



Supplement of

In situ vertical characteristics of optical properties and heating rates of aerosol over Beijing

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Fig. S1. Profiles of Rayleigh air scattering coefficients at 450 nm, 525 nm, and 635 nm, respectively.



Fig. S2. Comparison of aerosol absorption coefficient measured by the PASS-3 and the AE33 at (a) 405 nm, (b), 532 nm, and (c) 781 nm.



Fig. S3. Temporal variations from Dec. 10th to 12th of vertical profiles of wind direction (a), and wind speed (b) measured by wind profile radar; (c) particle extinction measured by MPL lidar; aerosol optical depth (d) and aerosol absorption optical depth (e) from AERONET (asterisk) and derived from aircraft in-situ measurements (open star); (f) surface PM_{2.5} and RH.). The vertical bars denote the periods with flight profiles, with blue, black and red bars represent the clean period, transition period and heavy pollution respectively during the pollution event.



Fig. S4. Identical plots with Fig. S3 but for Dec. 16th to 19th.



Fig. S5. The HYSPLIT 24h backward trajectories with ending points at 1000 m of Beijing (39.54°N, 116.23°E) for all flights.