We appreciate the referee's valuable comments on our work. Our responses to the specific comments and some changes made in the manuscript are given below.

Responses to the comments of Referee#1 (Dr. Magda Claeys):

Specific comments:
Comment 1: Line 17 – abstract: It is mentioned that the SFAs show a correlation with sucrose, which is a marker for plant pollen. I am not sure this correlation is very relevant. As discussed below, it would be meaningful to explore other correlations.

***Reply 1*: We mentioned the correlation between SFAs and sucrose to indicate that the SFAs mostly originated during the growing season, which is relevant to the emission of plant pollen. With regard to exploring the other correlations, please see our Reply 3 below.**

Comment 2: Line 29: The authors write: "Because of their chemical structure and the similarity of parts of this structure to water, lipids are surface-active". I found this sentence unclear and too general, and suggest to delete it. It is not strictly necessary.

***Reply 2*: As the referee suggested, the sentence has been deleted in the revised text.**

Comment 3: Lines 27 – 35: In this section, the authors discuss the possible origin of the SFAs and argue that. I am not convinced about this interpretation. An alternative explanation could be that they are due to photochemical degradation of fragile wax surfaces of higher plants, releasing components of plant waxes, i.e, fatty acids and long-chain fatty alcohols, into the atmosphere, and that this phenomenon is most important in the growing season. It would therefore be relevant to check whether there is any correlation with fatty acids and solar radiation. I am aware that fatty acids were not measured in this study but it could be mentioned that this would be relevant in a future study, but perhaps data are available about solar radiation. The correlation of SFAs and sucrose could just be coincidental. I think it would be more safe to write (line 34): ". . ... due to large emissions of plant waxes or components thereof (i.e., fatty alcohols)". I wonder whether there is any report in the literature reporting the direct emission of waxes from plants?

***Reply 3*: As we described in the original manuscript, there is a report which showed that the SFAs identified are indeed present in plant leaves (Yamamoto et al., 2008); *n*-nonacosan-10-ol has been identified as a major compound in epicuticular waxes.**

Therefore it is likely that they originate from the emission of plant waxes. In addition to this direct emission, we agree to the referee's comment that photochemical degradation of fragile wax surfaces of higher plants could produce the SFAs in the aerosols. Unfortunately, within our relatively long sampling duration of 1–2 weeks, light intensity was highly valuable, the time scale of which was much longer than possible time scales of photochemical degradation. This might make the correlation rather insignificant. As the referee suggested, we have revised the sentence as follows (P.4, L.41-P.5, 1): "*These results suggest that the increase in the mass concentrations of n-nonacosan-10-ol and the other SFAs is due to large emissions of plant waxes or components thereof (i.e., fatty alcohols) from the forest leaves into the atmosphere.*"

Comment 4: Tables 1 and 2: The number of significant digits should be reduced to 2 or to 3 in case the number starts with "1".

***Reply 4*: The number of significant digits has been reduced to three as pointed out.**

Technical Comments:
Technical corrections:
(1)Line 19 – abstract: . . ... from plant waxes and . . .. . .
(2)Line 31: . . .. . . of long-chain hydrocarbons . . ...
(3)Line 36: . . ... long-chain alcohols . . ...
(4)Page 2 – line 1: . . .., a secondary FA (SFA), ...
(5)Page 2 – line 8: . . .., we used gas chromatography-mass spectrometry (GC-MS) to identify . . ... Note: the abbreviation "MS" stands for "mass spectrometry" and not for "mass spectrometer". See article: K. K. Murray, R. K. Boyd, M. N. Eberlin, G. J. Langley, L. Li, Y. Naito. Definitions of terms relating to mass spectrometry. IUPAC Recommendations 2013. Pure Appl. Chem., 85, 1515-1609, 2013].
(6)Page 2 – line 9: . . .. and total suspended . . ...
(7)Page 2 – line 18: Note: there should be a space before degrees centigrade.
(8)Page 2 – line 33: same comment as above.
(9)Page 3 – line 10: same comment as above.
(10)Page 3 – line 11: . . .. for Gas Chromatography-Mass Spectrometry (GC-MS). Note: see comment above relating to "MS".
(11)Page 3 – line 14: . . ..., trimethylsilylchloride, ...
(12)Page 3 – line 15: . . .. . . using a gas chromatograph . . ... Note: the abbreviation "GC" stands for "gas chromatography" and should not be used to refer to the instrument.
(13)Page 3 – line 16: . . ... and coupled to a mass spectrometer (MSD5975C, Agilent).

Note: see comment above relating to “MS”.

(14)Page 3 – lines 17 – 18: . . .. were elucidated with low-resolution GC-MS (MSD5975C, Agilent) as well as with high-resolution GC-Time-of-Flight (TOF)-MS (JMS-T100GCV, JEOL) using electron ionization (EI).

(15)Page 3 – line 35: it would be more correct to write: “The ion at m/z 73, corresponding to [Si(CH3)3+], is characteristic for TMS derivatives containing one or more derivatized OH groups.

(16)Page 4 – lines 3 and 4: delete “=” after “m/z”.

(17)Page 4 – line 16: . . ... or similar sources as those of . . ...

(18)Page 8: legend of Table 2: chemical names should not be capitalized: . . ... nnonacosan-10-ol . . .., n-nonacosan-5,10-diol .

Reply **: We appreciate the referee’s careful corrections. We made all the technical corrections from (1) to (18) above.**