

Referee and editor comment responses on the manuscript:

Sensitivity of Antarctic surface climate to a new spectral snow albedo and radiative transfer scheme in RACMO2.3p3

by C.T. van Dalum et al.

Again, we would like to thank the referees and editor for their comments. Similar as before, the comments are in black and the response in orange.

Report #1

I totally disagree on this and I think there is a misunderstanding. I think the main differences between the maps shown in the responses is that when they used continuous sequential colormaps (left) and their original diverging colormaps (right), they also used continuous increments on the left whereas they used discrete increments on the right. Discrete increments are very good and recommended for data visualization. Without any doubt authors must use a continuous colormap such as viridis for continuous variables, everywhere in the article, but with discrete increments similar as in their original figures. **Indeed, there has been a misunderstanding. We thought that you wanted us to use both a continuous colormap as well as continuous increments. As requested, we have updated the colormap to a continuous one with discrete increments for all relevant figures, i.e., Fig. 8a, Fig. 9 and Fig. 12a.**

Editor Comment

According to reviewers, your paper is now ready to be accepted as you dealt with all their remarks except the remark of Referee #3 about the colour scheme used for some figure. I agree with her that a blue - yellow - red palette cannot be used here (as it is reserved for a centred palette on zero). Could you suggest a new "continuous" palette for these figures as requested by Referee #3?

As requested, we have updated Fig. 8a, Fig. 9 and Fig. 12a with a continuous colormap but with discrete increments.

Finally, I suggest to add the comment in brackets in line 412:

... allows for subsurface heating, improves, after tuning (as biases were partly compensated in former RACMO versions), the subsurface snow temperatures in Antarctica...

We have added this comment in brackets, as requested.

Furthermore, a couple of minor textual changes have been implemented on p1 L6 and p21 L379.