

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

U. Pöschl

poeschl@mpch-mainz.mpg.de

Received and published: 20 August 2005

In analogy to the preceding volumes of evaluated kinetic and photochemical data for atmospheric chemistry prepared by the IUPAC Subcommittee on Gas Kinetic Data Evaluation, the paper by Atkinson et al. again provides a very valuable resource for atmospheric research and modelling.

As outlined in a couple of recent model framework papers (Pöschl et al., 2005; Ammann and Pöschl, 2005), I hope that similarly consistent and comprehensive collections of evaluated kinetic parameters will also be prepared for aerosol and cloud surface

Full Screen / Esc

Print Version

Interactive Discussion

Discussion Paper

chemistry and gas-particle interactions (heterogeneous and multiphase atmospheric processes).

With regard to clarity and consistency of the terminology applied in the present paper by Atkinson et al., I would like to add a couple of comments and suggestions.

It seems that the use and distinction of the attributes “gas phase”, “photochemical”, and “thermal” is not entirely clear and unambiguous. If I am not mistaken, the manuscript deals with gas phase reactions only, including thermal and photochemical reactions of gas phase species.

Thus I would like to suggest the following modifications upon revision of the manuscript:

1) Include the term “gas phase” in the manuscript title:

Evaluated kinetic and photochemical data for atmospheric chemistry: Volume II - gas phase reactions of organic species

2) Adjust the second sentence of the abstract (p. 6297, l.4):

It covers thermal and photochemical gas phase reactions of organic species, ...

3) Restructure the sub-sections of manuscript section 3:

3.1. Thermal reactions

3.1.1. Conventions concerning rate coefficients

3.1.2. Treatment of combination and dissociation reactions

3.1.3. Treatment of complex-forming bimolecular reactions

3.2. Photochemical reactions

3.3. Assignment of uncertainties

References:

[Full Screen / Esc](#)[Print Version](#)[Interactive Discussion](#)[Discussion Paper](#)

Pöschl, U. , Rudich, Y. and Ammann, M.: Kinetic model framework for aerosol and cloud surface chemistry and gas-particle interactions: Part 1 - general equations, parameters, and terminology, Atmospheric Chemistry and Physics Discussions, 5, 2111-2191, 2005.

Ammann, M. and Pöschl, U.: Kinetic model framework for aerosol and cloud surface chemistry and gas-particle interactions: Part 2 - exemplary practical applications and numerical simulations, Atmospheric Chemistry and Physics Discussions, 5, 2193-2246, 2005.

[Interactive comment on Atmos. Chem. Phys. Discuss., 5, 6295, 2005.](#)

Interactive
Comment

Full Screen / Esc

Print Version

Interactive Discussion

Discussion Paper