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IAF 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 2017

Abstract

Since meeting in Adelaide for the IAC 2017, 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 constant 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 support ISS utilization and robotic maintenance. This year included robotic replacement of the second set of ISS batteries, as well as milestone maintenance of the Canadarm2 itself with the replacement of both of the arm's original end effectors.

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 mostly complete for CSA's third long duration mission to the ISS, CSA's two newest astronauts have completed their first year of training.

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