

# On the dynamics of the rigid body with a fixed point: periodic orbits and integrability

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The aim of the present contribution is to study the periodic orbits of a rigid body with a fixed point and quasi-spherical shape under the effect of a Newtonian force field given by different small potentials. For studying these periodic orbits we shall use averaging theory. Moreover, we provide information on the  $\mathcal{C}^1$ -integrability of these motions.