



TEST PARTICLE TRAJECTORIES IN REISSNER-NORDSTRÖM SPACETIME

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Many aspects of General Relativity (GR) solutions can be investigated by a careful analysis of test-particle motion in the corresponding spacetimes. Some classical tests of GR involve test-particle trajectories in the spherically symmetric Schwarzschild solution, which describes the spacetime of a static black hole with zero electric charge. The spacetime outside an spherically symmetric distribution of mass and electric charge, on the other hand, is described by the Reissner-Nordström solution, which can also describe the spacetime of a static and electrically charged black hole. We analyze the Reissner-Nordström solution, studying the trajectories of free test particles (geodesics), as well as of electrically charged test particles in the corresponding spacetime.