

Interactive comment on “An overview on the airborne measurement in Nepal-part 1: vertical profile of aerosol size-number, spectral absorption and meteorology” by Ashish Singh et al.

Anonymous Referee #3

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This paper describes measurements associated with the first phase of a field campaign aiming to quantify the vertical distribution of aerosol properties over Himalaya and to understand the transport of aerosols to there. The paper is scientifically sound and relatively well written. I have one major comment and a few minor ones that should be addressed before accepting this paper for publication.

My main concern with this paper is its descriptive nature. While the stated goals of the whole field campaign are very valuable, those of the phase 1 are more benign, i.e. mainly to demonstrate that the planned measurement strategy work fine. This is certainly important and worth to be reported properly, but it makes the paper a bit boring

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to read. I wonder whether the authors could make section 3 somewhat shorter and more compact. Furthermore, the limitations of this study should be brought up more clearly in abstract and conclusions: five short test flights is enough to demonstrate that the measurement approach works well, but it does not allow making any general conclusions about aerosol sources and properties over Himalaya. The authors need to explicitly tell the readers that the reported observations are just examples of what is going on in that environment.

Other minor comments.

Something (a verb?) is missing from the sentence on lines 45-46 on page at the end of abstract.

The second paragraph on page 10 gives a too optimistic view on the tight relation between AOD and surface PM_{2.5}. They cite to one paper where this correlation is apparently strong, but this is certainly not generally true. This paragraph needs to be rewritten to provide a more realistic connection between AOD and surface PM concentrations.

Figure 3 contains so different panels that, in my opinion, this figure should be split into 2-3 separate figures (3a-3c together making one figure and figures 3d and 3e either combined into one or preferentially separate figures as well).

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2018-95>, 2018.

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