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July 23, 1958

MEMORANDUM FOR MR. GRAY



Noted by Mr. Gray

SUBJECT: Progress Report on Military Reconnaissance Satellite Program

The Secretary of Defense makes four periodic Progress Reports to the President on missile and satellite activities, notably, (1) a monthly report on the ICBM and IRBM Programs, prepared by the Director of Guided Missiles; (2) a monthly report on the Scientific Earth Satellite Program (VANGUARD and EXPLORER), prepared by ARPA; (3) a quarterly report on the Anti-Ballistic Missile Weapon System, prepared by the Director of Guided Missiles; and (4) a quarterly report on the Military Reconnaissance Satellite Program, prepared by ARPA.

Attached is your copy of the second progress report on the reconnaissance satellites, which covers the quarter ending June 30, 1958. The following highlights from the report are of interest:

(1) Development of the military reconnaissance satellite (WS 117 L) and its supporting equipment and facilities progressed on schedule during the quarterly reporting period. (p. 1)

(2) The THOR-boosted flights will have as a second objective the collection of geophysical research data and development testing of a recoverable biosatellite capsule, that is, a capsule containing a living animal. Five biosatellite recovery capsules are to be produced in order to launch, orbit and recover animal subjects. Mice, rats and small primates will be used, with the first launch of four mice programmed for early in 1959. "The animals will suffer no irreversible biological damage." Reentry trajectories will be initiated over Alaska, and recovery after reentry will take place in the vicinity of Hawaii. Current indications favor an aerial recovery at approximately 10,000 feet, rather than sea or land recovery. (pp. 1, 3, 11)

(3) Detailed integration designs were started for the installation of nuclear auxiliary power in the WS 117 L vehicle. In addition to battery power, use of solar auxiliary power is under study. (p. 6)

(4) The first successful measurements of infrared radiation from ICBMs were made from B-47 aircraft during the flight of an ATLAS missile. The infrared scanning system is being designed to give early warning of an enemy ICBM attack, as well as other data. (p. 8)

(5) Five ground stations for tracking and data acquisition will be required in connection with the THOR-boosted WS 117 L vehicle launchings from Cooke Air Force Base, California. One such station will be located at Cooke; one at Oxnard, California; one in Hawaii; and two in Alaska. (p. 9)

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(6) The FY 1959 program is given at \$215 million, which compares with \$65.4 million in FY 1959. (p. 10)

Attached is a copy of the reconnaissance satellite launching schedule, prepared by the Defense Department for use at the Council on July 3, 1958. At that meeting, the Council considered a Defense recommendation for approval of a reconnaissance satellite program which would include eight reconnaissance test vehicles to orbit over the USSR. Action on that recommendation was deferred, pending study and report back to the Council by Dr. Killian (NSC Action No. 1941). Dr. Killian's report is currently scheduled to be made to the Council on July 31.



Attachments (with original only)

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