

The authors use the high resolution FESOM-C to investigate the non-linear tides in a part of the Wadden Sea. Using a new bathymetry, the tidal dynamics and energetics was described for the area. The paper is an interesting local study, and the methods and analysis will be of interest for other investigations. The implications of the work is also interesting, e.g., in terms of sediment transport and erosion. I agree with the reviewers' comments that the paper needs some more work, and I recommend a minor revision. The reviewers provide a series of relevant comment that I agree with, and I have nothing major to add on my own. In particular, I think the model description needs more detail, as suggested by both reviewers.

Dear Editor,

Thank you for the comments and suggestion! We have added the detailed description of the setup to the manuscript.

Also, the Vida TG station is dry at spring low - how is this taken into account? A traditional harmonic analysis on gappy data is not particularly reliable. Please comment.

Thank you for the question. VidaTG station is situated in the intertidal zone, however itself is situated in the quite deep channel, therefore there is no distortion of the time series (Fig. 1).

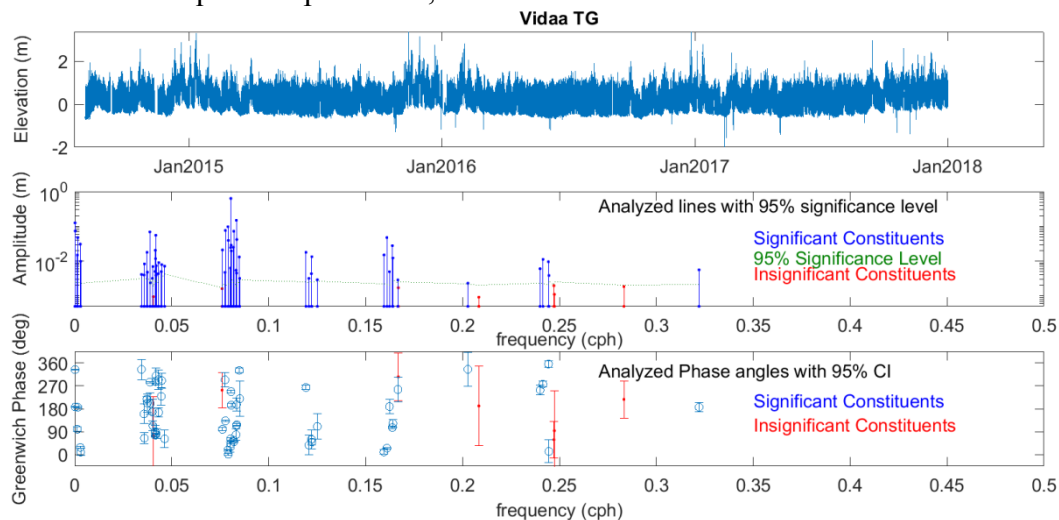


Figure 1. The elevation time series at the Vidaa TG and results of the classical harmonic analysis.

The other comments from the reviewers should be taken into account in the revised version.

We have incorporated the reviewer comments.