

论文

ASYMPTOTIC DECAY OF SOLUTIONS OF A NONLINEAR SCHRODINGER EQUATION IN \mathbb{R}^3

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摘要 In this paper we consider the following nonlinear Schrödinger equation: $i u_t + \Delta u + |u|^2 u = 0$ in $\mathbb{R}^3 \times \mathbb{R}_+$, $u(0) = u_0 \in H^2(\mathbb{R}^3)$. First we give a sufficient condition on the initial data which guarantees the existence of its global solutions. Then an asymptotic decay result of the solutions is obtained.

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