

Interactive comment on “SAGE III aerosol extinction validation in the Arctic winter: comparisons with SAGE II and POAM III” by L. W. Thomason et al.

L. W. Thomason et al.

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We wish to thank Pat Hamill and the other reviewer for their comments and sights. Their work has clearly made our manuscript better and we greatly appreciate their contribution.

Pat Hamill:

The noise in the color ratio noted in figure 13b is mostly due to noise in the POAM III 1020-nm extinction values. While it would be best if all three instruments agreed, the results in figure 13b are directly an outcome from the measurement noise seen in figure 1 and in following figures. The fact that SAGE II and SAGE III color ratios agree fairly well is the best argument available that SAGE III values are not greatly in

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error. We have clarified this in the text. We do not have a solution for the disagreement between SAGE III and the results reported by Russell et al. Based on the comparisons presented here, it seems possible for the SAGE III values to be biased somewhat, though not greatly, low. We do not wish to minimize the problem created by the Russell et al. work, we feel that our results demonstrate that SAGE III data is generally usable.

We have made the typographical corrections listed in numbered items 1-11, 13-16.

We have added text to clarify the use of PV as a matching coordinate (12).

We have redrawn figures 1, 3, 4, 5, and 6 using thinner lines than previously used. We tried the use of dots but found that many of the dots were not visible in the electronic version. We hope that this change is adequate.

We have fixed the axis offset (18)

Interactive comment on Atmos. Chem. Phys. Discuss., 6, 11357, 2006.

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