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The short-pulse equation (SPE) describes the propagation of light pulses of ultra-short duration in nonlinear optical media. Breather soliton solutions of SPE have been constructed previously by a transformation from the Sine-Gordon equation. In simulations, pulse interaction is observed to vary qualitatively as a function of a parameter that measures the “shortness” of the pulse envelope relative to the internal oscillations. These changes are intermittent as the parameter varies. Moreover, for some parameter values, soliton interaction generates persistent, highly oscillatory coherent states. (Received March 30, 2010)