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ON THE INVERSE PROBLEM FOR A CLASS OF DIRAC EQUATIONS SYSTEM WITH A DISCONTINUOUS COEFFICIENT AND WITH A SPECTRAL PARAMETER IN THE BOUNDARY CONDITION

Abstract

We investigate the inverse problem of scattering theory for a two dimensional Dirac equations system with discontinuous coefficient on the half line. The expansion formula by eigenfunctions associated with the given problem is obtained. The scattering function is defined as scattering data and the main equation is derived. The solvability of the main equation is showed. The potential is uniquely constructed with respect to the scattering function.