

2-12-81D (see file)

SECURITY CLASSIFICATION **[REDACTED]**

JOINT MESSAGEFORM

CLASSIFICATION CHANGED TO **[REDACTED]** RMS SC

By Authority of **AFR 205-2 LIV** 8030426
[Signature] 7 APR 1966 Cp 20/6

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

FROM: **6595 AEROSPACE TEST WG VANDENBERG AFB, CALIF.**

TO: **SPACE SYSTEMS DIV LOS A CALIF
VWZD - 26 - 10 - 291 - S**

SUBJECT: **8 HOUR LAUNCH FLASH REPORT**

I. A SATELLITE VEHICLE CONSISTING OF SLV-2 BOOSTER NO. 353 AND A S-01A ORBITAL STAGE NO. 1401 WAS LAUNCHED ON THE SECOND ATTEMPT FROM VAFB COMPLEX 75-1 PAD 2 AT 0914:39.20 PDT ON 26 OCTOBER 1962. THE PRIMARY LAUNCH OBJECTIVE, TO PLACE THE S-01 SATELLITE WITH PAYLOAD IN A ECCENTRIC ORBIT WITH AN INCLINATION OF 70 DEG WAS ACCOMPLISHED. THE VTS RADAR PLOTBOARD INDICATED APPROXIMATE NOMINAL TRAJECTORY UP TO LOSS OF RADAR TRACK SHORTLY BEFORE AGENA SHUTDOWN. PRELIMINARY ORBITAL PARAMETERS ARE REPORTED AS:

	<u>NOMINAL</u>	<u>ACTUAL</u>
PERIGEE (NM)	114.27	109
APOGEE (NM)	3036.31	3069
PERIOD (MIN)	148.58	149.1
INCLINATION (DEG)	69.92	70.0

DATE 26	TIME
MONTH oct	YEAR 1962

SIGNATURE **[REDACTED]**

WRITER TYPED NAME AND TITLE (Signature, if required) PHONE 86 [REDACTED] 1 [REDACTED]	TYPED (or stamped) NAME AND TITLE DOWNGRADED AT 3 YEAR INTERVAL DECLASSIFIED AFTER 12 YEARS DOD DIRECTIVE 5200.10
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6595 AEROSPACE TEST WG VANDENBERG AFB, CALIF.

PRELIMINARY VALUES OF SIGNIFICANT LAUNCH EVENTS ARE:

LIFTOFF 0914:39.28 PDT	ZERO
STEERING INITIATED	90.95 SEC
MECO (M1)	147.76 SEC (PROPELLANT DEPLETION)
VECO	156.70 SEC
ENABLE D1 AND D2 (S2)	152.05 SEC
D1 ON	155.33 SEC
D1 OFF	158.17 SEC
D2 ON	158.50 SEC
D2 OFF	168.48 SEC
SEPARATION COMMAND (S3)	169.06 SEC
SEPARATION COMPLETE	171.6 SEC
ULLAGE ROCKET IGNITION	188.46 SEC
S-01A ENGINE IGNITION	198.5 SEC
S-01A THRUST ATTACHMENT (90 PER CENT P _c)	199.68 SEC
S-01A BURNOUT (70 PER CENT P _c)	441.65 SEC
S-01A LINK 2 TELEMETRY ACQUISITION	484 SEC
S-01A LINK 3 TELEMETRY ACQUISITION	462 SEC
VTS VERLORT RADAR FADE	439 SEC
VTS TELEMETRY DATA FADE (LINK 1)	478 SEC
ZOMBIE ACTIVE	332 SEC

SYMBOL

PAGE NR

2

NR OF PAGES

SECURITY CLASSIFICATION

INITIALS

DD FORM 173-1
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ZEMBLE PASSIVE

512 SEC

II. ALL SLV-2 SUBSYSTEMS PERFORMED SATISFACTORILY AND, IN RESPONSE TO GROUND GUIDANCE SYSTEM COMMANDS, PROVIDED ADEQUATE COAST APOGEE TRAJECTORY CONDITIONS.

THE S-01A LATERAL AND NORMAL ACCELEROMETERS INDICATED THAT THE 30 CPS OSCILLATION DURING THE SLV-2 BOOST PHASE, WERE SIGNIFICANTLY GREATER IN AMPLITUDE THAN THAT OBSERVED ON ANY PREVIOUS SLV-2/01 VEHICLE.

GROUND GUIDANCE SYSTEM DATA INDICATE THAT COAST APOGEE ALTITUDE WAS 108.7 NM (NOMINAL: 107.9 NM) AND THE VELOCITY WAS 10,325 FPS (NOMINAL: 10,282 FPS). THE SLV-2 WAS INTENTIONALLY ALLOWED TO GO TO PROPELLANT DEPLETION FOR MAXIMUM ENERGY FROM THE BOOSTER. THUS, THE COAST APOGEE CONDITIONS EXCEEDED PREDICTED VALUES.

III. ALL S-01A VEHICLE SUBSYSTEMS PERFORMED SATISFACTORILY DURING LAUNCH TO PROVIDE THE PROPER TRAJECTORY CONDITIONS AT S-01 ENGINE SHUTDOWN. THE VELOCITY METER INDICATED A TOTAL ORBITAL STAGE VELOCITY GAIN OF 18,609 FPS, AS COMPARED WITH THE THEORETICAL VELOCITY GAIN CAPABILITY OF 18,640 FPS WITH A NOMINAL ENGINE. SHUTDOWN OCCURRED BY PROPELLANT DEPLETION, AS PLANNED.

HEAVY EXTRANEEOUS RADAR INTERFERENCE PENETRATED THE

S-01A BEACON RECEIVER CHANNEL TO RAISE THE SILENT LEVEL

SYMBOL

PAGE

3

PAGES

SECURITY CLASSIFICATION

INITIALS

DD FORM 1 MAY 55 173-1

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TO PEAKS IN EXCESS OF 1600 PPS. THE INTERFERENCE EXTENDED FROM T+20 SEC TO T+423 SEC. LIGHT INTERFERENCE IN THE BEACON TRANSMITTER CHANNEL WAS ALSO PRESENT. THE MOD II VERLORT RADAR EXPERIENCED PULSE JITTER AND COUNTDOWN ON THE BEACON RETURN SIGNAL BUT MANAGED TO MAINTAIN AUTO-TRACK THROUGHOUT THE TRACKING PERIOD.

SYMBOL

PAGE NO.

NO. OF PAGES

SECURITY CLASSIFICATION

INITIALS

JOINT MESSAGEFORM - CONTINUATION SHEET

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IV. COUNTDOWN

VEHICLE 253/1401 WAS LAUNCHED ON THE SECOND COUNT-DOWN ATTEMPT FROM LAUNCH COMPLEX 75-1, PAD 2, AT 0914^{31.20}0000 PDT.

THE FIRST COUNTDOWN WAS INITIATED AT 0901 PDT ON 24 OCTOBER 1964. IT WAS CANCELLED IN TASK 11 AT 0930 DUE TO A MALFUNCTION IN THE PAYLOAD TELEMETRY SYSTEM POWER SUPPLY. DURING THE COUNTDOWN, ONE TECHNICAL HOLD WAS IMPOSED FROM 0908 TO 0930. THE FOLLOWING PROBLEMS OCCURRED:

a. IN TASK 6, IT WAS FOUND THAT THE S-01A PAYLOAD TELEMETRY LINK NO. 1 HAD NOT BEEN CONNECTED TO AN EXTERNAL ANTENNA. A COAXIAL CABLE WAS PROVIDED BETWEEN THE PAD ANTENNA TOWER AND THE VEHICLE. THIS OPERATION REQUIRED APPROXIMATELY 1 HOUR, BUT DURING THIS PERIOD WORK WAS PERFORMED ON OTHER TASKS.

b. LATER IN TASK 6 (0445), THE TELEMETRY LINK NO. 2 SIGNAL WAS FOUND TO BE ERRATIC. THE LAUNCH WAS CANCELLED AT 0930 DUE TO THIS PROBLEM AND WAS RESCHEDULED FOR 25 OCTOBER. (LATER, HOWEVER, THE LAUNCH WAS RESCHEDULED FOR 26 OCTOBER DUE TO INABILITY TO RESOLVE THE PAYLOAD TELEMETRY PROBLEM.)

SYMBOL

PAGE NR

NR OF PAGES

SECURITY CLASSIFICATION

INITIALS

DD FORM 1 MAY 55 173-1

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c. DURING EVALUATION OF THE TELEMETRY PROBLEM, WEATHER REPORTS FORECASTED HEAVY FOG DURING THE SCHEDULED LAUNCH PERIOD, MAKING IT IMPOSSIBLE TO OBTAIN MANDATORY OPTICAL COVERAGE. A HOLD WAS IMPOSED AT T-175 MIN (8655) (START OF PROPELLANT LOADING) DUE TO WEATHER.

d. AT 0456 PDT, ALL FACILITY POWER AT THE BLOCKHOUSE AND PAD WAS LOST DUE TO AN ACCIDENT WITH A PERSONNEL HIGH LIFT. THE BOOM OF THE HIGH LIFT ENCOUNTERED A POWER LINE WHILE REPAIRS WERE BEING MADE TO THE HIGH LIFT. NO INJURIES RESULTED, HOWEVER, BUT THE FACILITIES HAD TO BE TRANSFERRED FROM COMMERCIAL TO AUXILIARY POWER DUE TO THE DAMAGED POWER LINE. SINCE ACS AND VEHICLE WERE ALREADY ON AUXILIARY POWER, THEIR STATUS WAS NOT AFFECTED BY THE LOSS OF COMMERCIAL POWER.

THE FINAL COUNTDOWN WAS INITIATED AT 0200 PDT, 26 OCTOBER. ONE HOLD OF 1 HR 15 MIN WAS IMPOSED AT T-15 MIN (8745 TO 8900) FOR RANGE CLEARANCE (TRAFFIC AND WEATHER) AND PAD SAFETY. TASKS 1 THROUGH 3 WERE COMPLETED IN AFTERNOON OF 25 OCTOBER IN ANTICIPATION OF

SYMBOL	PAGE NR	NR OF PAGES	SECURITY CLASSIFICATION	INITIALS

FROM:

INTERFERENCE WITH ANOTHER LAUNCH OPERATION. THE FOLLOWING PROBLEMS WERE ENCOUNTERED:

1. RANGE SAFETY DELAYED OPERATIONS IN TASK 6 DUE TO LAUNCH OF ANOTHER VEHICLE.
2. IN TASK 12 (0540), A LEAK OCCURRED IN THE LMSC FUEL FILL LINE. LINE WHERE THE FLEX PORTION OF THE LINE JOINS A METAL FITTING WHICH THREADS TO REVELMENT HARDWARE. THE LINE WAS REPLACED. FUEL WAS DRAINED BACK TO THE TRANSFER SET AND THE LOADING OPERATION REPEATED.
3. IN TASK 13, A FIRE TRUCK STALLED ON THE LAUNCH PAD AND WAS REMOVED BY A TOW TRUCK.
4. IN TASK 14, LMSC AGE FUEL AND OXIDIZER PRESSURE REGULATORS AT THE PAD REQUIRED READJUSTMENT.
5. THE TIMING SIGNAL ON LANGLINE DATA WAS IN ERROR BY APPROXIMATELY 4 HRS 3 MIN.
6. THE LIFTOFF SIGNAL WAS NOT PROPERLY GENERATED. THE UMBILICALS RELEASED BY THE BACK-UP (FLY-AWAY) METHOD.

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VE PAD DAMAGE

AND THERE WAS A SMALL AFTER-FIRE AT THE BASE OF THE LAUNCHER.

NORMAL

PRELIMINARY EXAMINATION INDICATES PAD DAMAGE.

SYMBOL	PAGE NO 7	NR OF PAGES	SECURITY CLASSIFICATION	INITIALS
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