General Comments

I would first like to thank the authors on their extensive revisions. The manuscript is better in all regards, except for uncertainty analysis (see below). The aims/goals, results, and interpretations are all presented quite cleanly and generally easy to follow. All figures are improved and generally I have small comments and suggestions. While the manuscript reads better and is easier to follow there are still some issues of awkward wording in a number of places and the three varieties of calculation methods I think could be simplified. Finally, I noted numerous typos/grammatical issues. I think this is just a result of revision under a deadline.

There is still a lack of uncertainty analysis and quantification. This is a major issue in my mind. The authors presented results with and without erosion, and the differences are sometimes large, sometimes not; this screams for a full analysis of the sensitivity to erosion. You also rely on regressions to assess ^{10}Be concentrations/inventories, any regression model has uncertainty and must be incorporated. The fact that uncertainties are discussed in other papers, means that those authors discuss the possible conceptual uncertainties in the application of the method. I was not referring to this, and rather referring to the resulting uncertainties on your results. I do agree that there is not a single number that results, but rather a distribution of values. I really do think this manuscript, and methodology, would benefit from this particularly since there is a new method, it relies on a regression, and all regressions by definition have some measure of uncertainty.

Detailed Comments

Line 20: Sentence starting this line seems incomplete. I feel it needs some sort of comparison to regions elsewhere. Also, the statement about largest changes in the TAM is not true for the entirety of Antarctica, but really only applicable to EAIS.

Line 25: How can you calculate a measured age? I think this sentences just needs to say very clearly what was done and remove the parenthetical aspects. Maybe rephrase as "We measured meteoric ^{10}Be and NO3- concentrations to calculate exposure ages using the total ^{10}Be inventory, the NO3 concentration, and infer exposure duration from the ^{10}Be surface concentration."

Line 27: Swap lower and relatively

Line 29: Change to indicate

Line 51: All evidence points to WAIS and EAIS max extent not synchronous with the canonical LGM (26-19 ka) and likely were largest approx. 14ka.

Line 80: Delete "it"

Line 81: You is spelled Yiou

Line 87: Insert "of" after "measurement"

Line 116: Maybe instead of "measured" say "as measured". That being said, the explanation here is better than in the abstract. Can you try to clarify the abstract a bit more?

Line 163: Many readers wont know what UVM stands for, suggest spelling out even though totally inconsequential for the manuscript.

Line 182: replace the comma with and.

Line 185: Expressing E as length per time in the text and then adding with respect to density is confusing, as the function really works with mass depth per time for erosion, E. Consider revising or rewording the text.
Line 285: Delete "regressed"
Line 292: Suggest presenting model ages in same order, first no erosion and then with erosion as above.
Line 295: Here and throughout there are some inconsistencies with tense and passive voice. Strongly suggest going through and editing for this and some other grammatical issues I noticed. I tried to point out many of them but skipped over many.
Line 377: Delete "study" before second clause.
Line 426: Should be stable
Line 438: Insert "of" after "most"
Line 460: MacKintosh is the same person as Mackintosh. The latter is correct. I noticed this elsewhere and suggest fixing before copy editing.
Figure 8: The black triangles are hard to see (even with the outline) on the imagery as the rock is so dark, and combined with ribbons of snow makes the two hard to differentiate. The symbols would also greatly benefit from displaying the ages on the maps.
Figure 9: Age-elevations plots are usually presented as elevation on the y-axis and age on the x-axis. I suggest flipping axes.
Figure 10: Swap axes like in Figure 9 for Figure 10b. For figure 10b, since you are comparing age vs elevation and showing along the length of Shackelton Glacier, where elevations span 1000 m, I suggest presenting as elevations relative to the ice surface. This will remove the slope effect on the absolute elevation.
Table 3: Uncertainties here and for all other columns should be presented using the same exponential as the concentration, otherwise just adds confusion. I know this was mentioned in my first review, there would only be one leading zero for most of the samples. One other note is that PRIME Lab reports values at two decimal places, I suggest only reporting to this precision. There is unlikely a need to present non-background corrected ratios, they are so high that it is unlikely that many will be have any significant correction.