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National Aeronautics and Space Administration
Goddard Space Flight Center
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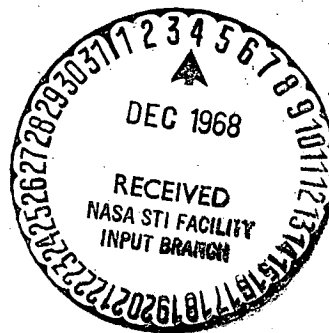
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" P R O T O N - 4 "

IN FLIGHT

(Tass Communique)



NOVEMBER 1968

" P R O T O N - 4 "

IN FLIGHT

(TASS COMMUNIQUE)

SUMMARY

The most powerful automatic space station, weighing 17 tons, has been launched on 16 November 1968, and placed into orbit around the Earth.

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In accordance with the program of space investigations, the most powerful carrier-rocket successfully launched the world's heaviest automatic scientific space station "PROTON-4" on 16 November 1968.

The total payload placed in orbit (without the last stage of the carrier-rocket) is 17 tons. The station's scientific apparatus alone weighs 12.5 tons.

PROTON-4 is now in orbit with 495 km apogee and 255 km perigee. The orbit inclination is $51^{\circ}30'$. The revolution period is 91.75 min.

This station is designed for further investigations, already begun with PROTON-1, -2 and -3, of the nature of cosmic rays of high and superhigh energies and their interaction with atomic nuclei.

The program of scientific research includes:

- the study of the energy spectrum of cosmic rays with energies to 10^{15} ev and of chemical composition of cosmic rays to energies of 10^{13} - 10^{14} ev;

- measurement of the probability of cosmic rays' collision with atomic targets (hydrogen, carbon, iron) in the 10^{11} - 10^{12} ev range;

- study of the dynamics of cosmic rays' collision with atomic target nuclei at energies of 10^{13} - 10^{14} ev;

- search for particles in primary cosmic rays with fractional electric charge;

- measurement of the intensity of high energy electrons and their energy spectrum.

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Besides the scientific and measurement apparatus a radio transmitter has been installed aboard the station, which operates in the frequency of 19.910 Mc/sec.

According to telemetry data, all onboard systems, the station's components and the scientific instrumentation operate normally. The incoming information is being processed at the coordination-computation center.

***** T H E E N D *****

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