

Atmos. Meas. Tech. Discuss., referee comment RC1
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Comment on amt-2022-276

Anonymous Referee #1

Referee comment on "Spectrometric fluorescence and Raman lidar: absolute calibration of aerosol fluorescence spectra and fluorescence correction of humidity measurements" by Jens Reichardt et al., Atmos. Meas. Tech. Discuss.,
<https://doi.org/10.5194/amt-2022-276-RC1>, 2022

Authors provide very detailed study of the fluorescence spectrum of aerosols (mainly BBA) and analyze the influence of fluorescence on water vapor measurements. This is high quality scientific study, which, in principle, can be published as it is.

I have just two comments.

- In this manuscript authors don't provide details of calculation of fluorescence backscattering. In particular, they don't mention how they performed the correction for aerosol differential extinction of fluorescence signals.

- 0.22 nm filter width in the far range water channel is rather small. Can temperature variations (and so variations of vapor spectrum) provide uncertainties?

Please also note the supplement to this comment:

<https://amt.copernicus.org/preprints/amt-2022-276/amt-2022-276-RC1-supplement.pdf>