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Hamiltonian aspects of
the local inverse scattering method

It is well known that soliton equations live not alone but in infinite families, which are called hierarchies and consist of commuting flows (Hamiltonian vector fields in involution) on the space of potentials, and the action-angle coordinates are given (in the case of rapidly decaying or quasiperiodic boundary conditions) by the direct scattering transform. The author developed a local version of the inverse scattering method, which enables one to construct all local holomorphic (in space and time variables) solutions of soliton equations of parabolic type and study their analytic properties (for example, the strong Painlevé property; every such solution is globally meromorphic in the space variable). The purpose of this talk is to discuss the picture of a completely integrable Hamiltonian system (described above) from the point of view of the local scattering data.