

Interactive comment on “Single-particle characterization of aerosols collected at a remote site in the Amazonian rainforest and an urban site in Manaus, Brazil” by Li Wu et al.

Anonymous Referee #2

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General comments: the manuscript provides information of individual particles in the Amazon basin using a combination of microscopy and infrared techniques, which is an unprecedented approach to the problem. This is the main achievement of the study from the analytic viewpoint. With respect to the location, particles are from the pristine ATTO Tower and urban pollution from the big city of Manaus. If ATTO has been extensively reported in the scientific literature, it is not the case for the city of Manaus, so the manuscript comes to contribute to the knowledge with respect to the properties of aerosols from Manaus.

Specific comments: this referee does agree to all comments posted by the other re-

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viewer with respect to explore better the Manaus database. I would add to this the poor discussion with respect to the the weak point of the manuscript is with respect to a better of the atmospheric condition as a whole. For example, the characterization of the meteorology (lines 138 - 144) was extremely poor. Nothing was written on the synoptic situation. Hysplit is useful but it does not consider wet removal adequately thus a 10 day back trajectory is far from enough to provide a good information about meteorology. To say that RH was above 55% in the Amazon is useless, it is almost all the time from January - May above it. So, were the measured days ordinary? Anything different?

With respect to the discussion about the emissions from Manaus, only 9 lines (100 - 108) were written about it with very few information. So, the city is industrial but the author did not mention that these industries are not great emitters, they are basically assembling industries. The main source of pollutants is the light vehicles fleet. Poor information was also provided with respect to the sampling site in Manaus. Also there were a mention about downwind transport of pollution from Manaus that confuses the reader (lines 104-108) because ATTO is upwind and barely get any influence from the city. The focus of this is far from any downwind issues.

Comments to the text: the text is very well written. I would add the following corrections: tar ball > tarball (several locations in the text). Figures 6, 8, 10, 11: fix the weird position of the axis label "kev". Figure 9: put dates instead of sample label in X-axis. Figure 11 (caption): tar call > tarball. Figure 13 (caption): "Relative abundance" to "Relative MASS abundance"

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