

Supplemental Information

Evaluation of Fast Mobility Particle Sizer (FMPS) for Ambient Aerosol Measurement

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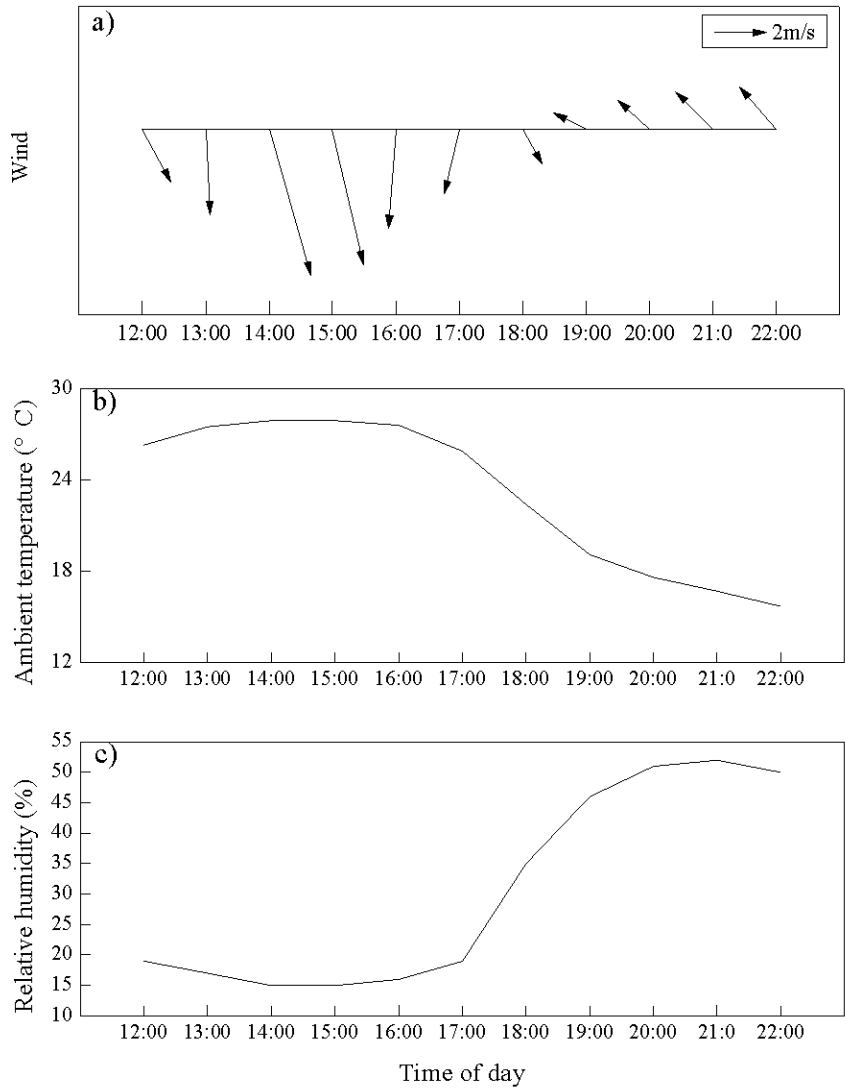
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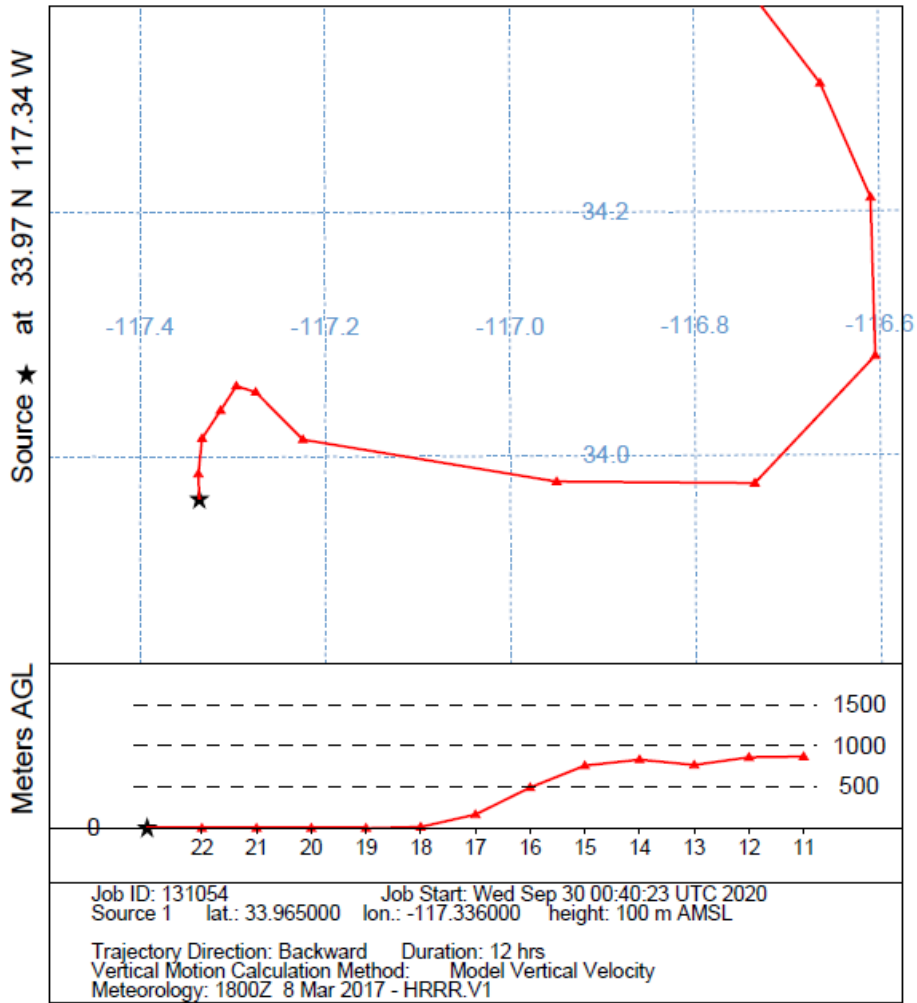
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Figure S1. Meteorological data obtained from the California Irrigation Management Information System (CMIS) meteorology station at UC Riverside (33.965°, -117.336°) for March 8th. a) Wind direction and speed; b) Ambient temperature; c) Relative humidity; d) Back trajectory (12 hr) analysis, initiated at 15:00 on March 8, 2017 Local Time (before the transition period); and e) Back trajectory (12 hr) analysis, initiated at 21:00 on March 8, 2017 Local Time (after the transition period).



(d)

NOAA HYSPLIT MODEL
Backward trajectory ending at 2300 UTC 08 Mar 17
HRRR Meteorological Data



(e)

NOAA HYSPLIT MODEL
Backward trajectory ending at 0500 UTC 09 Mar 17
HRRR Meteorological Data

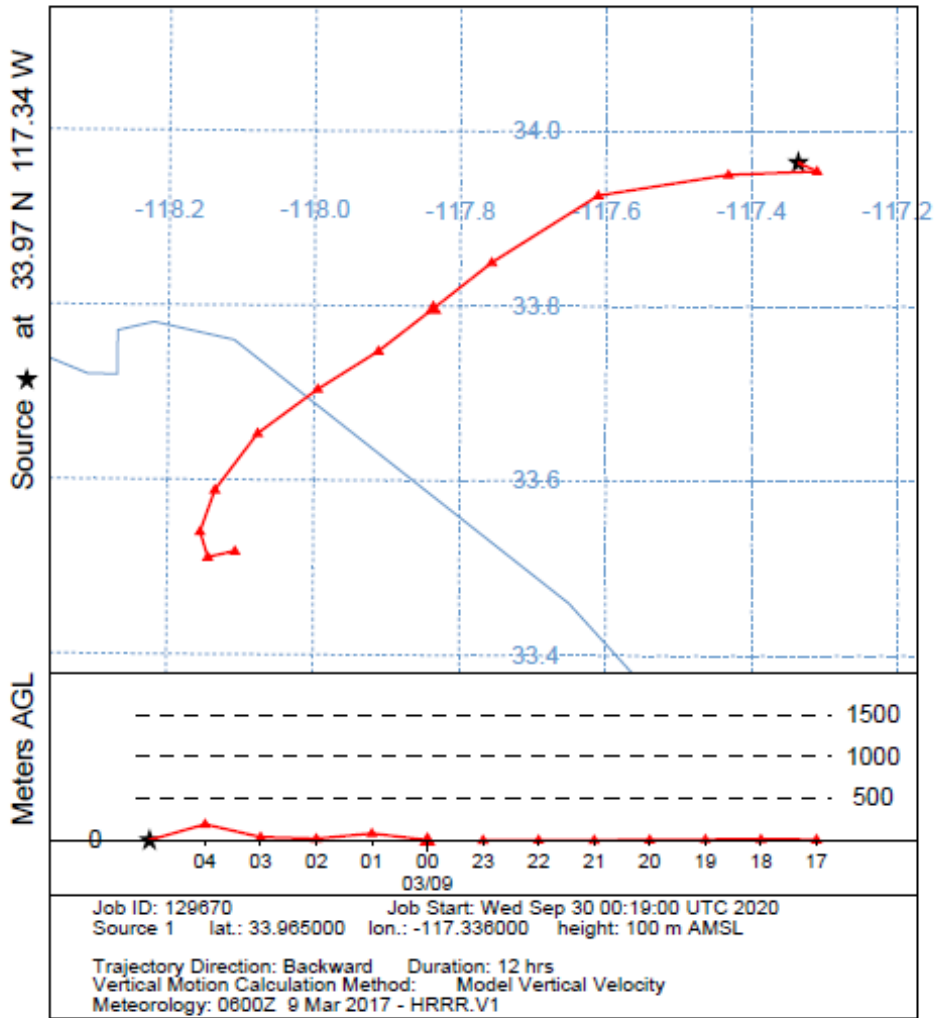
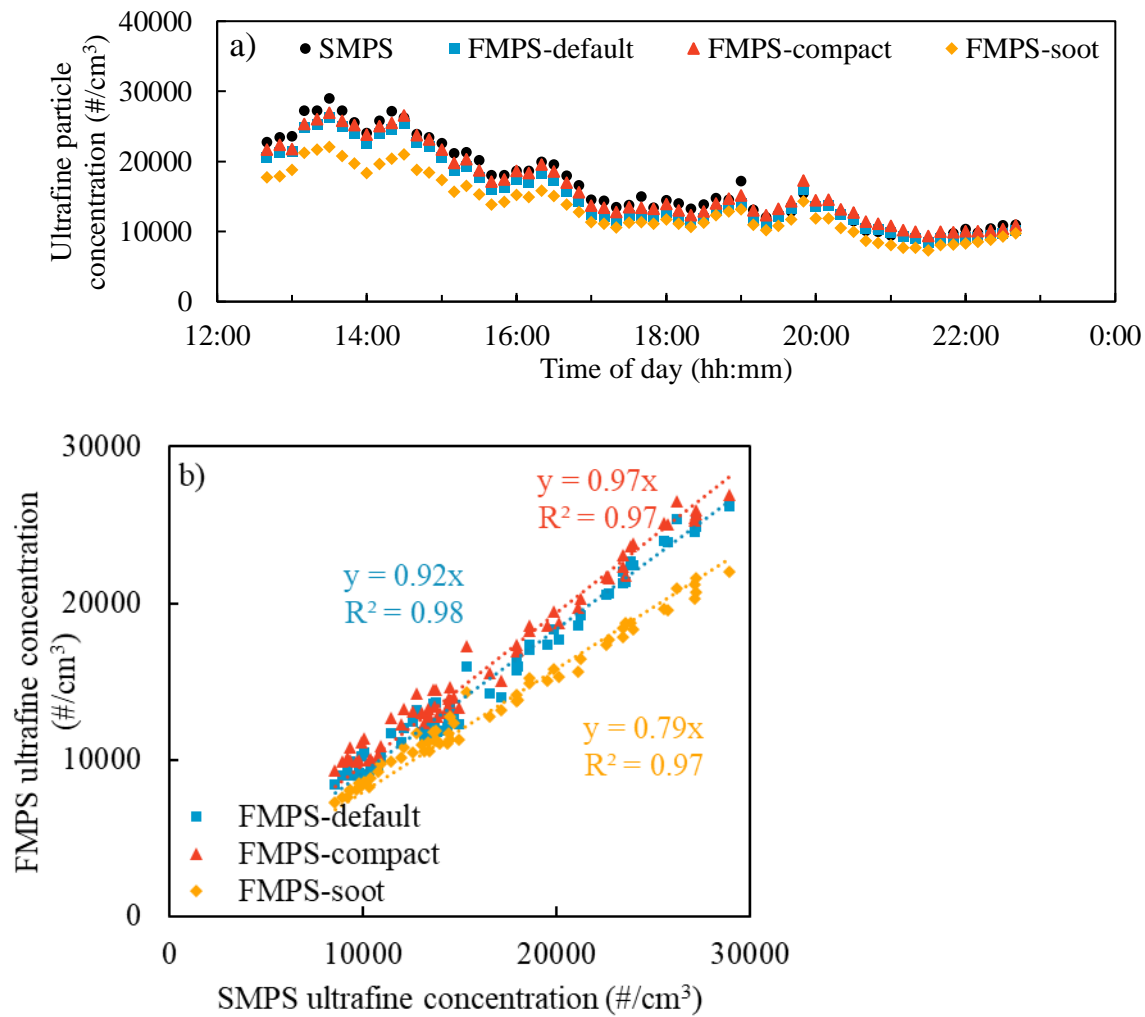


Figure S2. a) Time series of ultrafine (9-100 nm) particle number concentration from SMPS and different FMPS matrices; b) Correlation of ultrafine particle number concentration between SMPS and different FMPS matrices for the time period from 12:30 to 23:00; c) Correlation of ultrafine particle number concentration between SMPS and different FMPS matrices for the time period from 12:30 to 18:00; and d) Correlation of ultrafine particle number concentration between SMPS and different FMPS matrices for the time period from 20:00 to 23:00.



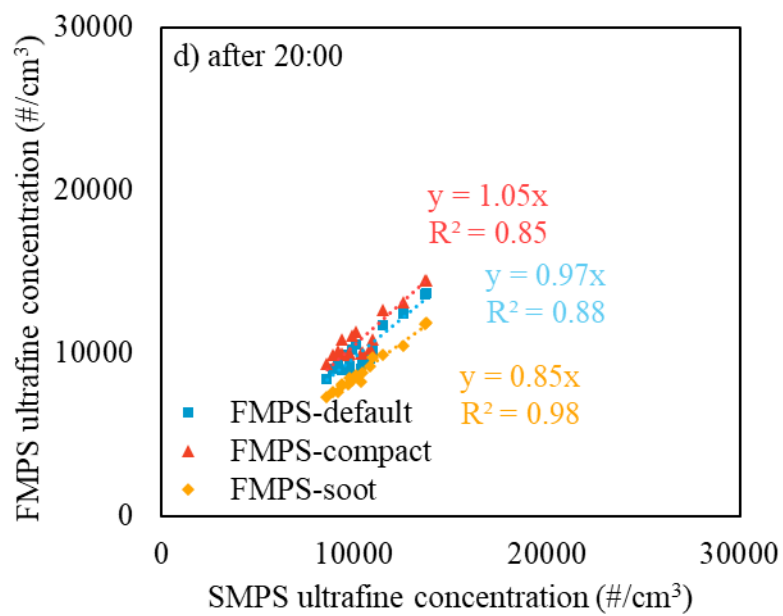
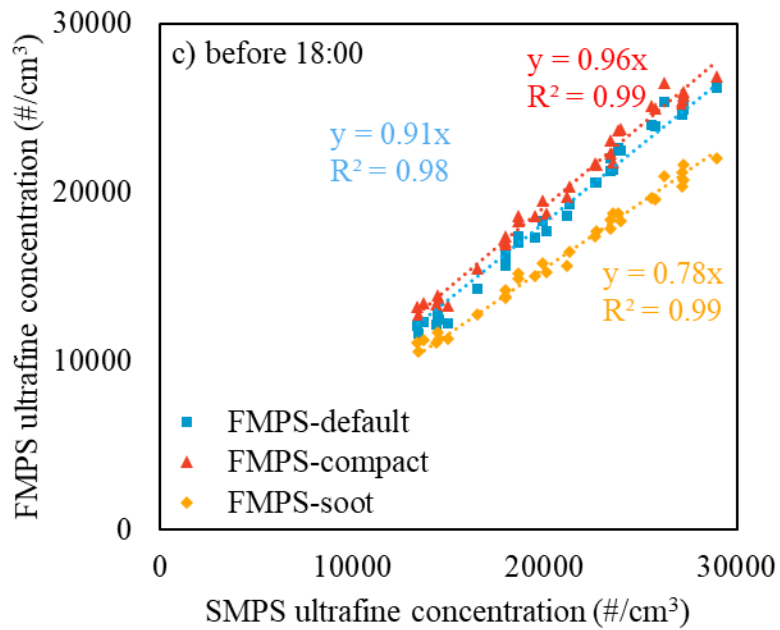
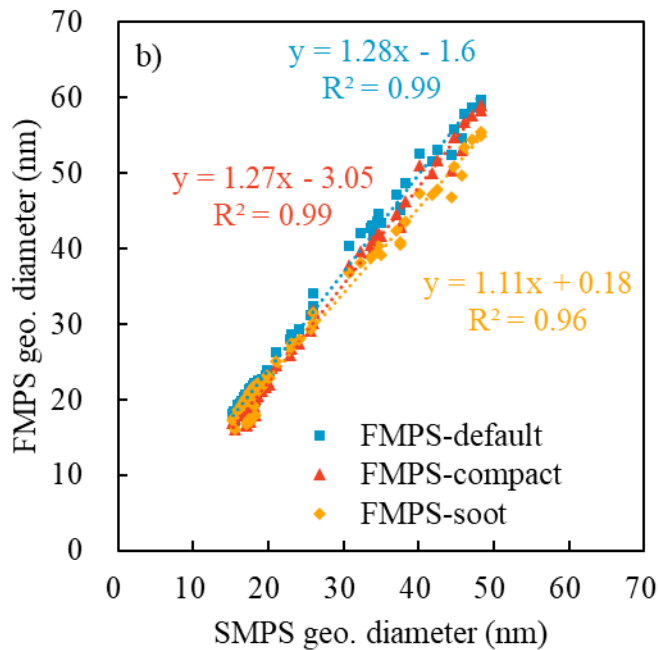
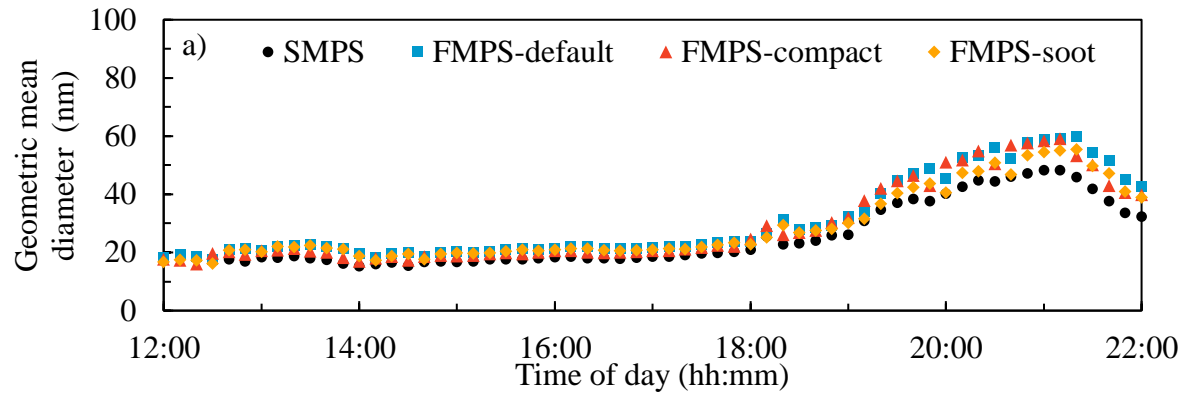


Figure S3. a) Time-resolved geometric mean diameter from SMPS and FMPS for ultrafine particle size range (9-100 nm); b) Correlation between SMPS and FMPS geometric mean diameter for ultrafine particle size range (9-100 nm) for the time period from 12:30 to 23:00; and c) Correlation between SMPS and FMPS geometric mean diameter for ultrafine particle size range (9-100 nm) for the time period from 20:00 to 23:00.



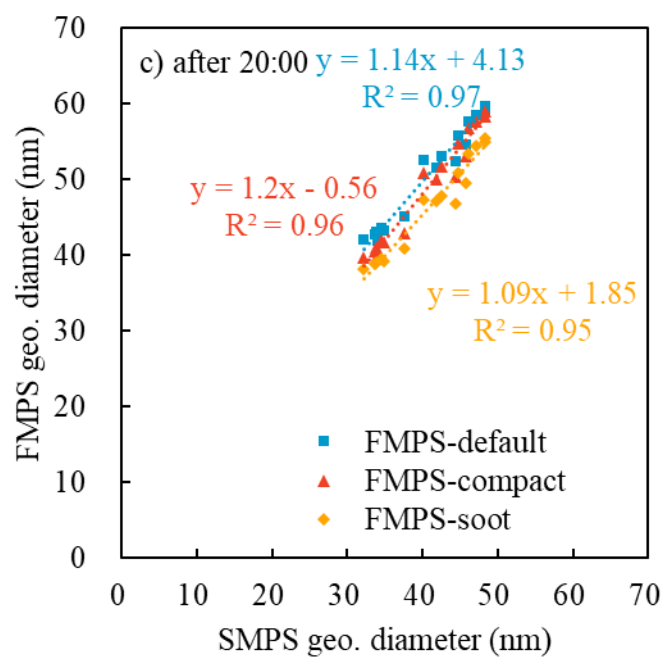
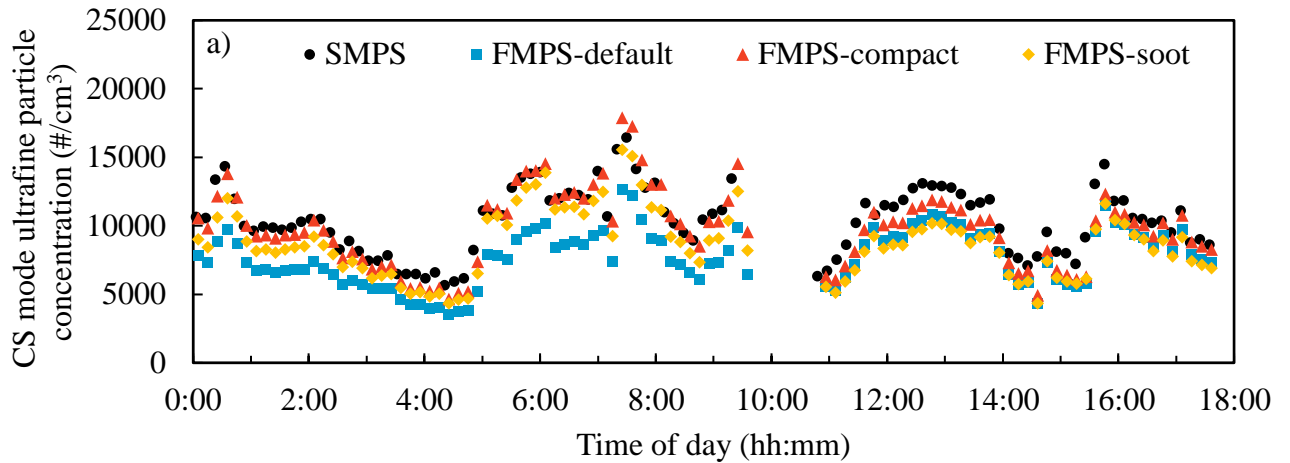
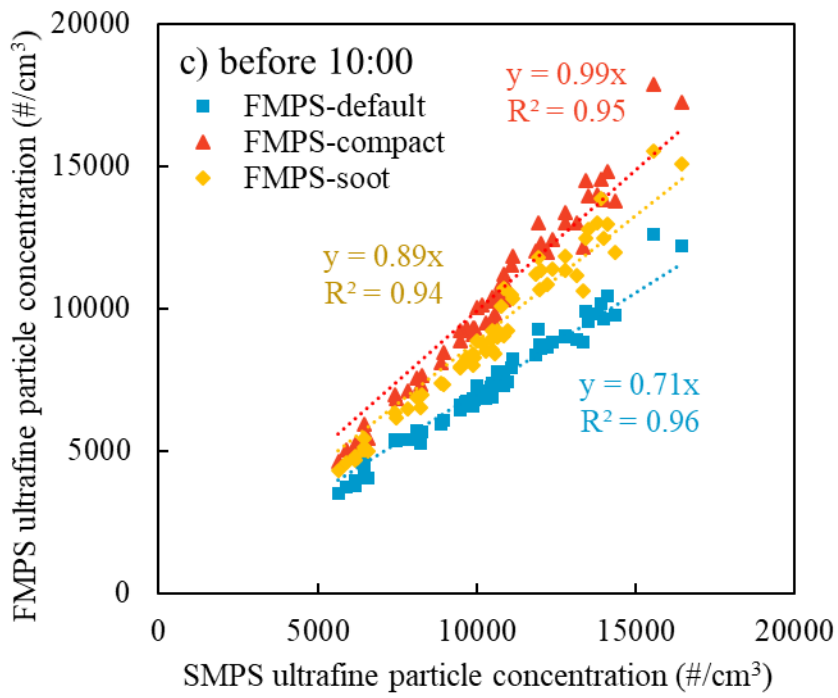
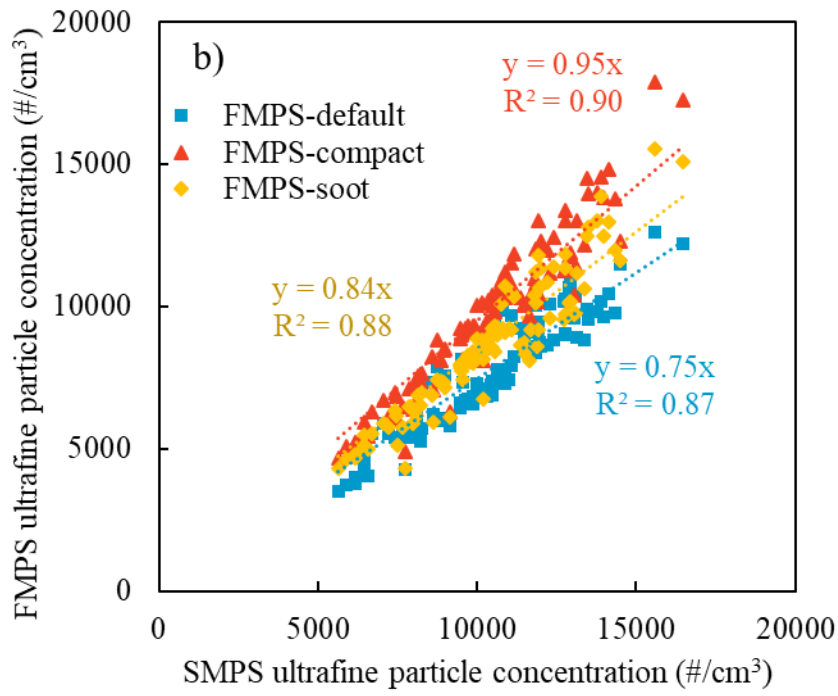


Figure S4. a) Time series of CS mode ultrafine particle number concentration from SMPS and different FMPS matrices (9-100 nm); b) Correlation of CS mode ultrafine particle number concentration between SMPS and different FMPS matrices for the time period from 12:30 to 23:00; c) Correlation of CS mode ultrafine particle number concentration between SMPS and different FMPS matrices for the time period from 12:30 to 18:00; and d) Correlation of CS mode ultrafine particle number concentration between SMPS and different FMPS matrices for the time period from 20:00 to 23:00.





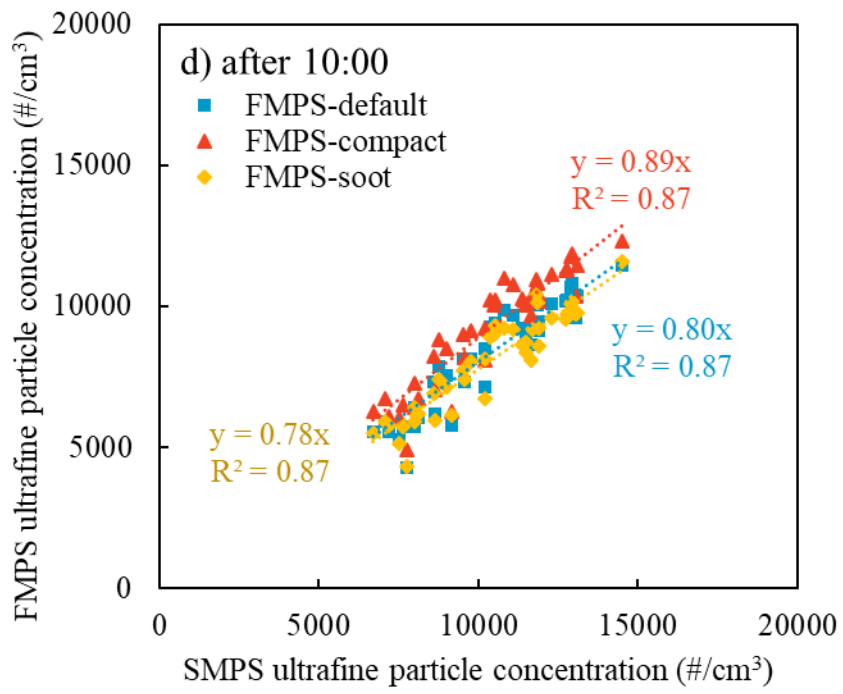


Figure S5. Meteorological data obtained from CMIS Meteorology station at UC Riverside (33.965, -117.336) for March 9th. (a) Wind direction and speed (b) Ambient temperature (c) Relative humidity

