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HUMAN SPACEFLIGHT SYMPOSIUM (B3)
Governmental Human Spaceflight Programs (Overview) (1)

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CANADA AND THE INTERNATIONAL SPACE STATION PROGRAM: OVERVIEW AND STATUS SINCE IAC 2016

Abstract

Since meeting in Guadalajara for the IAC 2016, the Canadian Space Station Program has been busy supporting the role of Canada's Mobile Servicing System (MSS) in the maintenance and utilization of the ISS. This paper focuses on the milestones reached and various activities that have occurred in the past twelve months.

The MSS is keeping pace with the increasing flow of free flying cargo vehicles which must be captured and berthed by Canadarm2. In addition to the free flyer traffic, the MSS also continues to expand its capability to support ISS utilization and robotic maintenance. This year included robotic replacement of the first set of ISS batteries. This proved to be the largest block of robotics work performed in space to date.

Utilization of the ISS as a research platform continued with Canada funding experiments targeting the identification, characterization and mitigation of the risks of long-duration human spaceflight. This paper provides a summary of these Canadian utilization activities. With preparations now underway for CSA's third long duration mission to the ISS, CSA increased its astronaut corps from two to four with the selection of two new astronaut candidates.

Along with other ISS partners, in order to continue to benefit from this unique space based laboratory, CSA is working towards supporting space station operations as the program's end date is extended to 2024. In addition, on-going technology development and research is using ISS assets to build capabilities further enabling future exploration initiatives.