

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

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General comments: This is an important manuscript to publish: it represents the first effort to publish in open access an extensive IRH dataset. The manuscript describes exhaustively how the IRHs were interpreted, dated and assigned uncertainties in both depth and age. The authors do a great job of being exhaustive in all their sources of error, including in the description of sources of error that they then neglect because they are negligible. The authors are also very clear in stating all the issues that affect the spatial extent of their final product which will help future contributors pick up where this manuscript leaves off. I recognize the amount of work involved with publishing a complete IRH dataset on PANGEA, which I applaud. More (myself included) should follow suit.

I went into a little more detail in my review of the manuscript than the other reviewers, but they are all very minor corrections.

Specific comments: I agree with Reviewer 1's comments that some seminal manuscripts on early RES work are missing in the citations and they should be added to the manuscript. I would suggest adding the total age uncertainty in Table 2 even though it is given in the main text. It makes it easier to go back and look up the information. I would also suggest keeping only panel (a) in Fig.3. Indeed, the zoom level is not much different in panels b-d except for the color scale nuances. But panel (a) already shows quite well the pattern of increasing normalized depth toward the coast. However, panel (a) is missing the DA to SP transect present in panel (d), could it be added back to panel (a)? In Table 3, the absolute depth differences are much larger in the AGAP South survey compared to the AWI survey, could the reason why be explained or if unknown hypothesized? Also, I think it would be interesting to have the absolute depth difference in the crossover analysis for the gridded part of the AWI data versus the long single transects (e.g. in CEA). But this might belong more to the realm of future work.

Technical comments: see in supplement

Please also note the supplement to this comment:

<https://www.earth-syst-sci-data-discuss.net/essd-2018-140/essd-2018-140-RC3-supplement.pdf>

Interactive comment on Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2018-140>, 2018.

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Discussion paper

