

Interactive comment on “Simple algorithms to compute meridional overturning and barotropic streamfunction on unstructured meshes” by Dmitry Sidorenko et al.

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Received and published: 9 June 2020

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We thank the reviewer for reading our manuscript and for giving suggestions. Please find our answers below.

The Authors

This paper clearly explains how to calculate the meridional overturning and the barotropic streamfunction on unstructured meshes. The method proposed avoids

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interpolation (which to my knowledge is the most common procedure) and preserves conservation. The paper is well written, and clearly discusses the mathematics of the computation, and the sensitivity of the parameters. I am not aware of any other publication that discusses these calculations. The paper could basically be published as it is, and it will be a useful reference for the community of ocean modellers aiming to reproduce this calculation. See below for some minor comments that may improve it. I find confusing the notation of the streamfunctions on top of page 4. The first one can be confused with the multiplication of two integrations when it should read a double integral.

Thank you, we modified notations of the streamfunctions in section 3.

Equations could be numbered so that it is easier to reference to them.

Fixed!

When explaining introducing the ways of computing the meridional overturning, stating which is method A and which is method B would ease the reading.

Done!

Could you please also state in the figure captions whether the calculation is made method A or B?

Done! We modified the figure captions in the revised paper stating the methodology and we also corrected for all grammar comments listed by the reviewer!

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