Energies as a function of time using velocity Verlet method, with $n=1.0\cdot 10^3$ and $dt=1.0\cdot 10^{-3}$ 0.0040.002 0.000E $[{
m M}_{\odot}{
m AU}^2/{
m yr}^2]$ Potential energy Kinetic energy -0.002Total energy -0.004-0.006-0.0080.0 0.2 0.4 0.6 0.8 1.0

t [years]