ASTRONAUT ROBERTA BONDAR



Canadian Space Agency, 2008, Image Gallery: Roberta Lynn Bondar. Retrieved March 2, 2008, from http://www.space.gc.ca/asc/app/gallery/gallery/hight/cd_01_11.JPG

Figure B-1 Astronaut Roberta Bondar

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ASTRONAUT ROBERTA BONDAR

Roberta Bondar enjoys flying, hot air ballooning, canoeing, biking, target shooting (rifle, handgun), fishing, cross-country skiing and hiking.

MISSIONS

In early 1990, Roberta Bondar was designated a prime Payload Specialist for the first International Microgravity Laboratory Mission (IML-1).

STS-42

Mission: IML-1.

Space Shuttle: *Discovery*.

Launched: January 22, 1992, 9:52:33 a.m. EST.

Landed: January 30, 1992, 8:07:17 a.m. PST.

Mission Duration: 8 days.

Orbit Altitude: 163 nautical miles.

The primary payload for STS-42 was the IML-1, making its first flight and using the pressurized Spacelab module. The international crew was divided into two teams for around-the-clock research on the human nervous system's adaptation to low gravity and the effects of microgravity on other life forms such as shrimp eggs, lentil seedlings, fruit fly eggs and bacteria. Materials processing experiments were also conducted, including crystal growth from a variety of substances such as enzymes, mercury iodide and a virus.

Other experiments during STS-42 were:

- Gelation of Sols: Applied Microgravity Research-1 (GOSAMR-1),
- IMAX camera,
- Investigations into Polymer Membrane Processing (IPMP),
- Radiation Monitoring Experiment III (RME III), and
- Shuttle Student Involvement Program (SSIP) experiments.

PLACE AND DATE OF BIRTH

Born December 4, 1945 in Sault Ste. Marie, Ont.

EDUCATION

Roberta Bondar's education includes:

- Elementary and secondary school in Sault Ste. Marie, Ont.,
- BSc in zoology and agriculture from the University of Guelph,
- MSc in experimental pathology from the University of Western Ontario,
- Doctorate in neurobiology from the University of Toronto,
- Doctor of Medicine from McMaster University, and
- Certification in scuba diving and parachuting.

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PROFESSIONAL EXPERIENCE

Roberta Bondar was a neurologist and a clinical and basic science researcher in the nervous system. As an undergraduate student she worked for six years for the federal Fisheries and Forestry Department on genetics of the spruce budworm with reference to the visual system. After internship in internal medicine at Toronto General Hospital, she completed post-graduate medical training in neurology at the University of Western Ontario and in neuro-ophthalmology at Tuft's New England Medical Center (Boston) and at the Playfair Neuroscience Unit of Toronto Western Hospital. Bondar was appointed assistant professor of medicine (neurology) in 1982–84 at McMaster University. She specialized in carotid and transcranial ultrasound at the Pacific Vascular Institute, in Seattle, in 1988.

Bondar was one of the six Canadian astronauts selected in December, 1983 and she began astronaut training in February, 1984. In 1985 she was named chairperson of the Canadian Life Sciences Subcommittee for Space Station. She served as a member of the Ontario Premier's Council on Science and Technology. She was a Civil Aviation medical examiner and a member of the scientific staff of Sunnybrook Health Science Centre. As an astronaut, she has conducted research into blood flow in the brain during microgravity, lower body negative pressure and various pathological states.

Roberta Bondar left the Canadian Space Agency effective September 4, 1992, to pursue her research.

SPECIAL HONOURS

Roberta Bondar's special honours include:

- recipient of Ontario Graduate Fellowship,
- recipient of National Research Council (NRC) Scholarship,
- recipient of NRC Postdoctorate Fellowship,
- recipient of Ontario Ministry of Health Fellowship,
- recipient of Medical Research Council Fellowship,
- recipient of Career Scientist Award from the Ontario Ministry of Health,
- honourary member of Zonta International,
- honourary member Canadian Federation of University Women,
- recipient of Vanier Award from the Jaycees of Canada,
- co-recipient of the F. W. (Casey) Baldwin Award,
- honourary life member of Girl Guides of Canada,
- recipient of Senior Fellowship from Ryerson Polytechnical Institute, Toronto, and
- recipient of honourary degrees from:
    - Mount Allison University,
    - Mount St. Vincent University,
    - University of Guelph,
    - Lakehead University,
    - Algoma College,
    - Laurentian University,
    - Saint Mary's University,

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- McMaster University,
- University of Regina,
- University of Calgary,
- University of Ottawa, and
- University of Toronto.

AFFILIATIONS

Roberta Bondar's affiliations include:

- Fellow of the Royal College of Physicians and Surgeons of Canada,
- American Academy of Neurology,
- Canadian Neurological Society,
- Canadian Aeronautics and Space Institute,
- Canadian Society of Aerospace Medicine,
- College of Physicians and Surgeons of Ontario,
- Canadian Stroke Society,
- Aerospace Medical Association,
- Albuquerque Aerostat Ascension Association, and
- American Society for Gravitational and Space Biology.

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