

Interactive comment on “Is there a bias in AERONET retrievals of aerosol light absorption at low AOD conditions?” by Elisabeth Andrews et al.

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Received and published: 21 October 2016

A very useful paper, and it will be interesting to see how to reconcile various measurements.

Here I just want to mention the issue of temporal sampling, see also: <http://www.atmos-chem-phys.net/16/1065/2016/>

While this temporal sampling issue is important for model evaluation, it is equally important in comparing different observational datasets. I see two issues relevant to the current paper:

Page 18, Line 732-735: Fig 7 was apparently made with different samplings of the in-situ and AERONET measurements. Is that the case for other figures as well? How

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might that affect results?

Page 22, Line 925 - 934: The authors suggest better estimates of AAOD may be obtained by using SSA measured at high AOD and applying it to low AOD cases. They mention possible sampling impacts but seem to feel those may not be that important. I'd like to caution against that.

I attach a figure of the difference in yearly SSA, when that SSA is taken at high AOD or at any AOD, for three different models. At least two models allow differences of more than 0.05. (In general, the MIROC-SPRINTARS model agrees best with AERONET Lev 2 SSA while HadGEM-UKCA is often too high and ECHAM-HAM too low.)

Finally, it would be useful if the authors made a suggestion under what conditions AERONET SSA conditions may be used. Is $AOD > 0.4$ sufficient?

regards, Nick

Interactive comment on *Atmos. Chem. Phys. Discuss.*, doi:10.5194/acp-2016-818, 2016.

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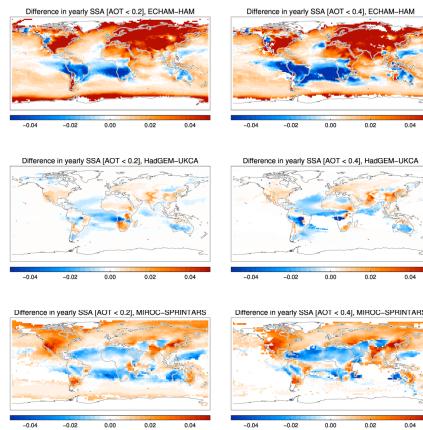


Fig. 1.