Supplement of

Sustained intensification of the Aleutian Low induces weak tropical Pacific sea surface warming

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Figure S1: (a-d) Seasonal mean skin temperature anomalies linearly regressed (LR) onto the PDO index in CONTROL scaled by 5x for comparison with HadSST4 data (panels e-h). Units: K per standard deviation.
Figure S2: Details of the nudging kernel used for the NUDGED experiment. (a) Horizontal variation, (b) vertical variation and (c) temporal variation.

Figure S3: Global sea level pressure anomaly field [hPa] for January of CONTROL year 163 used as the input anomaly for the NUDGED experiment. Blue box shows the domain used to calculate the North Pacific Index [30°N-65°N, 160°E-140°W].
Figure S4: Comparison between the expression of ENSO 3.4 in observations (HadSST4 - last 100 years) and FORTE 2.0 CONTROL run. Left panel – box and whisker plot showing statistical distribution. The box limits represent 10%, 25%, 75% and 90% of the distribution. The maximum and minimum values of Nino 3.4 in the HadSST4 and Control run are indicated by a red “x”. Right panels show composite maps of El Nino and La Nina SST anomalies in (upper) observations and (lower) FORTE2.0.
Figure S5: Years 1-30 DJF NUDGED near-surface and upper troposphere wind anomalies for (a,c) zonal and (b,d) meridional wind. Recall that the nudging strength in the upper troposphere is several times weaker than at the surface (Fig. S2), so the upper-level circulation anomalies likely represent a response to the lower tropospheric forcing. Stippling denotes anomalies that are significant at the 95% level.