



Supplement of

Understanding severe winter haze events in the North China Plain in 2014: roles of climate anomalies

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Supplemental Materials



Figure S1. Visibility of Beijing (green) and atmospheric compositions at BaoLian (blue) and Shangdianzi (red) stations at 02:00, 08:00, 14:00 and 20:00 LT from 1st Dec 2014 to 28th Feb 2015. The eight compositions included here are SO₂, NO, NO₂, NO_x, CO, O₃, PM_{2.5} and NEP from top to bottom. The correlation coefficient was recorded as "CC", and the "N" denotes the number of composition samples. The total number of visibility observations was 360, which was adjusted to match the "N" of each composition after quality control and to compute CC.



anomaly,SON,2010 ASI

10 Figure S2. Anomalies of pre-autumn ASI in 2010

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Figure S3. Anomalies of winter TS in 2010





Figure S5. Anomalies of pre-autumn TS in 2010



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Figure S6. UV850 (arrow) and speed (shade) anomalies in 2013. A and C represent anti-cyclone and cyclone, respectively.



Figure S7. Anomalies of surface wind speed (contour) and PBLH (shade) in winter 2013





Figure S8. Anomalies of external forcings in 2013. (a) ASI in pre-autumn, (b) TS in winter, (c) SST in Oct and Nov, and (d) TS in pre-autumn.



Figure S9. Correlation coefficients between EA/WR index and H500 (a) / Atlantic SST in pre-autumn (b). Pre-autumn SST anomaly during SON in 2013 (c) and 2014 (d)

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