

A Mathematical Exploration of the Hover Slam Manuever

A Mathematical Exploration



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1 Introduction

On December 21st, 2015. SpaceX, the privately owned space company, successfully landed their orbital-class rocket back at their launch site in Cape Canaveral, Florida. This is considered by some to be the next major advancement towards making humans an interplanetary species. Elon Musk, the founder and CEO of the company intends to achieve "plane-like" levels of rapid reusability of rockets, in hopes that this will help propel humans towards Mars.

SpaceX has since then, successfully landed their first stage rocket boosters a total of XX times, both at land and on a barrage in the ocean.

2 Background theory

2.1 What are orbits

3 Modelling