

## Canadarm shines again

Canada's remote manipulator system, Canadarm, aboard the space shuttle *Columbia*, returned to earth on July 4, after successfully completing its final test mission and performing some military tests for the United States defence department.



National Aeronautics and Space Administration

This southerly looking view photographed from the earth-orbiting space shuttle *Columbia* shows a small portion of the vehicle's aft section. Included are part of its cargo bay, some of the components of the Office of Space Sciences (OSS-1) payload and the majority of the 15-metre long Canadian-built remote manipulator system (RMS) arm.

The 15-metre, \$100-million robotic space arm, a joint project of Canada's National Research Council and Spar Aerospace Limited of Toronto was donated to the National Aeronautics and Space Administration (NASA) for use in the United States' space program and is central to the shuttle program's ability to place satellites in space and later retrieve them.

The arm, too frail to support its own weight in earth's gravity, was tested on *Columbia's* previous two trips in March 1982 and November 1981, (see *Canada Weekly* dated April 21, 1982) but the latest tests were the most exacting to date.

### Arm measures contaminants

The crane, operated by astronaut, Colonel Henry Hartsfield, lifted a 362-kilogram package (weightless in space) and moved it to 25 locations

around the 18-metre bay to measure contaminants. The data will be used to assess the shuttle's impact on satellites and payloads in the cargo bay.

The arm exercises were divided between swinging the contamination monitor around the inside of the cargo bay and waving it again while astronaut, Captain Ken Mattingly triggered steering jets to evaluate what effect that would have.

Owing to the success of the tests, Flight 5 for *Columbia* and Canadarm is expected to continue as scheduled next October or November when a Telesat Canada satellite will be deployed.

### Military tests performed

During this mission the arm was also used to perform some secret military tests in space for the United States defence department.

The military package operated by the *Columbia* astronauts contained an infrared telescope and an ultraviolet sensor designed to serve as missile detectors on future satellites, and a space sextant intended to give satellites navigation control independent of the ground.

## Aid for storm and war victims

Secretary of State for External Affairs Mark MacGuigan has announced that Canada is providing relief for tropical storm victims in Nicaragua and Honduras and for the civilian population in Lebanon which has suffered massive displacement as a result of the recent Israeli invasion.

The funds are being provided through the International Humanitarian Assistance programs of the Canadian International Development Agency.

### Relief for storm victims

The Canadian contribution of \$220 000 in relief for Nicaragua and Honduras is in response to an international appeal by the League of Red Cross Societies for \$3 million to aid victims of the storm, *Aletta*. The league is working closely with the office of the United Nations Relief Co-ordinator and the governments of the two countries who have listed relief needs as shelter, camp beds, tents, blankets and medical supplies.

In Nicaragua, four days of rain and high winds brought floods which caused severe damage in the capital, Managua, and four other cities leaving approximately 100 dead and 60 000 homeless. An esti-

mated 90 per cent of the banana crop, a major source of foreign exchange, and 60 per cent of the corn crop were destroyed in the storm.

An estimated 40 000 were left homeless and 200 died in the western and southern regions of Honduras. Severe crop damage was also reported.

Responding to an appeal from the International Committee of the Red Cross, Canada is providing \$1 million in immediate emergency assistance to the civilian war victims in Lebanon bringing Canada's contribution in response to humanitarian appeals for Lebanon since 1975 to over \$3.5 million.

In announcing Canada's current contribution, Dr. MacGuigan expressed Canada's concern about the situation in Lebanon from a humanitarian point of view, and noted that he would be keeping the situation under review. "If the situation warrants it, we will consider further contributions," he said.

## Sanctions lifted against Argentina

Canada has ended its ban on imports from Argentina and is permitting export credits from new transactions with that country.

The ban on imports and credits against Argentina was imposed by Canada on April 13, 1982, in concert with the countries of the European Economic Community owing to violation of Article 2 (3) of the United Nations charter requiring member nations to settle their international disputes by peaceful means. Also, Argentina refused to comply with the terms of Security Council resolution 502 of April 3, 1982, which demanded an immediate cessation of hostilities and an immediate withdrawal of all Argentine forces from the Falkland Islands.

In making the announcement, Secretary of State for External Affairs Mark MacGuigan noted that the hostilities in the South Atlantic now appear to have ceased, the British had already returned to Argentina several thousand Argentine soldiers captured in the fighting and the Argentine government acknowledged on June 18 in a note to the president of the United Nations Security Council that "in view of the present circumstances there is a *de facto* cessation of hostilities which Argentina is now observing".

The Canadian embargo on all exports of military equipment to Argentina will remain in effect for the time being.