SOME CONSIDERATIONS ON THE THEORETICAL DETERMINATION OF THE POTENTIAL BY THE MOTION OF ARTIFICIAL SATELLITES IN THE PLANE CASE

J.J. Martinez-Benjamin
The University of Texas at Austin and University of Barcelona

ABSTRACT

We consider the determination of the potential from the orbit of a satellite. The potential obtained is not unique because the satellite might describe the same orbit with different forces. The classical problem of determination of orbits has a unique solution, for given initial conditions. The problem is reduced to the planar case with a conservative force. The mathematical results depend on the arbitrary functions of the system of coordinates used.

https://doi.org/10.1017/S0252921100062369 Published online by Cambridge University Press