

Interactive comment on “CCN activity and organic hygroscopicity of aerosols downwind of an urban region in central Amazonia: Seasonal and diel variations and impact of anthropogenic emissions” by Ryan Thalman et al.

Anonymous Referee #2

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Overall: The manuscript in overall is very well written, and in agreement with scope of ACP. The scientific issues were well addressed, and are relevant. Several important measurements were performed, which were well treated and discussed, being an important scientific contribution. Therefore, I recommend publish the manuscript in ACP. However, I have few specific questions and technical corrections.

Specific comments and questions:

Line 105: Include references to support the affirmation “The hygroscopicities of typical

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inorganic in ambient particles are relatively well known”

Line 106: Please comment this sentence and clarify: “atmospheric aerosols consist of a large number of organic compounds, which often dominate the total fine aerosol mass”. Which type of region, urban, rural, forest, etc?

Line 303-305: Why the authors use the same size distribution shape? What is the potential implications?

Line 352: The authors said that it was correlated with concentrations of levoglucosan, vanillin and anthropogenic emission of aromatics. However, not mentioned in the section 2.4. this measurements. Please included.

Line 393: Define CN

Line 428: The authors could explain or comment why no clear seasonal trend was observed for sulfate volume fraction?

Lines: 431-432 and 442-443 its look contradictory as well in the conclusion, in lines 699-701 and 704-705. The authors said in lines 699-701: “The KCCN increased with particle size during all seasons, consistent with decreasing organic volume fraction.”. However, when Korg increase the KCCN also increase according to text. Please clarify

Technical corrections:

Line 105: “. . . typical inorganic in ambient particles. . .” better “. . . typical inorganic particles in ambient. . .”

Line 221: use PM2.5

Line 228: missing comma or and

Line 656: Use GoAmazon2014/5 as in others places (lines 687, 292, 249, etc)

Table 1: Put the meaning of K (Bkgd) in table footnotes

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Figs. 9 an 10: increase the size of the word Korg as in fig. 11

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2017-251>, 2017.