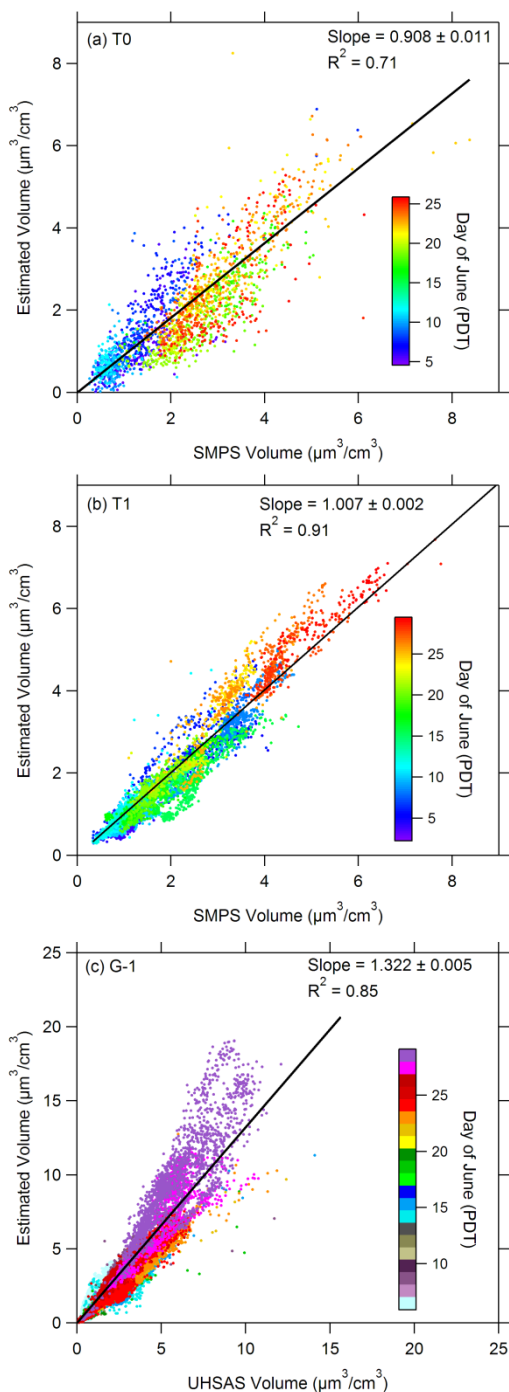
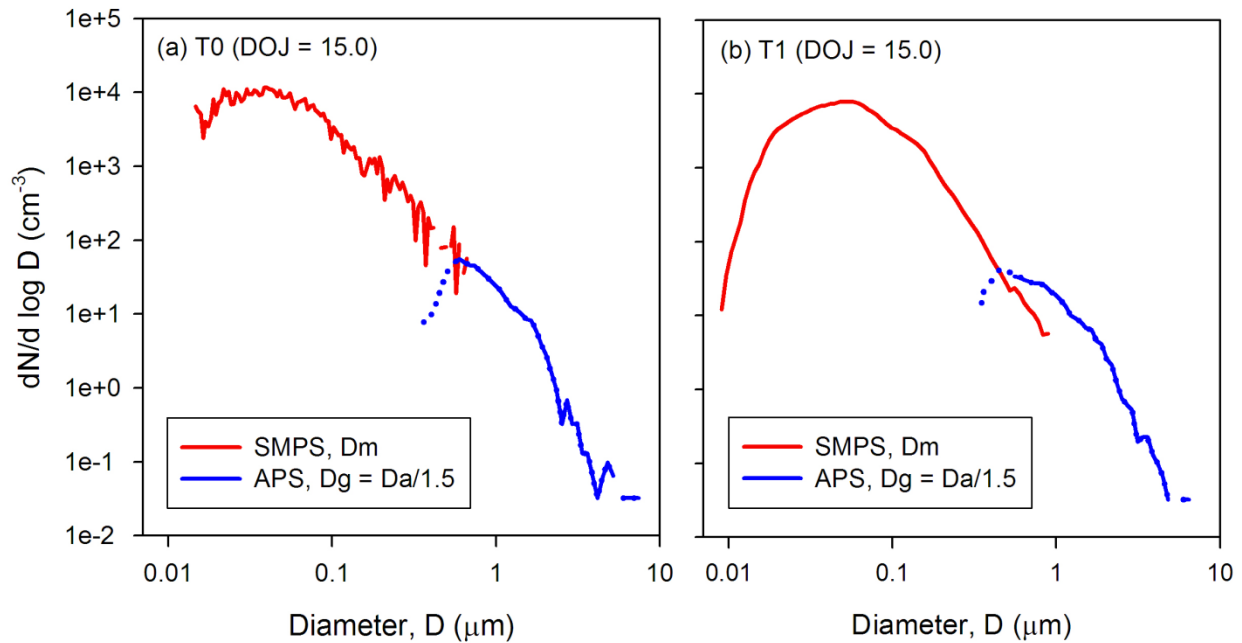


Supplementary material for “Overview of the 2010 Carbonaceous Aerosols and Radiative Effects Study (CARES)”



**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  $0.777 \text{ } \mu\text{m}$ ) where the APS appears to underestimate the number concentration compared to SMPS.