

General Relativity and Quantum Cosmology

Late-time tails of a self-gravitating Einstein-Skyrme model

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(Submitted on 26 Jan 2010)

We consider the long-time behaviour of spherically symmetric solutions in the Einstein-Skyrme model. Using nonlinear perturbation analysis we obtain the leading order estimation of the tail in the topologically trivial sector ($B = 0$) of the model. We showed that solutions starting from small compactly supported initial data decay as $1/t^4$ at future timelike infinity and as $1/u^2$ at future null infinity.

Comments: 7pp

Subjects: **General Relativity and Quantum Cosmology (gr-qc)**

Cite as: [arXiv:1001.4818v1](#) [gr-qc]

Submission history

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[v1] Tue, 26 Jan 2010 22:15:59 GMT (50kb)

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