

We'd like to thank Referee 2 for their technical corrections. Below we respond to each of the points (reviewer comments in black and our responses in blue).

Minor technical details that should be corrected.

Line 306: "Despite we showed that..." please fix the grammar of this sentence.

The sentence was revised to: *Despite we showed that the volatility quantification from both approaches was challenging, the volatility derived from the partitioning calculations was more realistic and broadly comparable with the concurrent TD measurements.*

Line 382 onwards: "Note that the volatility distributions from the TD measurements are expressed as a function of the total SOA particle mass whereas the FIGAERO-CIMS as a fraction..." The part about FIGAERO-CIMS needs modification to make sense, such as "...whereas the from the FIGAERO-CIMS are shown as...".

We thank the reviewer for this suggestion. We have altered the sentence based on your suggestion that now reads as: *"Note that the volatility distributions from the TD measurements were expressed as a function of the total SOA particle mass whereas from the FIGAERO-CIMS as a function of the total signal, assuming uniform sensitivity"*

Line 615: "based on the on the" has extra repetition

Repeated words were deleted.

Line 702: "...products found in the binary ternary mixtures.." is this supposed to only have one of them mentioned, or "binary and/or ternary"?

We thank the reviewer for pointing out this typo. Indeed we were referring to binary and/or ternary so we have added the "and/or" between binary and ternary.

Line 755: "...VOC concentrations...are expected...". not "is"

We thank the reviewer for pointing out this grammatical error. We corrected this according to your suggestion.

Line 770: "...can be extrapolated globally, but to demonstrate.." instead of "rather than to". the current version is not grammatically correct.

We thank the reviewer for pointing out this grammatical error. We corrected this according to your suggestion.