I believe the paper is much improved in terms of the overall presentation, discussion and analysis of results, and the summary of the conclusions and significance. I have only a couple minor comments. Line numbers below refer to the new manuscript without tracked changes.

- Page 17, lines 597-600: "This is important as it suggests that the salts formed in the fire via evaporation and recondensation drive the mixing of the carbon aerosol as the secondary inorganic condenses, and that the organic fraction is separate. This is consistent with findings regarding emissions of BC and K-salts and other salts in the flaming phase of a fire, while organic emissions occur during the pyrolysis or smoldering phases (Haslett et al., 2018)."
  The discussion quoted above is interesting and provides useful insight on BBA mixing state. However, I would point out that the work of (Haslett et al. 2018) and related work of (Fawaz et al. 2021) utilized uniform sections of woody biomass combusted under tightly controlled conditions, which can differ from field conditions where temperature gradients may exist within the fire and fuel can be highly variable (in terms of leafy vs woody and/or wet vs dry). This can lead to some degree of spatial or temporal variability in fire emissions and may impact the very near-source mixing of fresh BBA. I don't believe that the quoted passage needs to be altered, but I do suggest the authors consider whether to add a caveat to this discussion.
- Page 17, lines 606-609: "While the SAFARI campaign and other recent biomass burning campaigns found tar balls, our TEM analysis did not find tar balls other than on filters RF10 and RF11, which were aged for approximately 1 and 2 days, respectively. This finding implies a reduction in tar balls in aged African BB plumes."
  Would this paragraph be an appropriate place to discuss potential implications of tar ball loss with aging, for example regarding the evolution of optical properties of African BB plumes? While a major area of tar ball research has been their optical properties, I realize there are still many unknowns regarding the specifics of tar ball optical properties as well as transformation or loss processes, however the direct TEM observations in the present work give the authors a unique position to comment.

Fawaz, M., Avery, A., Onasch, T.B., Williams, L.R., and Bond, T.C. (2021). Technical note: Pyrolysis principles explain time-resolved organic aerosol release from biomass burning. *Atmos. Chem. Phys.* 21 (20):15605–15618. doi:10.5194/acp-21-15605-2021.

Haslett, S.L., Thomas, J.C., Morgan, W.T., Hadden, R., Liu, D., Allan, J.D., Williams, P.I., Keita, S., Liousse, C., and Coe, H. (2018). Highly controlled, reproducible measurements of aerosol emissions from combustion of a common African biofuel source. *Atmos. Chem. Phys.* 18 (1):385–403. doi:10.5194/acp-18-385-2018.