

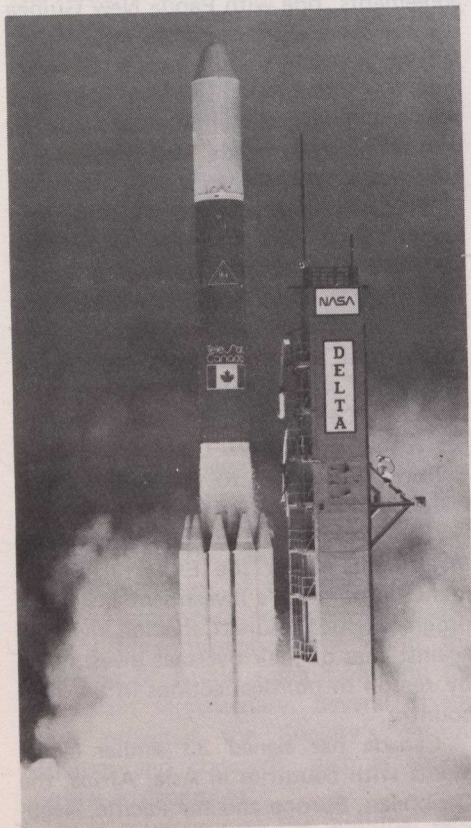
Telesat Canada's newest satellite launched at Cape Canaveral

Canada's latest domestic communications satellite was launched on schedule from Cape Canaveral, Florida on August 26.

The 24-channel *Anik D 1* was launched at 7:10 p.m. EDT and became the fifth satellite to be put into orbit by the United States National Aeronautics and Space Administration (NASA) for Telesat Canada, the Canadian domestic satellite communications organization.

The satellite, carried by a two-stage Delta rocket, was injected into an elliptical "transfer" orbit with an apogee of 22 597 miles. It was placed in a stationary orbit 22 240 miles above the Earth. Once the spacecraft has drifted to 104 degrees west longitude — its assigned operating station over the equator on the longitude over Saskatchewan — the on-board hydrazine-fueled reaction control system will synchronize the speed of the satellite with that of the Earth below so that the satellite will appear to "hover" in one location.

The satellite is designed to pick up the traffic from aging *Anik A* satellites now in orbit and is expected to begin service in mid-September as a television satellite. It is the largest capacity Canadian satellite to date and is capable of carrying more than 900 one-way telephone calls



"Letter perfect" liftoff of Anik D 1.



NASA Administrator, Dr. Stanley I. Weiss (left) and Telesat President Eldon Thompson sign agreements for launches of all five Anik C and D series spacecraft.

or one television channel through each of its 24 transponders.

Anik D 1 is one of five new generation satellites; the next four satellites in the *Anik C* and *D* series are expected to be launched in the U.S. space shuttle *Columbia* with the first three being put in orbit between November 1982 and October 1985.

In June, Telesat Canada signed a \$75-million contract with NASA covering the placing of the five satellites in orbit. Launchings by the shuttle are expected to cost between \$9 million and \$10 million compared to the \$31-million cost of the *Anik D 1* launch. The final space shuttle launch covered in the contract with NASA will cost about \$19 million.

Total cost

The five satellites are worth about \$160 million. Spar Aerospace Limited of Toronto is the prime contractor for the two *Anik D* satellites, and Hughes Aircraft Company of Los Angeles is the contractor for the three *Anik C* models.

The new satellites are expected to keep Canada among the leaders in commercial satellite communications with more satellites in space than any other western country after the United States. At the outset, some of the channels will be leased to U.S. customers and will revert to Canadian users as the need

arises. In June, Argo Communications Corporation, a U.S. satellite carrier, signed a contract with Telesat for the use of six channels on *Anik D 1*.

Cross-Canada capability

The new generation of satellites is expected to accommodate all Canadian satellite communications traffic into the 1990s. The five satellites will be in stationary orbit 22 500 miles above the equator and will be capable of reaching all of Canada. Besides having a larger capacity than existing satellites, the new *Aniks* will be more powerful. Inexpensive rooftop receivers, rather than expensive dishes will enable domestic households to pick up television programming.

In another development, Telesat Canada has been authorized by the federal government to negotiate arrangements with its United States counterparts for first-time satellite telecommunications between the two countries on a widespread commercial basis.

The negotiations are made possible by recent exchange of letters between Canada and the United States permitting large business networks to transmit voice and data information. The agreement does not include commercial television transmission. If the negotiations prove successful and receive regulatory approval the service could start in 1983.