# **Partners in Space**

# Innovating for a Thriving Future

The United States and Canada have been space partners for over 60 years. Our collaboration includes defense, space exploration, Earth observation, science, technology, outreach and international policy. For U.S. space endeavors, Canada is a partner of choice with cutting-edge capabilities and integrated supply chains.

#### **Securing North America**

Canada's space infrastructure enhances North American and global security. For example, Canada's RADARSAT Constellation Mission data (RCM) supports maritime surveillance and other security needs. Recently, Canada invested over \$1 billion in a replenishment satellite for the RCM, and the design of a next-generation satellite system to succeed the RCM. These investments in civil space capabilities complement nearly \$15 billion in space defence to enhance capabilities in the surveillance of, and from space along with communications in the high North. These initiatives are designed with a specific focus on interoperability with the United States.

#### **Monitoring Our Planet**

Satellite Earth observation is crucial for addressing everyday challenges. Canada is contributing to NASA's Atmosphere Observing System mission with a satellite and innovative scientific instruments to enhance weather prediction and climate modeling. Additionally, Canada is planning the Arctic Observing Mission for

detailed Arctic weather and atmospheric monitoring as well as developing the WildFireSat mission to monitor wildfires, protecting vital resources and infrastructure.

# Driving Business Opportunity and Growth

The space sector in Canada is innovative, export-driven and expanding, creating jobs and economic growth for both countries. Canada is a leader in space robotics, artificial intelligence, sensors for Earth observation and exploration, optical and quantum communications technologies, and satellite communications. Given our recognized areas of excellence, we look to support and collaborate on U.S.- and Canadian-led space projects and missions through the provision of key space technologies.



### CANADA AND ARTEMIS II

Astronaut Col. Jeremy Hansen will make history as the first Canadian astronaut to fly around the moon as part of NASA's upcoming Artemis II mission planned for 2026

Photo: Canadian Space Agency, NASA.



#### Collaborating on Exploration, Research and Development

Since 2023, over \$2 billion was committed for Canada's continued participation in the International Space Station, to support science on the Lunar Gateway, and develop a lunar utility vehicle to assist astronauts on the Moon.

Cutting-edge Canadian robotics, including Canadarm2 played a critical role in the assembly of the International Space Station, and along with Dextre, continue to support its maintenance. Canada will be contributing Canadarm3 to the Lunar Gateway, enabling human exploration of the Moon. Building on over four decades of rover expertise, Canada is also preparing a lunar rover science mission to search for water ice, essential for future human space exploration, and has committed to provide a versatile utility rover for the NASA-led Artemis program.

Canada is also a key partner on the James Webb Space Telescope, the world's most powerful and complex space telescope that enables scientists and engineers to expand our knowledge of the



# CANADARM3

Computer-generated imagery of Canadarm3, Canada's robotic system, located on the exterior of Gateway, a small space station in orbit around the Moon.

Image: Alberto Bertolin, Bradley Reynolds

universe. The Canadian instrument OSIRIS-Rex Laser Altimeter was crucial to the OSIRIS-Rex asteroid sample-return mission and continues its journey on the OSIRIS-APEX mission. Canada has extended its participation in the Mars Science Laboratory mission to March 2026, with the Canadian-built APXS instrument on the Curiosity rover continuing to perform tests of the Martian surface.



## CANADARM3

Close-up of the Canadian lunar rover prototype exploring a Moon-like surface

Photo: Canadian Space Agency

#### **Enabling Space Launch**

With large landmass, skilled talent pool and access to desired orbits, Canada is an ideal location for space launches, offering new options to U.S. launch companies and satellite operators. The recently concluded Canada – United States Technology Safeguards Agreement will allow the use of U.S. space launch technology, expertise and data for space launches in Canada as well as ensure that any sensitive U.S. technology used for space launch from Canada is handled in a secure manner.

