

## ***Interactive comment on “Water vapour total columns from SCIAMACHY spectra in the 2.36 $\mu\text{m}$ window” by H. Schrijver et al.***

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The authors thank the referee for his/her willingness to review the paper and his/her very positive comments.

Answer to specific comments:

1. The referee is right that, due to partial blocking of the light path from the SLS, the measured line shape is not entirely representative for the slit function during normal operations. However, we think it a reasonable assumption that the line shape in the wings (more than  $\pm 4$  detector pixels from the centre of the line) is well reflected by the SLS measurements. For the central part we have assumed the pre-launch calibration, but scaled by a factor (because the peak loses strength due to the scattering)

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determined from the SLS measurements. Admittedly this is not perfect, but the best we could think of, given the available evidence.

2. The surface pressure is taken from ECMWF data, but corrected for differences between the average surface elevation of the SCIAMACHY ground pixel and the value assumed by ECMWF. An explanation will be added to the text.

3. The referee is right that our results do not validate the spectroscopic data. In fact we avoided the term in the abstract, but overlooked it in the conclusions. We thank the referee for pointing this out.

Technical corrections: These will be implemented.

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