

Interactive comment on “Increased absorption by giant aerosol particles over the Gangetic–Himalayan region” by V. S. Manoharan et al.

Anonymous Referee #2

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Review of manuscript titled with “Increased absorption by giant aerosol particles over the Gangetic-Himalayan region” by V.S. Manoharan, et al. 2013

General comments: The paper “Increased absorption by giant aerosol particles over the Gangetic-Himalayan region” by V.S. Manoharan, et al. 2013 provides a useful information of the contribution of super-micron-sized aerosol particles to absorption in the atmosphere. The paper is well written and addresses relevant scientific questions within the scope of ACP. However, my major concern is the paper did not discuss the measurement uncertainty for daily averaged data set. Because one major finding of the paper is “Absorption due to super-micron-sized particles was nearly 30% greater than

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that due to smaller particles”, the reviewer believes that it is important for audiences to know the uncertainty range of measured absorption properties and the author also should discuss what the major sources of the uncertainty are.

Minor comments:

Page 19839, Line24-25: It is not easy to find the instrument operation and associated uncertainty limits in ARM website. It will be easier for audience to get the information from a summarized table. Page 19845, Line 14-15, and Page 19846, Line 1-5: The paper concludes markedly higher measured absorption values for large size particles. Is this observed by any other measurements on site, such as Aerosol Observing System (AOS)? Figure 2 and Figure 3: Because the figure shows the daily averaged absorption/scattering coefficient, it is expected to see an error bar for each data point.

Interactive comment on Atmos. Chem. Phys. Discuss., 13, 19837, 2013.

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