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Long Lee, Gregory Lyng* (glyng@uwyo.edu) and **Irena Vankova**. *The Gaussian Semiclassical Soliton Ensemble*.

We describe a number of careful numerical experiments motivated by the semiclassical (zero-dispersion) limit of the focusing nonlinear Schroedinger equation. These experiments were designed to study the evolution of a particular family of perturbations of the initial data. These asymptotically small perturbations are precisely those that result from modifying the initial data by use of formal approximations to the spectrum of the associated spectral problem; such modified data has always been a standard part of the analysis of zero-dispersion limits of integrable systems. However, in the context of the focusing nonlinear Schroedinger equation, the ellipticity of the Whitham equations casts some doubt on the validity of this procedure. Remarkably, our experiments show that that the rate of convergence of the modified data to the true data is propagated to positive times including times after wave breaking. (Received January 22, 2013)