Interactive comment on "Technical Note: Monte-Carlo genetic algorithm (MCGA) for model analysis of multiphase chemical kinetics to determine transport and reaction rate coefficients using multiple experimental data sets" *by* Thomas Berkemeier et al.

Anonymous Referee #3

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The authors present a Monte-Carlo Genetic Algorithm tool for fitting large sets of input parameters of kinetic multiphase atmospheric chemistry box models using multiple experimental data sets. The manuscript is well written and is recommended for publication in ACP after the authors address the following minor comments.

1) Line 73: Please define the term "non-orthogonal input parameters".

2) Line 80-82: While I generally understand what the authors are trying to say here,

it would be useful to elaborate a bit on what the term "the most limiting processes" exactly means in this context. It would be great to briefly illustrate it with an example, if possible.

3) While MCGA will prove to be a powerful tool in interpreting experimental data, I appreciate the discussion of its limitations in section 3. This is not presently reflected in the abstract. I suggest adding a sentence in the abstract that cautions the future users of such a tool to its limitations as well as potential solutions to overcome them (e.g., broader range of experimental techniques and approaches, etc.).

Interactive comment on Atmos. Chem. Phys. Discuss., doi:10.5194/acp-2017-45, 2017.