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EARLY EXPLORER VI FINDINGS

Samplings of early data from Explorer VI, launched August 7, indicate the satellite's signals are generally strong and clear. But scientists say it is much too early to try to draw firm conclusions from the fragmentary information.

The satellite has covered more than 1.5 million miles since it was launched from Cape Canaveral, Florida. It takes about $12\frac{1}{2}$ hour to circle the earth in its highly elongated 91,000-mile orbit which carries it out as far as 26,400 miles and in as close as 156 miles from the earth.

Officials of the Air Force Ballistic Missile Division and Space Technology Laboratories, Inc., major contractors of the National Aeronautics and Space Administration on the satellite, are processing the telemetered information to make it readily useful by the scientists whose experiments are in the satellite. The data are being relayed to STL data reduction center from tracking stations around the world.

Here are some of the indications from the early data:

Radiation -- The University of Chicago, University of Minnesota and STL experiments measuring radiation should provide a more exact mapping of the doughnut-shaped radiation belts

ringing the earth. Earlier Pioneer payloads indicated the radiation area started at about 600 miles and extended to some 35,000 miles from earth with peak intensities at 2,500 and 10,000 miles

The advantage of Explorer VI over space probes in radiation studies is: Explorer VI makes two round-trips a day through the belts while the space probes make only one pass on a one-way trip outbound.

Thus far, data from the radiation instruments appear to confirm some facts and considerable theory about the structure of the radiation spectrum. Also, very low energy particles in the radiation belts are being measured for the first time with a device called a scintillometer, designed by STL.

Micrometeorites -- In the first two days of orbit (through Sunday afternoon), Explorer VI was hit by 28 micrometeorites -- particles no bigger than a speck of dust. The impact rate indicates the presence of one micrometeorite in a volume about the size of the Empire State building.

Facsimile system -- The facsimile device, built to provide a crude picture of the earth's cloud cover, is operating. Tapes of its signals are being flown to a Los Angeles control center for final reduction. Scientists say it will be several weeks before they will know whether they will have a picture.

In radio wave experiments, "solid" signals and reception are reported but they will require detailed analysis as will the readings from the two magnetometers aboard.

The satellite is running well within its designed temperature range -- 25 degrees F. to 115 degrees F. The orbit of the 29-inch aluminum spheroid carries it 47 degrees north and south of the equator.

The solar cells mounted on the satellite's four paddles are supplying about nominal current to recharge the batteries powering the payload's electronics.

As yet no decision has been made as to when or if the small "kick" rocket riding in the center of the satellite will be fired. Presently, the orbit is such that no extra kick is needed to keep it from burning up on grazing the earth's atmosphere.

Tracking stations at Cape Canaveral, Millstone Hill, N. H., and Manchester, England, have at times triangulated simultaneously on the satellite from its radio signals to obtain precise tracking data.

The Smithsonian Astrophysical Observatory reported that its camera tracking team at Arequipa, Peru, photographed the empty third stage Explorer VI rocket casing early Tuesday. The casing was about 5,000 miles high when the picture was snapped. The photo should be available in about three weeks after the casing has been plotted precisely against a celestial background.