

Some analytical results about periodic orbits in the restricted three body problem with dissipation

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We present some analytical results about the existence of periodic orbits for the planar restricted three body problem with dissipation considered recently by Celletti et al. We show that, under fairly general conditions on the dissipation term, the circular orbits cannot be continued to the dissipative framework. Moreover, we give general conditions for the occurrence or not of a Hopf bifurcation around the libration points L_4 and L_5 . Our results are consistent with the numerical findings of Celletti et al. This is a work in collaboration with Rafael Ortega e Carlota Rebelo.

References

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