

JOINT MESSAGEFORM

SECRET/WDG-16-4
~~XXXXXXXXXX~~

SPACE BELOW RESERVED FOR COMMENTS

1960 AUG 11 23 15

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

FROM: CHIEF, AFBMD FIELD OFFICE, VAFB, CALIF

TO: HQ AFBMD, LOS ANGELES 45, CALIF
 HQ 6594TH TEST WING (SATELLITE), SUNNYVALE, CALIF
 LOCKHEED MISSILES & SPACE DIV, SUNNYVALE, CALIF
 LOCKHEED MISSILES & SPACE DIV, VAFB, CALIF (COURIER)
 DOUGLAS AIRCRAFT COMPANY, VAFB, CALIF (COURIER)

INFO: 1ST MISSILE DIVISION, VAFB, CALIF (COURIER)
 AFBMD TECHNICAL EVALUATION STAFF, P.O. BOX 1567, VAFB, CALIF (COURIER)

SECRET/WDG-16-4/1-120

DOWNGRADED AT 3 YEAR INTERVALS,
 DECLASSIFIED AFTER 12 YEARS
 DOD DIRECTIVE 5300.10

LOSA FOR WDZY; 6594TH TW FOR LT COL MATHISON; LMSD/SUNNYVALE FOR DEPT 61-44 (L. F. MORGAN); LMSD/VAFB FOR DEPT 65-44 AND 61-70; DAC FOR R. PURDY. INFO: 1MD FOR COMMAND POST; AFBMD TECH EVAL STAFF FOR MR. E. FISCHEL. SUBJECT: FOLLOW-ON REPORT TO FLASH REPORT, WDG-16-4-11-119, OF LAUNCHING OF DISCOVERER ^{XIV} ~~XIII~~ (NIGHT SHIFT-PRESTO).

1. PRE-LAUNCH PHASE

SYMBOL	SIGNATURE		
WDG-16-4	<i>William F. Heisler</i>		
TYPED NAME AND TITLE (Signature, if required)	TYPED (or stamped) NAME AND TITLE		
HAROLD H. POWELL, JR., MAJ, USAF	WILLIAM F. HEISLER, LT COL, USAF Chief, Satellite Systems Division		
PHONE 8-6734	PAGE NR. 1	NR. OF PAGES 4	
SECRET/WDG-16-4			

CLASSIFICATION CHANGED TO
 SECRET/WDG-16-4
 APR 1968

GP-3
 19/10/04
 392 COMBAT SUPP GP COPY of 80-10404

DATE	TIME
11	
MONTH	YEAR
AUG	1960

AFBMD FIELD OFFICE (WDG-16-4) COVERBACK CT

JOINT MESSAGEFORM - CONTINUATION SHEET

SECURITY CLASSIFICATION

FROM:

CHIEF, AFPMD FIELD OFFICE, VAFB, CALIF

~~CONFIDENTIAL~~

1.1. DISCOVERER ~~XIII~~ ^{XIV} WAS INITIATED AT 0600 PDT ON 10 AUGUST 1980. THE COUNTDOWN ^{Countdown} PROCEEDED SMOOTHLY UNTIL T-150 AT 0945 PDT WHEN AN OPERATIONAL HOLD WAS IMPOSED TO PERMIT THE WORK TO CATCH UP WITH THE COUNT. THIS HOLD WAS RELEASED AT 1101 PDT. SOME DIFFICULTY WITH TRAIN SCHEDULES AND FOG WERE ENCOUNTERED. NEITHER AFFECTED THE FINAL LAUNCH RESULTS. A TECHNICAL HOLD WAS CALLED IN PHASE 5 TO CLARIFY THE STATUS OF THE VERLORT RADAR. THE STATUS OF THE VERLORT RADAR WAS DETERMINED IN A MATTER OF SECONDS AND THE COUNT WAS RESUMED. THE KEY WAS TURNED AT 1321 PDT. THE TOTAL TERMINAL COUNTDOWN TIME WAS FOR 16 MINUTES 30 SECONDS. LIFT-OFF WAS AT 1337:54.42 PDT.

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2. EXIT PHASE

2.1. DURING THE FIRST PART OF THE LAUNCH PHASE THE SEQUENCE OF EVENTS OCCURRED AS FOLLOWS:

LIFT-OFF-----	1259:07.85
	1337:54.42
MECO-----	1259:52.72
	1340:37.39
VECO-----	1260:02.53
	1340:45.86
START OF SEPARATION-----	1260:09.59
	1340:56.33
ORBITAL STAGE IGNITION-----	1261:45.63
	1342:56.85
ORBITAL STAGE BURNOUT-----	1263:41.41
	1344:55.83

2.2. ALL ENGINE PARAMETERS FUNCTIONED NORMALLY. THE THRUST OF THE THOR BOOSTER WAS NOMINAL OR ABOVE AND THE THRUST LEVEL WAS ~~WAS~~ STABLE AND ~~WAS~~ WITHIN THE THOR PERFORMANCE SPECIFICATIONS. THE ENGINE PERFORMANCE OF THE AGENA WAS NOMINAL IN ALL RESPECTS.

delete

2.3. COMMAND 5 (DELAY IGNITION) WAS SENT AND RECEIVED FOR A

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FROM

CHIEF, AFBMD FIELD OFFICE, VAFB, CALIF

24.3

DURATION OF 49.25 SECONDS. HOWEVER, THERE WAS AN ADDITIONAL DELAY IN IGNITION DUE TO ACTION OF THE FAIRCHILD "H" TIME FOR ^{2.6} 2.2 SECONDS FOR A TOTAL EFFECTIVE DELAY OF IGNITION OF ^{26.9} 51.45 SECONDS. COMMAND 6 (REDUCTION IN VELOCITY TO BE GAINED) WAS SENT AND RECEIVED FOR A DURATION OF ^{13.2} 12.9 SECONDS. ORBITAL STAGE SHUT-DOWN OCCURRED BY SIGNAL FROM THE INTEGRATOR.

2.4. ORBITAL INJECTION VELOCITY WAS ^{26,100} 25,800 FPS (INERTIAL REFERENCE). THE INTEGRATOR INDICATED HORIZONTAL VELOCITY GAIN WAS ^{13,400} 13,500 FPS. INJECTION ALTITUDE ALONG THE LOCAL VERTICAL WAS APPROXIMATELY ¹²⁰ 160 STATUTE MILES BASED ON THE LMSD FT MUGU ~~TORRE~~ RADAR DATA (~~PUNCHED TAPE~~). THE FLIGHT PATH DEPARTURE ANGLE WAS APPROXIMATELY ^{172.0} 174.0 DEGREES BASED ON THE FT MUGU RADAR PLOT BOARD CHARTS.

2.5. THE INJECTION ANGLE WAS APPROXIMATELY 0.0 DEGREES BASED ON THE LMSD FT MUGU RADAR CHART.

3. RADAR AND TELEMETRY

3.1. GOOD TRACK WAS ACHIEVED BY THE FT MUGU RADAR FROM ACQUISITION AT ^{T+7} T/20 SECONDS AND LOCK ON AT ^{T+45} T/40 SECONDS UNTIL SIGNAL FADE AND SIGNAL LOSS AT ^{T+501} T/518 SECONDS. THE VAFB RADAR HAD GOOD TRACK UNTIL T/164 SECONDS AT WHICH TIME IT WENT PASSIVE AS PLANNED.

3.2. TELEMETRY RECEPTION AND RECORDING WERE SATISFACTORY AT BOTH VAFB AND FT MUGU, RECEIVING UNTIL T/502 SECONDS. THE DOWN RANGE T/H SHIP HAD A SIGNAL RECEPTION FOR APPROXIMATELY 524 SECONDS STARTING AT T/260. OBSERVATIONS RECORDED ON THE 8TH PASS INDICATED THAT ALL PERTINENT VEHICLE PARAMETERS APPEARED NORMAL. THERE WAS

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NO EVIDENCE OF ATTITUDE INSTABILITY. CONTROL GAS SUPPLY PRESSURE WAS ADEQUATE REMAINING AT OVER 2000 PSI.

4. FOLLOW-ON TO PRIMARY OBJECTIVES

4.1. ALL PRIMARY OBJECTIVES OF THE LAUNCH PHASE WERE ACHIEVED.

5. PAD DAMAGE

5.1. PAD DAMAGE WAS LESS THAN FOR ANY DISCOVERER LAUNCH TO DATE. THERE WAS NO ELECTRICAL OR STRUCTURAL DAMAGE TO THE PAD EXCEPT FOR THE FOLLOWING: A SECTION THREE FEET LONG WAS DESTROYED IN EACH OF THE TWO AGENA AIR CONDITIONING DUCTS, THREE CONDUIT DUCTS, THREE FEET LONG AND TEN INCHES IN DIAMETER AND LOCATED AT THE BASE OF THE MAST, WERE DESTROYED BY THOR ENGINE EXHAUST BLAST. THERE WAS NO SIGNIFICANT DAMAGE TO THE UMBILICAL COUPLINGS OR LINES.

5.2. FIVE WORKING DAYS WILL BE REQUIRED TO REPAIR THE DAMAGE.

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