Nonlinear stability in generalised photogravitational restricted three body problem

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We have discussed the non-linear stability of triangular equilibrium point in generalised photogravitational restricted three body problem.The problem is generalised in the sense that the both primaries are taken as an oblate spheroid.We performed the first order and second order normalisation of the Hamiltonian of the problem.We have applied Arnold's theorem to examine the condition of non-linear stability.We have found three critical mass ratio where this theorem fails. The stability condition is different from the classical case due to radiation and oblateness of both primaries.