

UNITED STATES GOVERNMENT

Memorandum

NRO APPROVED FOR RELEASE
DECLASSIFIED BY: C/IA RT
DECLASSIFIED ON: 3 AUGUST 2012

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TO : AD/Deputy Administrator

FROM : P/Deputy Assistant Administrator for
Program Plans and Analysis

SUBJECT: Lunar Mapping and Survey System

DATE: April 19, 1967

The purpose of the next Manned Space Flight Policy Committee (MSFPC) meeting is to discuss the circumstances surrounding the earth orbital test of the Lunar Mapping and Survey System (LMSS). In light of the disagreeable alternatives that have been suggested, it is appropriate to raise the more fundamental question of the real role this system now has in the NASA program. The following points are susceptible to further review and discussion:

1. No complete and integrated long-term lunar exploration program has been developed and approved.
2. The planning for AAP extended lunar exploration missions--and the technical requirements in support thereof--are necessarily dependent upon mainline Apollo accomplishment both for definition of the follow-on objectives and for mission hardware.
3. Surveyor and Lunar Orbiter are considered satisfactory for definition of Apollo sites. Lunar Orbiter resolution is considered at this time to be adequate for the scientific lunar mapping requirements.
4. Under any of the proposed test circumstances in earth orbit, the LMSS remains attached to the workshop for its orbital life (estimated to be 3 years); since the workshop may be revisited several times during the first 18 months of this period, the question of whether or not the device is being used may be raised, either nationally or internationally, each time a revisit mission to the workshop is announced.

If the decision is firm to keep the LMSS in the program, the following questions should be resolved in the context of the total NASA position:

1. For lunar mapping, how many missions on what time scale would be necessary to complete the task and at what total cost?
2. Are the LMSS data to be acquired of sufficient scientific and/or operational value by themselves to warrant this effort?



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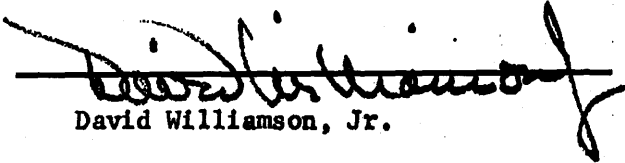
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3. What risks accrue if the system is not tested in earth orbit?
4. Can crew operations be simulated, for example, under water?
5. Can meaningful earth-orbital tests of the camera be accomplished on the ground, from aircraft, or from unmanned satellites?
6. Has the basic internal NASA justification of the LMSS changed toward an eventual earth-oriented application prior to a decision regarding the policy considerations of such utilization?
7. What interagency commitments, if any, affect NASA's ability to determine unilaterally whether or not to continue with the LMSS?

It may be appropriate to delay an MSFPC discussion of the LMSS until a more complete discussion of these and related questions can be scheduled. It may, on the other hand, be useful to hold the MSFPC meeting in order to test the general reactions of the members prior to a review of the basic planning for use of the LMSS. I do not feel we can, at this time, be confident that the requirement for the system or the plans for its testing are sufficiently defined to warrant the agency's taking a final position.

In light of the sensitivity of this subject, this memorandum is not being distributed or coordinated; if you feel the questions raised are of concern, Admiral Boone or this office could work with the Office of Manned Space Flight and the Office of Space Science and Applications to develop fuller documentation of the various issues for presentation and discussion at the level of the Office of the Administrator.


David Williamson, Jr.

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