Atmospheric
Chemistry
and Physics
Discussions

Interactive comment on "Real Time Detection of Airborne Bioparticles in Antarctica" *by* Ian Crawford et al.

Anonymous Referee #1

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Important contribution, worthy of publication

1. Calibration and classification of bio-particles is required (minimum theoretically, but possible practically) 'Bio-particles' misleading as measuring fluorescence, most of which may be down to biological origin, but by no means all Title: Real time detection of fluorescent particles in Antarctica P4 L22 Needs calibrating for different bio-particles as 2.35 L min-1 is a low flow rate P4 L30 What about non fluorescent bio-particles? P5 L16-17 This sentence strongly suggests that UV-LIF needs proper calibration for bio-particles

2. P4 L1 'near-sterile' is not appropriate as it cannot be substantiated, use 'low biomass'

3. Further methodological detail required P4 L16 'The instrument was designed to identify common fluorophores' detail needed here as fundamental to what is being measured P4 L22 Filtered – how, what proportion of bio-particules is removed by filtration? P5 L3 Many more bacteria are common aerosols, a diverse range of examples could be tested P5 L1 This needs more detail in order for the reader to be able to repeat the approach P16 L1 What was the rationale for these pollen types?

4. Further contextual detail helpful P5 L16 Specify what these 'many advantages' are?

5. Minor issues and typos P5 L3 Genus and species names in italics P5 L3 Capital A for Antarctica

Interactive comment on Atmos. Chem. Phys. Discuss., https://doi.org/10.5194/acp-2017-421, 2017.