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www.atmos-chem-phys-discuss.net/12/C12926/2013/

Atmospheric Chemistry and Physics Discussions

Interactive comment on "Evaluated kinetic and photochemical data for atmospheric chemistry: Volume VI – heterogeneous reactions with liquid substrates" *by* M. Ammann et al.

Anonymous Referee #3

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IUPAC data evaluaion Review of manuscript: acp-2012-706

The IUPAC data evaluation on heterogeneous chemistry is an enormous task in terms of the time taken by the authors, particularly the lead author. Data evaluation is always a difficult issue since it involves many different types of experiments. Authors may not aware of all the intricacies of different experimental techniques used in producing the results and rightfully so. The data evaluation is very important because of all the data of similar experiments are available in one place and easy for the users to look into the deficiency of any set of data and design high quality experiments that would help to address some of the controversies. As people use the review, I am sure other users

may make some useful comments that would improve the evaluation in the future. The authors should consider the comments by other two reviewers. They are very helpful. I have a few general comments: There is no figure of data with any of the results. May be in the next version, authors may consider to include figures. I agree that the interested parties can look up the original paper.

Technical corrections:

Page 32156: These two references need to be moved to the alphabetically appropriate place: Kleffmann, J., Kurtenbach, R., Becker, K. H., and Wiesen, P.: Faraday Discuss., 100, 5 121–127, 1995. Kleffmann, J., Becker, K. H., and Wiesen, P.: Atmos. Environ., 32, 2721–2729, 1998.

Page 32157: What is Saltzman reaction? May be a reference and a short description would be useful to the reader.

Page 32184, line 16: Typo: Replace "ressistance" with "resistance"

Page 32283: "Table: VI.A2.14 ICl + Br^- → IBr + Cl^- Experimental data": Perhaps reference is missing just before "AFT-CIMS (b)" Should it be "Braban et al. or Holmes et al."?

Page 32363: VI.A4.11 N2O5 + H2O (aqueous sulphuric acid aerosol) - "Talukdar et al. (2012), Talukdar, R. K., Burkholder, J. B., Roberts, J. M., Portmann, R. W., and Ravishankara, A. R.: J. Phys. Chem. A, 116, 6003–6014, 2012" also reported N2O5 uptake on 50 and 60 wt% H2SO4 at 210 and 220 K (Table 4 of this reference). The authors may wish to include those also.

Page 32470: Table of preferred values: Middle column, second and third lines: exponents should be 104 (i.e., 10000 and not 0.0001).

Page 32471, line 16: "HNO3" should be "HNO3" – just a subscript!

Please also note the supplement to this comment:

http://www.atmos-chem-phys-discuss.net/12/C12926/2013/acpd-12-C12926-2013-supplement.pdf

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Interactive comment on Atmos. Chem. Phys. Discuss., 12, 32109, 2012.