

## General Relativity and Quantum Cosmology

# Classical limits of boost-rotation symmetric spacetimes

David Kofron, Jiri Bicak

*(Submitted on 21 Jan 2010)*

Boost-rotation symmetric spacetimes are exceptional as they are the only exact asymptotically flat solutions to the Einstein equations describing spatially bounded sources ("point-like" particles, black holes) undergoing non-trivial motion ("uniform acceleration") with radiation. We construct the Newtonian limit of these spacetimes: it yields fields of uniformly accelerated sources in classical mechanics. We also study the special-relativistic limit of the charged rotating C-metric and so find accelerating electromagnetic magic field.

Comments: to appear in proceedings of MGM12 Paris, France

Subjects: **General Relativity and Quantum Cosmology (gr-qc)**Cite as: **arXiv:1001.3798v1 [gr-qc]**

## Submission history

From: David Kofroň [[view email](#)]

[v1] Thu, 21 Jan 2010 13:22:23 GMT (14kb)

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

## Download:

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

Current browse context:

**gr-qc**[< prev](#) | [next >](#)[new](#) | [recent](#) | [1001](#)

## References & Citations

- [SLAC-SPIRES HEP](#)  
([refers to](#) | [cited by](#))
- [CiteBase](#)

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

