

In two body systems, the orbit of the particle orbiting the dominant body is, during one orbit, approximately a keplerian ellipse. If the system contains a third, perturbing, body, orbital elements of the orbit of the test particle start to periodically evolve. This process, called Kozai-Lidov mechanism, leads to the closest approaches of the test particle to the dominant body of the system. In this work, I study these closest approaches and their difference between newtonian mechanics and postnewtonian approximation of general relativity.