REGULARITY OF THE ATTRACTOR FOR A COUPLED NONLINEAR KLEIN-GORDON-SCHRODINGER SYSETEM IN ¨ R^3

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Abstract

The main goal of this paper is to study the asymptotic behavior of a coupled Klein-Gordon-Schr¨odinger system in three dimensional unbounded domain. We prove the existence of a global attractor of the systems of the nonlinear Klein-Gordon-Schr¨odinger (KGS) equations in H1(R3) × H1(R3) ×L2(R3) and more particularly that this attractor is in fact a compact set of H^2(R^3) × H^2(R^3) × H1(R^3).

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KGS (2021).pdf available at https://authorea.com/users/337341/articles/462941-regularity-of-the-attractor-for-a-coupled-nonlinear-klein-gordon-schrodinger-sysetem-in-r-3