

Interactive comment on “CCN predictions using simplified assumptions of organic aerosol composition and mixing state: a synthesis from six different locations” by B. Ervens et al.

A. Jefferson

anne.jefferson@noaa.gov

Received and published: 16 February 2010

Nice paper. I wonder if you'd get better correlations with the measured CCN at the polluted sites, close to source regions, if you eliminated data with very high aerosol loading or number concentration or scaled the data wrt CN number concentration. Does your correlation drop off with CN conc. The DMT CCN manual (page 77) notes that the measured CCN drops off at high aerosol loading (CN>6000/cc) at the low %SS (<0.3%). This drop in CCN is likely due to not enough water vapor in the instrument or kinetic limitations, i.e. too short of a residence time.

Did you measure CO at any of the sites? The ratio of BC/CO can also a good indicator

C10901

of the air mass age.

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 21237, 2009.

C10902

Appendix G: Effect of SS % On Rate In CCN

Tests at DMT have shown that the maximum count rate in the CCN varies with SS%. All supersaturations have at least 6,000/cc maximum count rate. For supersaturations below 0.2%, tests show a decreased maximum count rate (see Figure 28 for test results).

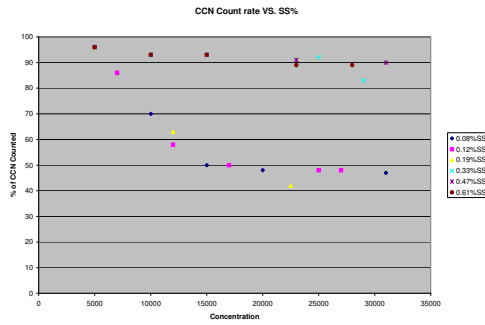


Figure 28. CCN Count Rate VS. SS%

Fig. 1.

C10903