

Dear Prof. Aijun Ding

Please, find our corrections for the revised manuscript.

The authors have substantially improved their paper by reconstructing a large part of their initial submission and by providing a more comprehensive analysis. Even if they have ignored my suggestion for separating the results and discussion sections, the revised version reads well and justifies such decision. I'm also happy to see the presented model vs measurements comparisons but still curious to understand why  $\beta$ -caryophyllene and aldehydes do not fit the model. I would still suggest including these results even as supplement. However, this shall not be a prerequisite for publication. I believe that the current manuscript warrants a publication in ACP after addressing few minor issues.

*The modelling results are included in the Table 5 also for aldehydes and  $\beta$ -caryophyllene. Unfortunately, we cannot give the explanation why they do not fit better.*

L26. Please provide some % (including uncertainties) for a- and b-pinene.

*The % values with deviations have been added to the abstract.*

L92. I would suggest to include the setup in the main paper and not in the supplement.

*The setup has been placed to the main text.*

L105. The  $\mu\text{m}$  shall not be underlined.

*It is no longer underlined*

L184. "Were higher than normal". How much?

*The average temperatures in central Finland were 2-3 degrees higher than the normal long-term average temperatures. This has been added to the text.*

L185. "Had very little precipitation". How much?

*The precipitation was 70 % of the long term (30 years 1971-2000) average values in the whole country, and about 60 % in the central parts. This has been added to the text.*

L189. What is the long term average?

*Long term average means previous 30 years. This has been added.*

L366. It's not clear what you want to say. Please revise.

*The sentence has been revised and it is now "It is also possible to measure total OH reactivity directly and experimental total OH reactivity measurements by Nölscher et al. (2013) showed that the contribution of SQTs in Norway spruce emissions in Hyytiälä was very small (~1%)."*

