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Generation of static solutions of the self-consistent system of Einstein-Maxwell equations

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Abstract

A theorem is proved, according to which to each solution of the Einstein equations with an arbitrary momentum-energy tensor in the right hand side there corresponds a static solution of the self-consistent system of Einstein-Maxwell equations. As a consequence of this theorem, a method is established of generating static solutions of the self-consistent system of Einstein-Maxwell equations with a charged grain as a source of vacuum solutions of the Einstein equations. © 1988 Plenum Publishing Corporation.

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