

Canadians In Space



Canada Does Space?

- One of the large misconceptions is that since we do not have launch capability there is no viable space program in Canada
- Actually that could not be further from the truth. Canadians are world leaders in astronomy, satellites, robotics, and Canada is a founding member of the ISS



Anik

- Canada's first satellite was called Anik
- Launched in 1972 **Anik was the worlds first geosynchronous communications satellite.**
- Anik F2 was launched in 2004 and is the first satellite to offer 2way broadband internet connections at high speed.



RADARSAT



- **RADARSAT-1** is an Earth observation satellite developed by Canada to monitor environmental changes and the planet's natural resources.
- Launched in November 1995, **RADARSAT-1** provides Canada and the world with an operational radar satellite system capable of timely delivery of large amounts of data.
- Equipped with a powerful synthetic aperture radar (SAR), it acquires images of the Earth day or night, in all weather and through cloud cover, smoke and haze.



The Humble Space Telescope

- Canada is the proud owner of the smallest space telescope in the world
- The official name of the telescope is MOST or Microvariability and Oscillations of STars, but it's affectionately known as the Humble, a takeoff on the larger Hubble space telescope.
- Launched in 2003 it is about the size of a pie plate in a suitcase.
- It is useful because it allows us to see tiny oscillations in stars to detect their composition and the possibility of planets.



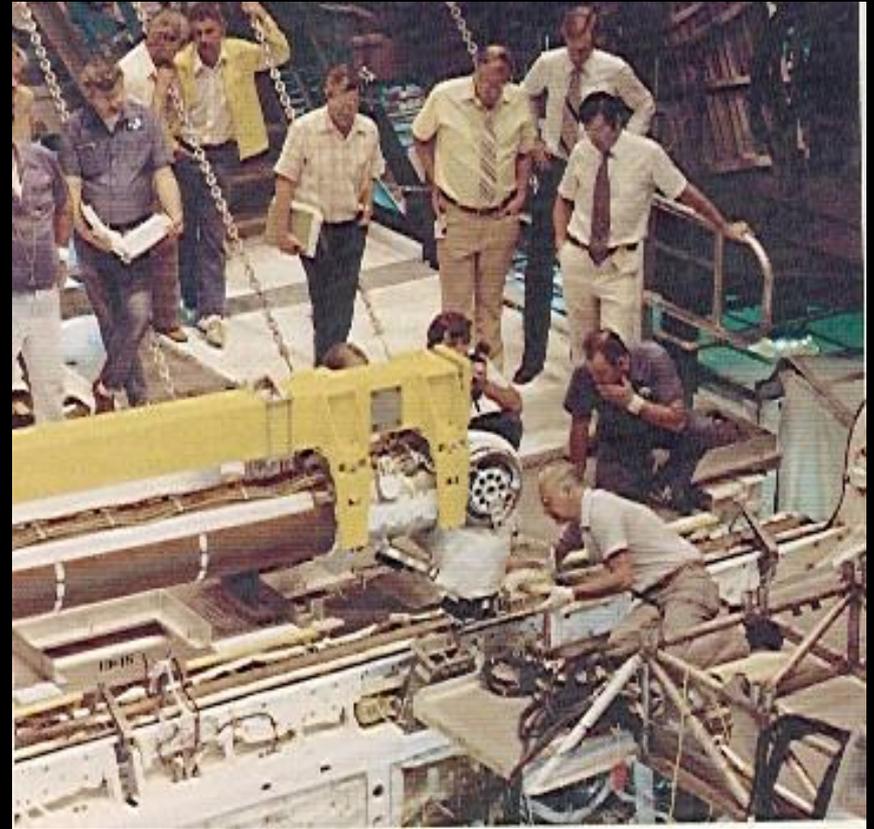
CANADARM 1

- The most notable Canadian contribution to space is the CANADARM.
- Attached to the space shuttle the CANADARM has become the most vital instrument on the shuttle.
- From grabbing satellites and moving cargo to being a lift for astronauts the shuttle would not have been the same without it.



About the Canadarm

- The Canadarm was built by Canada as our contribution to the space program.
- The cost for construction was 100 million dollars
- In return Canadian astronauts get preferential access to shuttle launches.



Canadarm 2

- Canada's contribution to the ISS is a more advanced manipulator arm
- The CANADARM 2 has a hand on both ends so it can “walk” around the ISS to where it is needed.



DEXTRE



- Robotic device that attaches to Canadarm2
- It is a two-armed robot used to do construction and repair work outside the ISS
- It has movable jaws, multi-jointed arms, and video cameras. It even has a toolkit around its middle!

Canadian Astronauts

- Marc Garneau was the first Canadian in space in 1984
- Since then 8 Canadian astronauts have flown 11 missions.
- Roberta Bondar was the first female Canadian in space in 1992
- Chris Hadfield was the first Canadian to walk in space in 2001
- He performed 2 spacewalks and spent 14 hours, 54 minutes outside, traveling 10 times around the world.

