~~HEXAGON~~ ~~CORONA~~

HEX-10794-69
Copy 10 of 14
14 November 1969

MEMORANDUM FOR: Director of Special Projects

SUBJECT: Photo Reconnaissance Systems Report No. 14

I. CORONA

A. Accomplishments

1. CR-10 instrument #320 stopped during transport in the HIVOS chamber at a silver mylar manufacturing splice. The failsafe mode was activated by the splice hang-up and instrument power automatically shut off. When the splice came off the supply during operation, pieces of emulsion from the succeeding wrap stuck to the emulsion side of the splice due to adhesive bleeding. As the splice transported over the exit roller at the end of the platen, hang-up occurred on the platen extension plate, evidenced by a piece of splice jammed in that vicinity. As a result of this failure, Eastman-Kodak was directed to use only permacel splices on all future film loads. It should be noted that the silver mylar splice has a history of adhesive bleeding, whereas no adhesive bleeding has been experienced with permacel splices.

2. The CORONA Program managers meeting was held on 13 November at the A/P.

B. Problems

1. Constant tension assembly tests are continuing on CR-11 using CR-9's supply cassette.

2. Since there was corona marking on the 3404 film on the aft looking instrument, a second HIVOS test for CR-10 is planned for early 1970, in time to meet R-15 status for CR-11 flight. Decision to postpone

re-HIVOS and to keep CR-10 at R-15 status through December 1970 was predicated on an examination of possible PMU flight failure modes which revealed only a slight risk. With normal PMU operation (50-60 microns), no corona would be expected. With complete PMU failure, the pressure level is expected to be below the pressure level range during which corona was experienced in HIVOS. Mechanically and electrically the system has no known problems.

3. Evaluation of out-of-spec T/U flanges is continuing.

C. Projected Status

1. CR-9. Flight Preps.

2. CR-10. Block Preps.

3. CR-11. Retracking.

4. CR-12. Tracking.

5. CR-13. Acceptance Testing.

II. HEXAGON

A. General

1. The integrated thermal tests using the Engineering Model, scheduled to start 20 November and continue through 24 December, will encompass essentially all of the planned testing, except for the film sticking tests which cannot be conducted because of the excessive leak rates in the film path. The SPO and LMSC representatives concurred in the sequence of the tests at a meeting held at Perkin-Elmer on 12 November.

2. The Project Office, SSC, and SETS are currently involved in a concentrated effort to finalize the HSSOP inputs to the HEXAGON Software Contractor, in view of the fact that TRW is conducting CDR's on certain phases of their software designs over the next six to eight week period.

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3. The film specification has been completed and transmitted to Eastman-Kodak. A film spooling problem which can potentially impact on the Development Model supply testing has resulted from E.K.'s delays in approaching the solution to the 500 psi pressure at the core requirement. Since the "D" model supply assembly with a full stack of film is being used for qual testing, the core itself cannot initially have any residual deformations from just the high pressures resulting from the spooling.

B. Engineering Model

1. Format illumination testing indicates excessive light levels available in the platen assembly area. The "A" platen assembly has access holes for fiber optic bundles not installed in this Engineering Model assembly. Consequently, some difficulty is anticipated in fully evaluating the engineering model film from Chamber A testing. However, with the placement of the three test collimators across the format, it is anticipated that these difficulties will be minimized.

2. Thermal blankets and all sensors are being installed in the midsection, and the midsection is being readied to be put into Chamber A. Without additional delays being encountered, the Chamber A in-air operational baseline should be started late this week (by 14 or 15 November).

C. Development Model

1. The status of the Development Model take-up #1 is such that test equipment incompatibilities are, at this point, delaying further acceptance testing. The TU acceptance test is being proposed to be shortened to 11 days and, pending resolution of the compatibility problems, it is believed that the acceptance testing (without further problems) should be completed on 19-20 November.

2. Both platen assemblies have been removed from the Development Model optical bars. In addition to design logic problems within the 2A1 boxes, the "A" assembly mechanical stops have not yet been repaired. The "B" assembly is experiencing a torque reversal problem which is caused by miswiring and is undergoing test after rewiring.

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D. First Flight Model

Optical Bar "B" is in final test stages at the 93°F level in Chamber D. Following acquisition of the interferometric data at this temperature, the chamber must be pressurized and the equipment failures of the albedo simulator repaired prior to continuation of optical testing on this Optical Bar.

III. ADMINISTRATIVE

A. Personnel

[redacted] **will depart for the West Coast this weekend. He will report for duty no later than 1 December 1969. He is assigned to the West Coast Project Office Assembly and Test Group, replacing** [redacted].

B. Meetings Requiring Participation of Headquarters Personnel

Date	Subject	Attendees
PERKIN-ELMER		
18 Nov (AM)	Class I and II Changes	[redacted]
18 Nov (2 PM)	Schedule Review	[redacted]
18 Nov	TFE Spares and LN_2 Handling Charges	[redacted]
19 Nov	Film Requirements	[redacted]
RCA		
19 Nov	DM-1 Core Binding Meeting	[redacted]

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Date	Subject	Attendees
SPO		
20 Nov	OOPS Meeting	[redacted]
LMSC		
17 Nov	Catastrophic Failures	[redacted]
17 Nov	HSSOP Pre-Meeting	[redacted]
17 Nov	Command Constraints	[redacted]
18-19 Nov	HSSOP	[redacted] Webb, Burks
18-19 Nov	SSTC Discussions	Burks, [redacted]
18-19 Nov	TT&C CDR	[redacted]
19 Nov	NPIC Visit to A/P	[redacted] Burks
20 Nov	Managers Meeting	Patterson
20 Nov	R-Day Countdown Meeting	[redacted]
HEADQUARTERS		
17 Nov	H Program Discussions with Maguire	Patterson
17 Nov	RFP Draft Review	[redacted]
18 Nov	Pre-CCB	Kohler
19 Nov	Qual Test Requirements	[redacted]
19-20 Nov	Quarterly CCB	Kohler

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Date	Subject	Attendees
NPIC		
21 Nov	Color Task Force	Kohler

[redacted]
PMO/PRS/OSP

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Cy 12 - OSP/PRS chrono
Cy 13 - [redacted]
Cy 14 - [redacted]

DD/S&T/OSP/PRS [redacted] /x5725 (14 November 1969)

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