

Dear Dr Kourtchev,

Thank you for your comments and suggestions. We have taken them into account in the revised manuscript (April 16).

Best regards,

Roland BENOIT

Comments : I found a few other statements which are necessary to improve or reduce the ambiguity of the manuscript.

Line 25: replace 'oxygenated products' with 'molecular formulae'

Line 40: abbreviation should be done in the first appearance order, so abbreviate VOC in line 40

Line 47: replace ' α - Pinene' with ' α -pinene'

Line 165: delete repeating sentence

Line 177: remove dots after 'CHO,...'

Line 178: remove dots after 'CHO,...'

Line 231: Move HESI settings into the Experiment's section

Line 283: Replace 'chemicals' with 'molecular formulae'

Line 287: Replace 'new chemical formula' with 'additional chemical formulae observed in the current study (also referred as 'new chemical formulae' below)...

Line 325: Replace 'a number of oxygen atoms increasing to 9' with 'up to 9 oxygen atoms'

Line 326: Replace 'globally' with 'mainly' (Please replace 'globally' across the text as this is not the correct choice of word in English).

Line 337: 'global' not sure if I understand this sentence... please rephrase

Line 465: Figure 9, capitalise 'Representation'

Line 469: Remove this sentence as it does not provide any information or value to the results and discussion

Line 478: Replace 'we noticed that' with 'our study suggest that'

Line 478: Complete the sentence as it is not clear similar to what?

Line 492: Remove 'former atmospheric chemistry' from the sentence

Line 513: Replace 'In any case, with' with 'Visualisation tools (e.g. VK diagrams, DBE plots) allowed to differentiate a number of the molecules that are likely related to the experimental conditions used in the current study (e.g. low temperature combustion)'

Line 514: Rephrase 'Among the chemical formulas observed in this work, some had not been reported in the 9 atmosphere-oriented studies considered here for comparison' with 'Among the chemical formulae observed in this work, some have not been reported in the studies considered here for comparison. It should be noted that other factors including experimental conditions (e.g. the use of flow tube reactor vs smog chambers) and/or MS instrument acquisition parameters (e.g. as demonstrated in the SI Figure 9) can be responsible for the observed differences with the compared studies.

I have suggested to add a statement to the introduction and conclusion section to address the two reviewer's comments on the relevance of the work to the atmospheric chemistry but for some reason it wasn't taken on board. I strongly suggest, adding a statement (at least as suggested above for line 514) to address this concern.

Here are the changes we have made :

All comments have been taken into account and changes have been made.