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Discussions

EGU

Interactive comment on "Long-term Brown Carbon and Smoke Tracer Observations in Bogotá, Colombia: Association to Medium-Range Transport of Biomass Burning Plumes" *by* Juan Manuel Rincón-Riveros et al.

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We thank the three anonymous reviewers for their thoughtful feedback, and constructive comments, which undoubtedly helped to improve our manuscript. The three reviewers accurately pointed out that the manuscript was missing an uncertainty analysis associated with the reported eBC and BrC concentrations, and they all emphasized the need to perform a sensitivity analysis for the parameters involved in the attribution of BrC and Black Carbon, to make the calculations more transparent. We addressed these issues (and all the other comments). This particular issue was addressed in the

C1

following way:

1. Detailed description showing step-by-step the decomposition of absorption measurements (babs) due to fossil fuel (FF) and biomass burning (BB).

2. Detailed discussion of uncertainties associated with our approach, both, from the decomposition into FF and BB (assumed angstrom exponents), and from uncertain values of mass absorption cross sections

3. Sensitivity analysis to parameter choices.

All the additional comments were also addressed and incorporated in a new version of the manuscript. Detailed responses to each one of the reviewers' comments are detailed below (in blue) sorted by publishing date (Referee #1, Referee #3, and Referee #2). Referee comments are marked with RC and are in black. Author Responses are clearly labeled and are in blue.

Please see the attached Supplement to access the document with the detailed responses to the three referees compiled in one document.

Please also note the supplement to this comment:
https://www.atmos-chem-phys-discuss.net/acp-2019-1124/acp-2019-1124-AC4-supplement.pdf

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Interactive comment on Atmos. Chem. Phys. Discuss., https://doi.org/10.5194/acp-2019-1124, 2020.