

On the generalized integrable Chaplygin system

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(Submitted on 10 Jan 2010)

We discuss two polynomial bi-Hamiltonian structures for the generalized integrable Chaplygin system on the sphere S^2 with an additional integral of fourth order in momenta. An explicit procedure to find the variables of separation, the separation relations and the transformation of the corresponding algebraic curves of genus two is considered in detail.

Comments: 12 pages, standard LaTeX with AMS fonts

Subjects: **Exactly Solvable and Integrable Systems (nlin.SI)**

Cite as: **arXiv:1001.1507v1 [nlin.SI]**

Submission history

From: Andrey Tsiganov [[view email](#)]

[v1] Sun, 10 Jan 2010 12:22:56 GMT (12kb)

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