



Rogue waves, dissipation and downshifting

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Damping plays an important role in stability and downshifting of waves. The physical and statistical properties of rogue waves in deep water are investigated using the focusing Nonlinear Schrödinger equation and the Dysthe equation with an additional damping term.

The effects of both linear and nonlinear damping on the development of rogue waves and the interaction between rogue waves and downshifting are examined using numerical investigations and analytical arguments based on the inverse spectral theory of the underlying integrable model, perturbation analysis, and statistical methods.