

Dear Alex,

Thanks for revising our manuscript and providing additional feedback. Below we show how the final comments were addressed.

Best regards,

Martim

Your revised manuscript is in very good shape. I find it is near ready for publication, with only the minor changes below needed:

L23, and elsewhere: sea level rise => sea-level rise

Changed as suggested.

L47: the complex subglacial terrain => complex subglacial terrain

Changed as suggested.

L51: from where => from which

Changed as suggested.

L60: up and downstream => up- and downstream

Changed as suggested.

L106: sliding law issues => sliding-law issues

Changed as suggested.

L134: Unclear phrasing, please revise: "As nunataks near the Antarctic coast or along the margins of palaeo ice streams are often situated ..."

Rephrased as: "Because nunataks close to the Antarctic coast, or along the margins of palaeo ice streams, are often situated in proximity to over-deepened troughs..."

L155, Eq. 2: Consider modifying equation such that the variable "SMB" is represented by one letter, which is clearer and commonly used. Since you already use "b(t)", why not $b(x,t) = b_0 - (b_0 - b_e)/L_x * x + b_{anom}(t)$, for

example?

We have followed the suggestion, but using “a” as opposed to “b”, thus keeping the time-dependent term as “b(t)”. We also made the necessary changes in the text (L154, L156 – 158, and Table 1)

L161: Model spin up => The model spin up

Changed as suggested.

L316: that this a => that this is a

The typo was fixed.

L340: but simplify => but they also simplify

Changed as suggested.