

Review
on the manuscript (Brief Communication)
“Is there a wind connection to freak wave occurrences?”
by *P.C. Liu, R. Bouchard, W.E. Rogers, A.V. Babanin, and D.W. Wang*

Any wave measurement is unique. In this sense the event with Provincetown ferry and simultaneous wind and wave measurement by NOAA NDBC buoy is worth to be mentioned as a brief communication. From the presented info is seen, that authors do not have raw wave records (or they are not exist). They only included hourly data of significant wave heights. This means, that other parameters of the freak wave are unknown. Namely, crest height, horizontal or vertical asymmetry, etc. The conventional definition of a freak wave is absent. There are a lot of papers with various definitions, with regard to shipbuilding we recommend to refer the paper in International Shipbuilding Progress 2004. N 2/3. The probability of freak wave in any ocean will vary from very often to very rare, depending from the definition.

As it is seen from the fig. 3 (it is misprint in their paper with fig numeration) there are a lot of local increasing and decreasing of the wave heights. The same are on the fig. 2 (wind speed). In a lot of papers had been pointed out, that freak waves may arise both in the cases of wind increasing and decreasing (see e.g., Rogue Waves 2000 or later, or OMAE 2008). It is clear that any disturbance of stability may lead to disbalance, and as one of a result to a freak wave formation. Authors presents 7 figures of frequency spectra, the only conclusion from these pictures is that all the spectra are similar and do not produce any findings about freak wave. This support the well-known opinion, that spectrum cannot contain information about single wave. Then maybe it is enough to draw the spectrum for the time of freak wave (though measured in another place).

They introduce the term “freak waves”, it will be better to avoid the new terminology (in spite of respect to Gallicism) as it is already exist common “freak wave” and “rogue wave”. The promotion “Babanin-Rogers Conjecture” seems too emotional and ambitious. It is better to soft the tone of communication.

At last, I do not sure that treated event is one of the base to warning criteria for freak wave forecasting. The weather forecast content the info about mean wind and it gusts, but not about possible unexpected drop or increase. It is clear that to foresee the place and time of a freak wave arising is impossible. We can speak only about the increasing of the probability of a freak. In particularly, due to drop of wind speed.

Though in spite of some criticism the paper may be published as Brief Communication. The explanation of freak wave formation (in the 4 part of communication) due to sudden wind speed drop is interesting and may be the background of separate paper.

