

## Supplementary Information

### Enhanced hydrophobicity and volatility of submicron aerosols under severe emission control conditions in Beijing

Yuying Wang<sup>1</sup>, Fang Zhang<sup>1\*</sup>, Zhanqing Li<sup>1\*</sup>, Haobo Tan<sup>2</sup>, Hanbing Xu<sup>3</sup>, Jingye Ren<sup>1</sup>, Jian  
Zhao<sup>4</sup>, Wei Du<sup>4</sup>, Yele Sun<sup>4</sup>

<sup>1</sup>College of Global Change and Earth System Science, Beijing Normal University, Beijing  
100875, China

<sup>2</sup>Key Laboratory of Regional Numerical Weather Prediction, Institute of Tropical and Marine  
Meteorology, China Meteorological Administration, Guangzhou 510080, China

<sup>3</sup> Shared Experimental Education Center, Sun Yat-sen University, Guangzhou 510275, China

<sup>4</sup>State Key Laboratory of Atmospheric Boundary Layer Physics and Atmospheric Chemistry,  
Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing 100029, China

\*Correspondence to: F. Zhang ([fang.zhang@bnu.edu.cn](mailto:fang.zhang@bnu.edu.cn)), Z. Li ([zli@atmos.umd.edu](mailto:zli@atmos.umd.edu))

Table S1. Mean meteorological parameters during three periods

|              | Clean1 | Clean2 | Pollution |
|--------------|--------|--------|-----------|
| WS, 8m (m/s) | 1.18   | 1.64   | 1.07      |
| T (°C)       | 26.00  | 18.93  | 22.57     |
| RH (%)       | 57.32  | 52.77  | 62.14     |

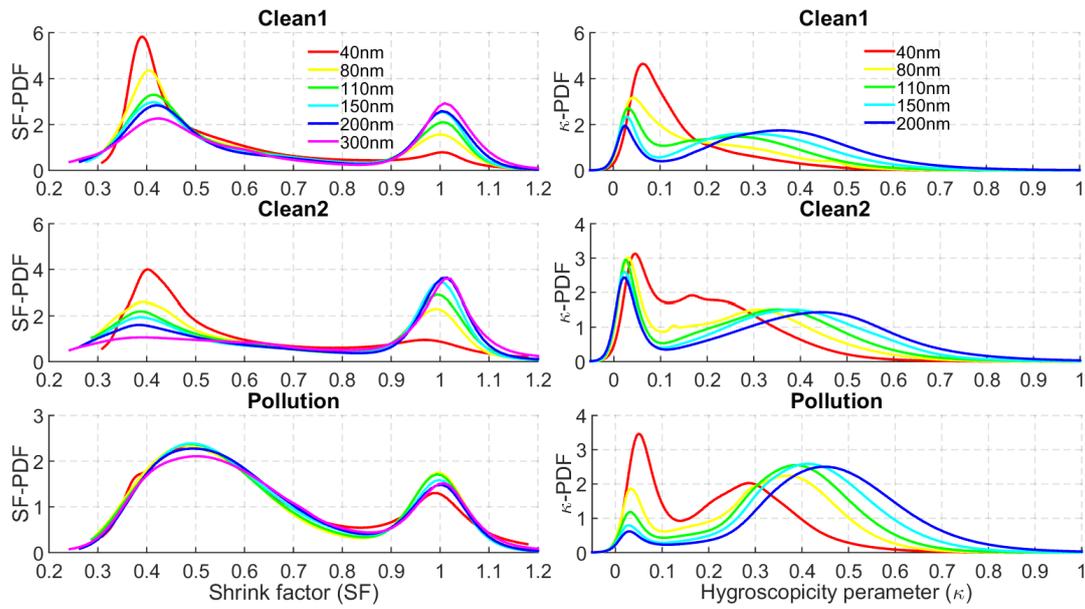


Figure S1. Mean SF-PDF (left) and  $\kappa$ -PDF (right) during three periods

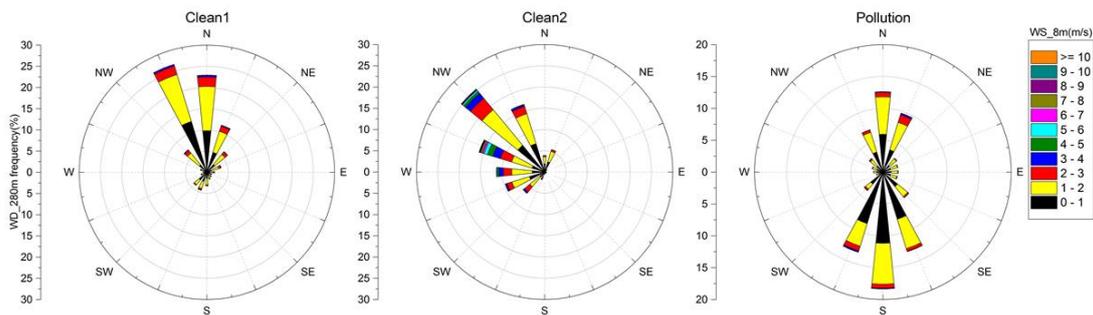


Figure S2. Wind rose diagram during three periods, color-coded by wind speed at 8m for each period. The frequencies are set to the same scales but for wind direction at 280m.

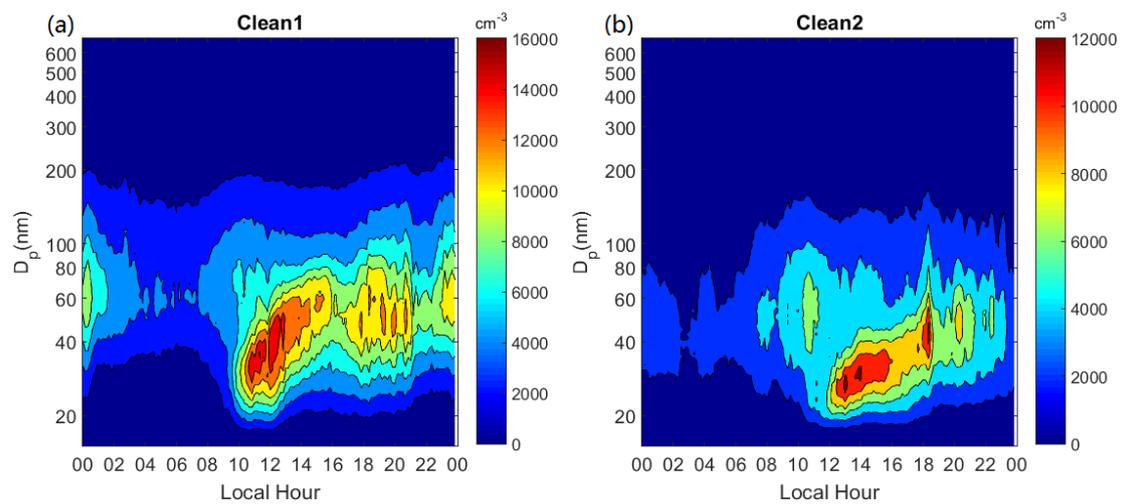


Figure S3. Diurnal variations in particle number size distribution at 260m on the tower during (a) Clean1 and (b) Clean2 periods, the colored values are the size-resolved number concentrations ( $dN/d\log D_p$ ).