

Abstract Submitted
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Static equilibrium configuration of two charges in General Relativity VLADIMIR BELINSKI, GEORGE ALEKSEEV, ICRANet and University of Rome “Sapienza” — An asymptotically flat static solution of Einstein-Maxwell equations which describes the field of two Reissner - Nordstrom sources in equilibrium is presented. It is expressed in terms of physical parameters of the sources (their masses, charges and separating distance). Very simple analytical forms were found for the solution as well as for the equilibrium condition which guarantees the absence of any struts on the symmetry axis. This condition shows that the equilibrium is not possible for two black holes or for two naked singularities. However, in the case when one of the sources is a black hole and another one is a naked singularity, the equilibrium is possible at some distance separating the sources. It is interesting that for appropriately chosen parameters even a neutral Schwarzschild black hole can be “suspended” freely in the field of a naked singularity which phenomenon is due to the repulsive forces produced by a naked singularity.

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