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19 December 1961

UNITED STATES SATELLITE RECONNAISSANCE PROGRAM1. General

The quality of photography for photo interpretation purposes as obtained from the Discoverer effort ranges from poor to good with such factors as altitude, weather, light conditions and lens - film emulsion combinations greatly influencing the final product. The photo interpretation quality has steadily improved throughout the Discoverer effort. Initially ground objects of approximately 35 feet dimension were the smallest sizes identified or measured. By late August 1961 the film quality or resolution had been improved to the point that ground objects of 10 to 15 feet dimension could be identified and measured. For comparison it might be noted that U-2 photography permitted identification of ground objects as small as 9 inches with an average ranging from 1 to 3 feet.

2. Significant Intelligence Derived Since June 1961

The six missions have had a major impact in the strategic intelligence field, primarily in the fields of SOVLOC weapons deployment, nuclear energy and supporting activities. Among the most important items discovered or developed are the following:

a. The first Soviet ICEM deployment sites (five launch complexes confirmed with at least 20 pads and one probable launch complex). All uncovered to date have been in the general area of north-central European USSR.

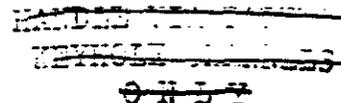
b. The first Soviet MREM deployment sites (60 complexes with a total of 240 pads identified to date), primarily in the Western USSR, with two complexes identified in the Far East and two in Turkestan.

c. The first Soviet SA-3 (low altitude surface-to-air missile) deployment sites (two in the Baltic area).

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- d. The existence of the first missile test range in China.
- e. The continued expansion of the Soviet Tyura Tam and Kapustin Yar missile test ranges.
- f. The extensive SA-2 Surface-to-Air missile deployment; approximately 256 sites identified and located from these six missions as compared to 121 located on all previous U-2 or Discoverer missions and other sources. (435 total SAM sites with more than 2300 pads identified to date in Sino-Soviet Bloc).
- g. The fact that deployment of SA-2 Surface-to-Air missile sites has started in China. (3 SAM sites with 18 pads located at Peiping).
- h. The accurate location of highly sensitive electronic sites associated with Soviet ICBM and space programs.
- i. The identification and location of a system of Soviet regional military storage sites for nuclear weapons and/or warheads plus missile component parts. Additional data on and identification of six other Soviet nuclear weapons stockpile or storage areas.
- j. Identification of a missile engine test facility and another gaseous diffusion plant; a reactor test site; complete plan view layouts and major component designation of the Dodonovo-Kyshtym Atomic Energy complexes; considerable new detailed information on the power grid in the Urals.
- k. The probable negation of areas suspected through collateral sources of significant activities, but for which photographic evidence lends no support.

3. Summary

Out of 23 Discoverer photo reconnaissance efforts, 9 capsules bearing good photography have been recovered. Approximately 5.1 million square miles or 68% of the USSR land mass have been covered by satellite photography with no more than 25% cloud coverage.

Satellite photography in its short 16-month history has become a major and in some areas the prime deliverer of Western intelligence. Its impact has been considerable in all phases of strategic intelligence with

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especially noteworthy effects on U.S. estimates of the Soviet missile threat and U.S. military targeting and war planning efforts.

(One more Discoverer, Mission No. 9029, dated 12-16 December 1961 was successfully accomplished but not yet received at the National Photographic Interpretation Center for readout on this date 19 December 1961).

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