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"The problems are widespread," he explained, "in the sense that the people who are producing the drugs can't survive just by substituting the crop. It means changing their whole social and economic situation, in order to survive in a competitive world."

The new strategy also recognizes the need to strengthen law enforcement agencies in drug-producing countries.

Satellite Space Simulation

The \$500-million Olympus satellite, a powerful, civilian communications satellite funded by eight countries through the Euro-

pean Space Agency, recently arrived at an Ottawa-area laboratory for pre-launch testing.

The David Florida Laboratory at Shirley's Bay, Ontario, is one of the few centres in the world that can simulate the stresses and temperature extremes that the British-built satellite will encounter after it is launched early in 1989 from Kourou, French Guyana.

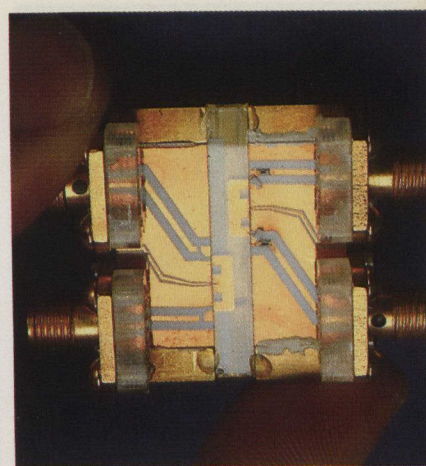
Suspended in a 10-m-deep vacuum pit, the 2.5-tonne satellite will be exposed to temperatures from 150° to -196°C. It will also undergo vibration tests to simulate the rigours of a launch.

The Olympus: a \$500-million civilian communications satellite being tested near Ottawa.

Canada has been involved with Olympus since 1980, and is contributing about \$80 million to the program.

Striking Out at Lightning

Canadian Marconi Co. of Montreal, using state-of-the-art integrated optics technology developed in co-operation with the National Research Council (NRC) of Canada, is designing an early warning sensor to help aircraft avoid lightning strikes.



Early warning sensor device for lightning strikes on aircraft.

While lightning strikes on aircraft occur at a rate of about 3 000 per year and are not generally considered dangerous, they can destroy sensitive electronic equipment. The new sensor, known as a guided-wave interferometer, will measure the electrical fields generated within clouds, and detect other activity that would be invisible to radar, thus making it easier for pilots to avoid charged areas.

The device, a self-contained unit about the size of a matchbox, is expected to operate at 10 to 100 times the speed of today's electronic circuits. "Data processing will be virtually instantaneous, limited more by the associated electronics than by the optics," says Dr. Jacek Chrostowski, an engineer with NRC's Division of Electrical Engineering. As well, the device is impervious to electromagnetic interference, resists corrosion, and can function in a harsh environment where conventional electronic equipment would fail.

Aid for the Environment

Canada has developed a comprehensive new planning framework for all international aid projects that incorporates the findings of the World Commission on Environment and Development.