



Supplement of

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

Yiming Wang et al.

Correspondence to: Haichao Wang (wanghch27@mail.sysu.edu.cn) and Shaojia Fan (eesfsj@mail.sysu.edu.cn)

The copyright of individual parts of the supplement might differ from the article licence.

Supporting information

Contents

Figure S1. The comparison of model results (color map) with observations (color points) for monthly mean $PM_{2.5}$ values and the correlation coefficient (R) between model and observation.

Figure S2. Daily averaged concentration of $PM_{2.5}$ on 12 December in China

Figure S3. Sea level pressure field on 12, 13 December in Changzhou

Figure S4. Daily averaged concentration of $PM_{2.5}$ on 18 December in China

Figure S5. Sea level pressure field on 18, 19 December in Wangdu

Figure S6. Daily averaged concentration of $PM_{2.5}$ on 20 December in China

Figure S7. Sea level pressure field on 20, 21 December in Wangdu

Figure S8. The average sea level pressure field of all T-NPES events in Changzhou

Figure S9. The average sea level pressure field of all T-NPES events in Wangdu

Figure S10. Backward trajectories of Chengdu, ending at 0:00 on 7, 8 January

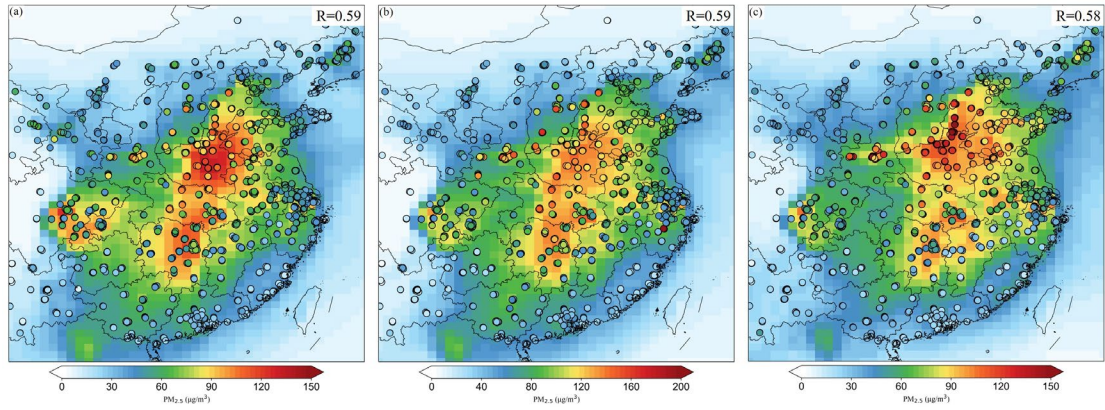


Figure S1. The comparison of model results (color map) with observations (color points) for monthly mean $PM_{2.5}$ values and the correlation coefficient (R) between model and observation. (a) 2018.12, (b) 2019.01, (c) 2019.02

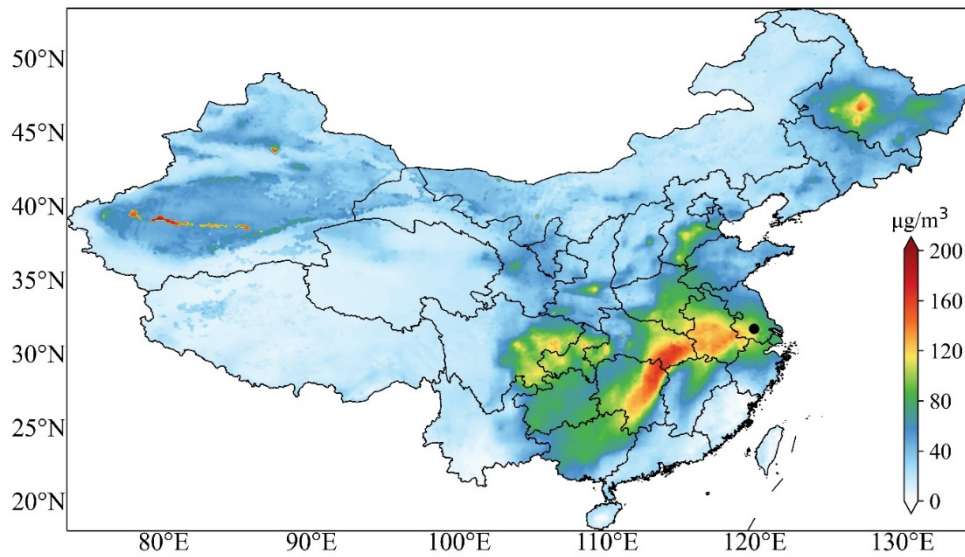


Figure S2. Daily averaged concentration of $PM_{2.5}$ (shaded, unit: $\mu\text{g}/\text{m}^3$) on 12 December in China. The dark dot represents the observation site in Changzhou.

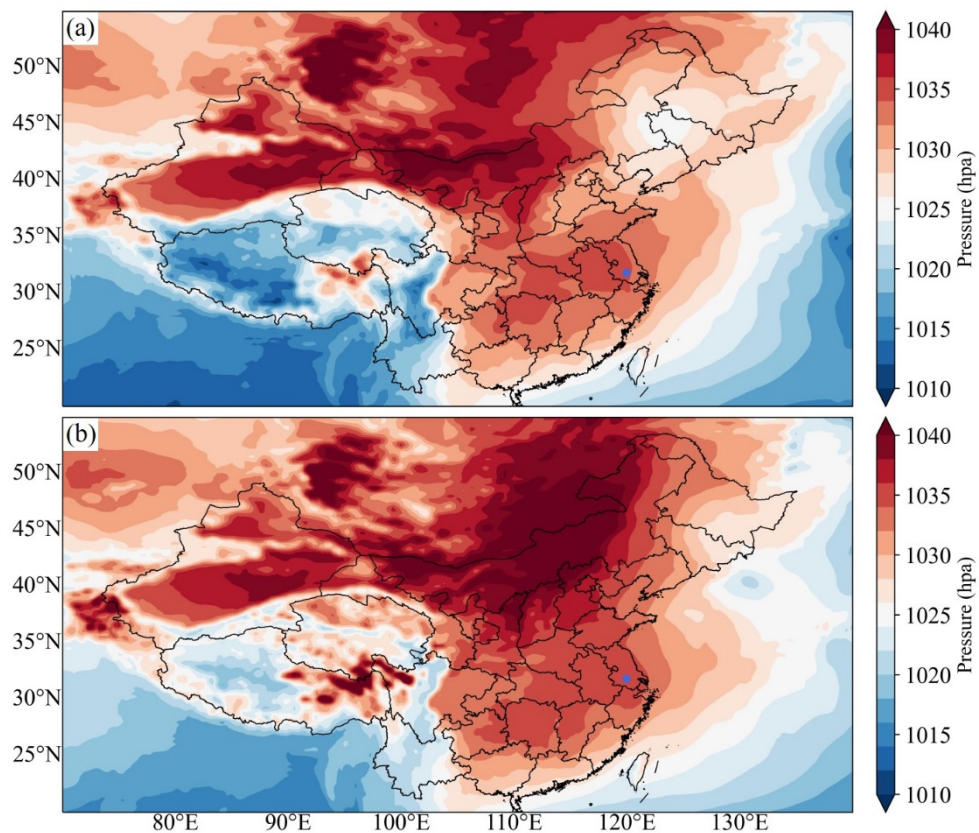


Figure S3. Sea level pressure (shaded, unit: hPa) field on (a) 20:00, 12 December and (b) 8:00, 13 December.

The blue dot represents the observation site in Changzhou.

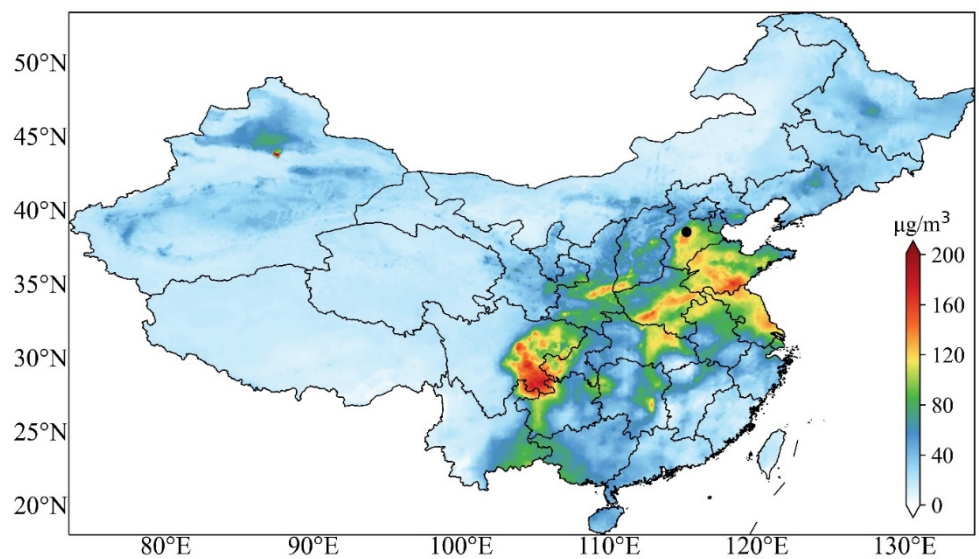


Figure S4. Daily averaged concentration of PM_{2.5} (shaded, unit: µg/m³) on 18 December in China. The dark dot represents the observation site in Wangdu.

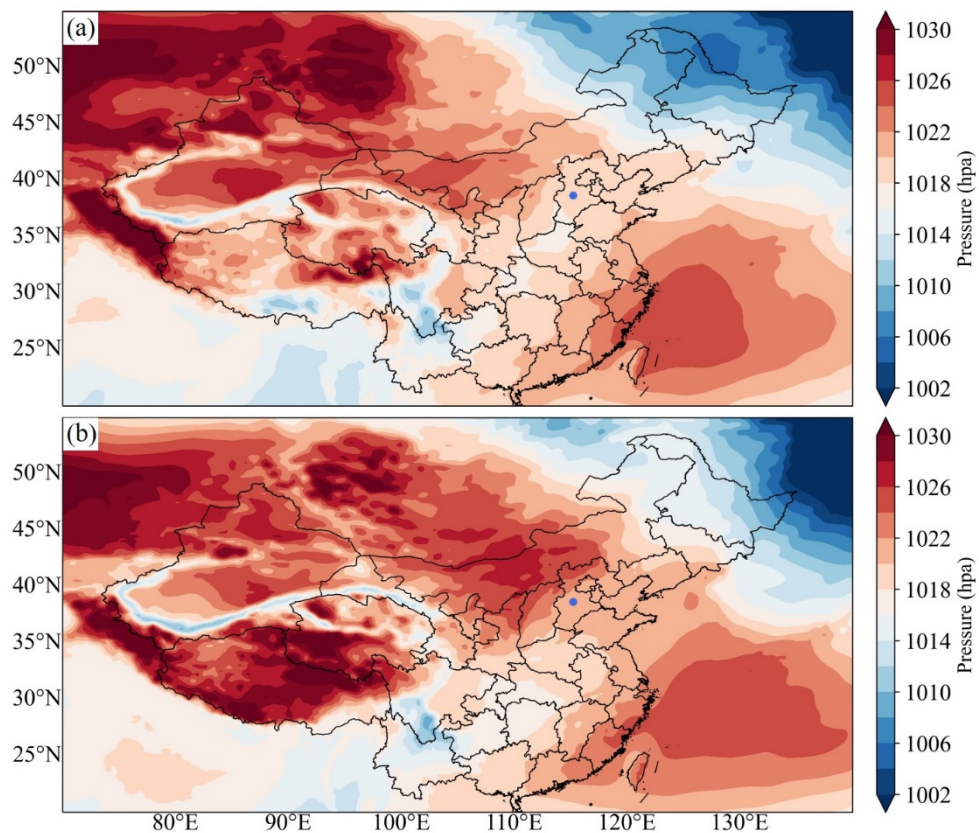


Figure S5. Sea level pressure (shaded, unit: hPa) field on (a) 20:00, 18 December and (b) 8:00, 19 December.

The blue dot represents the observation site in Wangdu.

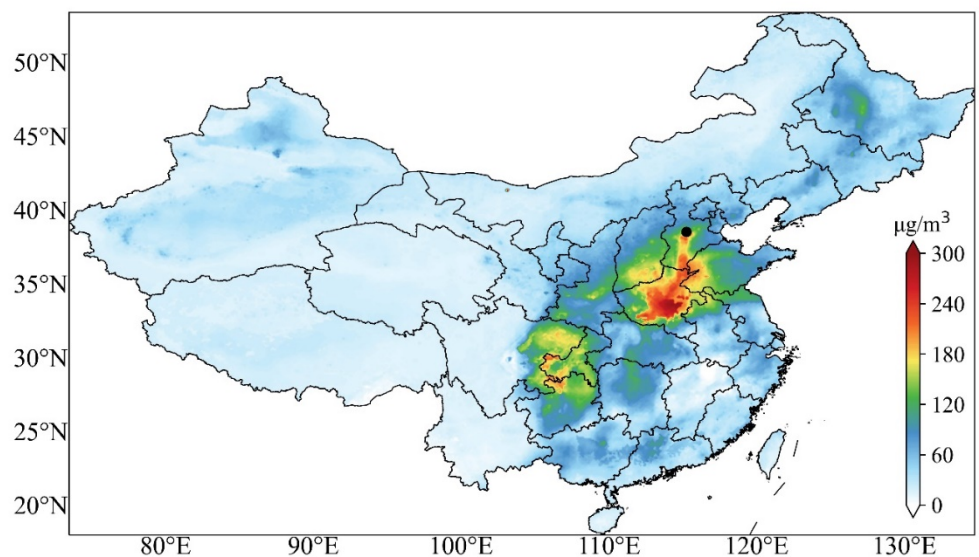


Figure S6. Daily averaged concentration of PM_{2.5} (shaded, unit: µg/m³) on 20 December in China. The dark dot represents the observation site in Wangdu.

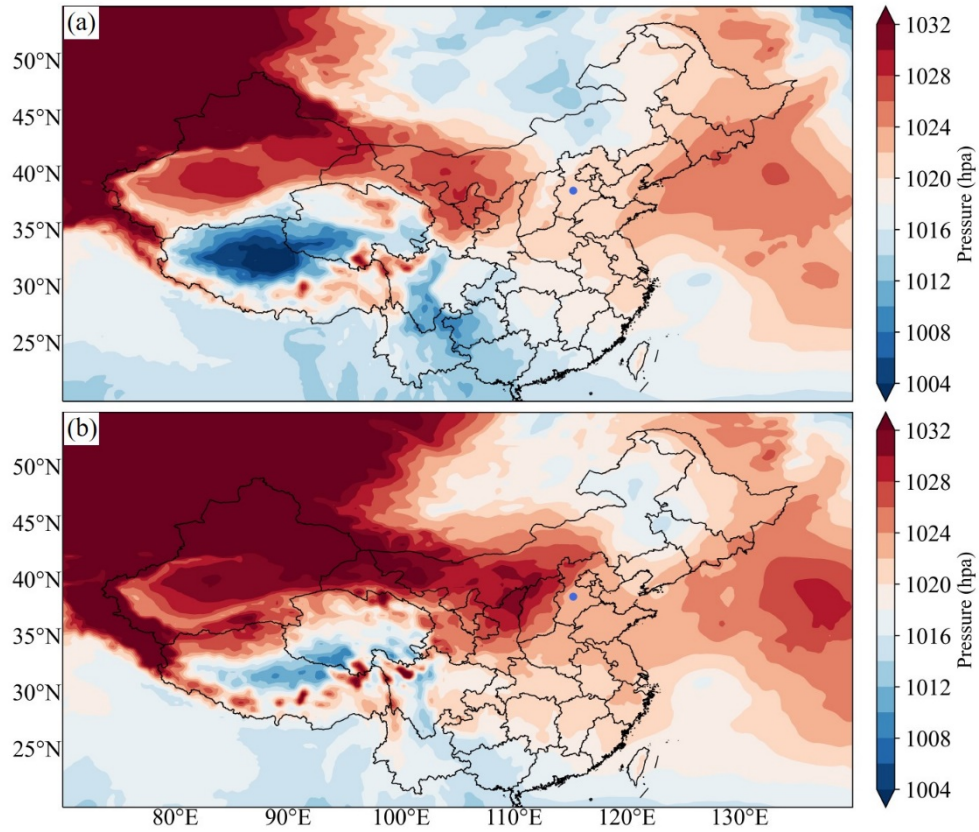


Figure S7. Sea level pressure (shaded, unit: hPa) field on (a) 20:00, 20 December and (b) 8:00, 21 December. The blue dot represents the observation site in Wangdu.

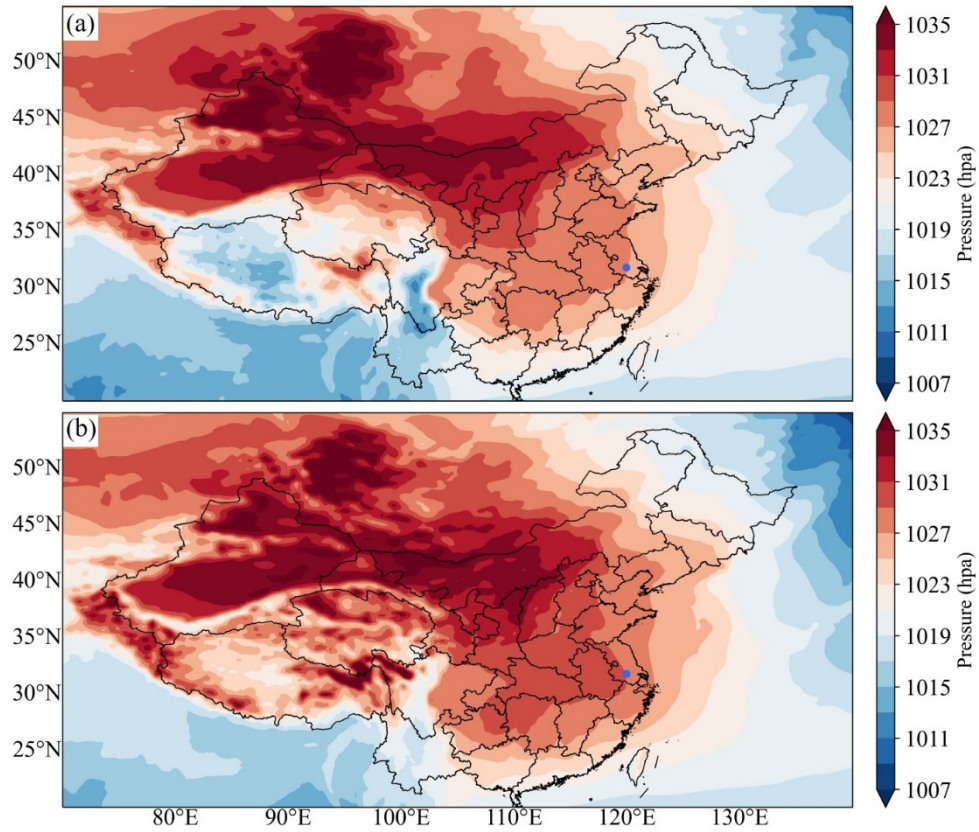


Figure S8. The average sea level pressure (shaded, unit: hPa) field on (a) 20:00 and (b) 8:00 in next day of all T-NPES events in Changzhou. The blue dot represents the observation site in Changzhou.

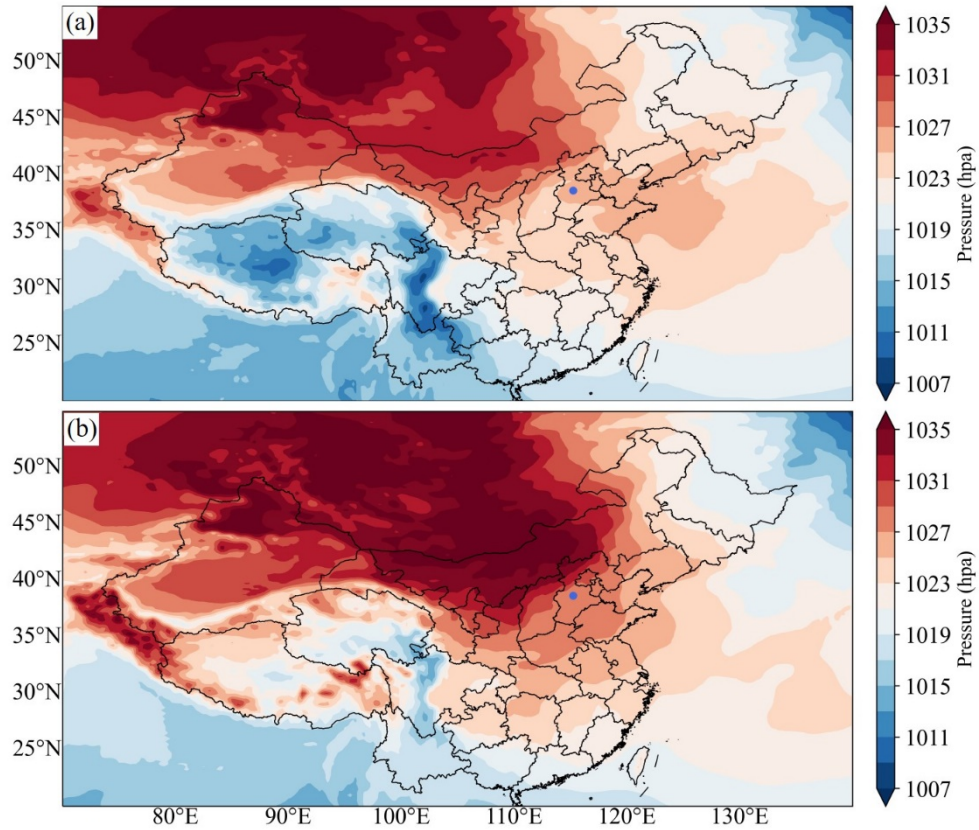


Figure S9. The average sea level pressure (shaded, unit: hPa) field on (a) 20:00 and (b) 8:00 in next day of all T-NPES events in Wangdu. The blue dot represents the observation site in Wangdu.

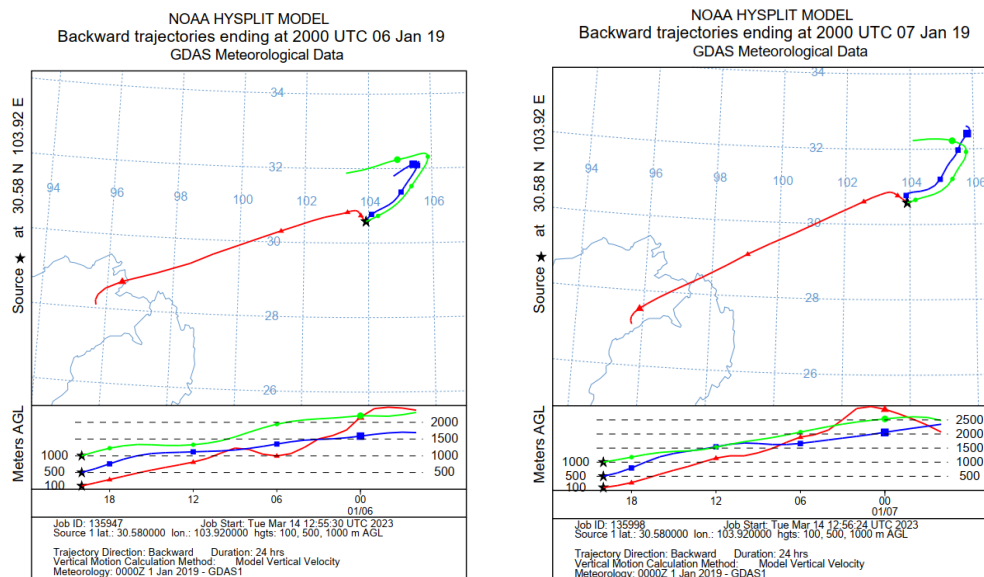


Figure S10. Backward trajectories of Chengdu at 100, 500, and 1000 m, ending at 0:00 on 7 and 8 January, determined by the HYSPLIT model.