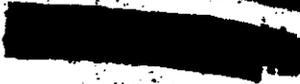


PT78804
NR 804

XKX

S P 158445Z
FM 6595 AEROSPACE TEST WG VAFB CALIF
TO 85D LOSA CALIF
6594 AEROSPACE TEST WG SUNNYVALE CALIF
LMSC SUNNYVALE CALIF
ZEN/LMSC VANDENBERG AFB CALIF
ZEN/DOUGLAS ACFT 80 VANDENBERG AFB CALIF
INFO ZENISTRATAD VANDENBERG AFB CALIF
6555 AEROSPACE TEST WG PATRICK AFB FLA
AFLC WRIGHT PATTERSON AFB OHIO
SBANA NORTON AFB CALIF
85D LOSA CALIF
85D LOSA CALIF



ALL C R 1 / FROM VVZD-15-11-288-S, PRESTO FLASH
55D FOR 85D SENCLN 6594TV FOR COL MOORE SENCON LMSC/SUNNYVALE FOR
WRCA-3 /J.J. DRIEFUSS/ SENCLN LMSC/VAFB FOR DEPT 65-44 SENCLN BAC/
VAFB FOR MR HECKMAN. INFO GLN ISTRATAEROSAPCEDIV FOR COMMAND POST AND
VDOPO SENCLN AFLCSB/VAFB FOR MR YOUNG SENCLN 6555TV FOR COL VIGNALL
SENCLN SBANA/NORTON AFB FOR SBVP SENCLN AFLC/WRIGHT PATTERSON FOR
ICGO. SUBJECT CLN FLASH REPORT ON THE LAUNCHING OF DISCOVERER 35.
1. DISCOVERER 35 CONSISTING OF THOR BOOSTER NO. 326 AND AGENA B
ORBITAL STAGE NO. 1118 WAS LAUNCHED FROM VAFB COMPLEX 75-3 PAD 4 AT
1322.46 PST ON 15 NOV 1961. THE PRIMARY LAUNCH OBJECTIVE CWN TO PLACE

CLASSIFICATION CHANGED TO

SECRET
AFR 205-2
By Authority of *[Signature]* 6 APR 1966

PAGE TWO
THE DISCOVERER SATELLITE WITH PAYLOAD IN A NEAR POLAR ORBIT WAS
ACCOMPLISHED. READINGS FROM THE VTS RADAR PLOTTING BOARD GAVE AN
INJECTION ALTITUDE OF 153 STATUE MILES CWN AN INJECTION INERTIAL
VELOCITY OF APPROXIMATELY 25788 FPS CWN AND AN INJECTION FLIGHT PATH
ANGLE OF ABOUT 8 DEG. TRACKING STATIONS AT KODIAK AND HAWAII HAVE
CONFIRMED ORBITAL STATUS THROUGH RECEPTION OF TELEMETRY AND RADAR
BEACON SIGNALS ON THE FIRST ORBITAL PASS.
B. PRELIMINARY EVALUATION INDICATES THE LAUNCH TEST OBJECTIVES WERE
ACHIEVED AS FOLLOWS GLN /REF. DETAILED TEST OBJECTIVES CWN LMSD
446484 CWN SECTION 2/
A. DISCOVERER BOOSTER - OBJECTIVE ACHIEVED. AT BOOSTER CUTOFF VEHICLE
WAS WITHIN A SPHERE OF 5 NM RADIUS CWN FLIGHT PATH ANGLE
WAS WITHIN PLUS OR MINUS 4 DEG CWN AND VELOCITY WAS WITHIN 500 FPS OF
NOMINAL VALUE. BOOSTER STEERING AND EVENT COMMANDS WERE GENERATED
AND TRANSMITTED SATISFACTORILY BY THE GROUND GUIDANCE SYSTEM AND VEHICLE
RESPONSE TO THE COMMANDS APPEARS TO HAVE BEEN PROPER. HECO OCCURRED
AT T PLUS 147.6 SEC AS A RESULT OF COMMAND FROM THE GROUND GUIDANCE
SYSTEM. VERNIER ENGINE SOLO OPERATION LASTED 8.8 SEC WITH VECO
OCCURRING AT T PLUS 156.4 SEC. SEPARATION WAS INITIATED BY GROUND
GUIDANCE COMMANDS AT T PLUS 162.2 SEC. GROUND GUIDANCE SYSTEM DATA

PAGE THREE

INDICATE THE BOOSTER COAST APOGEE WAS 123.62 NM /NOMINAL CLN 123.54 NM/ AND THE BOOSTER COAST APOGEE VELOCITY WAS 9588 FPS /NOMINAL CLN 9514 FPS /.

B. AGENA AIRFRAME AND ADAPTER - OBJECTIVE ACHIEVED.

NO EVIDENCE OF STRUCTURAL PROBLEMS IN THE AGENA AIRFRAME OR ADAPTER HAS BEEN NOTED. THE RETRO-ROCKETS SATISFACTORILY PROVIDED THE THRUST NECESSARY FOR COMPLETE SEPARATION BY T PLUS 164.8 SEC.

C. AGENA PROPULSION SYSTEM - OBJECTIVE ACHIEVED.

AGENA ENGINE IGNITION OCCURRED IN A NORMAL MANNER AT T PLUS 202.8 SEC AND THE ENGINE OPERATED SATISFACTORILY FOR 237.3 SEC. ENGINE SHUTDOWN OCCURRED AT T PLUS 446.1 SEC ON INTEGRATOR COMMAND. THE INTEGRATOR DATA SHOW A SENSIBLE VELOCITY GAIN OF 16170 FPS DURING ORBITAL STAGE BOOST. THE IMPULSE PROVIDED BY THE AGENA ENGINE WAS SUFFICIENT TO GIVE THE VEHICLE ORBITAL VELOCITY AT FLIGHT INJECTION ALTITUDE.

D. AGENA ELECTRICAL POWER SYSTEM - OBJECTIVE ACHIEVED.

NO EVIDENCE OF AGENA ELECTRICAL POWER SYSTEM PROBLEMS HAS BEEN NOTED.

E. AGENA GUIDANCE AND FLIGHT CONTROL SYSTEM - OBJECTIVE ACHIEVED.

THE AGENA GUIDANCE SYSTEM RESPONDED PROPERLY TO A 5.65 SEC TIME-TO-FIRE CORRECTION AND A 2.93 SEC VELOCITY -TO-BE-GAINED CORRECTION COMMANDED BY THE GROUND

SET ME 26 INI 26

DE WAFB KC

DE SSD KC

HOW NOW AND WHERE FM PLEVUBT

SET ME 27 INI 27K

DE WAFB KC

DE SSD KC

HOW NOW AND WHERE FM PLS DTNNHT

ONCE MORE SET ME 28 INI 28C

KDE WAFB KC

DE SSD KC

HOW NOW WHERE FM

DE WAFB (AND RECD END THRU I LINE "CORRECTION AND A ETC")

DE SSD START WITH THE AGENA GUIDANCE

THE AGENA GUIDANCE SYSTEM RESPONDED PROPERLY TO A 5.65 SEC TIME-TO-FIRE CORRECTION AND A 2.93 SEC VELOCITY -TO-BE-GAINED CORRECTION COMMANDED BY THE GROUND GUIDANCE SYSTEM. VEHICLE ATTITUDE APPEARS TO HAVE BEEN

PAGE FOUR
CONTROLLED SATISFACTORILY DURING THE COAST PHASE AND THE ORBITAL BOOST
PHASE CMN AND CONTROL GAS EXPENDITURE WAS SLIGHTLY HIGHER THAN NOMINAL
DURING BOTH OF THESE PERIODS. ENGINE SHUTDOWN WAS COMMANDED SAT-
ISFACTORILY BY THE INTEGRATOR CMN AND THE D-TIMER PROPERLY CONTROLLED
THE TIME AND SEQUENCE OF ALL PROGRAMMED EVENTS THAT WERE SCHEDULED
TO OCCUR PRIOR TO LOSS OF TELETERED DATA AT VTS.

F. AGENA SPACE COMMUNICATIONS SYSTEM - OBJECTIVE ACHIEVED.
OPERATION OF THE ACQUISITION BEACON AND THE RADAR BEACON WAS
SATISFACTORY. VTS TRACKED THE ACQUISITION BEACON FROM LIFTOFF TO T PLUS
527 SEC AND THE RADAR BEACON FROM LIFTOFF TO T PLUS 482 SEC. AT T
PLUS 511 SEC CMN THE TIME OF TELEMETRY DATA FADE FOR VTS CMN ALL
TELEMETRY CHANNELS WERE OPERATING. AT THIS TIME THE ORBITAL TIMER WAS
SET AT 3466 SEC CMN IN THE RESET-ON POSITION CMN IN THE INCREASE MODE
CMN AND ALTERNATE RE-ENTRY DISARM STATE. NO GROUND COMMANDS WERE
SENT DURING THE ASCENT PHASE.

G. AEROSPACE GROUND EQUIPMENT - OBJECTIVE ACHIEVED.
BOOSTER AND ORBITAL STAGE CHECKOUT WAS SUCCESSFULLY ACCOMPLISHED DURING
THE PRE-LAUNCH COUNTDOWN BY THE AEROSPACE GROUND EQUIPMENT CMN HOWEVER
SEVERAL PROBLEMS OCCURRED. THE AGENA AGE PROPELLANT LOADING EQUIPMENT
MALFUNCTIONED AND LOADED 17 LBS EXCESS OXIDIZER. THE LOAD WAS ADJUSTED

PAGE FIVE
BY DRAINING A SMALL AMOUNT OF OXIDIZER FROM THE VEHICLE BY USE OF A
HAND VALVE. FINAL LOADING OF OXIDIZER FROM THE VEHICLE WAS 3 LBS SHORT
OF NOMINAL BUT WITHIN SPECIFICATION. DURING THE EVALUATION PERIOD
FOLLOWING AGENA PRESSURIZATION CMN A HELIUM LEAK WAS INDICATED ON
BLOCKHOUSE INSTRUMENTATION. EVALUATION SHOWED THAT THE LEAK WAS IN THE
AGE. RATHER THAN DELAY THE LAUNCH FOR REPAIRS CMN THE VEHICLE HELIUM
PRESSURIZATION WAS RE-ACCOMPLISHED DURING TERMINAL COUNTDOWN WITH HELIUM
FLIGHT PRESSURE BEING MAINTAINED BY TOPPING OFF UNTIL UMBILICAL
RELEASE.

PRIOR TO START OF TERMINAL COUNTDOWN CMN BLOCKHOUSE INSTRUMENTATION
INDICATED THAT THE THOR ENGINE REGULATOR DISCHARGE PRESSURE WAS
OSCILLATING. INVESTIGATION SHOWED THAT THE INDICATION WAS ERRONEOUS
AND THE COUNTDOWN WAS CONTINUED. DURING TERMINAL COUNT THE THOR 95
PERCENT LOX SWITCH FAILED TO ACTUATE. THE SWITCH WAS BYPASSED AND AFTER
EVALUATION THE COUNTDOWN WAS RECYCLED TO THE START OF PHASE V.

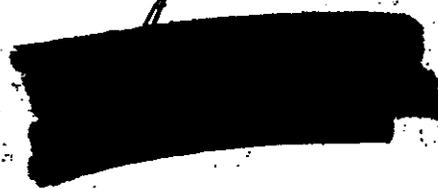
H. DISCOVERER SYSTEM FACILITIES - OBJECTIVES ACHIEVED.
THE AGENA TELEMETRY SIGNAL WAS RECEIVED AND RECORDED BY VTS FROM
LIFTOFF TO T PLUS 526 SEC AND GOOD
FLIGHT DATA WERE DERIVED FOR THE PERIOD FROM LIFTOFF TO T PLUS 511 SEC.

SCP-4

BT
16/0445Z NOV

RECEIVED IN BUREAU TIME ON 1153 1964. GLENN

NR0005
NR0005
O P 160445Z
FM 6599 AEROSPACE TEST WG VAFB CALIF
TO SLD LOSA CALIF
6599 AEROSPACE TEST WG SUNNYVALE CALIF
LNSC SUNNYVALE CALIF
ZEN/LNSC VANDENBERG AFB CALIF
ZEN/DOUGLAS ACFT CG VANDENBERG AFB CALIF
INFO ZEN/STRATAD VANDENBERG AFB CALIF
6599 AEROSPACE TEST WG PATRICK AFB FLA
AFLC WRIGHT PATTERSON AFB OHIO
SBAMA-NORTON AFB CALIF
ZEN/DIT 1 AFLC VANDENBERG AFB CALIF
ZEN/CDS NOR 1 VONR VAFB CALIF
BT



W E C R E T / FROM VVZD-15-11-208-S, SECTION II OF II, PRESTO FLASH
SSD FOR SSZD SENCLN 6594TV FOR COL MOORE SENCON LNSC/SUNNYVALE FOR
FVRCA-3 /J.J. DRIEFUSS/ SENCLN LNSC/VAFB FOR DEPT 63-44 SENCLN DAO/
VAFB FOR MR HECKMAN, INFO CLN 1STRATAEROSAPCEDIV FOR COMMAND POST AND
WDPO SENCLN AFLCSB/VAFB FOR MR YOUNG SENCLN 6595TV FOR COL WIGNALL
SENCLN SBAMA/NORTON AFB FOR SNVP SENCLN AFLC/WRIGHT PATTERSON FOR
NCGG. SUBJECT CLN FLASH REPORT ON THE LAUNCHING OF DISCOVERER 35.
THE VTS VENTORT RADAR PRODUCED GOOD ANALOG AND DIGITAL DATA RECORDS
FOR THE PERIOD FROM LIPTOFF TO LOSS OF TRACK AT T PLUS 482 SEC. STATION
COMMUNICATIONS DURING THE LAUNCH OPERATION WERE ADEQUATE. VTS DECOM-

RELATION EQUIPMENT USED FOR CHANNEL 16 BECAME INOPERATIVE DURING PHASE
DURING ASSENT.
THE LAUNCH COUNTDOWN
THE COUNTDOWN STARTED AT 0838 PST ON 15 NOV 1961 AND PROGRESSED TO
LIFTOFF WITH 3 HOLDS TOTALING 83 MINUTES. HOLD NO. 1 LASTED 78 MINUTES
WITH 58 MINUTES DUE TO RANGE CLEARANCE PROBLEMS WITH TRAINS AND 28
MINUTES DUE TO AN AGENA AGE HELIUM LEAK AND A FAULTY INDICATION ON THE
THOR ENGINE REGULATOR DISCHARGE PRESSURE MONITOR. HOLD NO 2 LASTED 1 MINUTE
AND RESULTED FROM THE FAILURE OF THE THOR 95 PERCENT LOX SWITCH TO
ACTUATE. HOLD NO. 3 WAS OF 4 MINUTES DURATION AND WAS DUE TO VTS
DECOMMUTATION EQUIPMENT PROBLEMS.
4. PAD DAMAGE.
DAMAGE TO THE PAD EQUIPMENT AND FACILITIES WAS NORMAL.
DECONTAMINATION WORK IS EXPECTED TO BE SIMILAR TO THAT AT
FROM THIS PAD. SCP-4.
BT



PAGE TWO
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BT
16/0500Z NOV.

