

Geosci. Model Dev. Discuss., author comment AC5
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Reply on RC2

Nairita Pal et al.

Author comment on "Barotropic tides in MPAS-Ocean (E3SM V2): impact of ice shelf cavities" by Nairita Pal et al., Geosci. Model Dev. Discuss.,
<https://doi.org/10.5194/gmd-2022-188-AC5>, 2023

Dear Referee,

We sincerely thank you for the positive feedback of our work. We are indeed happy to read that our paper is an interesting read, and that it is scientifically rigorous. The comments are addressed below, and a file is also attached with detailed comments.

L-25 Please provide reference and citations

Thank you. We have now provided references and citations (page 2 second paragraph of our revised manuscript).

Fig 1- can Fig 1a be redrawn? it looks like a sketch

Thank you for pointing this out. The figure has been redrawn (page 7 of our revised manuscript).

Fig 2 - please improve the figure resolution

Thank you. The figure resolution is now improved (page 9 of our revised manuscript).

Fig 4 - please include x and y axis labels

Thank you. We have now provided the x and y labels (page 13 of our revised manuscript).

Apart from these minor comments, the overall work that has been presented is significant, well written, and structured and should be considered for publication as the impact of this work will enable accurate tidal prediction, which will facilitate and enable us to predict global climate variability.

We sincerely thank you for taking the time to prepare the report for this paper. The comments have led to important improvements of our manuscript. It is truly encouraging to read that the reviewer finds this work impactful towards predictions of climate

variability.

Please also note the supplement to this comment:

<https://gmd.copernicus.org/preprints/gmd-2022-188/gmd-2022-188-AC5-supplement.pdf>