

### Corrections before publication ( tc-2022-52 )

Thank you for having addressed my minor comments. Please make these two last corrections:

- I am glad that you have defined what the "SMB signal" is, i.e. the sum of the absolute values (magnitude) of precipitation, sublimation and runoff. To be consistent with this definition, please use a different word than "signal" in line 24 (Introduction).

In Line 24 we have changed the following text: "Precipitation dominates the AIS SMB signal" to "Precipitation is the dominant SMB component"

- I still have a concern with the  $\Delta$  terms in section 3.5: SMB is in  $\text{Gt yr}^{-1}$  and T is in  $^{\circ}\text{C}$ , so  $\Delta\text{SMB}/\Delta T$  should be in  $\text{Gt yr}^{-1}\text{ }^{\circ}\text{C}^{-1}$ , not in  $\text{Gt yr}^{-2}\text{ }^{\circ}\text{C}^{-1}$  as written in the text. If you keep these units, then it should be written  $\Delta\text{SMB}/(\Delta t \Delta T)$  where  $\Delta t$  is 85 years (from 2005-2015 to 2090-2100).

We believe that the  $\Delta\text{SMB}/\Delta T$  is the clearest way to define this term and so we have changed the units from  $\text{Gt yr}^{-2}\text{ }^{\circ}\text{C}^{-1}$  to  $\text{Gt yr}^{-1}\text{ }^{\circ}\text{C}^{-1}$  in section 3.5.