

Abstract Submitted
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Low Thrust Orbital Maneuvers Using Ion Propulsion¹ ERIC RAMESH, New Mexico State University — Low-thrust maneuver options, such as electric propulsion, offer specific challenges within mission-level Modeling, Simulation, and Analysis (MS&A) tools. This project seeks to transition techniques for simulating low-thrust maneuvers from detailed engineering level simulations such as AGI's Satellite ToolKit (STK) Astrogator to mission level simulations such as the System Effectiveness Analysis Simulation (SEAS). Our project goals are as follows: A) Assess different low-thrust options to achieve various orbital changes; B) Compare such approaches to more conventional, high-thrust profiles; C) Compare computational cost and accuracy of various approaches to calculate and simulate low-thrust maneuvers; D) Recommend methods for implementing low-thrust maneuvers in high-level mission simulations; E) prototype recommended solutions.

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