

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

M. Hernandez et al.

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We thank Dr. Crawford for his helpful comments and criticisms and address them below in the order they appeared.

Ln 92-95 - We agree with this reviewer’s opinion about the absolute nature of our statement; indeed UV-LIF data can be interpreted with utility in many different credible ways, notably including hierarchical cluster analyses. By no means did the authors intend to suggest the approach described here was the “gold” standard for UV-LIF optical particle recognition; we mean to present a systematic approach which, from an aerobiology perspective, can be replicated (or expanded) in a referential “library” paradigm. We have amended the manuscript to reflect (and reference) the fact that different analytical approaches – including cluster analysis – are valid, and can

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be successfully used to characterize aerosol particle challenges to UV-LIF instruments both in the environment and in the laboratory. In this specific regard, we have expanded the citations suggested by this reviewer in the context of this investigation (and its discussion). The authors would like to point out that the process of this pure-culture library challenge manifests in a defacto cluster analyses which resolved, as the title suggests, the physiology of three major bioaerosol classes using UV-LIF as configured in a WIBS.

Ln 130-160 - With regard to discussion about the fluorescence thresholds used to qualify these data for analyses, we have amended the methods section of the manuscript in accordance with this reviewer's suggestion. As is customary in this sub-discipline, we did follow the practice of using a (mean) forced trigger value + 3 Standard Deviations.

Fig. 3 - Dr. Crawford (and another reviewer) asks for clarification and amendment to the Y axis of figure three. We apologize for this graphical oversight and have corrected the symmetry and labels on the ordinate axis and expanded this figure's caption.

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