

Russian Physics Journal 2005 vol.48 N4, pages 357-364

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## Gravitational radiation and nonlocal electrodynamics

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### Abstract

A model of nonlocal response of a medium with an initially constant and homogeneous magnetic field acted upon by a planar gravitational wave is constructed on the basis of a covariant formulation of integral constitutive equations. The model is studied in detail and the problem of anomalous behavior of the response of the given electrodynamic system to a gravitational-wave action is discussed. © 2005 Springer Science+Business Media, Inc.

<http://dx.doi.org/10.1007/s11182-005-0133-y>

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