

Meeting: 999, Nashville, Tennessee, AMS CP 1, Session for Contributed Papers

999-37-236 **Yilian Zhang*** (yilianz@usca.edu), 471 University Parkway, Aiken, SC 29801, and **Adrian I Nachman**. *A class of integrable dynamical systems and their connection to one-dimensional inverse system.*

We present a large class of exact solutions to A-equation introduced by Barry Simon and reveal a new class of arbitrarily large systems of nonlinear ordinary differential equations, which we show to be C-integrable in the sense of F. Calogero. Integration scheme is proposed and the approach is illustrated in several examples. (Received August 24, 2004)