

## ***Interactive comment on “Validation of 525 nm and 1020 nm aerosol extinction profiles derived from ACE imager data: comparisons with GOMOS, SAGE II, SAGE III, POAM III, and OSIRIS” by F. Vanhellemont et al.***

### **Anonymous Referee #2**

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The paper present an interesting and well documented comparison between ACE, GOMOS, SAGE II, SAGE III, POMA III and OSIRIS vertical extinction of aerosols. The conclusion is that more or less the ACE profiles are promising, but some problems remains in the data reduction and/or in the instrument. The authors are honest, and this is how a validation paper must be conducted. The paper can be published if the following comments are taken into account:

All the figures containing the Rel. diff (%): Because of the limitation of the x-axis to -150% + 150%, some of the dashed lines are out of the figures. It could be interesting to

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extend the x-axis, or to add a comment concerning the high value of the uncertainties.

The authors say that the strong differences that can appear in the lower stratosphere and upper stratosphere could be due the high variability of aerosol content in such layers. This is true, but it can be also due to the low signal to noise ratio for the lines of sight at such altitude due to the strong atmospheric attenuation. The authors can tentatively estimate the errors due only to the low signal to noise ratios.

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Interactive comment on Atmos. Chem. Phys. Discuss., 7, 12349, 2007.

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