

Interactive comment on “Wave climate and storm activity in the Kara sea” by Stanislav Myslenkov et al.

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The authors are grateful to the referee for the hard work with manuscript and significant comments. The article is a very large, so a lot of technical information was not included in the text. Here I will try to comment on the main claims: This work was started at 2016, and at that time we used the newest version of WW3. We made sensitivity tests with all available parametrization, including the interaction of ice and waves. Model results were compared with several buoy stations in the North Atlantic, the Norwegian Sea, the Barents Sea. But the ST1 scheme was the best choice which based on Bias, RMSE and R. The IC0 ice scheme provided the best results too (but the differences were very small, because measurements were not close to the ice edge). In the Kara Sea the direct wave measurements practically absent, and we use all which is available for us.

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We can include in the paper the comparison of model results with Saral and Sentinel satellites directly for the Kara Sea. We can include some sensitivity tests with different configuration from 6.07 WW3 but I believe that the storm statistics will not change. The interaction between ice and waves is a very hard task and needs a separate study. In our paper the focus is on the extreme storm events (with SWH 5-7 m) and this events possible generally in case of wide open water without ice. Thus, the using different ice schemes has a little influence on the climate statistics and trends. We agree with all comments on the English language and inaccurate using of terms and will fix it in the next version of manuscript. Next, we analyze the comments on the points. Basically, we agree with everything, but we will comment on several of them. P2L50 data from models are preferable. They are also limited by the presence of sea ice, as waves-in-ice modelling remains quite challenging (e.g Squire, 2020). Also, I would not say that model data are “preferable” to observations. - We mean that the measurements are certainly more accurate and good, but the series are usually short and only at 1-2 points, and this is not enough for analyzing storm activity.

P4L132 In a spectral wave model, SWH is not computed as the average height value of the 33% highest waves. - We understand this, but for untrained readers it is necessary to give a clear definition.

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