From Earth Missions to Deep Space Exploration (05)
International Plans and Concepts (4)

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CANADIAN SPACE AGENCY'S SPACE EXPLORATION PROGRAM

Abstract

Space agencies around the world are discussing how to coordinate the next phases of the space exploration program. As an active partner in this endeavour, the Canadian Space Agency (CSA) is focusing its efforts on developing space science and technologies that serve national priorities and play a niche role in international missions. Space Exploration has always been a central pillar of the Canadian Space Agency's Program, encompassing space astronomy and astrophysics, human spaceflight, robotic exploration of the solar system, and advanced exploration technology development.

This paper will give a succinct overview of Canada's Space Exploration Program—its goals, thrusts and roadmap—to provide the context in which Canadian space exploration initiatives are identified and pursued.

The main CSA goal is to build on Canada heritage and to take advantage of the global environment.

To prepare for exploration beyond Earth orbit, the CSA will operate and upgrade the Canadian robots on the International Space Station that is the only current destination for Canadian astronauts. The CSA will also utilize the Station to advance research in life science and space medicine to support human space flight and to develop the new technologies required to advanced space exploration.

We want Canadian technologies to play a key role in Mars exploration, Canadian rovers, robotic technologies and science instruments to explore the Moon, Canadian scientists to analyze Mars samples and Canadian robotics to service in-orbit spacecraft. We will achieve this by collaborating with other space agencies for Mars and Moon missions. Opportunistic missions to other destinations such as asteroid are also interesting if key Canadian technology and science are provided. This will pave the way for Canadians to work beyond Low Earth Orbit in the next decade. In addition, we will build on the excellent reputation of our astronomers and our industry through participation in the astronomy missions of our partners.

Moreover, we will continue to invest in key technologies to prepare Canada, its industry and academia to maximize the benefits of future space exploration missions. We will also encourage a larger public

participation in the space exploration program and leverage government investment by building on the commercial interest for space exploration.