FROM:
6595TH AEROSPACE TEST WING, VANDENBERG AF:B, CALIF.

TO:
SPACE SYSTEMS DIV. LOSA, CALIFORNIA

SUBJECT: EIGHT-HOUR FLASH REPORT 29-10-475

1. SUMMARY

A VEHICLE CONSISTING OF LV-2A BOOSTER NO. 356 AND SS-O1A ORBITAL STAGE NO. 160 WAS LAUNCHED ON THE FIRST ATTEMPT FROM VAFB COMPLEX, 75-3, PAD 4, AT 1319:03, 72 PST ON 29 OCTOBER 1963. THE PRIMARY-LAUNCH OBJECTIVE, TO PLACE THE SS-O1A SATELLITE WITH PAYLOAD IN POLAR ORBIT, WAS ACCOMPLISHED.

THE COUNTDOWN PROGRESSSED SMOOTHLY WITH ONE HOLD OF 51 MIN. IMPOSED FOR RANGE CLEARANCE (TRAIN). THE ABSENT PERFORMANCE OF ALL STAGES (TRADE).
GROUND GUIDANCE AND SPACE COMMUNICATIONS
APPEARED TO BE SATISFACTORY.

THE VERIFOR RADAR AND GROUND GUIDANCE INDI-
CATED THAT THE NOMINAL TRAJECTORY WAS CLOSELY
FOLLOWED THROUGH INJECTION. INFORMATION OB-
TAINED FROM FIRST PASS ACQUISITION INDICATED
THE ATTACHMENT OF AN ADEQUATE ORBIT AND THAT
THE BASIC VEHICLE SUBSYSTEMS WERE FUNCTIONING
SATISFACTORILY.

II. SIGNIFICANT EVENTS
PRELIMINARY VALUES OF SIGNIFICANT LAUNCH
EVENTS ARE:

<table>
<thead>
<tr>
<th>EVENT DESCRIPTION</th>
<th>VALUE</th>
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</thead>
<tbody>
<tr>
<td>JETBRTY (210.03.71 PST)</td>
<td>ZERO</td>
</tr>
<tr>
<td>WSR BURNOUT OF SOLID MOTORS</td>
<td>47.1  SEC</td>
</tr>
<tr>
<td>SOLID MOTOR TERMINAL TERMINATION</td>
<td>42.9  SEC</td>
</tr>
<tr>
<td>SOLID MOTOR JETSON</td>
<td>63.5  SEC</td>
</tr>
<tr>
<td>STEERING INFLATED</td>
<td>92.50 SEC</td>
</tr>
<tr>
<td>STOP STEERING</td>
<td>144.67 SEC</td>
</tr>
<tr>
<td>MECO (3-1)</td>
<td>147.72 SEC</td>
</tr>
<tr>
<td>VECO</td>
<td>153.88 SEC</td>
</tr>
<tr>
<td>SEPARATION COMMAND</td>
<td>161.03 SEC</td>
</tr>
</tbody>
</table>
II. VEHICLE PERFORMANCE

All LV-2A subsystems performed satisfactorily.

All objectives related to the booster were achieved. MECO occurred in response to the
Ground Guidance command.
IV. COMMAND GUIDANCE

PERFORMANCE OF THE COMMAND GUIDANCE SYSTEM
WAS SATISFACTORY. CONTINUOUS TRACK WAS MAINTAINED UNTIL 492.6 SEC WHEN THE MISS WAS SHUT-DOWN BY THE ASCENT TIMER.

CHECK-LIST EVALUATION OF THE TRAJECTORY
V-scope AT GUIDANCE TERMINATION PREDICTED THE
FOLLOWING VALUES:

- INJECTION ALTITUDE: 189.351 NM (NOM: NAV: 189.44)
- INJECTION FLIGHT PATH ANGLE: 0.167 DEG (NOM: NAV: 0.164)
- ORBITAL PERIOD: 99.923 MIN (NOM: NAV: 99.915)
- INCLINATION ANGLE: 99.818 DEG (NOM: NAV: 99.96)

V. SS-4A VEHICLE PERFORMANCE

ALL SS-4A VEHICLE SUBSYSTEMS PERFORMED SATISFACTORILY DURING LAUNCH TO PROVIDE ADEQUATE
ORBITAL INJECTION CONDITIONS AT ENGINE SHUTDOWN.

CONTROL GAS EXPENDITURE WAS SLIGHT.

AT THE TIME OF TELEMETRY SIGNAL FADE AT VTS,
THE ORBITAL TIMER WAS SET AT 5455 SEC (STEP 287)
IN THE ARM-ON POSITION, IN THE (DECREASE)
MORE, AND ALTERNATE RE-ENTRY DISARM STATE.

VI. SPACE-GROUND COMMUNICATIONS

TELEMETRY DATA FROM ALL LINES WERE SATIS-
FACTORY RECEIVED AND RECORDED.

THE WEATHER RADAR MAINTAINED CONTINUOUS
AUTOMATIC TRACK UNTIL HORIZON SIGNAL FADE
TO SEC AFTER RS-41A ENGINE SHUTDOWN.

VII. COUNTDOWN

THE COUNTDOWN WAS INITIATED AT 0325 ON
29 OCTOBER 1963 AND PROCEEDED TO LIFTOFF WITH
ONE TECHNICAL HOLD IMPOSED FROM 1215 TO 1300.

PET FOR RANGE CLEARANCE (TRAINS IN AREA).

THE FOLLOWING PROBLEMS, NONE OF WHICH CAUSED
A DELAY, WERE ENCOUNTERED:

(A) THE RS-41A LINK 2 CHANNEL 10 TELEMETER
COMMUTATOR FAILED TO OPERATE WHEN
COMMAND COMMANDER DURING TASK 8. BUT PERFORMED
SATISFACTORY DURING REPEAT CHECKS IN
TASK 10. FURTHER INVESTIGATION WAS
WAIVED BY THE AIR FORCE.
(B) In Task 16, the blockhouse indication of SS-01A guidance gas pressure read in error due to a defective pressure transducer (AGE). TELEMETRY AND PAD GAS PRESSURE READINGS OF GUIDANCE GAS PRESSURE WERE USED THROUGH THE REMAINDER OF THE COUNTDOWN. ALSO DURING TASK 16, PERSONNEL WERE SENT TO THE PAD TO ADJUST LMSC (AGE) NITROGEN AND HELIUM GAS REGULATORS.

VIII. AEROSPACE GROUND EQUIPMENT (AGE)

The AGE functioned satisfactorily to support checkout and launch of the vehicle with the following exceptions:

(A) LMSC PAD NITROGEN AND HELIUM REGULATORS REQUIRED ADJUSTMENT.

(B) AN AGE PRESSURE TRANSDUCER FOR MEASURING SS-01A GUIDANCE GAS PRESSURE MAL-FUNCTIONED.

IX. PAD DAMAGE

Damage to the pad is considered to be light. The rehabilitation schedule can be maintained.