PRIORITY

OUT63402

TOP SECRET

T O P S E C R E T 211414Z CITE [redacted] 1967 OCT 21 16 00Z 25X1
PRIORITY [redacted] 25X1
[redacted] 25X1

SUBJ: MISSION 1101 (CR-1) PHOTOGRAPHIC EVALUATION INTERIM REPORT (PEIR)
REF A. [redacted] 25X1
B.

1. NUMERICAL SUMMARY

MSN NO AND DATES	1101-1, 15-21 SEPTEMBER 1967 1101-2, 21-29 SEPTEMBER 1967
LAUNCH DATE AND TIME:	15 SEPTEMBER 1967/1941Z
VEHICLE NUMBER	1641
CAMERA SYSTEM:	CR-1
PAN CAMERA NO:	FORWARD-LOOKING, 303 AFT-LOOKING, 302
DISIC NO:	3
STELLAR RESEAU NO:	1, IP
TERRAIN RESEAU NO:	102
RECOVERY REVS:	MSN 1101-1, 97 MSN 1101-2, 208

2. CAMERA SETTINGS

FWD-LOOKING	WRATTEN 23A FILTER (PRIMARY) WRATTEN 25 FILTER (SECONDARY) SLIT WIDTHS: 0.150, 0.171, 0.218, 0.272, AND A FAIL SAFE SLIT OF 0.250 INCHES.
AFT-LOOKING	WRATTEN 21 FILTER (PRIMARY) WRATTEN 23A FILTER (SECONDARY) SLIT WIDTHS: 0.134, 0.134, 0.175, 0.225 AND A FAIL SAFE SLIT OF 0.200 INCHES.

3. PERFORMANCE SUMMARY

A. PAN CAMERAS: THE BEST PHOTOGRAPHY OF MISSION 1101 IS EQUAL TO OR BETTER THAN ANY PREVIOUS CORONA PHOTOGRAPHY. THE BEST PHOTOGRAPHY FROM 1101 WAS OBTAINED WITH THE FWD-LOOKING CAMERA. THE AFT-LOOKING CAMERA PRODUCED SOFTER IMAGERY THAN NORMALLY OBTAINED WITH THE CORONA SYSTEM BECAUSE OF AN OUT-OF-FOCUS CONDITION (SEE SECTION FOUR). SEVERAL CORN AND FIXED RESOLUTION TARGETS WERE RECORDED. READINGS OF THESE TARGETS GIVE AN INDICATION OF THE SYSTEM PERFORMANCE. THE BEST TARGETS OBSERVED YIELDED [redacted] 25X1
[redacted] RESOLVED DISTANCE ALONG THE LINE OF FLIGHT (IMC DIRECTION), AND TEN FEET ACROSS THE LINE OF FLIGHT (SCAN DIRECTION). THE PHOTO INTERPRETABILITY OF THE FORWARD-LOOKING CAMERA PRODUCE GENERALLY RANGES FROM FAIR TO GOOD THROUGHOUT THE FIRST HALF OF THE MISSION AND IS GENERALLY GOOD THROUGHOUT THE SECOND HALF OF THE MISSION. THE PRODUCE OF THE AFT CAMERA IS CONSIDERED TO BE ONLY FAIR TO POOR FOR PHOTO INTERPRETATION THROUGHOUT THE MISSION. THE OVERALL NFORMATION CONTENT OF THE SECOND HALF OF THE MISSION IS IMPROVED, COMPARED TO THAT OF THE FIRST HALF, IN ASSOCIATION WITH THE SHIFT IN PERIGEE WHICH RESULTED IN LARGER SCALE PHOTOGRAPHY OVER THE PRIME TARGET AREAS. THE IMAGE QUALITY OF THE FORWARD CAMERA PHOTOGRAPHY RECOVERED FROM MISSION 1101-2 IS JUDGED TO BE GOOD AND COMPARABLE TO THE BEST EVER PRODUCED BY THE CORONA CAMERA SYSTEM.

B. DISIC

(1) STELLARE EVALUATION: THE FINAL DATA REDUCTION HAS NOT BEEN COMPLETED BY THE USER GROUPS. [redacted] ANALYSIS INDICATES 25X1
THAT FOR THE FIRST HALF OF THE MISSION, THE STARBOARD CAMERA RECORDED ENOUGH STARS FOR ATTITUDE DETERMINATION. IN FACT

[redacted] SYSTEM ON

GROUP 1
Excluded from automatic downgrading and declassification

TOP SECRET

STARBOARD FRAME 5 RECORDED 6.5 MAGNITUDE STARS. THE PORT CAMERA STAR FIELD WAS WEAK THROUGHOUT THE MISSION, AND USELESS THROUGHOUT THE SECOND HALF. CHANGING ORBITAL PARAMETERS GRADUALLY CAUSED BAFFLE-INDUCED FLARE TO DECREASE THE NUMBER OF STARS RECORDED ON THE STARBOARD CAMERA DURING THE SECOND MISSION, SUCH THAT, ATTITUDE DETERMINATION WILL NOT BE POSSIBLE FOR SOME OPERATIONS. SOME OF THE FORMATS ARE SLIGHTLY DEGREADED BY VARIOUS TYPES OF CORONA AND ELECTROSTATIC MARKINGS.

(2) TERRAIN EVALUATION: AS WITH THE STELLAR FILM, THE USER EVALUATION HAS NOT BEEN COMPLETED; HOWEVER, THE [redacted] CONSIDERED THAT THE IMAGE QUALITY IS FAIR AND THE MATERIAL IS SUITABLE FOR ATTITUDE DETERMINATION, RELATIVE ORIENTATION, AND AUXILIARY MAP MAKING, THERE IS, HOWEVER, A LACK OF SHARPNESS. THE [redacted] FELT THAT THE TERRAIN PRODUCE DID NOT HAVE THE OPPORTUNITY TO DEMONSTRATE ITS FULL POTENTIAL BECAUSE OF THE EXPOSURE CONTROL PROBLEM, FILM PROCESSING CONDITIONS, AND THE LOW TEMPATERATURES EXPERIENCED THROUGHOUT THE MISSION. 25X1 25X1

4. PAN CAMERA ANOMALIES

A. ALL THE PHOTOGRAPHIC IMAGERY FROM THE AFT CAMERA WAS DEGRADED. THE BETTER CORN TARGET READINGS INDICATED THAT THE AFT CAMERA PRODUCED APPROXIMATELY [redacted] ACROSS TRACK RESOLUTIONS. 25X1

CAUSE: THE AFT CAMERA WAS NOT CORRECTLY FOCUSED. COMPUTED ANSLYSIS OF LENS FABRICATION DATA SHOWED A BACK FOCUS SHIFT OF 1/1000 LESS THAN ANTICIPATED. IN ADDITION, AN AMBIENT VERSUS ALTITUDE TEST HAS SHOWN AN ADDED SHIFT OF APPROXIMATELY ONE-HALF OF A THOUSANDTH AT THE FOCAL PLANE. THE FORWARD CAMERA WAS FOCUSED IN A POSITION THAT PERMITTED THE ABOVE CHANGES WITHOUT GOING OUT OF FOCUS.

ACTION: AFTER FINAL TEST AND ACCEPTANCE OF EACH LENS, A COMPUTER ANALYSIS OF THE ACTUAL FABRICATION DATA WILL BE MADE. VARIATION FROM THE NOMINAL WILL ALSO BE CONFIRMED IN THE LENS-ONLY TEST CHAMBER. THE RESULTS OF THESE DATA WILL BE USED FOR FINAL LENS SETTINGS. (MONITOR: [redacted] 25X1

B. IN MOST MEASURED CASES THE SCAN RESOLUTION WAS INFERIOR TO THE FORWARD MOTION RESOLUTION.

CAUSE: DURING TESTING OF THE J-3 SYSTEMS, AN OPTICAL/MECHANICAL PHENOMENON ASSOCIATED WITH THE PANORAMIC CAMERAS WAS OBSERVED WHICH EXPLAINS THE LOSS OF SCAN RESOLUTION. WHEN THE SCAN HEAD LIFTS THE MATERIAL DURING THE ACTIVE PHOTOGRAPHIC SCAN, A DIFFERENTIAL FILM VELOCITY IN THE DIRECTION OF SCAN IS PRODUCED. THIS FILM VELOCITY IS PROPORTIONAL TO LIFT. AS LIFT IS INCREASED THE APPARENT FILM VELOCITY AT THE SCAN HEAD IS ALSO INCREASED. THE LOSS OF RESOLUTION OBSERVED IS A FUNCTION BOTH OF THE LIFT AND OF THE SLIT WIDTH AT THE TIME. LABORATORY RESOLUTION TESTS WITH 0.134 INCH SLITS EXHIBIT A ONE TARGET READING VARIANCE BETWEEN THE SCAN AND IMC DIRECTIONS. FORM MISSION 1101, LIFT WAS INCREASED APPROXIMATELY 0.004 INCH AS A RESULT OF THE LOWER THAN NOMINAL ON-ORBIT TEMPERATURE.

ACTION: THE THERMAL PATTERN HAS BEEN MODIFIED FOR 1102 AND TEMPERATURE SHOULD BE APPROXIMATELY TEN DEGREES WARMER THAN 1101. A TEST PROGRAM IS NOW BEING CONDUCTED TO REDUCE THIS MOTION BY DETERMINING THE OPTIMUM RAISED POSITION OF THE DRUM ROLLERS. ALSO ON 1102 A NEW HIGHER SPEED FILM IS BEING EVALUATED WHICH COULD ALLOW FOR A SIGNIFICANT REDUCTION IN EXPOSURE TIME (SLIT WIDTH). THESE ACTIONS WILL HELP TO MINIMIZE THE PROBLEM. (MONITOR: [redacted] 25X1

C. ON BOTH CAMERAS AT THE TAKE-UP SIDE OF THE FORMAT, THERE IS A SMALL BAND OF SMEARED PHOTOGRAPHY. THE CONDITION DOES NOT AFFECT ALL FORMATS.

CAUSE: AS THE LEAD FOCAL PLANE (SCAN HEAD) ROLLER ENTERS THE FORMAT IT DISTURBS THE FILM. THIS DISTURBANCE IS NOT RECORDED BECAUSE THE EXPOSING SLIT HAS NOT ENTERED THE FORMAT. WHEN THE TRAILING FOCAL PLANE ROLLER IMPACTS THE FILM, THE AREA IMMEDIATELY ABOVE THE EXPOSING SLIT IS SMEARED BY THIS DISTURBANCE. THE LOWER TEMPERATURES ENCOUNTERED ON THIS FLIGHT MAY HAVE AGGRAVATED THE CONDITION BY LOWERING THE TRANSPORT ASSEMBLY.

ACTION: INCREASE THE CLEARANCE BETWEEN THE FOCAL PLANE (SCAN HEAD) ROLLERS AND THE TRANSPORT ASSEMBLY GUIDE ROLLERS. INCREASE THE DETAIL OF ANALYSIS OF THE "DR. A" TEST IN THE AREAS NEAT THE END OF FORMAT. (MONITOR: [redacted] 25X1

D. VERY MINOR FOG PATTERNS ARE PRESENT ON THE FIRST FRAME AND NEXT TO LAST FRAME OF SOME CAMERA OPERATIONS IN 1101-1 AND 1101-2.

CAUSE: UNKNOWN - THE LIGHT LEAK PATTERNS EXHIBITED ON 1101-1 AND 1101-2 WERE EXTREMELY MINOR AND VERY DIFFICULT TO LOCATE ON THE DP MATERIAL. THE VERY LOW DENSITIES AND MARGINAL EQUIPMENT SHADOWS MADE CORRELATION IMPRACTICAL.

ACTION: IT IS THE OPINION OF THE [redacted] THAT BECAUSE OF 25X1 THE MINOR NATURE OF THESE LIGHT LEAK FOG PATTERNS, NO LOSS OF INTELLIGNENCE WAS INCURRED. NO ACTION IS RECOMMENDED.

E. THE HORIZON IMAGERY WAS NOT AS SHARP IN SOME CASE AS NORMALLY EXPECTED. THIS WAS NEITHER "VEILING", AS HAS OCCURRED IN THE PAST, NOR DID IT APPEAR TO BE AN OUT-OF-FOCUS CINDITION.

CAUSE: THE CAUSE IS UNKNOWN. THE MOST PROBABLE CAUSE IS THE TIMING OF THE SHUTTER OPENING SOLENOID WITH THE OPEN POSITION ON THE SHUTTER. THAT IS, THE SHUTTER SHOULD BE CLOSED PRIOR TO THE END OF SOLENOID TRAVEL. THIS PROBLEM IS NOT RELATED TO VIGNETTING.

ACTION: REVIEW PRESENT ASSEMBLY AND TIMING TECHNIQUES AND RE-EVALUATE THE PHOTOGRAPHIC TEST DATA. (MONITOR: [redacted] 25X1

F. ALL FOUR HORIZON CAMERAS PRODUCED VIGNETTED IMAGES. BOTH INPUT HORIZON IMAGES (FORWARD-LOOKING PORT SIDE, AND AFT-LOOKING STARBOARD SIDE) DISPLAYED GENERALLY SIMILAR VIGNETTING. LIKEWISE, BOTH OUTPUT HORIZON CAMERAS PRODUCED SIMILAR VIGNETTING PATTERNS BUT DIFFERENCE FROM THE OTHER TWO HORIZON CAMERAS. THE TOTAL EXTENT OF THE HORIZON LINE THAT WAS OBSCURED VARIED FROM 25 PERCENT TO ABOUT 40 PERCENT. PRELIMINARY MEASUREMENTS BY USERS TEND TO INDICATE THAT THIS ANOMALY DOES NOT DEGRADE OPERATIONAL VALUE OF THE HORIZON ARC IMAGERY.

CAUSE: A PART OF THE VIGNETTING HAD BEEN ANTICIPATED BECAUSE OF OBSTRUCTIONS BY STRUCTURAL COMPONENTS OF THE SYSTEM. HOWEVER, THIS CONDITION DOES NOT EXPLAIN EITHER THE EXTENT OR VARIABILITY OF VIGNETTING THAT IS OBSERVED. TESTS AND ANALYSES TO DATE AT A/P HAVE NOT PROVIDED A COMPLETE EXPLANATION OF THE ANOMALY.

ACTION: (1) CONTINUE INVESTIGATION OF THE CAUSE OF THE ANOMALY. (MONITOR: [redacted] (2) DETERMINE WHETHER THE 25X1 ANOMALY HAS ANY OPERATIONAL SIGNIFICANCE. (MONITOR: [redacted] 25X1

G. MINOR SCRATCHES WERE OBSERVED WITHIN THE FORMAT AREA ON THE AFT CAMERA. THESE SCRATCHES OCCUR INTERMITTENTLY THROUGHOUT THE MISSION.

CAUSE: SIMILAR SCRATCHING WAS OBSERVED PRIOR TO FLIGHT DURING THE READINESS TESTS. THE SCRATCHES WERE NOT CONSIDERED TO BE SUFFICIENTLY DEGRADING TO DELAY THE FLIGHT. AS THE FLIGHT PROGRESSED THEY BECAME LESS SIGNIFICANT.

ACTION: REVIEW TEST PROCEDURES TO DETERMINE POSSIBLE MEANS FOR IMPROVED PREFLIGHT DETECTION AND CORRECTION OF SCRATCHING CONDITIONS. (MONITOR: [redacted] 25X1

H. STARTING MIDWAY THROUGH MISSION 1101-2, BREAKS IN THE SCAN TRACE IMAGERY OCCURRED ON BOTH MAIN CAMERAS.
CAUSE: AS EMULSION BUILT UP ON THE RAIL EDGES, IT EXTENDED INTO THE PROJECTED SCAN TRACE.
ACTION: ALTHOUGH HIGHLY POLISHED RAIL SURFACES HAVE BEEN INTRODUCED TO REDUCE RAIL SCRATCHING, THE CONDITON HAS NOT BEEN ELIMINATED. THE [redacted] DOES NOT CONSIDER FURTHER ACTION TO BE WARRANTED. 25X1
I. LOSS OF SOME RAILS HOLES ON BOTH CAMERAS OCCURRED.
CAUSE: THE FILM EMULSION FILLED SOME OF THE RAIL HOLES AS THE MISSION PROGRESSED. SOME WERE FILLED PRIOR TO LAUNCH.
ACTION: EFFECTIVE WITH CR-2, THE RAIL HOLES ARE FILLED WITH A TRANSPARENT SUBSTANCE. THIS IS EXPECTED TO SIGNIFICANTLY REDUCE THE POSSIBILITY OF LOST RAIL HOLE IMAGES DUE TO HOLE FILLING. THE NUMBER OF RAIL HOLES THAT FILLED DURING THIS MISSION WAS COMPARABLE TO THOSE OBSCURED IN J-1 PG FLIGHTS.
J. DURING THE FIRST 22 REVS OF THE MISSION, THE V/H PROGRAMMER DELAY TIMER APPEARED TO BE TIMING OUT EARLY, BUT RANDOMLY. THIS EARLY TIME-OUT CAUSED A V/H MISMATCH.
CAUSE: CROSS CORRELATION OF TIMER TIME-OUT AND REAL-TIME COMMANDING REVEALED THAT THE EARLY TIME-OUTS OCCURRED ONLY DURING THOSE REVS THAT REAL-TIME COMMANDS WERE SENT DURING THE TIME WHEN THE TIMER WAS COUNTING. IN VIEW OF THIS, ALL REAL-TIME COMMANDING WAS RESTRICTED DURING THE INTERVALS WHEN THE DELAY TIMER WAS COUNTING. SUBSEQUENT IN-FLIGHT TESTING ON NON-PHOTOGRAPHIC REVS VERIFIED THAT THE PROBLEM COULD BE DUPLICATED BY VIOLATING THE COMMANDING RESTRICTION. DURING SUBSEQUENT TESTING AT [redacted] THE PROBLEM WAS DUPLINATED USING THE CR-2 V/H PROGRAMMER AND TRACED TO TRANSIENTS GENERATED BY THE REAL-TIME COMMAND ASSOCIATED CIRCUITRY. 25X1
ACTION: A RE-DESIGN CURRENTLY UNDERWAY AT [redacted] TO FILTER OUT THE TRANSIENTS CAUSED BY THE REAL-TIME COMMAND ASSOCIATED CIRCUITRY. ADDITONALLY, THE CIRCUITRY CAUSING THE TRANSINTS WITL BE MODIFIED TO INCORPORATE IMPROVED ARC SURPRESSION. THE RE-DESION WITL BE THROROUGHLY EVALUATED PRIOR TO THE CR-2 (1102) FLIGHT. (MONITOR: [redacted] 25X1
K. THE [redacted] MESSAGES REPORTED THAT THE BINARY DATA BLOCK WAS MISSING ON THE LAST FRAME OF ALL OPERATIONS AND OCCASIONALLY MISSION ON THE SECOND TO LAST FRAME. 25X1
CAUSE: THIS LAS THE NORMAL MODE OF OPERATION AND INHERENT TO THE BASIC CR-1 SYSTEM DESIGN.
ACTION: THE DESIGN IS BEING CHANGED, EFFECTIME WITH CR-2, SUCH THAT THIS WILL NOT RE-OCCUR. (MONITOR: [redacted] 25X1
L. THROUGHOUT THE MISSION, THE DISIC EXPOSURE CONTROL COMMAND FAILED TO SWITCH TO THE 1/500 SECOND POSITION AT THE PREDICTED TIMES.
CAUSE: A REVIEW OF THE TAPE RECORDER DATA AND FLGOHT REQUIREMENTS LIST CONFIRMED THAT THE TIMER WHICH CONTROLS THE DISIC TERRAIN EXPOSURE WAS IMPROPERLY SET PRIOR TO LAUNCH. THERE WAS NO HARDWARE PROBLEM BUT RATHER A PROCEDURAL ONE.
ACTION: THE PROCEDURES HAVE BEEN CORRECTED.
M. STARBOARD AND PORT HORIZON IMAGERY AND FIDUCIALS ARE MISSIVNG ON FRAMES 76, 78, AND 80 OF PASS D06 OF AFT CAMERA.
CAUSE: A REVIEW OF THE FILM REVEALS THE PRESENCE OF A NORMAL DATA BLOCK ASSOCIATED WITH EACH OF THE AFFECTED FRAMES. THIS ISOLATES THE PROBELM AREA TO A HOLDING RELAY AND THE ONE-HALF RPC SWITCH. PAST HISTORY WITH CAM ACTUATED SWITCHES HAS SHOWN THAT LOW TEMPERATURES REDUCE THE OVERTRAVEL. SWITCHES WITH MARGINALLY ADJUSTED OVERTRAVEL HAVE TYPICALLY FAILED TO ACTUATE WHEN SUBJECTED TO LOW TEMPERATURES. THE [redacted] 25X1

BELIEVES THAT THIS IS THE MOST LIKELY CAUSE FOR THIS INTERMITTENT FAILURE.

ACTION: (1) VERIFY THAT OVERTRAVEL ON ALL SWITCHES ARE CHECKED AT [redacted] PRIOR TO FLIGHT. (MONITOR: [redacted]) (2) INSURE THAT THERMAL PAINT PATTERN IS PROPER FOR THE ORBIT TO BE FLOWN. (MONITOR: [redacted]) 25X1

N. IN REVIEWING THE FILM, THREE INSTANCES OF DATA BLOCK ANOMALIES WERE NOTED.

CAUSE: TO DATE, [redacted] HAS READ APPROXIMATELY 25 PERCENT OF THE DATA BLOCKS, CONSEQUENTLY THE DATA IS NOT SUFFICIENT TO DRAW CONCLUSIONS. 25X1

ACTION: (1) [redacted] WILL SUPPLY THE CORONA RESIDENT OFFICE WITH A LIST OF ALL IMPROPER DATA BLOCKS WITH DESCRIPTIONS OF DATA BLOCK ANOMALIES AND OTHER DATA MARK (SMEAR PULSE, SERIAL NO., ETC.) ANOMALIES ON THE ASSOCIATED FRAMES. (MONITOR: [redacted]) 25X1 (2) [redacted] WILL PERFORM ANALYSIS TO ISOLATE ANY PROBLEMS. (MONITOR: [redacted]) 25X1

5. DISIC ANOMALIES

A. THE FIRST FRAMES OF MANY PORT STELLAR OPERATIONS WERE DEGRADED BY A HEAVY PLUS-DENSITY WAFFLE PATTERN ON THE PORT FORMAT. OCCASIONALLY, ADDITIONAL FRAMES WERE AFFECTED.

CAUSE: MECHNAICAL AND/OR ELECTROSTATIC MARKING CAUSED BY THE COARSE TEXTURE OF THE PLATEN PRESSURE PADS AND HEAVY PLATEN PRESSURE.

ACTION: INVESTIGATION OF A FINER-TEXTURED PRESSURE PAD AND REDUCTION OF PLATEN PRESSURE TO A MINIMUM ACCEPTABLE FOR FILM FLATNESS IS IN PROGRESS AT ARBOR ON DISIC NUMBER EIGHT. (MONITOR: [redacted]) 25X1

B. THE STELLAR FILM IS FOGGED DURING EXTENDED NON-OPERATIVE PERIODS ON FIVE TO SIX FORMATS WHICH LIE BETWEEN THE PORT AND STARBOARD UNITS. DEGRADATION IS MINOR TO SEVERE, DEPENDING ON THE DURATION OF THE SIT PERIOD.

CAUSE: THE LIGHT LEAK IS CAUSED BY A LOOSE SEAL BETWEEN THE DISIC COVER AND TERRAIN LENS.

ACTION: (1) [redacted] TO INVESTIGATE NEW MATERIALS FOR THE SEAL AND IMPROVED FINAL INSTALLATION PROCEDURES. (MONITOR: [redacted]) 25X1 (2) [redacted] TO INVESTIGATE LIGHT LEAK TEST METHODS TO VERIFY EFFECTIVENESS OF THE DISIC LIGHT SEALS. (MONITOR: [redacted]) 25X1

C. MOST STELLAR FORMATS ARE AFFECTED BY GENERAL FOGGING, OFTEN HEAVIER IN ONE AREA OF THE FORMAT AND USUALLY HEAVIER ON THE PORT THAN ON THE STARBOARD. DEGRADATION RANGES FROM MINOR TO SEVERE, WITH SIGNIFICANTLY HEAVIER DENSITIES NOTED ON THE SECOND MISSION. A LOSS OF STAR IMAGES IS EVIDENT ON THE MORE HEAVILY FOGGED FRAMES.

CAUSE: THE PRIMARY CAUSES ARE BAFFLE SURFACES WHICH ALLOW REFLECTIONS INTO THE LENS FROM BOTH RELATIVE SUN POSITION AND EARTH ALBEDO. ABRUPT CHANGES IN FLARE DENSITY ARE APPARENTLY CAUSED BY SLIGHT CHANGES IN VEHICLE ATTITUDE AT THE TIME OF PAN CAMERA START-UP OR SHUT-DOWN.

ACTION: (1) [redacted] TO INVESTIGATE POTENTIAL IMPROVEMENTS OF BAFFLE DESIGN TO REDUCE FLARE. (MONITORS: [redacted]) 25X1 (2) [redacted] TO INVESTIGATE THE ASSOCIATION OF VEHICLE ATTITUDE PERTURBATIONS WITH THE ABRUPT CHANGES IN FLARE PATTERS ON FRAMES 1158 AND 655, MISSION 1101-2. (MONITOR: [redacted]) 25X1 (3) [redacted] TO INVESTIGATE THE EFFECTS OF USING LESS STELLAR PREFOG FOR RESEAU ILLUMINATION. MONITOR: [redacted] 25X1

D. SEVERAL FORMS OF MARKING WERE OCCASIONALLY NOTED ON THE STELLAR RECORD. IMAGE DEGRADATION CAUSED BY THESE MARKS HAS NOT BEEN DEFINITELY ESTABLISHED BY THE USERS, BUT IS NOT CONSIDERED

SEVERE.
CAUSE: THIS MARKING IS ATTRIBUTED TO ELECTROSTATIC CAUSES; THESE FORMS HAVE BEEN NOTED IN PREFLIGHT ENVIRONMENTAL TESTING OF THE SYSTEM.
ACTION: CONTINUE CORONA INVESTIGATION INITIATED AS A RESULT OF PREFLIGHT TESTING. (MONITOR: [redacted] 25X1
E. SEVERAL VERY SMALL MINUS DENSITY SPOTS NOTED ON ALL TERRAIN AND STELLAR FRAMES. IMAGE DEGRADATION IS CONSIDERED MINOR.
CAUSE: PROBABLE CAUSES OF THESE MARKS ARE FLAKED PAINT AND DUST ON THE BACK RESEAU SURFACE AND DIRT/EMULSION PARTICLE BUILD-UP BY THE METERING ROLLER.
ACTION: ACTION HAS PREVIOUSLY BEEN INITIATED TO IMPROVE APPLICATION OF INTERNAL LENS BARREL PAINT AND PRE-FLIGHT CLEANING PROCEDURES. (MONITOR: [redacted] 25X1
F. CORONA-TYPE MARKS ALONG BOTH EDGES OF THE ENTIRE STELLAR RECORD. THE MARKS VARY IN INTENSITY BUT REMAIN OUT OF THE ACTIVE FORMAT AND OFF THE SLP DATA.
CAUSE: MARKS ARE CAUSED BY PRESSURE OF THE SKEW BEAD ROLLERS IN THE DISIC EXIT BOX.
ACTION: MARKS ARE NORMAL IF THEY REMAIN OUT OF THE ACTIVE FORMAT AND OFF THE SLP DATA. SKEW BAR ADJUSTMENTS WILL ASSURE THAT THE MARKS REMAIN OUT OF THE FORMAT. (MONITOR: [redacted] 25X1
G. VERY FLAT (LOW CONSTRAST) APPEARNCE OF MOST TERRAIN PHOTOGRAPHY.
CAUSE: OVEREXPOSURE.
ACTION: THE ANOMALY DISCUSSED IN 4L ABOVE WAS THE MAJOR CONTRIBUTOR TO OVEREXPOSURE. FILM SELECTION, EXPOSURE SETTINGS, AND PROCESSING FOR THE NEXT DISIC MISSION ARE UNDER INVESTIGATION. (MONITOR: [redacted] 25X1
6. COMMENTS.
A. THE AFT CAMERA OUT-OF-FOCUS PROBELM RAISES INTERESTING QUESTIONS. THAT IS, WHAT IS THE RELATIONSHIP BETWEEN GROUND AND FLIGHT FOCUS AND IS THE FOCUS, AS SET ON THE GROUND, BEST FOR THE FLIGHT SITUATION? TO ANSWER THIS FUNDAMENTAL QUESTION A THROUGH FOCUS TEST IS BEING PLANNED FOR CR-3. A SECOND QUESTION ARISES AS TO THE RELATIONSHIP BETWEEN THE RESULTS OF [redacted] 25X1
DYNAMIC RESOLUTION TESTING. THIS RELATIONSHIP IS BEING STUDIED NOW TO INSURE THAT EACH CORONA FLIGHT WILL HAVE THE OPTIMUM FOCUS SETTING.
B. BECAUSE OF THE SCAN RESOLUTION LOSS DISCUSSED UNDER PARA. B OF SECTION 4, THE [redacted] BELIEVES THE SO-230 TEST SCHEDULED FOR 1102 25X1
WILL BE EXTREMELY SIGNIFICANT. THE [redacted] REPRESENTATIVE HAS ASSURED THE 25X1
GROUP THAT SUFFICIENT QUANTITY AND QUALITY SUPPLIES OF SO-230 ARE AVAILABLE TO INCREASE THE MAGNITUDE OF THE TEST IF DESIRED. THE TEST IS PRESENTLY SCHEDULED TO INCLUDE 1,000 FEET ON THE FWD CAMERA AND 1,500 FEET ON THE AFT CAMERA. THE [redacted] RECOMMENDS THAT THESE AMOUNTS 25X1
BE INCREASES TO 2,000 FEET AND 2,500 FEET RESPECTIVELY, THEREBY ALLOWING A MORE COMPLETE EVALUATION OF THE SO-230 FILM.
T O P S E C R E T

END OF MESSAGE