

## ***Interactive comment on “Dust from the dark region in the western ablation zone of the Greenland ice sheet” by I. G. M. Wientjes et al.***

**Anonymous Referee #1**

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**Scientific Significance:** I find very little new information in this manuscript. And, a number of conclusions are drawn on solely speculative basis without testing the hypothesis behind the conclusion. A number of places I find results highlighted as new results, but in fact just being a repetition of older findings without a proper reference.

**Scientific Quality:** The results are certainly not discussed in a proper way. For example Maurette et al found large quantities of meteorites in the same region as this study. So, the lack of detection of meteorites in this study does not indicate that they are not there. Such flaws also go for the analysis of microorganisms. Stibal point out that the lack of observation of microbiobes is not necessarily evidence for them not being there. A number of papers have been published or are in press, with much more detail on microbial processes, in the *Annals of Glaciology* (vol 51). I would recommend the

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author to carefully read the most relevant papers and refer to them in detail instead of inventing "new" results and from this drawing speculative conclusions. The most relevant papers are Hodson et al, Stibal et al and Langford et al. Besides this the most recent paper by Uetake et al discuss the distribution of algae and cyanobacteria also in the same region. One major conclusion of the paper is that most dust is of local origin. Bøggild et al did reach the same conclusion but is only cited for clay in Pleistocene ice. So, local dust as a major source is also not a new result.

**Presentation Quality:** The language and the editorial quality of the paper is better than the scientific content.

I would reject the paper.

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Interactive comment on The Cryosphere Discuss., 4, 2557, 2010.

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