



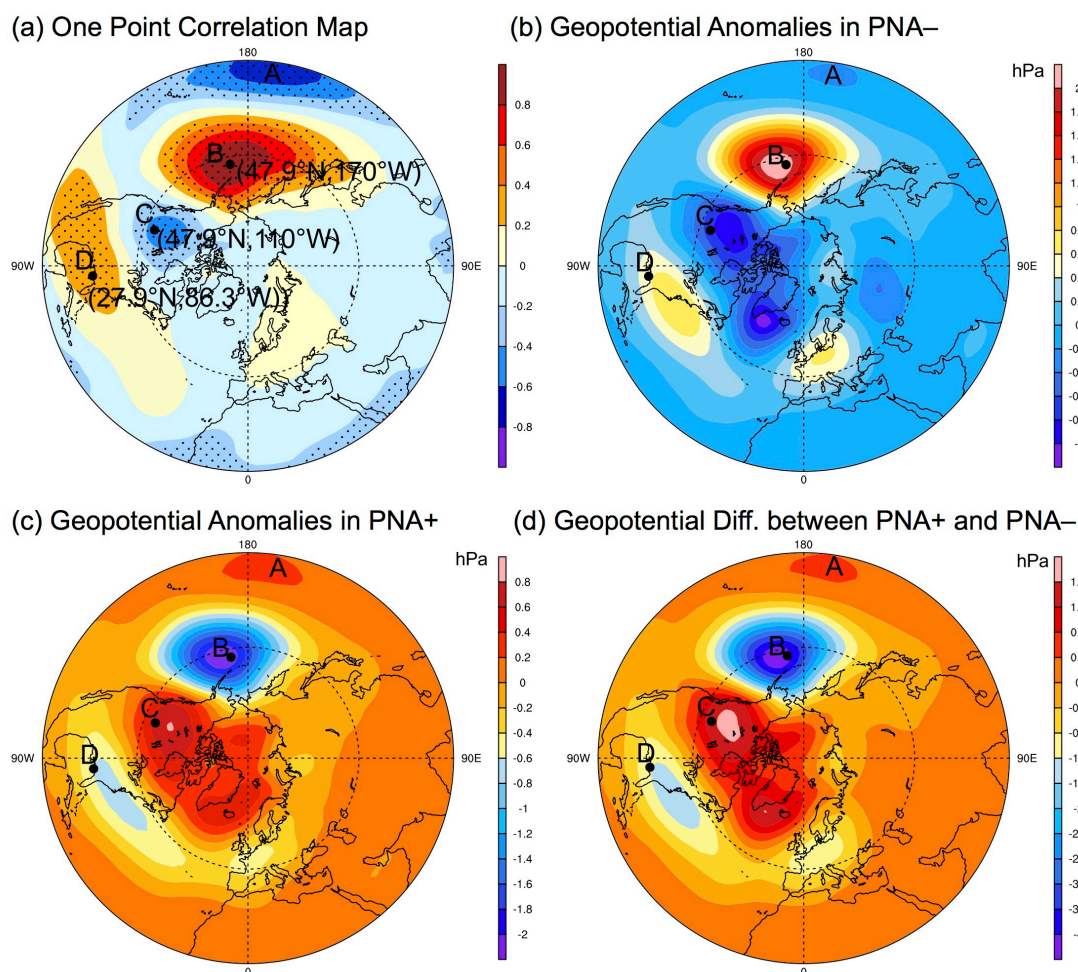
*Supplement of*

## **The impact of monthly variation of the Pacific-North America (PNA) teleconnection pattern on wintertime surface-layer aerosol concentrations in the United States**

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**Fig. S1.** (a) The correlation coefficients between geopotential height at point B and geopotential heights in other grid cells in the Northern Hemisphere, following Wallace and Gutzler (1981). (b) The average geopotential height in PNA- months minus the average of geopotential height over the months of NDJFM of 1986–2013. (c) The average geopotential height in PNA+ months minus the average of geopotential height over the months of NDJFM of 1986–2013. (d) The average geopotential height in PNA+ months minus that in PNA- months. Datasets used are deseasonalized geopotential heights at 700 hPa from NCEP-2 assimilated data in the months of NDJFM during 1986–2013. See Sect. 2.3 in the manuscript for the calculation of PNA index and the definition of PNA+ and PNA- months.

The dotted areas in (a) denote the regions that have passed the two-tail student-t test with 90% significance level. As shown in (b) and (c), the PNA pattern comprises positive (negative) geopotential height anomalies in the vicinity of Hawaii (Point A) and over the intermountain region of North America (Point C), while negative (positive) geopotential height anomalies in the south of the Aleutian Islands (Point B) and over the Gulf Coast region in the United States (Point D). The PNA has large impacts on meteorological variables in the U.S. in wintertime (Leathers et al. 1991, Notaro et al. 2006).

## References

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