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Inverse scattering transform with arbitrary spectral singularities.

For the AKNS system Xin Zhou in his dissertation developed an inverse scattering mechanism to deal with non-generic initial data that allow arbitrary number of spectral singularities. In this talk, we give a self-contained and constructive characterization of the scattering data and discuss its applications to the global well-posedness problem to the dnls equation. This is joint work with R. Jenkins, P.Perry and C. Sulem. (Received August 17, 2018)