Scattering in the generalized Hartree equation

We consider a nonlinear Schrödinger type equation with nonlocal nonlinearity, of a convolution type, called the generalized Hartree equation. In the focusing case we investigate global behavior of solutions. In the inter-critical regime we obtain a dichotomy for global vs finite time existing solutions exhibiting two methods of obtaining scattering: one via Kenig-Merle concentration - compactness and another one is using Dodson-Murphy approach via Morawetz on Tao's scattering criteria. We use Riesz transform estimates and other convolution type inequalities to treat the convolution type of nonlinearity.

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