

JOINT MESSAGEFORM				SECURITY CLASSIFICATION [REDACTED]	
SPACE BELOW RESERVED FOR COMMUNICATION CENTER					
L111					
PRECEDENCE		TYPE MSG (Check)		ACCOUNTING SYMBOL	ORIG. OR REFERS TO
ACTION		BOOK	MULTI	SINGLE	CLASSIFICATION OF REFERENCE
FROM:					SPECIAL INSTRUCTIONS
6595 AEROSPACE TEST WG VANDENBERG AFB, CALIF.					CLASSIFICATION CHANGED TO SECRET APR 1966 DOWNGRADED AT 5 YEARS DECLASSIFIED AFTER 12 YEARS 000 DATED 12-1-88
TO:					
SPACE SYSTEMS DIV LOS A CALIF					
VWZD - 9-10-278					
SUBJECT: 8-HOUR LAUNCH FLASH REPORT					
<p>I. A VEHICLE CONSISTING OF THOR BOOSTER NO. <u>352</u> AND AGENA B ORBITAL STAGE NO. <u>1134</u> WAS LAUNCHED ON THE FIRST ATTEMPT FROM VAFB COMPLEX 75-3, PAD 4, AT 1135:38.77 PDT ON 9 OCTOBER 1962. THE PRIMARY LAUNCH OBJECTIVE, TO PLACE THE AGENA SATELLITE WITH PAYLOAD IN A NEAR-POLAR ORBIT, WAS ACCOMPLISHED; HOWEVER, THE TRAJECTORY WAS SIGNIFICANTLY ABOVE NOMINAL DUE TO LOSS OF THE BTL GROUND GUIDANCE AND COMMAND SYSTEM DURING THOR BOOST. THIS RESULTED IN THE ABSENCE OF GROUND COMPUTED STEERING COMMANDS, EVENT COMMANDS, AND AGENA DISCRETE COMMANDS. AIRBORNE BACKUP SYSTEMS WERE EFFECTIVE IN SIGNALLING CRITICAL EVENTS</p>					
SYMBOL		SIGNATURE			
TYPED NAME AND TITLE (Signature, if required)		TYPED (or stamped) NAME AND TITLE			
C. S. WALLER, LT. COL USAF		22 OCT Hqs			
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AND THUS PERMITTED ORBITAL ATTAINMENT DESPITE THE LOSS OF RADIO GUIDANCE. THE VTS RADAR PLOTBOARD INDICATED THE FOLLOWING APPROXIMATE INJECTION CONDITIONS: ALTITUDE, 210 STATUTE MILES; PAD REFERENCED VELOCITY, 25,200 fps; ELEVATION FLIGHT PATH ANGLE, APPROXIMATELY PLUS ONE DEG; AZIMUTH FLIGHT PATH ANGLE, APPROXIMATELY 173 DEG. THE ORBITAL PERIOD ATTAINED APPEARS TO BE ABOVE NOMINAL, BASED ON FIRST PASS ACQUISITION. PRELIMINARY VALUES OF SIGNIFICANT LAUNCH EVENTS ARE:

LIFTOFF (1135:38.77 PDT)	ZERO
STEERING INITIATED	NONE
MECO (PROPELLANT DEPLETION)	147.18 SEC
VECO	156.12 SEC
ENABLE D1 AND D2 (S2)	NONE
D1 ON	NONE
D1 OFF	NONE
D2 ON	NONE
D2 OFF	NONE
SEPARATION COMMAND (TIMER BACK-UP)	163.7 SEC
SEPARATION COMPLETE	166.1 SEC
ULLAGE ROCKET IGNITION	194.7 SEC

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PAGE
NR
2NR OF
PAGES

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AGENA ENGINE IGNITION

106.7 SEC

AGENA THRUST ATTACHMENT (90 PER-

CENT P₀)

107.9 SEC

AGENA BURNOUT (70 PER CENT P₀)
(PROPELLANT DEPLETION)

452.1 SEC

VTS VERLORT RADAR FADE

540 SEC

VTS AGC/BEACON BEACON FADE

564 SEC

VTS TELEMETRY DATA FADE (LINK 1) 569 SEC

II. ALL BOOSTER SUBSYSTEMS PERFORMED SATISFACTORILY EXCEPT THE GROUND GUIDANCE SYSTEM, WHICH LOST THE MISSILE (MISSILE BOMB GUIDANCE EQUIPMENT) BEACON SIGNAL 70 SEC AFTER LIFT-OFF. TELEMETRY DATA INDICATE THAT THE MISSILE MAGNETRON TRANSMITTER WAS FUNCTIONING NORMALLY AT THE TIME AND SUBSEQUENT TO THE TIME THAT THE GROUND-RECEIVED SIGNAL FADED. THE SIGNAL FADE WAS NOT ABRUPT; THAT IS, APPROXIMATELY ONE SEC ELAPSED BETWEEN A GOOD SIGNAL AND NO SIGNAL. DESPITE CONTINUED INTERROGATION AND BEACON RESPONSE, THE GROUND RECEIVER DID NOT RE-ACQUIRE THE BEACON SIGNAL. POST-LAUNCH TEST OF THE GROUND EQUIPMENT INDICATED THAT IT WAS FUNCTIONING CORRECTLY. THE EXACT CAUSE OF SIGNAL LOSS HAS NOT BEEN DETERMINED. DUE TO THE LOSS OF TRACK NO STEERING ORDERS NOR DISCRETE COMMANDS WERE TRANSMITTED.

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PAGE
NO.NO. OF
PAGES

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III. ALL AGENA VEHICLE SUBSYSTEMS PERFORMED SATISFACTORILY DURING LAUNCH TO PROVIDE ADEQUATE TRAJECTORY CONDITIONS AT AGENA ENGINE SHUTDOWN; HOWEVER, THE FOLLOWING DISCREPANCIES WERE NOTED:

A. DUE TO THE LOSS OF GROUND GUIDANCE DURING THE BOOST PHASE, TIME-TO-FIRE, VELOCITY-TO-BE GAINED ADJUSTMENTS, AND SEPARATION COMMAND WERE NOT PROVIDED. CONSEQUENTLY, SEPARATION AND IGNITION WERE SIGNALLED BY THE D-TIMER AFTER PREDETERMINED INTERVALS FROM LIFTOFF. AGENA ENGINE SHUTDOWN OCCURRED DUE TO PROPELLANT DEPLETION SINCE SUFFICIENT IMPULSE WAS NOT AVAILABLE TO SATISFY THE UNCORRECTED VALUE OF VELOCITY-TO-BE GAINED. THE INTEGRATOR DATA INDICATE THAT SHUTDOWN OCCURRED AT A VELOCITY GAIN APPROXIMATELY 170 fps LESS THAN THAT REQUIRED TO SATISFY THE UNCORRECTED INTEGRATOR SETTING OF 16,756 fps.

B. HEAVY RADAR INTERFERENCE IN THE BEACON SIGNAL CHANNEL RAISED THE ACTIVITY LEVEL TO PEAKS IN EXCESS OF 1200 pps; HOWEVER, NEGLIGIBLE COUNTDOWN IS REFLECTED IN THE BEACON POWER CHANNEL, WHICH PROVIDED THE VERLORT RADAR WITH A GOOD TRACKING SIGNAL.

AT THE TIME OF SIGNAL FADE AT VTS, ALL VEHICLE SUBSYSTEMS WERE FUNCTIONING NORMALLY AND THE ORBITAL

SYMBOL

PAGE

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PAGE

NO

SECURITY CLASSIFICATION

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TIMER WAS SET AT 5439 SEC (STEP 19), IN THE RESET-ON POSITION, IN THE INCREASE MODE, AND ALTERNATE RE-ENTRY DISARM STATE.

IV. THE COUNTDOWN WAS INITIATED AT 0330 PDT AND PROGRESSED TO LIFTOFF WITH 2 HOLDS TOTALING 35 MIN.

HOLD NO. 1 WAS IMPOSED AT 1000 FOR 15 MIN TO ADJUST THE COUNTDOWN TO A CHANGE IN THE LAUNCH WINDOW FROM 1100 TO 1115.

HOLD NO. 2 WAS IMPOSED AT 1100 FOR 20 MIN DUE TO TRAINS IN THE HAZARD AREA.

DURING THE COUNTDOWN, THE FOLLOWING TECHNICAL DIFFICULTIES WERE ENCOUNTERED:

1. THE LANDLINE INDICATIONS OF AGENA LIFEBOAT SPHERE TEMPERATURE AND FUEL TANK TEMPERATURE WERE INOPERATIVE THROUGHOUT THE COUNTDOWN.

2. IN TASK 10, AFTER PREPRESSURIZATION, IT WAS NECESSARY TO REVERIFY LIFEBOAT CONTROL GAS SPHERE PRESSURIZATION BY REFERRING TO THE TELEMETRY READOUT AND BY OFF LOADING ~~ON~~ OF CONTROL GAS FROM 2000 psi TO 1400 psi AND THEN RELOADING.

3. IN PHASE V, THE TELEMETRY INDICATION OF THOR PITCH ATTITUDE SIGNAL WAS FOUND TO BE OUT OF CALIBRATION.

PAD DAMAGE WAS NORMAL AND THE NORMAL TURNAROUND

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PAGE

NR

NR OF

PAGE

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5

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16595 AEROSPACE TEST WG VANDENBERG AFB, CALIF.

SCHEDULE CAN BE MAINTAINED.

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PAGE
NR 6

NR OF
PAGES

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