

Interactive comment on “A comparison of three optical absorption photometers at a boreal forest site – effects of different correction algorithms” by Krista Luoma et al.

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Received and published: 3 November 2020

Dear authors,

I have found the paper very interesting. I would like to add a quick comment on section 4.3, where you discuss the Absorption Ångström exponent (AAE) retrieved when using different correction algorithms.

In the case of the AE31 (page 19, paragraph starting in line 29), I would like to mention that we have compared the AE31 with a multi-wavelength absorption photometer (see ref1), an instrument that works in a similar way to the MAAP but uses multiple

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light sources at 5 different wavelengths. In our comparison we have found that the AAE retrieved from "raw" AE31 data was closer to the reference AAE, compared to the "corrected" AAE, calculated after correcting the data using two different correction algorithms.

References

- (1) Massabò, D., Bernardoni, V., Bove, M. C., Brunengo, A., Cuccia, E., Piazzalunga, A., Prati, P., Valli, G., and Vecchi, R.: A multi-wavelength optical set-up for the characterization of carbonaceous particulate matter, *J. Aerosol Sci.*, 60, 34–46, <https://doi.org/10.1016/j.jaerosci.2013.02.006>, 2013
- (2) Saturno, J., Pöhlker, C., Massabò, D., Brito, J., Carbone, S., Cheng, Y., Chi, X., Ditas, F., Hrabě de Angelis, I., Morán-Zuloaga, D., Pöhlker, M. L., Rizzo, L. V., Walter, D., Wang, Q., Artaxo, P., Prati, P., and Andreae, M. O.: Comparison of different Aethalometer correction schemes and a reference multi-wavelength absorption technique for ambient aerosol data, *Atmos. Meas. Tech.*, 10, 2837–2850, <https://doi.org/10.5194/amt-10-2837-2017>, 2017.

Interactive comment on *Atmos. Meas. Tech. Discuss.*, doi:10.5194/amt-2020-325, 2020.

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