

Figure S1: Temporal variations in PM<sub>2.5</sub>, surface radiation, and vertical distributions of meteorological factors from December 1, 2016 to January 10, 2017. (a) PM<sub>2.5</sub> mass concentration (gray or colored line: Beijing; light gray line: Baoding; gray dot: Shijiazhuang); (b) winds (vectors) and wind velocity (shadings; units: m s<sup>-1</sup>); (c) temperature (shadings; units: °C); (d) RH (shadings; units: %); and (e) global radiant exposure. (Blue line: HPEs; green line and orange box: TSs; red line and white or red box: CSs; purple box: clean periods)