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Relaxation approximation of some nonlinear Maxwell initial-boundary value problem. (English) [Zbl 1119.35033](#)

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Two nonlinear Maxwell systems are considered: Kerr model exhibiting an instantaneous response of the medium, Kerr-Debye model which contains some delay term and is a relaxation approximation of the first one. In one space dimension, we prove that the limit of the solution to the ingoing wave condition for Kerr-Debye model is a solution to the Kerr model.

MSC:

[35L50](#) Initial-boundary value problems for first-order hyperbolic systems

[35Q60](#) PDEs in connection with optics and electromagnetic theory

Cited in **7** Documents

Keywords:

[Kerr-Debye model](#); [one space dimension](#); [Kerr model](#)

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