Atmos. Chem. Phys. Discuss.,
doi:10.5194/acp-2016-663-SC1, 2016

Atmospheric Chemistry and Physics Discussions

Interactive comment on "Sensitivity model study of regional mercury dispersion in the atmosphere" *by* Christian N. Gencarelli et al.

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Received and published: 8 August 2016

The mechanism used here for Br-initiated oxidation of mercury (from Gencarelli et al (2015)) cites Goodsite et al (2004) for the rate constants for HgBr reacting with Br and OH. These two rate constants are given as equal in Gencarelli et al. However, Goodsite et al did not report a rate constant for HgBr reaction with OH, so Gencarelli et al (2015) assumed that these two rate constants are equal.

If a model is going to treat these two rate constants as equal, it seems reasonable to include the reactions of HgBr with NO2, HOO, ClO, and BrO with the same rate constant, as was suggested by Dibble et al (2012).

References

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Interactive comment on Atmos. Chem. Phys. Discuss., doi:10.5194/acp-2016-663, 2016.

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