UNITED STATES GOVERNMENT

Memorandum

TO : Code 5600 (Mr. H. O. LORENZEN) DATE: 28 May 1969

~~TOP SECRET~~

FROM : Code 5614

SUBJECT: Anticipated areas to be covered during scheduled travel

1. One aspect of my trip with which you should be quite familiar is the proposed useage of the 7106 birds on the first five or six orbits to collect data which would possibly serve the community in appraising the Soviet response to this launch. It seems important that the manner and degree to which they focus their surveillance radar systems against this multi-warhead launch might be used to describe the sequence of their response against the real McCoy. It has been suggested that if this is valid that the total community in depth COMINT as well, be on this operation so that all layers of sensors might focus and describe the overall response and develop the communities best evasive offensive doctrine. In any case the collection of this data on the first several passes is one of the areas of my trip which will be dealt with at each of the sites. The operational plan will evolve after my return. I have talked only in generalities to CIA about the visit to their site and they have agreed primarily on the necessity for getting the restraints imposed by the site on our study for the semi-unattended operation of their equipment on this program to bridge those crisis periods of maximum demand for personnel where they are too busy to attend our job. They have 5000 square feet of new building space and they have not been generous withiit. Maybe if we sweeten the pot with this special system controller and the Digitizer system we could enhance their contribution considerably. I really need George Miller NELSON's okay to go to the site. Captain MOFFIT wants to meet me there too and I suspect that he wants

Handle via Talent-Keyhole Control System Only

~~TOP SECRET~~

TOP SECRET

to come back to [redacted] with me for my last stop. I don't mind except he has gone to Europe until about 14th of June and the agreed upon date for meeting in [redacted] is 25 June and I doubt that he can be dashing off there after having been to Europe just the previous week. "Kinda Clumsy" and waste of emphasis when he is pushing [redacted] so Hard and doing only lip service to us.

Reid Mayo

Handle via Talent-Keyhole Control System Only

TOP SECRET

Code 5600 (H. O. LORENZEN) 28 May 1969

Code 5614

Working areas covered during your travel

1. Budget paper for FY-70 and FY-71 for 7107 and went out about 8 May. The major basis of this cost and 24 month schedule estimate was the next paper for mission 7107 Concept which went out May 196h. The major elements of this concept are as follows:

(a) We used both NRO and SORS draft to USIB guidance for the coverage with Bill BOENNING having a heavy hand in the numbers proposed. Nor guidance differed mostly from the SORS in that NRO in their highest priority they started POPPY at while the SORS guidance to USIB started the highest priority at and the next was so BOENNING combined these and dropped and it came These are really pushing the state-of-the-art in the upper microwave areas.

2. Pete WIHHELM and I reviewed the wisdom for a change in the spacecraft structure design and reasoned that since 7107 will be going on an Agena, and that this will be the last Agena, we should get a running start on a structure which will fit on the next booster...hopefully one which goes often enough that it will not be a complete "Bastard" but rather one which has mass use and thus competency, low cost and ease of launch schedule availability. The TITAN III-D looks like the one which the photo program will ride so this is our first choice, at least at this moment. The result of the various structure designs is one which is cylindrical (about 4 feet across and about 2 feet thick) so that they may be stacked four high and fill up the narrower nose fairing. This should give us 30 to 40 watts of power also and considerably more usable volume with potential for improving the temperature-constancy for Vince ROSE's stuff.

3. Twenty-four month development cycle was provided (relative to 7106 flight) but a statement was made that approval of the detailed design goals must be available in mid July (I think thats right) in order for us to get a running start on the long lead time items before the deployment for launch and operational evaluation of Mission 7106 in September.

28 May 1969

4. In the NRO request for Budget information they specifically demanded that we identify and justify each area where there would be changes in the ground station systems. Only two areas were so identified for 7107 and one for 7106; 7106 evaluation of payload ELINT systems must take place routinely like once a week so that the time delays of the spacecraft can be identified and taken into account in the calibration for this critical element which presently limits the overall system accuracy. We suggested that [redacted] be expanded to the extent that these measurements could be made at the NRL R&D site [redacted] We made a pitch that the improved accuracy was enough to make this mandatory but there were also significant areas of program improvement in the areas of operator training, SOP production, system documentation and R&D payload evaluation. The additional use of [redacted] with regard to the ELINT systems was in connection with the "Stored Command" provision which was proposed for Mission 7107. This will allow up to 14 hours worth of tasking to be loaded into each bird at [redacted] and as the birds fly along it will be possible to change the entire tasking each five minutes for the 14 hour period. The frequency of task-change can be increased if the number of bands per change is reduced from 16 to something less. This proposed use of stored commands will provide two important advantages for the program: (1) Greatly reduce the exposure of the command signals to overseas world and (2) Vast increase in the world wide tasking versatility such that one could task for [redacted] as the bird came out the [redacted] other changes could be made as the community desired. The accuracy of the initiation of each [redacted] this degree of accuracy. This proposal rivals the [redacted] The other aspect of this stored command proposal was the ability to take the satellite "Off the programmed cycle" for emergency use against a Target of Opportunity and then after a preset period of time the bird would once again enter into the programmed cycle at the correct spot in the cycle. This would allow the use of the [redacted] National Priority.

5. The Major Goals for 7107 were taken from the SORS paper:

(1) Detection, Location and Technical assessment of previously unknown radar emittors at the earliest possible time.

(2) EOB surveillance sampling of a specific geographic area sufficient to disclose the activity levels, the interrelationships and usage patterns of these new components of the known weapons systems.

28 May 1969

6. Briefings have been repeated and frequent with NRO visits:

On 9 April 1969 the following visited the Laboratory:

Col Lou ALLEN, Jr.; Col David D. BRADBURN; [redacted]. (Col. ALLEN replaces General BERG)

On 15 April 1969 following visited the Laboratory, NRO personnel

Dr. John McLUCAS, (Under Sec AF), Mr. Harry DAVIS, Col Irving [redacted] BrigGen Russell A. BERG, Mr. BEONNING and [redacted]

18 April 1969 following visited the Laboratory:

Mr. John W. WARNER, Under Sec Nav; Hon Robert FROSCH, Under Sec Nav for R&D, Mr. Harry SONNEMANN, Special Ass't to Dr. FROSCH, P. WATERMAN, Adm CLANCY, [redacted] and Capt MOFFIT.

25 April 1969 following visited the Laboratory:

Adm RUCKNER, Adm LEONARD and [redacted] OP-76.

27 May 1969 following briefed at the Laboratory:

Adm B. CLAREY, Vice Chief of Naval Operation

28 May 1969 following briefed at the Laboratory:

[redacted] replacement)

Other briefing conducted at the Laboratory during your travel:

NSA briefing on Software mathematicians who are writing Mission 7106 machine stuff "B" and "A" reps about 5 each.

Army briefing given to [redacted] from Missile Information Div Huntsville, Ala and [redacted] Senior gent and [redacted] who are to write software for Army [redacted] use, [redacted] from ASA and [redacted]

Reid D. MAYO