Earth Syst. Sci. Data Discuss.,
https://doi.org/10.5194/essd-2018-140-RC2, 2019

Open Access Earth System Science Data Discussions

Interactive comment on "Age stratigraphy in the East Antarctic Ice Sheet inferred from radio echo sounding horizons" *by* Anna Winter et al.

Anonymous Referee #2

Received and published: 2 April 2019

Summary

This is a concise manuscript on a new hard-earned dataset of general value to the glaciology community, particularly those interested in the long-term history of the East Antarctic Ice Sheet. The strata mapped cross remarkably long distances, perhaps longer than any other comparable effort for certain lines, so in my opinion the manuscript reaches a key threshold of significance in terms of usefulness and completeness. The expected parameters associated with the traced horizons are provided and they placed in appropriate glaciological and geophysical context, and the discussion/conclusions are forward-looking for the value of the dataset. The results themselves are certainly evolutionary rather than revolutionary, but the manuscript is framed appropriately in this regard. Given this context, my concerns are all very minor.

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Discussion paper

Comments

1/22-24: “Furthermore, an established stratigraphy ensures an undisturbed layering. . .” appears to be a truism. A better statement of what I think the authors means could be: “Furthermore, mapping of radar-detected horizons increases confidence that layering at those depths is undisturbed. . .” or something similar.

Figures

Figure 1: Top right corner or map does not display sometimes on screen, which is possibly a graphics export issue? Specify projection used (most likely EPSG:3031). Identify with a different color the sections of transects shown in Figure 2. Add acronyms to caption (only spelled out presently).

Figure 3: Narrow the color scales here to better illustrate the range of IRH normalized depth. Label each panel with isochrone age being shown.

Grammar, etc.

4/7: spell out ice-equivalent 5/21-22: at EDC were carried out. . .who used the 11/25: merge with previous paragraph

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