Simulating Missile Trajectory with DEs

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Modeling and Simulation Final

Introduction

In a ballistic missile trajectory simulation, the system of DEs used to describe the ballistic model is a highly complex system. In particular, the six-degree of freedom model used most frequently, solves for the missile's components of acceleration, velocity, and position at discrete time intervals. The usual approach for simulation is the 4th Order Runge Kutta method. This poster will be diving into a different, and potentially more efficient algorithm, called the Parker-Sochacki Method (PSM for short).

Assumptions

Variables used/Assumptions used in model

Problem Identification

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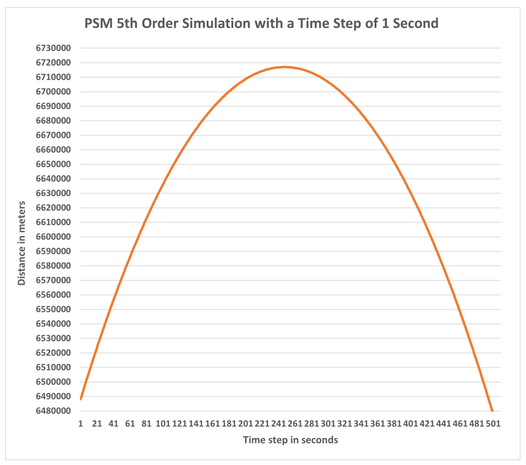
Cauchy Product Derivation

Model Verification



Hello

Figures

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Conclusion

conclusion stuff

References

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