**Atmospheric
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Interactive
Comment

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.

M. Buchwitz et al.

Received and published: 25 March 2007

Authors answers to interactive comment by J. Walker on paper Buchwitz et al., Three years of global carbon monoxide from SCIAMACHY: comparison with MOPITT and first results related to the detection of enhanced CO over cities, Atmos. Chem. Phys. Discuss., 7, 405–428, 2007

A more detailed explanation of WFM-DOAS will be added for the revised version of the paper.

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An short explanation will be added why SCIAMACHY's averaging kernels are close to unity throughout the troposphere. We do not have the random errors for each profile level as we do not retrieve profiles but only the vertical column (we do not have profile information as the degree of freedom for signal is close to 1.0). Therefore we only have the error for the vertical column, not for profile levels.

The operational MOPITT column is obtained (as far as I know) basically by adding up the retrieved sub-columns. As the SCIAMACHY averaging kernels are essentially 1.0, applying the SCIAMACHY averaging kernels would not result in a significant change compared to a direct comparison with the MOPITT operational columns.

More details on the RMS of the fit residuum will be added. A detailed global analysis of the RMS will however not be added. This could however be the topic of a future much more detailed paper.

More information on the pixel mask and how the choice of a pixel mask influences the retrieved CO columns will be added.

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

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