

## Abstract - History of Solid Rockets

Solid rockets are of interest to the space program because they are commonly used as boosters that provide the additional thrust needed for the space launch vehicle to escape the gravitational pull of the Earth. Larger, more advanced solid rockets allow for space launch vehicles with larger payload capacities, enabling mankind to reach new depths of space.

This presentation will discuss, in detail, the history of solid rockets. The history begins with the invention and origin of the solid rocket, and then goes into the early uses and design of the solid rocket. The evolution of solid rockets is depicted by a description of how solid rockets changed and improved and how they were used throughout the 16<sup>th</sup>, 17<sup>th</sup>, 18<sup>th</sup>, and 19<sup>th</sup> centuries. Modern uses of the solid rocket include the Solid Rocket Boosters (SRBs) on the Space Shuttle and the solid rockets used on current space launch vehicles. The functions and design of the SRB and the advancements in solid rocket technology since the use of the SRB are discussed as well. Common failure modes and design difficulties are discussed as well.