

SPACE PROPULSION SYMPOSIUM (C4)  
Propulsion Systems II (2)

Author: Mr. Didier Boury  
Herakles (Safran group), France, didier.boury@herakles.com

## SPACE LAUNCHER SRM MARKET ANALYSIS

**Abstract**

Large Solid Propulsion has been used since the beginning of space launch activities most of time with motors derived from defense applications. Currently numerous launcher systems are using large solid rocket motors fully devoted to their requirements. Tentatively structuring the large spectrum of SRM applications on space launcher systems, three main missions can be 'identified' for this propulsion mode: · stage one of heavy launchers where large thrust levels, easily achievable at affordable cost with solid propulsion, are required for take-off · strap-on boosters for liquid core stage to give launcher some flexibility and optimum adaptation to mission requirement · propulsion system for small launchers benefiting from an attractive performance to cost ratio and high availability This paper presents a review of the past decade 2000-2010 overall market of large solid propulsion for these applications on space launchers. This review intends to give an idea of what is this business in term of volume, type of products and industrial organization. Then a tentative market analysis of the coming decade up to 2020 is drafted. Recent motor development activities and evolutions are reported in order to detect the main trends of solid rocket motors activities. Potential impacts of the closing of 'Shuttle Era' are discussed. New launcher projects or evolution of launchers using SRM propulsion mode are reported.