RESPONSE TO EDITOR

In the following, the Editor's comments are in blue, and our response is in black.

Thank you for submitting your revised manuscript. You have appropriately answered the Reviewers' comments, however I wonder if there is still an outstanding issue with your shortwave radiation plots on figures S4 and S7. Maybe the issue is that you are comparing net shortwave radiation to downward shortwave radiation? Can you please double check this and amend as needed?

We sincerely would like to thank two referees for noticing the problem relating to shortwave radiation and the Editor for insisting on a more detailed check.

We have conducted a thorough review of the ECBilt code and found that indeed there was a mislabeled text field regarding shortwave radiation in the outputs. We sincerely apologize for not noticing this earlier.

We have now corrected the iLOVECLIM forcings accordingly and re-run all the simulations of BESSI and ITM. As expected, the simulated SMB by both models is now much lower for both ice sheets with the correct shortwave radiation for the present-day condition and pre-industrial period. These results are consistent with the warm temperature bias (+10°C) of iLOVECLIM. After correcting the biases, both models' results are in a similar range as MAR.

We have updated the text and figures of the manuscript with new results.

Although this is a major correction, fortunately, it does not change the main outcomes of the paper:

1. BESSI-MAR provides decent results when compared to MAR and contrary to the ITM-MAR.
2. BESSI is physics-based and does not need retuning.
3. BESSI strongly depends on the quality of the forcing, and the biases of iLOVECLIM strongly affect the model's results.
4. The sensitivity of BESSI to the climate forcings of the Last Interglacial (LIG) is higher than ITM.

Once again, we apologize for this mistake.