

Supplement for

Impact of aerosol-radiation interaction on the new particle formation

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1. Lognormal fit of the measured PNSD.

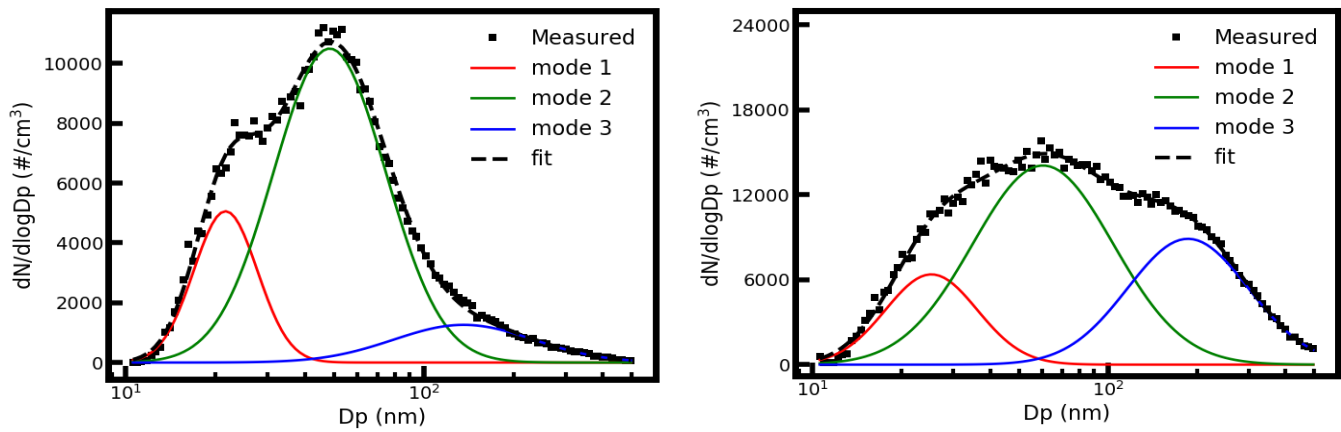


Figure. S1. Lognormal fit (three modes) examples of the PNSD during the campaign. Black squares mark the measured PNSD, dashed lines represent the PNSD of fitting modes, and the black dashed line marks the sum of the PNSD of all fitting three modes. Mode 1 (red), 2 (green), and 3 (blue) are nucleation mode, Aitken mode, and accumulation mode, respectively.

2 Comparison between the measured and calculated scattering coefficients

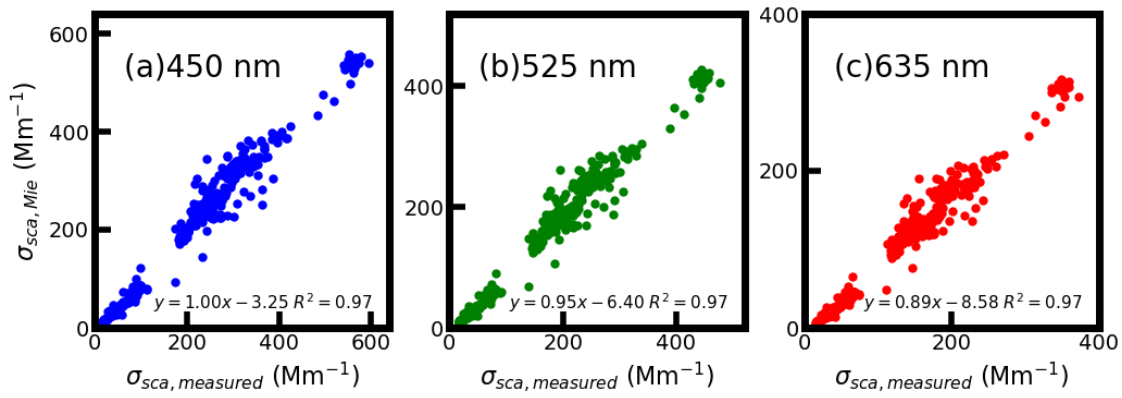


Fig. S2. Comparison between the measured scattering coefficients and calculated scattering coefficients at the wavelength of (a) 450 nm, (b) 525 nm, and (c) 635 nm.

3 Measured PNSD profile when the cabin is moving downward.

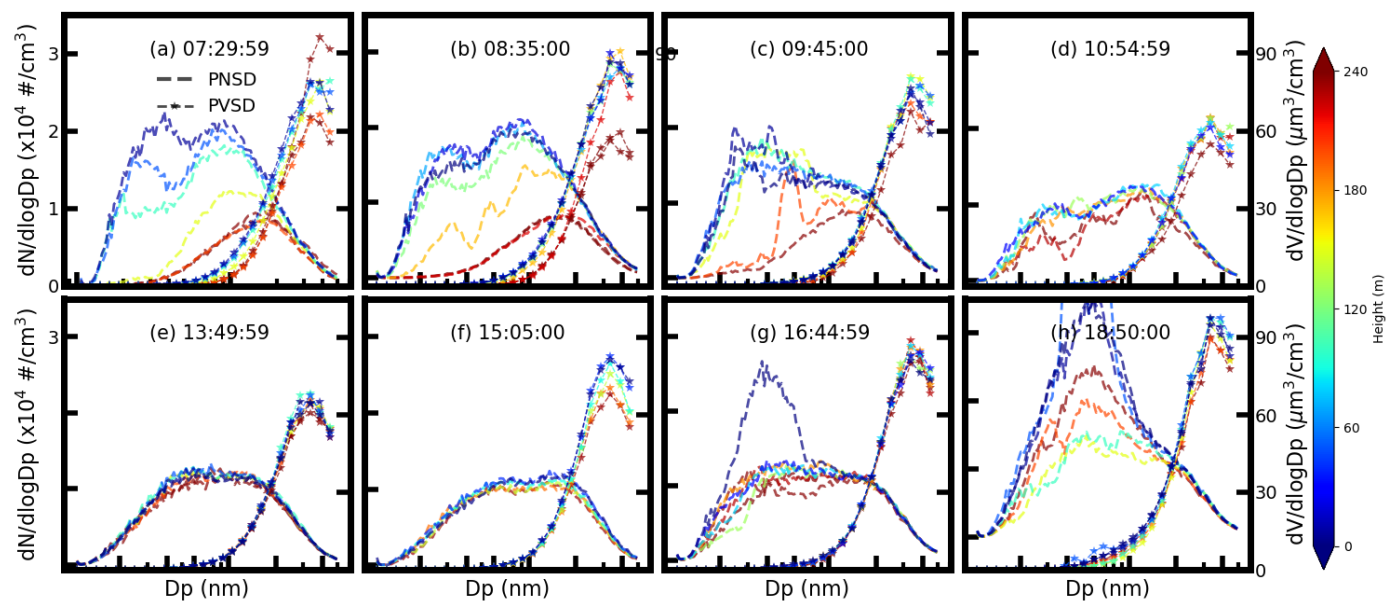


Figure. S3. The measured aerosol PNSD (dashed line) and the PVSD (dashed line with star) at (a) 7:00, (b) 8:05, (c) 9:50, (d) 10:20, (e) 13:20, (f) 14:25, (g) 16:15, and (h) 17:25. The filled colors represent the corresponding measurement height above the ground.

4 Different aerosol number concentration distribution types.

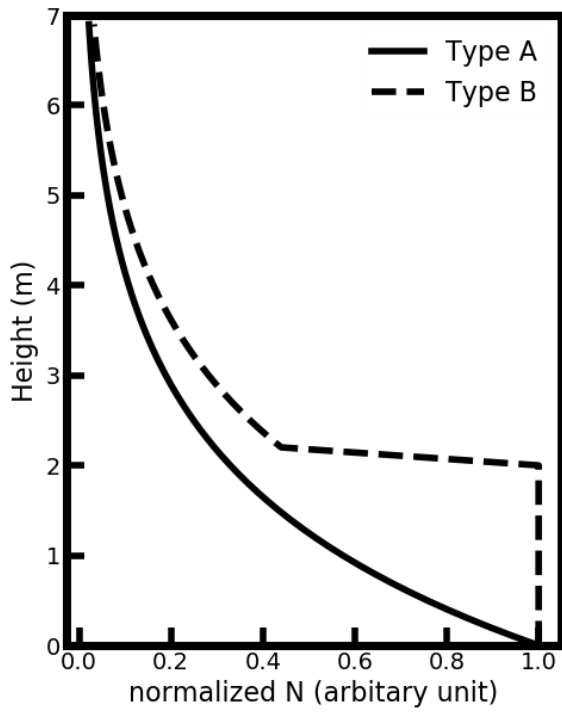


Figure S4. The typical aerosol number concentration (N) at different heights for types A and B.