Periodic orbits of charged collinear 3–body problem

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Abstract

The presentation is devoted to the study of a type of differential systems which appear usually in the study of some Hamiltonian systems with 2 degrees of freedom. We prove the existence of infinitely many periodic orbits on each negative energy level. All these periodic orbits pass near the total collision. Finally we apply these results to study the existence of periodic orbits in the charged collinear 3–body problem.