Atmos. Chem. Phys. Discuss., 8, S8629–S8630, 2008
www.atmos-chem-phys-discuss.net/8/S8629/2008/

Atmospheric Chemistry and Physics Discussions

Interactive comment on "Aerosol hygroscopicity in the marine atmosphere: a closure study using high-resolution, size-resolved AMS and multiple-RH DASH-SP data" *by* S. P. Hersey et al.

Anonymous Referee #1

Received and published: 29 October 2008

This paper presents field campaign data and analysis of organic composition and RH effects on hygroscopic growth during the MASE-II July 2007 campaign off the coast of California. Measured results are fit to a simple empirical model relating GF, RH, and the relative amount of organics in an aerosol. This is an excellent paper overall containing important results on the GF of real organic-containing aerosols. The important final conclusion, that GF can be predicted with good accuracy knowing only RH and the volume fraction or organic material, will be usefully to researchers working on global models. It is well-written and requires no major revisions for publication. Some specific comments by page and line number are given below:

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Interactive Discussion
Discussion Paper

P16794 L12: Why was 1.65 assumed as the density? Please cite a source or explain how the density was determined.

P16798 L4: For the observed trends, can the authors rule out potential hysteresis effects related to pressure to temperature changes?

P16801 L3: What was the pure organic acid used?

P16802 L22: Is the reason these relatively high GFs indicative of this particular case (since most of the flight were on back-to-back days in the same particular location) or is there some compelling reason to believe the results from these 7 flights would apply more generally to other air masses/locations?

Interactive comment on Atmos. Chem. Phys. Discuss., 8, 16789, 2008.

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Interactive Comment