IAF HUMAN SPACEFLIGHT SYMPOSIUM (B3)
Governmental Human Spaceflight Programmes (Overview) (1)

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CANADA AND THE INTERNATIONAL SPACE STATION PROGRAM: OVERVIEW AND STATUS SINCE IAC 2019

Abstract

Since meeting in Washington DC for the IAC 2019, 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 steady flow of free flying cargo vehicles requiring capture and berthing by Canadarm2. In addition to the free flyer traffic, the MSS also continues to support ISS utilization and robotic maintenance. Of note, this year saw replacement of the fourth and final set of ISS batteries. 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. CSA's research program visibility has benefited from the Canadian long-duration crew member's time on ISS. Along with other ISS partners, CSA is working towards supporting space station operations through the program's end date of 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.

Keywords: Canada, Canadarm2, Canadarm3, CSA, Dextre, ISS, Robotics, Gateway