leaders' summit meeting in Quebec City, March 17-18. Canada's contribution to the project will cost $8.8 million in 1985-86.

When the space station is launched in the early 1990s, it is expected to be one of the most complex and visible technological achievements in history. Based on modular design principles, it will be a base camp for space which may some day evolve into a space community.

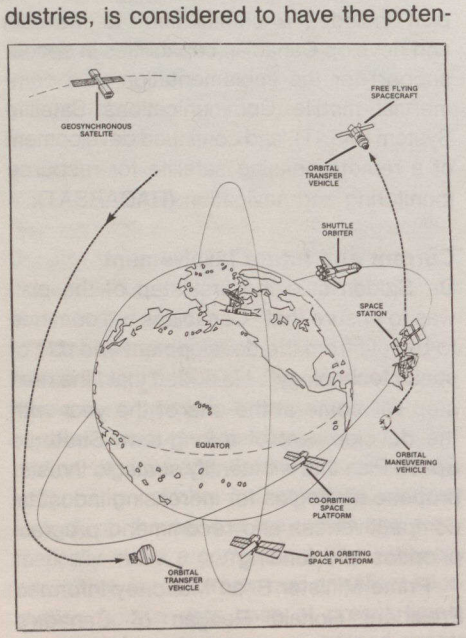
This self-contained station will include space laboratories and observatories, manufacturing facilities, a maintenance and storage depot, a servicing station for orbital platforms and satellites, living quarters for the astronauts, as well as orbital manoeuvering and transfer vehicles to link the base station with other orbiting platforms and satellites.

Benefits of participation

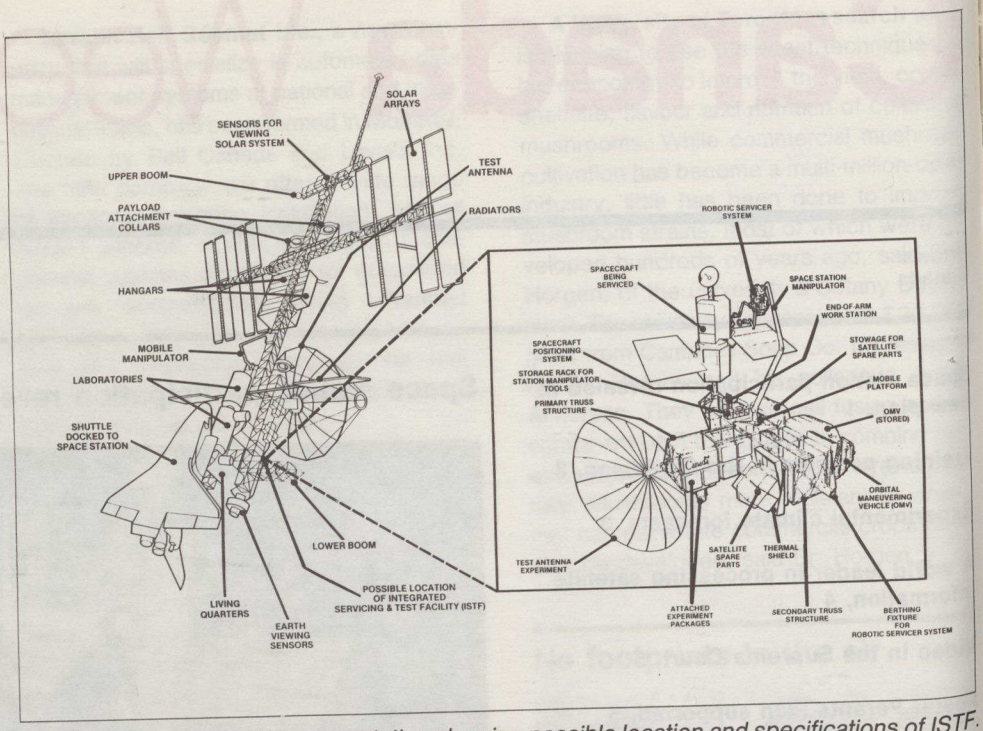
Commitment to the space station will allow participating nations to be involved in the development, use and operation of the facilities, to develop systems which will be of later benefit to industry, and to obtain preferential access for research users.

Through remote sensing, Canada will be able to monitor the country's extensive land mass and resources. The new remote sensing systems will have greater power, as well as improved data-handling and transmission capabilities.

Space technology, life science and space medicine, communications systems and space science are also areas where Canada is expected to benefit from involvement in the space station. In addition, the use of microgravity for developing new or improved products for the electronics, pharmaceutical and metal processing industries, is considered to have the potential to make materials processing one of the more significant economic applications.



Possible infrastructure of the space station to be launched early in the 1990s.



Drawing of proposed US space station showing possible location and specifications of ISTF.

Program phases

Canada has already been involved in phase A of the space station project which began in January 1982. This preliminary study phase included an appraisal of the possibilities for countries to participate in the program, an assessment of the contribution according to their respective existing technology bases and an assessment of each country's potential use of the facility. In addition to the US and Canada, a number of European nations and Japan were involved.

Spar Aerospace Limited and Philip A. Lapp Associates, under contract to the National Research Council (NRC), carried out the preliminary studies in Canada. The report concluded that Canada could benefit scientifically, technologically, economically and socially through participation in the development of the space station.

Phase B, the definition and design phase, will run from April 1985 to March 1987. It will include a more detailed study of each nation's potential contribution to the program. The Systems Requirements Review outlining possible contributions, will be held by the National Space Administration Agency (NASA) in January 1986.

In Canada, NRC will carry out the project design and preliminary definition studies to develop specific proposals for Canadian participation. Six major Canadian companies are involved in the studies.

The Canadian role is expected to be that of a supplier of specialized equipment and a user of the space station for scientific research, remote sensing and industrial testing.

One of the proposals is the development of a robotic servicer and an Integrated Servicing and Test Facility (ISTF) for space assembly, test, servicing and maintenance functions. This facility would be used to service satellites and other earth orbiting spacecraft, a key function in outer space.

Second, are the solar arrays which could provide primary power to the man-tended platforms or auxiliary power for the station. Third, is a remote sensing facility based on RADARSAT.

The other three phases of the space station program will be established in early 1987 when agreements are negotiated between NASA and each of its international partners. In phases C and D, the hardware for a space station will be designed, built, integrated and tested. And in phase E, components will be transported into orbit in the shuttle's cargo bay and assembled by astronauts.

MSAT system

Canada's Interim Space Plan also supports the implementation of a commercial mobile satellite communications system (MSAT), an industry-led project involving Telesat Canada, a US satellite operator, the Department of Communications and NASA, by 1990. This could make Canada the first country in the world with a domestic mobile satellite communications system.

The MSAT system is intended to meet the need for improved voice and data communications to vehicles, aircraft, ships, and other portable stations for business applications