



Variation of kurtosis over non-uniform bathymetry

Huiming Zeng and Karsten Trulsen

Department of Mathematics, University of Oslo, Norway (karstent@math.uio.no)

We have previously reported (Zeng and Trulsen, presentation at EGU 2010) that waves propagating over a shoal may experience a dynamic relaxation over some distance in order to reach an equilibrium state corresponding to the new local depth. This can provoke local values of kurtosis different from the equilibrium value expected for a flat bottom of the same given depth. This may provoke localized regions of increased freak wave probability.

Recent experimental results from MARIN (provided by T. Bunnik, J. Hennig and C. Schmittner) may shed some light on the problem of non-equilibrium values of kurtosis, and in particular, localized regions of increased kurtosis. We show how the numerical and the experimental data are related.