

Geosci. Model Dev. Discuss., author comment AC3
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Reply on RC1

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.,
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Thank you very much for sending us the report and for giving us the chance to address the concerns. We thank you for taking the time to prepare the report on our paper.

We are pleased to receive the positive review of our manuscript. It is indeed encouraging to read that our work on implementing tides in MPAS--Ocean is significant, and will enable more accurate tidal predictions, and hence will facilitate prediction of global climate variability. The comments have greatly contributed to the improvement of our manuscript.

We give below detailed responses to the various questions and comments. In addition, we have added the particular version of the Energy Exascale Earth System Model that we use in the title of the manuscript, the main body of the paper, as well as the code availability section, as suggested by the editorial team. The changes in our revised manuscript, which have been made to address the comments of the Referee and the editorial team, are indicated in blue. We have addressed the concerns fully. We hope, therefore, that our paper will now be accepted for publication in Geoscientific Model Development.

Best regards,

Nairita Pal (on behalf of all authors)

Please also note the supplement to this comment:

<https://gmd.copernicus.org/preprints/gmd-2022-188/gmd-2022-188-AC3-supplement.pdf>