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SPACE PROPULSION SYMPOSIUM (C4)
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NASA SPACE LAUNCH SYSTEM ADVANCED BOOSTER RISK REDUCTION STATUS REPORT

Abstract

For NASA's Space Launch System (SLS) Advanced Booster Engineering Demonstration and/or Risk Reduction (ABEDRR) procurement, Dynetics, Inc. and Aerojet Rocketdyne (AR) formed a team to offer a wide-ranging set of risk reduction activities and full-scale, system-level demonstrations that support NASA's goal of enabling competition on an affordable booster that meets the evolved capabilities of the SLS. During the ABEDRR effort, the Dynetics Team will apply state-of-the-art manufacturing and processing techniques to the heritage Apollo F-1 rocket engine as well as design and demonstrate components of a new state-of-the-art liquid oxygen / liquid kerosene engine, the AJ1E6- both focused on a low recurring cost engine. ABEDRR is using NASA test facilities to perform hot–fire test campaigns for engine risk reduction. Dynetics will also fabricate and test a low cost tank assembly to verify the structural design. The Dynetics Team is partnered with NASA through Space Act Agreements (SAAs) to maximize the expertise and capabilities applied to ABEDRR.