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'Weather Eye' Enters Orbit

By Courtney Sheldon

Staff Correspondent of The Christian Science Monitor

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A historic 270-pound weather satellite is whirling over the world with its camera eyes focused on global cloud cover and all else below.

If United States scientists are able to pick up useful pictures by radio relay, it would be a momentous achievement in the space race.

It would be a step toward an ultimate worldwide meteorological satellite system with potential weather forecasting benefits for all mankind.

There could be national military security ramifications, too. Advance knowledge of the weather is vital in military operations.

And though the National Aeronautics and Space Administration's TIROS I satellite launched from Cape Canaveral April 1 is not a military reconnaissance vehicle, or a prototype, it has cameras that can't avoid seeing what is below besides cloud cover.

Should Scan Soviets

The TIROS I planned orbit takes it over the southern part of the Soviet Union and Communist China during the anticipated three-months lifetime of its electronic components.

If this proves to be the case, it will be the first time a United States camera-laden satellite has peered at Communist lands.

[Five hours after the launch NASA officials said they interrogated the satellite. They said they thought they would get some pictures later in the day.]

The Soviet Union has televised the back of the moon, but made no mention of photographing the earth from satellites or meteorological space tests like TIROS I.

NASA officials would have much preferred that a Defense Department satellite be the first to risk the wrath of the Soviets. The Defense Department has a reconnaissance satellite ready for testing.

First Report Terse

The first NASA announcement merely states that "the belt covered by the orbiting TIROS will extend from 50 degrees north latitude to 50 degrees south latitude."

Dr. Abe Silverstein, NASA Director of Space Flight Programs, said that there would not be enough definition from the TIROS I pictures for reconnaissance pictures.

Asked if NASA had consulted with the State Department on the implications of sending a camera satellite over Communist countries, he replied that the State Department was aware of NASA's scheduling.

TIROS I has two cameras—one a high resolution and the other a low resolution. It is not as sophisticated as meteorological experiments planned for later this year and next.

TIROS II is scheduled for this fall and another series of tests under the name of Nimbus are set for next year.

Because the satellite is stabilized by spinning, it will not be looking at the earth all the time. Ground signals from the earth will command the satellite



Associated Press Wirephoto

Thor-Able Launching TIROS I starts historic flight

when to take pictures. TIROS I follows the successful launches of NASA satellites containing major meteorological instrumentation.

NASA is gradually improving its launch record. Of three major launches this year, two have been successful.

TIROS I was placed reasonably close to the hoped-for 400-mile circular orbit. First calculations placed its apogee at 468 miles and its perigee at 435 miles.

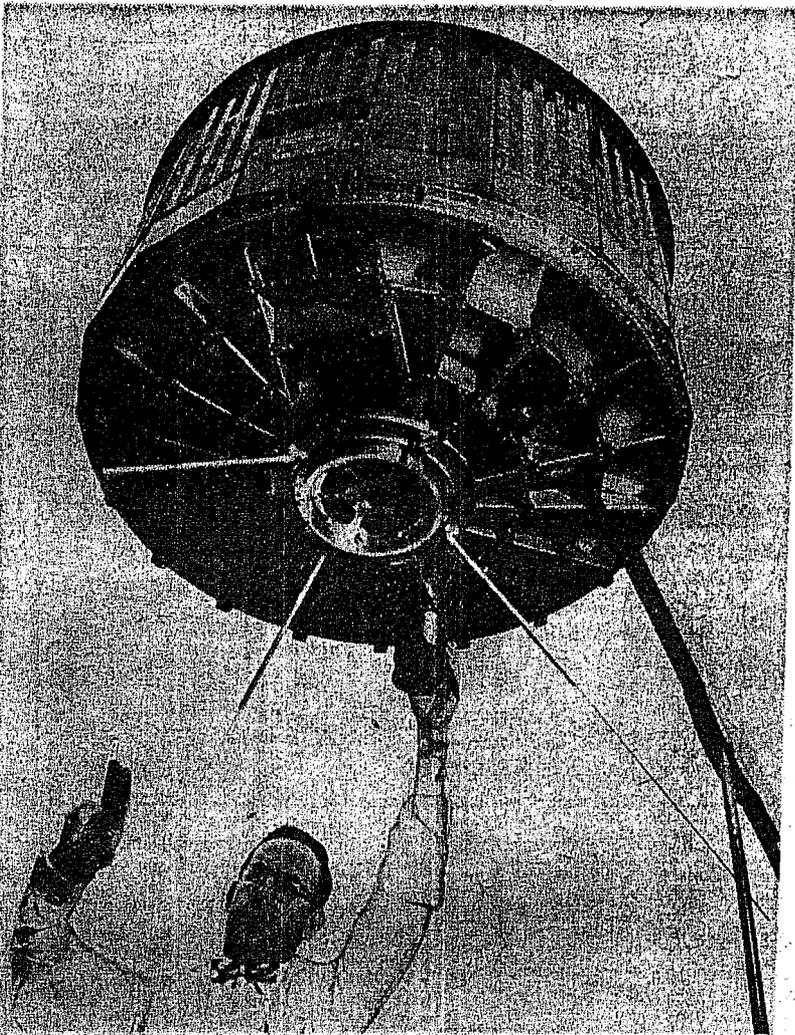
The payload and special ground station equipment was designed and constructed by RCA's Astro-Electronic Products Division, Princeton, N.J., under the technical supervision of the Army Signal Research and Development Laboratory, Fort Monmouth, N.J.

Vanguard II was the first. It contained a scanning photocell for mapping areas of high reactivity, essentially cloud cover. There was difficulty in reducing the data because a wobble developed.

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Satellite's Equipment Works



SATELLITE'S UNDERSIDE. A technician examines the bottom of Tiros I during tests at RCA laboratories at Princeton, N. J., prior to successful launching. He is holding the wide angle

lens used to capture images of cloud formations for the built-in TV cameras. Whip-like rods are transmitting antennae. The sides and top of Tiros consist of solar power cells. AP Wirephoto.