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The authors describe experimental findings from the OH-initiated oxidation of DMS conducted in a chamber under almost atmospheric conditions. Bimolecular RO_2 lifetime was varied in a wide range from > 10 s to < 0.1 s by changing NO in the reaction gas from 10 ppt up to 50 ppb. A suite of analytical techniques was used for comprehensive analysis of the resulting product distribution in the gas phase as well as of the formed aerosol products on a seed. Reaction conditions for the long bimolecular lifetime, standing for the pristine atmosphere, allowed studying the product formation in the abstraction channel governed by $CH_3SCH_2O_2$ isomerization. The rate coefficient of this isomerization step was re-investigated being in good agreement with other experimental values. Especially the fantastic sulfur closure in the measured products is worth mentioning, which demonstrates the accuracy in conducting the experiment and in product analysis.

This work represents a next, very nice piece of work from this group on the understanding of chemical processes in the reaction of OH with DMS, here especially for the 1st generation gas-phase products.

The manuscript is well written and suitable for publication in this journal. Here only a few minor comments:

1) While the agreement between experiment and model in the low-NO case is very good, there are clear differences in the high-NO case. Here, the MSA production seems to be strongly underestimated by the mechanism. High-NO experiments have been already done 20 years before by the Wuppertal group and by others, mostly with relatively high reactant concentrations. Are the findings from the present work consistent with the former results? Can we learn anything from the comparison?

2) Product distributions are presented for very long and very low bimolecular RO_2 lifetimes, > 10 s and < 0.1 s. But what happens in between? The RO_2 lifetime was varied in order to estimate the rate coefficient of $CH_3SCH_2O_2$ isomerization based on HPMTF yields. Could the authors provide more information on the other products as a function of lifetime?

3) k($CH_3SCH_2O_2$ isomerization) was obtained in an indirect way relative to k(RO_2 + NO), right? What was the used value of k(RO_2 + NO)? It´s important to have a comparison with other studies. Was the $CH_3SCH_2O_2$ + HO_2 reaction neglected in the analysis? Please explain more in detail the determination of k(isomerization).
Moreover, $CH_3SCH_2O_2$ isomerization leads to the next RO_2 radical $HOOCH_2SCH_2O_2$ after O_2 addition. And the next isomerization step in $HOOCH_2SCH_2O_2$ finally ends up in HPMTF + OH. What is known about the rate of $HOOCH_2SCH_2O_2$ isomerization? Is $HOOCH_2SCH_2O_2$ + NO distinctly slower even for the high NO addition of 50 ppb? Otherwise it must be considered in the data analysis because HPMTF was taken for the determination of k($CH_3SCH_2O_2$ isomerization), not the direct isomerization product $HOOCH_2SCH_2O_2$.

4) It is not the first time that HPMTF was detected by ammonium CIMS. In Berndt et. al a suite of ionization schemes was used for HPMTF monitoring including ammonium (with the PTR3), see fig. S3 and explanation in the main body.