Supplementary material for "**Stratospheric ozone depletion has contributed to the recent tropical La Niña-like cooling pattern**"

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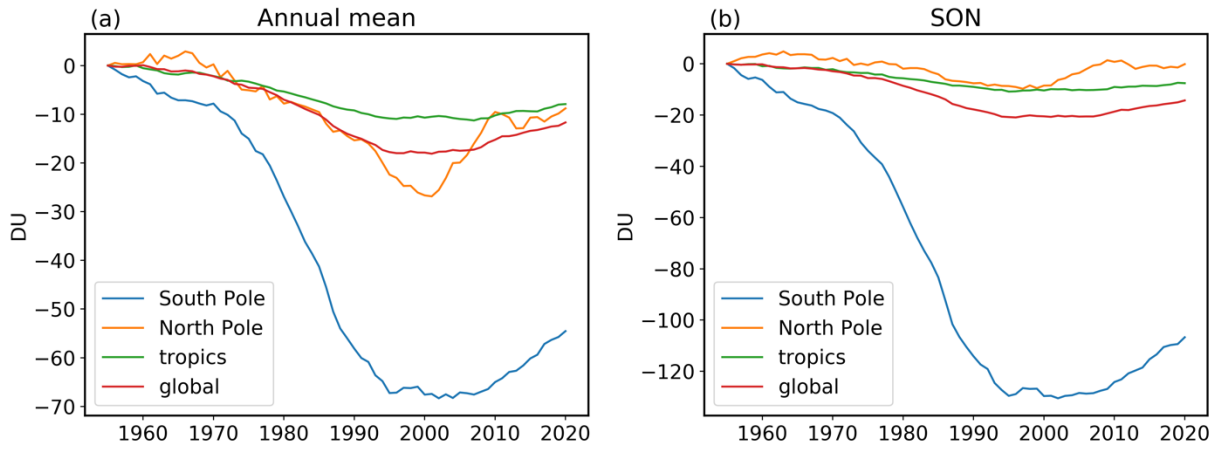

Figure S1. Column-integrated stratospheric ozone concentration difference between ALL and xO3S in (a) annual mean and (b) SON, averaged over the South Pole (southward of 60°S), the north Pole (northward of 60 °N), the tropics (30°S-30°N) and the whole globe.

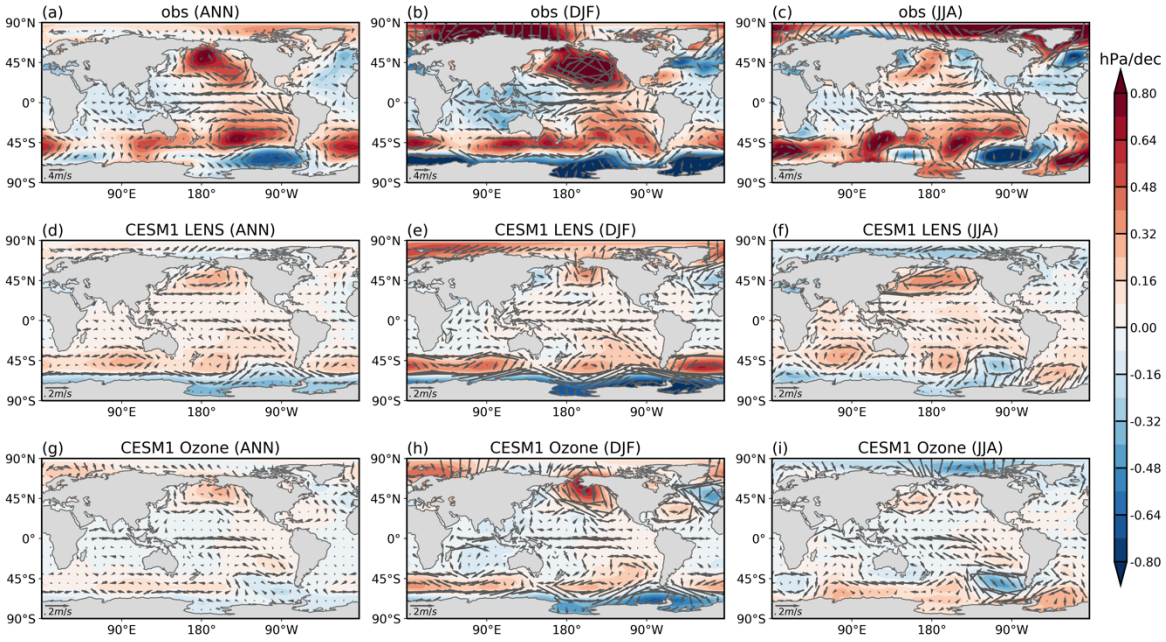

Figure S2. Same with Figure 1 except for sea-level pressure (shading) and 850 hPa winds (arrows) trends in observation and CESM1 simulations. Note that the wind scale (shown at the bottom left corner) is different for observations and model simulations.

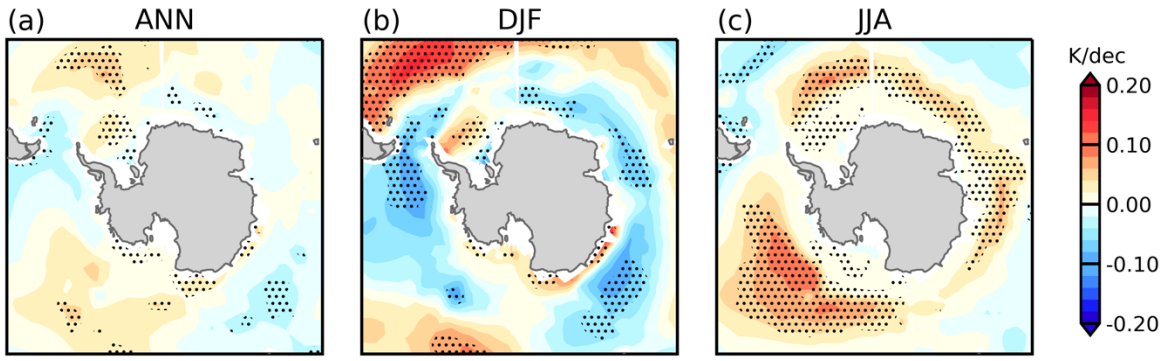

Figure S3. Simulated SO SST trend response to stratospheric ozone depletion during 1970 - 2004. Stippling indicates statistical significance at the 95% confidence level.

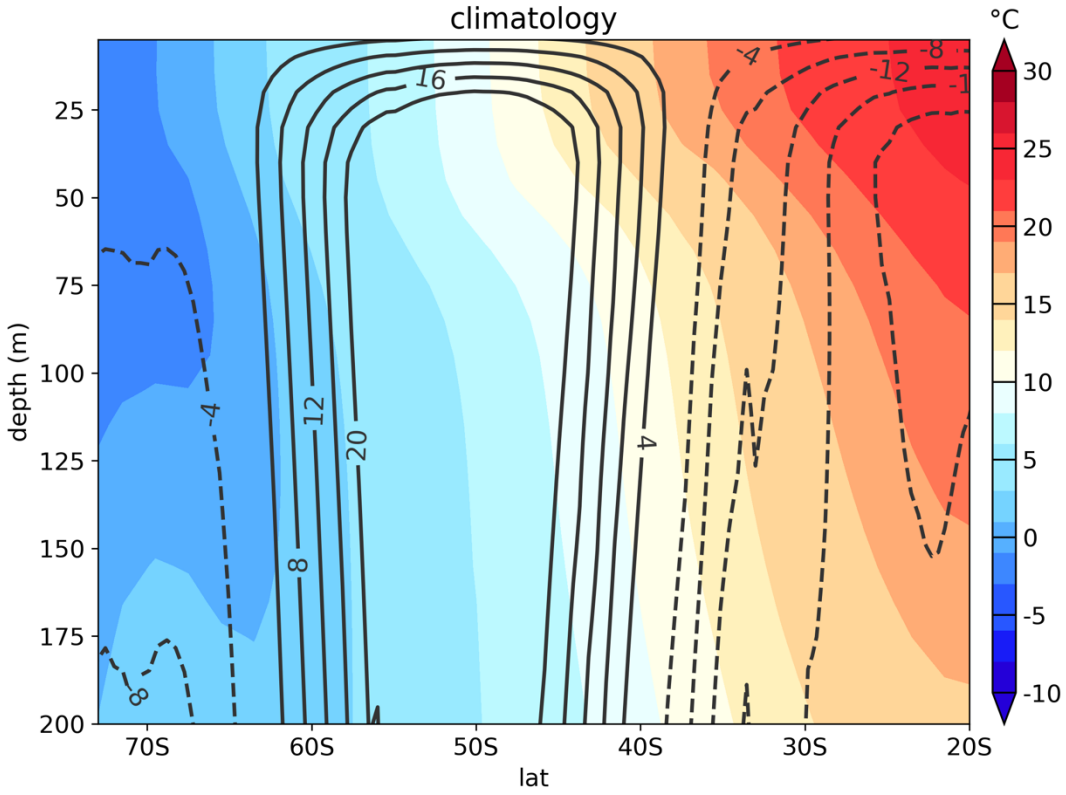

Figure S4. Similar to Fig. 6 (a-d) except for the long-term averaged DJF climatology from the ALL ensemble means. Shading represents the East Pacific ocean potential temperature; contours represent the Eulerian-mean meridional overturning circulation in the Pacific basin.