

Abstract

In this talk, I will introduce the planar circle restricted 3-body problem in celestial mechanics which studies the motion of the zero mass body when the two primaries move in two circular orbits. This problem can be traced back to Poincaré and Birkhoff. Birkhoff conjectured that the retrograde orbit of the planar circle restricted 3-body problem bounds a global surface of section. I will review the results on the Birkhoff conjecture in a decade and present our recent results. This is a joint work with Otto van Koert.