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July 17, 1969

MEMORANDUM FOR THE RECORD

SUBJECT: NASA Initiative in Strategic Arms Limitation

On July 11 I visited Admiral Lemos to ask the status of a response by Mr. Laird to Dr. Paine on the NASA proposed initiative in the field of strategic arms limitation.

After locating a copy of the document in the OASD/ISA, Adm Lemos indicated that it was his impression that no response was expected by NASA. I pointed out that, on the contrary, NASA was looking for a response and specifically was hoping for some DOD support for the initiative. Adm Lemos pointed out that he was under the impression that the NSSM 28 Steering Committee had remanded a similar proposal to the NSAM 156 C mmittee for policy review. I agreed that such action had been taken but suggested that it would be most helpful to NASA if OSD were to at least provide the courtesy of an OSD response. Adm Lemos asked me to wait then while he went to see Mr. Packard and to ask his advice.

Adm Lemos returned and indicated that it was Mr. Packard's decision that a response at this late date would be embarrassing and that a telephone contact and apology might be in order. Adm Lemos asked me if I could "get OSD off the hook." I told him I could, but that I suggested very strongly that he call an appropriate individual in NASA and at least provide some brief explanation and add at least tacitly an indication of OSD support for the NASA initiative. He agreed that this might be the better course and asked me for a contact.

I provided General Smart's name, title, and telephone number. I returned to the office and called Gen Smart's office to alert them to Adm Lemos' call.

WILLIAM R. YOST
Lt Colonel, USAF

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
WASHINGTON, D.C. 20546

14 000492100

OFFICE OF THE ADMINISTRATOR

14 MAY 1969

MEMORANDUM FOR: Secretary of State
Secretary of Defense
Director of Central Intelligence Agency
Administrator, ACDA

REFERENCE: Memo from U. Alexis Johnson, dated 1 May 1969, (TCS-38626/69)

Attached is a paper summarizing a possible new Administration initiative in the field of strategic arms limitations. If you agree that this approach may have substantive worth, I suggest that it be considered by the NSSM 28 Steering Committee in addition to the three approaches suggested in the referenced memorandum. NASA would be glad to assist in developing this proposal in more detail if this appears appropriate.

T. O. Paine
Administrator

Attachment
Paper - A Possible
Initiative in Strategic
Arms Limitation. (TCS-38833/69)

TCS-38832/69 2B1 4

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TCS-38832-69
This document consists of 1 pages
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905-14-016

A Possible Initiative in Strategic Arms Limitation

A major problem in developing a basis for strategic arms limitations arrangements with the USSR is that of a credible means for verification. As of today, emphasis is being placed upon the formula, "reliance upon national means of verification," referring specifically to the present US reconnaissance satellite program.

If the intelligence collection activities of the US are to be protected from public revelation, an alternative to this formula would appear to recommend itself: bilateral negotiations on verification means to include the development and utilization of an open satellite system designed for the single purpose of verifying US and USSR adherence to treaty conditions.

Such a proposal, if made, would not require the disclosure by either the US or the USSR of the existence, scope, utility, or sophistication of the present overhead reconnaissance programs of both nations. The concern over international confrontation on this issue could thereby be minimized, while both parties could rightly claim to be acting in the spirit of using space for peaceful purposes.

Such a proposal, if accepted, would not interfere with covert intelligence-gathering activities and might provide an important bulwark to their unimpeded continuation. In this case, the quality of intelligence each was able to obtain from overhead reconnaissance

would remain a function of technical progress and evaluative capabilities. Further, the existence of an overt system would provide a reasonable basis for the possible challenges that might become necessary in the event treaty violations were discerned through any covert means.

An overt system that could be bilaterally implemented must be technically feasible, should be based on technologies there is reason to believe neither party would consider highly sensitive, and would have to have a lead time commensurate with the time-frame of the arms limitation agreement desired. Assuming that satellite imagery would be the most useful class of treaty verification data, the key factors become those of appropriate ground resolution, flexibility of target coverage, and parity of data availability to both parties. Image quality must be sufficiently good to offer a basis for public interpretation of the conditions felt or known to exist yet should not reveal actual or projected covert system capabilities. Target coverage is necessarily a determination made by each party concerning the other; polar orbiting satellites with long life and command response should be sufficient to afford photographic access to any part of the world. Parity of data could be achieved through a number of means: APT readout along the lines of current meteorological satellites, jointly manned and operated data acquisition centers, at independent but essentially identical systems each under national control.

As a political initiative, this approach appears both realistic and useful; it would offer new principles for negotiation without compromising the unacknowledged activities of either party, it would underline the US commitment to peaceful uses of outer space, and it would appear publicly credible as a verification means both at home and abroad. While there would have to be more work done to delimit the system characteristics operationally possible, there seem to be no technological barriers that would negate the concept. The task appears to be much more one of systems engineering than one of advanced development. To protect covert and classified capabilities, NASA might offer a logical instrumentality for the technical and operational aspects of the system, with ACDA providing interpretation. These agencies would, of course, work in concert with and under the policy guidance of other appropriate government departments and agencies.

CENTRAL INTELLIGENCE AGENCY

WASHINGTON, D. C. 20505

14 00049212D

OFFICE OF THE DIRECTOR

20 May 1969

MEMORANDUM FOR: The Honorable Thomas O. Paine
Administrator, National Aeronautics
and Space Administration

SUBJECT : Proposal to Use Satellite Reconnaissance in Arms Limitation Verification

1. I appreciate your memorandum of 14 May suggesting the use of an "open" satellite reconnaissance program designed to verify U.S. and Soviet adherence to any arms limitation treaty. The proposal was imaginative and well presented.

2. I believe the subject was discussed by the NSSM 28 Steering Committee on 14 May and remanded to U. Alexis Johnson in his capacity as Chairman of the NSAM 156 Committee. As you know, this Committee is responsible for considering political aspects and general policies on satellite reconnaissance.

Richard Helms
Director

TCS 1958/69
Copy No. 2B1

TCS-1958/69

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Recommendation

1. The DOD and NASA undertake a joint experiment program to develop and fly on NASA AAP the acquisition and tracking system developed for the MOL for the purpose of obtaining definitive data on man's capabilities, limitations and the definition of his role in future spaceflight missions. This experiment be scheduled for the first NASA AAP Workshop in second quarter calendar year 1972.

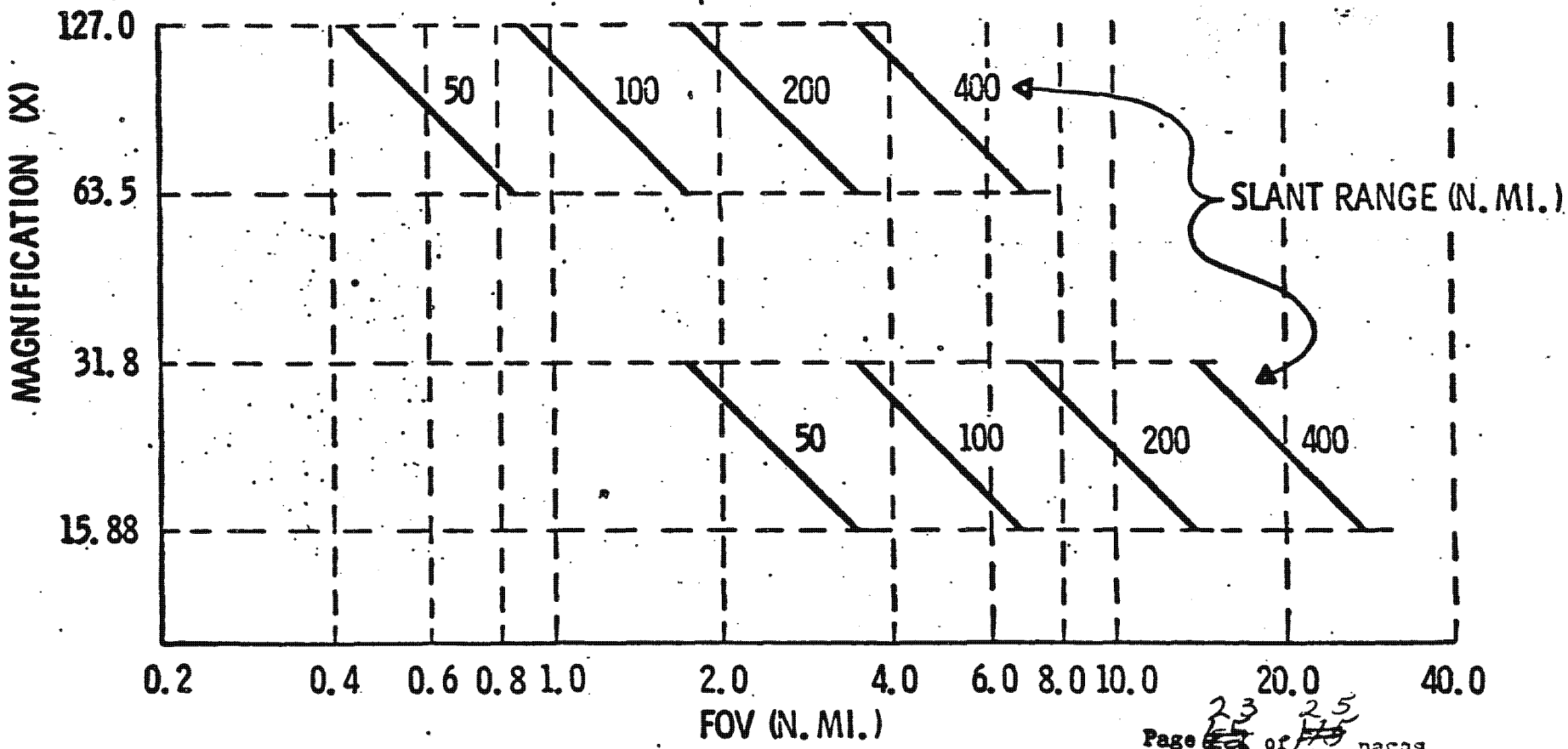
2. FY 70 funds in the amount of $400,000 be provided to immediately permit the definition of this experiment.

3. Hold actions be taken to prevent disposition of the MOL ATS and MOL mission development simulator equipments until the ATS experiment program can be formally gotten underway.

4. NASA and DOD carefully select the experimental and technical management personnel for managing this experiment to insure that details in engineering, missions and operations planning and scientific quality of data will be insured.

5. Actions be started immediately to begin the clearance of the MOL ATS system and mission development simulator from the MOL special security constraints to normal military security to facilitate joint NASA/DOD actions on this experiment.

FIELD-OF-VIEW VS MAGNIFICATION



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SYSTEM VISUAL RESOLUTION (FT/LP)

SLANT RANGE (N. MI.) →	50	100	200	400
MAGNIFICATION				
15.88X	9.6	19.2	38.4	76.8
31.8X	4.9	9.8	19.6	39.2
63.5X	2.8	5.6	11.2	22.4
127X	1.6	3.2	6.4	12.8

CONDITIONS

- ON-AXIS
- 2:1 CONTRAST RATIO
- > 560 FT LAMBERTS

} AT APERTURE

- < 0.5 ARC SEC JITTER (P-P)

ATS/CREW COMBINATION CAN OBSERVE ANY SMITHSONIAN-CATALOGED STAR (M = +9).

DRAFT

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PROGRAM OF MAJOR MILESTONES
ALPHA EXPERIMENT