

On inverse scattering for time-decaying harmonic oscillators

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Different from the usual harmonic oscillator, it is known that the time-decaying harmonic oscillator accelerates the particles and constructs the scattering state. We study one of the multidimensional inverse scattering in this two-body quantum system perturbed by the short-range interaction potentials that have the bounded part and locally singular part. In this talk, applying the Enss-Weder time-dependent method, we report that the scattering operator determines interaction potentials uniquely.