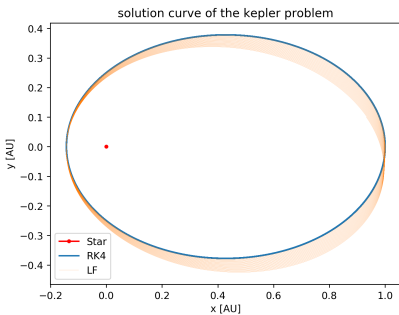
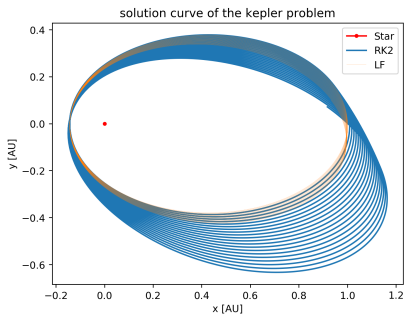
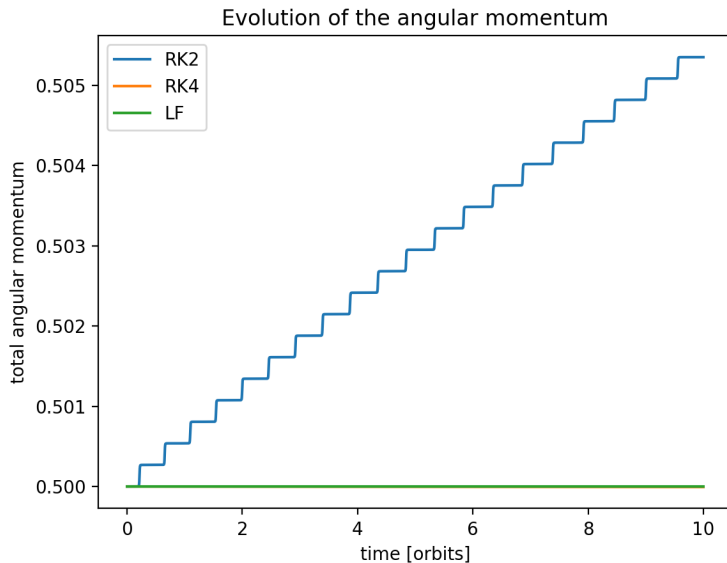


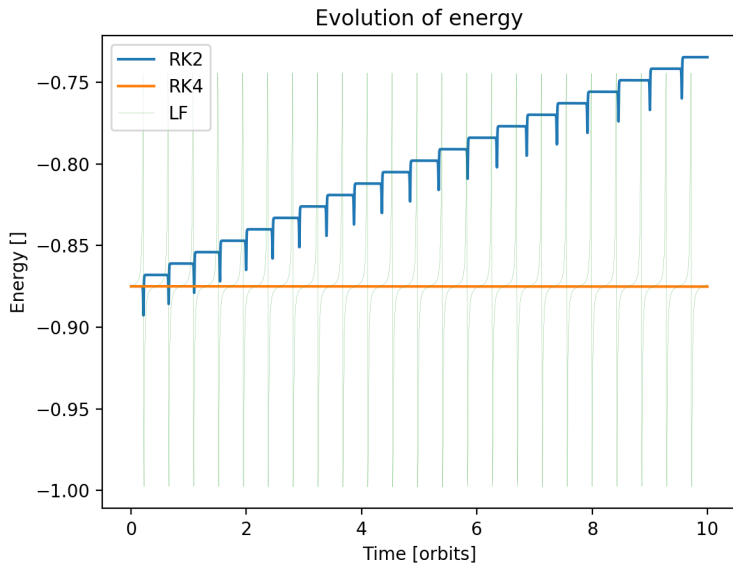
solution for $T=10$ orbits



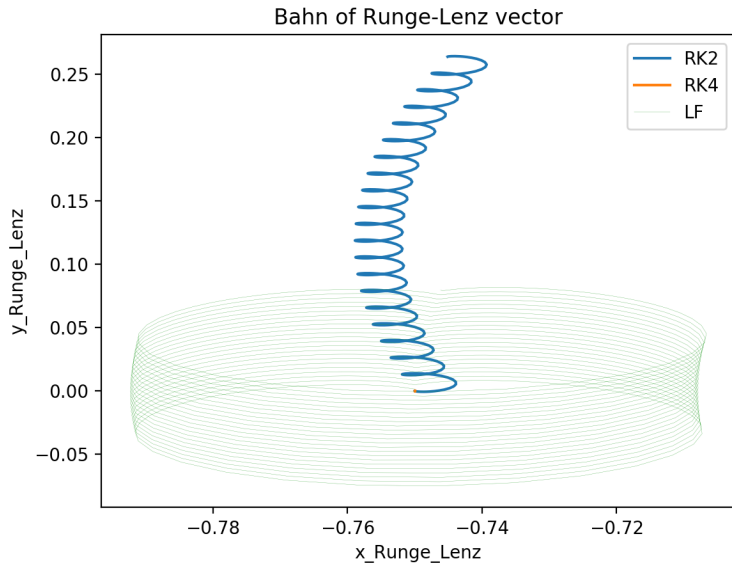
conserved quantities for $T=10$ orbits



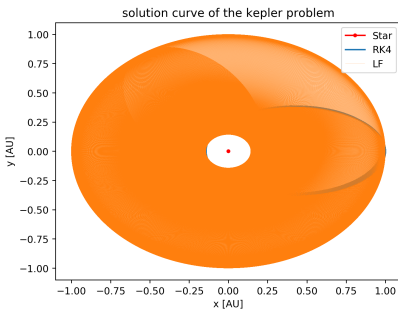
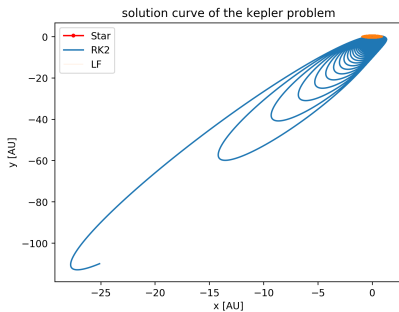
conserved quantities for $T=10$ orbits



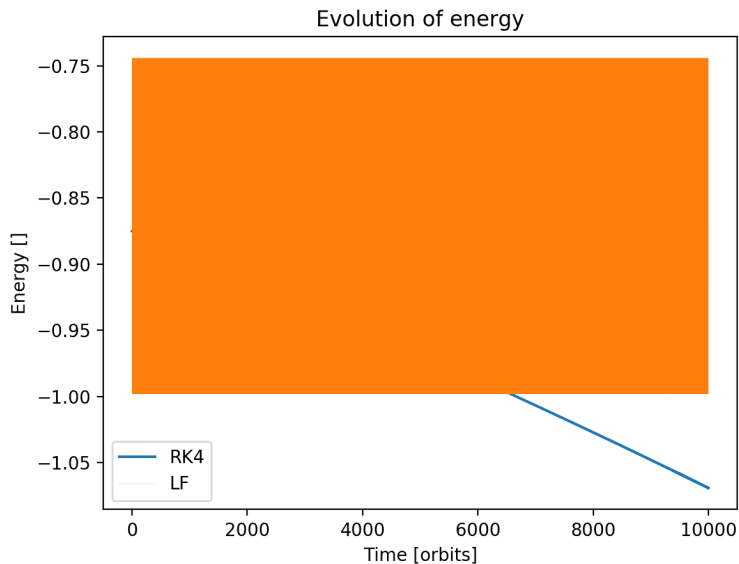
conserved quantities for $T=10$ orbits



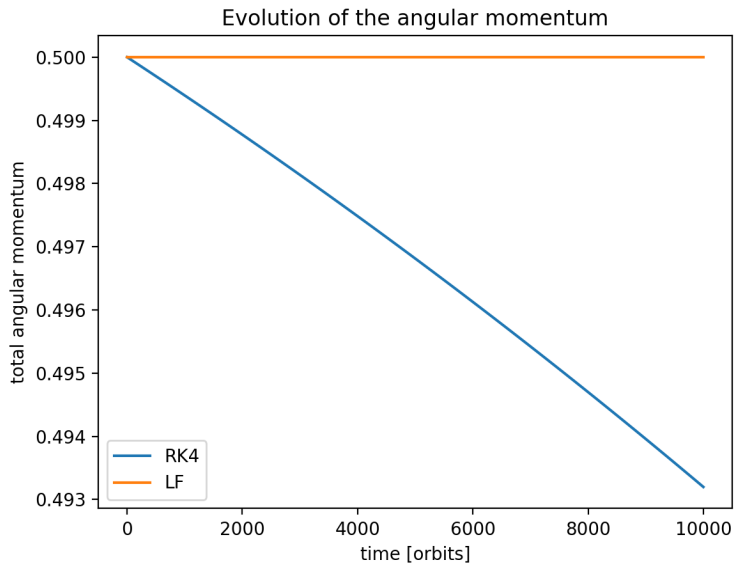
solution for $T=1000$ orbits



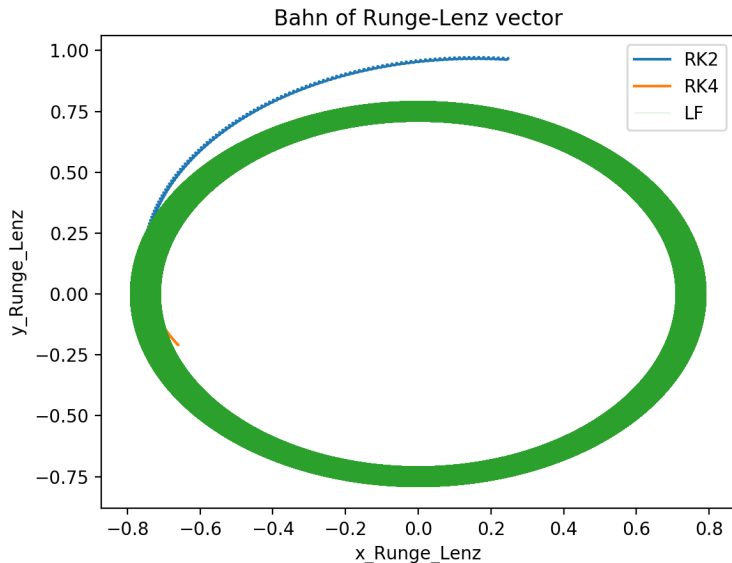
conserved quantities for $T=10000$ orbits



conserved quantities for $T=10000$ orbits



conserved quantities for $T=10000$ orbits



conclusion

1. Time reversibility $t \mapsto -t$
2. Adjoint of method $\Psi_{\Delta t}^* = [\Psi_{-\Delta t}]^{-1}$
3. $\Psi_{\Delta t}$ symmetric \Rightarrow order of convergence is even
4. some methods conserve additional quantities

Questions???

Thank you for attention!