

## ***Interactive comment on “Fram Strait sea ice export variability and September Arctic sea ice extent over the last 80 years” by L. H. Smedsrud et al.***

**L. H. Smedsrud et al.**

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Thank you for your positive and helpful comment.

We will indeed follow your suggestions, and have started implementing the requests. We certainly agree that “no particular record is the truth” and that the errors “are not well defined”, but will do our best to improve the description and discussion as suggested by you and the two reviewers. The answer to your more detailed questions will be given in the author response, as part of the re-submission.

In short we will:

- 1) Better describe the uncertainty both in the SAR based and “mSLP” based time

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series.

- 2) Extend the existing discussion about the large-scale atmospheric forcing incorporating the suggested Hilmer and Jung (2000) and Wu et al (2006) papers.

- 3) More carefully include the uncertainties in the discussion of our mSLP based time series before 1979, including long-term changes in sea ice concentration from Walsh et al (2015).

- 4) Tighten the discussion of the link to the following September SIE, and instead cite the newly published Williams et al (2016) paper.

On behalf of all co-authors,

Lars H. Smedsrud

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