

MISSION DESIGN EVALUATION AND PERFORMANCE DEVIATION ANALYSIS USING MONTE CARLO ANALYSIS

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Abstract

Renewed interest in Re-usable Launch Vehicles has led to the evolution of technology demonstration concepts, where the prime objective is to demonstrate new technologies at reduced cost and shorter turnaround time. This paper presents the details of both ascent and descent mission design and Monte Carlo analysis. It also compares the preflight design and Monte Carlo bounds with the flight observed performance parameters. A very good match was observed between the flight data and pre-flight prediction.

Keywords: Monte Carlo, Entry Corridor, Equilibrium Glide, Load Factor