The authors use SWOT KaRIn data to retrieve Arctic lead sea surface height anomalies and sea ice total radar freeboard over two growth seasons (Oct 2023 to Apr 2025). Leads are identified from incidence-angle-dependent backscatter using an empirical threshold. SWOT derived freeboard is to compare to ICESat-2 freeboard. This is a timely, clearly motivated assessment of SWOT over sea ice. The authors are open about several limitations, and the correction of SWOT freeboard to total freeboard using a linear regression from IS-2 is an interesting result. I would have been nice to have independent snow depth and freeboard measurements to validate. I only have specific comments.

Specific comments:

L12: the statement “time-invariant penetration depth” is quite surprising to me given that penetration depth should change over the season... It should reduce technically with increased grain size and denser snow. Maybe a word on this on line 436 when it is mentioned in the conclusion.

L101: 524 nm or 532 nm?

L130: confirm with previous comments. Also, a space is missing before the units.

L134: Yes, the location of scattering surface is unresolved but maybe explain what is happening compared to Ku. It might not be obvious to everyone.

L155: Its says 50km swath in section 2.1…

Figure 1: consider adding a,b,c,d… to all 6 sub figures

L159: Where is the 50% coming from?

L192: again here… where is the 5^{th} percentile coming from. Just by looking at the data? Perhaps explain a bit more.

Figure 4-5: A b) is mentioned in the captions but it is missing on the image

L318: An intercept of -0.3 cm appears in the freeboard and SSHA comparison. Is it a potential systemic error between the IS-2 and SWOT instrument?

Figure 6: Would be interesting to see cryosat2 freeboard also in Figure 6a).

Eqn3: A bit link to my previous comment but its should be going to zero?

L339: Could “SWOT corrected freeboard” be a better name?

L438: Why suddenly use R instead of R2. I feel like it a bit circular and inflated since the total SWOT freeboard is corrected by IS2 and then compare to IS2 to validate.