

***Interactive comment on “Three years of global carbon monoxide from SCIAMACHY: comparison with MOPITT and first results related to the detection of enhanced CO over cities” by M. Buchwitz et al.***

**J. Walker**

walker@atm.ox.ac.uk

Received and published: 6 March 2007

Perhaps a brief explanation of WFM-DOAS is required.

It would be useful to note the wavenumber of the CO band used in this analysis.

Perhaps some explanation of why SCIAMACHY can measure CO with nearly equal sensitivity in the troposphere and boundary layer is required. Also, it seems that the more pertinent question here relates to the random error associated with each profile level since any nadir viewing instrument using a least squares fit retrieval will have an

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identity matrix as its averaging kernel. What do these errors look like?

In addition, the results are compared with MOPITT which, being a longer wavelength instrument, presumably has less sensitivity in the boundary layer. Why not use the SCHIAMACHY averaging kernels to simulate MOPITT before making this comparison?

The description of the RMS residual analysis perhaps needs expanding.

Also, the dependence of the results on the pixel mask is a concern. How big is this effect?

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Interactive comment on Atmos. Chem. Phys. Discuss., 7, 405, 2007.

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