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DIRECTORATE OF
SCIENCE & TECHNOLOGY

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FMSAC-SER-113/69

Space Event Report

J-Vehicle Failure -- 3 July 1969

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FMSAC-SER/69-13

26 August 1969

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J-VEHICLE FAILURE -- 3 JULY 1969

SUMMARY

An attempt to launch the Soviet's giant new space booster from Complex J at Tyuratam at approximately 2015Z on 3 July resulted in a major disaster when the vehicle exploded on the pad soon after first-stage ignition. The intended mission of the operation was to send an unmanned payload to the moon. Recovery of the vehicle in the USSR after a low-G re-entry over the Indian Ocean apparently was also included in the mission profile. A similar operation had culminated in a cancellation prior to launch on 22 February 1969.

Support ship deployments and communications activity, including practices on 27 June and 1 July, had indicated that a major space operation was under way in the Soviet Union. The nature of the activity indicated that a lunar mission and subsequent recovery were involved. However, certain aspects--primarily SSESS deployment in the Atlantic under a 49-degree earth trace (vice the usual 52-degree positioning) and the lack of a SMRIS under the parking orbit insertion point in the Pacific--suggested strongly that the operation would involve the Soviet's new space booster rather than the SL-12 launch vehicle.

Identification of the event as a possible early in-flight failure was based initially on communications activity and the failure of US collection sensors to acquire the vehicle.

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This report was produced by the CIA. It was prepared solely by the Foreign Missile and Space Analysis Center of the Directorate of Science and Technology.

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The new Soviet booster is estimated to have a thrust of 12 to 14 million pounds at lift-off and to be capable of placing a payload of 300,000 to 350,000 pounds in earth orbit. It is the only Soviet launch vehicle capable of supporting a manned lunar landing operation, although, since high energy propellants are not used (as in the case with the US Saturn V), two launches with subsequent earth-orbit rendezvous and docking will be required to accomplish such a mission. It appears virtually certain that the 3 July event was intended as the first in a series of flight tests leading to a manned lunar landing. The loss of the booster during its first launch attempt is expected to delay the Soviet manned lunar landing by upwards of a year. Pad J-2, however, can probably be used for launchings when problems with the system are corrected. It could support several missions, such as a manned lunar orbiter, an unmanned sample return probe, or a large space station. Since a manned lunar landing mission requires both pads, it now appears that the Soviets will be unable to mount this mission until late 1972, or more likely, 1973.

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SOVIET PRESS SUMMARY

No Soviet announcement was made.

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IMPLICATIONS OF THE FAILURE

From available evidence the cause of failure cannot be determined. If no major redesign of the J-Vehicle is required, a launch could probably take place from Pad J-2 before the end of 1969. A reasonable manned lunar landing program schedule would not require the first dual launch until the spring of 1971--probably allowing sufficient time to repair Pad J-1. Thus a manned lunar landing would not appear possible before late 1972 or, more likely, 1973. Such a landing would, of course, be further delayed if major redesign of the J-Vehicle is necessary.

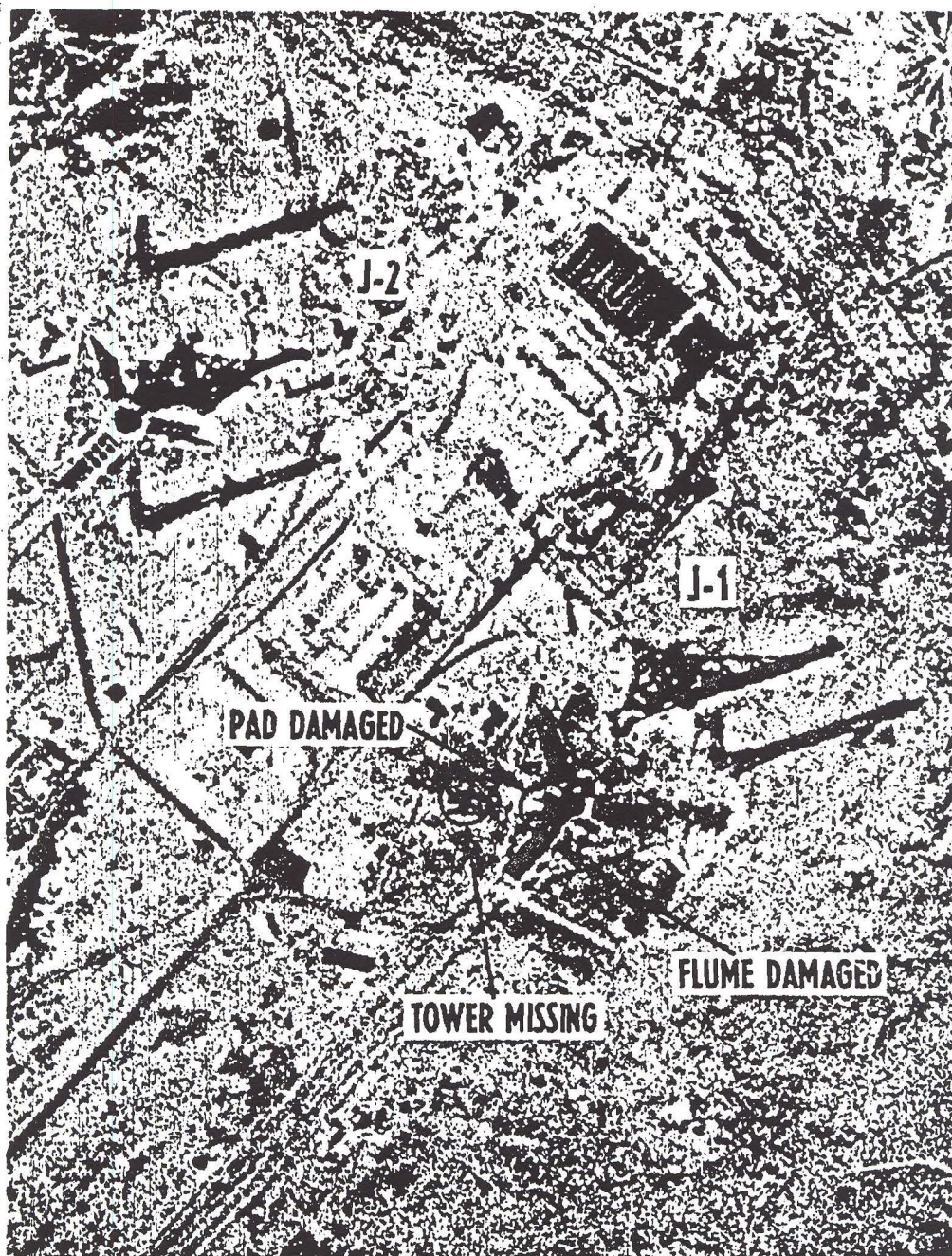
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