

Interactive comment on “Spectral Characterization, Radiative Forcing, and Pigment Content of Coastal Antarctic Snow Algae: Approaches to Spectrally Discriminate Red and Green Communities and Their Impact on Snowmelt” by Alia L. Khan et al.

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Major comments

This study presents the different impact of red- and green- snow algae on the radiative forcing in the coastal Antarctic region, which indicates the role of snow algae in the warming of Antarctic. The different spectral absorption characteristics of red- and green- snow algae provide potentials in discriminating them using satellite remote

sensing. It is an interesting and important study to improve our understanding on the snow algae and their remote sensing methods. However, I still have several concerns need to be addressed before the consideration of its publication.

Specific comments: My Main concern is Figure 7(D) and (E). How are the threshold, i.e. the middle line defined for the discrimination of the 2 types of snow algae?

Other comments are made directly in the text as attached. I hope you will find them useful.

Best regards, Yangyang Liu yliu@awi.de

Please also note the supplement to this comment:

<https://tc.copernicus.org/preprints/tc-2020-170/tc-2020-170-RC2-supplement.pdf>

Interactive comment on The Cryosphere Discuss., <https://doi.org/10.5194/tc-2020-170>, 2020.

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