

Dear Yevgeny Aksenov,

Thank you for accepting the manuscript and for your work as editor.

Kind regards,

Isolde Glissenaar

Reply to specific comments

L 143 : Linear trend, thanks for adding this precision. I will reformulate my question as I think it was not clear. I was wondering which estimation method was used. Indeed, there is a lot of variability in these regions and usual linear regression made with python/scipy used least squared method so trends can be biased a lot due to outliers. I would not suggest to change the trends computation but to precise this choice because climate trends are usually computed with estimators that give less weight to outliers (e.g. Theil-Sen algorithm), same for the test which is used to estimate the significance of the trend.

*We have clarified that it is indeed the least-squares method that was used.*

Figure 4: If ever it's possible to enlarge the font or the figure a little to make it easier to read, that would be great.

*It is not really possible to enlarge the font size and keep the figure in the same dimensions. We hope it is possible to have this figure larger than the 12cm in the TC figure guidelines, or to have the figure in Landscape in the final document.*

Abstract: May be the use of PIOMAS should be mentioned in the Abstract, since it plays a significant role in the paper?

*We have added this to the abstract.*

L143: "we retrieved the linear trend in PIOMAS mean thickness": The PIOMAS mean thickness as provided by PSC represents effective ice thickness (Volume per unit Area). Is this consistent with the proxy-product (and eventually the CryoSat-2 SIT)? Please clarify if needed.

*We have corrected the PIOMAS effective thickness to real thickness using the PIOMAS sea ice concentration.*