

# Abstract

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“Non-existence of the wave operators for the repulsive Hamiltonians”

We consider the scattering theory for the Schrödinger equation with the repulsive Hamiltonian. In this quantum system, we can see the characteristic property in which the free dynamics of the particle disperse in an exponential order in time. This fact indicates that the borderline between the short-range and long-range has to be the log-type decaying. I will report in this talk that we can decide this borderline affirmatively by finding concrete counter-example such that the wave operators do not exist.