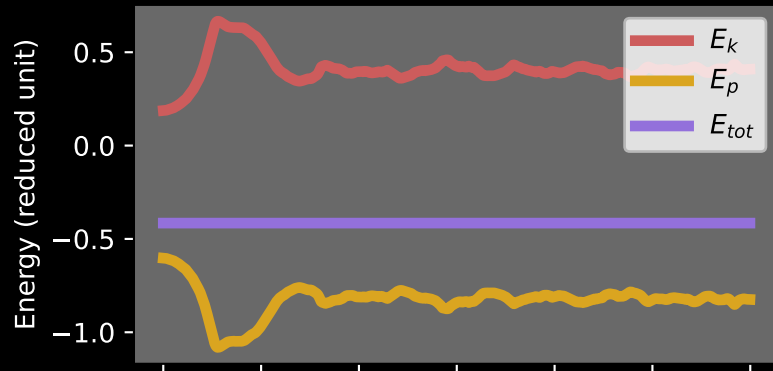


Conservation of total energy:

Conservation of total angular momentum L_0 