

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

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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.