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Jeffery C DiFranco* (difranco@seattleu.edu), Department of Mathematics, 901 12th Ave, P.O. Box 222000, Seattle, WA 98122, and **Peter Miller**. *Inverse scattering for the semiclassical modified nonlinear Schrödinger equation.*

The modified nonlinear Schrödinger equation (MNLS) has the interesting feature that, depending on the initial conditions, it can behave like the focusing nonlinear Schrödinger equation, the defocusing nonlinear Schrödinger equation or an interesting mixture of the two. In this talk I will discuss some of these features and, in particular, speak about the role of these characteristics in obtaining semi-classical asymptotics through inverse scattering using the Deift-Zhou steepest descent analysis for Riemann-Hilbert problems. (Received December 12, 2011)