

Interactive comment on “Overview of SCIAMACHY validation: 2002–2004” by A. J. M. Piters et al.

A. J. M. Piters et al.

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We would like to thank referee #1 for critically reading the manuscript.

The main concern of this referee is that the paper is too long for an introduction paper, and that it should be shortened to essentially the sections on correlative measurements and validation results.

Although we agree that the text can be shortened in several places, and we have in fact shortened the revised version considerably, we believe that also the other sections are essential ingredients of this overview.

Section 2 on validation methods is essential because it explains how the validation results should be interpreted. E.g., an average bias and rms difference with respect to a certain set of correlative data is not enough to understand how a certain error in the satellite data and its dependence on specific parameters can affect the scientific

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results. This section also explains what aspects should be investigated for a proper assessment of the usefulness of the data in a certain scientific application. This section has been cut down to a length of less than 2 columns.

Section 3 on the validation organisation is essential because it demonstrates how SCI-AVALIG methodically has set-up a novel organisational structure to ensure a life-long assessment of SCIAMACHY data quality, in spite of limitations and time dependence of the funding and data availability. We believe that the application of the methods described in section 2 and the assessment of the validation results by independent validation product coordinators will ensure an objective and complete description of the data quality. This section has been cut down to a length of 1.5 column.

Section 5 on SCIAMACHY data is essential because it describes what data is actually validated. It clarifies the complex data availability situation we had during the first years, and which is reflected in the validation papers. The information in this section therefore helps to interpret the validation results. This section has been cut down to a length of less than 2 columns.

Section 7 on validation plans is essential because it shows that the validation is not at all finished, and for some products a lot of work still has to be done. This section has been cut down to a length of 1.5 column.

Specific comments:

"1. The Abstract seems more like an abstract, where I would expect a summary of the validation results."

The whole section 6 is already a summary of the results from many individual validation papers, and in Table 6 this section is again summarised as quantitatively as possible. We argue in this paper that only giving an average bias and rms difference is not enough. Looking at Table 6 it is probably more important to note that for many products we do not have information on data quality. The quality of the products for

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which we filled in actual numbers in Table 6 and their usefulness for specific scientific applications cannot be given in such a Table. Therefore we feel that summarising Table 6 even more for the abstract is not appropriate. Nevertheless, we added lists with the scientific products already giving acceptable results in the abstract.

"1. Abstract, 1st sent.: 'is now in operation' → 'has been in operation now'"

This change has been applied in the revised version.

"2. Abstract, line 21: 'Untied to the constraints' → 'Free from the constraints'"

This change has been applied in the revised version.

"3. Section 2, line 13: SCIAVALIG is mentioned without definition."

We changed this in the revised version. The first occurrence of SCIAVALIG, and its definition, will be in Section 3.

"4. p. 7783, line 11: change 'on-board...' to 'on-board, these flights were optimised for measuring the cloud...'"

This change has been applied in the revised version.

Interactive comment on Atmos. Chem. Phys. Discuss., 5, 7769, 2005.

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