

SPACE EXPLORATION SYMPOSIUM (A3)
Space Exploration Overview (1)

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A CSA VISION FOR SPACE EXPLORATION

Abstract

Space exploration missions have a unique capacity to capture our imagination, stimulate our curiosity, and answer fundamental questions about the Universe. They lead to new discoveries, drive innovation and attract world-class talent. Space exploration missions are also a powerful source of inspiration for young people to pursue advanced studies in science and engineering.

Having been among the first countries, after the Soviet and American super powers, to design and manufacture its own satellite, Canada has made—and continues to make—critical contributions to highly visible international space exploration programs, including: the now-retired US Space Shuttle; the International Space Station; the 2008 Phoenix Mars Lander mission; and the future James Webb Space Telescope. Canadians have learnt to focus on and nurture science and technology strengths. The resulting specialized expertise developed by the Canadian space sector has yielded commercial success and science and technology domains of genuine national excellence. It has given Canada a track record as a trusted, respected and sought-after international partner.

This paper presents the context of the CSA's vision for space exploration, which is that "Canada will join in the human and robotic exploration of the solar system and space-based astronomical observation of the Universe beyond. The CSA will maintain a robust and balanced space exploration program to ensure that, as a nation, Canadians share in the discoveries, technological breakthroughs, societal impact and economic benefits stemming from the global exploration endeavour". This paper also introduces the four Canadian exploration goals and the priorities of Canada's Space Exploration Program for the next ten years. It presents the principles that guide the decision process for Canada's space exploration activities when targeting missions and mission contributions. The presented roadmap, which is aligned with the guiding principles, assumes two types of missions based on their overall cost. The first type includes the missions that the CSA can develop within its budget for space exploration. The second type includes larger missions for which the CSA will work with the space exploration community to complete the planning phase in order to submit proposals to fund the definition and implementation phases. The paper will conclude with the short-term priorities for CSA's Exploration branch.