

Over all this paper is much improved. My only minor concerns are that the authors needs to clarify that their results hold only in the dry snow region a bit more clearly and more clearly define their layer dating as a few sentences seem to contradict each other. This study is in a very specific area where HL modeled density works well. HL is not working well in many regions of the percolation zone anymore in Greenland. A few detailed comments below:

Page 1 line 6 the combine sentences to read 1985 to 1994 and by 13% above 3000 m.

Page 1 line 10 change to ASIRAS-NP estimates in the dry snow region.

Page 2 line 6 – This is stated in a way saying that you are assuming radar and density are the best measurements. You may want to say radar/density measurements and ice core isotopic analysis are both accurate ways to determine accumulation as you are using ice core analysis as ground truth.

Page 5 line 7- This is confusing. You are saying that density peaks are in the Winter snow formed during the summer warm temperatures. Are you suggesting that the summer snow is percolating into the winter layer? Please clarify as this justifies your dating of October-September for the accumulation year. If summer warm temperatures are densifying the snow wouldn't that correspond to a peak in July/Aug. Or are us suggesting compaction winter snow by overburden?

Page 6 Line 6- I find the first sentence confusing. I believe you are saying that no matter the density profile for radar travel time you get the same layer depths. If this is so the sentences before showing 190 ns is 20.03 or 20.24 m in depth seems like it would be a range bin different given the .109 range resolution of the radar and you have layers picked below 20 m. Please clarify.

Page 7 line 29- We linearly interpolate... please add how you interpolated. Also by the end of the paper I was still confused as to the input for the high resolution temperatures, accumulation and density for the HL model. Please clarify. Were you using IST, using a lapse rate from AWS stations???

Page 8 line 16- ice lenses below the winter snow pack seems to contradict the statement that the density peak is in the winter snow. (see Page 5 line 7 comment) Please clarify.

Page 10 line 13 correct fig ??

Page 11 line 3 I believe you need to add layers after five.

Page 12 line 25 correct Table ??

Page 12 line 29- appears to be a sentence fragment here that need to be incorporated in paragraph below.

Page 14 line 18- estimates in the dry snow region.

Page 14 line 26- thanks for the acknowledgment. Laura should be Lora.

