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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Atmospheric black carbon can exhibit enhanced light absorption at high relative humidity" *by* Y. Wei et al.

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I thank the reviewer for his / her time spent carefully looking over the manuscript. The review focuses on the correction employed for the scatter truncation. I agree this is the most significant limitation of the data set. We did correct for this phenomenon as carefully as possible (as described in the manuscript). In many instances, we may overcorrect (which would actually lower MAC at high RH).

I point out that a few publications previously have reported increases in absorption for coated soot at high relative humidity for laboratory experiments. (I note the second paper is from our laboratory so that should be ignored)

Mikhailov et al. J. GEOPHYS. RES. 111, D07209, doi:10.1029/2005JD006389, 2006.

Wei et al. Anal. Chem., 2013, 85 (19), pp 9181–9188 DOI: 10.1021/ac401901b

The results reflected in this ACPD work are largely consistent with these previous works.

Having had six years experience with the optical measurement system used, I am of the personal opinion the data reported within reflects a true and real phenomenon for the samples studied. Nonetheless, I also fully recognize taking up arguments such as these will largely be perceived as being non-scientific. Such effort (as are most) merely represents a 'chasing after the wind' - but I digress.

Since the reviewer has recommended rejection of the manuscript under consideration for ACP, and this view is very unlikely to change, and having no ability to make additional measurements, we do not plan to invest any additional time in this work.

Interactive comment on Atmos. Chem. Phys. Discuss., 13, 29413, 2013.