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NORTH AMERICAN AIR DEFENSE COMMAND

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K 410. 607-209

W O I R

WEEKLY INTELLIGENCE REVIEW (U)

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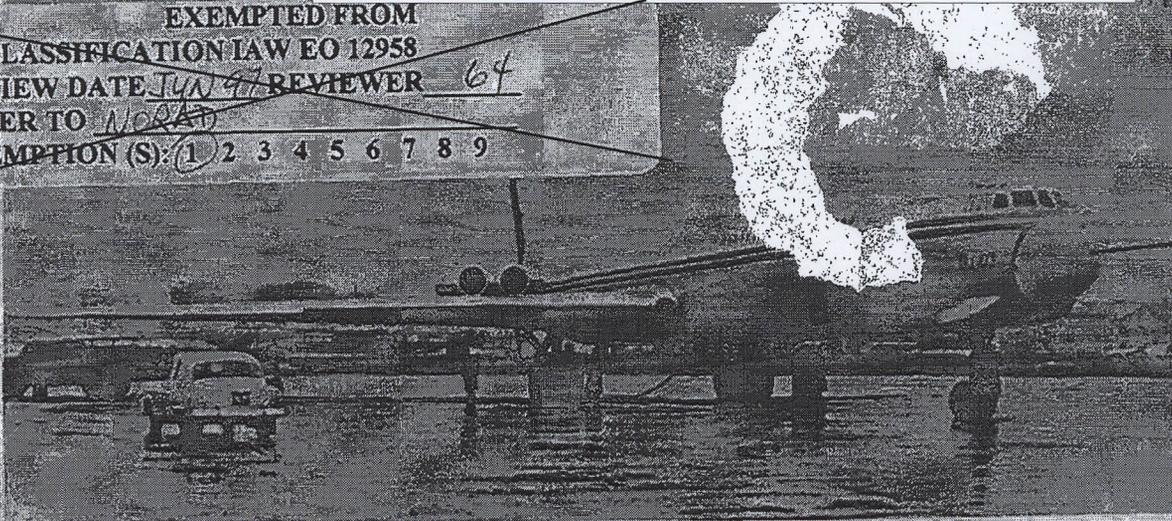
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The WIR in Brief

Portion identified
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to the appeal

Space

ANOTHER LUNAR PROBE FIZZLES

3d stage apparently failed.

SATELLITE SIGHTED BY COSMONAUTS PROBABLY FRAGMENT OF THEIR LAUNCH VEHICLE

6-foot long piece, only space hardware known to
be in vicinity of Voskhod 2 at the time.

COSMOS 64 DE-ORBITED IN ROUTINE FASHION

Brought down on Rev 128.

RECENT INTERCEPTS OF SOVIET SPACE- VEHICLE TRANSMISSIONS

Only 6 payloads known to be active.

ERROR IN ORBITAL TABLE IN WIR 13/65

Cosmos 44 parameters affected.

NORWEGIANS REJECT SOVIET PROTEST AGAINST SPACE-TELEMETRY STATION ON SPITSBERGEN

Portion identified
as non-responsive
to the appeal

Portion identified
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to the appeal

COVER: Soviet CLASSIC/IL-62 transport
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NOTE: Pages 30, 31, 32, 34, 35, 38, 39, 42,
and 43 of this issue are blank.

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space

significant
intelligence
on space
developments
and trends

Another Lunar Probe Fizzles

The Soviets' second attempt this year to launch a probe of the Moon has failed. [redacted] indicates that the Soviets launched a vehicle from Tyuratam (from which all Soviet lunar probes to date have been launched) at about 0840Z, 10 April, or within 4 minutes of the optimum time for a lunar launch on that date. (The lunar launch "window" for a Lunik 4 type event was open for only two days this month -- 9 and 10 April.)

The lack of later [redacted] intercepts or detection by Shemya radar indicates that the vehicle failed in flight, apparently during 3d (Venik) stage propulsion.

The Soviets' first lunar probe attempt this year was launched at about 0926Z, 12 March. The vehicle achieved parking orbit but the 4th stage, which should have injected the payload into a transfer trajectory toward the Moon, apparently did not ignite. The Soviets covered up this failure, yet satisfied UN requirements that all orbiting vehicles be reported, by an announcement naming the vehicle Cosmos 60 and claiming that it was participating in the 3-year-old Cosmos program of space research. Cosmos 60 decayed 5 days later, having apparently executed no mission other than achievement of orbit.

The Soviets' latest lunar probe attempt is their 13th to date. A listing of these attempts and their achievements, or reasons for failure, is shown on page 37. For more data on launch vehicles and techniques, see page 40.

The next Soviet attempt, or series of attempts, to launch lunar probes will probably come in December this year, when the "window" again opens for a Lunik 4 type event. Lunik 4 was probably intended to soft-land an instrumented package on the Moon.

(Various ELINT sensors; SPADATS; NORAD)

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'Satellite' Sighted by Cosmonauts Probably Fragment of Their Launch Vehicle

The "satellite" which Soviet cosmonauts Belyayev and Leonov reported observing about 5 hours, 12 minutes after launch (about 1412Z, 18 March) was probably a fragment of the Voskhod 2 launch vehicle, assuming that the report represented a valid observation. Analysis by SPADATS indicates that the only piece of space hardware known to be within 200 kilometers (108 n. m.) of Voskhod at the time was a fragment of the launch vehicle. This piece was about 4.5 kilometers (2.4 n. m.) from Voskhod 2 at the time of the sighting and was tumbling once every 112 seconds. Radar signature analysis indicates that this fragment was about 6 feet long and 2-3 feet in diameter.

(SPADATS)

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Cosmos 64 De-Orbited in Routine Fashion

Cosmos 64, which the Soviets launched from Tyuratam at about 1000Z, 25 March 1965, was de-orbited at about 0811-0816Z, 2 April, during the early part of Revolution 128, after nearly 8 days in orbit. This is the 15th TT-launched Cosmos de-orbited on Revolutions 126-128. Its mission was photoreconnaissance but it could also have carried equipment for performing other missions.

(SPADATS; NORAD)

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Recent Intercepts of Soviet Space-Vehicle Transmissions

Following are the most recently reported intercepts of transmissions from Soviet space vehicles which may still be active:

<u>Vehicle</u>	<u>Date of Launch</u>	<u>Signal Characteristics</u>	<u>Date of Last Intercept</u>
Electron 4	10 Jul 64	50X1 and 3, E.O.13526	
Zond 2 (Mars probe)	30 Nov 64		
Cosmos 55	21 Feb 65		
Cosmos 58	26 Feb 65		
Cosmos 61	15 Mar 65		



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Cosmos 63

15 Mar 65

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Other Soviet payloads are considered to be inactive; no intercepts of transmissions from them have been made within the past 45 days.

(Various ELINT sensors)

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Error in Orbital Table in WIR 13/65

The apogee and perigee for Cosmos 44 were given incorrectly in WIR 13/65 (p. 42) as 821.7 and 663.2 kilometers, respectively. Actual parameters were 871.4 and 609 kilometers.

(SPADATS)

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Norwegians Reject Soviet Protest Against Space-Telemetry Station on Spitsbergen

Norway has rejected Moscow's 17 February protest against construction of a telemetry station on Spitsbergen and has confirmed that it plans to go ahead with this project, which is to support the space program of Western Europe. The Soviet protest was based on Articles 5 and 9 of the Spitsbergen Treaty, which state that the island should never be used for military purposes. Moscow contended that construction of the station could not be undertaken without concurrence of the treaty signatories. The Soviets apparently fear the station would be used to monitor satellites which have passed over Soviet territory, and could support a NATO surveillance effort against the USSR's Arctic operations.

Norway agreed last December to build and operate the station in support of the European Space Research Organization (ESRO). The Norwegian Technical and Natural Research Council will build and operate the facility, which will be sited at Ny Alesund. (For more on the status of Spitsbergen, see pp.11-12, WIR 5/65.)

(CINCEUR; CINCLANT)

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Soviet Lunar Probe Attempts -- 4 December 1958 to 11 April 1965

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<u>Date of Launch</u>	<u>Soviet Designations</u>	<u>Achievements, or Reasons for Failure</u>
04 Dec 58	*	Propulsion (sustainer) failure.
02 Jan 59	Lunik 1	Missed Moon; went into orbit around the Sun. First man-made vehicle to escape the Earth's gravitational field. Telemetered some data about Van Allen belt radiation. Probably an attempt to hit the Moon, a mission later achieved by Lunik 2.
18 Jun 59	*	Propulsion (sustainer) failure.
12 Sep 59	Lunik 2	Impacted on Moon. Telemetry from magnetometer indicated that Moon has little or no magnetic field.
04 Oct 59	Lunik 3	Flew around the Moon and returned to vicinity of Earth, decaying about 6 months later. Photographed far (unseen) side of Moon and sent video pictures to Earth.
15 Apr 60	*	Propulsion (3d stage) failure.
04 Jan 63	*	Propulsion (4th stage) failure.
03 Feb 63	*	Propulsion (3d stage) failure.
02 Apr 63	Lunik 4	Launch successful but payload missed Moon by about 8500 kilometers (4560 n. m. l), according to TASS. Midcourse guidance maneuver may have failed. Went into barycentric (Earth-Moon) orbit; Soviets claim that it has now gone into heliocentric orbit (around the Sun). Probably an attempt to soft-land an instrumented package on the Moon.
21 Mar 64	*	Propulsion (3d stage) failure.
20 Apr 64	*	Propulsion (3d stage) failure.
12 Mar 65	Cosmos 60	Propulsion (4th stage) failure.
10 Apr 65	*	Propulsion (3d stage) failure.

* Soviets never announced launch.

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-37-

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Soviet Lunar Probe Attempts -- Data Summary

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All lunar attempts have been launched from the Tyuratam Missile Test Range. Two different techniques have been used, which are compared as follows:

	Direct Ascents (Launch from site directly toward the Moon.)	Parking Orbit Events (Launch into parking orbit and later injection into transfer trajectory toward the Moon.)
Time period	1958-1960	1963-1965
No. of attempts	At least 6	At least 7
Propulsion	SS-6 ICBM booster/sustainer plus "Lunik" (light) 3d stage	SS-6 ICBM booster/sustainer plus "Venik" (heavy) 3d stage and a 4th stage
Advantages	Shorter transit time	Heavier payload
Transit time	1.5-2.5 days	3.5 days
Useful payload weight	800-1,000 pounds	3,135 pounds for hard impact or circum-lunar flight 650-1,000 pounds for a soft landing 1,550-2,000 pounds for a lunar orbiter

Telemetry

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-40-

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