NASA To Orbit 2 Explorer Satellites In Radiation Test

The National Aeronautics and Space Administration has begun preparations for the launch of two Explorer series satellites on a single Scout launch vehicle late this year. NASA's Langley Research Center here has awarded a $478,622 contract to the State University of Iowa City to provide one of the spacecraft.

The contract covers construction and assembly of one of SUI's series of Injun satellites containing instruments to record corpuscular radiation streaming into the earth's upper atmosphere from space.

The second spacecraft will be a 12-foot polka dot inflatable sphere to measure air density. The sphere, similar to Explorer IX now in orbit, will be built by the Langley Research Center.

Both the sphere and the Injun are scheduled to be launched into a near-polar orbit by a solid propellant Scout vehicle from the Pacific Missile Range late in 1963.

The launch will mark two firsts:

- It will be the first attempt to measure air densities by a polar orbiting satellite.
- It will be the first attempt to use Scout to place two satellites into orbit at the same time.

The two-part experiment is intended to provide new scientific knowledge of how the earth's atmosphere reacts to radiation from space.

It is thought such radiation tends to heat the upper atmosphere, thereby changing its density and probably causing it to extend further upward from the Earth.

While the Injun Explorer is measuring the downflow of corpuscular radiation into the atmosphere, the measurements of the Air Density Explorers' orbit will simultaneously indicate drag characteristics in the atmosphere.

After correlating the two sets of data, scientists hope to gain a better understanding of how radiation affects the earth's blanket of air.

A near-polar orbit was chosen to expose spacecraft to areas of maximum radiation flux. The earth's magnetic field deflects particle radiation in a way that allows it to penetrate more deeply in the polar regions.

Both satellite experiments and the Scout are projects of NASA's Office of Space Sciences, with project management a responsibility of the Langley Research Center.