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Intelligence Note 669 from Thomas L. Hughes to the Secretary, 'Tests of Soviet Fractional Orbital Bombardment System (FOBS)'

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Summary:

Soviet tests of a fractional orbital bombardment system (FOBS) attracted the interest of the US intelligence community because of the unique challenges it posed to defenses. At that point, August 1967, the US had no means to detect a FOBs attack but INR noted that a satellite detection system would be operational during 1970. This was a reference to the secret Defense Support Program (DSP), which would use infrared technology to detect missile launches and reduce any surprise advantage from the FOBs. The Soviets recognized this and later retired their twenty or so ICBMs with FOBs capabilities in 1983.

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To : The Secretary
Through: S/S
From : INR - Thomas L. Hughes

Subject: Tests of Soviet Fractional Orbital Bombardment System (FOBS)

On August 8, the Soviets conducted the eleventh test of what probably is a fractional orbit bombardment system (FOBS). This is the third test in three weeks and suggests a major effort on the part of the Soviets to check out this system prior to deployment.

Testing of this system was first detected in December 1965. Initially there were three firings in a sub-orbital mode to Kamchatka. Beginning in September 1966 the system was tested in an orbital mode. The first two tests were failures and it was not until January 1967 that the first probably successful orbital test occurred. It was followed in March and May by failures. The last three tests, however, apparently were successful and indicate that the main problems plaguing the program probably have been solved.

This system (designated SS-X-6 or OB-1) uses the SS-9 (large) ICBM as the first two stages and adds a new third stage for retro fire back into the atmosphere. We estimate that fired against the US in a fractional orbital mode it could deliver a warhead yielding up to 5 megatons with an accuracy (CEP) of 1.5 to 3 nautical miles.

FOBS deployment will probably be limited in numbers and designed to supplement rather than replace existing ICBMs. Fired in advance of the main

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ICBM force, FOBS could attack some targets in the US from a southerly direction without our present Ballistic Missile Early Warning System (BMEWS) being able to provide tactical warning.* FOBS deployment is unlikely in the foreseeable future to affect the basic strategic balance, and deliberate Soviet attack upon the US will remain extremely unlikely. Soviet strategists probably look on FOBS as useful primarily in a pre-emptive attack. And considering the yield and accuracy of the system, its role initially would probably be limited to attack upon time-urgent, soft targets, such as SAC bases with ground alert aircraft, and key governmental and control centers, such as Washington, D.C. or Omaha.

If FOBS in time are deployed in large numbers, a mass FOBS attack would potentially be detectable during the launch phase, though no detection system is as yet in DOD's program. We understand that it will be mid-1970 before a first R&D satellite detection system will be available and no timetable has been formulated for an operational system.

FOBS can also serve to complicate the US problem of developing an effective ABM defense. This system, whether used across the Arctic as a "depressed trajectory" ICBM or around the globe as a FOBS, would approach the US on a much lower flight path than that of a normal ICBM. The "radar horizon" of FOBS would be approximately 1,000 nautical miles or about four minutes in terms of warning.

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* "TActical warning" refers to warning that an attack has already been launched. "Strategic warning" or notice that a potential enemy intends to attack would not be affected by FOBS deployment, and such prospects as now exist for deriving strategic warning from a whole range of indications--posture of all Soviet military forces, civil defense preparations, leadership activities, political climate, etc.--would not be altered.

The Soviets have the technical capability to improve the current FOBS which has been under test. Boosters larger than the SS-9 are available which could place as much as 60,000 pounds in near earth orbit. This would permit options for maneuvering, multiple orbits, larger or multiple payloads as well as improved accuracy.