Atmos. Meas. Tech. Discuss.,
doi:10.5194/amt-2015-372-SC1, 2016

Atmospheric Measurement Techniques Discussions

Interactive comment on "Composite Catalogues of Optical and Fluorescent Signatures Distinguish Bioaerosol Classes" *by* M. Hernandez et al.

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Received and published: 14 March 2016

Dear authors,

I have followed your bioaerosol cataloguing work with interest and I agree that a unified approach for UV-LIF calibration and PBAB classification is much needed by the community and the objectives of this study do attempt to address this issue. Referee #2 has already made some useful comments, which I mostly agree with, and I have a few comments which I would also like to add.

Ln 92-95: You state that UV-LIF measurements can only be interpreted using referenced fluorescence emissions. While this is the gold standard we should be striving for, other approaches have been used with success, e.g., hierarchical agglomerative cluster analysis methods have been demonstrated to be useful for interpreting WIBS

UV-LIF datasets collected from forest and mountain field sites (Crawford et al., 2014; Crawford et al., 2015; Crawford et al., 2016; Whitehead et al., 2016).

Ln 130-160: There needs to be a discussion here on how the data has been treated prior to analysis and what QA procedures have been followed e.g., if sampling concentrations were high have weak flashes been removed? What fluorescence threshold has been used to determine if a particle is fluorescent in a given channel? The agreed standard is to use the mean forced trigger value + 3 standard deviations, although other methods have been used. Please clarify this as it is critically important that the same procedure is followed by anyone wishing to interpret WIBS datasets using your results.

Fig. 3: Can you please clarify what the Y axis represents. The Y labels aren't evenly spaced and a number of the Y labels don't correspond to a tick, making it difficult to interpret the figure.

References

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Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2015-372, 2016.