

Regarding the technical correction, we propose the following explanation:

"During the typesetting of the manuscript, we realised that we misstated the impact of coincident particles in the manuscript. We erroneously stated that the black carbon mass did not exceed the level where the mass concentrations would be biased low but this is not the case for some of the data during one of the flights presented in the paper. We have revised this statement in the final manuscript with a reference stating that this issue is relatively minor and that the issue does not materially change our results or discussion."

As for the manuscript itself, can the following be replaced in the manuscript:

'However, the BC masses in this study were well below this threshold and thus would not be affected by the coincidence issue.' with 'Several plume interceptions exceeded this concentration limit but the impact on BC mass concentration is expected to be relatively small given that the effect is predominantly on small particles with limited mass (Yuan et al., 2017).'

Reference: Yuan, J.-F., Corbin, J. C., Modini, R. L., Zanatta, M., Muller, T. and Gysel, M.: The accuracy of commercial pulsed LII compared with reference rBC mass in laboratory and field measurements, European Aerosol Conference 2017, Zurich, Abstract T306N3c3, 2017.

Further typesetting-related revisions required for the manuscript continue below.

The reference referred to in TS1 should read as follows:

Morgan, W. T., Allan, J. D., Darbyshire, E., Flynn, M. J., Liu, D., Johnson, B. T., Haywood, J. M., Longo, K. M., Artaxo, P. E., and Coe, H.: Transformation and aging of biomass burning aerosol over tropical South America from aircraft in-situ measurements during SAMBBA, in preparation, 2018.

The Darbyshire et al. reference should read as follows (we omitted the 'E' in Artiaxo, P. E. previously):

Darbyshire, E., Morgan, W. T., Allan, J. D., Liu, D., Flynn, M. J., Dorsey, J. R., O'Shea, S. J., Lowe, D., Szpek, K., Marengo, F., Johnson, B. T., Bauguitte, S., Haywood, J. M., Brito, J. F., Artaxo, P. E., Longo, K. M., and Coe, H.: The vertical distribution of biomass burning pollution over tropical South America from aircraft in-situ measurements during SAMBBA, in preparation, 2018.

In Table 1, 'residual' should not be capitalized. Please can this be altered.

In footnote for Table 3, references 11 and 12 should refer to van der Werf et al. (2010) and Kaiser et al. (2012) rather than GFEDv3/4. Thus reference 11 would be '¹¹van der Werf et al. (2010); Kaiser et al. (2012)' in the table footnote. The entries for 'GFEDv4: deforestation' and 'GFEDv4: savannah' would be followed by superscripts for '¹¹' rather than '¹²' also. Having re-read the table footnote, we have also noticed further mistakes on our part; following the entry for reference 11 outlined above, the footnote should continue as follows:

¹²Sinha et al. (2003). ¹³Yokelson et al. (2003). ¹⁴Wooster et al. (2011). ¹⁵Desservettaz et al. (2017). ¹⁶McMeeking et al. (2009).

The superscripts in the table entries should then be correct.

On page 14, the 'methods' in the sentence 'This methods follows established...' should read as 'method'.

I noticed that the reference links to the FAAM research flights (2014a and 2014b) referred to in my previous email are not active i.e. they do not give the option to jump to the entry in the references list.

I also noticed that TS12 referred to in my email on 06/04/18 regarding the previous typeset version of the manuscript has not been actioned. Can this be rectified please. I have re-stated the change below.

TS12: please replace the second sentence in the first data availability paragraph with the following: 'Direct links to the flight data records are given in the reference list.'

