

Anonymous Referee #3

General comments:

- *The authors have addressed my comments well. I agree with how the text has been updated to use sensitivities instead of uncertainty when comparing different MEGAN versions. Also I like how you have updated the descriptions of the MEGAN versions as this is much clearer. I also like how you have added comparisons against formaldehyde satellite columns and incorporated more information for all the ground isoprene observations in Table 4. Thanks for making these update.*

We thank the reviewer for the detailed and valuable comments through the review process. These suggestions have guided us to make corresponding corrections and supplements very well, and they are very helpful for improving the quality and fluency of the manuscript.

Technical corrections:

- *Line 116: It is okay to use “large uncertainties” here instead of “large modeling sensitivities” if you desire. Here you are directly explaining the current uncertainties in estimating BVOC emissions using MEGAN, so it is fair to use uncertainty here.*

Yes. We revised the sentence as “**However, there still remain larger uncertainties in the estimation of BVOCs emission with MEGAN, due to the uncertain emission rates of some compounds, the limited knowledge of environmental activity factors controlling the BVOCs emissions, the accuracy of vegetation distributions, and etc. (Guenther, 2013).**”

- *Line 462: “southwest of domain” to “southwest region of the domain”*

Corrected.

- *Line 509: “north of domain” to “northern part of the domain”*

Corrected.

- *Line 801-803: This sentence is kind of a clunky: Possibly rephrase to something like this: “BVOC emissions over East China are sensitive to the version of MEGAN used.”*

We rephrased the sentence as “**The BVOCs emissions over East China are sensitive to the versions of MEGAN used**”.

- *Line 803 for “previous studies” here, can you provide a reference?*

We cited references here.

- *Line 1713: “dataset” and do you mean “the first column is from the satellite retrievals”?*

We corrected the figure caption as “**Spatial distributions of total column tropospheric formaldehyde concentration (include biogenic and anthropogenic emissions) in April**”

and July with different versions of MEGAN using the VEG-2015 vegetation dataset.
The first column is from the satellite retrievals.”.