Inverse Spectral Problem for Schroedinger Operator with Energy Depending Potentials

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Abstract

We study an inverse problem for a class of Schroedinger operators with energy depending potentials. In particular we show that introduction of the discrete spectrum generically does not lead to singularities of the corresponding soliton solution. We derive some new trace formulas which could be considered as generalization of standard trace formulas for Schroedinger operators.