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14 December 1963

MEMORANDUM FOR MR. McCONE

In accordance with your request through Mr. Scoville this memorandum is a summary of the Satellite Reconnaissance Program and its current status. A current schedule is attached.

The CORONA-MURAL 24" focal length stereo search system is operational. Thirteen of sixteen flights have returned material for exploitation with average resolution of ten to thirteen feet. A small percentage of the material has measured resolution down to seven feet and a portion of the material has resolution ranging up to twenty feet. The system also includes a 1.8 inch focal length framing camera and 85 mm stellar camera unit to enhance the use of the panoramic reconnaissance photography.

In May of 1963 the CORONA-J configuration should be available for test. The CORONA-J is identical with the CORONA-M system except that the vehicle is modified to have two complete recovery systems. The operational plan for this system is to operate for four days and then recover the first capsule. The vehicle may then be placed in an inactive mode and reactivated at any time up to about 20 days (depending on orbital decay parameters). After re-activation a three-day mission and subsequent recovery of the second capsule will complete the active life of the vehicle.

The CORONA-J is dependent on the thrust-assisted Thor-Agena configuration. However, in the event this booster is not immediately successful, a standard CORONA-M system can be flown in the same configuration as currently exists.

As of 11 December 1963, I issued termination instructions for the 722 system. This system was designed to obtain area coverage at eight to ten feet resolution with a 36" focal length panoramic stereo system. This action was predicated on recovery vehicle problems, and I am now considering the possibility of an experiment using a Thor-Agena vehicle and the proven recovery capsule system to obtain data on the performance of the payload and the increase in intelligence content inherent in the better resolution system.

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The LANYARD system is a 66" focal length panoramic system with optional stereo capability designed for reconnaissance of specific targets. This system is scheduled for first flight in February 1963. It is completely dependent on success of the thrust-assisted Thor-Agena vehicle. Recent dynamic resolution tests have obtained 80 to 85 lines/mm at low contrast which is equivalent to about five feet resolution which is the design goal.



The ARGON geodetic and mapping system has had two successful tests. Further flights of this system are deferred until next year. I am now considering a proposal for a new geodetic and mapping system with greater capabilities.

Project 417 is a small weather satellite in support of the satellite photographic reconnaissance program. The first successful launch was accomplished 23 August 1962. As of 5 December, 5600 pictures had been received of which 70% were usable. This satellite will probably continue to provide useful information through mid-January 1963. The next vehicle is ready for launch when the payload now in orbit ceases to function.

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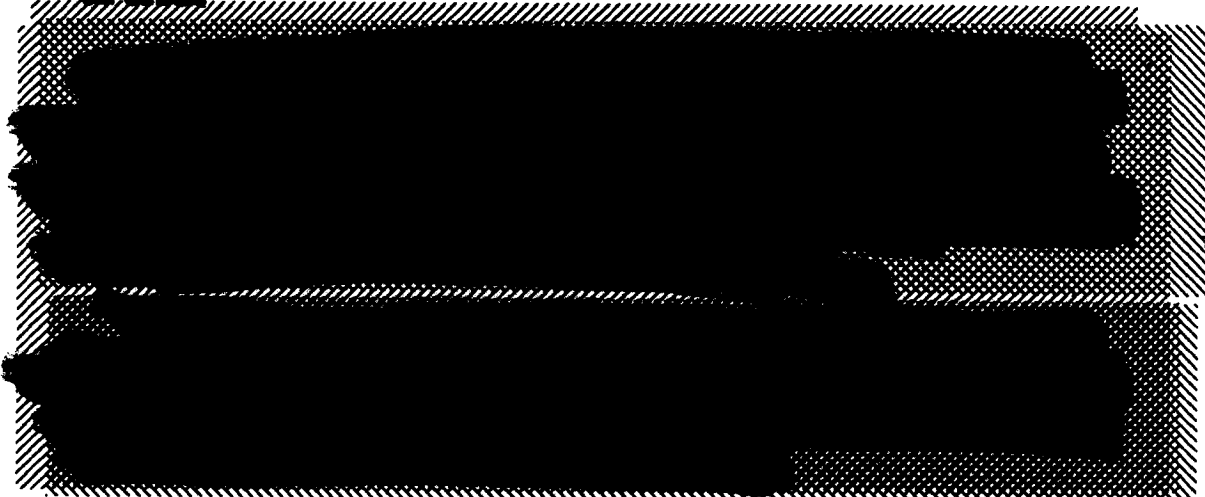
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In the signal intelligence area Project 315 contains both digital and analog payloads. There are eight combinations of receivers and antennas covering the frequency range of [REDACTED]. Three of these combinations may be used as [REDACTED]. This system presently uses the Thor-Agena and later will use the thrust-assisted Thor-Agena when it is available to provide longer lifetimes on orbit.



There has been a major effort made to provide the maximum flexibility within the physical constraints of the overall system, and an important aspect of this effort has been to require an interchangeability of payloads that could be used on the Thor boosted systems. Currently there exists the possibility at R-35 days to interchange the CORONA, ARGON, LANYARD and CORONA-J payload subsystems. It is planned that there will be "on the shelf" payloads available so that the launch rate can be increased over the planned schedule in any particular month. It is also possible to replace the entire Agena and payload so that a signal intelligence payload can be substituted for a photographic payload and vice versa, subject to the availability of SIGINT configured Agenas in a flight ready status.

In August of 1963 and every other month thereafter we have programmed a CORONA-J vehicle to be available which will not necessarily be flown in those months. The purpose is to provide a relatively quick-reaction capability which will allow reconnaissance flights to be executed rapidly in future emergency situations. Our launch pads will, however, restrain us from maintaining a sustained rate of more than three Thor-Agenas per month.

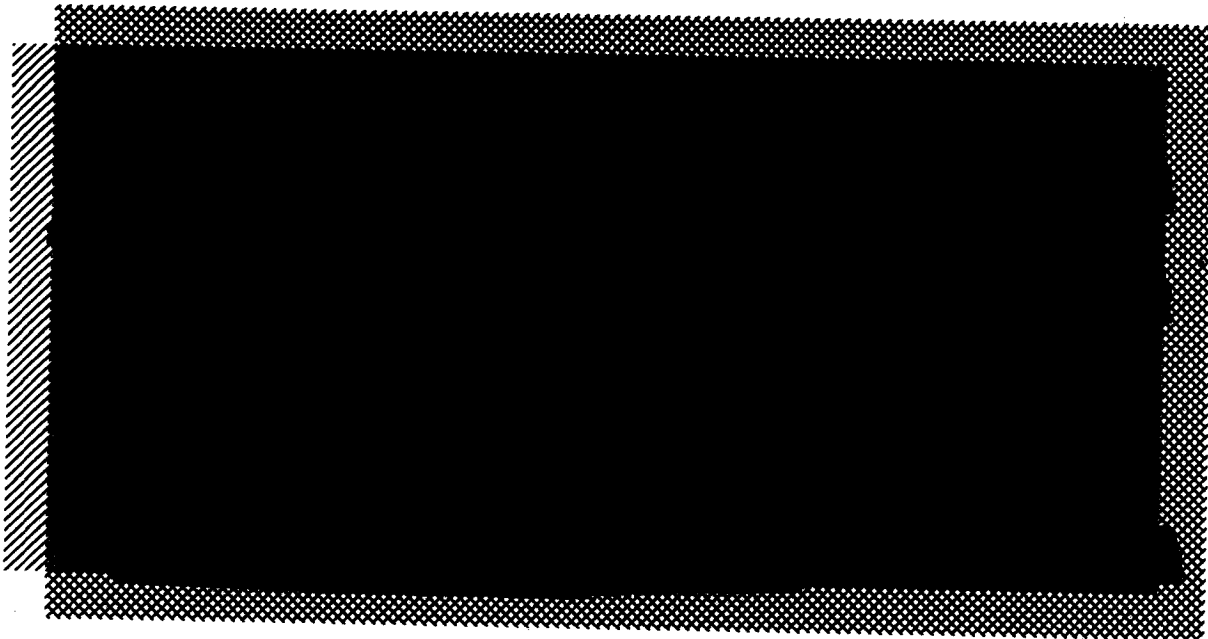
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Signed

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Joseph V. Charyk
Director
National Reconnaissance Office

cc: Mr. McNamara
Mr. Gilpatric

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