

Review of
Multiple modes of shoreline change along the Alaskan Beaufort Sea
observed using ICESat-2 altimetry and satellite imagery
Bryant et al. 2024-1656
#2

I am satisfied with the answer that the authors provided to my comments.

I particularly appreciated that they added the suggested Figure A7.

I am only left with small concerns which should not prevent publication of the article, nor another round of review.

1. Code should be shared.

2. It is quite intriguing that the Planet-derived shoreline falls between the ICESat-2 upper and lower shoreline. It really makes me curious to see a quick comparison with external data (e.g. Sentinel, Landsat) to, maybe, rule out systematic geolocation error in, at least, one of the products.

3. I do not understand why the increase of coastal retreat since 2000 is not believed to be an actual signal. It is true that measurements periods are shorter, but they are consistent with Jones et al. (2018) and averaged together, they show an acceleration compared to similar period duration of Jones et al. (2009). I would repeat that clearly in conclusion as it is an interesting finding of this work.

L17: “complimentary”?

L60 “10m” missing a space

L96: “ $m\ a^{-1}$ ” The author’s guide does not seem to require units to be in italic

L113 “and evidence that retreat rates are increasing in recent years”

L122 “CNES Airbus”

L143 “thermal mechanical abrasion” thermo-mecanical? Thermal and mechanical?

L213 “3r,2r” missing space

L232 “the background-corrected standard deviation” thanks for adding more details about this error. However, this term remains unclear. “Background” is never used elsewhere in the text. And “standard deviation” of what?

L286 “a position change estimate uncertainty” thanks for adding “position”, maybe “estimate” can now be deleted?

L297 “in 2020 (-16.8 m) **and** in 2021 (-17.7 m)”

L302 “**We find that** 24%...” to avoid starting a sentence with a number.

L408 “characterized” twice in the same sentence

L431 “that that”

L437 “(-20.3 m to - 67.2 m) change” move the numbers after “change”? Or even after “boundaries”

Figure 6 “SlideRulederived” missing “-” or a space.

“overlain”

Figure 7 This figure could be about twice smaller. Text size is huge at the moment.

Figure A7 is not cited in the text, it could fit in 4.1.