

IAF HUMAN SPACEFLIGHT SYMPOSIUM (B3)

Flight & Ground Operations aspects of Human Spaceflight - Joint Session of the IAF Human Spaceflight and IAF Space Operations Symposia (4-B6.4)

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LEVERAGING ISS MISSION OPERATIONS TECHNIQUES FOR COMMERCIAL APPLICATIONS

Abstract

NASA's Marshall Space Flight Center (MSFC) has been the hub of human spaceflight science operations since the days of Skylab and Shuttle. Since 2001, Marshall's Payload Operations and Integration Center had been leading NASA's space station payload operations support. As the commercial sector of space operations continues to grow, NASA offers much in the way of risk reduction through our flight-proven systems and processes. Building and operating a space platform requires extensive ground infrastructure and flight operations know-how. Part of NASA's mission is to enable successful commercial efforts, and MSFC has infrastructure and operations teams already in place that can help support such efforts, particularly in the area of science operations. This paper will describe the capabilities that NASA's Marshall Space Flight Center (MSFC) Payload Mission Operations Division (PMOD) offers to commercial entities today that can be leveraged for tomorrow's commercial space endeavors. NASA's PMOD consists of two broad categories of expertise. Our Mission Operations and Integration experts provide a one-stop-shop for payload integration services with a particular emphasis on designing, integrating, and operating payload and flight systems safely, effectively, and efficiently. We offer services that support mission planning, crew and ground training, and activity execution for the entire mission life cycle. Our other primary area of expertise is in space ground systems design, implementation, and operations via our multi-mission operations facility, the Huntsville Operations Support Center (HOSC). With numerous on-site mission control areas, extensive remote support capabilities, cutting-edge data technologies, connectivity to NASA's global spaceflight partners and NASA mission infrastructure, and a proven history of success, our ground systems personnel can support your mission regardless of location or size. Our experts and experience are ready to support our commercial partners and ensure their mission success. The experience of NASA's PMOD operations and ground systems experts is available to aid in the commercialization of space. We have decades of experience and a desire to use our capabilities to support your mission operations concepts and execution. Through a partnership with NASA, your commercial venture can be in the best position possible to succeed. We're here to help and look forward to making your commercial venture successful.