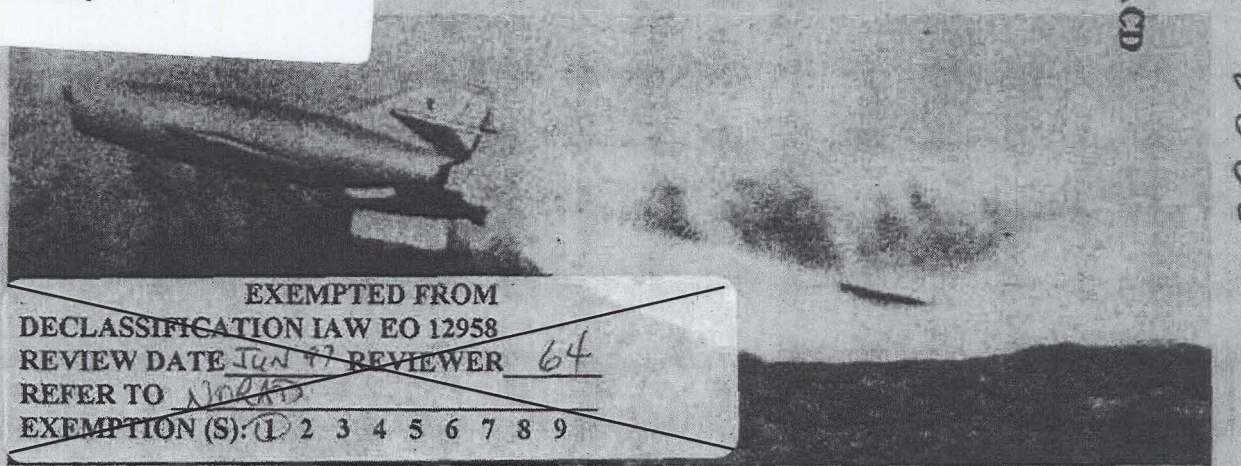
NORTH AMERICAN AIR DEFENSE COMMAND

WIR

WEEKLY INTELLIGENCE REVIEW (U)



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NORAD Weekly Intelligence Review

Issue No. 51/66, 23 December 1966

The WIR in Brief

Portion identified as non-responsive to the appeal

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Space

COVER: Launch of a SAMLET coast-defense missile (UNCLASSIFIED)

NOTE: Pages 2, 32, 34, 36 and 38 of this issue are blank.

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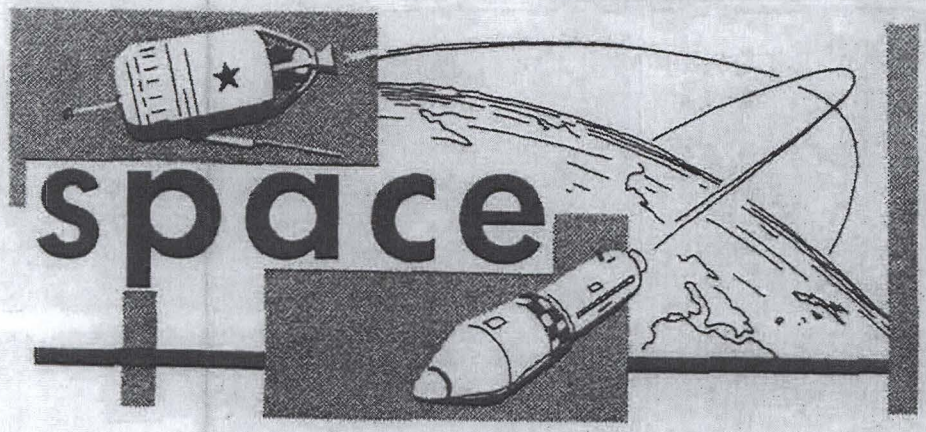

significant intelligence on space developments and trends

Soviet Luna 12 Photos Inferior To Those of U. S. Orbiter 2

The poor quality of photographs taken by Luna 12, placed in orbit around the moon on 25 October, greatly reduces their scientific and propaganda value and shows deficiencies in this aspect of Soviet space technology.

Of 22 photographic transmissions from the spacecraft, only a few could be converted into pictures of even fair quality. The two best ones were the same two published in the Soviet press on 6 November, suggesting that the Soviets did not have any of better quality. Soviet articles about the mission have not played up the photographic aspects. Moreover, Moscow has not released glossy prints -- even of those pictures published in Soviet newspapers -- possibly because they could be unfavorably compared with the photographs taken by the US Lunar Orbiter 2.

The facsimile system which transmitted the Luna 12 photographs is similar to that used by wire photo services throughout the world, and does not have the sensitivity of the system used on the US lunar and planetary probes. Consequently, the Luna 12 photographs lack sharp definition. In addition, every frame shows streaking of the film, probably caused during development aboard the spacecraft. A "hair" visible in one of the photographs indicates that either the camera or the film was not properly cleaned before assembly.

Luna 11, the other Soviet lunar orbiter which had a photographic mission, failed to transmit photographs because of malfunctioning equipment. Although at time of writing, the Soviets have not announced the purpose of Luna 13, launched 1017Z on 21 December 1966, the probe may be intended to remedy some of the deficiencies of Luna 11 & 12.
(CIA; NORAD)
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1967 Lunar Probes May Soon Commence: Soft Landing; Orbiter; Circumlunar Missions Likely

The Soviets are expected to launch a number of additional lunar probes in the next six months. Three missions appear likely: soft landing; lunar orbiter; and a circumlunar with return to earth. The windows for the soft landing and lunar orbiters are similar and have been calculated using lighting conditions on the moon for the probe's arrival which match past missions. These launch times will vary several minutes as the Soviets change their lunar aiming point or parking orbit. The date/launch times marked $ are considered most probable and the injection point (end of fourth stage burning) has been included for this date. The nominal 52-degree parking orbit inclination is considered most likely, but the times for 65 degrees are listed as a precaution. It is difficult to forecast the constraints the Soviets will employ for circumlunar flights, but based on declination of the moon, a launch on 5 January 67 is possible.

	52 Degree Inclination	62 Degree Inclination
Jan	19/1011Z	0754Z
	20/1115Z $ (20.63S 333.9E)	0855Z $ (19.66N 5.53E)
	21/1213Z	0954Z
Feb	18/1051Z	0843Z
	19/1138Z $ (16.54S 337.28E)	0926Z $ (15.7S 7.33E)
	20/1218Z	1013Z
Mar	19/1010Z	0802Z
	20/1046Z $ (9.01S 343.02E)	0846Z $ (8.27S 10.51E)
	21/1118Z	0926Z
Apr	18/0944Z	0757Z
	19/1012Z $ (8.06N 355.24E)	0834Z $ (8.79N 17.44E)
	20/1042Z	0913Z
May	17/0839Z	0706Z
	18/0909Z $ (18.56N 003.32E)	0745Z $ (19.39N 22.08E)
	19/0943Z	0827Z
Jun	15/0740Z	0620Z
	16/0816Z $ (27.35N 11.27E)	0705Z $ (28.37N 26.64E)
	17/0900Z $ (31.05N 15.20E)	0755Z $ (32.19N 28.88E)
Jul	15/0742Z	0640Z
	16/0839Z $ (33.54N 18.14E)	0739Z $ (34.83N 30.57E)
	17/0943Z	0841Z

(NORAD)

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Mars Window Open: Two or Three Probes Possible in January 1967

Since the Soviets achieved the propulsion capability for Mars and Venus probes, they have not missed an opportunity to launch such interplanetary vehicles. They launched three vehicles during the last Venus window, two of which were successfully ejected towards Venus. The period 2-16 January 1967 is again a minimum energy period for Mars (minimum date 11 and 12). The Soviets have in the past traded minimum energy advantage to gain decreased communication distance. It is interesting to note that the January minimum energy dates nearly coincide with minimum communications distance between earth and Mars at probes arrival. Therefore, it appears that the Soviets will probably launch two or three Mars probes beginning early January with only a few days between launches. (NORAD)

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