

I thank the authors for updating the manuscript. Nevertheless, there are still incorrect statements, internal inconsistencies and technical mistakes.

Figures, tables and results were not prepared and discussed carefully.

The updated manuscript does not meet the standards of ACP.

I divide my comments into two major parts. First, I address some author responses.

Afterwards, I address specific comments in the updated manuscript.

I put all author comments by Wimmer et al. in blue italic font.

Replies to Author comments:

All the precipitation days have been excluded in the revised manuscript for the results shown in Tables 2 and 3 and Figures 2 and 3.

Reply to author comment:

According to table 1, the authors reject minimum 85% of all wet season data. Please justify your results are still representative for an Amazonian wet season.

We removed pristine from the revised manuscript, as our focus for the dataset presented in our manuscript is not on a pristine environment. Nucleation mode particles have been observed in the Amazon region in the vicinity of Sao Paulo (Backman et al., 2012).

Reply to author comment:

This statement raises serious concerns. Sao Paulo is some 3500 km SE of Manaus - it is definitely not close to the Amazon region. There is a similar statement in the abstract.

Additional specific comments related to the updated manuscript:

I do not list all typos and grammar mistakes - the manuscript needs a careful revision, especially in 2.4 and 3.

The authors mix up their notations for the two different sites. Still you can find 'outside' and 'inside rainforest' or 'rainforest canopy' or 'pasture'.

l. 35: 'The occurrence of NPF on ground level in the Amazon region has been observed previously only in the vicinity of large cities.'

The statement needs justification. If it is related to Backman 2012, it is incorrect.

paragraph 2.4: In this paragraph multiple statements repeat - it needs to be revisited.

l. 316: It is not clear what the authors refer to.

l. 345: 'The intermediate (2-4) positive ion concentrations are about a factor of 2 higher (16 (-) wet, 29(+) wet; 18 (-) wet, 32 (+) dry).' - wet, wet, wet, dry - there is something wrong.

l. 358: The presented numbers don't match those in the respective table.

l. 362: The presented numbers don't match those in the respective table.

l. 415: The Wang 2016 statement is repetitive.

l. 473: 'The results of the back-trajectory calculations are shown in Figure 10. On non-NPF days, the 50 th percentile of air masses originate from about 2.6°S, 56.6°W and 537.4 m.a.s.l., a location on the Amazon river upstream. On NPF days, the back-trajectory calculations show an origin at 1.6°S, 56.5°W and 738.9 mm a. s. l.; further north, which is an area with dense rainforest.'

The quoted air mass origins do not fit to the coordinates in the figure. Also, one should not interpret one single point of a trajectory as the specific origin. Also, 738.9 mm seems wrong.

l. 487: There is no table 4.

l. 532: According to table 1 there were 517 rainy days instead of 646 - which is wrong as well. The yearly sums add up to 643 rainy days.

Additional technical comments related to figures and tables in the updated manuscript:

Table 1: Some numbers are incorrectly summed up.

Also, it seems unlikely that there was no rain in March 2012 in the middle of the wet season.

Table 2: The presented numbers are not consistent with the numbers in the text.

Example: the CPC concentration at T3 is according to the text 1000 per cc (2400) for the wet (dry) season. According to the table it is 1000 per cc for both seasons.

Additionally, the median CPC concentration for the wet season is lower than the first quartile (see the table). The in the text indicated 2400 per cc for the dry season are higher than the indicated third quartile. These kind of mistakes occur in all 3 versions of this manuscript which is very concerning.

Table 4 is missing.

There are typos in almost all figure captions and/or labels.

Figure 2: There is a lot of variation during February. This is not discussed.

Additionally, the units are missing. Furthermore, the label states you refer to T0t, the caption states it is the outside forest station.

Figure 3: The units are missing.

Figure 4: The precipitation unit is wrong.

Figure 5: The figure raises a lot of questions. Why is the number of days with and without rain zero for March, why is it even possible that both is zero?

One other example: according to table 1, it was raining on 23 days each in June 2012 and June 2013 but in this figure the number of rain days is between 10 and 15. Figure 5 is totally inconsistent with table 1.

Additionally the unit for precipitation is missing.

Figure 6: In an earlier version, the rain rates at the two stations were comparable. In this version they are different by a few orders of magnitude. It is concerning that the authors do not recognize or discuss this.

Figure 10: Units are missing.

Figure 11: Why is the lower cut off of the SMPS at 20 nm?