

Interactive comment on “SCIAMACHY Level1 data: Calibration concept and in-flight calibration” by G. Lichtenberg et al.

G. Lichtenberg et al.

Received and published: 14 March 2006

The authors would like to thank the referee for his/her constructive comments on our manuscript. The specific comments are addressed below in order of their appearance.

1. General comments

As suggested by the referee, the abstract and part of the introduction were completely rewritten. In addition the whole text was reviewed and details were added to increase the readability. Especially the section explaining the polarisation correction was re-structured, now first explaining first the general steps before going into the details of

the correction. The impact of calibration problems on trace gas retrievals is difficult to judge from the available data. There is still a lack of studies investigating the sensitivity of trace gas retrievals to specific issues in the calibration of SCIAMACHY. The paper was not intended to replace more detailed studies, but to make the user aware of the calibration issues at hand. Follow-up papers that investigate the impact of calibration issues are planned.

2. Specific comments

Note that some comments that are addressed by the re-writing of the abstract and the introduction are omitted here.

p 8926, line 22: Added the mesosphere.

p. 8926, line 25: The sentence was removed from the introduction.

p. 8928, line 23: Changed the formulation into 'SCIA has various observation modes to obtain spectra from the Earth's atmosphere, the sun and the moon.'

p. 8929, line 17: Added the description of the lunar occultation mode.

p. 8932, line 28: Changed the formulation.

Section 4: Followed the suggestion of the referee.

Figure 6: The figure was changed from the surface plot to a 2D-colour coded plot. Also the axis annotation has been changed and now shows time instead of 'Measurement #' and wavelength instead of 'Pixelbin #'.

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3. Technical corrections

Are implemented.

ACPD

5, S5844–S5846, 2005

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