



Nonlinear Sciences > Exactly Solvable and Integrable Systems

Dunajski-Tod equation and reductions of the generalized dispersionless 2DTL hierarchy

L. V. Bogdanov

(Submitted on 17 Apr 2012)

We transfer the scheme for constructing differential reductions recently developed for the Manakov-Santini hierarchy to the case of the two-component generalization of dispersionless 2DTL hierarchy. We demonstrate that the equation arising as a result of the simplest reduction is equivalent (up to a Legendre type transformation) to the Dunajski-Tod equation, locally describing general ASD vacuum metric with conformal symmetry. We consider higher reductions and corresponding reduced hierarchies also.

Comments: 14 pages

Subjects: **Exactly Solvable and Integrable Systems (nlin.SI)**; General Relativity and Quantum Cosmology (gr-qc)

Cite as: [arXiv:1204.3780v1](https://arxiv.org/abs/1204.3780v1) [nlin.SI]

Submission history

From: L. V. Bogdanov [[view email](#)]

[v1] Tue, 17 Apr 2012 12:27:00 GMT (10kb)

[Which authors of this paper are endorsers?](#)

Link back to: [arXiv](#), [form interface](#), [contact](#).

Download:

- [PDF](#)
- [PostScript](#)
- [Other formats](#)

Current browse context:

nlin.SI

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1204](#)

Change to browse by:

[gr-qc](#)

[nlin](#)

References & Citations

- [NASA ADS](#)

Bookmark([what is this?](#))

