

PHYSICS SEMINAR

Dynamics of Celestial Bodies in Space

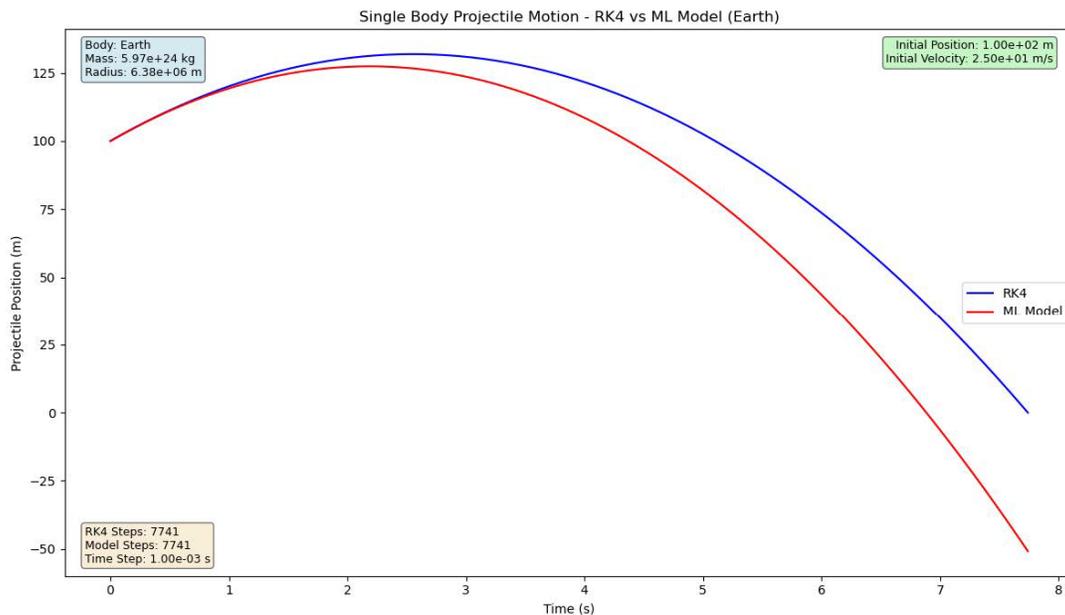
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12:30 – 1:30 p.m.

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This work presents a computational study of the dynamics of celestial bodies governed by Newtonian gravitation. The equations of motion are derived and numerically integrated to analyze two-body, three-body, and general N-body systems. The original Python implementation was refactored into C++ to improve performance and structural clarity. In addition, a neural network model was developed to approximate dynamical behavior in projectile motion systems. A generalized N-body solver was implemented to extend the framework beyond classical three-body configurations, enabling scalable simulation of multi-body gravitational interactions.



Refreshments!