



EGUsphere, community comment CC4
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Reply on RC3

Jiping Xie

Community comment on "Assimilation of sea surface salinities from SMOS in an Arctic coupled ocean and sea ice reanalysis" by Jiping Xie et al., EGU sphere,
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This work presents a good assessment of the usefulness of SMOS sea surface salinity data in Arctic Ocean modeling. The control vs SSS assimilation experimental design is valid, statistical error diagnostic is standard and the evaluation is well done by comparing with independent source of observations. Discussion is also informative and interesting. In general, I found it being a nice piece of research without major flaws. However, the following attentions need to be paid for improving the manuscript. 1) there are a few mistakes in the equations, although it seems that the authors did the correct diagnostics according to the figures presented.

Sorry for the related errors in Eq. like the Eq. 6 missing the sqrt. I will further correct the Eqs as the required by the common mathematic rules.

2) some acronyms, data and analysis method are not clearly defined in the text - please see my specific comments.

Thanks for this suggestion. The consistence in text will be checked more strictly in the revision, especially to the related comments.

3) the English writing must be improved as some parts of the article reads awkward and confusing which makes it hard for readers to follow.

Thanks for this suggestion. I together all the co-authors will improve the language more fluent and ask the native speaker to proofread the revision.

Other suggestions about making changes to figures and writing are included in the annotated document. Overall, I would suggest a minor revision recommendation for this article.

We will work for these comments and give the official reply in PDF with one by one response.