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Constance M Schober* (drschober@gmail.com), University of Central Florida, Dept. of Mathematics, PO Box 161364, Orlando, FL 32816. *Rogue waves and Dissipation.*

We discuss rogue wave generation in deep water from the perspective of the focusing Nonlinear Schrödinger equation and some of its higher order generalizations (HONLS). For the HONLS equation two features emerge: (a) a chaotic sea state appears to be an important mechanism for both generation and increased likelihood of rogue waves; (b) the extreme waves intermittently emerging from the chaotic background can be correlated with degenerate homoclinic orbits characterized by maximal coalescence of their spatial modes. The effects of wind and wave damping are examined and a statistical interpretation of rogue wave data is provided. (Received September 01, 2009)