

Comments on tc-2023-22

The authors have improved the manuscript based on the reviewer comments. It is my opinion that the manuscript should be published, subject to (very) minor revisions, as detailed below.

157 - slight rephrasing would help, I had to read the sentence a couple times to follow. What quantity did Wang et al. (2016) measure? I'd replace "did report no" with "reported no".

171 - I believe you mean "Laptev Sea"? Vilkitsky Strait connects the Kara and Laptev Seas.

178 - The idea of the sentence works, but it needs to be rephrased to avoid being a run-on sentence. Perhaps "These are regions with complex bathymetry, and hence..." I think that the phrase "a lot of details" is too colloquial.

199 - Island should be capitalized

203 - no comma needed before F_SCV

234 - 90th percentile is correct, as you had it originally, rather than 90% percentile

277 - no comma needed between regions and "where a significant"

278 - I'd rephrase as "In both the Beaufort Sea and in Fram Strait"

360 - Tides impact sea ice both through inducing a vertical gradient in the surface current and by enhancing the upward heat flux. You mention tide induced shear a few lines above, so perhaps all you need to do is change "tides" to "tide-driven mixing".

414 - I think the final sentence can be improved. As in the sentence in line 178, I think the phrase "a lot of details" is too colloquial. I think that reworking the last two sentences can help emphasize that your paper has demonstrated that there is useful local information provided in the lead fraction dataset, and that future work can leverage this dataset for more detailed investigations of the local forcing.