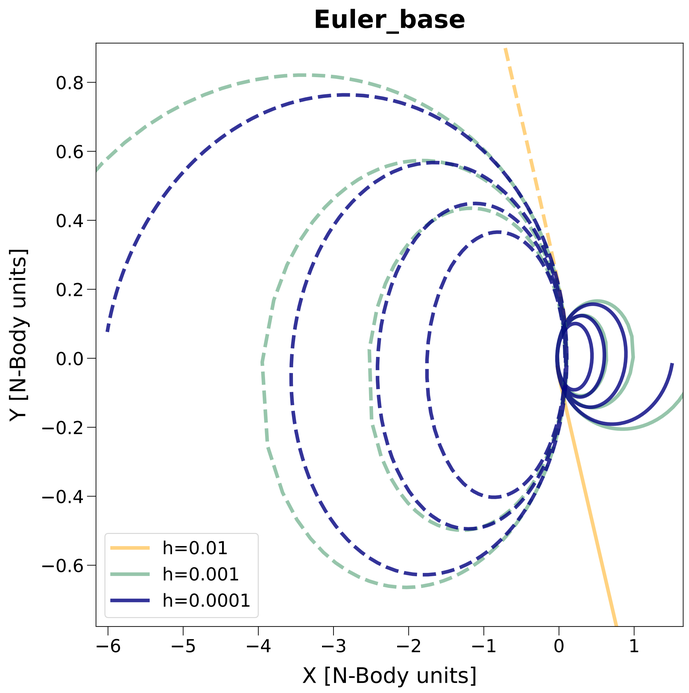
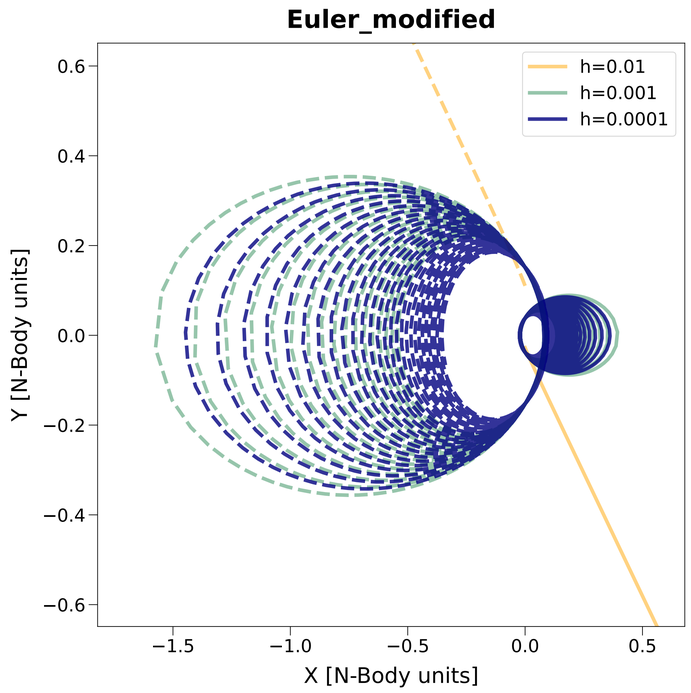
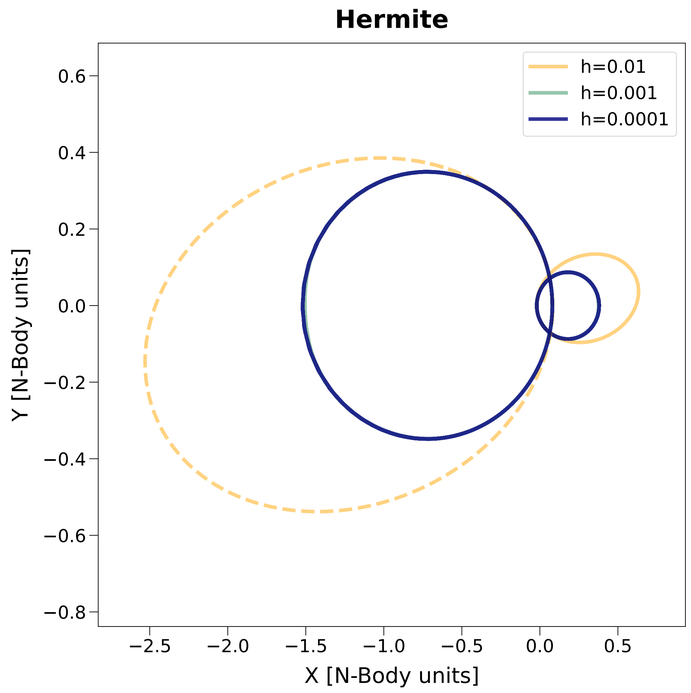
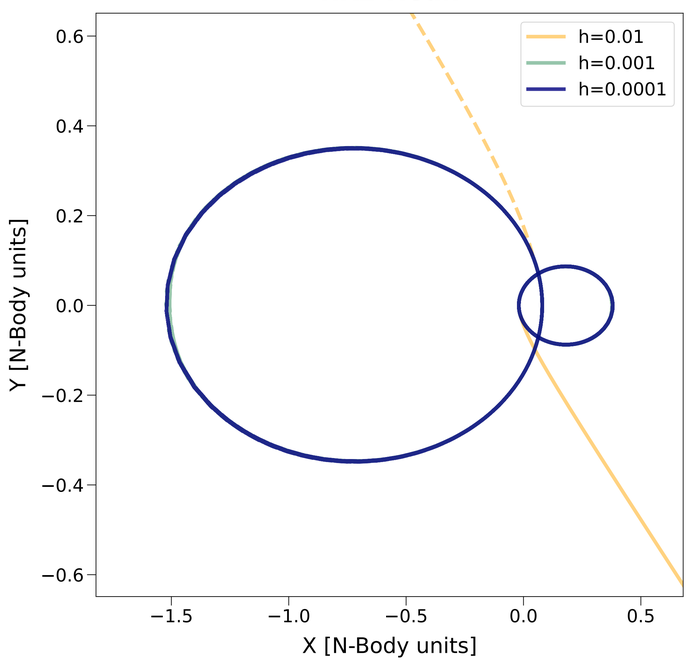
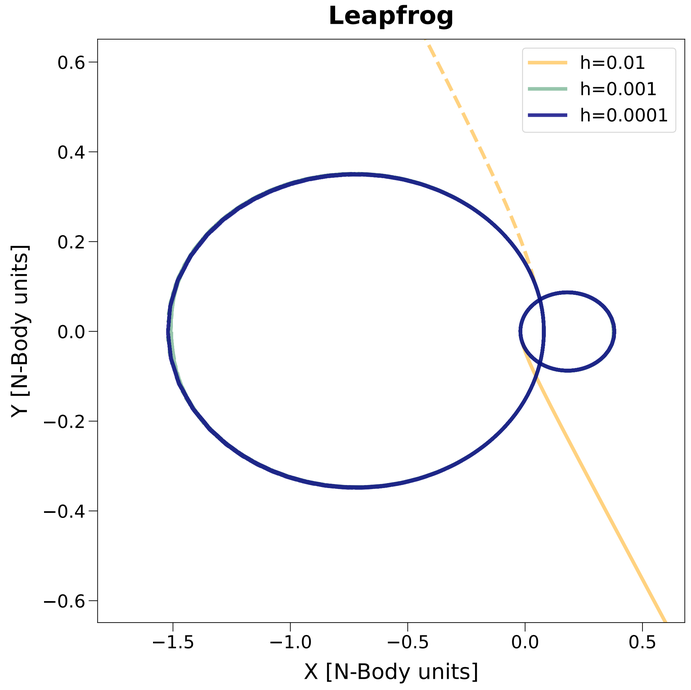
Position on X-Y Plane
(M1=8.0, M2=2.0, e=0.90, rp=0.10, T=1.99)

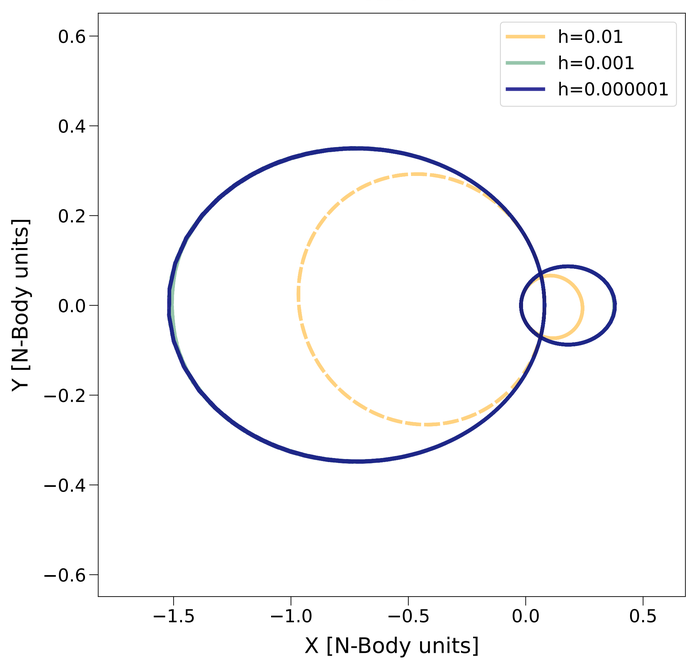


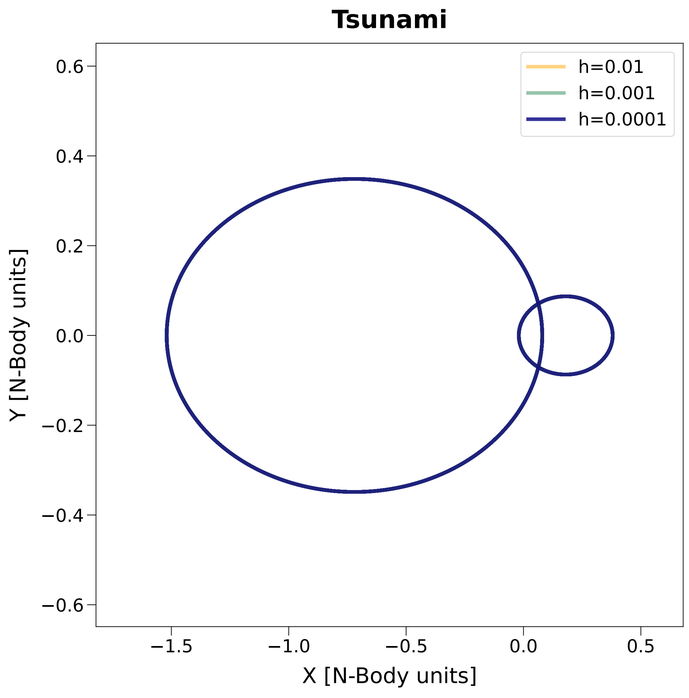






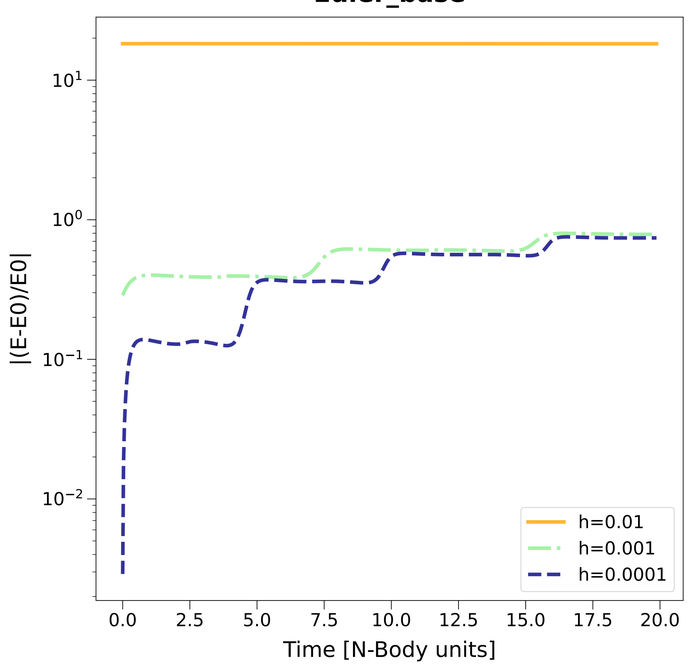




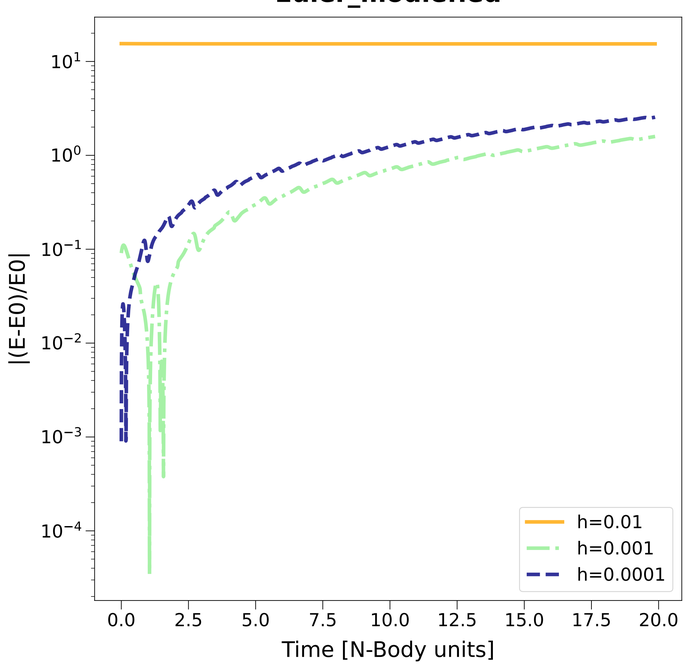


|ΔE/E| Evolution
(M1=8.0, M2=2.0, e=0.90, rp=0.10, T=1.99)

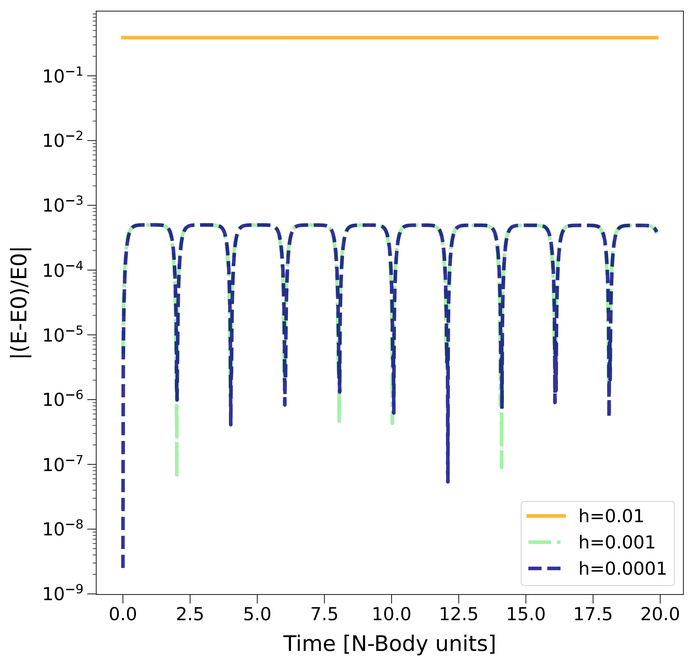
Euler_base



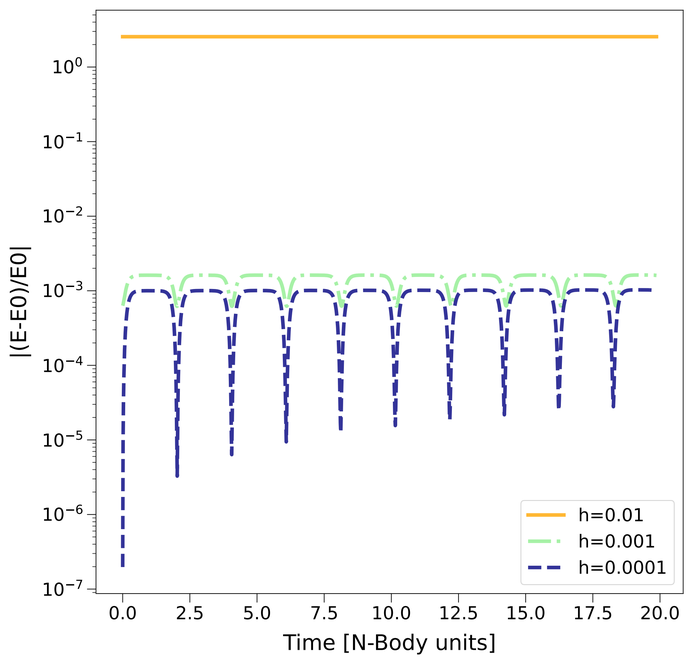
Euler_modiefied



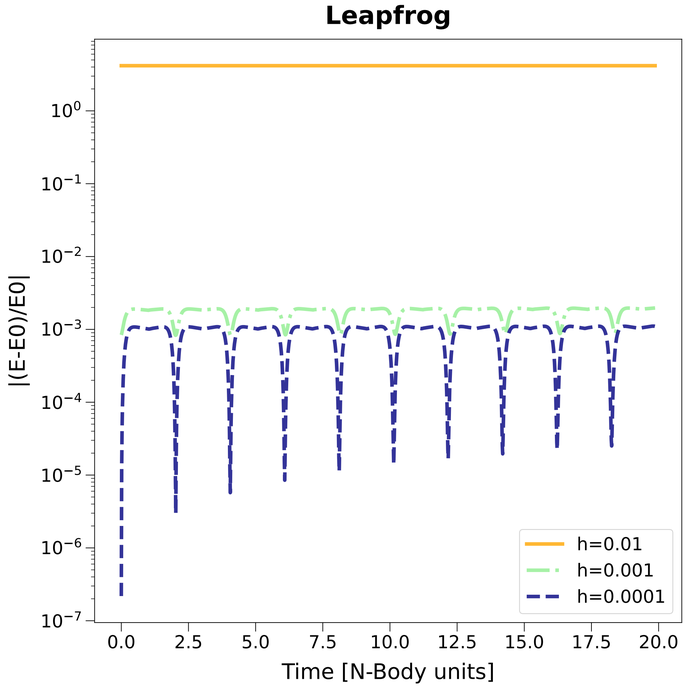
Hermite



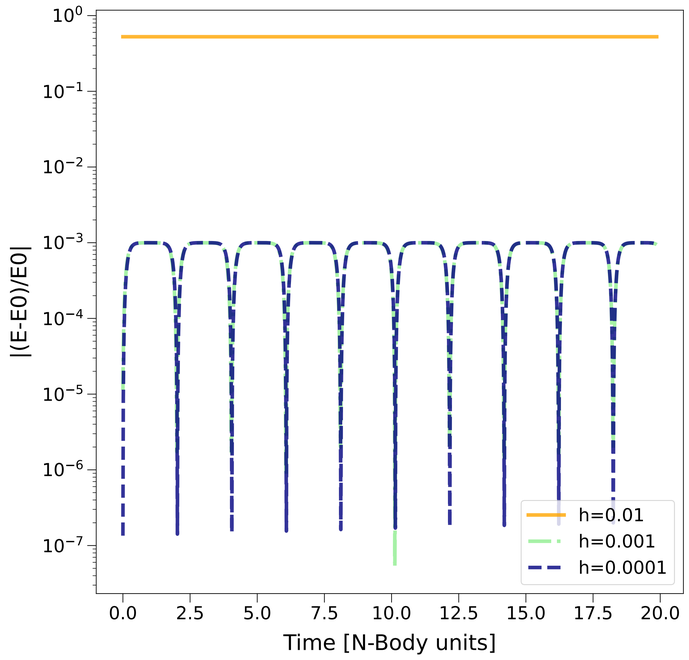
RK2-Heun



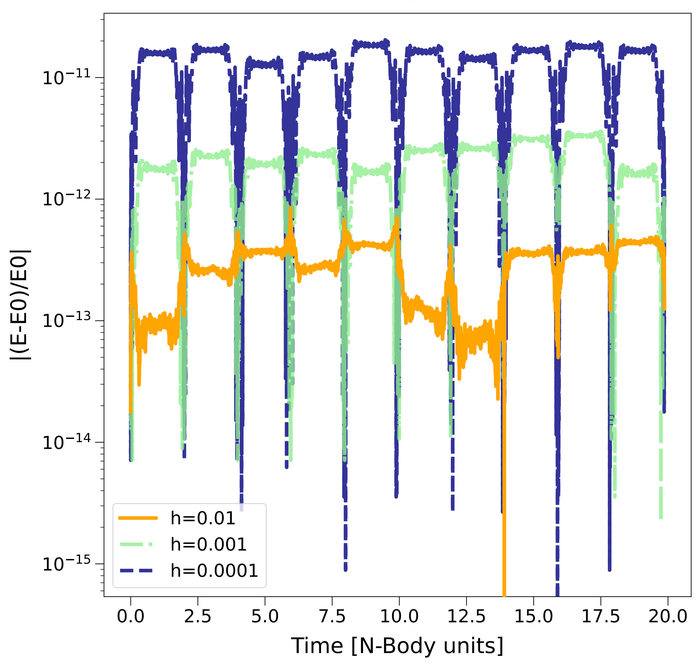
Leapfrog



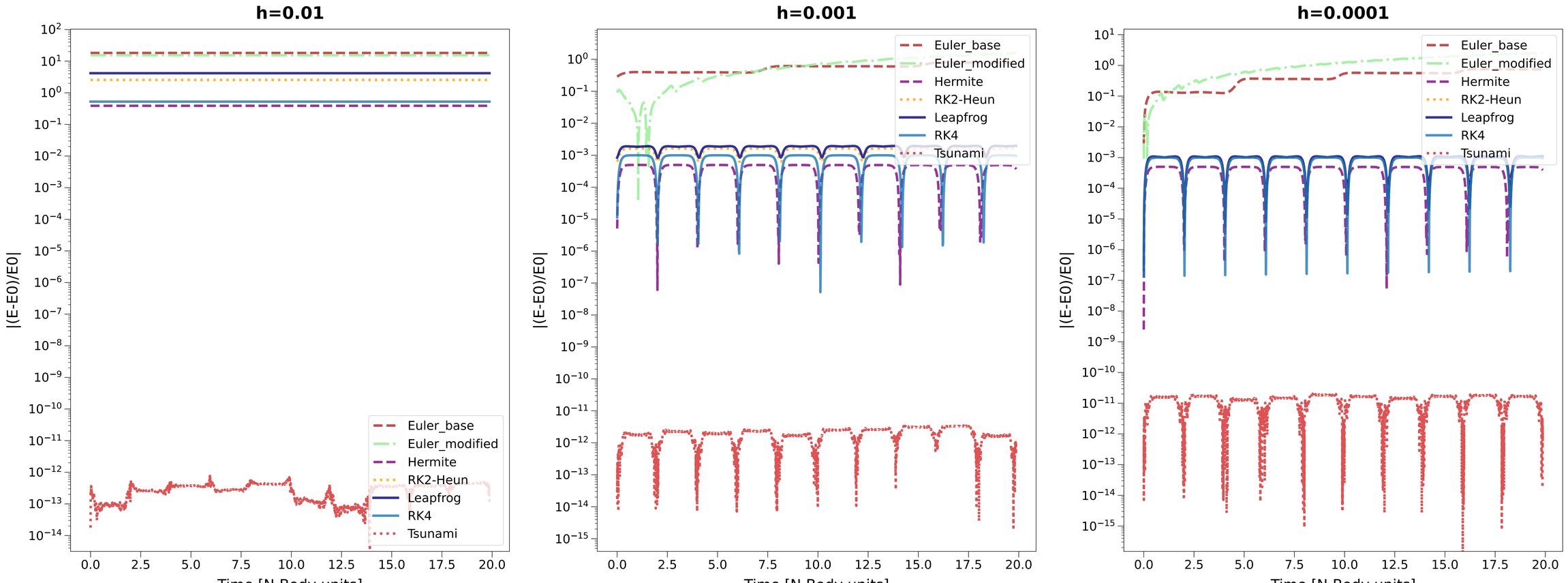
RK4



Tsunami

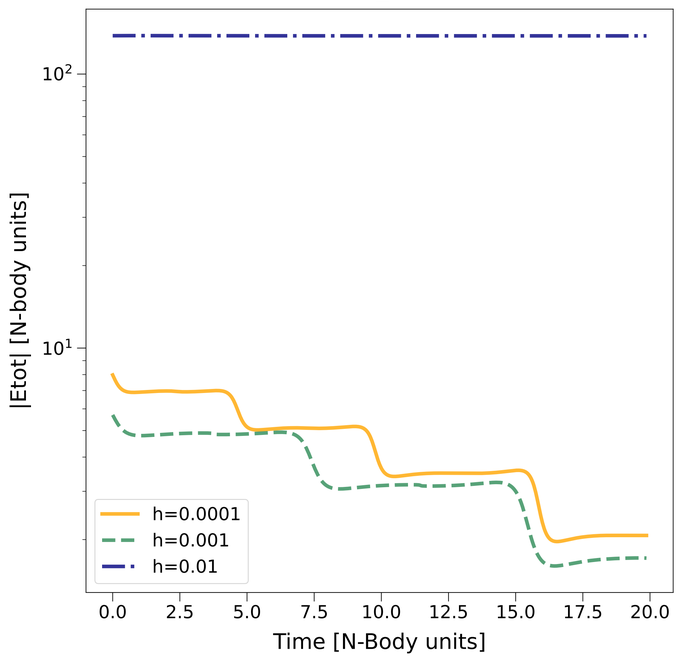


|ΔE/E| Evolution
(M1=8.0, M2=2.0, e=0.90, rp=0.10, T=1.99)

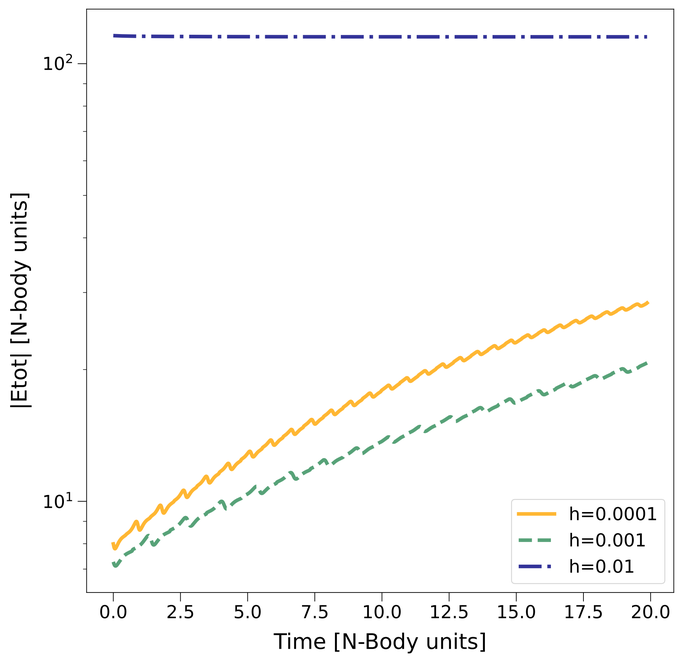


Total Energy Evolution
(M1=8.0, M2=2.0, e=0.90, rp=0.10, T=1.99)

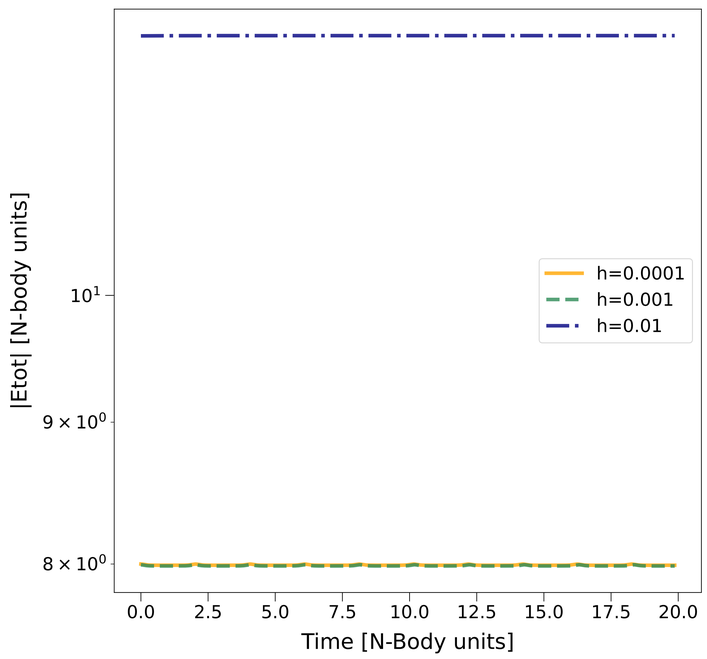
Euler_base



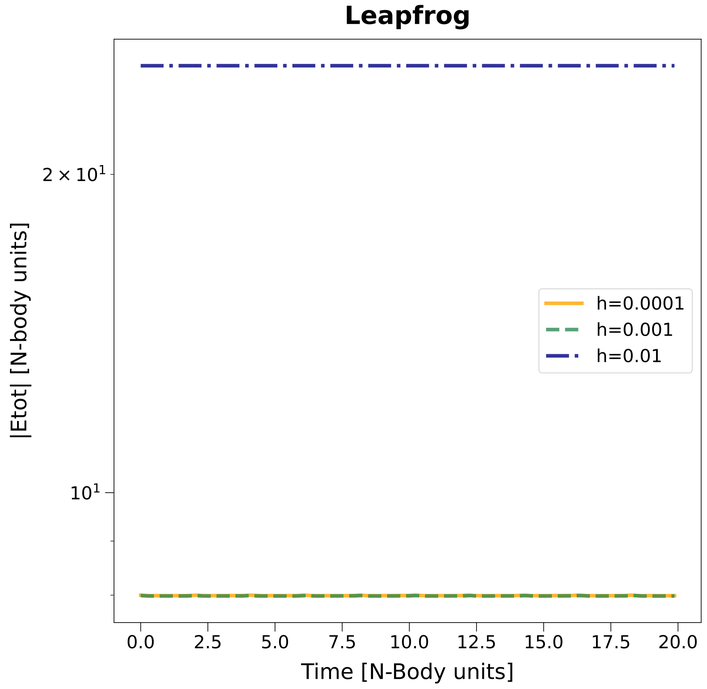
Euler_modiefied



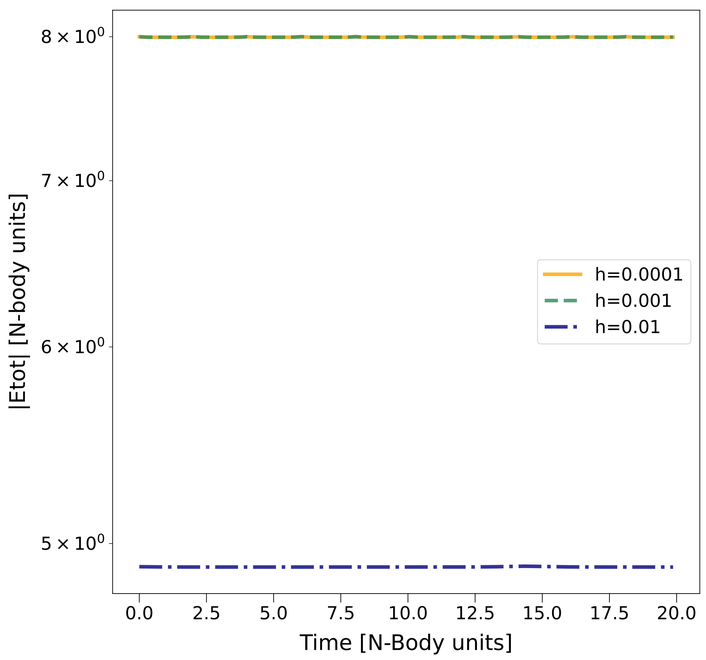
RK2-Heun



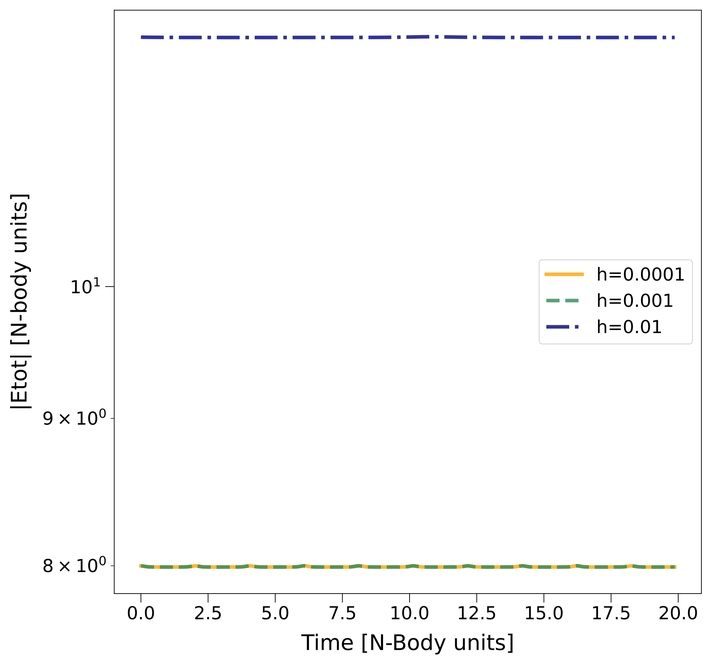
Leapfrog



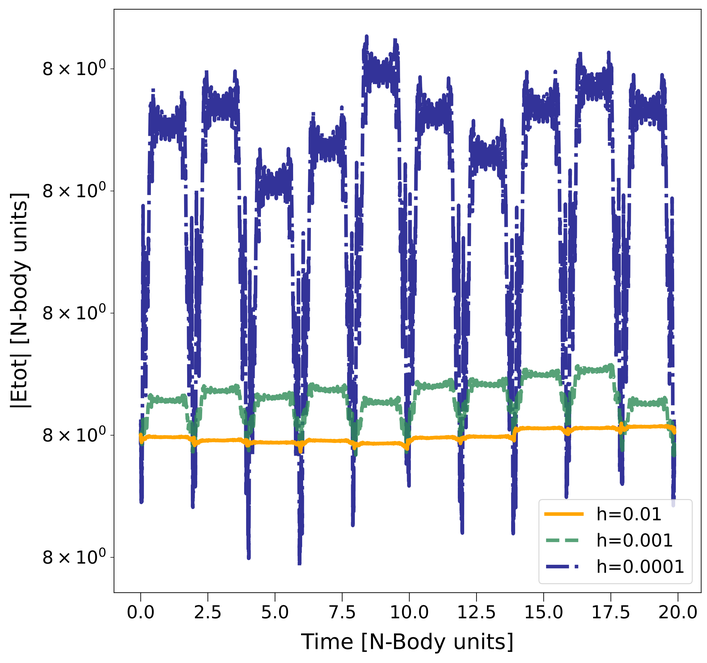
Hermite



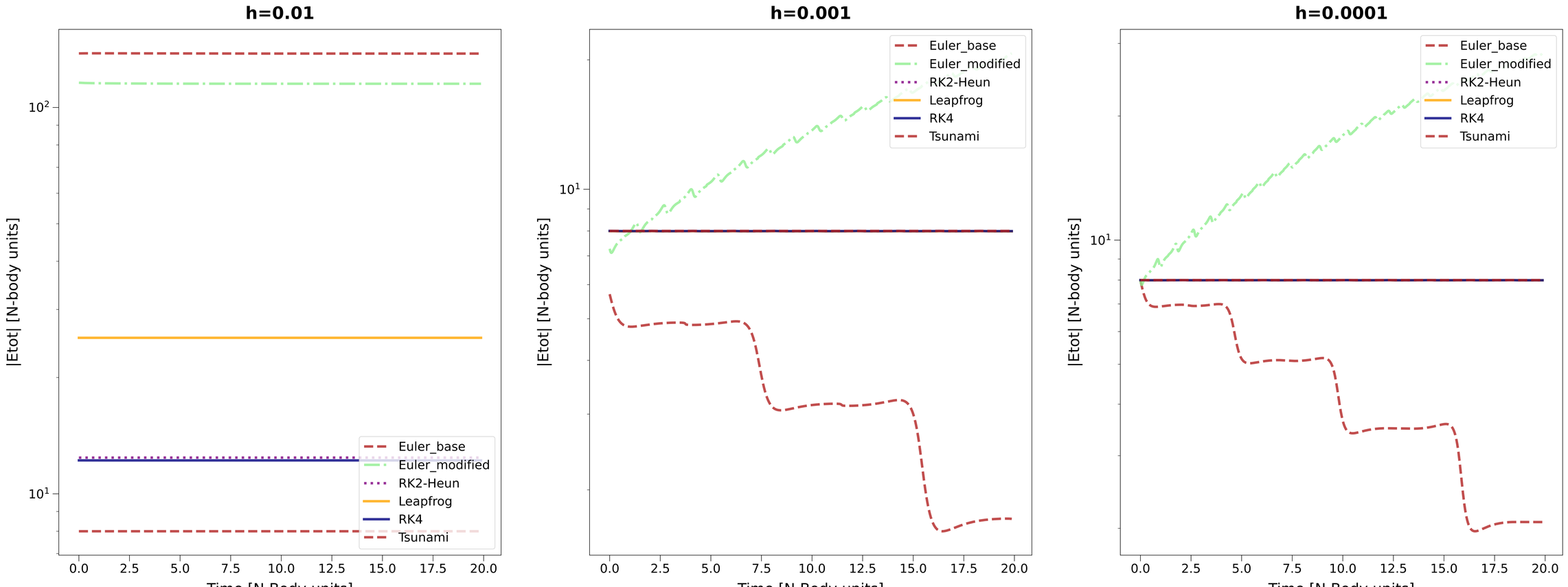
RK4



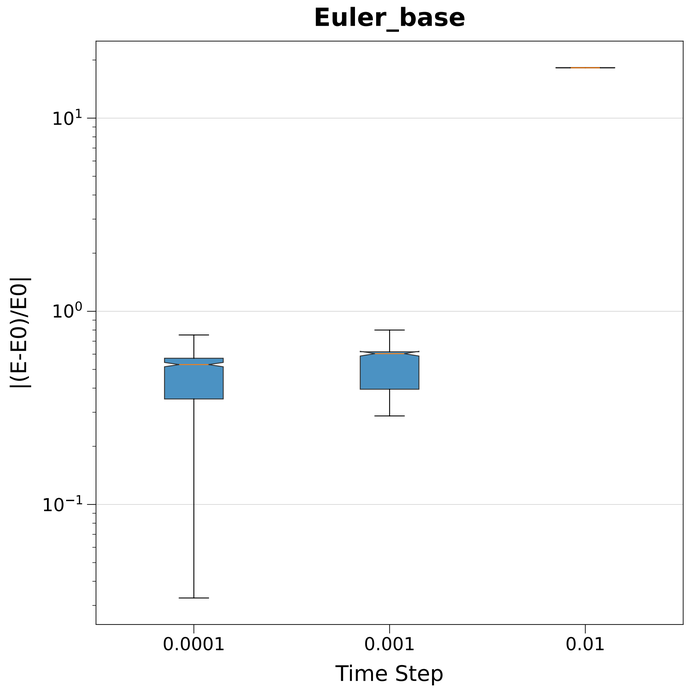
Tsunami

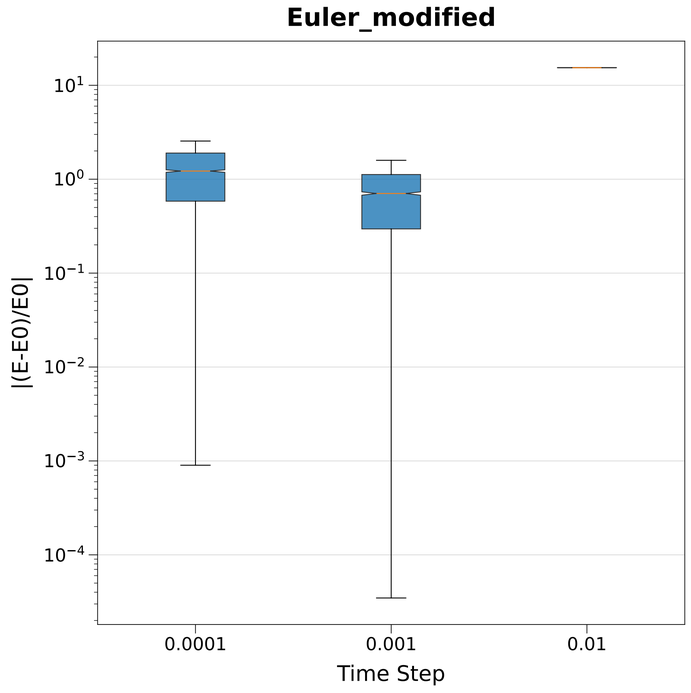


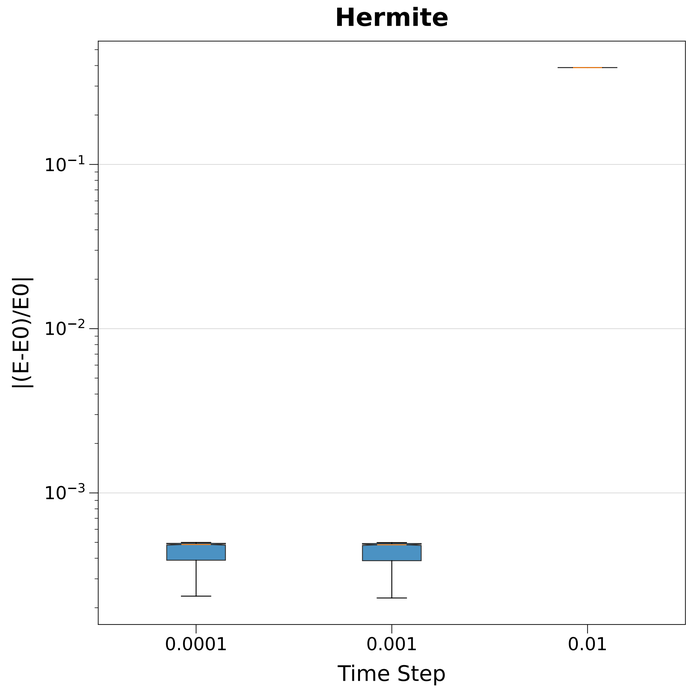
Total Energy Evolution
(M1=8.0, M2=2.0, e=0.90, rp=0.10, T=1.99)

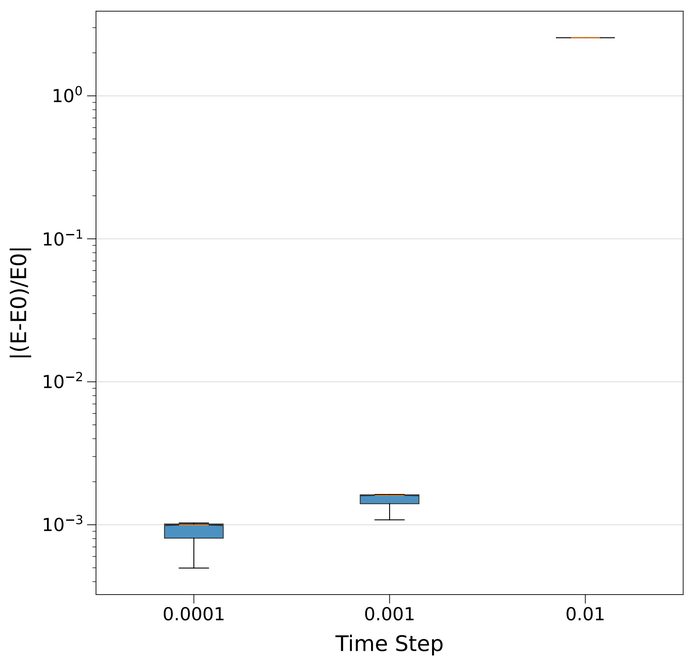


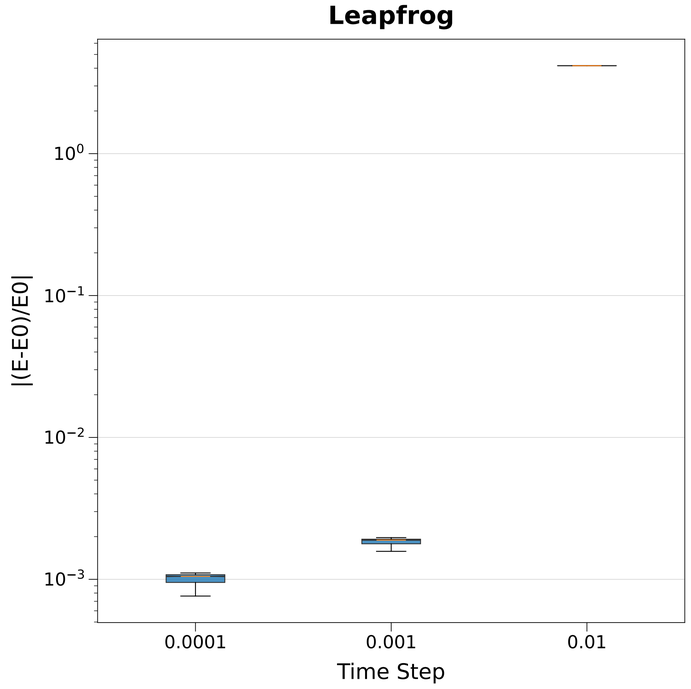
Relative Energy Errors
(M1=8.0, M2=2.0, e=0.90, rp=0.10, T=1.99)

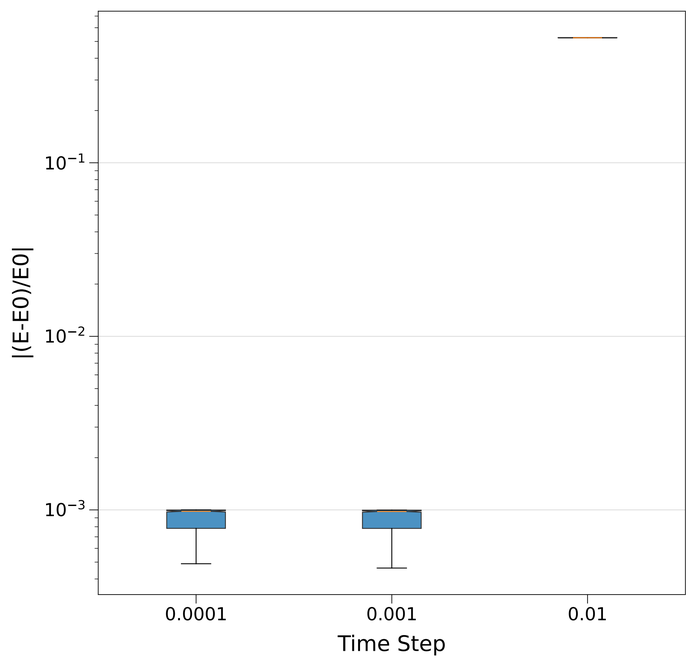


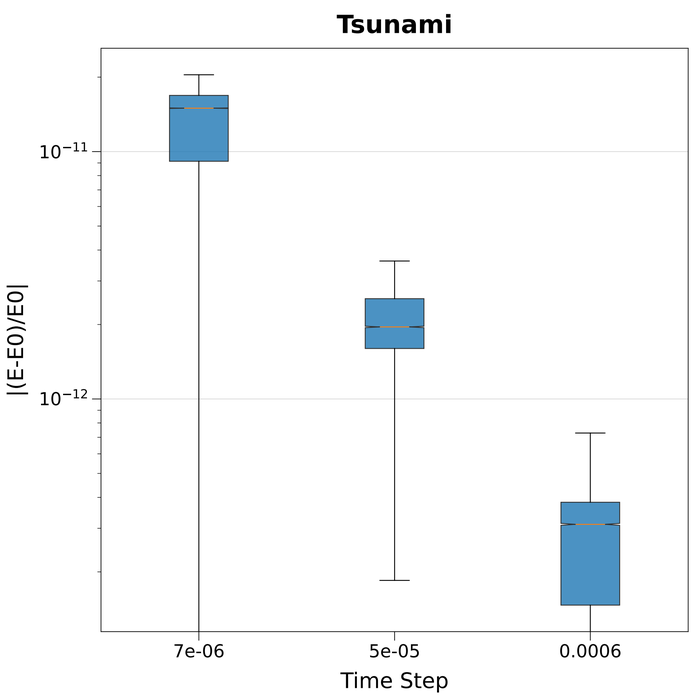






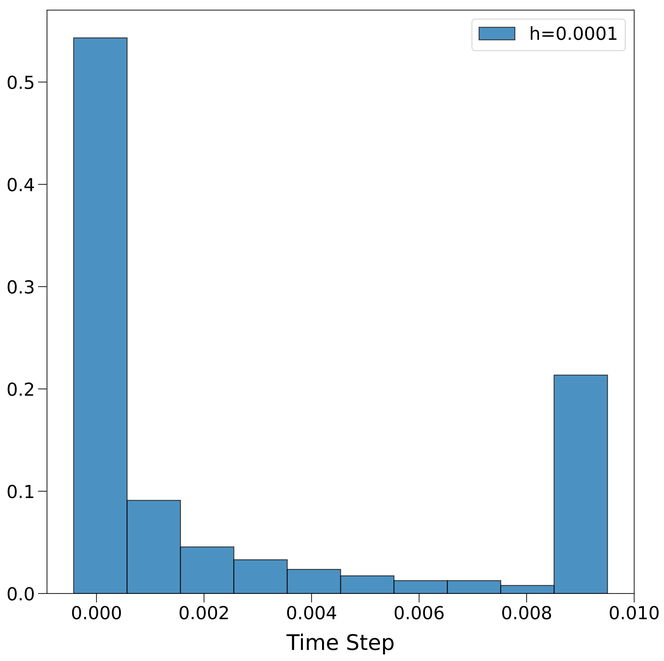


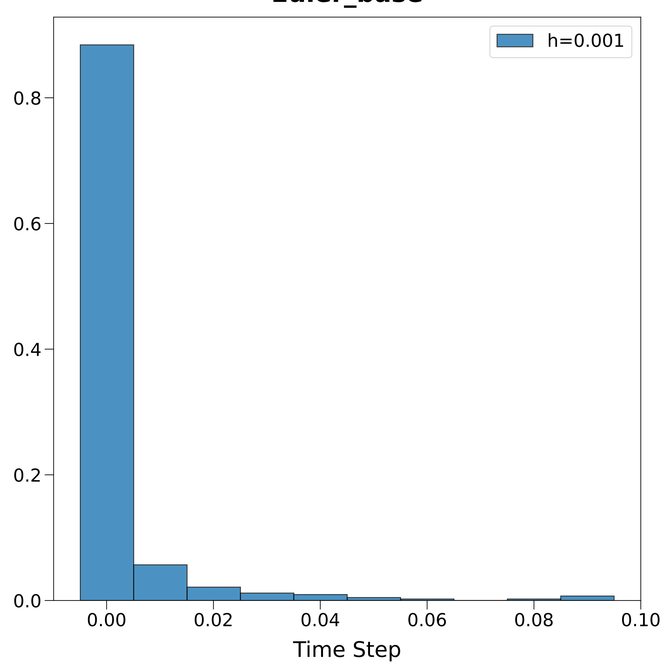


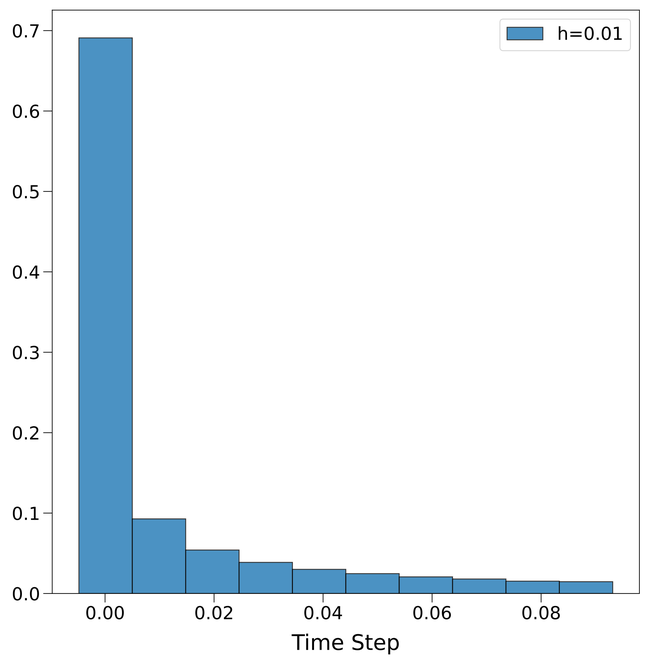


Adaptive Timesteps Distribution
(M1=8.0, M2=2.0, e=0.90, rp=0.10, T=1.99)

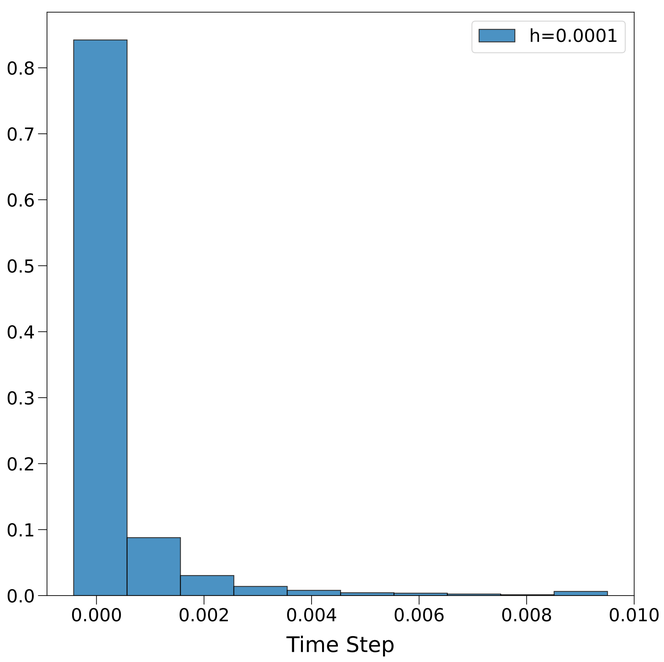
Euler_base

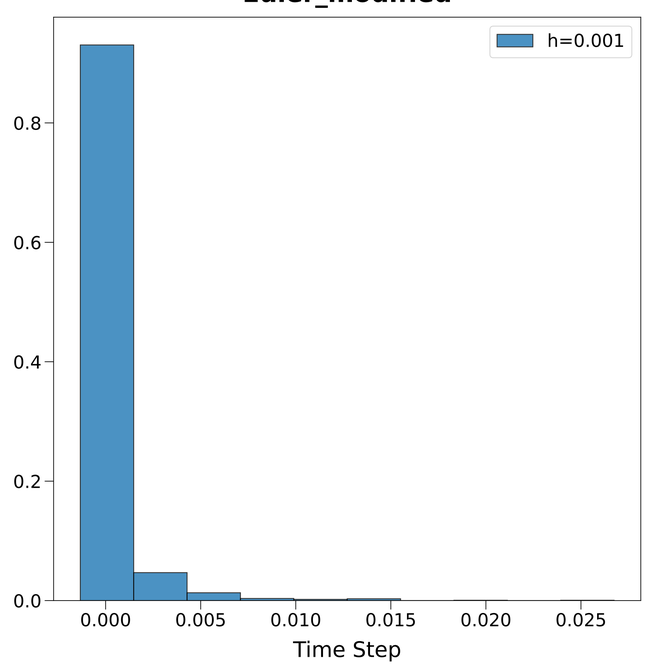


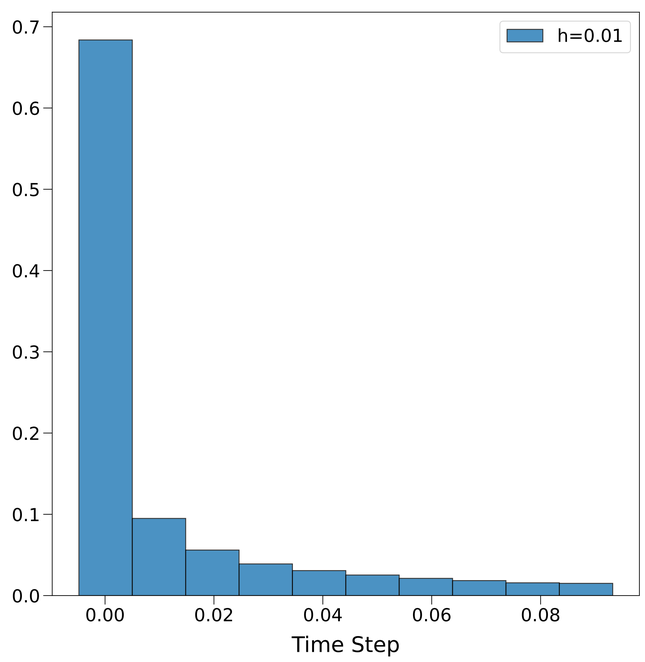




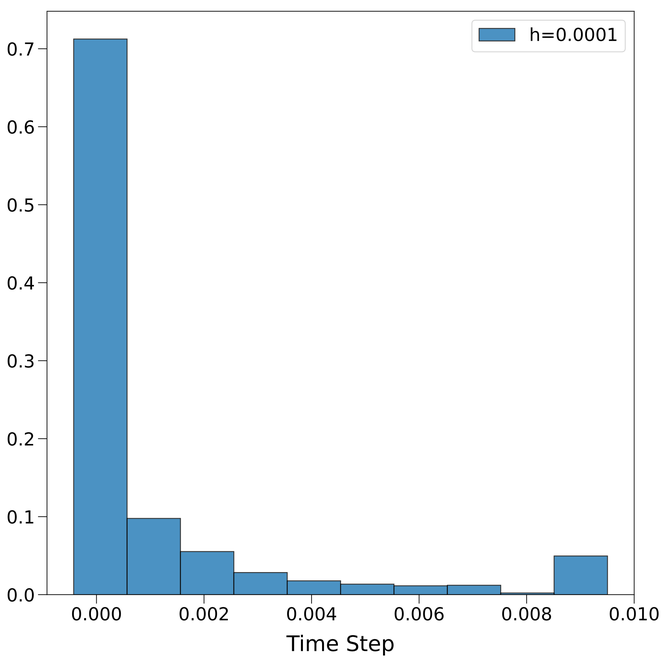
Euler_modified

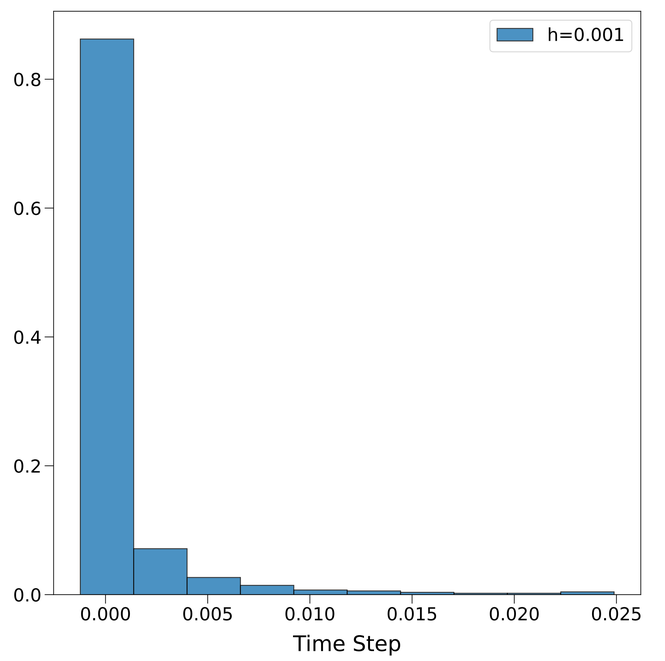


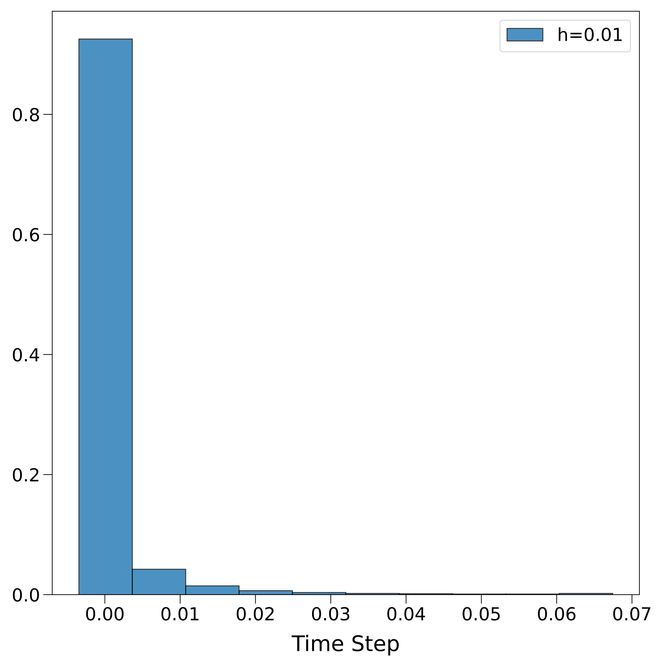




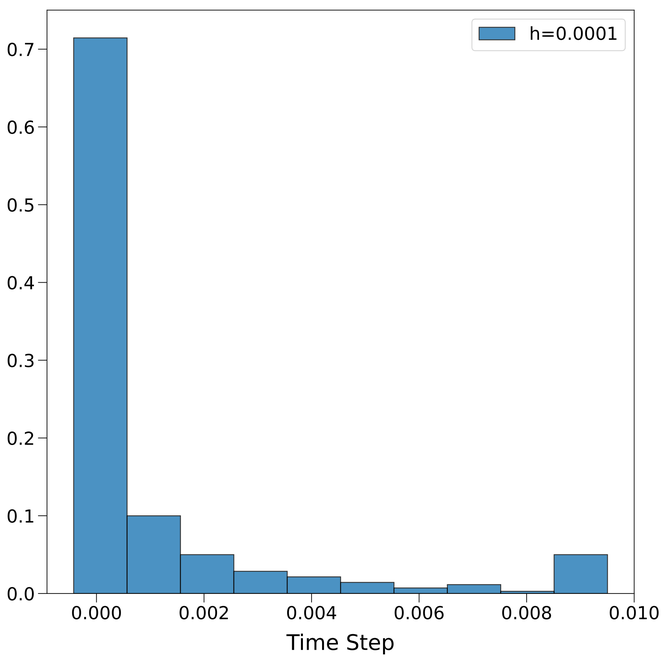
Hermite

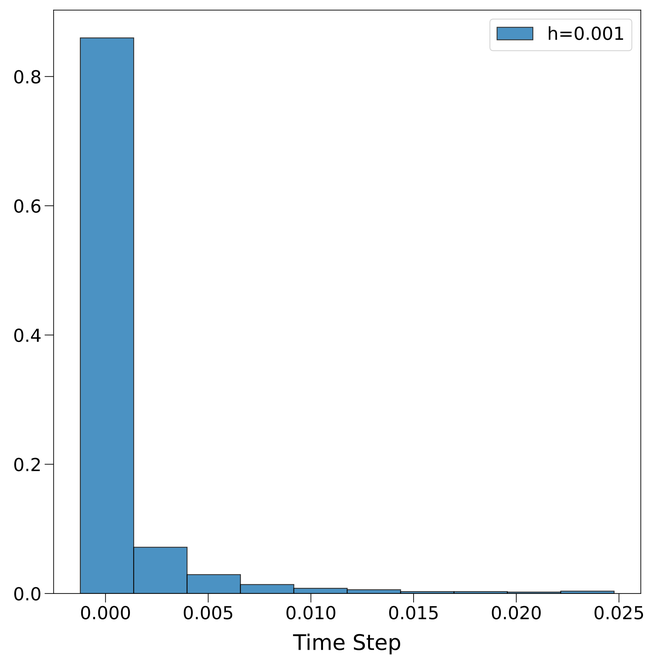


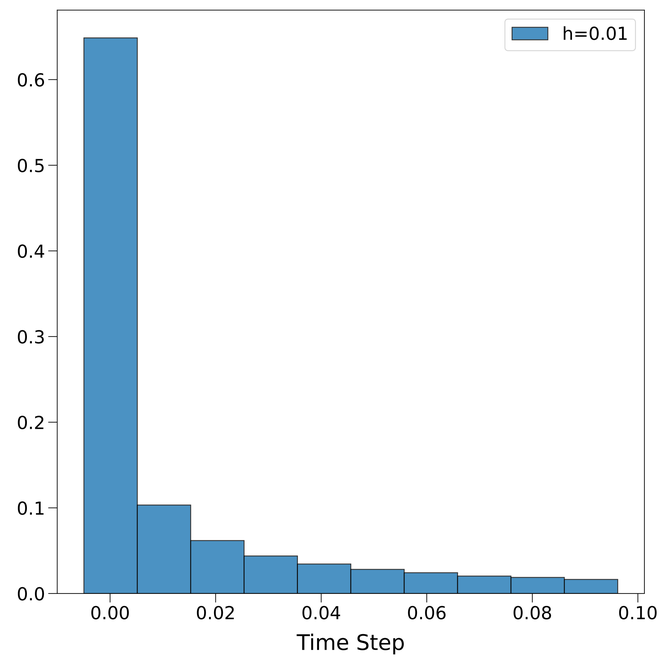




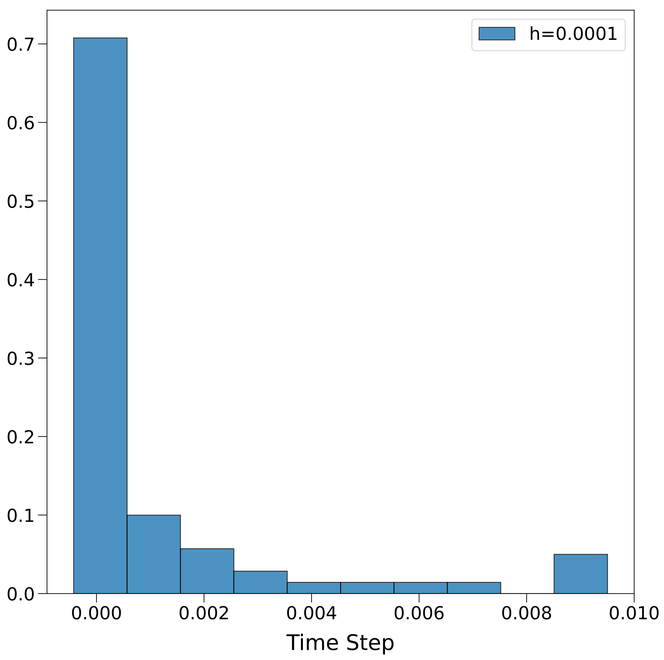
RK2-Heun

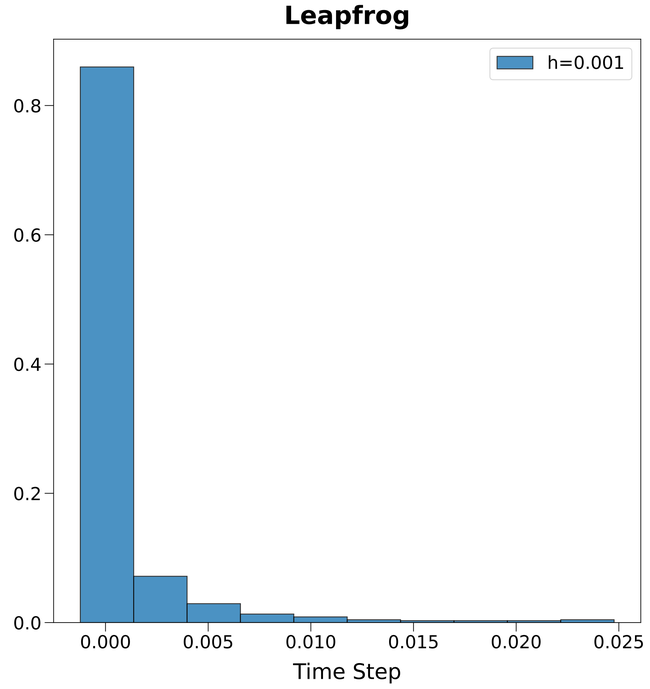


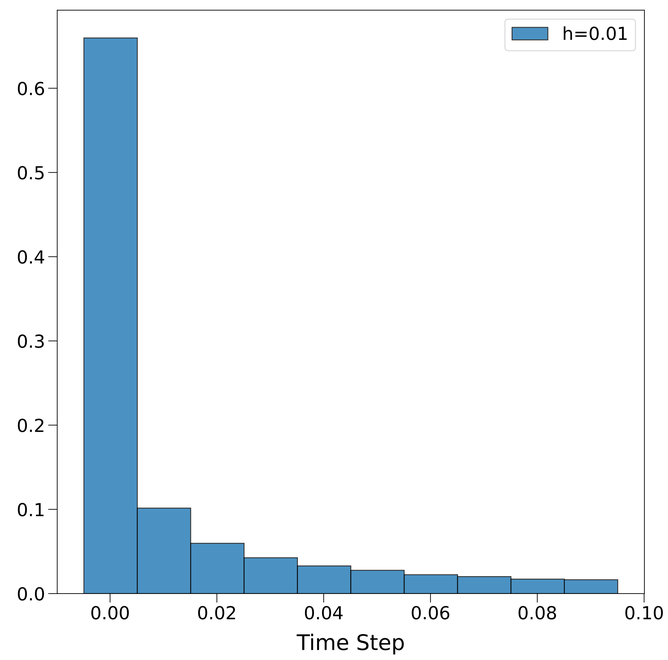




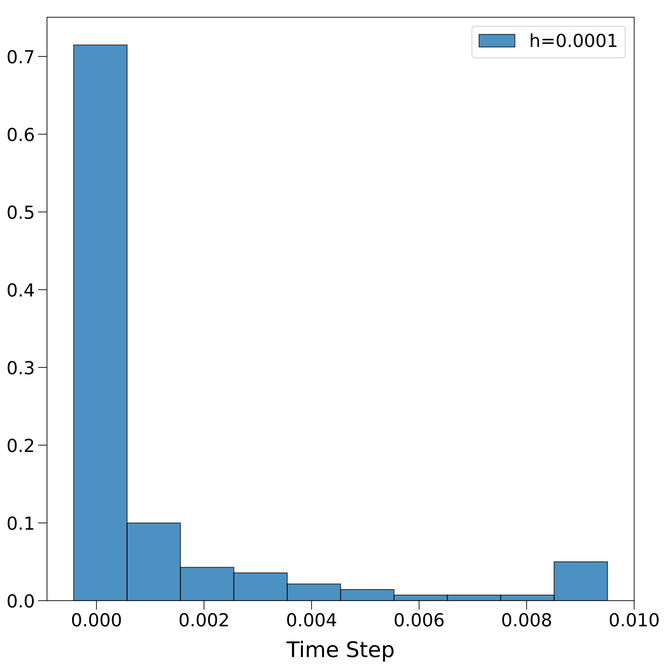
Leapfrog

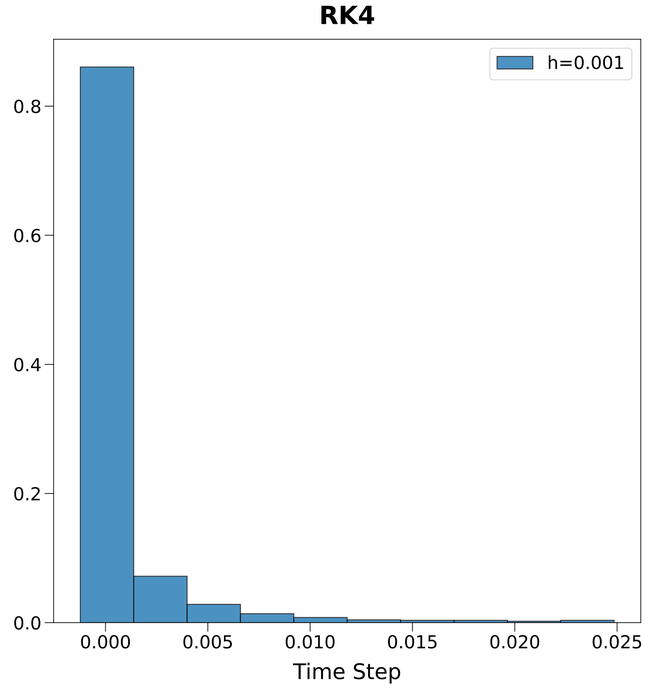


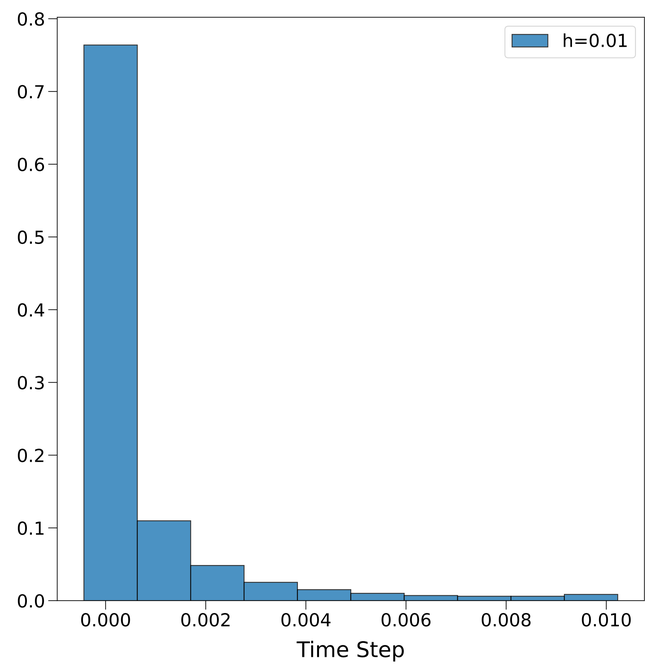


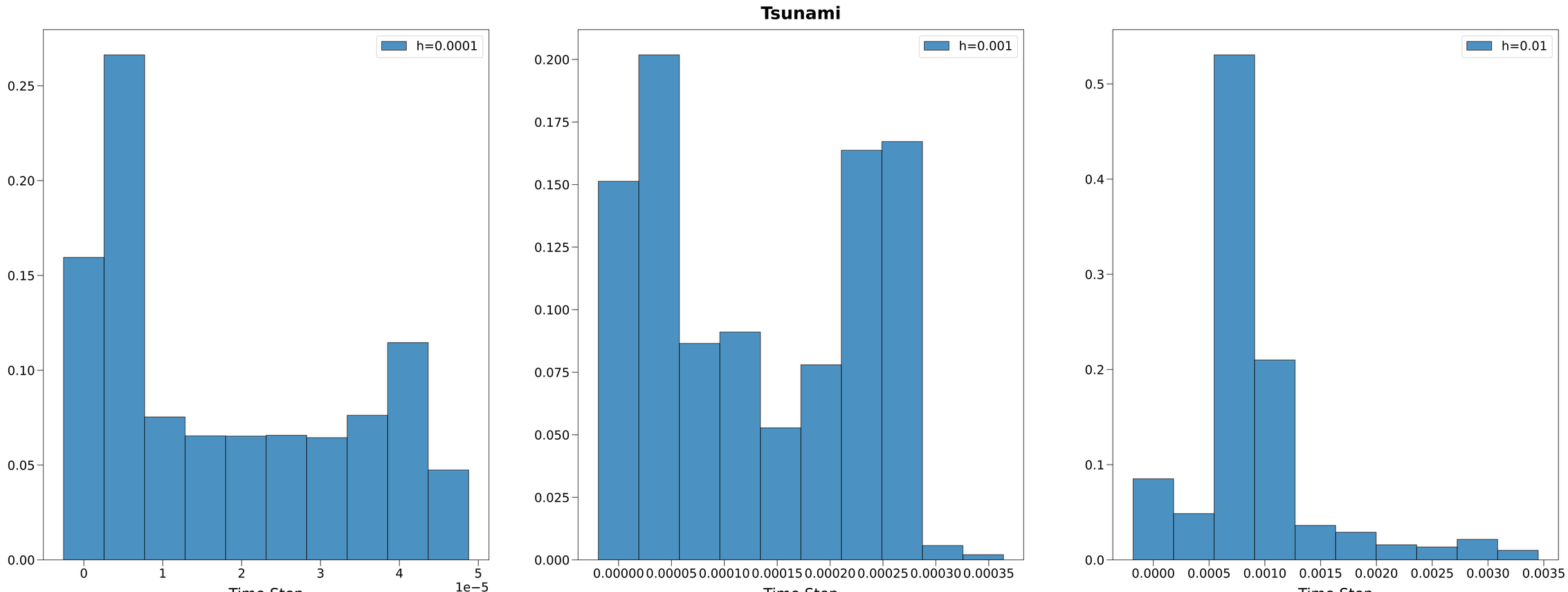


RK4

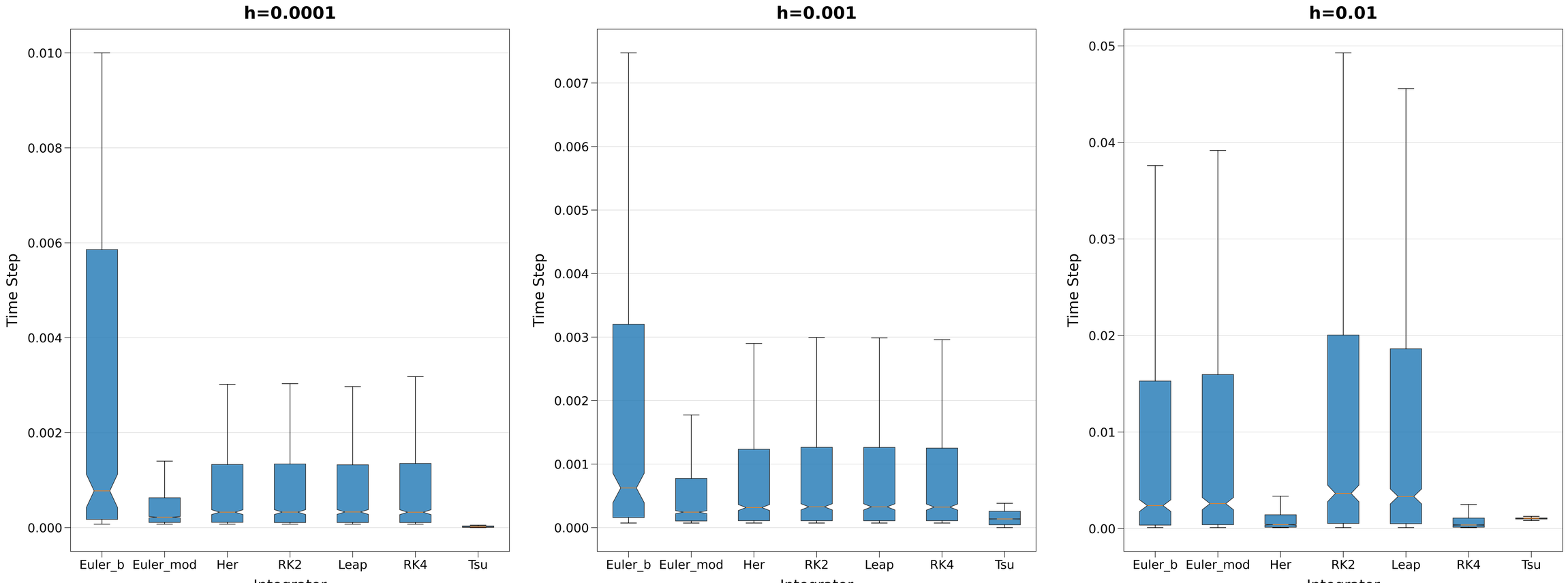






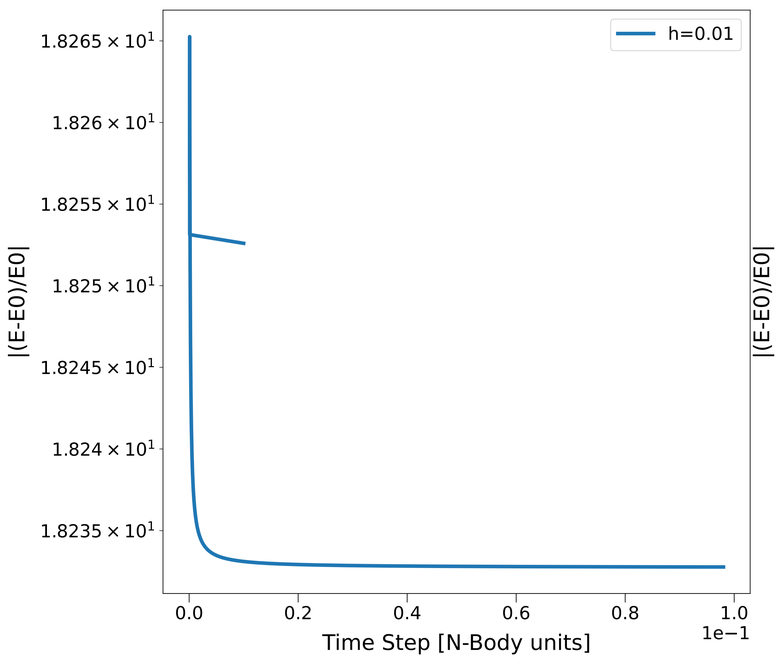

Tsunami
h=0.0001
0.25
0.20
0.15
0.10
0.05
0.00
0
1
2
3
4
5
1e−5
Time Step
h=0.001
0.200
0.175
0.150
0.125
0.100
0.075
0.050
0.025
0.000
0.00000
0.00005
0.00010
0.00015
0.00020
0.00025
0.00030
0.00035
Time Step
h=0.01
0.5
0.4
0.3
0.2
0.1
0.0
0.0000
0.0005
0.0010
0.0015
0.0020
0.0025
0.0030
0.0035
Time Step

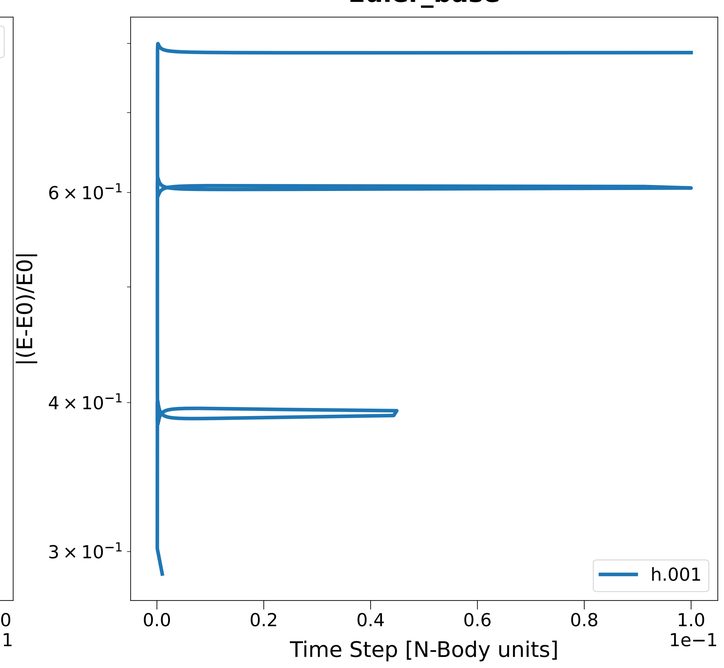
Adaptive Timesteps
(M1=8.0, M2=2.0, e=0.90, rp=0.10, T=1.99)

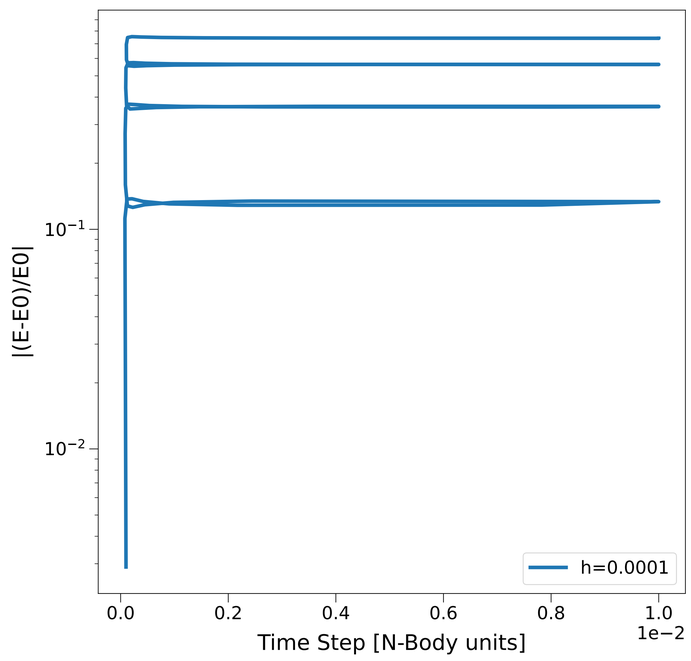


tstep vs |ΔE/E|
(M1=8.0, M2=2.0, e=0.9, rp=0.10, T=1.99)

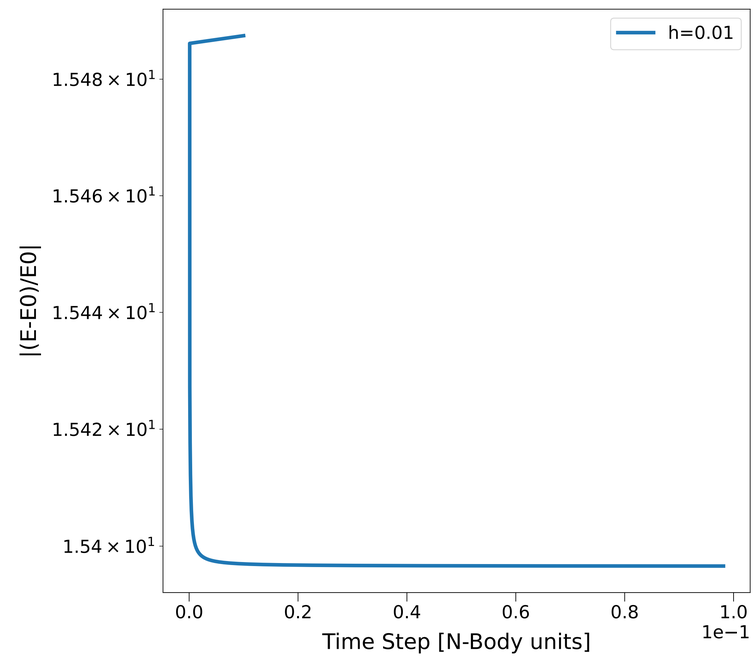
Euler_base

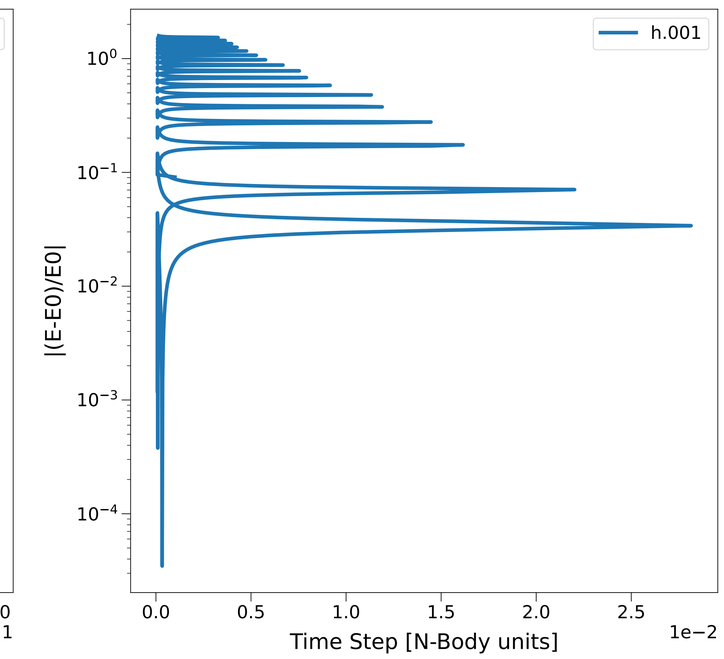


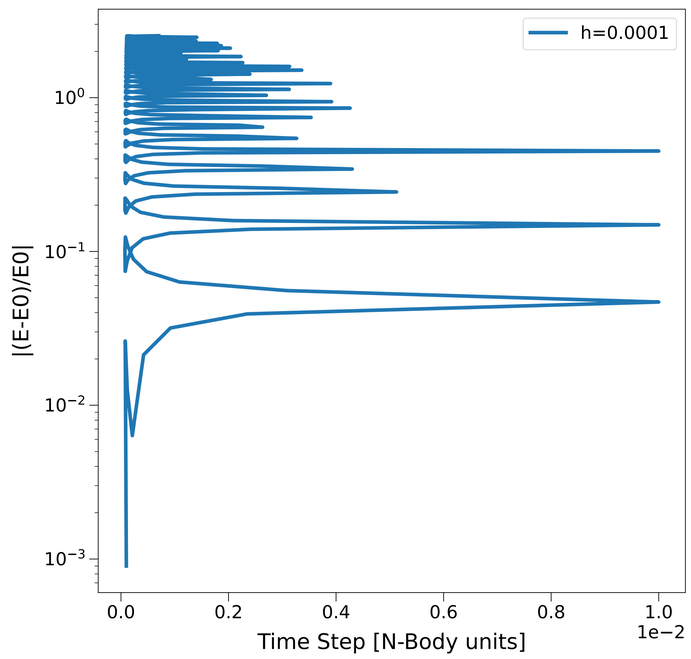




Euler_modified







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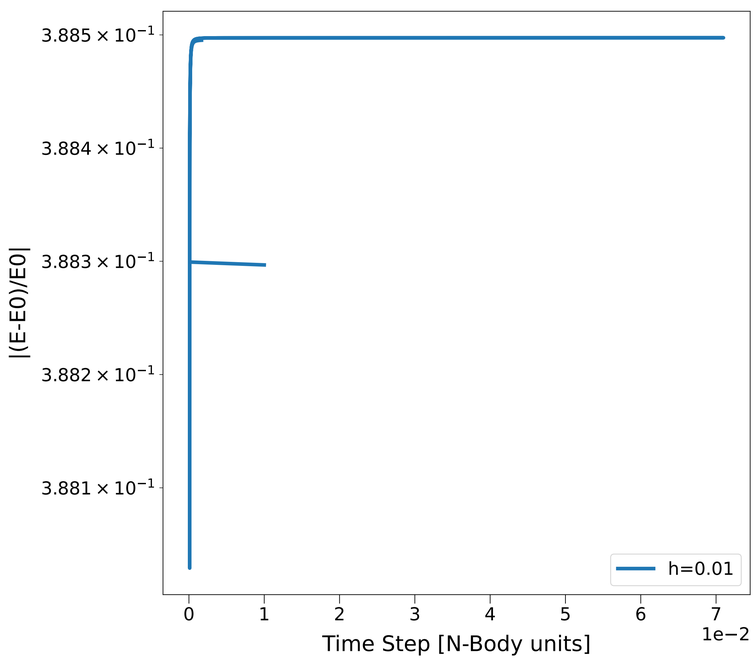
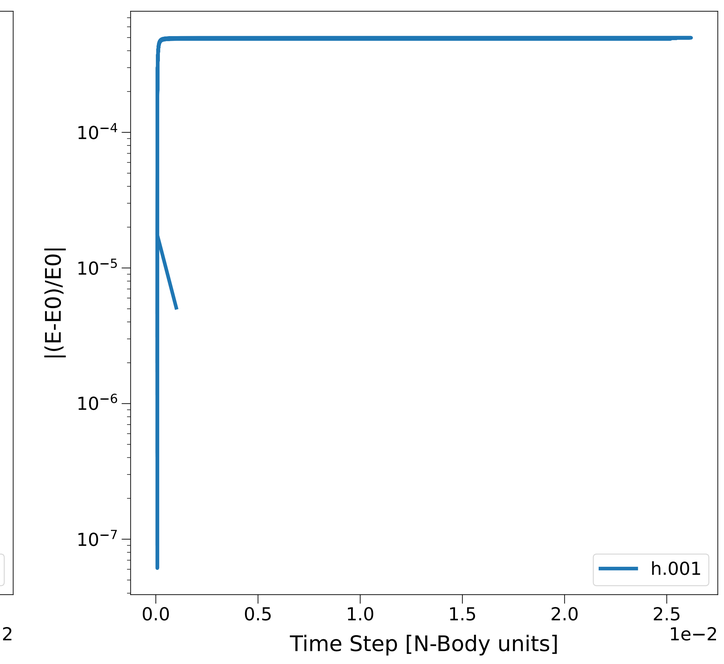
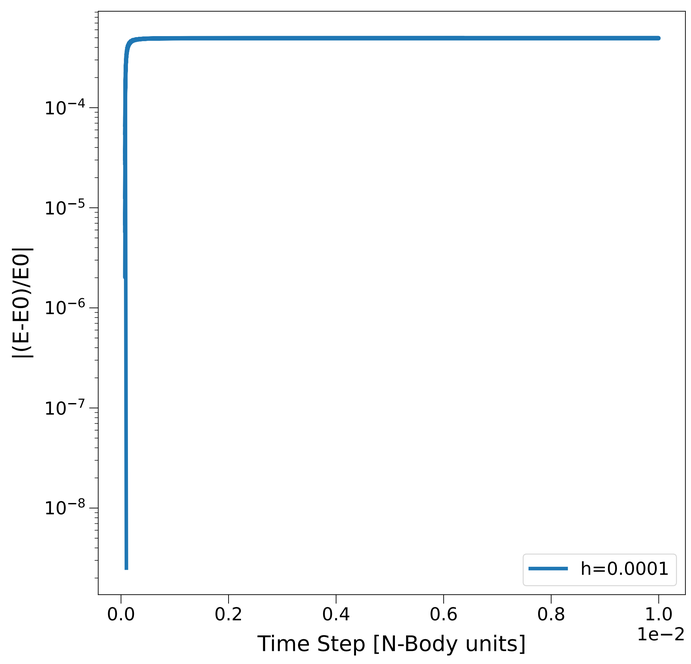
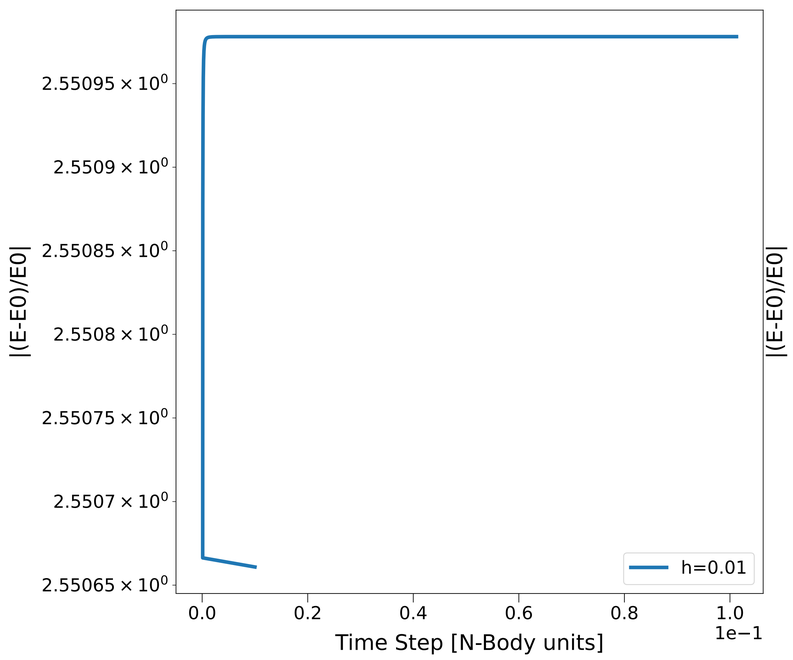
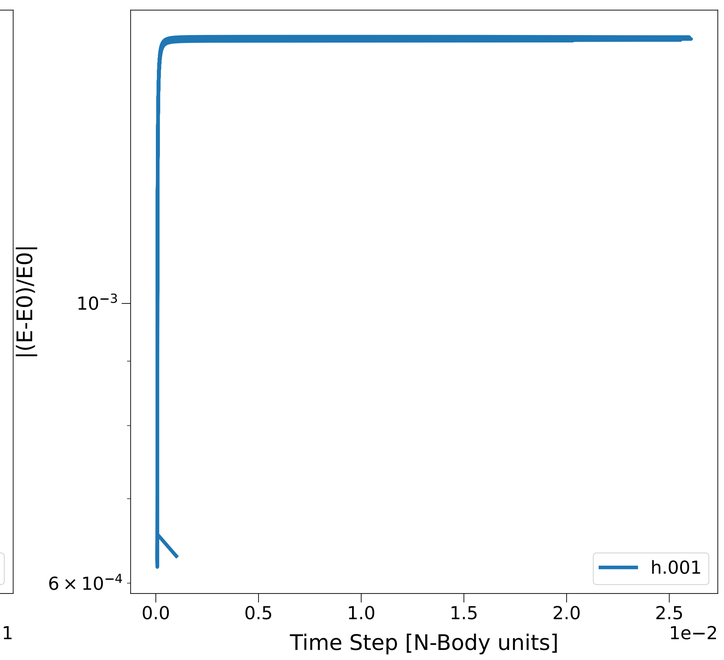


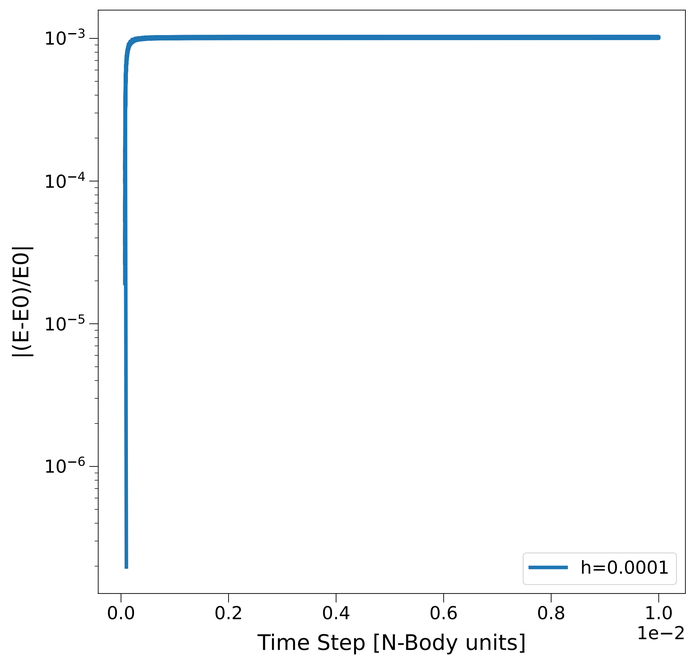




RK2-Heun







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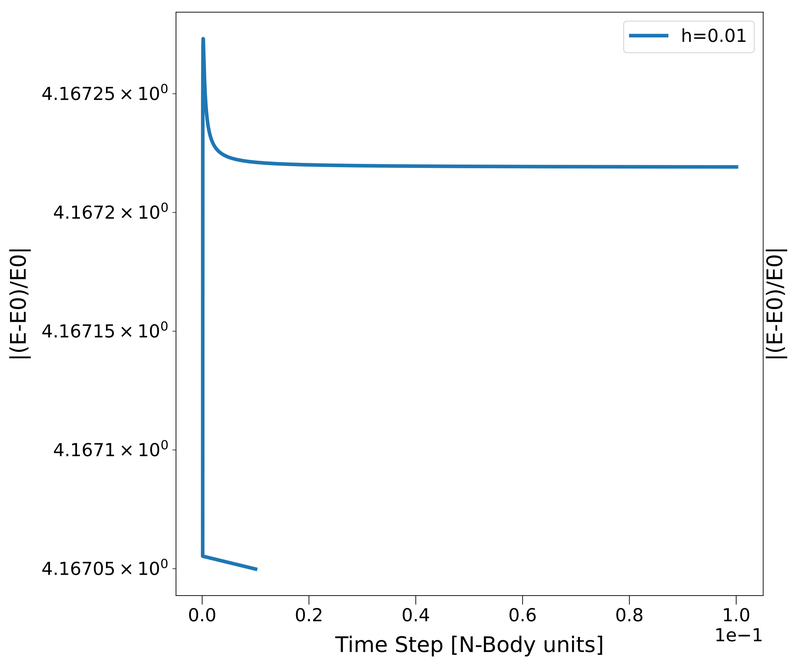
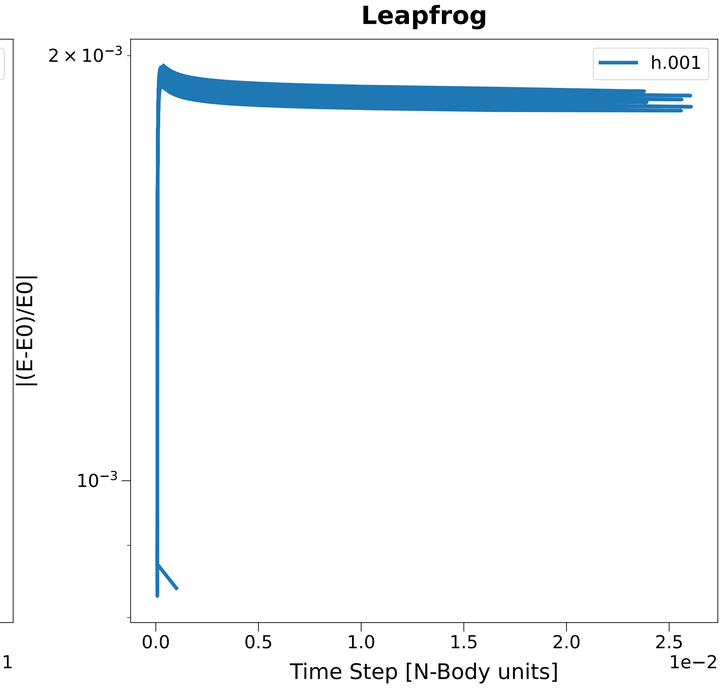
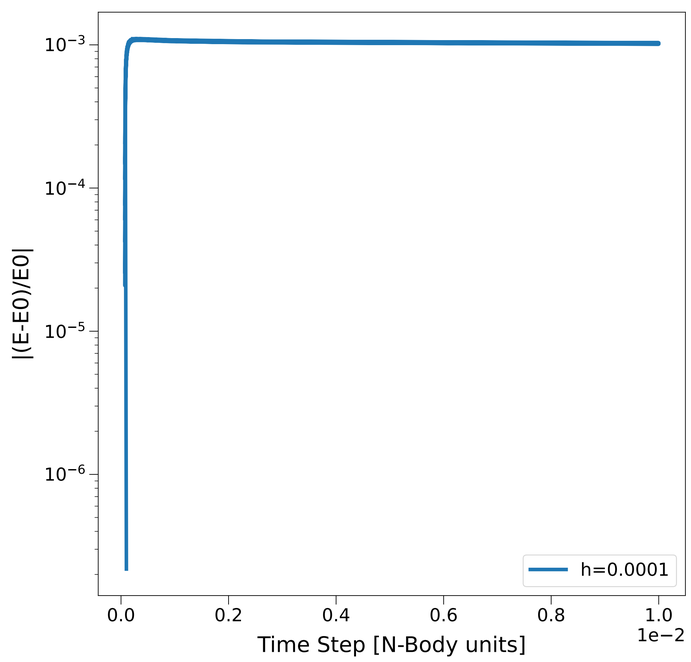
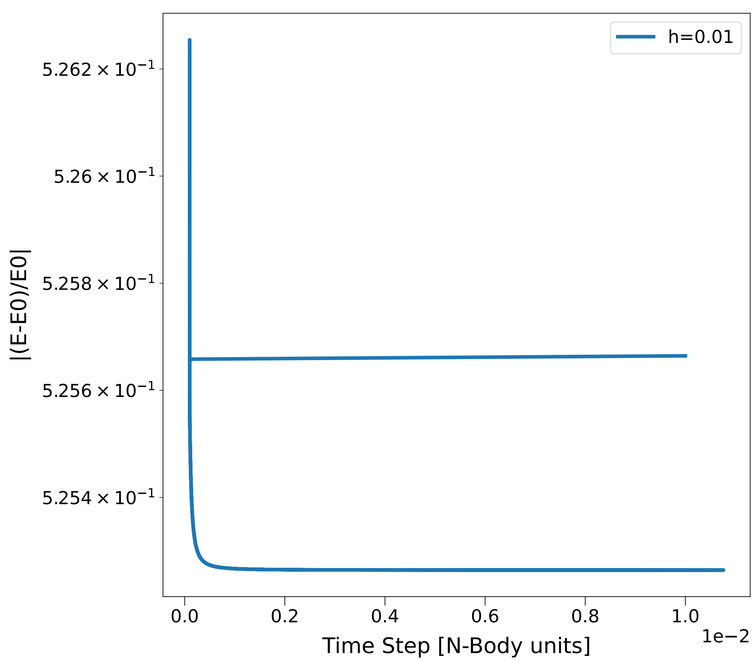
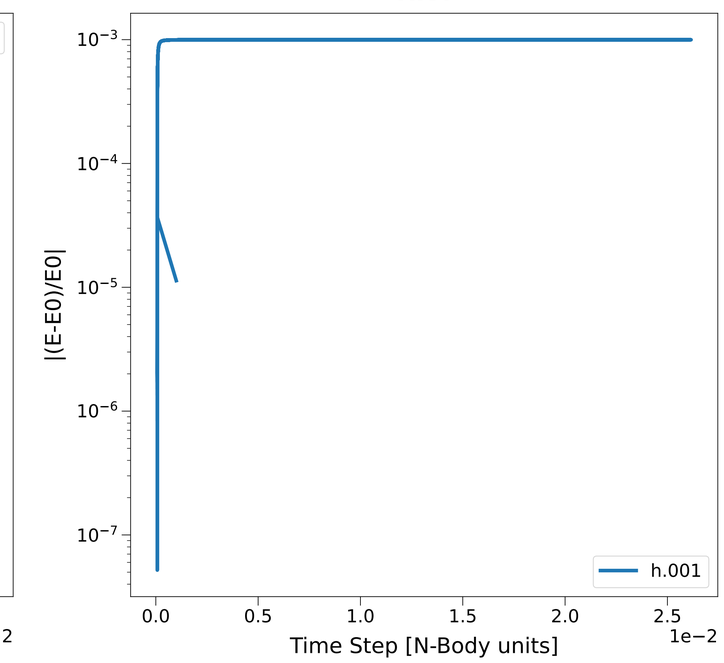


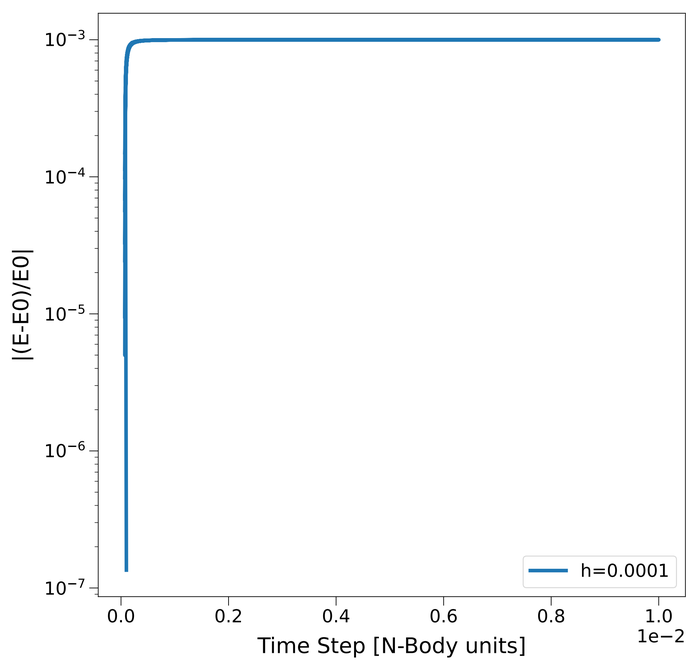


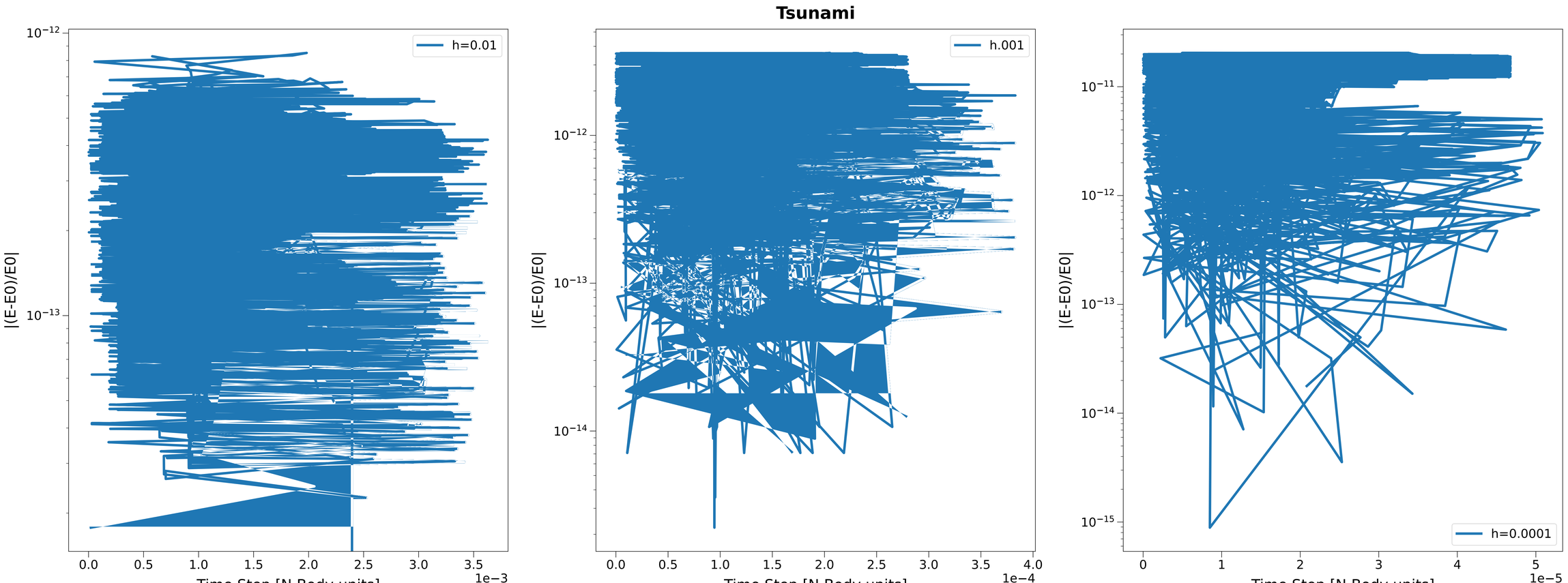


RK4





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Time Step [N-Body units]
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1e−4
1e−5