SMALL DATA SCATTERING FOR A SYSTEM OF NONLINEAR SCHRÖDINGER EQUATIONS

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Abstract. We study the scattering theory for a system of nonlinear Schrödinger equations in space dimension \( n \geq 3 \). In the case \( n \geq 4 \), existence of the scattering operator is proved in small data setting in the Sobolev space \( H^{n/2-2} \). In the case \( n = 3 \), a similar result is proved in the weighted \( L^2 \) space \( (x)^{-1/2}L^2 = \mathcal{F}(H^{-1/2}) \) under the mass resonance condition.

Keywords and phrases: nonlinear Schrödinger equations, scattering theory.

REFERENCES
