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The impact of El Niño–Southern Oscillation on the total column ozone over the Tibetan Plateau

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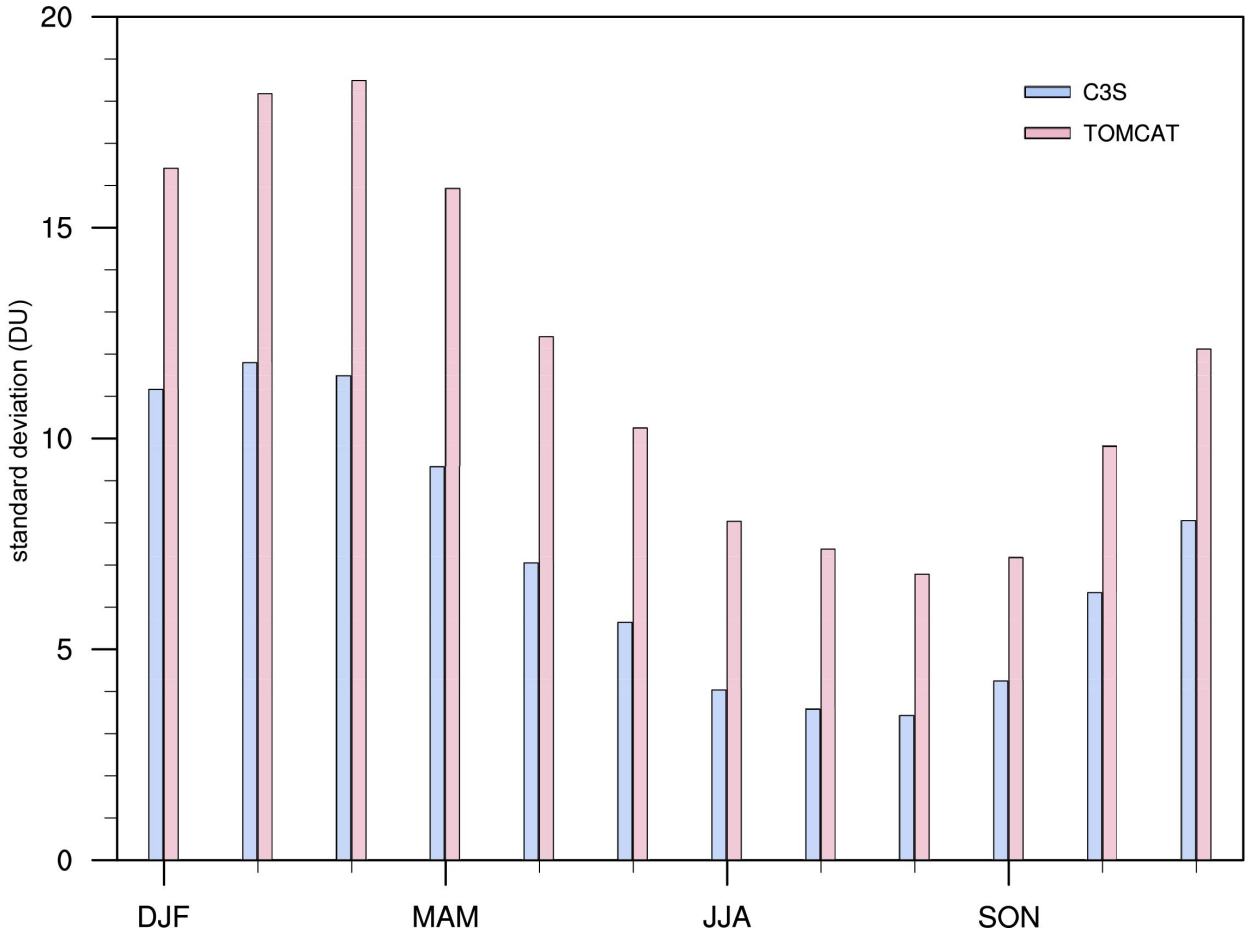

Figure S1: Standard deviations (DU) of 3-month running mean TCO over the TP region (27.5–37.5°N, 75.5–105.5°E) for C3S dataset and TOMCAT simulation.

20

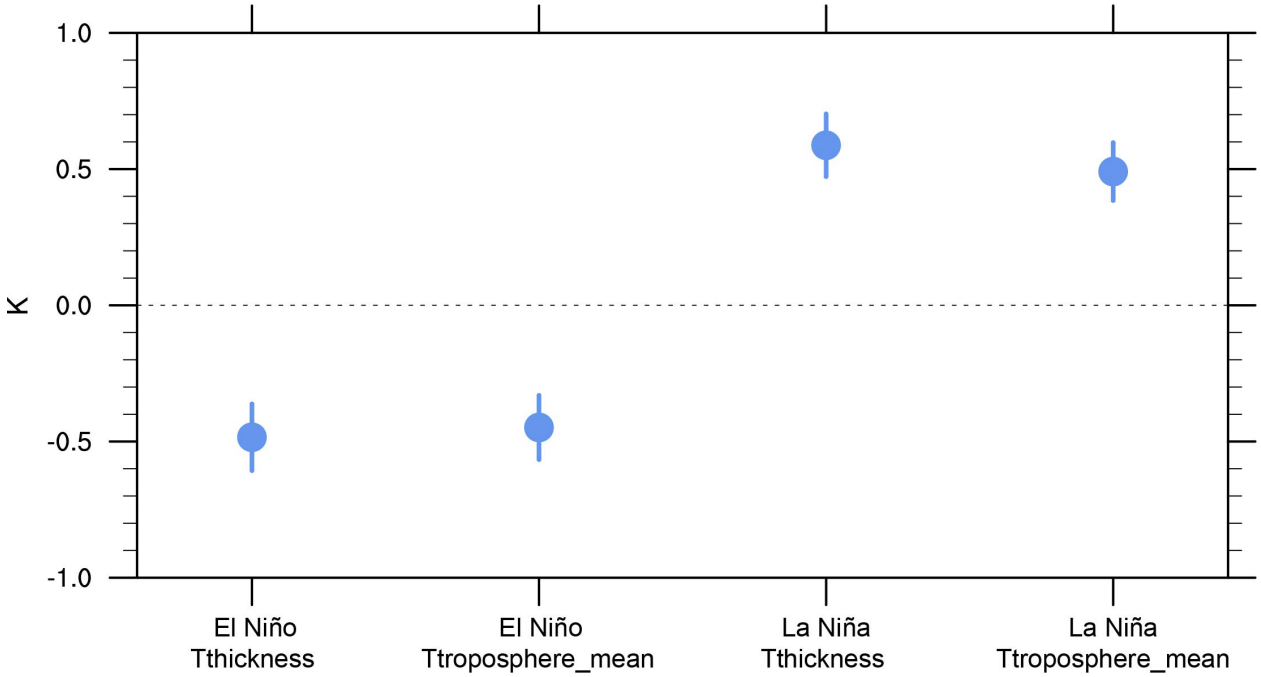

Figure S2: The circles represent the area–averaged values of Tthickness and Ttroposphere_mean over the whole TP based on Figure 8. The vertical bars represent standard deviation.

Table S1 Description of experiments.

Experiments	Description
R0	Control run, using case F_2000. The solar forcing, carbon dioxide, ozone concentration, and aerosol are fixed at their level of 2000. Prescribed SST forcing used climatological present-day SST provided by NCAR.
R1	El Niño sensitive run, same as R0, but with SST anomalies (Figure 7a) added in Pacific (30°S-30°N, 120°E-80°W) from December to May.
R2	La Niña sensitive run, same as R0, but with SST anomalies (Figure 7b) added in Pacific (30°S-30°N, 120°E-80°W) from December to May.

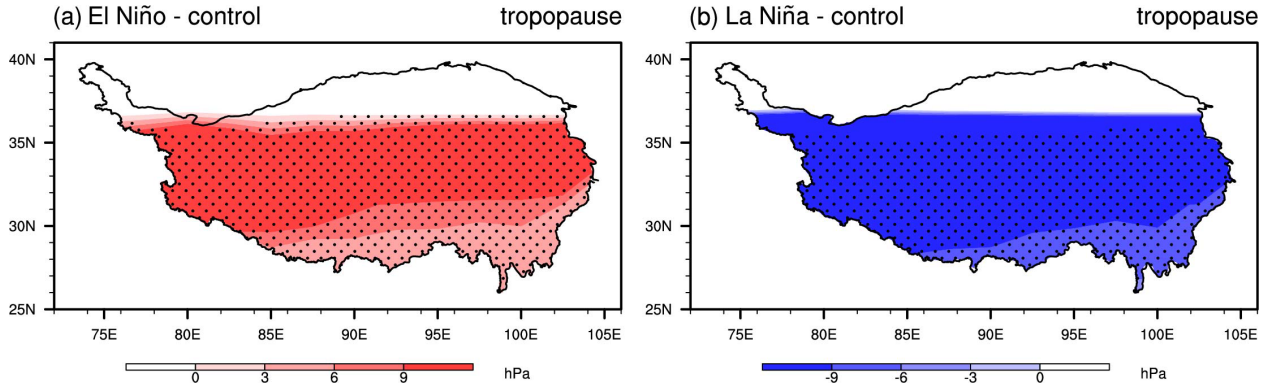

Figure S3: Differences in tropopause height (hPa) (a) between the El Niño response of experiments R1–R0 and (b) La Niña response of experiments R2–R0. The differences over the dotted regions are statistical significance at the 90% confidence level. The black lines represent the boundary of the TP.