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Copy No. [redacted]

3 July 1967

MEMORANDUM TO HEADQUARTERS

TO: [redacted]

INFO: [redacted]

FROM: [redacted]

SUBJECT: Monthly Activity Report - June 1967

31 May 1967

Reports from Boston concerning the J-3 400 cycle inverter/instrument power supply problem indicated success in reducing the current load to within the spec values for the inverter. The power factor is within spec so the major problem remaining is the distortion. [redacted] is conducting tests on the inverter to determine whether it can be qualified to meet the modified power supply outputs.

1 June 1967

Informed by [redacted] that J-1 flight will be flown in July if we cannot guarantee a J-3 payload will be available. Resident Office recommended planning proceed on that basis as we could not guarantee CR-1 would be ready by 25 July 1967.

2 June 1967

Boston inverter tests using an all resistive load indicated the current slope of current curve was considerably reduced and there was no distortion in the voltage curve. Other tests conducted this date using an inductive type load on the inverter indicated that, in mono operation, the distortion was considerably improved.

Preliminary reports from inverter tests at Inglewood also indicate improvement in a mono operation using an inductive type load, but they have not yet operated two loads from the same inverter.

[redacted]

[redacted]

6-7 June 1967

Mission 1041 PET meeting at [redacted]

7 June 1967

Qual vibration of QR-2 completed. Post vibration operation successful. Decision made to re-run J-46 block test as there were no high contrast targets on one instrument on the first run.

CR-1 HIVOS test began but was shut down because of a circuit failure in the chamber.

8 June 1967

Information exchange meeting held at [redacted] with [redacted] and Resident Office personnel on the J-3 evaluation plan.

J-37 shipped to the base for confidence run and mating to Agena.

SRV USE 808 (CR-3B) accepted at [redacted]

CR-1 HIVOS test re-started.

9 June 1967

J-37 confidence run conducted at base.

A problem developed with CR-1 in HIVOS chamber in that one of the instruments could not be shut off; however, the system resumed proper operation when the chamber started to be re-heated and brought up to ambient pressure. It was decided to resume the testing as the problem was determined to be either in the control box or a micro switch in the payload. If another failure occurs a specific fix for the problem will be determined. The problem was in the microswitch which had been adjusted slightly since the failure did not reoccur.

12 June 1967

[redacted] and [redacted] reviewed with [redacted] of [redacted] the photo system analysis to be conducted by [redacted] for the J-3 program.

14 June 1967

An inverter/camera power supply meeting was held at AP. The [redacted] representative, Colonel Murphy, indicated in a subsequent meeting that he would

[redacted]

probably waive the requirement that the camera power supply cause no more than a 5 percent distortion on the inverter voltage wave form in event no solution was obtained. Thus the 8.5 percent with the resistor modification would be acceptable. However, [redacted] was directed to do additional testing with inductive power supply circuits.

16 June 1967

Mission 1042 (J-37) successfully launched after two delays postponement from the original date of 13 June. The first delay was for a commutator change in the Agena and the second postponement was because of problems with a LOX valve.

The orbit was near nominal but a little low in period and perigee.

A meeting was held in Sunnyvale regarding SRV re-entry dynamics. It was generally agreed that it would be better to trim to reduce c.g. offset and, therefore, cross products of inertia than to cant the retro. This would, however, add approximately 4.5 lbs. of ballast per SRV or 9 lbs. per payload system bringing total weight to 1,758 pounds which was acceptable to [redacted]

19 June 1967

CR-1 post chamber preliminary reports indicate Corona problems on the DISIC stellar cameras and the main pan camera number 303. In addition, there were several data anamolies on the film.

20 June 1967

Meeting at Sunnyvale with [redacted] LMSC, and Resident Office to discuss projected Agena/Payload electrical interface changes on J-3 systems.

Managers' Meeting was held at [redacted] Major items discussed were:

a. Camera power supply tests conducted at [redacted] include the addition of various values of inductance to reduce the leading edge slope of the current wave form.

A system compatability test (CR-1 and Agena) will be conducted around 12 July to evaluate two different modifications to the camera power supply, either of which may be selected for incorporation.

The additional testing has necessitated the slipping of CR-1 flight to not earlier than 10 August.

b. [redacted] has completed low temperature tests on the VJ recovery battery. At 10°F the available current was below spec, but was sufficient to fire all squibs.

c. Scan resolution problems on CR-3 have been diagnosed as caused by film sag in the rails. This problem had not been noticed previously because standard resolution testing had been accomplished with a narrow test slit which masked the problem, but on CR-3 resolution testing was initiated with flight type slits and filters. The corrective action for J-3 is to raise the eight drum rollers which precede the scan head. The only corrective action possible with J-1 is use of a faster film. A full flight load of SO 230 on a J-1 system is planned if the SO 230 test on CR-2 is successful.

d. An [redacted] review of J-1 camera spares at [redacted] revealed that 45 percent were either out of shelf life or need modifying. [redacted] was assigned the action to present a spares proposal by the next Managers' Meeting that will include lists of salvageable spares and parts recommended for scrap.

e. Camera drum rotation during vibration was discussed and [redacted] and [redacted] were given action to review the significance and present recommendations at the next Managers' Meeting.

21 June 1967

J-50 buyoff in Boston.

Meeting at STC with FTFD, GE, LMSC to discuss SRV recovery computer inputs. It was determined that the computer input for retro rocket specific impulse could be modified as required to account for c.g. offsets caused by different combinations of pan and DISIC take-up loading.

CR-1 completed optical block test but the targets were underexposed so that the test will be re-run.

Mission 1042 "A" RV recovery successful. One DMU fired on Rev. 102.

CR-1 instrument 302 sheared a pin during optical block run due to test console power supply failure.

CR-2 altitude chamber test initiated.

23 June 1967

CR-2 clock not reading out. System being removed from chamber for trouble-shooting.

26 June 1967

Discussions between Resident Office and AP on a new schedule for CR-1 concluded that a re-run of the HIVOS test was required because of the Corona problems and that the earliest launch date was 29 August 1967.

28 June 1967

Meeting in Sunnyvale with Colonel Murphy to discuss CR-1 problems, Agena electrical interface, and a proposal for a tape speed change in the Agena orbital programmer.

29 June 1967

Meeting at AP to discuss the effects that the proposed orbital programmer would have on payload operations.

1 July 1967

Mission 1042 "B" RV recovery successful; however, an anomaly was experienced in that the capsule was first sighted in the water and was picked up by helicopter. T/M data from the recovery event are under study but present analysis indicates that the most likely cause of the anomaly was that the phenolic nylon heat shield partially or fully broken away causing a c.g. offset that put the capsule in spinning and/or tumbling mode. This caused the G switches to open and close intermittently each time resetting the parachute deployment timer causing deployment at a much lower altitude than predicted.

Failure of the QR-2 DISIC subsystem was experienced following C & S resulting in an abort of the 14 day HIVOS qualification test. QR-2 was returned to AP for failure analysis.