

Supplementary material for “Overview of the 2010 Carbonaceous Aerosols and Radiative Effects Study (CARES)”

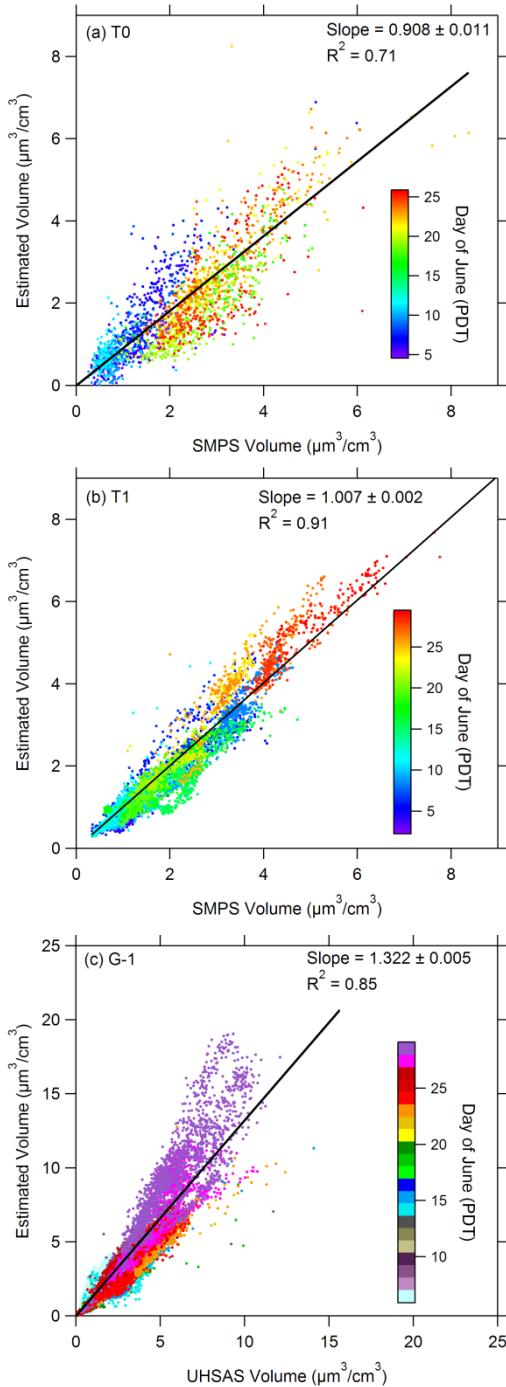


Fig. S1. Comparison of estimated and measured aerosol volumes for (a) T0, (b) T1, and (c) G1 (UHSAS volume is restricted to below $0.5 \mu\text{m}$). Some day-to-day variations in the agreement between estimated and measured volumes are observed for all three platforms, especially for the G-1 data for June 27 and 28, but the overall agreements are reasonably good.

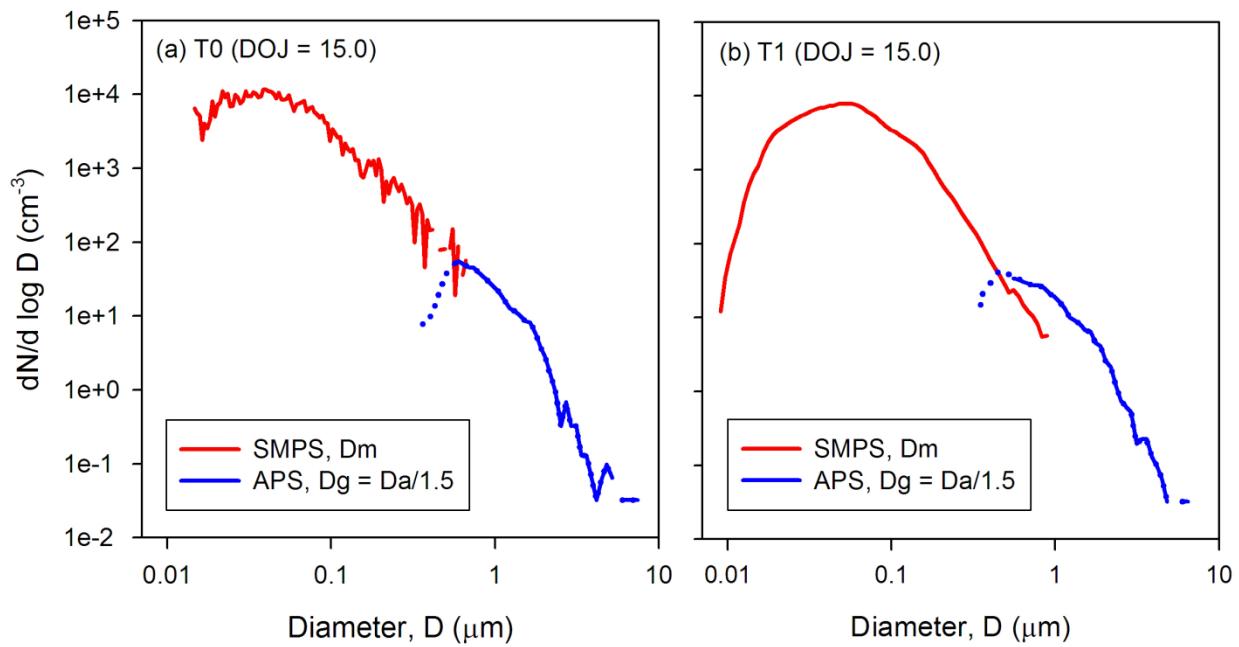


Fig. S2. Examples of comparison of the number size distributions measured by the SMPS and APS in the overlap region: (a) T0 and (b) T1, both on midnight of June 15. SMPS measures mobility diameter (D_m), which is equal to geometric diameter (D_g), assuming the particles are spherical. Density of coarse mode particles is assumed to be that of sea salt ($\rho = 2.25 \text{ g cm}^{-3}$), and the APS aerodynamic diameter (D_a) is divided by 1.5 (i.e., square root of 2.25) to convert it to geometric diameter (D_g), assuming the particles are spherical. The dotted portion of the APS size distribution represents first 7 bins ($D_a = 0.523$ to $0.777 \mu\text{m}$) where the APS appears to underestimate the number concentration compared to SMPS.