

Interactive comment on “Mean dynamic topography of the black sea, computed from altimetry, drifters measurements and hydrology data” by A. A. Kubryakov and S. V. Stanichny

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In this manuscript the authors present a calculation of a new estimate of the MDT in the Black Sea. I find the article interesting, because it describes the process of obtaining MDT estimates along tracks that are more accurate than the previous estimates in the Black Sea. The authors, however, state that the method is very similar to one previously applied in the Mediterranean Sea and the Global Ocean. The novel aspects of this study are not clearly described. I also have some other important comments. I suggest that the authors respond to my comments before accepting the manuscript for the publication.

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Comments:

1. The novel aspects of the study are not clearly presented. Although there are some similarities to the referenced papers (and some other papers that are not referenced), the calculation of the MDT in this paper is somewhat different. It provides estimates along tracks without the need for the background estimate. This can be added as a novel aspect of the study in addition to the calculation of a new MDT in the Black Sea.
2. Page 702 – Title: It should be “Black Sea” instead of “black sea”.
3. page 705, Section 2.2.3 Why is the depth of 500m chosen?
4. Page 706, Section 2.2.4. The description of the CMDT is insufficient. It is the main data set for the comparison and must be described with much more details: What are the parameters of the model set-up (model, resolution, time integration length, etc.) ? How is the T/S climatology obtained (data sets, OA scheme, radius of correlation, etc.)? Is the model able to generate any of the observed eddies?
5. Page 710, line 15. The eddies should be shown in a figure, because those who read the paper are not always experts on the Black Sea dynamics.
6. The study is almost completely self-referenced without addressing other methods for the MDT estimation. Only a very similar method is referenced. The introduction should at least give references to other possible methods for the estimate of the MDT.

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