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NORTH AMERICAN AIR DEFENSE COMMAND

WIR

WEEKLY INTELLIGENCE REVIEW (U)

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NORAD Weekly Intelligence Review

Issue No. 16/67, 21 April 1967

The WIR in Brief

WIR to be Smaller Temporarily

Budgetary restrictions on printing forces the WIR to pare down its size for the rest of the fiscal year, which ends 30 June 1967.

Portion identified as non-responsive to the appeal

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Space

RECCE COSMOS 153 DE-ORBITED 12 APRIL;
RECCE COSMOS 155 LAUNCHED SAME DAY 6
Program getting back on schedule.
COSMOS 149 STUDIED EARTH's WEATHER;
CARRIED UNUSUAL STABILIZATION SYSTEM 6
Stabilizer combined aerodynamic feature with 2 gyroscopes.

Portion identified as non-responsive to the appeal

incorrect pagination

COVER: CLASSIC/IL-62 transport (from Interavia) (OFFICIAL USE ONLY)

NOTE: Pages 20, 22, and 23 of this issue are blank.

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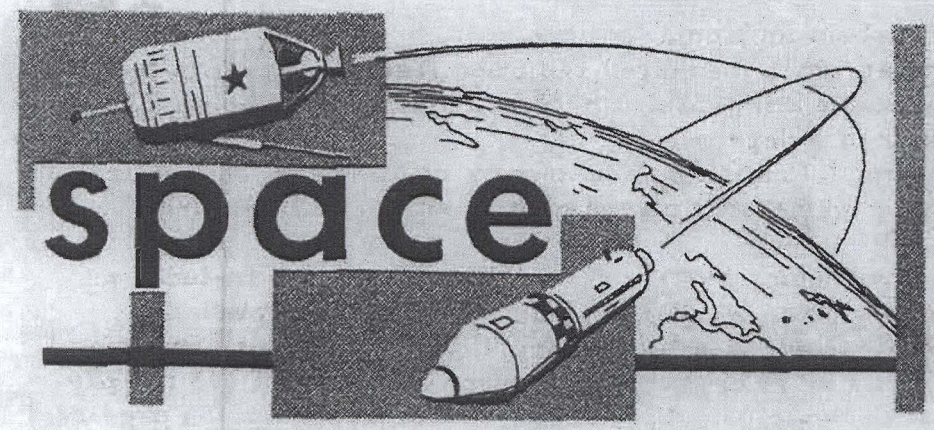

significant intelligence on space developments and trends

Recce Cosmos 153 De-Orbited 12 April,
Recce Cosmos 155 Launched Same Day

Cosmos 153, a reconnaissance satellite which the Soviets launched from Plesetsk at about 1400Z, 4 April, was de-orbited on 12 April during the early part of Revolution 125, slightly less than 8 days after launch. Impact in the USSR probably occurred at about 0752Z, 12 April.

Cosmos 155, which the Soviets launched from Tyuratam at about 1052Z, 12 April, is a high-resolution photoreconnaissance satellite, [redacted]. It was launched by the SL-4 system (SS-6 ICBM and Venik heavy upper stage) into an orbit with an inclination of 51.8 degrees.

The rate of Soviet recce launches has been stepped up recently, probably in an effort to bring the program back on schedule following the low launch rates of January and February. Three recce satellites have been launched in the 3 weeks since 22 March, but the over-all rate for the year -- 2 per month -- conforms with the estimated schedule for 1967 and is about the same as last year's rate.
(NORAD)
~~(SECRET)~~

50X1 and 3, E.O.13526

Cosmos 149 Studied Earth's Weather;
Carried Unusual Stabilization System

Cosmos 149, which the Soviets launched on 21 March, made scientific studies related to the Earth's weather, though it was not an operational weather satellite, according to the 12 April issue of Pravda. Its mission was to study weather-related phenomena with a view to developing improved satellite weather surveillance capabilities.

Pravda said that Cosmos 149 carried the following items, in addition to the usual spacecraft systems (such as telemetry, thermoregulation, power generation):

- Two multichannel photometers which scanned the Earth in two mutually perpendicular directions, to determine the brightness of the planet in narrow spectrum intervals, including that of the

belt of absorbent molecular oxygen.

- A radiometer which measured radiation from the Earth in the IR window of the atmosphere (8-12 microns). Its precision was on the order of 1 degree.
- A TV system. (Pravda gave no details of its operation or purpose, saying only that it played only an auxiliary role during the flight.)
- An "aerogyroscopic" system of stabilization, which included an aerodynamic device which stabilized the payload in pitch and yaw along the flight path with a precision of 5 degrees, and two gyroscopes with two degrees of freedom which stabilized the payload in roll and dampened satellite oscillations. (Photo on page 24.)

Instrumentation on weather satellites Cosmoses 122 and 144, said Pravda, collected total radiation data, while Cosmos 149 measured it in discrete narrow bands, a procedure which will yield more precise data about the composition of the Earth's atmosphere and the nature of the Earth's surface and its cloud cover.
(Pravda)
(UNCLASSIFIED)

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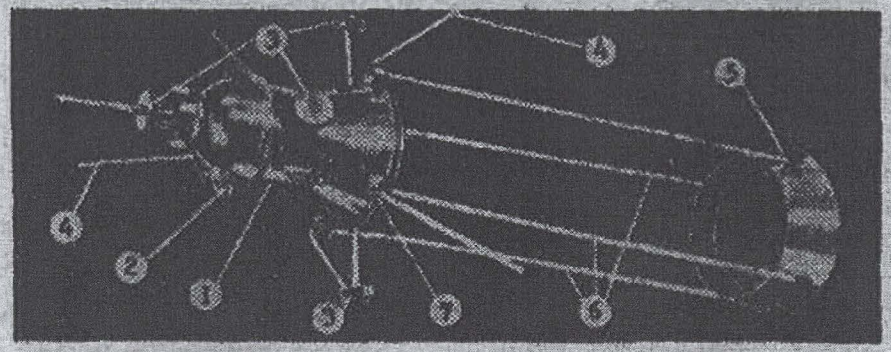
(Begin ~~SECRET~~) Available evidence indicates that Cosmos 149 actually was stabilized, unlike other Cosmoses launched from Kapustin Yar (KY). In other respects it seemed to be a normal KY-launched Cosmos: its weight, for example, was in the usual 350-500 pound range, [redacted]

A CIA analysis indicates that the video may have been used to determine the accuracy of the spacecraft's unusual stabilization system. (This could be the "auxiliary" mission cited by Pravda.) Demodulation of Cosmos 149 video shows the Earth's surface and cloud cover passing beneath the vehicle at a constant rate according to CIA. The video had a frame rate of 25 per second, with 400 lines per frame. Ground resolution should be about 1,000 feet -- inadequate for any known military application.
(CIA)
~~(SECRET)~~

Cosmos 149 -- R&D Weather Satellite



1. Spacecraft body 2. TV port 3. Actinometric sensor. 4. Antennas 5. Aerodynamic stabilizer 6. Stabilizer rods (in extended position for flight; they are retracted until separation of last propulsion stage) 7. Stabilizer motion mechanism.

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