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

Anonymous Referee #1

Received and published: 18 December 2013

It should be noted that limitations of truncation correction also pervade the Mikhailov et al. work. In fact, their analysis of the effects of truncation on their results are even more limited than those here, which in my opinion leads to questions about the Mikhailov et al. results as well (at least in my opinion). (Although Mikhailov et al. have the benefit of working with well-defined samples, as opposed to atmospheric samples.)

It is stated in the brief response that they did "correct for this phenomenon as carefully as possible (as described in the manuscript)." However, the description in the manuscript is exceptionally limited, amounting to a total of two lines: "To correct the optical data at high RH, a hygroscopic growth model must be used to estimate aerosol diameters and truncation effects considered. Qian et al. (2012) developed a correction scheme for the albedometer bscat measurement based on particle size parameter

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that we have employed to correct data." Perhaps with more details it could be demonstrated that the truncation correction is applied in a robust manner that accounts for the variability in the ambient atmosphere.

As I stated: the measurements may indeed be correct, and if so are very important. I simply did not find the manuscript to demonstrate this in a convincing manner.

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

ACPD

13, C10223–C10224,
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