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MEMORANDUM FOR THE RECORD

11 FEB 1966

SUBJECT: PSAC Meeting, 9 February 1966

1. A review of the MOL Program was presented to the Reconnaissance Panel of PSAC from 1500 to 1945 hours on 9 Feb 1966. Panel members present included Hornig, Land, Purcell, Garwin, Golivan, Koslov, Baker, Ling, Drell, Thomas, and Steininger. NRO, DDR&E and MOL personnel present included Flax, Generals Schriever and Berg, Fink, Yarymovych, Leonard, Tennant, Allen and Knolle. EKC personnel present for Tennant's and their presentation included Simmons, Oder, Sewell and Collinge. In the way of an overall summary of the meeting, I would say that the briefings were extremely well received and that the committee appeared to be completely satisfied with our approach and plans as presented. Following is a summary of the session.

2. The agenda included:

- a. Introduction Dr. Flax
- b. Subject Overview Gen Berg
- c. Manned/Unmanned Review
  - (1) Sensor and Operation Considerations Sam Tennant
  - (2) MOL System Impact Dr. Leonard
- d. Sensor Status Jim Collinge  
John Sewell
- e. Schedule and Conclusions Gen Berg

3. Dr. Flax introduced the briefing as the MOL report on the dual mode (Manned/Unmanned) studies and indicated that CDP was proceeding on that basis. The schedule information presented was the proposed schedule but subject to change as the CDP proceeded.

4. Following Gen Berg's overview of the agenda, Sam Tennant presented his briefing on the Sensor and Operation Considerations of the Dual Mode system including the initial look at uses of the additional weight available

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in the unmanned mode. The committee essentially had no questions on Sam's presentation and seemed pleased with our approach to the incorporation of the dual mode. Land was interested in the status of our V/H sensor development and this was discussed by Lew Allen. Garwin felt that we had used the sizing of the cryogenic tanks to determine the 41 days mission life of the unmanned system. This was discussed at some length and it was indicated that this was our initial look.

5. Dr. Leonard presented the impact of the Dual Mode on the MOL Systems. This briefing was also very well received. It was pointed out that the approach to automating the lab had been shown previously to Joe Shea and he was in agreement with our approach.

6. Jim Collinge presented the first part of the EKC briefing to include the areas of Optical Manufacturing, Thermal Control and Alignment problems. There was considerable discussion by the committee concerning the EKC proposed fixed slats riding on the tracking mirror for view factor control. Although several members felt intuitively there must be some fault with this approach, it was finally agreed that it was a clever approach and would do the job. Any major concern of the panel over the thermal problem seems to be now satisfied. John Sewell followed with a discussion of the dynamics problem. The panel, and Garwin in particular took EKC to task on the depth of their analysis of the dynamics problem. Later in the executive session he stated that he felt their briefing in this area indicated a questionable competence to properly perform the dynamics analyses. In response to his concern, it was pointed out in the executive session that we have an Aerospace group also working this problem and that it appears that one of the major causes of the dynamic problem was the EKC design of the tracking mirror riding on the lens barrel. It was indicated that we were looking in house at different approaches to mounting the tracking mirror. The panel was in complete agreement with this course of action.

7. In conclusion, General Berg presented the new nine flight program with the first two unmanned and the remainder in the manned-automatic mode with option of flying the last five as manned manual or complete automatic (unmanned) flights. Three automatic kits would be ordered. The flights would be on 4 month centers with the first manned flight in June 69 and the first all up optical system going on the second manned flight in Oct 69. Several questions arose out of this concluding presentation:

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a. Garwin was concerned as to how the four month cycle time between the decision to go manned or unmanned was determined. It was pointed out that it was desirable to make this decision at the factory so that the factory system run could be made in the flight configuration prior to going to the pad.

b. Land wondered if the unmanned sensor system would be configured as now planned if we had never heard of the manned requirement first. It was pointed out that the accuracy of IMC now planned for the tracking sensor essentially makes the two approaches identical.

c. Land also wondered if we should at this time designate one of the last five flights as an unmanned flight for planning. It was agreed that the fourth manned flight (June 70) would be designated as an unmanned flight.

d. Hornig asked if the new schedule was affected by budget considerations. Dr. Flax indicated only that it was to a lesser degree than the original schedule. He also pointed out that the Oct 69 date was paced by the sensor.

8. Some general comments and points were brought up in the concluding discussions around the table:

a. Land and Garwin were interested in possible night photo applications.

b. Land remarked that we were scheduling on things that do not exist such as the V/H sensor. This was not a critical remark, but rather one of observation of the "times".

c. Garwin questioned what could be tested on the first two unmanned flights. He also asked about the status of 20 mega bit readout links and the problems of doing this unmanned.

d. Land raised the question of rendezvous and the apparent desirability of changing crews with less expensive vehicles.

e. Steininger inquired as to the status of other experiments. Sea Surveillance and COMINT were briefly discussed by Dr. Flax. Steininger also raised the question of the value of using this sensor as an astronomical telescope.

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f. The ability to use the manned system [REDACTED] was discussed during Leonard's presentation. The panel discussed the difficulty of automating the unmanned system to do this job.

g. Slit image intensifiers [REDACTED] were discussed.

h. In the event the political situation should deny the use of the man on the initial flights we should attempt to protect the ability to go unmanned as early as possible.



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