

Interactive comment on “Isotope effect in the formation of H₂ from H₂CO studied at the atmospheric simulation chamber SAPHIR” by T. Röckmann et al.

Anonymous Referee #1

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This is a seemingly solid piece of work that has been carried out fairly carefully. The authors point out the shortcomings of the presented methodology and note some things could have been done differently to improve the results, but those shortcomings don't take away from the main point of the paper. I therefore have no major criticisms in the approach or its conclusions. The following comments are minor in nature. I find the importance of H₂ in the atmosphere, particularly with respect to the ozone hole recovery rate, to be a bit overstated in the first part of the paper. The impact of H₂ on stratospheric O₃ (particularly in the Southern Hemisphere) is small in relation to the other important factors that determine catalytic O₃ loss. Why is the quoted uncertainty in the presented measurements identical to that published in Feilberg et al. (2007)?

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Everything is plus/minus 0.03 per mil. This seems unlikely, especially considering the authors here used IRMS and Feilberg et al used FTIR. If indeed this is coincidental, it deserves some sort of brief explanation.

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 25187, 2009.

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