

Interactive comment on “MP CBM-Z V1.0: design for a new CBM-Z gas-phase chemical mechanism architecture for next generation processors” by Hui Wang et al.

Anonymous Referee #2

Received and published: 22 June 2018

My previous review had some formatting issues where 3 of the lines were truncated, and I'm sorry for any confusion caused. I include these comments below.

General Comments

5. CBM-Z output is plotted for 10 model hours, and within this time the relative error introduced by the optimisations is less than 0.05% (just), as seen in Figure 4 and mentioned throughout the manuscript. However, it is clear that this error is increasing for some species (e.g. H₂O₂, SO₂, and H₂SO₄ as presented, and possibly others not shown). If these simulations were run for longer than 10 hours, would these errors still be below 0.05%? For confidence in the improvements described I would expect to see

[Printer-friendly version](#)

[Discussion paper](#)



that the errors remain low for the length of a typical CTM simulation, which could be years depending on how the author's CTM is used. If the conditions used are more realistic (see point 4 above) do these errors increase?

Specific Comments and Technical Corrections

P1L19 - I question whether the <0.05% figure is correct (see General Comments)

P6L17 - as I have mentioned in the General Comments, how robust is the error of range <0.05%?

Interactive comment on Geosci. Model Dev. Discuss., <https://doi.org/10.5194/gmd-2018-42>, 2018.

Printer-friendly version

Discussion paper

