1052-37-12

Maarten Bergvelt, University of Illinois, Urbana, IL, Michael Gekhtman, University of Notre Dame, Notre Dame, IN, and Alex Kasman* (kasman@cofc.edu), Department of Mathematics, College of Charleston, Charleston, SC 29424. Spin Calogero Particles and Bispectral Solutions of the Matrix KP Hierarchy.

The bispectrality of Lax operators for a non-commutative version of the KP hierarchy is shown to have dynamical significance for the spin generalization of the Calogero-Moser particle system. This not only generalizes a previous result by one of the authors regarding the commutative and spinless versions of these integrable systems but also provides new information about the scalar case as well. (Received April 18, 2009)