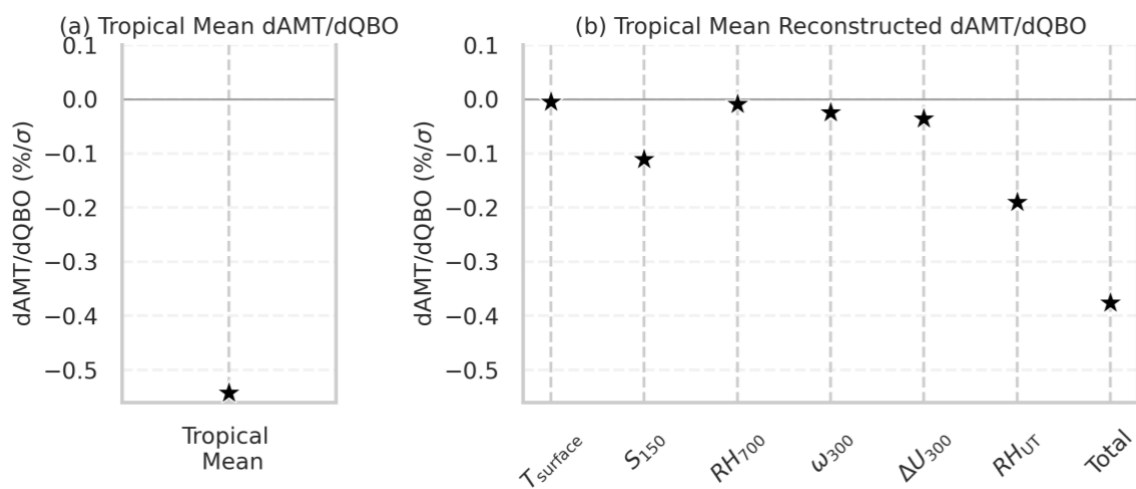


Figure S6: (a) Tropical mean (10S–10N) of QBO-regressed TTL cloud fraction in observations (b) Individual CCF contributions to the observed tropical-mean QBO-induced TTL cloud response and the total.

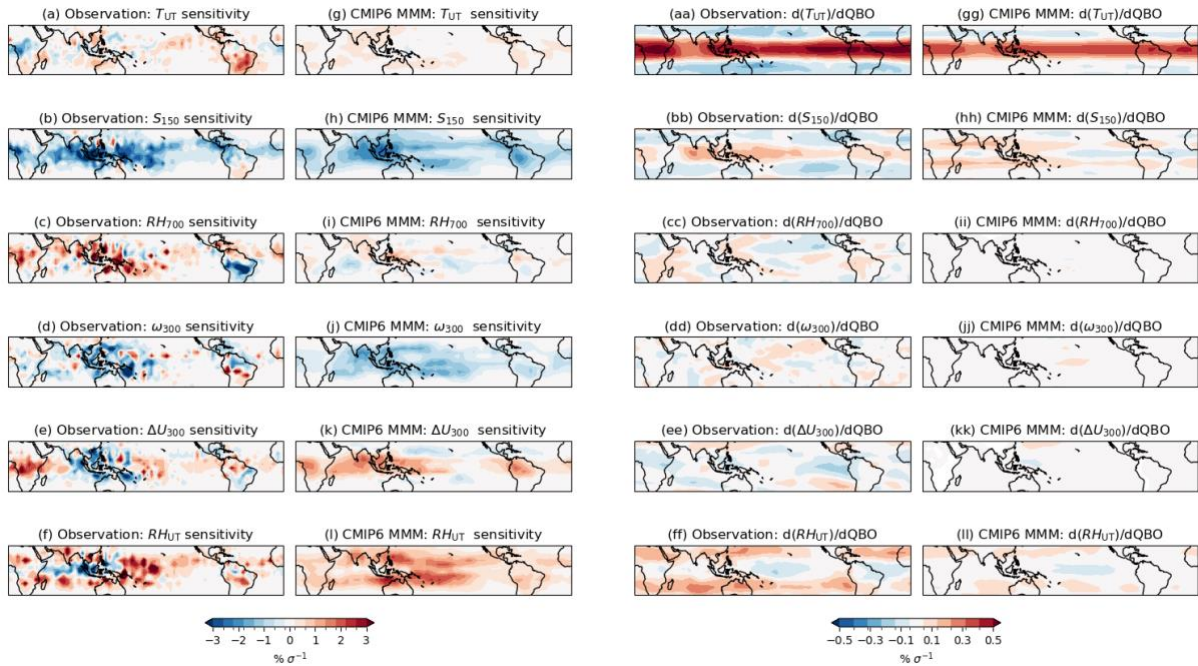


Figure S7: Similar to figure 4, but for all CCFs. Historically derived sensitivities of the TTL cloud fraction to CCFs in observation (a-f) and CMIP6 MMM (g-l). QBO-regressed CCFs, in units of standard deviation of CCF per standard deviation of QBO, in observation (aa-ff) and CMIP6 MMM (gg-ll).

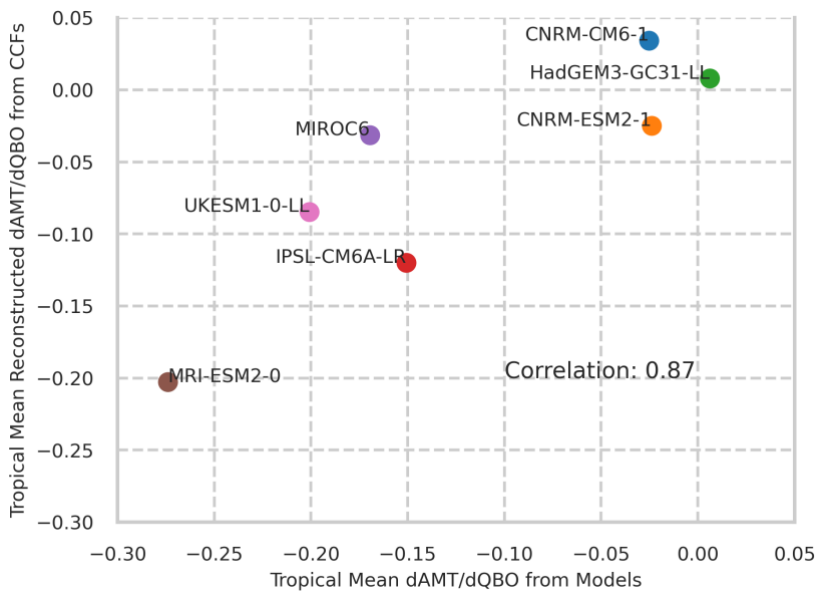


Figure S8: correlation between QBO-regressed TTL cloud fraction and its corresponding CCF-based reconstruction across CMIP6 models.