

## Editor's comments

Apart from matters of clarity, there is still some need for more discussion in my opinion, especially about how widely applicable are the results here. Any paper should have a discussion section for this purpose. A referee's question about the significance of the JONSWAP spectrum as the initial condition still needs answering (you could look at how much the spectrum changes during the Chalikov and Bulgakov 2017 70,000 time steps). Might model resolution affect the relation between extremes and  $H_s$ ? The calculations have wind energy input = dissipation; might the relation be different in a growing or decaying sea? What return period does  $10^{-7}$  correspond to?

## Authors' response

1. We added discussion section
2. For ensemble numerical simulation used the relatively high resolution which allowed the simulation of very large number of wave modes. Since the extreme waves are formed mostly by waves in vicinity of wave peak, we consider the results of modeling as well suited for analysis. Our preliminary results with simulation of waves field developing under action of wind show that distribution of probability remains more or less universal i multi-mode wave field. What concerns decaying wind, this process is still not investigated. When wind becomes weak, the spectrum is narrowing and spectral tail disappears. In reality, more often, the wave just fall under action of another wind system.

Lines 23-24. I do not understand “frequencies more then  $2.5 \cdot 10^{-5}$  Hz” in this context. All your waves have much higher frequency. Also should be “. . . than  $2.5 \times 10^{-5}$ ” and “-5” should be superscript.

The change was made:

In (Larsen et al., 2015) it was shown that power spectrum of modeled significant wave height miss the energy for frequency more than  $2.5 \times 10^{-5}$  (daily timescale and less). The spectral correction method was developed to fill in the missing variability of the modeled variable at high frequencies.

Line 40. Long-wave currents can steepen (or flatten) shorter waves according to the laws of physics. Physics applies always, not rarely!

The change was made:

Waves of other types of spectrum (swells) have a small steepness and don't influence extreme wave generation except cases when long-wave currents can steepen shorter waves.

The rest of the editor's corrections were accepted.