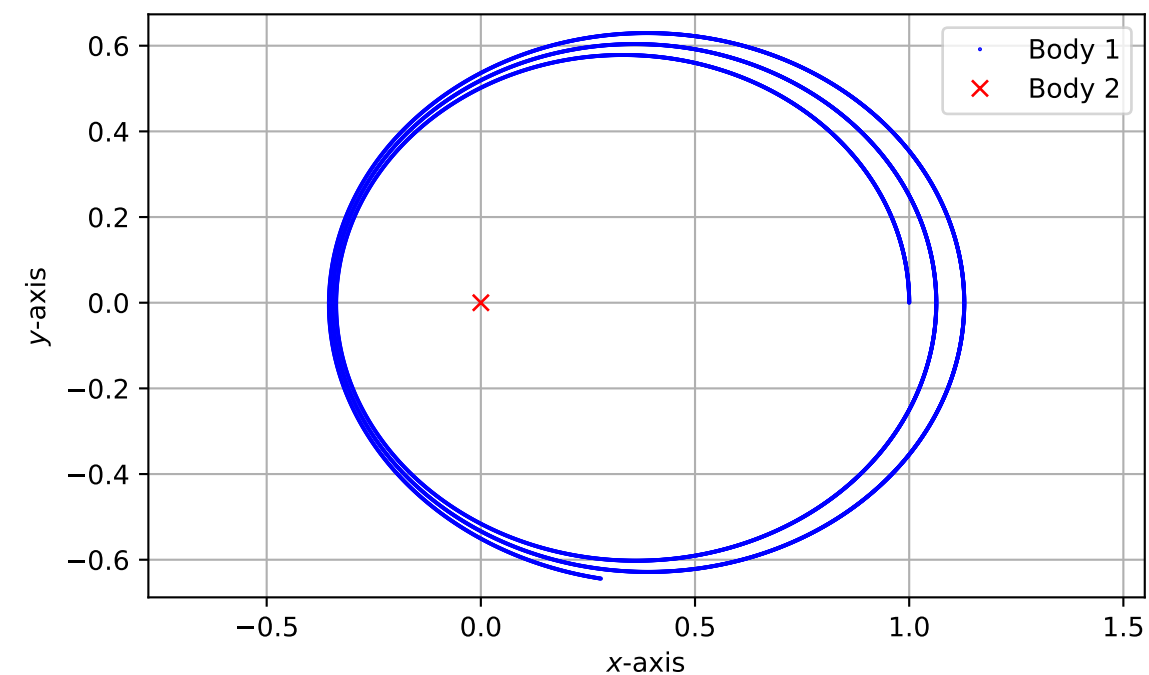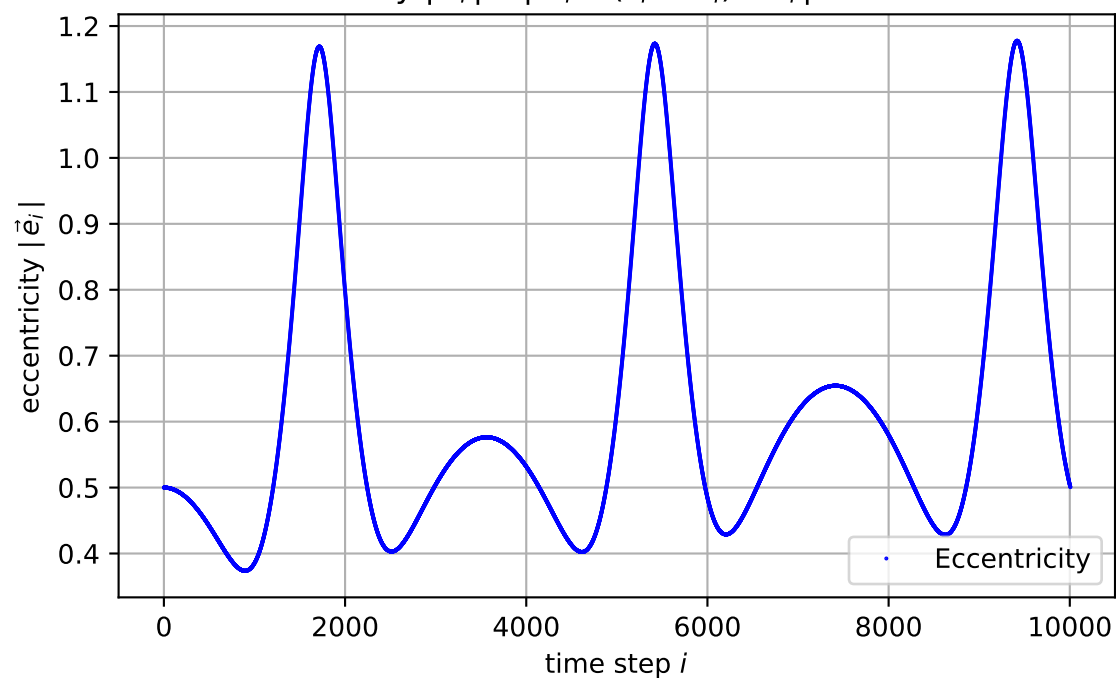Forward Euler Method: Numerical Simulation of the Two-Body Problem
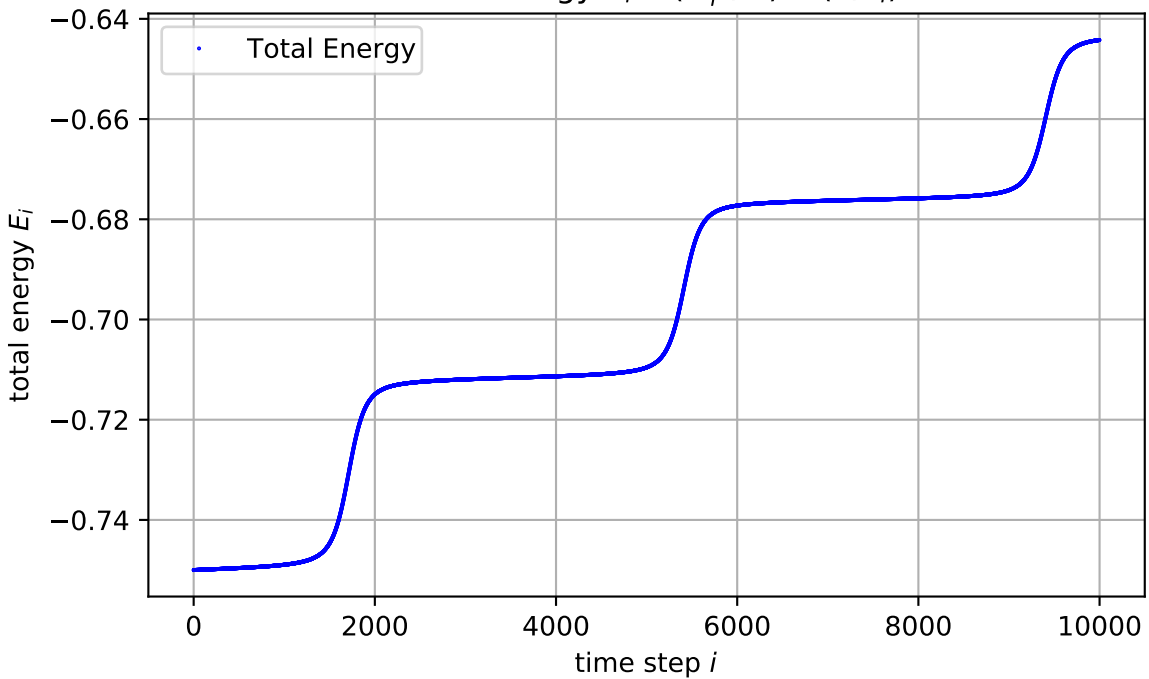
Orbits

Eccentricity $|\vec{e}_i| = |\vec{w}_i \times (\vec{s}_i \times \vec{w}_i) - \vec{s}_i|$ of the Orbit

Total Energy $E_i = (w_i^2/2) - (1/s_i)$

Relative Error $\varepsilon_i(h) = |E_i - E_0|/|E_0|$ in the Total Energy E_i