

Interactive comment on “Database for the kinetics of the gas-phase atmospheric reactions of organic compounds” by Max R. McGillen et al.

Anonymous Referee #3

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This article describes a newly released database of kinetic parameters for the gas-phase reactions of organic compounds with the atmospheric oxidants OH, NO₃, O₃ and Cl. The database is online, searchable and larger than all previous compilations of this information. It is an incredibly valuable resource for the atmospheric science community and I sincerely hope that it is maintained over the coming years. The article is essentially a reference document that accompanies the database and the associated instruction manual. Earth System Science Data is a very appropriate journal for this article.

The article and the instruction manual are both very well written and I only have some very minor comments for consideration by the authors.

1. The database does not contain all types of atmospheric reactions of organic com-
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pounds. For example, photodissociation and the reactions of various organic peroxy (and oxy) radicals are not considered. The authors should therefore consider rewording the title thus: Database of kinetic parameters for the gas-phase reactions of organic compounds with the atmospheric oxidants OH, NO₃, O₃ and Cl.

2. Line 23: Rephrase sentence thus: Organic compounds with a large variety of functional groups are present in this database,
3. Line 25: Recommendations are. . . .
4. Line 63: As shown in Figure 1. . . .
5. Line 89: Use times symbol instead of x
6. Line 103: . . .and a reference compound. . . .
7. Line 173-175: This sentence contains the word “contained” or a variant several times. . .re-phrase
8. Line 211 and 213: lookup?. Why not “search”?
9. Line 276: . . .is necessary for. . .
10. Line 297: . . .species that do not. . . .
11. Line 310: . . .consumed in the troposphere, . . .
12. Line 365: . . .is likely to depend on. . . .
13. Line 373: Delete “perceived”. The need is real.
14. Instruction manual and spreadsheet: use the term rate coefficient instead of rate constant. Also, add a space between number and units. Page 11, line 5: delete “gives”.
15. It would be great if users could contact the database managers to give suggestions etc. Is this opportunity available on the homepage of the database?
16. Finally, the database will need a name. . .the EUROCHAMP Kinetics Database?

