

HUMAN SPACE ENDEAVOURS SYMPOSIUM (B3)
Astronauts: Those Who Make it Happen (5)

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C1 MISSION: LESSONS LEARNED ABOUT PAIRING SPACE ACTIVITIES WITH CANADIAN
ASTRONAUT INCREMENT.

Abstract

The Canadian-1 (C1) expedition was a great success and full of excellent Canadian scientific and educational activities on the International Space Station (ISS). However, the path to ISS is not easy and matters become even more complex when trying to integrate them with the first expedition of a Canadian astronaut. The normal payload manifesting process requires 18 months and crew selection is often announced a year or less before flight. Until now, Canadian activities centred on ISS science utilization. However, for the preparation of the expedition completed by the Canadian astronaut Bob Thirsk, many different divisions within the Canadian Space Agency came together to ensure that our astronaut had many activities to choose from that would reach the Canadian public as a whole. Dr. Thirsk participated in the Bodies in Space Experiment (BISE) investigating how gravity influences the perception of up and down and performed crucial manipulations for APEX-Cambium (Advanced Plant Experiments on Orbit) that the launched on ULF3, to study the impact of gravity on wood formation. Dr. Thirsk also participated in the first commissioning phase of the Canadian contribution (Microgravity Vibration Isolation System, MVIS) to the European Fluid Science Lab (FSL), radiation measurements (high energy neutrons, payload Radi-N) as well as a robotic technology demonstration (Avatar) and educational (IRIS) payloads as well as many podcasts. CSA-supported Canadian scientists have also been collaborating on NASA-led Cardiovascular Conditioning on return from ISS (CCISS), European-led Influence of Vibrations on the Diffusion of Liquids (IVIDIL) and Japanese-led Marangoni Experiment In Space (MEIS) experiments. In this paper we provide an overview those Canadian activities and discuss some of the obstacles encountered and how they were overcome. In addition, we discuss the lessons learned that will assist in future planning of ISS activities.