Vehicle 4D Gen

JOINT MESSAGEFORM

SECRET [redacted]

AREA BELOW RESERVED FOR COMMUNICATION CENTER

LXV

PRECEDENCE	TYPE MSG (Check)			ACCOUNTING SYMBOL	ORIG. OR REFERS TO	CLASSIFICATION OF REFERENCE
ACTION:	BOOK	MULTI.	SINGLE			
INFO			X			

FROM: 6596th AEROSPACE TEST WING
VANDENBERG AFB, CALIF., VWZD

SPECIAL INSTRUCTIONS

TO:
SPACE SYSTEMS DIVISION, LOSA, CALIF.

Subj: EIGHT-HOUR FLASH REPORT

I. SUMMARY 12-6-266

A VEHICLE CONSISTING OF SLV-2A BOOSTER NO. 362 AND S-01A ORBITAL STAGE NO. 1161 WAS LAUNCHED ON THE SECOND ATTEMPT FROM VAFB COMPLEX 75-3, PAD 4, AT 1658:38.03 PDT, ON 12 JUNE 1963. THE PRIMARY LAUNCH OBJECTIVE, TO PLACE THE S-01A SATELLITE WITH PAYLOAD IN A NEAR-POLAR ORBIT, WAS ACCOMPLISHED. BOTH GROUND GUIDANCE TRAJECTORY EVALUATION AND THE REPORTED FIRST PASS ORBITAL PARAMETERS CONFIRM THAT NEAR NOMINAL TRAJECTORY CONDITIONS EXISTED AT S-01A ENGINE SHUTDOWN. CONTROL GAS CONSUMPTION WAS EXCESSIVE DURING THE S-01A THRUST INTERVAL.

DATE 12 | TIME OF ORIGIN AES
MONTH JUN | YEAR 63

WRITER
SYMBOL
TYPED NAME AND TITLE (Signature, if required) F. L. WRIGHT, MAJ, USAF
PHONE 266/3247 | PAGES (Including This) 2 | NO. OF ATTMTS 1
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DECLASSIFIED AFTER 12 YEARS
DOD DIR 5200.10

DD FORM 1 MAY 58 173 REPLACES DD FORM 173, 1 OCT 62, WHICH WILL BE USED UNTIL EXHAUSTED

II. SIGNIFICANT EVENTS

PRELIMINARY VALUES OF SIGNIFICANT LAUNCH EVENTS ARE:

LIFTOFF (16:38:03 EDT)	ZERO
WEIGHTOUT ON SOLID MOTORS	27-28 SEC
SOLID MOTOR THRUST TERMINATION	39 SEC
SOLID MOTOR SEPARATION SIGNAL	70.69 SEC
SOLID MOTOR JETTISON	70.72 SEC
[redacted]	92.52 SEC
[redacted]	140.15 SEC
[redacted]	157.08 SEC
SEPARATION COMMAND (S-2)	161.79 SEC
SEPARATION COMPLETE	164.09 SEC
ULLAGE ROCKET IGNITION	166.03 SEC
S-2A ENGINE IGNITION	169.04 SEC
S-2A THRUST ATTAINMENT (90 PERCENT PC)	178.22 SEC
BEGIN S-2A STEERING	180.52 SEC
END S-2A STEERING	360.91 SEC
ENABLE S-2A VELOCITY METER	363.31 SEC
S-2A ENGINE SHUTDOWN (VELOCITY METER)	411.15 SEC

FROM:

VTS VELOCITY RADAR FINAL MODE 4 413 SEC

VTS TELEMETRY DATA FADE (LINK 1) 456 SEC

VTS TELEMETRY SIGNAL STRENGTH FADE (LINK 2) 460 SEC

VTS TELEMETRY SIGNAL STRENGTH FADE (LINK 3) 462 SEC

VTS TELEMETRY SIGNAL STRENGTH FADE (LINK 4) 466 SEC.

III. SLV-2A PERFORMANCE

ALL SLV-2A SUBSYSTEMS PERFORMED ADEQUATELY FOR ACHIEVEMENT OF THE PRIMARY TEST OBJECTIVES.

IV. COMMAND GUIDANCE

PERFORMANCE OF THE COMMAND GUIDANCE SYSTEM WAS SATISFACTORY. QUICK-LOOK EVALUATION OF INJECTION CONDITIONS AND ORBITAL PARAMETERS AT GUIDANCE TERMINATION PREDICTED AN INJECTION ALTITUDE OF 110.45 NM (NOMINAL: 109.45 NM), INJECTION FLIGHT PATH ANGLE OF PLUS 0.35 DEG (NOMINAL: PLUS 0.12 DEG), ORBITAL PERIOD OF 90.75 MIN (NOMINAL: 90.89 MIN), AND INCLINATION ANGLE OF 81.89 DEG (NOMINAL: 81.80 DEG). ORBITAL PARAMETERS REPORTED AFTER REV 1 ARE: PERIGEE ALTITUDE OF 109 NM (NOMINAL: 110.10 NM), APOGEE ALTITUDE OF 241 NM (NOMINAL: 237.90 NM),

ECCENTRICITY OF 0.0324 (NOMINAL: 0.0277), PERIOD OF 90.34 MIN (NOMINAL: 90.34 MIN), AND INCLINATION ANGLE OF 81.39 DEG (NOMINAL: 81.39 DEG).

V. S-IVA PERFORMANCE

ALL S-IVA VEHICLE SUBSYSTEMS PERFORMED SATISFACTORILY DURING LAUNCH TO PROVIDE ADEQUATE ORBITAL INJECTION CONDITIONS AT ENGINE SHUTDOWN. CONTROL GAS CONSUMPTION WAS EXCESSIVE DURING THE THRUST INTERVAL. TOTAL GAS CONSUMPTION THROUGH SIGNAL FADE WAS APPROXIMATELY 15 LBS., 14 LBS. OF WHICH WERE EXPENDED DURING ENGINE BURN. GAS VALVE ACTIVITY, AND A 3.4 DEG OFFSET IN ROLL GYRO OFFSET ARE INDICATIVE OF THE PRESENCE OF A SIGNIFICANT EXTRANEOUS ROLL TORQUE DURING THE THRUST INTERVAL. AT THE TIME OF TELEMETRY SIGNAL FADE AT VTS, THE ORBITAL TIMER WAS SET AT 9454 SEC (STEP 349) IN THE RESET-ON POSITION, IN THE INCREASE MODE, AND ALTERNATE RE-ENTRY DISARM STATE.

VI. SPACE-GROUND COMMUNICATIONS

TELEMETRY DATA FROM ALL LINKS WERE SATISFACTORILY RECEIVED AND RECORDED.

THE VERLORT RADAR EXPERIENCED DIFFICULTY IN MAINTAINING CONTINUOUS TRACK OF THE VEHICLE DUE TO WEAK SIGNAL STRENGTH RETURN FROM THE S-BAND BEACON. INTERMITTENT TRACK STARTED AT 265 SEC WITH 6 PERIODS OF TARGET LOSS RANGING FROM 2 TO 20 SEC. DURATION EACH. FINEL SIGNAL LOSS OCCURRED AT 413 SEC AT AN ANTENNA ELEVATION ANGLE OF 1 DEGREES. NO EXTRANEOUS RADAR INTERFERENCE WAS EXPERIENCED.

VII. COUNTDOWN

LAUNCH WAS ACCOMPLISHED ON THE SECOND ATTEMPT. THE FIRST COUNTDOWN WAS INITIATED AT 0630 PDT ON 11 JUNE 1963 AND WAS CANCELLED IN TERMINAL COUNT AT 1800 PST DUE TO A PROBLEM ENCOUNTERED DURING SLV-2A ENGINE GIMBAL CHECKS.

THE FINAL COUNTDOWN WAS INITIATED AT 0800 PDT ON 12 JUNE 1963 AND PROCEEDED TO LIFTOFF WITH NO HOLDS IMPOSED. WORK ON SOME TASKS WAS ABBREVIATED BECAUSE THE VEHICLE WAS PLACED IN A LAUNCH STATUS ON THE PREVIOUS DAY. IN TASK 10 THERE WAS A 10 MIN DELAY DUE TO CONFLICT WITH ANOTHER OPERATION AT PALC 1. TASKS 14 AND 15 WERE DELETED BECAUSE THE

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CRUCIAL STAGE HAD BEEN TANKED DURING THE PREVIOUS COUNTDOWN.

VII. AEROSPACE GROUND EQUIPMENT (AGE)

THE AEROSPACE GROUND EQUIPMENT PERFORMED SATISFACTORILY TO SUPPORT CHECKOUT AND LAUNCH OF THE VEHICLE. THE FOLLOWING PROBLEMS WERE ENCOUNTERED:

1. THE AIR CONDITIONING EQUIPMENT DID NOT MAINTAIN PAYLOAD BLANKET TEMPERATURE WITHIN TOLERANCE.

2. ONE AGE NITROGEN PRESSURE TRANSDUCER MALFUNCTIONED.

3. TWO GAS PRESSURE REGULATORS ON THE MAST REQUIRED REPEATED RESETTING.

IX. PAD DAMAGE

PAD DAMAGE WAS NORMAL. REHABILITATION CAN BE ACCOMPLISHED WITHIN THE TURNAROUND SCHEDULE.

1 APR 1986

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