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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Global emissions of non-methane hydrocarbons deduced from SCIAMACHY formaldehyde columns through 2003–2006" *by* T. Stavrakou et al.

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Dear authors,

The absorption cross sections of formaldehyde published by Cantrell et al. (1990) are about 20 percent lower than those published by Meller and Moortgat (2000).

In a laboratory intercomparison published in 2007 (Gratien et al., J. Geophys. Res. D 111, D05305, doi:10.1029/2006JD007201), the authors concluded that the correct values are very probably those of Meller and Moortgat (2000). This is also in agreement with other recent studies of formaldehyde cross sections (Pope et al., PCCP 7, 79-84, 2005; Co et al., J. Phys. Chem. A 109, 10675-10682, 2005).

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Interactive Discussion

Discussion Paper

This actually implies that the atmospheric formaldehyde columns measured and analysed in the present paper probably include an important additional systematic error, that is (as an example) as big as the difference of a-priori and a-posteriori emissions over North America.

I would suggest - as a minimum - to discuss the impact of such a systematic error on the results of this study.

Best regards,

Johannes Orphal

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Interactive comment on Atmos. Chem. Phys. Discuss., 9, 4609, 2009.