

## Summary

The authors fully addressed my initial comments. There are a few missing commas throughout and a few instances of double punctuation (“,”). I suggest a final close read to address any grammar issues. I only have a few optional specific comments.

### Specific comments:

**Line 90:** The end of the introduction is a bit abrupt as written. It is somewhat typical for the last paragraph of the Intro to briefly describe the contents/section of the paper and state the objective, but this is up to the authors/editors’ preferences.

**Lines 97-99:** “*Previous studies of this sensor have shown high PM<sub>2.5</sub> correlation with reference instruments (Badura et al., 2018; Liu et al., 2019) but PM<sub>10</sub> values may be underestimated (Budde et al., 2018; Kuula et al., 2020).*” Just a note that there are physical-optical reasons that this type of sensor is likely ill-suited to measure PM<sub>10</sub> (and probably even PM<sub>2.5</sub>) which I believe are relevant to the interpretation of this work, but the incorporation of which is technically not required. For more information, see:

Molina Rueda, E., Carter, E., L’Orange, C., Quinn, C., and Volckens, J.: Size-Resolved Field Performance of Low-Cost Sensors for Particulate Matter Air Pollution, *Environ. Sci. Technol. Lett.*, 10, 247–253, <https://doi.org/10.1021/acs.estlett.3c00030>, 2023.

Ouimette, J.; Malm, W.; Schichtel, B.; Sheridan, P.; Andrews, E.; Ogren, J.; Arnott, W. P. Evaluating the PurpleAir Monitor as an Aerosol Light Scattering Instrument. *Atmos. Meas. Technol. Discuss.* **2022**, 15, 655–676, DOI: 10.5194/amt-15-655-2022

**Lines 114-115:** “*We developed a fog alert and data impacted by fog were removed for this analysis.*” It could be helpful if more details of this algorithm were included in the SI for others who might have similar issues.

**Lines 228-229:** “*Figure 3 shows the MAE, R<sup>2</sup> and K-S test statistic for proxies located at various distances away from the **four** (PM<sub>2.5</sub>) and **five** (PM<sub>10</sub>) co-located AMS test locations.*” Is this right? There are five black squares each in Figure 1a and 1b.

**Figure 6:** Isn’t CMPT in the LA region? But shown in the RC region here. It would be helpful if the same colors as Figure 2 were used here. It would also be nice if the colors used in Fig. 2 and Fig. 6 fit the theme of the region colors in Figure 1 and Figure 3 (i.e., AMS/AQY in LA district were shades of orange, IE were shades of blue, and RC were shades of red), but this is just a preference.

**Lines 429-431:** “*This also highlights that a more flexible proxy selection approach depending on dominant wind direction and particle source may be more suitable than using the same proxy site across all seasons.*” It could also be worth exploring how a seasonal proxy selection approach works – for example, if the seasons are well-characterized, you could use the data from the previous year(s) to calibrate the new data (i.e., use best proxy site from Nov-Jan 2021 to calibrate AQY data for Nov-Jan 2022). This could be less computationally demanding than a drift detection approach, but more representative than the calendar month-based calibration approach.

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