



Interactive  
Comment

## ***Interactive comment on “Preliminary investigation on the coastal rogue waves of Jiangsu, China” by Y. Wang et al.***

### **Anonymous Referee #3**

Received and published: 9 March 2014

The manuscript describes a study of extreme/rogue/freak waves based on buoy measurements. I find, however, that the method and analysis are far from being accurate. In this present form, the manuscript is not suitable for publication in an international Journal such as NHESS.

More specifically:

1) the study uses buoys measurements to study the height of individual waves. While buoys provide accurate integrated spectral parameters, wave height is less accurate than those measured by other devices (see, e.g., Forristall, JPO 2000, and references therein).

2) Only 17.067min time series a hour are used. This does not provide a long enough

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records for the measurements of statistical parameters such as skewness and kurtosis, which on the contrary requires very long series to be statistically significant. I doubt that the values obtained are reliable.

3) Records only show very mild sea state conditions, with  $H_s < 1$  m. Although the definition of a rogue waves is dimensionless, the overall dimension of the sea state cannot be disregarded. Are these measurements really representative of a storm condition? It would be more interested to see a broader range of measurements with larger significant wave height

4) At page 6600 there is a description of wave steepness. Does this relate to the spectral peak or does it refer to individual waves? This is an important detail for understanding the results.

5) At page 6600 there is a discussion on BFI. This is a parameter that refers to unidirectional sea states and it is completely meaningless in the present study, which consider realistic directional waves.

6) Authors suggest existence of rogue waves with  $H/H_s > 2.5$ . I find it hard to believe that this can really happen in stormy conditions. Such waves would definitively break before reaching such an incredible ration.

7) I do not understand the discussion on the wave recorded in September 2011. While there is no specific date associated to the time series, forecast/hindcast on 2 Sept. is claimed as relevant. How can this be so?

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 1, 6593, 2013.

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