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20 OCT 1969

MEMORANDUM FOR: Director, CIA Reconnaissance Programs

SUBJECT : OSP's NRO Quarterly Report on NRP Satellite Systems

Attached for your consolidation into an overall CIA Reconnaissance Report is OSP's NRO Quarterly Progress Report. Two additional copies are attached for Dr. McLucas and [redacted] and one copy each of CORONA and [redacted] is attached for forwarding to [redacted]

[redacted]

Attachments: a/s

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SUBJECT: OSP's NRO Quarterly Report on NRP Satellite Systems

Distribution:
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QUARTERLY PROGRESS REPORT

SATELLITE SYSTEMS

1 July 1969 through 30 September 1969

I. CORONA PROGRAM

A. J-1 System Status

1. Mission 1052 (J-46): The last J-1 Payload was successfully launched 22 September 1969. Originally scheduled for 17 September, the launch date was slipped due to problems in the vehicle command box and booster hydraulic system. The slope programmer failed to start on Revs. 21 and 38, otherwise all systems functioned normally.

2. The first and second recovery vehicles were successfully recovered via aircraft on 29 September and 7 October 1969 respectively. No significant problems were evident on either half of the mission. Preliminary evaluation of the processed film from the first recovery indicated that it was a normal J-1 mission take. An MIP of 85 was assigned.

B. J-3 System Status

1. Mission 1107 (CR 7) was successfully launched on 23 July 1969. PET stated "The general image quality of the aft-looking camera record is comparable to what was expected from that instrument considering the operational aspects of the mission; i.e., altitude (100 NM vs. 85 nominal for J-3's) launch time and the measured quality of the lens." The mission received an MIP rating of 95. At Rev. 1[redacted] during the first operation, the forward-looking instrument (No. 215) failed. The aft-looking instrument continued to function normally. The DISIC Subsystem operated satisfactorily until Rev. 282, at which time the system jammed.

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2. A thorough examination of all available data resulted in the probable determination of the failure mode experienced by the forward-looking camera; however, the actual cause is still uncertain. Two possible causes have been hypothesized:

a. Film restriction or film velocity reduction at the shuttle input.

b. Film restriction at the supply cassette.

As the actual cause of failure is unknown, no corrective action is being taken at this time. However, if future events provide more definitive data correction action will be considered.

3. Evaluation indicates that the most probable cause of the DISIC stall was a drag on both the stellar and terrain films. Several areas are being investigated by Fairchild Camera and Lockheed personnel. Their recommendations are due by mid-October 1969.

C. Ultra Thin Base Film Usage in the CR Camera System

1. CR-8 qualification tests have been completed. These included POCO vibration (3.5 G's), acoustic, and simulated shock. All UTB film modifications were successfully qualified. Minor hardware problems and questionable workmanship items were noted. Corrective actions have been implemented for CR-9 and all successive systems.

2. The thermal/vacuum tests (described in the last Quarterly) are completed. Estimated release date of final report is 15 October 1969.

3. The next UTB flight will be CR-11 (Mission 1109) scheduled for 18 February 1970. The Dr. Aschenbrenner Grid Test will be conducted on this system during environmental testing. Based on acceptable results in future testing the system will use a full load, 48,000 feet, of UTB film.

4. Although it has completed its original acceptance level vibration, CR-9 is currently being prepared for another vibration test to ensure that corrective action has been successful. See I.C.1. above. The vibration levels for this test are being reviewed.

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5. Test of a low R.H. UTB film roll will be conducted at the Boston ITEK facility. After drying of the roll, the film will be forwarded to [redacted] for respooling at normal tensions and concurrent monitoring of static discharge. Upon return to ITEK, a series of Dr. Aschenbrenner Grid Tests and evaluation of resultant data will be accomplished using CR-8. These tests will determine the effectiveness of utilizing pre-dried film in operational endeavors.

D. Proposals and Future Changes

1. CR-14 and subsequent systems will utilize .040 inch glass filters in the primary position. CR-8 refurbishment will include change to glass filters and is therefore included in the subsequent category. Additionally, it is planned to use a .037 inch glass filter in the alternate filter position. This will allow a small focus adjustment during on-orbit operations. Film evaluation of the A portion will allow selection of the better focus during the B portion.

2. Splices: The ultrasonic splice testing at AP is completed. The test report will be released 20 October 1969.

E. ITEK, Boston, will refurbish CR-8 after its qualification starting in early December 1969. The system will be returned to AP in September 1970. General Electric will refurbish the SRV's during the same time span.

F. A new CORONA flight schedule has been approved. One flight during the remainder of C.Y. 1969, four flights for C.Y. 1970, and five flights for C.Y. 1971. The last CORONA flight is scheduled for November 1971.

G. To utilize more effectively Government personnel for both the CORONA and [redacted] Program, these two offices have been combined. Direction of both programs is maintained in OSP by the Photographic Reconnaissance Systems Office. Field direction to both CORONA and [redacted] contractors is maintained by the West Coast project office presently located at the A/P, with temporary office space in [redacted] in the LMSC complex in Sunnyvale.

H. Missions Completed This Quarter

Mission No.	1107	1052
Booster No.	69-038	68-300
Agena No.	1652	1653
Payload No.	CR-7	J-46
Instrument No.	314/315	216/217
S.I. No.	S/N-11	D-110/111
Film Type (Main Instruments)	3404	3404
Flight Date	24 July 69	22 Sept 69
Feet Payload Flown	32,600 feet	32,600 feet
Feet Payload Recovered	16,570 feet	32,600 feet
Recovery Dates	2 Aug 69	29 Sept 69
	12 Aug 69	7 Oct 69

I. Missions Planned For Next Quarter

Date - 26 November 1969
Mission 1108
Payload CR-9

J. Meetings and Briefings

1. PET meeting for Mission 1107 was held at NPIC 3-5 September 1969.

2. Special engineering review for Mission 1052 was conducted by the SPD [redacted] at VAFB on 10 September. The normal R-1 meeting on this mission was conducted on 16 September at VAFB.

3. Mission 1052 PET meeting will be convened at NPIC 28-29 October 1969.

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NOTICE OF REMOVED PAGES

Pages 5 through 23 are not provided because their full text does not contain CORONA, ARGON, LANYARD programmatic information.