Improved time decay for magnetic Schrödinger evolutions

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Abstract

We will present some recent results concerning with electromagnetic Schrödinger equations, with scaling critical fields. While proving dispersive estimates, a quite explicit solution formula permit to reduce matters to the study of the boundedness of a suitable kernel. Moreover, we prove that, if the first eigenvalue of the angular hamiltonian is strictly positive, then the time decay rate is polynomially improved, by suitably weighting the topology.

The results are obtained in collaboration with V. Felli, M. Fontelos, G. Grillo, H. Kovarik, A. Primo.