

The Cryosphere Discuss., community comment CC2
<https://doi.org/10.5194/tc-2020-371-CC2>, 2021
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Comment on tc-2020-371

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Community comment on "A Bayesian approach towards daily pan-Arctic sea ice freeboard estimates from combined CryoSat-2 and Sentinel-3 satellite observations" by William Gregory et al., The Cryosphere Discuss., <https://doi.org/10.5194/tc-2020-371-CC2>, 2021

The article could be clearer on where CryoSat and Sentinel-3 operate in different modes (SAR for S3, SARin for CS2) over certain areas of the Arctic such as the Canadian Archipelago, what differences in freeboard might be expected in these areas, and the subsequent effect on regional and pan-Arctic statistics. The authors might consider restricting the analysis or including an analysis of areas of the Arctic where CS2 and S3 operate in the same mode (SAR). For example, on line 292, 'significant discrepancies between CS2 and S3 freeboards' are noted but not explained. This could be partially explained by the different modes in operation.

On line 292, 'Candian Archipelago', should be 'Canadian Archipelago'