

## ***Interactive comment on “The diurnal Energy Balance Model (dEBM): A convenient surface mass balance solution for ice sheets in Earth System modeling” by Uta Krebs-Kanzow et al.***

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RequirePackagecolor

### **Response to Reviewer Comments - Reviewer 1**

We would like to thank Reviewer 1 for the constructive feedback and detailed suggestions. After the open discussion we will provide a point-by-point response. However, the reviewer's comments helped to identify two errors in the manuscript we would

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already like to address. In the following the reviewer's comments are printed in blue and our response is printed in black.

**eq. 13: So  $\epsilon_{fair}$  and  $\epsilon_{cloudy}$  are both smaller than  $\epsilon_a$ ?**

Thank you for spotting this! There is a typo in the second row of eq. 13 and this should be

$$\epsilon_{cloudy} = \epsilon_a + (1 - CC)\Delta\epsilon.$$

**p13, l10f: Why are the biases negative. Is this shown in figure 5?**

Unfortunately, Fig. 5 displays the data-model difference but the text refers to the model-data bias. We apologize for this inconsistency. In the revised version Fig. 5 will be corrected accordingly.

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Interactive comment on The Cryosphere Discuss., https://doi.org/10.5194/tc-2020-247, 2020.

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