

Propagation Property and Inverse Scattering for Fractional Powers of the Negative Laplacian

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Enss (1983) proved a propagation estimate for the usual free Schrödinger operator that turned out to be very useful for inverse scattering by Enss-Weder (1995). Since then, this method has been called the Enss-Weder time-dependent method. In this talk, first, the speaker will introduce the same type propagation estimate for the fractional powers of negative Laplacian. Second, he will report about the inverse scattering by applying the Enss-Weder time-dependent method. He and his group find that the high velocity limit of the scattering operator uniquely determines the short-range interactions.