

I would like to thank the authors for implementing the reviewer suggestions. Overall, the revised manuscript has improved significantly. The authors have greatly improved the readability of the manuscript. The purpose of the work is now clearly articulated. The result and discussion sections are concise and easy to read. Well done.

Suggested corrections:

- In-situ vs in situ: The authors use both forms of the word. Consider choosing either the hyphenated form or the unhyphenated form for consistency.
- Figure 2 Caption: “Panel (c) shows the contour plot of FYI density evolution from hydrostatic weighing with bulk density values for each coring event shown in blue and grey shaded areas representing snow or surface scattering layer thickness.” Consider placing a comma “(...) shown in blue, and grey shaded areas (....)”.
- Table 1 Caption: “Bulk physical properties of level first-year ice at the coring and ROV sites” A period is missing at the end of the caption.
- Figure 4 caption: “Dotted blue line in (b) represents sea-ice density estimate corrected for coring measurements performed in unponded areas as described in Section 4.6.” Consider adding an article at the beginning of the sentence, “The dotted blue line in (b) ...”
- Figure 4 caption (and Figure 2 caption): “Time axis is not continuous.” Consider adding an article at the beginning of the sentence, “The time axis is not continuous.”
- Figure 7 panel (d): The scatter plot shows FYI in blue and SYI in orange, while the lines show FYI in orange and SYI in blue. The legend labels or line colors might have been mixed up here.
- Figure 10: I think something went wrong when rendering the figure. The legends are not aligned. Lines delimiting the individual legend boxes are missing. Additional boxes are floating left of panel (b) and panel (e).
- Lines 471-472: “Upscaling of these estimates during winter is complicated by the large-scale spatial variability of snow depth due to variability of ridge fraction.” Consider changing the sentence to “(...) is complicated due to the large-scale variability of snow depth and/given the variability of the ridge fraction.”