**Atmospheric
Measurement
Techniques**
Discussions

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Interactive comment on "Stratospheric aerosol particle size information in Odin-OSIRIS limb scatter spectra" *by* L. A. Rieger et al.

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We would like to thank the reviewer for their helpful comments.

- p. 5067, line 21: Add information about Odin altitude and local time development during the mission.

  This will be added.

- p. 5069, Eq(1): In the exponent the notation is a little bit unclear: $ln(sigma)2$. You mean: $(ln(sigma))2$?

  Yes, that is what was meant, we will clarify.

- Eqs. (3) and (6): How do you model Rayleigh signal?

  Rayleigh signal for the scan is modelled using SASKTRAN assuming an air density taken from ECMWF data. This will be more clearly explained in the revisions.

- Eqs. (4) and (6): You are using geometric averaging in the high altitude normalization. Please, provide some words about it.

  An explanation of this will be included.

- p. 5072, line 22: Add the name of the simulation model (SASKTRAN) here

  This will be added.

- p. 5076, lines 7-8: Please give more details. In Fig. 4 you have several cases: single/multiple scattering and different angles. The normalized eigenvalues are for what case?

  The normalized eigenvalues are for the multiple scattering kernels. Both angles and wavelengths are used in the determination of the eigenvalues. This will be added to the text.

- Eq. (15): Are you assuming that the Rayleigh normalization free of systematic error?

  Yes, Eq. 15 refers only to the error due to measurement noise. Errors in the air density profiles and SASKTRAN forward model calculations are not considered in this analysis.

- p. 5083, line 13: SAGE II started in 1984.

  Will be updated.

- p. 5083: Provide the version of SAGE II data you are using in this work.

  We used V7.00A, this will be added.