Supporting information for

Measurement report: Nocturnal subsidence behind the cold front enhances surface particulate matter in the plain regions: observation from the mobile multi-lidar system

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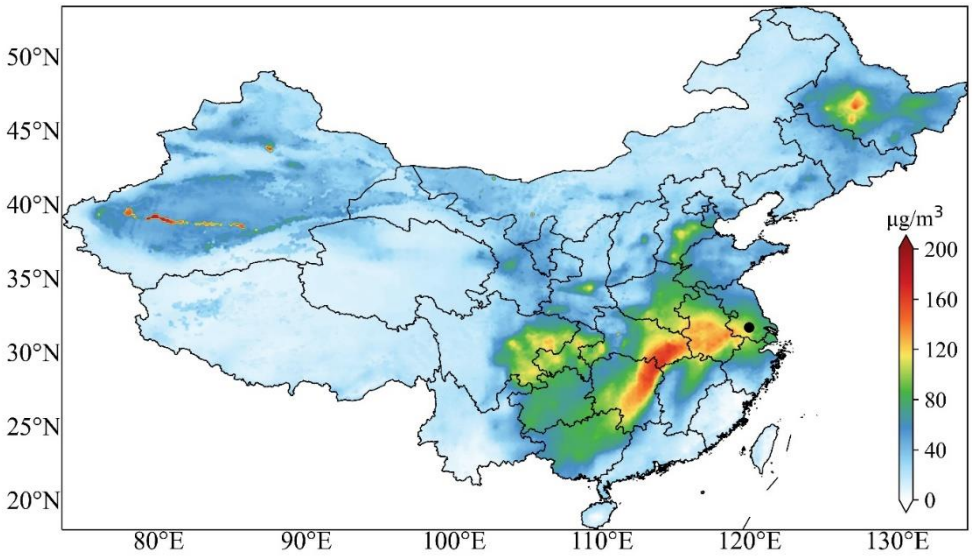

Figure S1. Daily averaged concentration of $PM_{2.5}$ (shaded, unit: $\mu g/m^3$) on 12 December in China. The dark dot represents the observation site in Changzhou.

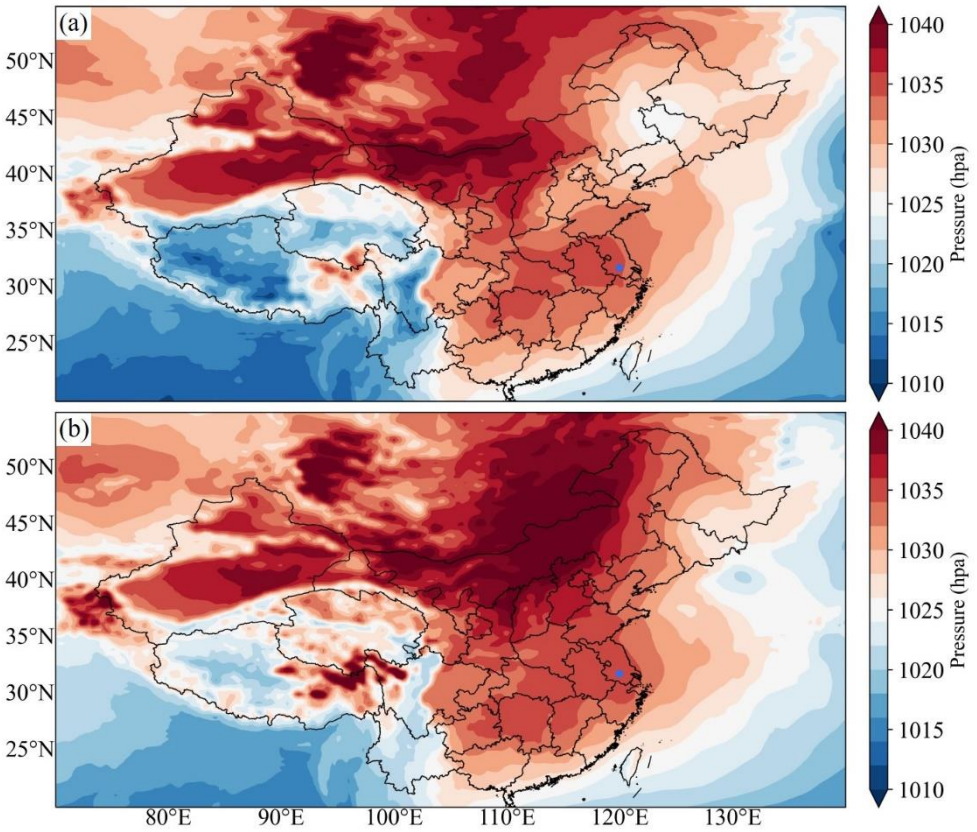

Figure S2. Sea level pressure (shaded, unit: hPa) field on (a) 20:00, 12 December and (b) 8:00, 13 December. The blue dot represents the observation site in Changzhou.

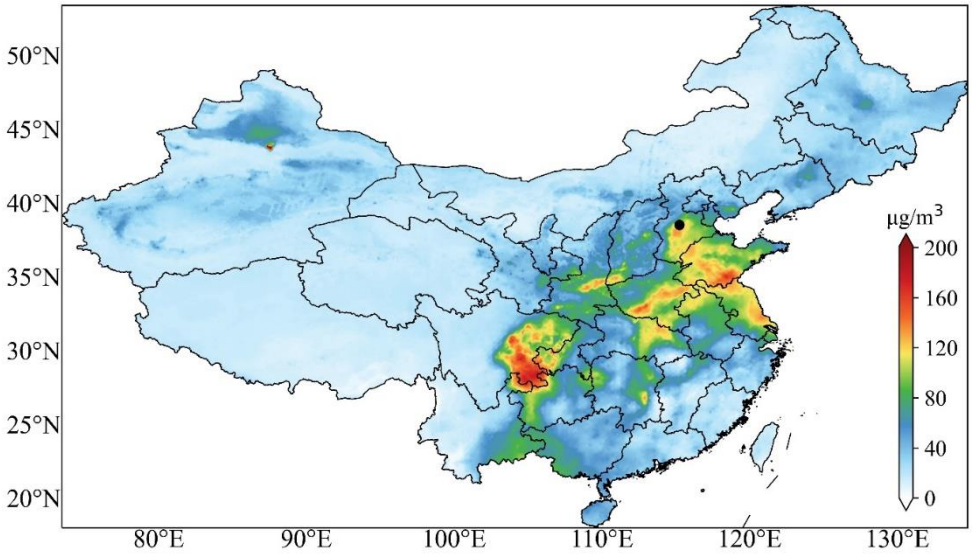

Figure S3. Daily averaged concentration of $PM_{2.5}$ (shaded, unit: $\mu g/m^3$) on 18 December in China. The dark dot represents the observation site in Wangdu.

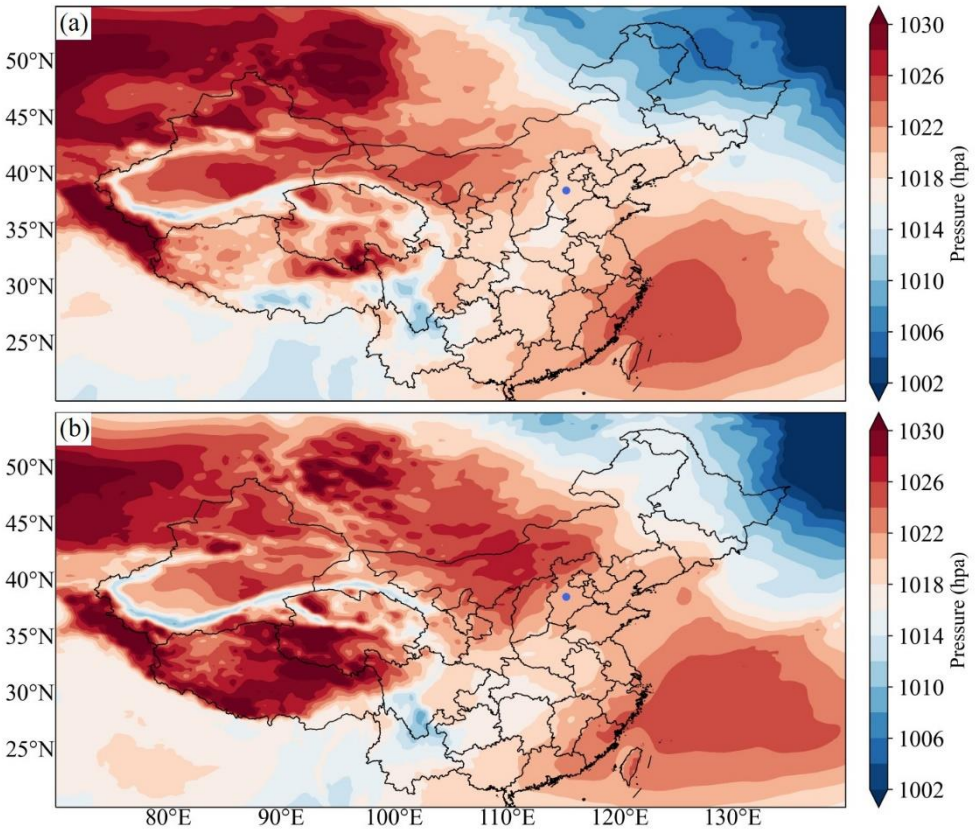

Figure S4. Sea level pressure (shaded, unit: hPa) field on (a) 20:00, 18 December and (b) 8:00, 19 December. The blue dot represents the observation site in Wangdu.

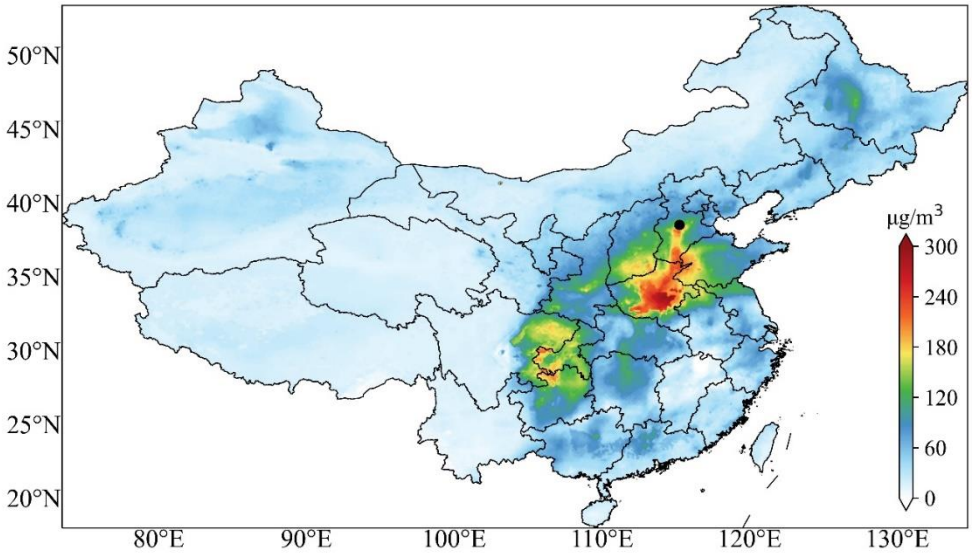

Figure S5. Daily averaged concentration of $PM_{2.5}$ (shaded, unit: $\mu g/m^3$) on 20 December in China. The dark dot represents the observation site in Wangdu.

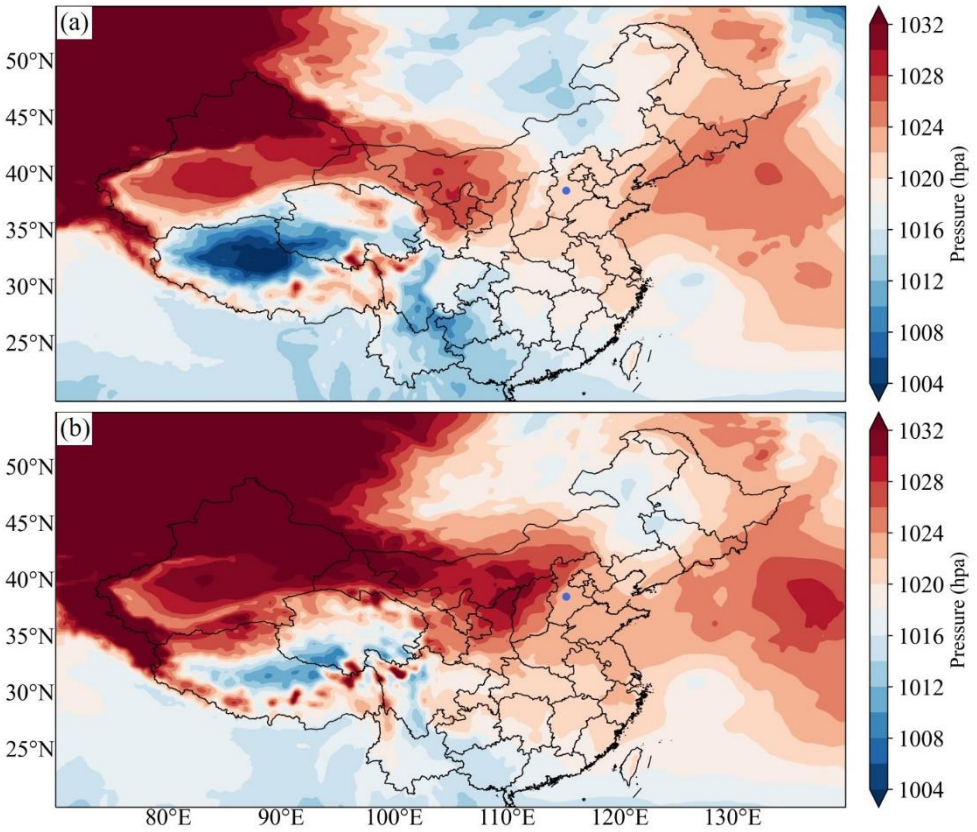

Figure S6. Sea level pressure (shaded, unit: hPa) field on (a) 20:00, 20 December and (b) 8:00, 21 December. The blue dot represents the observation site in Wangdu.

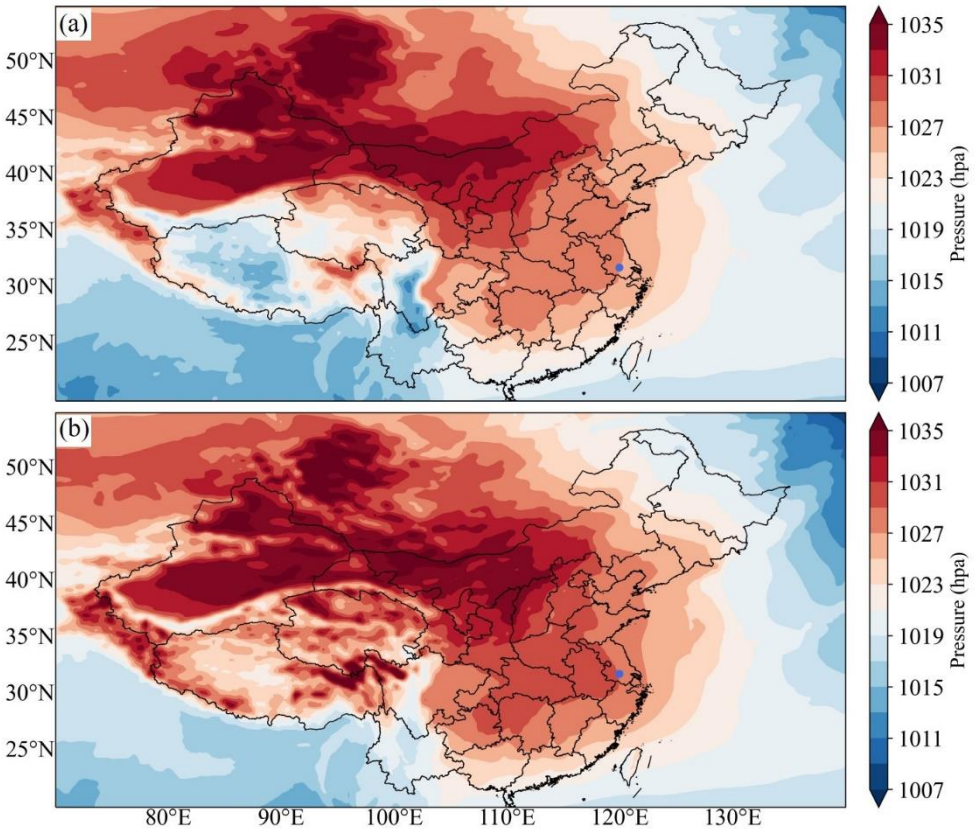

Figure S7. The average sea level pressure (shaded, unit: hPa) field on (a) 20:00 and (b) 8:00 in next day of all T-NPES events in Changzhou. The blue dot represents the observation site in Changzhou.

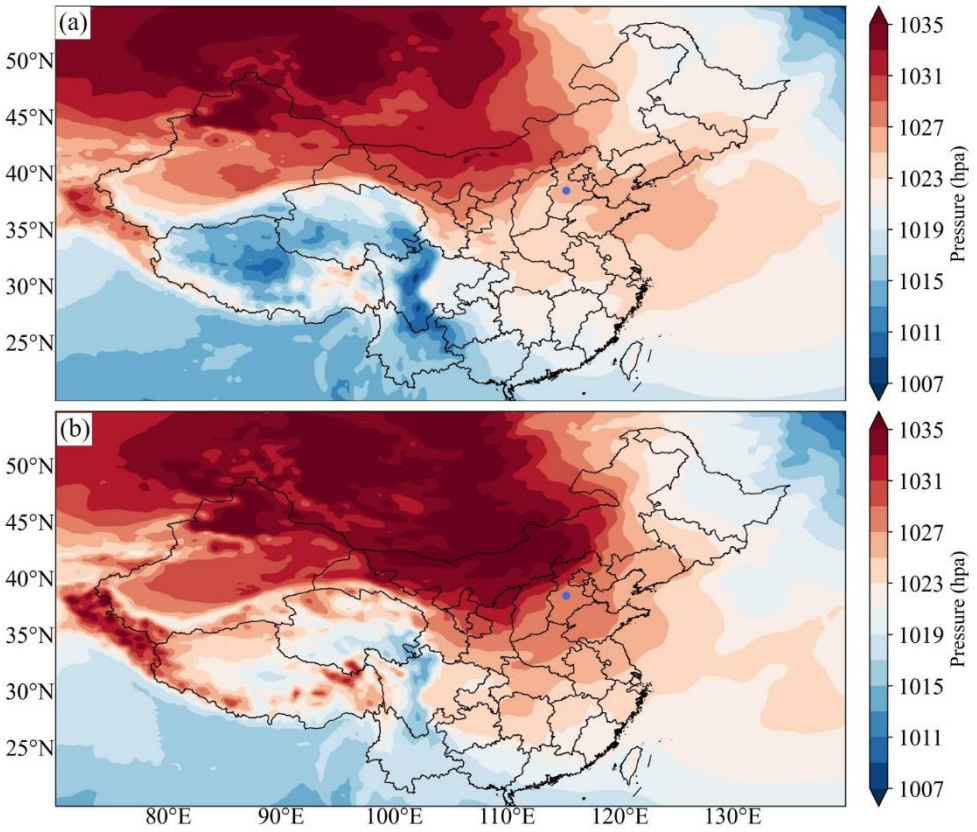

Figure S8. The average sea level pressure (shaded, unit: hPa) field on (a) 20:00 and (b) 8:00 in next day of all T-NPES events in Wangdu. The blue dot represents the observation site in Wangdu.

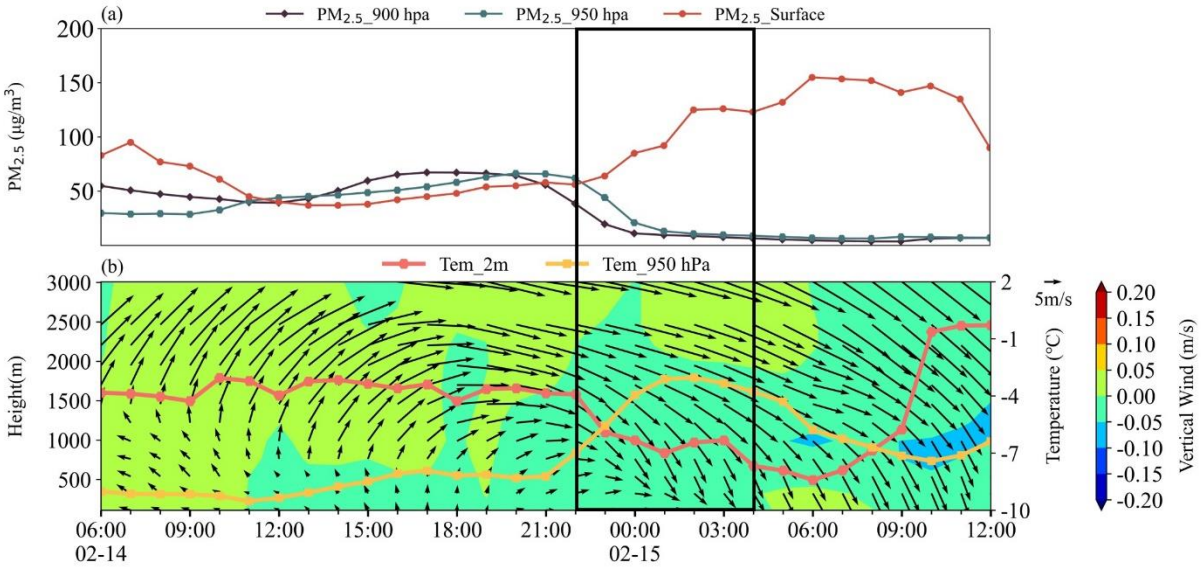

Figure S9. A typical T-NPES event of Type 1. The black box indicated the T-NPES event.

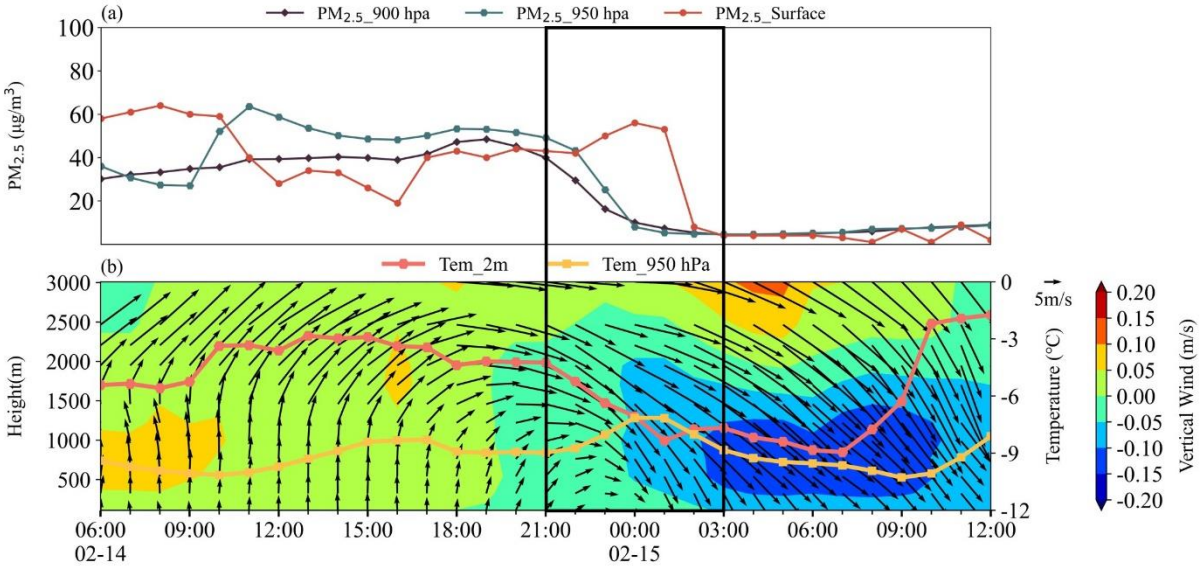

Figure S10. A typical T-NPES event of Type 2. The black box indicated the T-NPES event.

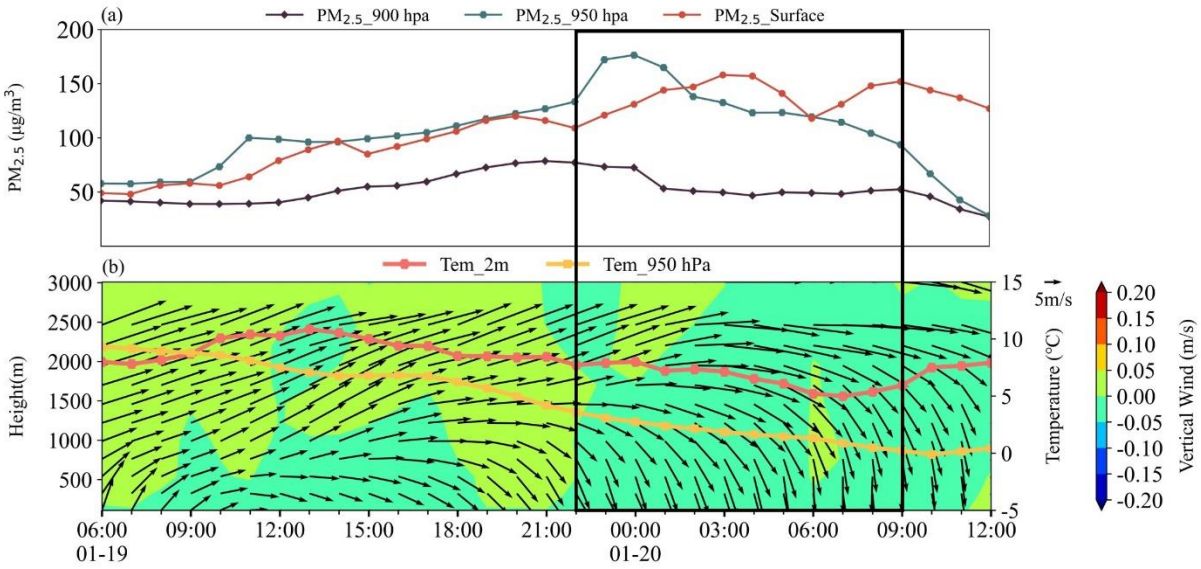

Figure S11. A typical T-NPES event of Type 3. The black box indicated the T-NPES event.

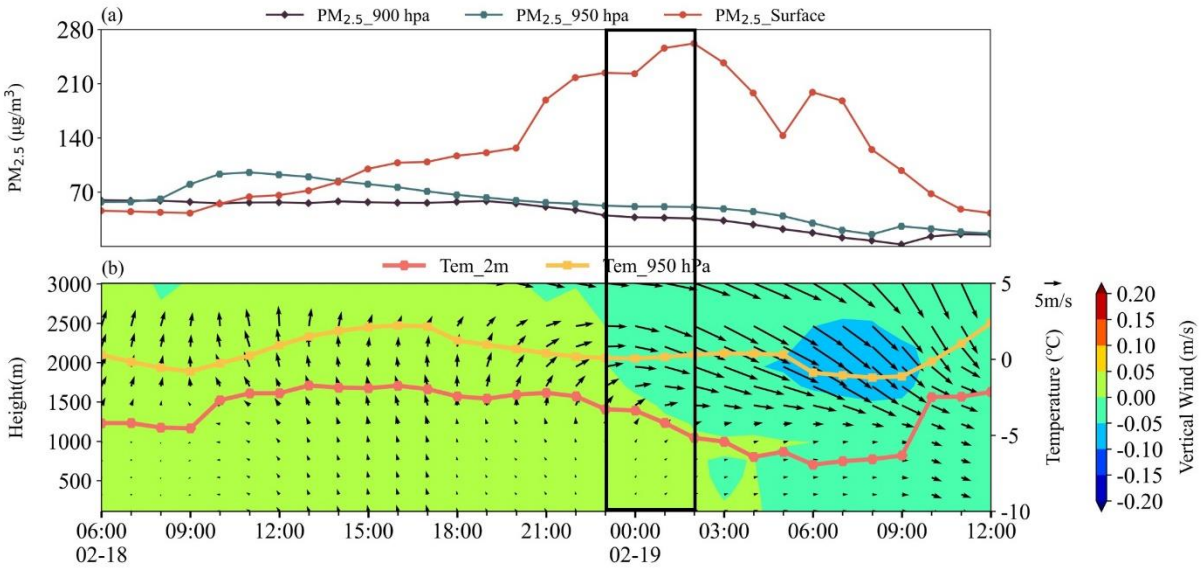

Figure S12. A typical T-NPES event of Type 4. The black box indicated the T-NPES event.

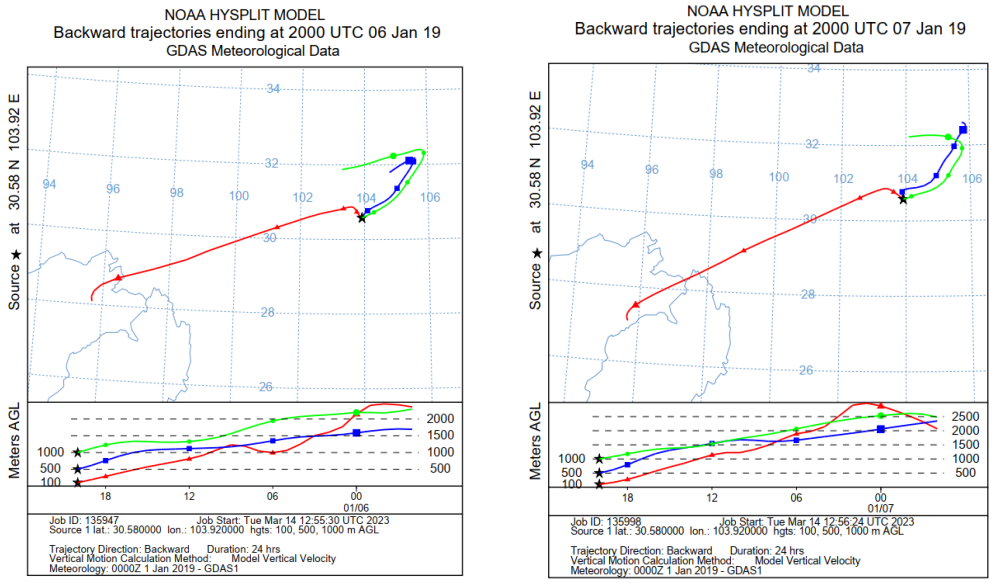

Figure S13. Backward trajectories of Chengdu at 100, 500, and 1000 m, ending at 0:00 on 7 and 8 January, determined by the HYSPLIT model.