

***Interactive comment on* “Evaluated kinetic and photochemical data for atmospheric chemistry: Volume IV – gas phase reactions of organic halogen species” by R. Atkinson et al.**

Anonymous Referee #2

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This paper describes a major critical review of laboratory measurements on the kinetics and photochemistry of halogenated organics relevant to the atmosphere. The review has been carried out by the IUPAC sub-committee on Gas Kinetic Data Evaluation, which has been operating since 1980. The panel consists of about 10 members who are all very well distinguished in laboratory experimental and/or theoretical studies. This review continues to maintain the very standard that they have achieved previously.

The introduction provides some historical background, and then explains for non-experts in kinetics (i.e., the majority of atmospheric modellers for whom a review like this is critical), how the temperature- and pressure-dependences of the recommended

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rate coefficients are to be used, and the basis for the evaluated errors. Similar tutorial information is provided for photochemical processes.

What I particularly like about the way each section is set out is that there is a summary of the recommended physico-chemical parameters, followed by data-sheets on the individual reactions. These list ALL the experimental measurements, and then explain how the recommended value is arrived at. This is important information, since the recommendations often have to be made by evaluating a handful of measurements, so the reader can make their own evaluation of the panel's conclusions.

In conclusion, this is a major publication which will be very widely used. I recommend publication without any substantive changes.

Interactive comment on Atmos. Chem. Phys. Discuss., 7, 16349, 2007.

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