

Introduction

Space exploration represents one of the most fascinating and complex frontiers of contemporary science and technology.

The launch system consists of three RS-25 (SSME) and two additional Solid Rocket Booster (SRB). The SSME, across the entire mission, maintains a constant thrust of 1,815,000 lbf.

The Space shuttle propulsion system consists of three space shuttle main engines (SSME) which draw liquid oxygen and liquid hydrogen from the external tank and draw liquid oxygen from the solid rocket booster. These parameters are used to calculate the thrust of the SSME.