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THE SECRETARY OF DEFENSE
WASHINGTON

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August 18, 1960

Dear Mr. President:

A summary of progress on the Military Space Projects during March, April, and May 1960 is attached.

During the subsequent period to date, the following events of interest have occurred.

DISCOVERER XIII was launched from Vandenberg Air Force Base and successfully placed into orbit on 10 August 1960. On 11 August, a highly-instrumented data capsule was ejected from the satellite on its 17th orbital pass and was retrieved from the water in the Pacific Ocean recovery area by a helicopter from an on-station recovery ship. Tracking stations reported continuous bearings on the capsule during its half-hour descent and aircraft reported visual sighting of the capsule in the water. Cloud cover apparently prevented airborne recovery. This is our first successful recovery of a data capsule from an orbiting satellite.

DISCOVERER XII was launched from Vandenberg Air Force Base on 29 June. The powered flight trajectories of the THOR booster and AGENA second-stage vehicles were normal. A malfunction, however, apparently occurred in the horizon scanner which resulted in a pitch down attitude and caused the satellite vehicle to re-enter the atmosphere.

The SAMOS and MIDAS Projects are, in general, on schedule and are progressing satisfactorily.

TRANSIT 2A was launched into orbit from the Atlantic Missile Range on 22 June using the THOR-ABLE SEAN launching vehicle combination. The **TRANSIT 2A** satellite carried a Naval Research Laboratory radiation satellite as a pick-a-back package. In-orbit separation of the two payloads was successfully accomplished. This is the first time that two satellite payloads have been placed into orbit by one launching vehicle. All experiments in the satellites are functioning properly and extremely useful data are being obtained for further development of the satellite navigational system.

With great respect, I am

Faithfully yours,



Signed
THOMAS S. GATES

Attachment

The President

The White House

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SUMMARY

DISCOVERER PROJECT (Research and Development Satellites)

DISCOVERER XI was launched from Vandenberg Air Force Base on 15 April. The powered flight trajectory of the THOR-AGENA launching vehicle and orbital injection were excellent. All program objectives were attained with the exception of capsule recovery. Successful recovery was prevented by capsule ejection on a higher than nominal re-entry trajectory. Intensive testing of recovery system components has been initiated to provide maximum probability of successful recovery on future flights.

All AGENA "A" vehicles and the first AGENA "B" vehicle were delivered during March.

The construction contract for the Vandenberg Air Force Base propellant storage and disposal facility was awarded in April with completion scheduled for September. The conversion of launch pad 5 at Vandenberg Air Force Base to AGENA "B" capability has been started.

RAMOS PROJECT (Reconnaissance Satellites)

Systems checks of the second-stage AGENA vehicle for the first RAMOS flight in September are nearing completion with delivery to Santa Cruz Test Base scheduled for June. The vehicle will be the first of three to carry a dual visual-ferret payload.

Subsystem testing of the first visual (photographic) payload has been completed successfully and payload AGENA capability established. The optical glass for two of the 66-inch, f/5 lenses for the visual recovery system (E-5) payload has been delivered from West Germany.

Subsystem tests of the first two ferret reconnaissance system payloads were completed in March. The first electromagnetic ferret payload was aligned with the visual component test payload and the dual package was installed in the AGENA vehicle. Systems testing of the complete installation was started in March.

The missile assembly building at Vandenberg Air Force Base was completed during March 1960. Construction was started on the technical support and laboratory buildings.

At Point Arguello, launch pad 1 was completed in March and launch pad 2 was completed in May. The construction contract for the launch technical support buildings was awarded in April.

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MIDAS PROJECT (Very Early Warning Satellites)

The second MIDAS flight test vehicle was launched successfully from the Atlantic Missile Range on 24 May. Orbital performance was outstanding. A total of thirty minutes readout time was recorded during the first two passes.

Preliminary planning and design work was authorized in support of two additional MIDAS flights using THOR/AGENA vehicles obtained from the DISCOVERER Program.



A study is being made of the feasibility of extending MIDAS operational system capability to provide world-wide coverage.

Procurement has been authorized for a third Programmable Integrated Control Equipment (PICE) unit as part of the interim MIDAS equipment at the New Boston, New Hampshire tracking station. This unit will be similar to the PICE units at the Satellite Test Center and at Vandenberg Air Force Base.

Construction of the Vandenberg Air Force Base data acquisition and processing building was essentially complete in May and ready for installation of technical equipment.

TRANSIT PROJECT (Navigation Satellites)

TRANSIT 1B was launched into orbit on 13 April 1960 by a THOR-ABLE SEAR vehicle from the Atlantic Missile Range. TRANSIT tracking operations and analysis of telemetered data indicate that the operation of all equipment is normal.

The third attempt to perform a TRANSIT-on-DISCOVERER experiment was successful in the launching of DISCOVERER XI satellite into orbit on 15 April. The TRANSIT equipment is performing well.

All seven TRANSIT receiving stations began tracking TRANSIT 1B satellite from the time of its launch. These stations also began tracking TRANSIT-on-DISCOVERER with the launch of DISCOVERER XI. The tracking stations have been giving excellent performance.

COURIER PROJECT (Communications Satellites)

The two launchings for COURIER, the delayed repeater satellite, originally scheduled for 19 July and 1 September 1960 were rescheduled for 16 August and 4 October because of needed modifications in the second stage of the THOR-ABLE SEAR launch vehicle.

Development and testing of the two COURIER satellite vehicles and of the equipment at the two ground stations at Puerto Rico and Fort Monmouth, New Jersey are proceeding satisfactorily on schedule.

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The three previous programs, ~~SWEEP~~, ~~TACKLE~~ and ~~DEEPER~~, were modified into a single research and development program, ~~ADVENT~~, for an instantaneous repeater satellite in a 24-hour synchronous (hovering) equatorial orbit.

The research and development phases and the determination of management responsibilities for ~~ADVENT~~ are undergoing study.

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