Space Stations (9)
Space Stations (1)

Author: Mr. Matthew Duggan
The Boeing Company, United States, matthew.b.duggan@boeing.com

Mr. Valery Aksamentov
The Boeing Company, United States, Valery.K.Aksamentov@boeing.com
Mr. Rushan Beglov
S.P. Korolev Rocket and Space Corporation Energia, Russian Federation, Rushan.Beglov@rsce.ru

CONCEPTS FOR JOINT INTERNATIONAL MODULES

Abstract

Space agencies and companies around the world are examining concepts for human exploration in Low Earth Orbit and beyond. Continued human presence in in Low Earth Orbit and cislunar space for science and exploration continues to be a primary goal of space agencies and companies around the world. International collaboration has been critical to the success and safe operation of the International Space Station, at both the agency and contractor levels. International cooperation will be similarly critical to future human space exploration though leveraging the strengths and capabilities of the partners and creating opportunities for cost sharing. The Boeing Company and RSC Energia have jointly studied stations and vehicles to consider joint designs and operations. We have leveraged our vast integration experience on ISS to identify promising hardware and architectures that use current and emerging technologies to enable efficient integration and utilization of space vehicles. This paper describes the strengths and benefits of international cooperation in mission architectures, emphasizing international partnerships and elements and providing opportunities for a wide variety of mission goals. The advantages of implementing common standards for design and interfaces that streamline integration while respecting established partner standards and processes are discussed. We will describe various interface and cooperation concepts within envisioned missions, discuss required capabilities and key features and examine the importance of common standards in cooperative human space exploration.