Ocean Science
Discussions

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Interactive comment on **"Technical note: Common characteristics of directional spreading-steepness joint distribution in freak wave events"** *by* **S. H. Liu and X. Y. Yue**

Anonymous Referee #1

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I have reviewed the manuscript [os-2015-93] titled "Common Characteristics of Directional Spreading-Steepness Joint Distribution in Freak Wave Events" by Liu and Yue.

The authors constructed hindcast simulations of ocean conditions to analyze the wave parameters that closely related to freak waves. They found common visual features in direction spreading-steepness joint distributions when freak waves occurred. The common features seem obvious and interesting. The paper is generally written well and easy to follow. I have only minor comments, and suggest that the manuscript be published in OS.

1. The model used in the study is WAVEWATCH III (WW3), which is a spectral model to describe the statistic characteristics of ocean waves. It is impossible to simulate freak

waves using WW3. How to build the connection between the simulated results and the freak waves is important, but unclear in the paper. 2. Page6, line14-17 "Tamura et al., (2009) and In et al., (2009) have introduced frequency peakedness-directional spreading joint distribution". Where "Steepness" is used in the paper instead of "peakendness". What's the difference between steepness and peakedness in the joint distribution? 3. Page5, Line26, "Burgers et al., (2008)" change to "and Burgers et al. (2008)" 4. Page5, Line 4, "Where" change to "where" 5. Page6, Line 14,"Tamura et al., (2009), In et al., (2009)" change to "Tamura et al. (2009) and In et al. (2009)"