

Rotopulsating orbits in the curved N-body problem

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We consider the gravitational motion of N bodies of positive masses in spaces of constant curvature $\kappa \neq 0$, which can be reduced to the sphere \mathbb{S}^3 for $\kappa > 0$ and the hyperbolic sphere \mathbb{H}^3 for $\kappa < 0$, [1], [4], [5]. The rotopulsating orbits are the analogue of the homographic solutions of the Euclidean case, i.e. the configuration of the bodies rotates and/or dilates or contracts, [2], [3]. In this talk we present some of the properties of the rotopulsating orbits and find several classes of such solutions.

References

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