We thank the authors for addressing our comments and making changes. We recognize that work, especially group work that requires coordination, is difficult given the current global pandemic and so we appreciate the authors' efforts in this regard. This paper has improved markedly from the previous version to the current. However, we think substantial revisions remain necessary for this paper to be ready for publication. Below are some general comments that discuss some issues that recur throughout the paper, as well as specific comments that address individual points.

Tessa Gorte & Jan Lenaerts

General Comments

While the authors have added some additional discussion that addresses our initial comments (and that of the other reviewers), we would encourage them to be more specific and quantitative. For example, the discussion about the relevance to Antarctic mass balance (input-output method) is useful but currently very vague, qualitative, and not supported by any visual evidence (a figure would be useful). More generally, the comparisons between the models in the text remain rather qualitative in many instances, sometimes subjective, and or not supported by numbers and their associated uncertainties. There are numerous examples of this throughout the text, e.g. 'overestimate/underestimate' (by how much?); 'lower bias'; 'best comparison'; 'rather small'; etc. etc.

While much better than the previous iteration of the manuscript, we find that the authors still switch from passive to active voice (and back), sporadically. For instance:
"The model was used to run a series of consecutive twice-daily 24-hour forecasts at 00 and 12 UTC 25 from the beginning of 1980 to the end of 2018." (P5L24-25)
"… in these simulations we used a simplified single-layer scheme with for example, no refreezing (Cox et al., 1999)." (P5L27-28).
"SMB was calculated base on output precipitation and sublimation and evaporation." (P5L28)

The figure quality needs additional improvements. Several figures are still hard to read (see 'Specific Comments' for more details). The font size for some figures, particularly figures with maps, could be increased a bit to help with readability. Figure 3 is especially problematic, since the individual dots are not readable, the lines are difficult to separate, and most importantly, the comparison of observed and modeled SMB is plotted on a double-logarithmic axis, which hides a lot of the scatter between observations and models. A linear fit that is shown on a double logarithmic axis (as is the case in Figure 3), does not imply a linear relation between the observations and models – it might just show that their exponential behavior is linearly related. We would highly encourage the authors to revise Figure 3 substantially to provide a fair and visually engaging and understandable.

Lastly, the third reviewer brought up a very important point, and we feel that hasn't yet been adequately dealt with. If a true intercomparison of models is presented, the common P-E-S budget should be evaluated. So that means that, while blowing snow sublimation can be included, runoff (for MAR and RACMO2) and ER_{ds} (for RACMO2) should not. The author's argument that 'these cannot be easily removed without retuning the models', is only relevant for blowing snow sublimation, not for runoff or erosion.

Specific Comments

P1L2: SMB is introduced without spelling out the acronym. Later in the abstract, the phrase is entirely spelled out, though.

P1L5: Similar to SMB, AIS should be spelled out the first time.

P1L11: Consider adding over what period you refer to finding no trend (i.e. 1987-2015 or 1980-2010). It may be over both, in which case you can add "over either period."

P1L14: "between 1000 and 2000 m" what? I'm not sure what that scale is referring to. Is it the length of the slope?

P2L9: fine to use submarine melting here so as not to confuse it with basal melting but still think this term should be defined either within this sentence or in a following sentence.

P2L18: We are a bit confused why the authors introduce the term "surface mass budget" here. If it is synonymous with surface mass balance, surely just using SMB throughout the paper is sufficient. If the authors want to note this term and its equivalence to surface mass balance or climate mass balance, perhaps it would be best to do so when SMB is first introduced.

P2L30: "Currently runoff…" —> "Currently, runoff…"

P2L30-34: This is one of the few remaining run-on sentences that I think could be broken up.

P3L23: "In this paper we seek…" —> "In this paper, we seek…"

P3L29: "…backwards continuity we also…" —> "…backwards continuity, we also…"

P4L9: There should be an and at the end of this list and commas around "among others."

P4L28: Missing space after the end of the sentence starting with "As these terms cannot easily…"

P4L33: "Additionally this model…" —> "Additionally, this model…"

P5L21: "Here we run…" —> "Here, we run…"

P11L2: "…taking note of the differences…" —> "…take note of the differences…"

P11L6: "In figure 1 we show…" —> "In figure 1, we show…"

P12L1: "Figure 1 analysis shows that depending on the variable the models…" —> "Figure 1 analysis shows that, depending on the variable, the models…"

P12L12-13: "…show that although the models perform well (…) on average…" —> "…show that, although the models perform well (…), on average…"

P13L8: Avoid "It is clear." This is a complex figure that, while you describe what's going on well, is still fairly high-level.

P13L23: "This comparison therefore is…" —> "This comparison, therefore, is…"

P15L8-P16L2: This sentence 1) requires commas around "to show… models clearly" and 2) switches from passive voice in the first half to active voice in the second ("are given in Table 2", "we show all models").

P16L3: "Apart from COSMO-CLM2 and HIRHAM5 0.11∘the…" —> "Apart from COSMO-CLM2 and HIRHAM5 0.11∘, the…"

P16L5: "In general all models…" —> "In general, all models…"

P16L6-9: This is another long sentence that could benefit from being broken into two.

P18L3: Consider introducing the concept of SSMB as well as the acronym to help the reader.

P18L10: "…and therefore orographic precipitation." —> "…and, therefore, orographic precipitation."

P22L8: "For example there is an…" —> "For example, there is an…"

P25L5: Missing spaces after the degree symbols.

P27L5: "…allows us to estimate not only the likely range of SMB over Antarctica, but also to identify…" —> "…allows us not only to estimate the likely range of SMB over Antarctica, but also to identify…"

P28L1: "Nevertheless it is therefore also important…" —> "Nevertheless, it is also important…"

P28L5: "…have quite strong trends, for example a steady…" —> "…have quite strong trends: for example, a steady…" or "…have quite strong trends (for example, a steady…)."

P28L7: I believe the comma after "very difficult" is meant to be a period.

P28L12: Again, try to avoid "it is clear" as it may not be clear to all readers.

P28L26: "Basins in West Antarctica, and particularly on the Antarctic peninsula have very large…" —> "Basins in West Antarctica, and particularly on the Antarctic peninsula, have very large…"
P29L1: "We found that although the variation…" —> "We find that, although the variation…"
P29L21: "Nonetheless we are able…" —> "Nonetheless, we are able…"
P29L22-25: This is a long and confusing sentence that could be reworked.
P29L29: "It is therefore important…" —> "Therefore, it is important…"
P29L32: "…perform, broadly speaking better than…" —> "…perform, broadly speaking, better than…"
P30L6: "However table 2 shows…" —> "However, table 2 shows…"
P30L7: Consider changing "clear" to "evident" (or something similar).
P30L12: "Currently efforts are…" —> "Currently, efforts are…"
P31L2: Missing space after the degree symbol.
P21L18: Missing space after the period.
P30L21: "Berg et al. (2013), argue…" —> "Berg et al. (2013) argue…"
P31L31: "In this paper we have compared…" —> "In this paper, we have compared…"
Figure 1 caption: Toward the end of the first sentence, there is an extra space in the (c) notation and a missing space after the period. The curved, centric lines are not explained (do they show CRMSE? What is CRMSE?).
Figure 2: I realize this is in contrast from our previous review so at the risk of sounding contradictory and incredibly nitpick-y, would it be possible to make this figure a touch smaller such that it fits onto the previous page? The font size increase will help significantly if the figure size is reduced and (I think) the figure will still be readable. Also, the y-axis reads "Modeled" which is fine American English but the authors use "modelled" (which is fine British English) throughout the rest of the paper.
Figure 4: This seems like a potentially really great figure but the images are a bit too small to glean a lot of high detail information. Perhaps consider rearranging to make the individual subplots larger.
Table 3: Is the last column meant to have sigma spelled out?
Figure 6: The text on this figure (both the title and the numbers on the scale) are still quite small and hard to read.
Figures 7, 8, & 9: Shouldn't the units for SMB (and precipitation) be Gt/yr and SMB trend Gt/yr2, respectively?
Table 4 caption: "…standard deviations are also show." —> "…standard deviations are also shown."