

## ***Interactive comment on “Spectral Aerosol Extinction Monitoring System (SAEMS): setup, observational products, and comparisons” by A. Skupin et al.***

**A. Skupin et al.**

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Our response to referee #2 in the supplement.

Please also note the supplement to this comment:

<http://www.atmos-meas-tech-discuss.net/6/C4044/2014/amtd-6-C4044-2014-supplement.pdf>

Interactive comment on Atmos. Meas. Tech. Discuss., 6, 8647, 2013.

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We thank the reviewers #1 and #2 for their substantial comments. We believe their effort helped improving the manuscript a lot. We tried to follow the suggestions of the reviewers as good as possible. Our response to the comments are highlighted in green.

**Anonymous Referee #2**

Received and published: 9 December 2013

General Comments: This is a paper that presents the operating principle along with the technical details, of an instrument (SÆMS) continuously measuring the spectral extinction coefficient of atmospheric aerosol particles. A case study is also analyzed, and for the reliability of the atmospheric products provided by SÆMS a comparison with other instruments (lidar, sun photometer, in situ sensors) is reported. The study reported here is, in reviewer's opinion, worth of being published in Atmospheric and Measurement Techniques scientific journal.

I would suggest to the authors, especially to the abstract and conclusion section, to highlight more the rationale behind this development. The message from this paper should be more clearly stated.

*We have added some quantitative results from our work.*

To the reviewer's knowledge, SÆMS is the first instrument capable of reproducing ambient aerosol optical properties at near ground level, and this is the major advantage of SÆMS, compared to other commercial instruments. The paper is well written, very innovative and in order to be improved I would suggest to the authors to take into consideration the following comments.

Minor Comments:

1. Page 8652, line 18 [Equation 5]: The sign of minus is missing from the right side of the Ångström exponent equation.

*We apologize for this mistake. We have corrected the equation.*

2. Page 8670: The caption of Figure 5 is really very explanatory, but it is recommended also a legend on the plots [especially for the bottom plot of Fig.5], for better and easier understanding of the case.

Fig. 1.

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