General comments from Anonymous Referee #2

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.

Response: We thank the reviewer for the positive evaluation of our work.

Specific comments from Anonymous Referee #2

This referee does agree to all comments posted by the other reviewer with respect to explore better the Manaus database. I would add to this the poor discussion with respect to 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?

Response: Detailed meteorological conditions were added in Table 1. Based on the meteorological parameters during the samplings, the sampling days do not seem abnormal.

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.

Response: The reviewer is correct as the industries in the region do not emit a large amount of pollutants, whereas power plants, refinery, and vehicle fleet are mainly responsible for the atmospheric emissions and the vehicle fleet is the main source. Light vehicles powered by gasoline, ethanol, or both account to the majority of the transportation fleet in the city. The information was added to the text.
As suggested by the reviewer, the confusing downwind-upwind part was deleted – "Based on an investigation on particulate matter during the wet season, oxidized organic components were significantly observed at Manaus sites (de Sá et al., 2018)".

Comments to the text from Anonymous Referee #2

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

Response: Done as suggested, except (i) comment #3, for which Fig. 9 was modified as suggested by Reviewer #1 and (ii) comment #5, for which *"Relative abundance" was replaced by "Relative number abundance"*.