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HUMAN SPACEFLIGHT SYMPOSIUM (B3)
Utilization & Exploitation of Human Spaceflight Systems (3)

Author: Mr. Michael Suffredini
NASA, United States

Mrs. Kathy Laurini
National Aeronautics and Space Administration (NASA), United States
Mr. Michael Read
NASA, United States

THE INTERNATIONAL SPACE STATION: EXPANDING ITS IMPACT ON SPACE UTILIZATION AND EXPLORATION

Abstract

In November 2013, the International Space Station (ISS) completed its 15th year of continuous human presence. Since completion of in-space assembly in 2010, the ISS has been focused on a wide range of utilization activities which are increasingly contributing knowledge and results benefiting our lives here on Earth. Utilization activities include life science research, fundamental microgravity physical sciences research, Earth and space observation, technology demonstrations, as well as numerous educational activities and initiatives. In addition, activities are conducted onboard the ISS that are essential for understanding and limiting the risks associated with human missions beyond (LEO). The ISS user base is expanding to include public and private sector entities which see the opportunity provided by the ISS and low-Earth orbit (LEO). This is possible because of the increasing availability of transportation to and from the ISS, as well as the ease of doing research onboard the ISS. The ISS is paving the way for a robust future for human activities in LEO and beyond, conducted by both space agencies and the private sector.

At the International Space Exploration Forum held in Washington, DC in January 2014, the United States announced its decision to support ISS in-orbit operations until at least 2024, ensuring the availability of the ISS to support ground breaking research impacting the lives of people on Earth, as well as completing the activities necessary to manage risks of exploration beyond LEO. This paper will discuss the rationale for this decision and how it enables NASA to continue its efforts to expand the use of ISS. Continuing the life of ISS into the next decade will provide the cornerstone for ongoing private and public sector efforts to expand the economic sphere of Earth to include LEO, advance human spaceflight capabilities and lower the cost of human spaceflight. This paper will describe these activities and demonstrate the lasting impact of the ISS on the future of human space utilization and exploration