

***Interactive comment on* “Quantifying Bioaerosol Concentrations in Dust Clouds through Online UV-LIF and Mass Spectrometry Measurements at the Cape Verde Atmospheric Observatory” by Douglas Morrison et al.**

Anonymous Referee #1

Received and published: 27 April 2020

Morrison et al. submitted a manuscript titled “Quantifying Bioaerosol Concentrations in Dust Clouds through Online UV-LIF and Mass Spectrometry Measurements at the Cape Verde Atmospheric Observatory.” This manuscript presents annual observations of bioaerosol concentrations associated with long-range dust transport. UV-LIF single-particle measurements were compared with LAAP-ToF measurements, and the results show high correlations between LAAP+ToF spectral signatures indicating particles mixed with bio-silicate mass and UV-LIF fluorescent particle signatures. The manuscript is well written, and the experimental/analysis methods are clear as well as

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the results. I support the publication of this manuscript with some minor technical edits. Here are a couple of suggestions for technical edits:

-Line 9: “A full analysis anc classification of the back-trajectory wind fields during this intensive experiment period was performed by Liu et al. (2018).” The word “anc” should be corrected to “and”.

-Line 30: A full description of the site and experimental setup is provided byLiu et al. (2018), and Marsden et al. (2019) but a brief summary is now given. Suggestion to put a space between “byLiu”

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