

Supplementary material: Interdecadal variability of the ENSO teleconnection to the wintertime North Pacific

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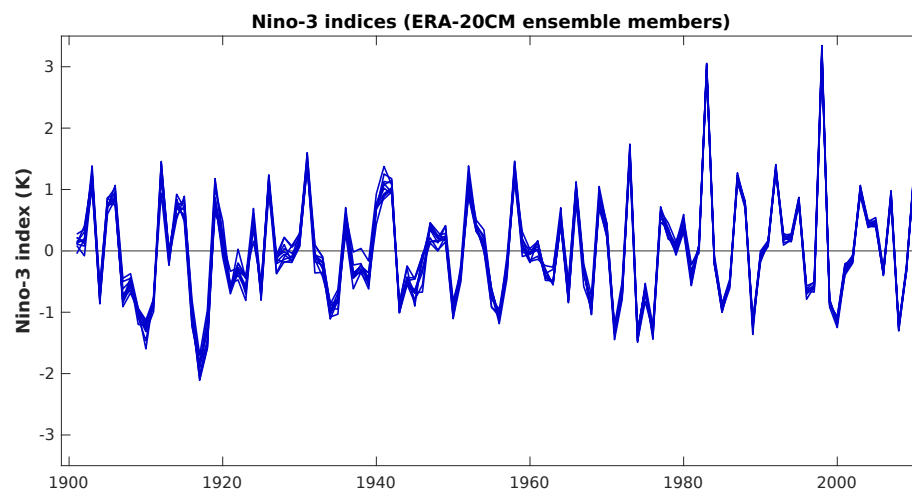


Fig. S1: Wintertime (DJF) Nino-3 indices used in the 10 ERA-20CM ensemble members.

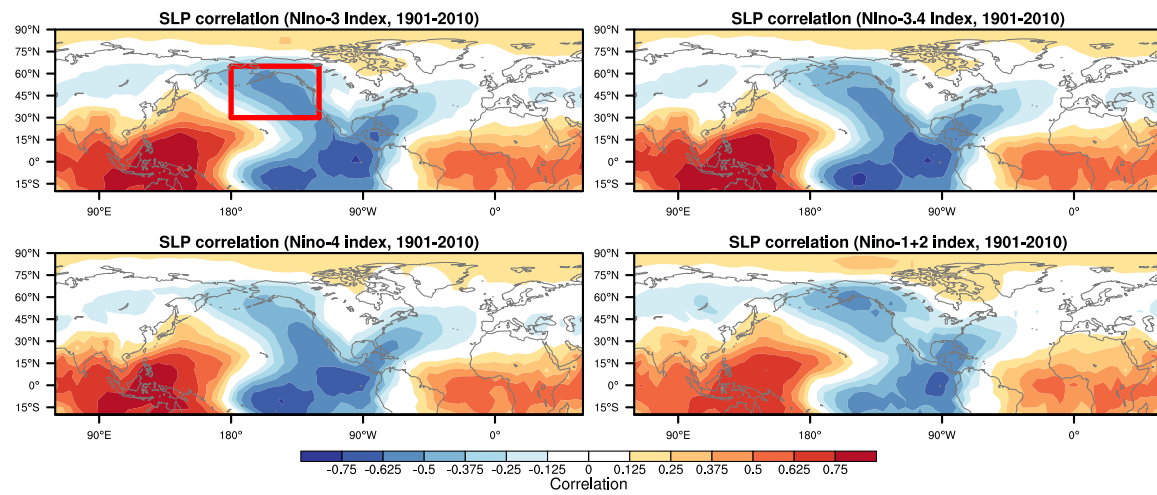


Fig. S2: Correlation of SLP (from HadSLP) with the different Nino indices, over the period 1901-2010.

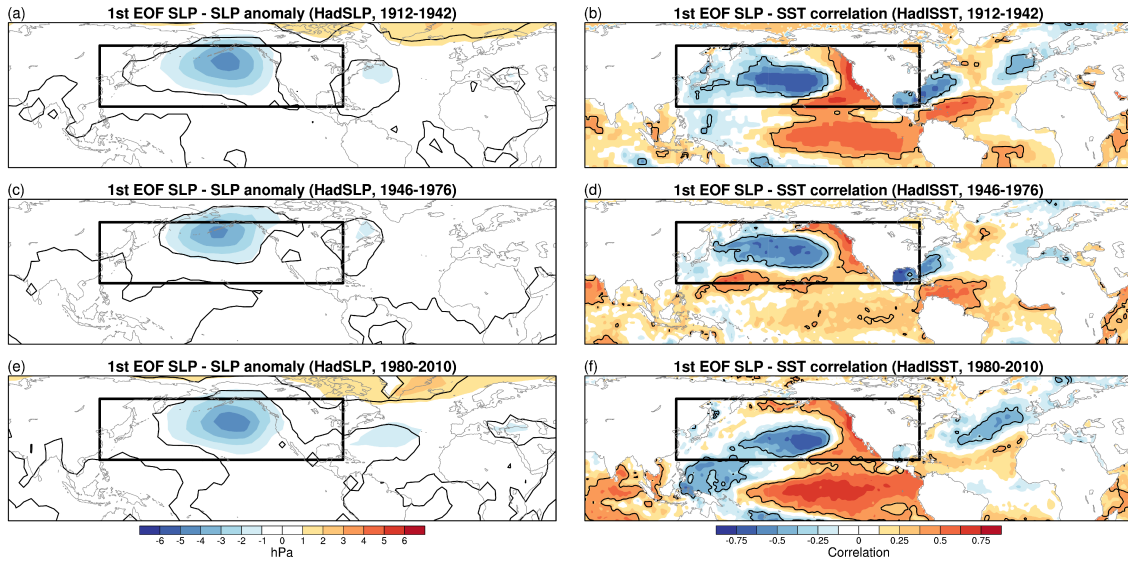


Fig. S3: SLP anomalies regressed against the normalised principle component time-series for the 1st EOF of SLP (from HadSLP) calculated separately for the (a) early-century, (c) mid-century and (e) late-century periods. The black boxes indicate the region used for the EOF calculation ($20-60^{\circ}\text{N}$, $120-280^{\circ}\text{N}$), using the same region as in Yu and Kim (2011). The correlation between the 1st EOF in each period with the SST anomalies (from HadISST) are also shown for the (b) early-century, (d) mid-century and (f) late-century periods. The black contours in each panel indicate regions that are significant at the 5% level, based on two-sided t-test.

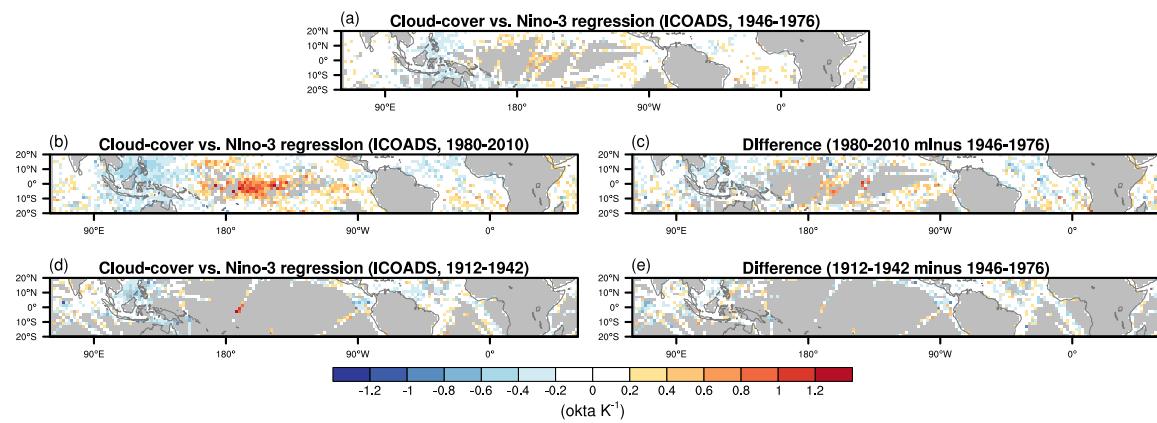


Fig. S4: Cloud-cover anomaly (from ICOADS) regressed onto the mean Nino-3 SST index over the periods (a) 1946-1976, (b) 1980-2010, and (d) 1912-1942. The difference between the regression over the mid-century period (1946-1976) and the recent (1980-2010) and early (1912-1942) periods are shown in (c) and (e), respectively. Only grid boxes with less than 10% of years missing are shown.

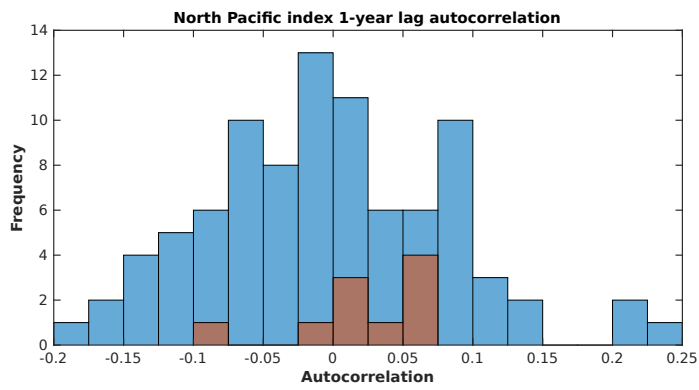


Fig. S5: 1-year lag autocorrelation of the North Pacific index in the ERA-20CM ensemble: all members with themselves (shown in red, 10 autocorrelation values) and with all other ensemble members (shown in blue, 90 autocorrelation values). It is clear that from one year to the next, the North Pacific index has no significant memory. The autocorrelation of the North Pacific index from observations is 0.09.