Supplement of

Elevated foehn exacerbates surface ozone pollution in summer Beijing

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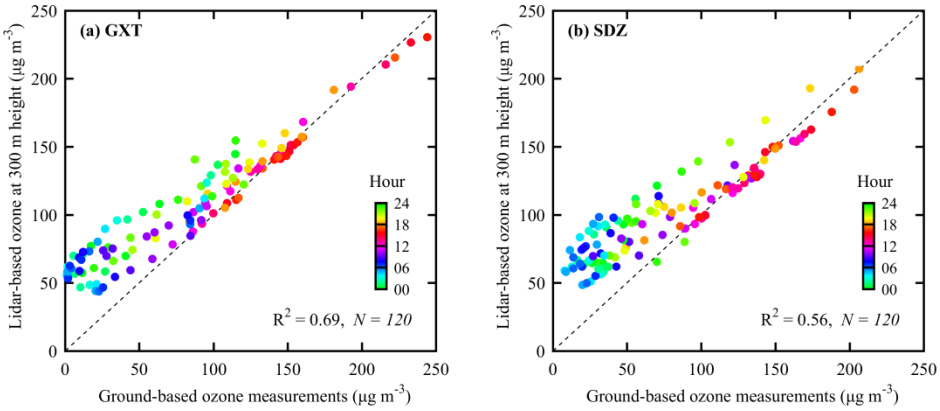

Figure S1. Validation of O_3 lidar observations against ground-based measurements during the ozone pollution event (27–31 August 2024).

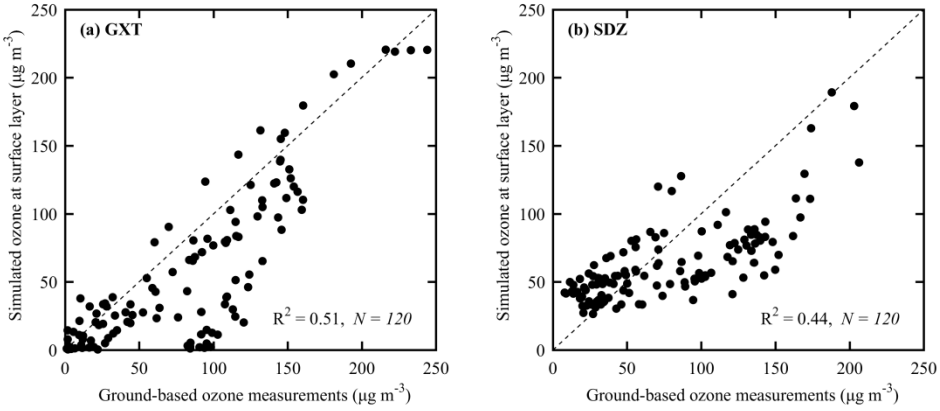

Figure S2. Validation of simulated surface ozone concentrations against ground-based measurements during the ozone pollution event (27–31 August 2024).

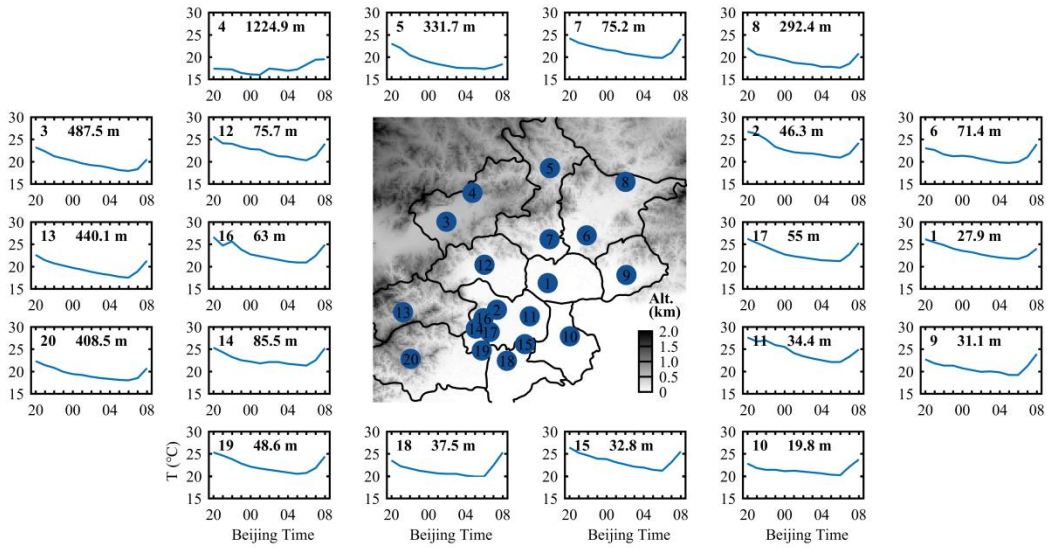

Figure S3. Hourly temperature variations from 20:00 BJT on 29 August to 08:00 BJT on 30 August at 20 surface meteorological stations in Beijing. The locations of individual stations can be found in middle plot, and their altitudes are listed by digits in individual subplots.

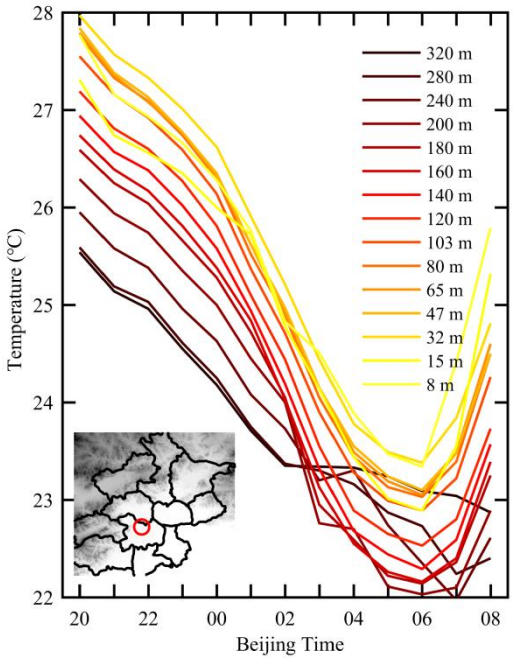

Figure S4. Hourly temperature variations from 20:00 BJT on 29 August to 08:00 BJT on 30 August at 15 levels on a 325 m high meteorological tower in the Institute of Atmospheric Physics (red dot in subplot).