

Canada and Space Exploration

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CORE THRUSTS

- Earth Observation
- **Space Science and Exploration**
- Satellite Communications
- Space Awareness and Learning

Space Science and Exploration

- To understand the solar system and the Universe;
- To expand our knowledge on the constituent elements and origins of life;
- To strengthen a human presence in space.



Building on Past Experience

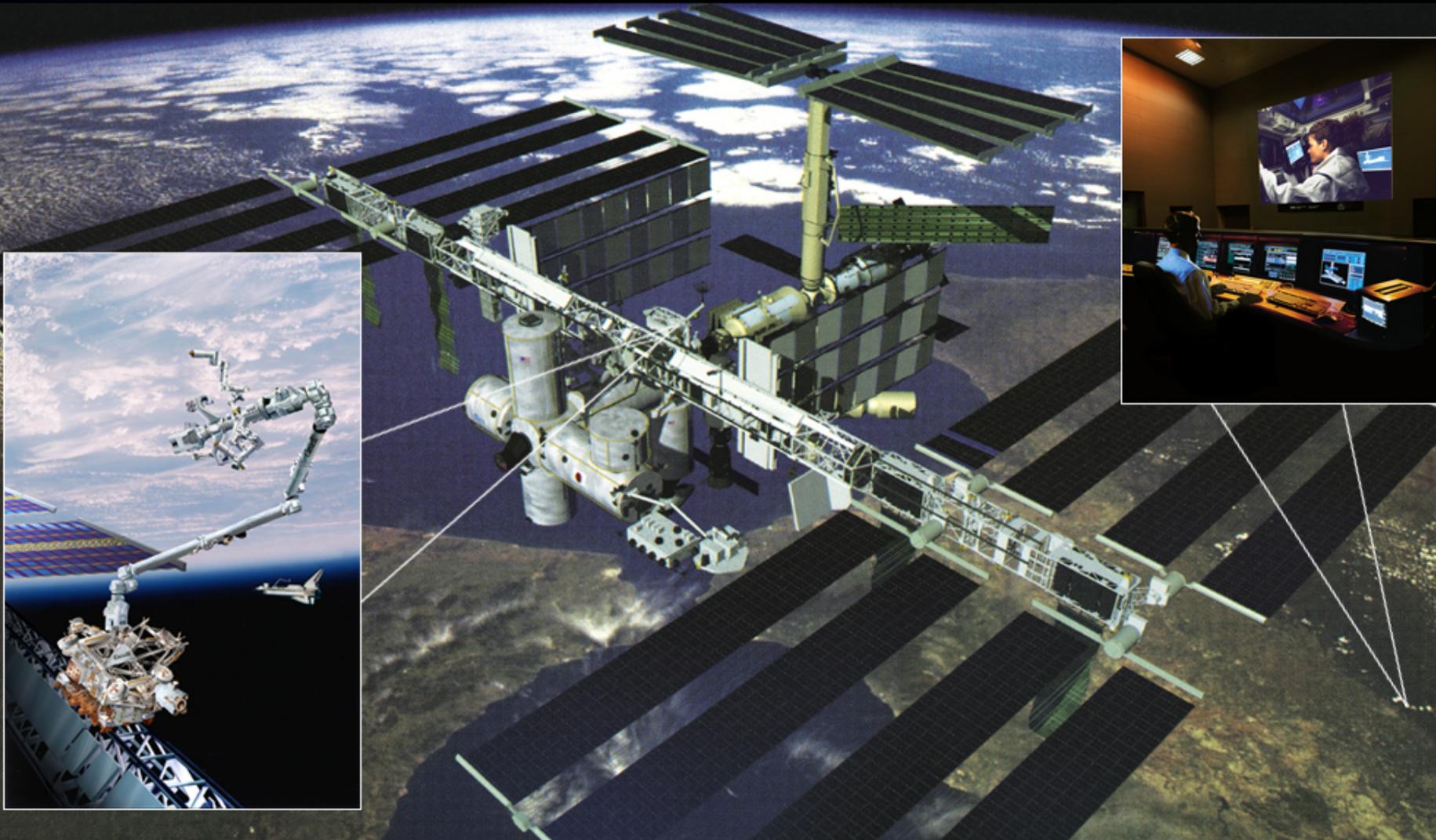


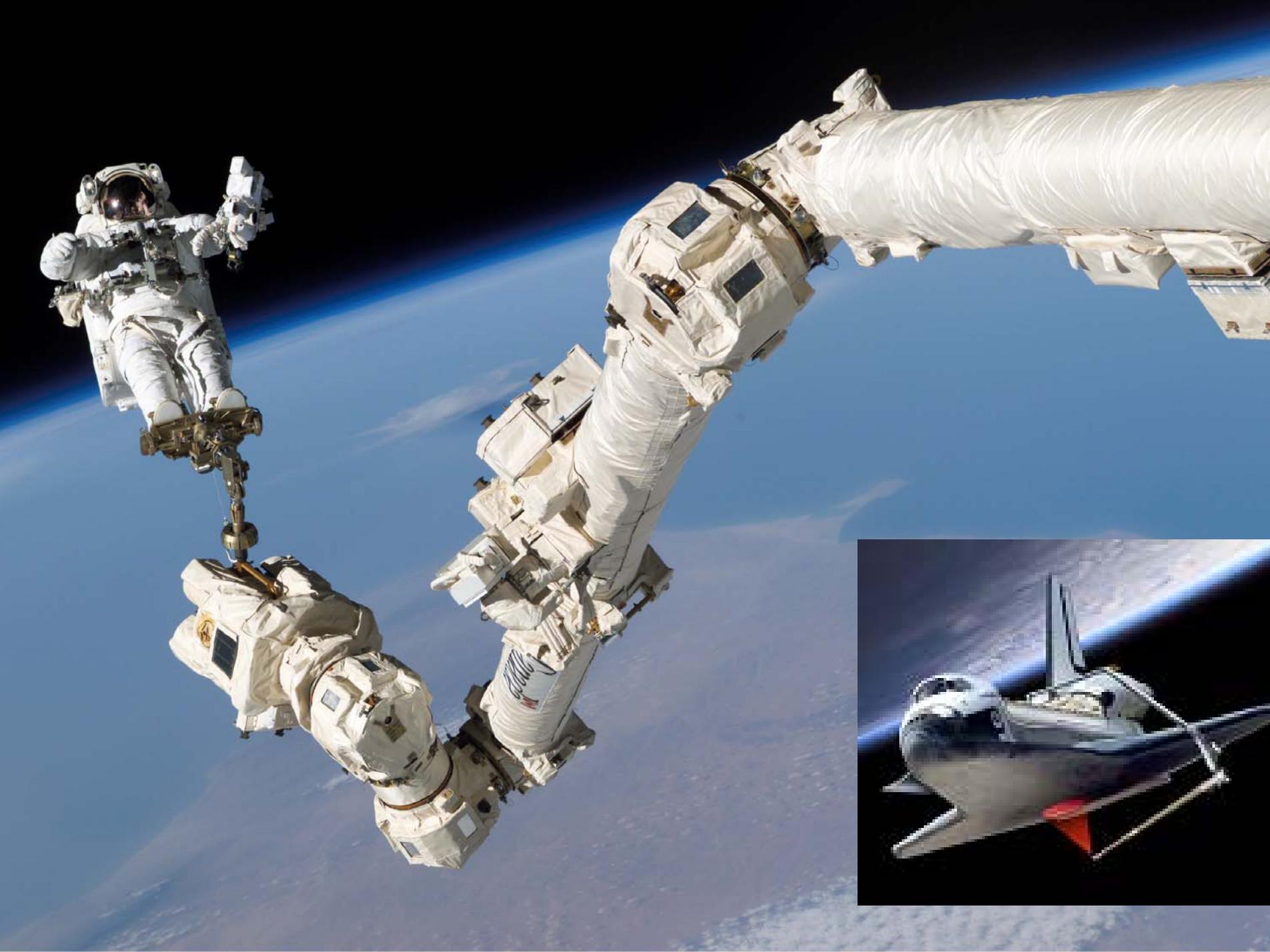


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Le système d'entretien mobile





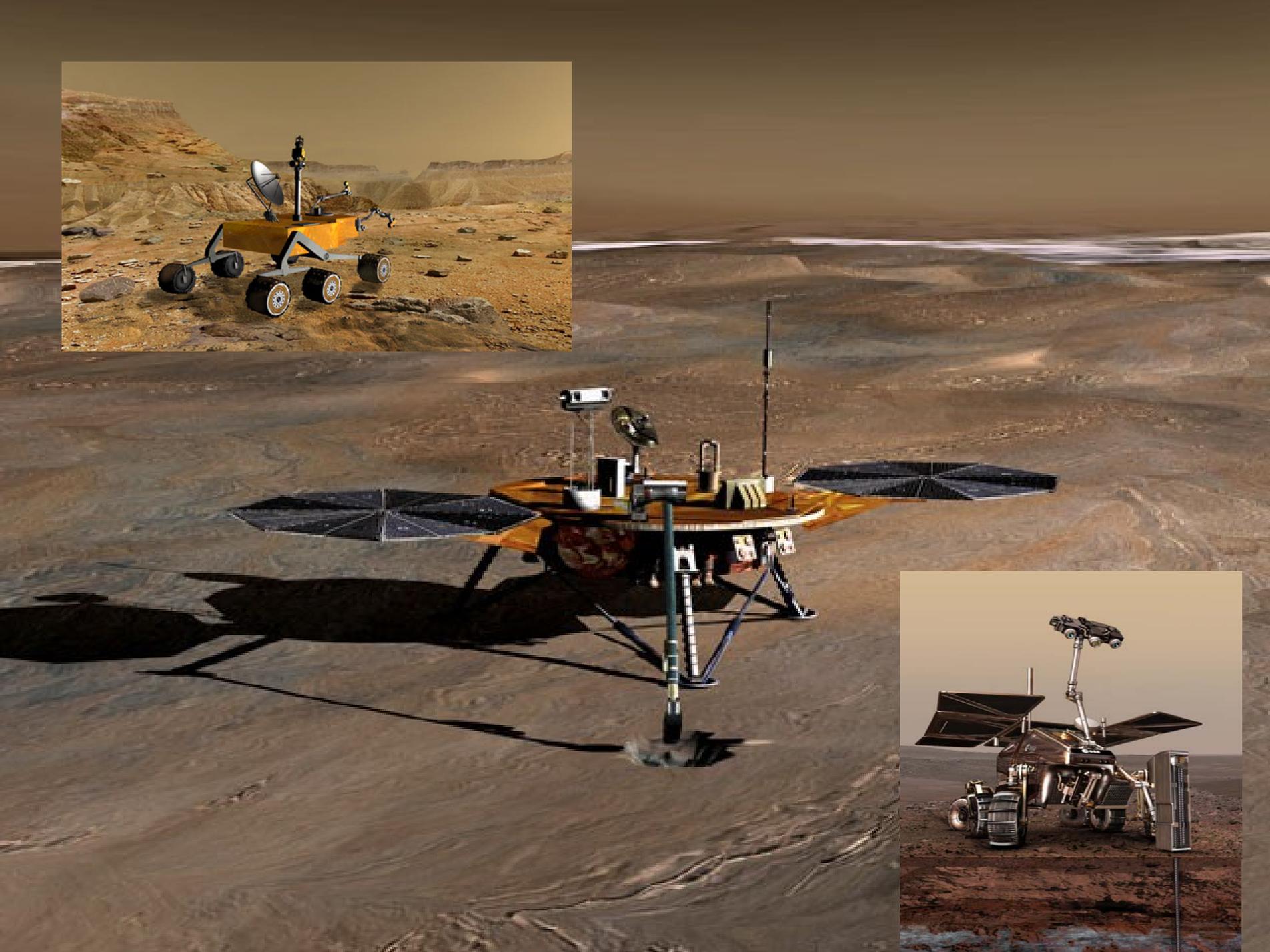


The Canadian Astronaut Corps



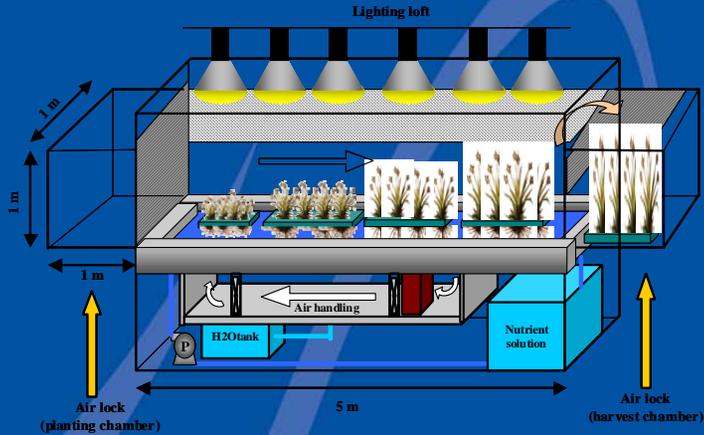
Areas of Interest



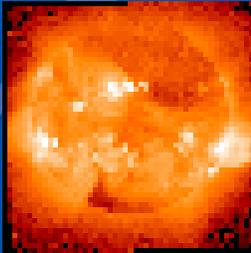




Life Support/Health

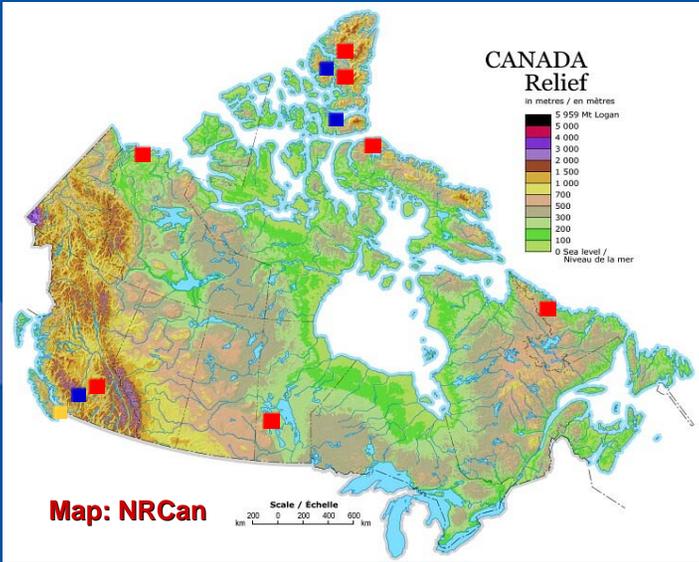


Heliophysics and Astronomy





Canadian Analogue Research Network





Determining Areas of Interest

- Internal Working Groups
- ESA Aurora Program
- Global Exploration Strategy
- Advisory Committees
- National Workshops



Exploration Canada 2006: Oct 2006

- Propose a comprehensive Canadian Exploration Programme that best meets the Goals of the Space Science and Exploration Strategy. Timeframe: 2007-2027.
- Provide a timeline with estimated cost per activity.
- Assess how well each component meets the Goals of the Strategy as well as how well the overall proposed programme meets the Strategy.



EARTH ISS MOON MARS

Recurrent themes (1/2)

- The need for an overall Program
 - ◆ Parallel tracks of:
 - ◆ science missions
 - ◆ key contributions of enabling technologies
 - ◆ critical infrastructure contributions

- Examples of potential infrastructure contributions:
 - ◆ Mobile robotics
 - ◆ Surveying/prospecting/mining/ISRU
 - ◆ Operational medical support
 - ◆ Life support



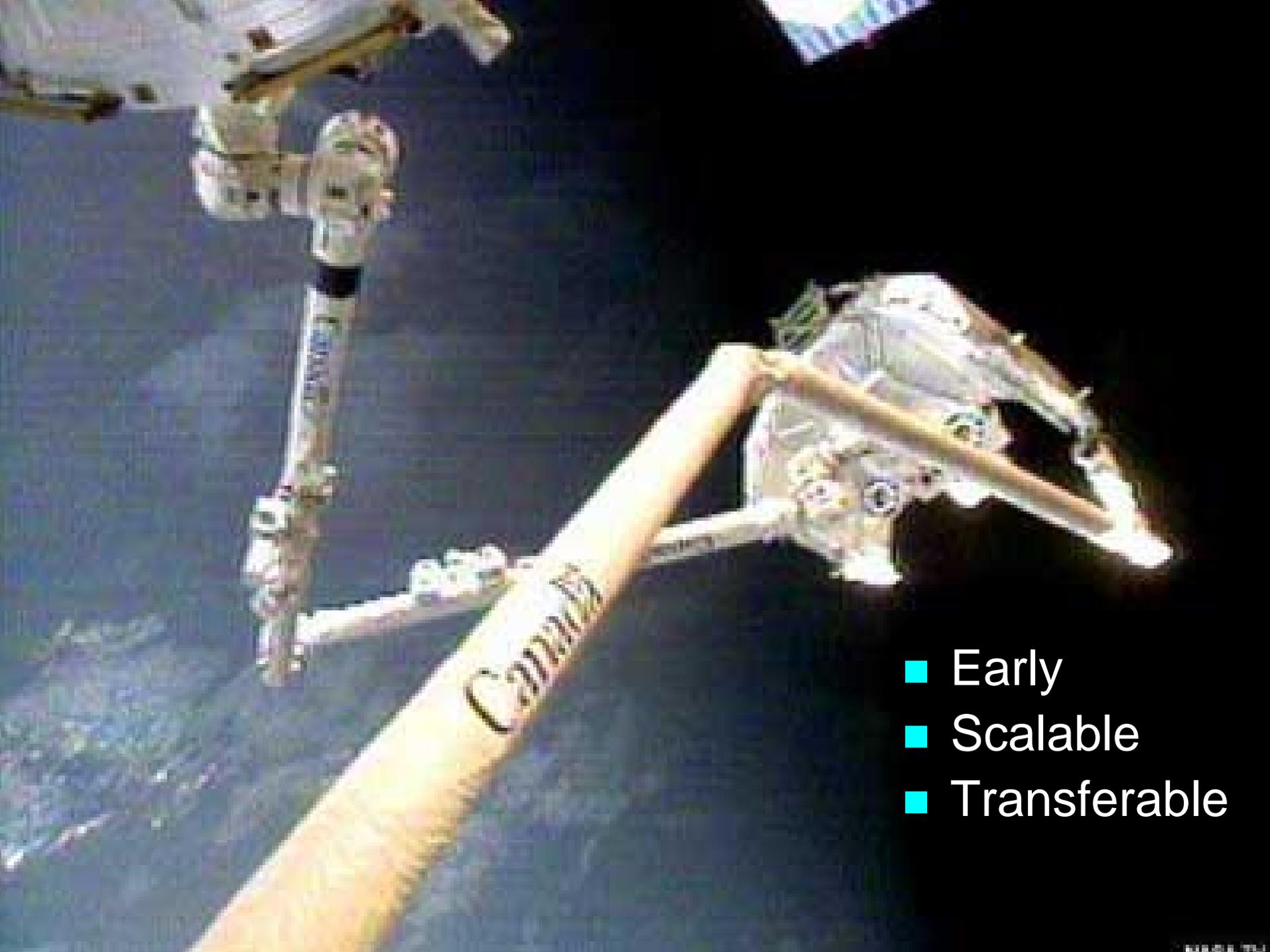
Recurrent themes (2/2)

- Analogues (Earth and ISS and Moon)
- The destination is not the driver
 - ◆ Exploration is not a place



Lessons Learned





- Early
- Scalable
- Transferable

Lessons learned

Political involvement may be required

Framework agreements need to be developed

Ability to exchange information and expertise is required

