

Supplement for “A low-cost monitor for measurement of fine particulate matter and aerosol optical depth. Part 2: Citizen science pilot campaign in northern Colorado” by Ford et al.

Table S1. List of AERONET sites used for comparison.

AERONET Site	Longitude	Latitude
Denver_LaCasa	-105.005°	39.7789°
DigitalGlobe_Cal	-105.137°	40.139°
NEON-CPER	-104.744238°	40.812444°
NEON_CVALLA	-105.16725°	40.16063°
NEON_NIWO	-105.582°	40.054°
NEON_RMNP	-105.545972°	40.2759°
Table_Mountain	-105.237°	40.125°

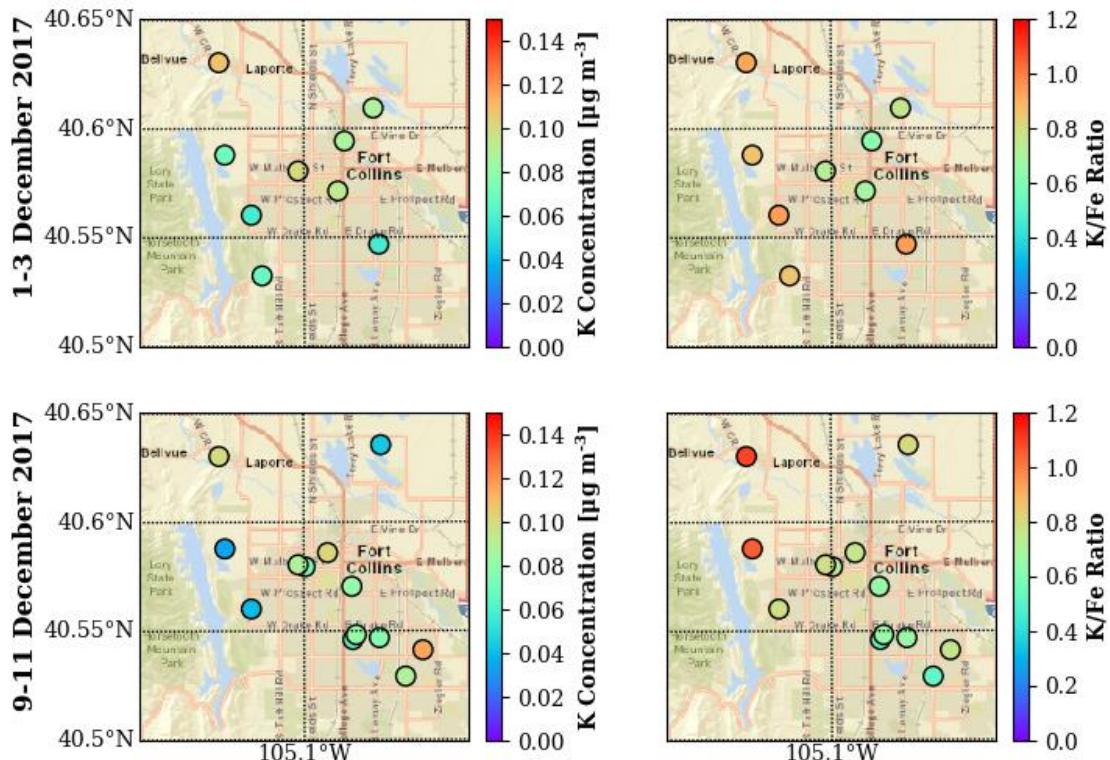


Figure S1. Potassium (K) concentrations and ratios of potassium to iron (K/Fe) measured in Fort Collins for 1-3 December 2017 (top row) and 9-11 December 2017 (bottom row).

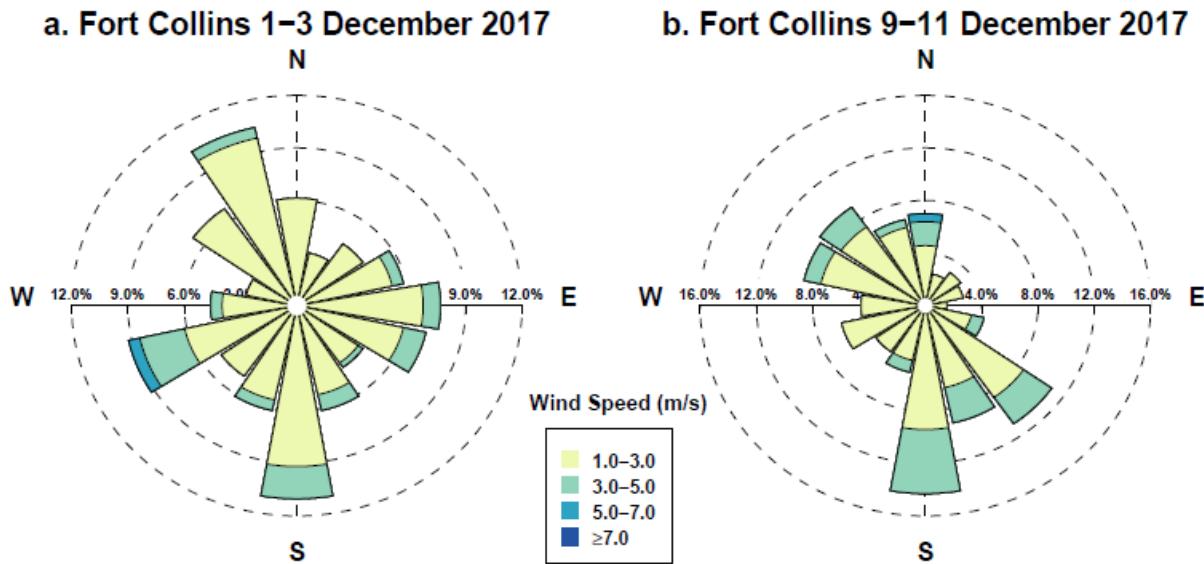


Figure S2. Wind rose diagrams for the two sampling periods mentioned in the main text. Measurements were taken at the Fort Collins weather station located on the Colorado State University campus (note different scales on the panels).

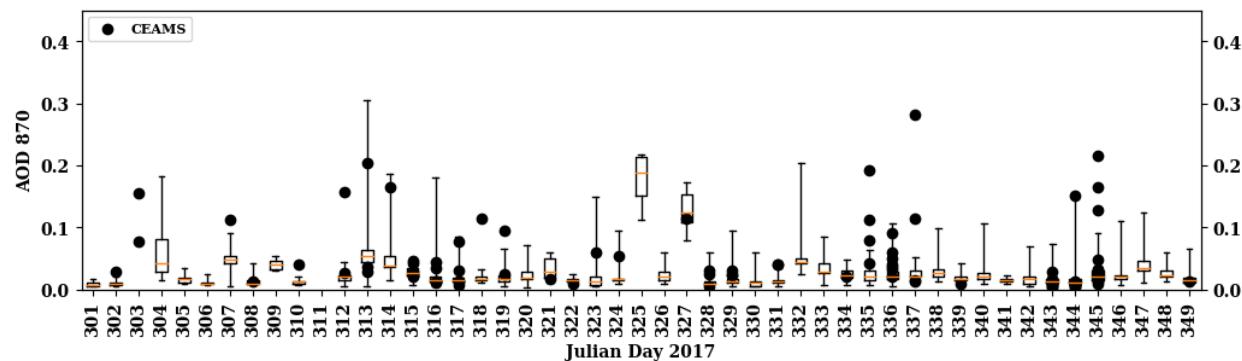


Figure S3. Box and whisker plots showing the distribution of AERONET AOD at 870 nm at all sites in northern Colorado (listed in Supplementary Table S1, not all sites have values for every day) for each day from 28 October - 15 December 2017. Box denotes first and third quartile; whiskers denote maximum and minimum; and orange line shows median. CEAMS AOD at 870 nm are overlaid as black dots.

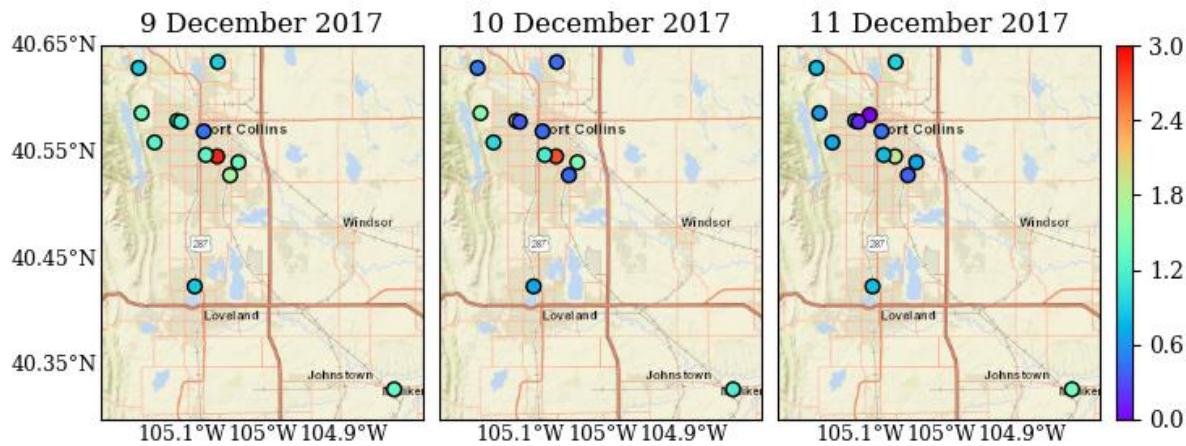


Figure S4. Map of the Ångström exponent values (calculated from the 870 and 440 nm wavelengths) for 9-11 December 2017.

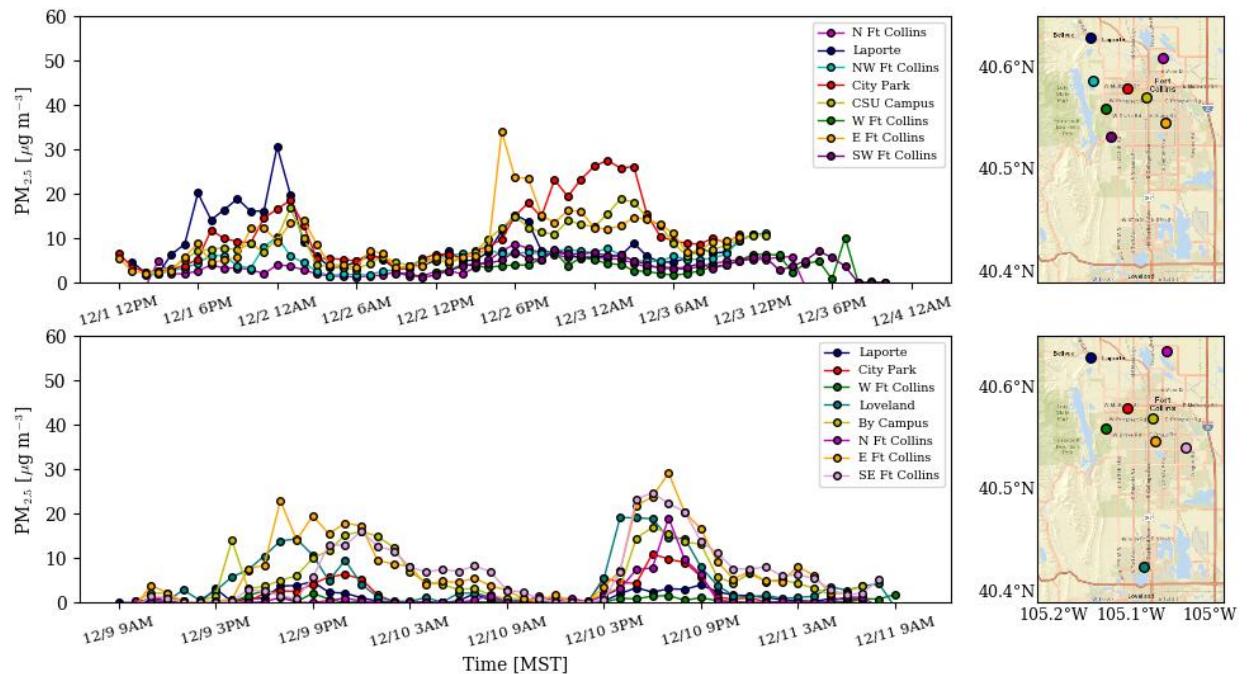


Figure S5. Time series of uncorrected hourly-averaged $\text{PM}_{2.5}$ concentrations from the Plantower PMS5003 sensor inside the AMOD for 1-3 December (top row) and 9-11 December (bottom row) sampling periods. Maps show sampling locations for each sampling period.

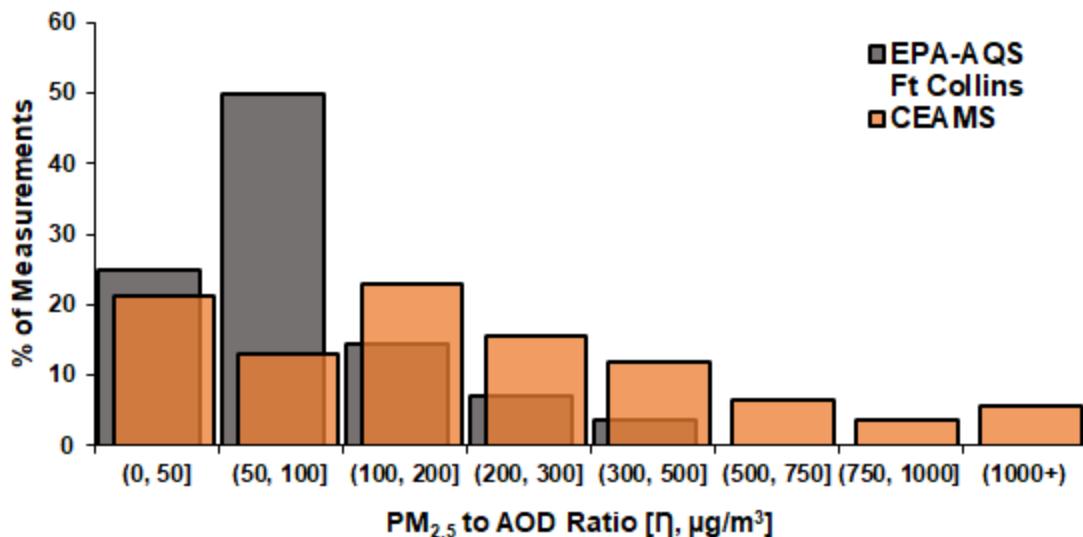


Figure S6. Distribution of the PM_{2.5} to AOD ratios calculated from CEAMS 520-nm AOD and CEAMS filter PM_{2.5} concentrations (gray) and the EPA-AQS site PM_{2.5} in Fort Collins and the MODIS 550-nm AOD for 28 October - 15 December 2017.

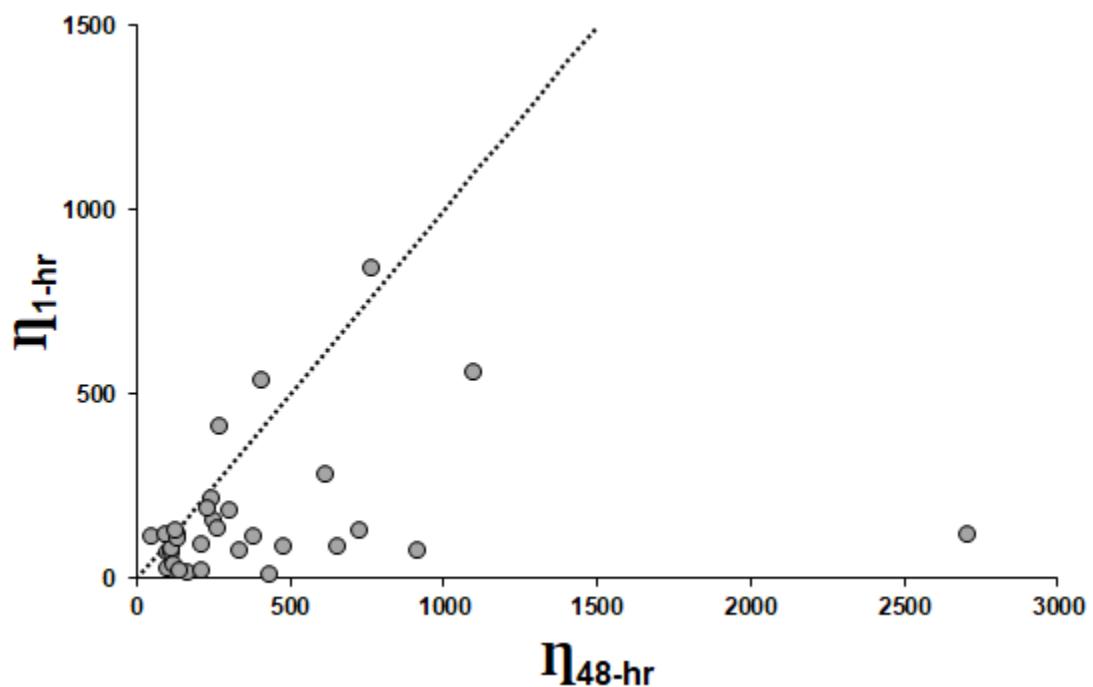


Figure S7. Comparison of η calculated using the AOD measurement and the 48-hr concentration from the filter ($\eta_{48\text{-hr}}$) and the 1-hr average concentration from the Plantower PMS5003.