

To the Editor,

Please consider our enclosed paper "*The Complete Annual Record of Sea Ice Volume Export through Fram Strait as Observed by Satellite from 2010-2022*" for publication within GRL. This paper uses a new year-round satellite ice thickness product from CryoSat-2 to close the annual record of sea ice volume export through Fram Strait. Previous estimates of sea ice volume export from satellites are limited to winter and while in situ observations of thickness from moorings have been used to estimate the annual record previously and provide a long-term view of the ice pack since 1992, the spatial coverage of mooring-based observations is limited and leads to considerable uncertainty. We further refine our estimates using seven years of high-resolution ice drift data from spaceborne SAR to show that volume fluxes calculated with coarse passive microwave drift products may underestimate the magnitude by up to 30%. Overall, we provide an important update and refined estimates of sea ice volume export through Fram Strait, which is the primary pathway for sea ice export from the Arctic Ocean and therefore a critical part of the ice mass balance of the Arctic Ocean. This paper builds on a long history of papers examining sea ice volume export within GRL and the broader AGU family of journals.

We have no conflicts of interest to declare and have suggested reviewers who can provide an expert peer-review. All datasets used in this study are referenced in the data availability section and publicly available online.

Thank you for your consideration,
- David Babb

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