

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
IN THE CONTEXT OF CANADIAN PRIORITIES FOR SPACE EXPLORATION

Abstract

The Canadian Space Station Program (CSSP) is actively supporting Canada's Mobile Servicing System (MSS) for the maintenance and utilization of the ISS, as well as conducting scientific research aboard the ISS and planning astronaut launches. This paper focuses on the ISS, highlighting the milestones achieved and various activities undertaken by the CSSP in the recent years. The broader context of Canadian Space Exploration activities undertaken by the Canadian Space Agency (CSA) will also be discussed.

In March 2023, an important milestone was reached for the CSA when our Prime minister officially confirmed Canada's extended participation in the ISS program until its termination in 2030. The announcement also included significant other Canadian investments in Space Exploration programs, such as Canadarm3, the Lunar Rover and Gateway utilization, confirming to all nations that Canada is committed to Space Exploration.

These past years, MSS activities have been on the rise again and Canadian robots on board ISS (Canadarm2, Dextre and MBS) were kept busy by the steady flow of visiting cargo vehicles requiring capture and berthing. In parallel, maintenance of NASA's and partners modules and ISS payloads utilization also required constant efforts from MSS robotics operations.

Utilization of the ISS as a research platform continues for Canada and Canadians, focusing on funding experiments and technology targeting the identification, characterization, and mitigation of risks to human health during long-duration spaceflights. Ongoing technology development and research by Canada also use ISS assets to build future space exploration capabilities, enabling future exploration initiatives towards the Moon and Mars.

Six years after the launch of Canadian astronaut David Saint-Jacques to the ISS for CSA's fourth long-duration space mission in December 2019, CSA is now thrilled to be planning for two Canadian astronaut launches in 2025. Astronaut Joshua Kutryk will participate in the first CSA mission under NASA's Commercial Crew Program with the Starliner-1 mission, scheduled to reach ISS early 2025. Additionally, Astronaut Jeremy Hansen will be the first Canadian to orbit the Moon aboard the Artemis II mission scheduled for September 2025.

Nearly 30 years after Canada entered the ISS program and with many more years of success and international collaboration to come in low Earth orbit, the CSA and Canadians are excited to participate in the Artemis program, a stepping stone towards establishing a durable lunar presence and paving the way for human exploration of Mars.