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HEADQUARTERS
THOR BALLISTIC MISSILES CENTER
UNITED STATES AIR FORCE
Air Force Unit Post Office
Los Angeles 45, California

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REPLY TO
ATTN OF

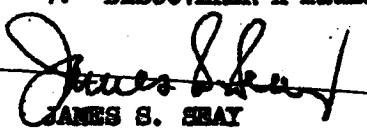
LBZJS/Maj. E. H. Brass/ea/2714

5 February 1960

SUBJECT: DISCOVERER IX Launching

TO: LEG

1. Set forth below is a suggested item for the AMC Diary describing the results of the launching of DISCOVERER IX.
2. DISCOVERER IX was launched at 1051 hrs, 4 February 1960 but failed to achieve orbit. Exact cause or causes of orbital failure are unknown; however, the following irregularities in launch operations are presumed to be the cause of non-orbit.
 - a. Failure of umbilical mast to retract during lift-off caused the helium quick disconnect to be torn from the AGENA vehicle resulting in loss of pressure in AGENA propellant pressurization spheres.
 - b. THOR booster main engine cut-off occurred at approximately 145 seconds, which would be approximately 20 seconds earlier than the nominal burning time resulting in a range of only 48 nautical miles vs a nominal of 85 nautical miles and an altitude of 33 statute miles vs a nominal of 47 statute miles.
 - c. AGENA separation was apparently normal, however, preliminary data available indicates that the vehicle was unstable during ignition burning. AGENA burning lasted only 17 seconds during which the vehicle continued to be unstable with final tumbling being the suspected cause of the engine shut down because of the lack of propellant.
 - d. Failure of the telemetry ship to establish contact on the acquisition frequencies coupled with the initial calculations that maximum velocity attained was only 9000 feet per second, it is presumed that orbit was not achieved.
3. All telemetry records are being flown to IASD for reduction and analysis for more definitive causes of failure to orbit.
4. DISCOVERER IX launch is not scheduled before 18 February 1960.


JAMES S. GRAY
Lt Colonel, USAF
Chief, Satellite Systems

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