

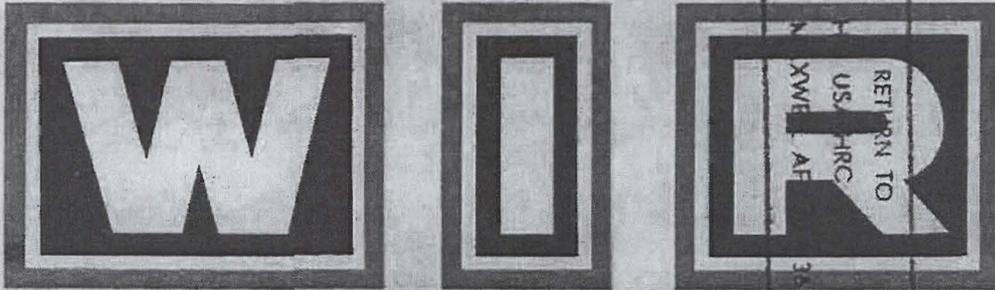


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NORTH AMERICAN AIR DEFENSE COMMAND



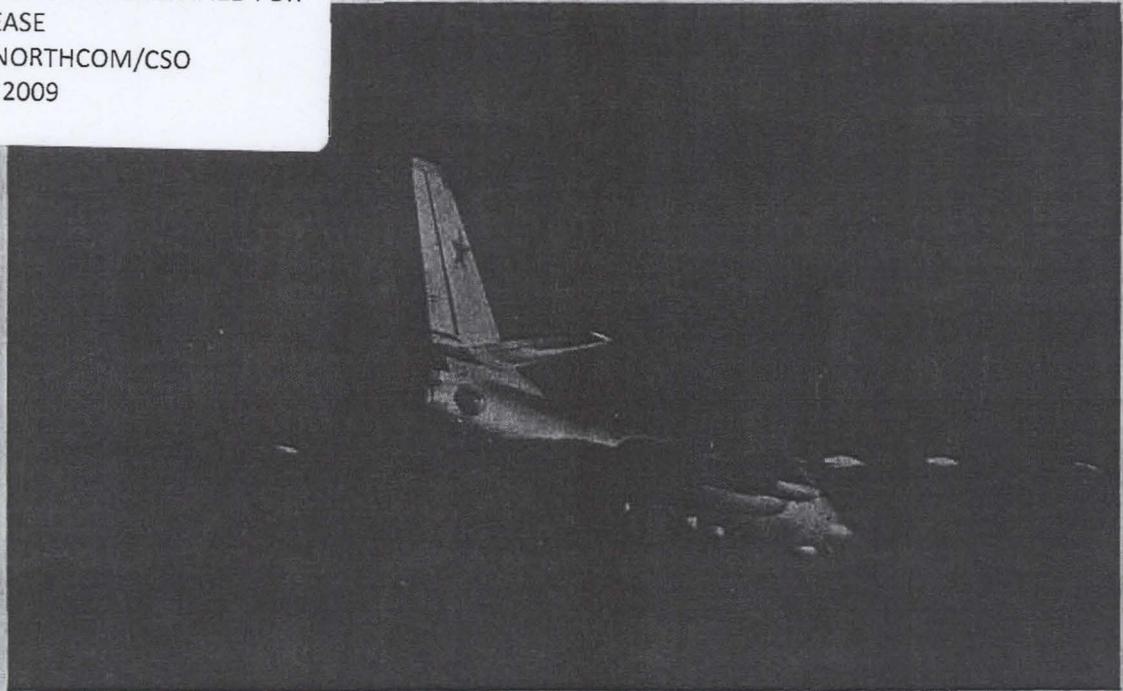
WEEKLY INTELLIGENCE REVIEW (U)

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WIR 7/70
13 Feb 70

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Issue No. 7170, 13 February 1970

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The WIR in Brief

Portion identified as non-responsive to the appeal

MISSILE/SPACE RANGEHEAD ACTIVITY FAIRLY HIGH IN JANUARY 1970 (S)

About half of launches involved ICBMs.

Portion identified as non-responsive to the appeal

Space

LAUNCH FAILURE OF 6 FEB, PROBABLE LUNAR ATTEMPT, IS SL-12's 4th SUCCESSIVE FAILURE (S)

SL-12 record: 11 failures, 7 successes.

SOYUZ CAN BE REPRESSURIZED ONLY ONCE AFTER AIRLOCK IS OPENED

Only limited EVA is possible.

COSMOS 323 IS SOVIETS' 3d RECSAT OF 1970 (S)

Portion identified as non-responsive to the appeal

Portion identified as non-responsive to the appeal

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NOTE: Pages 26, 27, 30, and 31 of this issue are blank.

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Missile/Space Rangehead Activity Fairly High in January 1970 ~~(S)~~

Launch activity at Soviet missile/space rangeheads in January 1970 is shown in the listing on page 25 and the following table:

	Last Month (Jan 70)	Previous Month (Dec 69)	1 Year Ago (Jan 69)	2 Years Ago (Jan 68)
Missile launches	15	17	15	2
Vertical rocket firings	0	7	2	0
Space launches	<u>5</u>	<u>7</u>	<u>8</u>	<u>2</u>
TOTALS	21	31	25	4

Although the total number of launches in January 1970 was noticeably less than in the preceding month and slightly less than in January a year ago, it may be noted that the missile launches were about the same. In comparing the Jan 70 figures with those of Dec 69 and Jan 69, it should be noted that Decembers are usually busy months at the rangeheads, and January 1969 was busier than most Januarys. For instance, total space and missile launches for January 1968 and January 1967 were, respectively, only 4 and 10.

Unusual features of the January 1970 activity:

- Almost half of the missiles were ICBMs.
- Three of the ICBM launches were for research and development.
- The SS-NX-5 naval missile was launched to a range of about 3,040 n.m. (map on p.27, last week's WIR).
- One missile of unknown type was launched from Plesetsk on 16 January.

(NORAD)
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significant
intelligence
on space
developments
and trends

Launch Failure of 6 Feb, Probable Lunar Attempt, is SL-12's 4th Successive Failure (S)

A Soviet attempt to launch a probable lunar probe with the large 4-stage SL-12 propulsion system at about 0416Z, 6 February, ended early in failure. The vehicle did not achieve orbit probably because of premature shutdown of the second stage.

This launch appears to have been another attempt, similar to that of Luna 15 last July, to softland a nonrecoverable payload on the moon for exploratory purposes. (Luna 15 was partially successful: it went into orbit around the Moon, and its orbit was changed several times, but it crashed when it was deorbited onto the Moon.)

The last four SL-12 launches have all failed (listing and time scale on page 32). The SL-12 record now stands at 11 launch failures, 7 successes. A most discouraging aspect of this record (from the Soviet point of view) is that failures have not been confined to a single stage on which remedial efforts could be focused. Both the 2d and 4th stages have failed several times. Also, the success rate last year (about 22%) was much lower than that of 1968 (80%).

Not only are these failures serious setbacks to the Soviets' lunar-exploration program but they consume propulsion vehicles which the Soviets no doubt would like to use also in other programs, such as launch of geosynchronous communications satellites and manned space laboratories or stations.

The SL-12 has shown that it can put about 50,000 pounds into low Earth orbit or 10,000-15,000 pounds into a lunar trajectory. This would be adequate for a manned circumlunar mission or a medium-sized manned Earth-orbital scientific laboratory. The low-acceleration levels of the SL-12 are consistent with manned flights, and the restart capability of its fourth stage engine meets the requirements for a lunar-mission profile.

The hardware and launch costs for each SL-12 booster (not including the payload) are estimated at \$45 million, and over-all development costs

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would appear to have been about \$2 billion -- additional causes for disappointment in the Soviet hierarchy, which needs a morale-building space victory in 1970 to celebrate the 100th anniversary of the birth of Lenin.

(NORAD)

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25X1 and 3, E.O.13526

Soyuz Can Be Repressurized Only Once After Airlock is Opened (S)

[redacted] Soyuz 6, aboard which a welding experiment was conducted in the vacuum of space last October (p. 7, WIR 43/69), supports previous indications (p. 7, WIR 45/69) that Soyuz-type spacecraft carry enough stored breathing gas (air) to repressurize the orbital compartment only once.

During the Soyuz 6 flight, pressure was dropped to zero in the compartment where the welding experiment was to be conducted, and then the outer hatch (airlock) was opened. After the experiment, pressure was restored to the normal level of one atmosphere before Soyuz 6's next pass over the USSR, but repressurization consumed almost all of the available gas supply.

This means that, for all practical purposes, the airlock can be used only once and, in turn, only one EVA (extravehicular activity) can be performed. During EVA, the compartment must be kept depressurized either until the cosmonaut completes his work outside the spacecraft and returns or until he has safely entered another. The compartment, when depressurized, can be used only for operational or research activities performed by remote control or by a cosmonaut wearing a space suit.

(CIA)

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Cosmos 323 is Soviets' 3d Recsat of 1970 (S)

Cosmos 323, which the Soviets launched from Plesetsk into a 65-degree orbit at about 1200Z, 10 February, is a military reconnaissance satellite carrying a low-resolution camera system and an ELINT-collection package. This is the Soviets' 3d recsat launched this year.

(NORAD)

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Soviet
Missile
& Space
Launches

January
1970 (U)

06	Jan	0303Z	SS-11M ICBM	Tyuratam
09	Jan	0920Z	Cosmos 318 (SL-4)	Tyuratam
15	Jan	1340Z	Cosmos 319 (SL-7)	Plesetsk
16	Jan	1100Z	Cosmos 320 (SL-7)	Kapustin Yar
16	Jan	1313Z	SS-4 MRBM	Kapustin Yar
16	Jan	1612Z	SS-4 MRBM	Kapustin Yar
16	Jan	2004Z	Unknown (possibly SS-7)	Plesetsk
17	Jan	0330Z	SS-9 ICBM	Tyuratam
19	Jan	0230Z	SS-11M ICBM	Tyuratam
20	Jan	2020Z	Cosmos 321 (SL-7)	Plesetsk
21	Jan	0305Z	SS-9 ICBM	Tyuratam
21	Jan	1200Z	Cosmos 322 (SL-4)	Plesetsk
23	Jan	0838Z	SS-4 MRBM	Kapustin Yar
23	Jan	1439Z	SS-4 MRBM	Kapustin Yar
24	Jan	0534Z	SS-7 ICBM	Tyuratam
24	Jan	2026Z	SS-NX-5 naval missile	Nenoksa
30	Jan	0205Z	SS-9M ICBM	Tyuratam
30	Jan	0305Z	SS-9 ICBM	Tyuratam
30	Jan	1037Z	SS-4 MRBM	Kapustin Yar
30	Jan	1148Z	SS-12 SRBM	Kapustin Yar
30	Jan	1540Z	Space launch failure	Plesetsk

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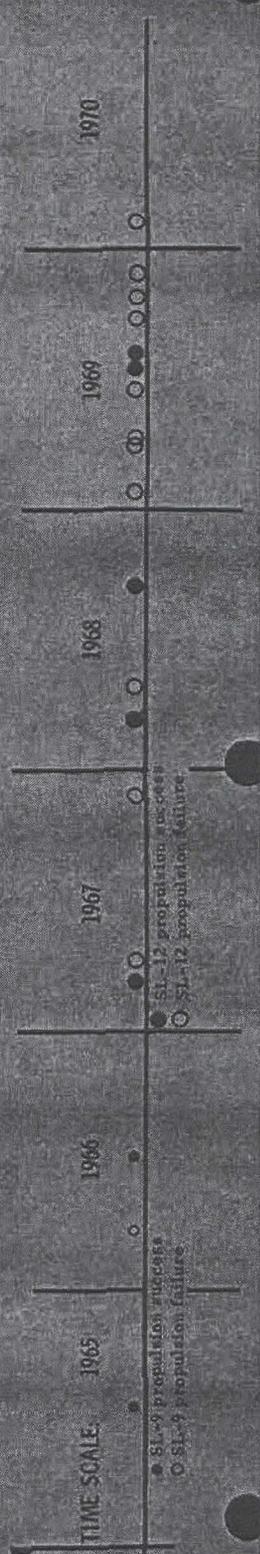
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The Launch Record of the SL-9 and SL-12 Space Systems (X)

Launch Date	Name/ID	Propulsion Performance	Mission (and Remarks)
16 Jul 66	*Proton 1	Success	Cosmic-ray studies in Earth orbit.
02 Nov 65	*Proton 2	Success	Cosmic-ray studies in Earth orbit.
24 Mar 66	*	Failure	Cosmic-ray studies in Earth orbit (2d stage shut down prematurely).
06 Jul 66	*Proton 3	Success	Cosmic-ray studies in Earth orbit.
10 Mar 67	#Cosmos 146	Possible success	Earth-orbit test (4th stage known to have reignited).
08 Apr 67	#Cosmos 154	Failure	Earth-orbit test (4th stage failed to reignite).
22 Nov 67	#	Failure	Circumlunar try (2d stage shut down prematurely).
02 Mar 68	#Zond 4	Success	Circumlunar simulation (all stages successful but recovery may have failed).
22 Apr 68	#	Failure	Circumlunar try (2d stage shut down prematurely).
14 Sep 68	#Zond 5	Success	Circumlunar (recovered after ballistic re-entry).
10 Nov 68	#Zond 6	Success	Circumlunar (recovered after skip re-entry).
16 Nov 68	#Proton 4	Success	Cosmic-ray studies in Earth orbit. A3-stage SL-12.
20 Jan 69	#	Failure	Circumlunar try (2d stage failure)
27 Mar 69	#	Failure	Mars probe.
02 Apr 69	#	Failure	Mars probe.
14 Jun 69	#	Failure	Nonrecoverable lunar probe (4th stage failed)
13 Jul 69	#Luna 15	Success	Nonrecoverable lunar probe (possibly a Moon rover)
06 Aug 69	#Zond 7	Success	Circumlunar (recovered after skip reentry)
23 Sep 69	#Cosmos 3000	Failure	Nonrecoverable lunar probe (4th stage failure)
22 Oct 69	#Cosmos 3050	Failure	Nonrecoverable lunar probe (4th stage failure)
28 Nov 69	#	Failure	Possibly similar to Cosmos 146 or 154 (2d or 3d stage failure)
06 Feb 70	#	Failure	Nonrecoverable lunar probe (1st or 2d stage failure)

* Launched by the SL-9, a large 2-stage propulsion system.
 # Launched by the 4-stage SL-12 -- the SL-9 plus 2 upper stages.
 ** Zond 4 and Luna 15 were launched successfully but mission success was less than complete for each.
 @ Those who names failed at launch. The Soviets never name launch failures.
 @ Cosmos 300 and 305, though they failed to go toward the Moon, had to be given names because they, or fragments of them, orbited the Earth. The Soviets said they were studying the near-Earth space environment.



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