

Interactive comment on “Nonlinear probability distributions of waves in bimodal following and crossing seas generated in laboratory experiments” by P. G. Petrova and C. Guedes Soares

Anonymous Referee #1

Received and published: 6 December 2013

Manuscript # nhess-2013-256: Nonlinear probability distributions of wave heights in bimodal following and crossing seas generated in laboratory experiments

The manuscript presents an interesting analysis of experimental data describing the statistical properties of bimodal sea states. This research is of importance for the ocean engineering community and I support its publication in NHESS. However, the authors should first address the following comments before the manuscript can be accepted.

C1966

1) It is not clear to me what "Nonlinear Probability" is. The term is used in the title and throughout the manuscript. However, it looks like the authors are describing the effect of nonlinear wave dynamics on wave statistics rather than some "nonlinear" probabilistic function. I suggest to revise this term and if necessary modify the title.

2) Figures 5 and 6 show the evolution of the high frequency peak only. Why not showing the evolution of the full spectrum, i.e. comprising of the low and high frequency peak. Can you see any nonlinear interaction between the two peaks?

3) I would suggest to use larger fonts for the figures so that the text is well visible

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 1, 5403, 2013.

C1967