

Interactive comment on “Optical properties of absorbing and non-absorbing aerosols retrieved by cavity ring down (CRD) spectroscopy” by A. A. Riziq et al.

Anonymous Referee #3

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This is a well written paper which describes a nice application of CRD to determining optical properties of aerosol particles. I expect it will be the first of many such studies. The technique is well described and the results nicely presented. The important (depressing?) result is that we have much work ahead to understand how to deal with absorbing aerosols. I have a few suggestions for its improvement. 1. Given that the scientific point of the paper is to compare different mixing rules to experimental results for absorbing and non-absorbing particles, a brief description of the mixing rules should be given. 2. The experiments are carried out on dry particles which were formed via evaporation of aqueous solutions. For the mixed particles, is there any chance that the solid mixture might not be homogeneous? Could the organic and AS exist in sep-

arate domains? 4. The residuals plotted in Fig. 7 should show a scale. It looks as though they are similar in magnitude at low and high size parameters, contrary to what is implied by the main figure and stated in the caption.

Interactive comment on Atmos. Chem. Phys. Discuss., 6, 12347, 2006.

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Discussion Paper