

22(5)

# Inverse Scattering for a Schrodinger Operator with a Repulsive Potential

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**摘要** We consider a pair of Hamiltonians  $(H, H_0)$  on  $L^2(\mathbb{R}^n)$ , where  $H_0 = p^2 - x^2$  is a Schrödinger operator with a repulsive potential, and  $H = H_0 + V(x)$ . We show that, under suitable assumptions on the decay of the electric potential,  $V$  is uniquely determined by the high energy limit of the scattering operator.

**关键词** [Inverse scattering](#) [Repulsive potential](#)

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**Abstract** We consider a pair of Hamiltonians  $(H, H_0)$  on  $L^2(\mathbb{R}^n)$ , where  $H_0 = p^2 - x^2$  is a Schrödinger operator with a repulsive potential, and  $H = H_0 + V(x)$ . We show that, under suitable assumptions on the decay of the electric potential,  $V$  is uniquely determined by the high energy limit of the scattering operator.

**Key words** [Inverse scattering](#) [Repulsive potential](#)

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