Fifteenth International Conference Zaragoza-Pau on Mathematics and its Applications
Jaca, September 10–12th 2018

Symmetric periodic orbits in a four-body problem

Antonio Elipe

SUMMARY

The planar motion of an infinitesimal particle in a restricted four-body problem where the three primaries are in a collinear central configuration is considered. The evolution of the families of symmetric periodic orbits when the mass parameter μ increases from the value $\mu = 0$ has been studied. When the central body is introduced, some new families appear and others change. Spiral points, where the Asymptotic orbits that connect both triangular equilibrium points end at the so called spiral points. The number and the evolution of these points have been analyzed.

[1]Grupo de Mecánica Espacial & IUMA. University of Zaragoza
Centro Universitario de la Defensa. Zaragoza
email: elipe@unizar.es