

## ***Interactive comment on “Crustal Density Model of the Sea of Marmara: Geophysical Data Integration and 3D Gravity Modelling” by Ershad Gholamrezaie et al.***

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Dear members of the Editorial Board,

First of all, we would like to thank reviewer #2 for providing us with the detailed comments and for revising his/her recommendation towards “major revisions” instead of “reject”.

In our revised version we attempt to address all concerns raised by the reviewer and provide new results considering the full amount of accessible observations. Before we explain how we have addressed the specific concerns of the reviewer in detail

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(enclosed) we would like to give a short summary of the additional work that went into the revised version of this manuscript:

We have revised the structural model by implementing the higher resolved bathymetry provided by referee Pierre Henry.

We tested the sensitivity of our results by calculating a series of “best-fit models” with respect to both gravity data sets and present a detailed discussion of these results. This quantitatively illustrates how robust the results are and in which range uncertainties are involved.

We have included the additional hypotheses concerning the origin of the modelled high-density bodies in the discussion considering the references suggested by all three reviewers.

Please find enclosed our detailed answers to the reviewer’s comments. We hope the reviewer find his/her concerns satisfactorily addressed and that the revised manuscript can be accepted for publication.

Yours sincerely

On behalf of all co-authors,

Ershad Gholamrezaie

Please also note the supplement to this comment:

<https://www.solid-earth-discuss.net/se-2018-113/se-2018-113-AC3-supplement.pdf>

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Interactive comment on Solid Earth Discuss., <https://doi.org/10.5194/se-2018-113>, 2018.

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