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A. Shadi Tahvildar-Zadeh* (shadi@math.rutgers.edu), Department of Mathematics, Rutgers University, Piscataway, NJ 08854. *General-relativistic Nonlinear Electrodynamics*. Preliminary report.

We review the existence of families of exact symmetric solutions of the Einstein-Maxwell system of gravito-electrodynamics with arbitrary constitutive laws, and present some results concerning the nature of singularities present in them, and the propagation of scalar waves on these backgrounds. (Received August 31, 2009)