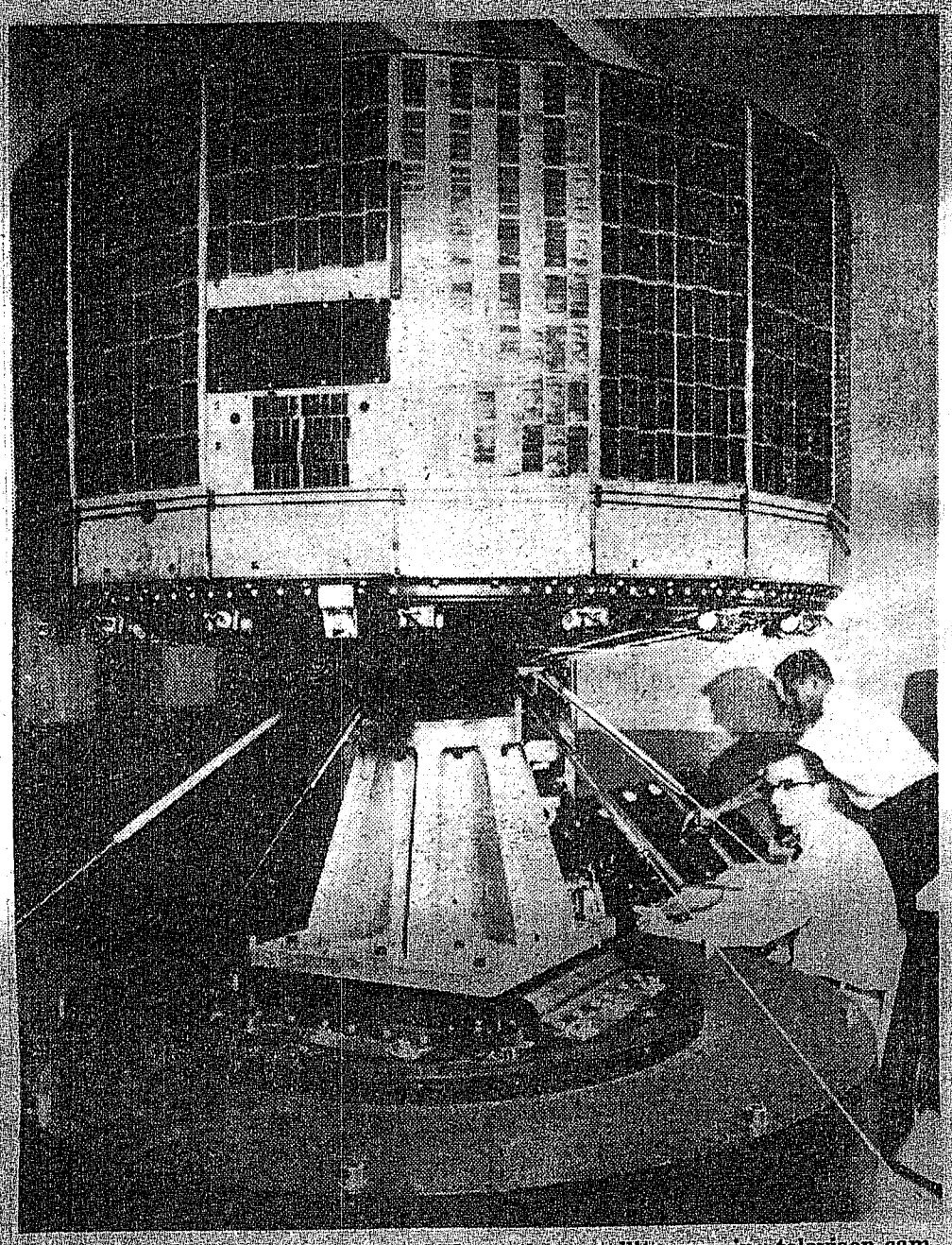
The Evening Bulletin Friday, April 1, 1960

U. S. Orbits Photo Satellite To Help Forecast Weather



Engineers check Tiros I, the 270-pound weather satellite carrying televison cameras and other equipment, before it was blasted into orbit around the earth atop a giant Thor-Able rocket launched at Cape Canaveral, Fla.

TV Cameras Will Reveal Cloud Data

By The Associated Press

Cape Canaveral, Fla., April 1 — An experimental weather satellite was launched smoothly into orbit today.

The 270-pound package, carrying television cameras, was hurled aloft from this Missile Test Center at 6.40 A. M. atop a giant Thor-Able rocket.

Two hours later, the National Aeronautics and Space Administration in Washington announced that the satellite, called Tiros I, was in orbit around the earth.

The name Tiros stands for television and infra-red observation satellite.

3-Month Life Expected

The satellite is intended to provide weathermen with an observation station in space and lead to improved weather forecasting.

It was aimed at an orbit about 400 miles high, with a life of about three months.

Officials said that while the exact characteristics of the orbit had not been determined it looks fairly good.

Its planned orbit would take it over an area stretching from 50 degrees south latitude to 50 degrees north. In the Western Hemisphere, this extends roughly from Santa Cruz, Argentina, to Montreal, Canada.

Two TV Cameras

The satellite contains two tiny television cameras to take photographs of the earth's cloud cover from above and store them on tape for transmission upon command.

If successful, it will furnish meteorologists with enough pictures to reconstruct cloud patterns over a large portion of the earth.

The comparison of the pictures with ground observations will make it possible to relate certain cloud formations to cold fronts, storms and other phenomena.

If Tiros I remains in orbit 90 days, it could prove useful in supplying information on hurricanes spawned in the Caribbean. The hurricane season starts in June.

Solar Cells Used

Tiros I looks much like an oversized hatbox, 42 inches in diameter and 19 inches high.

Its top and sides are almost completely covered by 9,000 solar cells which are designed to trap the sun's rays and convert them to energy to run the satellite's batteries.

Four transmitting antennas extend from the bottom and a single receiving antenna from the top.

The two cameras point out the bottom of the satellite.

One of the cameras was designed to take pictures covering an area 800 miles square, the other to take magnified pictures of an area 30 miles square in the center of the area photographed by the wide-angle camera.

The enlarged second picture would enable weathermen to identify cloud types.

Broad Plans Made

The NASA plans eventually to place a system of six operational weather satellites into 700-mile-high polar orbits from Vandenberg Air Force Base, Calif.

These would provide a complete picture of the earth's cloud cover every two hours.

These advanced satellites would point always at the earth and would employ infra-red devices to take pictures at night.

The next step would be to place four giant meterological satellites into orbits 22,300 miles above the earth. Using electronic devices they would supply instant weather information.

Today's Tiros was developed by the Radio Corp. of America under technical direction of the Army Signal Corps.