

Canada Weekly

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Astronaut program crest: The design features a Canadian maple leaf overlaid with a vertical arrow, denoting Canada's upward reach to space. The arrow's shaft forms a human body lifting off into flight. The white circle inside the maple leaf represents both the head of the human form and the full moon rising in the starry field above the earth's horizon. A US space shuttle glides in earth orbit with the Canadarm extended skyward.



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Canada's first astronaut soars successfully through space

Marc Garneau has become the first Canadian to orbit in space. And as payload specialist responsible for a number of Canadian scientific experiments aboard the United States' space shuttle *Challenger*, his contribution to Canada's space program is considered to be very important.

Dr. Douglas Watt of Montreal's McGill University, principal investigator for the space motion sickness experiment and other scientists from the National Research Council (NRC) in Ottawa, where many of the experiments were designed and developed, said they were delighted with the way Commander Garneau conducted their experiments in space. During a press conference at Johnson Space Centre near Houston, Texas, they reported that all but two of the ten Canadian experiments were completely successful.

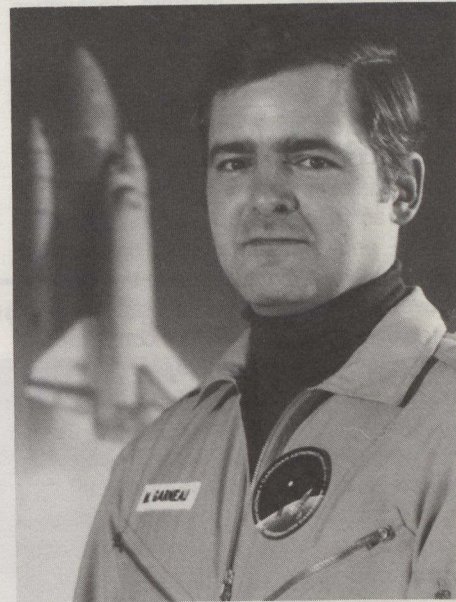
Near perfect launch

The eight-day space mission began with the almost perfect launch of the US space shuttle *Challenger* from Kennedy Space Centre in Florida on October 5. Precisely on schedule at 7.03 a.m., the shuttle exploded upward, and, within eight minutes, was in orbit.

During lift off, Canada's first astronaut was strapped to the floor between the storage lockers and the airlocks in the bottom of the shuttle. Marc Garneau was one of a crew of seven, the largest crew ever aboard a US shuttle in space.

In addition to carrying the largest crew and the first flight of a Canadian astronaut, this shuttle flight featured several other "firsts". Two women, Sally Ride and Kathy Sullivan were the first American women to travel aboard a spacecraft and Kathy Sullivan was the first woman to walk in space. In addition, Commander Robert Crippen was the first astronaut to make four shuttle flights, and the first test of satellite refuelling was done in space.

The orbit of the *Challenger* varied between 356 to 224 kilometres in space. Flying at a 57-degree inclination rather



Marc Garneau, Canada's first astronaut.

than the normal shuttle orbit, the space shuttle had a greater coverage of the earth and, on several orbits *Challenger* passed over Canada.

Marc Garneau's first recognition of Canada from aloft was the outline of Lake Winnipeg, then Hudson's Bay. On October 13, Kingston, Ontario, saluted *Challenger* as it passed over in its orbit by flashing all the lights in the city.

Wide range of tests

Work on the experiments began almost immediately. Ranging from taste-tests to complex photography, Canada's first astronaut spent about 12 hours a day working on ten experiments in space technology, space science and life sciences. Tests were aimed at helping the human body adapt to space, photographing the earth's atmosphere and developing a more accurate method of using Canadarm, the remote manipulator arm.

While Marc Garneau was working on the experiments in space, the other five Canadian astronauts, Roberta Bondar, Kenneth Money, Robert Thirsk, Bjarni Tryggvason