GLOBAL WELL-POSEDNESS AND SCATTERING FOR THE QUINTIC NLS IN TWO DIMENSIONS

XUEYING YU

We consider the Cauchy initial value problem for the defocusing quintic nonlinear Schrödinger equation in $\mathbb{R}^2$ with general data in the critical space $\dot{H}^{1/2}(\mathbb{R}^2)$. We show that if a solution remains bounded in $\dot{H}^{1/2}(\mathbb{R}^2)$ in its maximal interval of existence, then the interval is infinite and the solution scatters.