

Soviet Satellite Is First of Eye-in-Sky Lifesavers

By **BILL GRUBER**
Courant Staff Writer

WASHINGTON — When most people think of Russian satellites, they conjure up images of malevolent eyes in the sky, spying on the United States and casing American military installations.

But of the 685 Soviet satellites that pass over the United States each day, at least one has a purely humanitarian mission: saving lives.

The 2,000-pound satellite, launched June 30, is the first of what is expected to be an international net of search and rescue satellites. Called Sarsat, the program is a joint venture between the United States, Canada, France and the Soviet Union.

Sarsat has already paid off. Fifteen lives have been saved so far as a result of data received from the Soviet satellite.

Here's how it works:

The satellite, traveling in a polar orbit at an altitude of about 600 miles, passes over the United States three times a day. It is equipped to receive signals from small, inexpensive emergency transmitters. By law, the transmitters, called ELTs, are carried by all 200,000 general aviation aircraft in the United States. The nautical version of the transmitter, called an EPIRB, is carried by more than 6,000 ships.

ELT stands for Emergency Locator Transmitter and EPIRB for Emergency Position Indicating Radio Beacon.

When a plane crashes, the transmitter automatically emits a signal which is picked up by the satellite when it passes overhead and is relayed to an American ground station. The position of the crash is then relayed to authorities in the area of the crash, and rescue efforts can begin. The same procedure is followed in an ocean-going emergency.

The transmitters also can be activated manually.

There is no actual communication with the Soviet Union. The satellite is "on," and its data is available to ground stations whenever it passes over the United States.

The next Sarsat satellite will be launched by the United States Feb. 15. It actually will be a weather satellite equipped with Sarsat capability.

Eventually there will be four satellites, two launched by the Soviets and two by the United States, providing a net of "nominal ideal coverage" for the entire globe, Bernie Trudell, NASA's program manager for search and rescue, said.

NASA plans to launch 12 Sarsat satellites during the next six to eight years, Trudell

said. "The Soviets will match our satellites one-for-one," he said.

Meanwhile, data from the Soviet satellite, monitored by the Air Force, NASA's Goddard Space Flight Center and Canada, has already been used to save 15 lives. For example:

- On Sept. 10, three Canadians were saved when their light plane crashed in British Columbia. Signals from their Emergency Locator Transmitter were picked up by the Soviet satellite and relayed to authorities on the ground who used the data to locate the victims.

- One other Canadian was rescued Sept. 29 when ELT data relayed by the satellite led

rescuers to his crash site in heavily wooded terrain 160 miles north of Montreal.

- The crew of the 36-foot sloop "Blue Jeans" was rescued Nov. 7 from a remote position off the Bahamas. Abandoning their sinking ship after it ran aground, the five Americans headed toward what they thought was a passing merchant ship in their dinghy, bringing their emergency transmitter with them. The ship turned out to be the abandoned freighter "Polyxeni," which had run aground nine months earlier. The crew boarded "Polyxeni" and waited for help. The satellite detected the signal from their transmitter and transmitted it to Scott Air Force Base in Illinois.