

Atmos. Meas. Tech. Discuss., referee comment RC2
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Comment on amt-2021-285

Anonymous Referee #2

Referee comment on "An instrument for direct measurement of emissions: cooling tower example" by Christopher D. Wallis et al., Atmos. Meas. Tech. Discuss.,
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The manuscript presents a method to measure aerosol emission from cooling towers using direct dried-aerosol sampling techniques, both off- and online. The authors use two sets of instruments; aloft and ground-based. The latter one is used as reference to correct for sampling losses in the aloft setup. The normalization is done using PM₁₀ and PM_{2.5} passive sampling but a comparison of the APS results is missing. I suggest the authors to provide a comparison of the size distributions obtained by APS measurements in order to improve the manuscript. The paper is well written and should be published after considering this suggestions and the following minor comments.

Minor comments:

L. 95: What would be the expanded uncertainty of the method?

L. 212: How far from the tower is the parallel set of measurements located?

Table 2: Please report standard deviations for the values shown here. Please fix the units to $\mu\text{g}/\text{m}^3$