

Declassification review by
NGA

65588

SECRET

R 192035Z JUL 68
FM NPIC WASHDC
TO RUEOJFA/DIA (DIAXX-2)
RUEOJFA/JCS (JRC)
RUEFHQA/HQ USAF FOR AFNICAD & AFRDRP
RUCSAAA/SAC (DIR)
RUWMDDA/9 SRW (DCI)
BT

19 Jul 68 21 20z

25X

25X1

SECRET [] CITE NPIC 4236
SUBJECT: EVALUATION OF GIANT SCALE MISSION S-033, FLOWN 30 JUNE 68

1. QUALITY SUMMARY: THE TECHNICAL OBJECTIVE CAMERA PROVIDED IMAGERY COMPARABLE TO THAT OF MISSION S-014 AND THE OPERATIONAL OBJECTIVE CAMERA PROVIDED IMAGERY COMPARABLE TO THAT OF MISSION S-032. INTERPRETATION SUITABILITY IS CONSIDERED GOOD IN CLOUD FREE AREAS AND RANGES TO POOR IN AREAS AFFECTED BY ATMOSPHERICS. GROUND RESOLUTION FIGURES ARE EMPIRICAL ESTIMATES BASED ON EVALUATION OF SIMILAR SENSORS AND IMPLY A BAR AND A SPACE. A FIGURE OF 4.0 FEET INDICATES THAT A 2.0 FOOT OBJECT COULD BE DETECTED. THE FOLLOWING RESOLUTION ESTIMATES WERE MADE FROM THE ORIGINAL NEGATIVE FROM CLOUD FREE IMAGERY AT OR NEAR NADIR AND WHERE THE

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VEHICLE IS AT AN ALTITUDE OVER 70,000 FEET.

- A. LEFT TECHNICAL OBJECTIVE CAMERA 3.5 FEET
- B. RIGHT TECHNICAL OBJECTIVE CAMERA 3.5 FEET
- C. LEFT OPERATIONAL OBJECTIVE CAMERA 4.0 FEET
- D. RIGHT OPERATIONAL OBJECTIVE CAMERA 4.0 FEET

2. THE SYSTEM EMPLOYED THE USUAL SENSORS AND THE MATERIAL WAS PROCESSED AT YOKOTA []. THE ONLY MATERIALS EVALUATED ARE THE ORIGINAL NEGATIVES FROM THE OPERATIONAL AND TECHNICAL OBJECTIVE CAMERAS.

- 3. CLOUDS OBSCURE OR DEGRADE 55 PERCENT OF THE MISSION.
- 4. ANALYSIS OF THE TECHNICAL OBJECTIVE MATERIAL.

A. COMMENTS APPLICABLE TO BOTH CAMERAS.

(1) MINUS DENSITY STREAKS ASSOCIATED WITH THE PLATEN CONFIGURATION AND RANDOM MINUS DENSITY STREAKS PARALLEL TO THE MAJOR AXIS OF THE FILM ARE PRESENT THROUGHOUT THE MISSION.

(2) FOG CAUSED BY STATIC DISCHARGE CAN BE DETECTED ALONG BOTH EDGES OF THE NEGATIVE.

(3) BANDING IS PRESENT THROUGHOUT THE MISSION.

(4) INTERMITTENT EMULSION LIFTS AND SCRATCHES

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ARE PRESENT THROUGHOUT THE MISSION.

(5) THE DATA CHAMBER IMAGES ARE DENSE AND DIFFICULT TO READ.

(6) THE DENSITY AND CONTRAST ARE ADEQUATE WHERE CLOUDS AND HAZE ARE NOT A MAJOR FACTOR.

(7) APPROXIMATELY 30 PERCENT OF THE PHOTOGRAPHY WAS ACQUIRED ABOVE 30 DEGREES OBLIQUITY.

B. LEFT TECHNICAL OBJECTIVE CAMERA (AL), S/N 64-15.

(1) A PLUS DENSITY STREAK LOCATED 0.2 INCH FROM THE UNTITLED EDGE IS PRESENT THROUGHOUT THE MISSION. TWO ADDITIONAL CONTINUOUS PLUS DENSITY STREAKS, LOCATED 1.9 AND 1.8 INCHES FROM THE UNTITLED EDGE ARE PRESENT DURING THE LAST THIRD OF THE MISSION AND FROM FRAME 100

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GROUP 1
Excluded from automatic
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TO THE END RESPECTIVELY.

(2) SEVERAL MINUS DENSITY SPOTS OCCUR INTERMITTENTLY THROUGHOUT THE MISSION.

(3) CAMERA OFF/ONS OCCURRED BETWEEN FRAMES 98/99, 321X322, 470/471, 612/613, 667/668, AND 937/938.

(4) THE COUNTER HAS A BIAS OF 36 OVER THE TITLED FRAME.

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25X1

(5) THE LAST TITLED FRAME IS 1105.

C. RIGHT TECHNICAL OBJECTIVE CAMERA AR S/N 64-03.

(1) AN ULTRASONIC SPLICE IS LOCATED IN FRAME 38.

(2) CAMERA OFF/ONS OCCUR BETWEEN FRAMES 98/99, 288/289, 412/413, 571/572 AND 882/883.

(3) THE COUNTER HAS A BIAS OF 96 OVER THE TITLED FRAME.

(4) THE LAST TITLED FRAME IS 1040.

5. ANALYSIS OF THE OPERATIONAL OBJECTIVE CAMERA MATERIAL

A. COMMENTS APPLICABLE TO BOTH CAMERAS.

(1) THE DENSITY AND CONTRAST IS MEDIUM AND APPEARS TO BE SATISFACTORY.

(2) THE TIMING DOTS IMAGED WITH EACH FRAME BEGIN 0.6 INCH AFTER THE START OF SCAN ON BOTH CAMERAS AND EXTEND 0.6 INCH BEYOND THE END OF SCAN ON THE RIGHT OOC AND 0.8 INCH BEYOND THE END OF SCAN ON THE LEFT OOC.

(3) RAIL SCRATCHES ARE PRESENT THROUGHOUT THE MISSION. ON THE RIGHT OOC, THE SCRATCHES RUN 0.2 INCH INTO THE FORMAT ON THE NON-TITLED EDGE. ON THE LEFT OOC,

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25X1

THE SCRATCHES ARE 0.13 INCH INTO THE FORMAT ON BOTH THE TITLED AND NON-TITLED EDGES.

B. LEFT OPERATIONAL OBJECTIVE CAMERA (CL), S/N 4027

(1) THE FIRST 0.4 INCH OF SCAN IS DEGRADED AND APPEARS TO BE OUT OF FOCUS. THE FIRST 0.2 INCH OF THIS IS MOST SEVERE.

(2) THERE IS A MINUS DENSITY STREAK PARALLEL TO THE MAJOR AXIS OF THE FILM THROUGHOUT EACH FORMAT 0.75 INCH FROM THE TITLED EDGE. THERE IS ALSO A FINE MINUS DENSITY STREAK 0.45 INCH FROM THE NON-TITLED EDGE.

(3) THERE ARE EMULSION LIFTS ON FRAMES 1547, 1553, 1594, 1598, 1599, 1609, 1625, AND 1631.

(4) SPLICES OCCUR BETWEEN FRAMES 340/341, 680/681, 1020/1021, 1360/1361, 1394/1395, 1700/1701, 2040/2041.

(5) CAMERA OFF/ONS OCCUR BETWEEN FRAMES 1005/1006, 1780/1781, AND 2019/2020.

(6) THERE IS A BIAS OF ONE BETWEEN THE EVENTS COUNTER AND THE TITLED FRAME NUMBER.

(7) THE DATA CHAMBER IS READABLE, BUT THE LEFT SIDE EXTENDS 0.2 INCH INTO FORMAT. ALSO, THE MINUTE/SECOND

.3.

MARKS ON THE RIGHT SIDE OF THE CLOCK ARE UNDETECTABLE.

(8) THE LAST TITLED FRAME IS 2133.

C. RIGHT OPERATIONAL OBJECTIVE CAMERA (CR), S/N 4030

(1) THE FIRST 0.3 INCH OF SCAN IS DEGRADED AND APPEARS TO BE OUT OF FOCUS. THE FIRST 0.1 INCH OF THE IS MOST SEVERE.

(2) THERE IS A CONTINUOUS MINUS DENSITY STREAK PARALLEL TO THE MAJOR AXIS OF THE FILM 0.7 INCH FROM THE BOTTOM OF THE FRAME THROUGHOUT THE MISSION.

(3) THERE ARE INTERMITTENT MINUS DENSITY DOTS (FOUR CONSECUTIVE ONES) ON FRAME 2052.

(4) EMULSIONS LIFTS OCCUR INTERMITTENTLY THROUGHOUT THE MISSION.

(5) SPLICES OCCUR BETWEEN FRAMES 557/558, 680/681, 1020/1021, 1248/1249, 1360/1361, 1700/1701, 2040/2041, AND 1896/1897.

(6) THE TIME TRACK WAS NOT IMAGED ON FRAME 1-16; FRAME 17 HAS A PARTIAL TIME TRACK.

(7) MINOR PRESSURE INDUCED FOG IS PRESENT ON THE TITLED EDGE THROUGHOUT THE MISSION.

GP-1

S E C R E T

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END OF MSG

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