

The facilities in the laboratory include:

- two high-bay spacecraft assembly areas, with appropriate dust and contamination control, for assembly of aerospace components and systems—sufficient space for up to five Delta class spacecraft—such as Anik C—at one time;
- two RF anechoic (no radio wave reflections) test chambers;
- three vibration machines with control and measurement instrumentation for launch simulation;
- five thermal vacuum chambers that simulate conditions of outer space;
- data reduction facilities to display, record, and analyse thermal vacuum, vibration and RF test data.

The laboratory was built in the early 1970s to support the design, assembly and test of Hermes. It was greatly expanded in 1979-80 to accommodate complete satellites to be launched by expendable rocket or by the space shuttle. The laboratory has recently been upgraded for testing of large satellites, such as Olympus and the two Brazilian communications spacecraft. By autumn 1983, more than 20 complete satellites and subsystems had been tested.

The laboratory is part of the Communications Research Centre and its facilities are available to Canadian industry and government agencies on a cost-recoverable basis. It was named in recognition of C. David Florida, a leader of Canada's early space effort, who died in 1971.

### International Consulting and Sales

Canadian engineers and technicians travel the world as consultants in the design, procurement and operation of satellite systems. Canadian companies have advised and sold to governments and private companies in Canada, the United States, Europe, Asia, Africa, South America and Australia. Among the Canadian companies prominent in space-related consulting services are:

- AEL Microtel Limited • Canadian Astronautics Limited • Com Dev Ltd. • Miller Communications Systems Ltd. • Raytheon Canada Limited • SED Systems Inc. • Spar • Telesat.

In 1982, the Canadian industry's 48 largest companies—which accounted for more than 95 per cent of space-related sales—had total sales of \$196 million, \$128 million (65 per cent) outside Canada. The estimated 1983 figures for these same companies are \$276 million total, \$194 million (70 per cent) in exports. Just over 40 per cent of the total sales were, and are projected to be, related to the ground segment of satellite communications systems (earth stations, antennas, etc.).

Major products of important Canadian space industry firms include:

- **SATELLITES** Spar;
- **SATELLITE SUBSYSTEMS** Canadian Astronautics, Com Dev, Fleet Industries, SED Systems, Spar;

*Canadarm undergoes tests and (inset) is seen in flight on the Columbia space shuttle.*

*The enlarged anechoic chamber, an environmental testing facility, which opened in 1980, at the David Florida Laboratory at the Communications Research Centre.*

