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NRL B-000136-70

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GROUP 1
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DEPARTMENT OF THE NAVY
NAVAL INTELLIGENCE COMMAND
2461 EISENHOWER AVENUE
ALEXANDRIA, VA. 22314

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IN REPLY REFER TO
NIC-20/fah
BYE 66444-70
30 October 1970

~~TOP SECRET EARPOP~~
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From: Manager, Program C
To: Distribution List

Subj: POPPY Augmentation Meeting; report of

1. A POPPY augmentation meeting was held at 0930, 16 October, 1970 in the Hoffman Building. Following is the list of attendees:

[redacted]	Program Manager
MR. DIX	Program Manager's Office
MR. MAYO	Program Manager's Office/NRL
MR. HELLRICK	NRL
MR. PRICE	NRL
LTJG MORGAN	NSG
[redacted]	NSA
MR. ABPLANALP	NSA
[redacted]	NSA
	NSA

2. The meeting was held to discuss planning necessary to ensure an orderly augmentation of the POPPY ground sites, authorized by Dr. McLucas, acting for DEPSECDEF Packard. It was agreed to establish working groups, along functional lines, which would coordinate joint efforts required. These working groups will meet at regular intervals, and will submit written POA&Ms to the Program Manager, for further dissemination to all concerned. Additional reports required from the working groups concern actions initiated, milestones met, slippage in schedules, and similar matters which would impact on the program.

3. The following Working Groups, with indicated membership, were deemed necessary:

a. Computer Working Group

Mr. Hellrick - NRL (Chair)
Mr. Hammerstrom - HRB
[redacted]

[redacted] EARPOP
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b. PDE Working Group

Mr. Price - NRL (Chair)
Mr. Fisher - NRL
Mr. Hammerstrom - HRB

c. [redacted] Working Group

LCDR. McGraw - NSG (Chair)
LTJG Morgan - NSG
Mr. C. Price - NRL
Mr. Withrow - NRL
[redacted]
Mr. G. Price - NRL
Mr. Hellrick - NRL
(NSA Membership - to be determined)

4. The first meeting of the Computer Working Group and the PDE Working Group was scheduled for 26 October 1970. The first meeting of the [redacted] Working Group will be announced at a later date.

5. It was agreed that NSG and NSA would work together on such matters as CCP programming, keeping the Program Manager advised on all relevant matters. It was further agreed that NSG would prepare a draft message outlining action items required by various commands to ensure an orderly progression of the schedule. This message would be transmitted from CNO to relevant commands, and would serve as the official authorization for proceeding with the implementation of the augmentation authorized.

6. There being no further agenda items or discussion, the meeting was adjourned.

[redacted]

Distribution:

COMNAVSECGRU (G-54)
Director, NSA (K4/SPO)
Director, NRL
NRO, (attn. [redacted])

[redacted]

SECRET

COSTS:

II- Due to the delay in the distribution of the internal Job Order Status Reports by the NRL Comptoller shop the MSR will report on a cost base about 5 to 6 weeks after the fact. These JOSR reports are of a fixed format and not the one required by NRO comptoller for Program C. However an attempt will be made to convert the cost format of the MSR to the NRO format... I- Payload, II- Ground Station III- Facilities and IV- Contractural Services

For the period ending 10/31/70 (FY-71) the entire Program C effort at NRL is summarized as follows:

	Current Hours	Cumulative Hours	Current Costs	Cumulative costs
Scientific Routine Costs:				
Straight Time Pay. . .	8,897	35,303	$85,908	$336,507
Overtime	1,910	8,038	14,297	60,476
Misc Mats . .			84,974	495,951
Travel.			616	12,365
Service Division Support:				
ESD Pay.	6,645	23,106	$37,949	$132,528
ESD Non-Salary			15,510	65,426
Other Pay.	356	1,479	2,000	8,501
Other non-Salary . . .			10,509	42,267
Applied Overhead:				
Gen & Adm.			82,273	324,844
Indirect			17,637	69,937
Subtotal Routine:.			$351,673	$1,548,802
MAJOR PROCUREMENT.(Over.$5,000.ea).			314,866	2,795,563
TOTAL			$666,539	$4,344,365

BALANCE REMAINING= $4,704,635

Note: The Subtotal Routine for the first FY-71/3 is $1½M.

The $1,220,500 for Augmentation of Program C when taken from the Balance leaves Balance of $3,484,185. Now if we linearly extrapolate the subtotal Routine this will demand that $3 M be retained for these salary and routine purchase type expenses leaving only $386,581 for major procurements after 1 November (except for the Augmentation funds). Thus the budgetary deficiency had severely curtailed major procurements until 9 December when we were informally informed that the defeciency was being supplemented and at this time the subtotal routine funds were available for use in procurements of a major amount.

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3614

29 OCT 1970

Proposed Program for [redacted] USN — 30 October 1970

0830	Program C	Mayo, Bldg 56, room 200D
0915	RASUR Program	Trexler, Bldg 70W, Conf. Room
0945	TATTLETALE	Brown, Bldg 69, Trailer
1005	Simulation	[redacted], Bldg 69, Trailer Bldg 56, room 100
1100	Airborne DECM	[redacted] Bldg 56, room 119 [redacted]
1130	Shipboard DECM	[redacted] Bldg 56, room 119

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Alternatives:

Add information to our last outgoing Budget letter to NIC which is now somewhat ??? in error regarding the Budget Table, the [redacted] and the FY-72 item for the Second generation PDE and the [redacted] during FY-72.. [redacted] was told verbally that the PDE should not wait until FY-72 to be started but that the ADDS could wait. The thought being that the Computer [redacted] could act in its back-up DATRAN role and make any digital tapes needed as the prototype ADDS is used for Second Generation PDE development at [redacted] or NRL proper. $65K for [redacted] +$10K for O&M in FY-72.

The NIC answer to the 14 Sept Questions also leaves our Budget letter in disrepair and need of adjustment.

What ever we do it must pull both these into agreement and summation.

Therefore we must start with these two documents and re-issue our last outgoing budget letter.

Modifications to our FY-71 budgetary position by the NIC answer to 14 Sept questions:

1- Comb Filter @ $50K is on O/S Tab....
2- [redacted] A/DDS @ $140.6K "
3- Advanced PDE Development @$185K """
4- Ephemeris Software (NWL)@$65K

$440.6K TOTAL + R&D Payload @$2062 K

Modifications to our FY-72 must be much more complete than given in our 1 May 70 Paper but so far the Nic paper does raise several items:

1- If [redacted] is approved for [redacted] then = $65K
O/M for WH 10K

2- If [redacted] but [redacted] must command then . . . $70K
Communications @ ?????

[redacted] Wants:

Written summary of Briefing (per [redacted] a few lines about each viewgraph

FY-72must be in some doubt also and FY-73 must be $2Mto $3M short, [redacted] we now see for 7107.

[redacted] much like FY-71 for 7107.

Therefore our new letter must draw the last two into focus and then press on into FY-72 to finish 7107 [redacted]

contents and the costs for FY-72.....

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Ways that our last Budget revision must be changed due to the 26 Oct Briefing

1. Ascertain if the NRL to NIC paper is to be submitted or to be reissued.
2. Assuming that it is to be redone:

[redacted]

~~Not enough details on R&D, Column #4, and Augmentation for O/S.~~

Items treated in Budget-R&D Briefing not raised in paper

[redacted] Wants just a few lines on each of our Briefing Charts along with the charts..... This presupposes that the order of the briefing could be reversed as originally intended before Lee had to leave..... I.E. Architecture changes in Mission 7107 and impact on Ocean Surveillance followed by R&D Spacecraft and then the Budget Revision and then Schedule.

I- Architecture changes in Mission 7107 and impact on Ocean Surveillance capability for the mission:

The changes to Mission 7107 are due to many things, primarily engineering incompatibilities and component availability. The adjustment between the various spacecraft of certain of the collection systems has been due to these reasons, while the deletion of a band and addition of another has other justification. For example the 4-way common coverage proposed in Ref (a) was heavily aimed at the [redacted] use of frequency diversity and this unknown emitter has been resolved since Ref (a) was submitted. Therefore it has been incumbent upon us to provide other 4-way coverage in this mission. In order to do this without a schedule impact it is necessary to utilize heavily the spare components remaining from 7105 and 7106. Thus proposed the changes relative to Ref (a) [redacted] shown in the proposed ELINT Coverage for Mission 7107 of Table #1. The 4-way coverage now proposed for Mission 7107 will greatly enhance the Ocean Surveillance capability of Missison 7107 by virtue of the de-cluttering capability potential of the X-Band Comb Filter and (2) the increase in time over target possible with [redacted] and (3) the potential for intercept of the Total Weapon System as opposed to the ability to intercept just one or two parts of it. Thus L-Band, S-Band, C-Band and X-Band 4-way common coverage will enhance the O/S capability of Mission 7107.

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-1-

Other architecture changes in Mission 7107 which are proposed in the ELINT Coverage of Table #1 are as follows:

Complete frequency coverage from 154 to 18 GHz in direct response to emphasis by NRO staff on numerous occasions.

Extended Geopositioning capability in K_u band as requested by NSA & NRO to satisfy the [redacted] emitter requirement.

Band #8 of the 7107A & B spacecraft has been raised from 2800 to 2840 MHz to more adequately embrace the [redacted] emitter signal.

Note that these improvements to the design concept for Mission 7107 do indeed improve the overall concept and in so doing they do enhance in a number of ways the capability for Ocean surveillance by this mission.

NIC letter to the NRO of 17 August proposing the augmentation of the Program C in support of Ocean Surveillance, concentrates on improvements at the overseas sites and the addition of the first operational CONUS site at [redacted] These improvements are for processing a new or Second-Generation Computer and Hardware sorting system to make the computer available for [redacted] processing data from certain selectable spacecraft collection systems or Bands. The computer system has by virtue of its increased speed alone, the potential of a factor of 40 to 50 improvement beyond that currently being used at the sites in [redacted] for Program C on-site processing. Therefore the arenas where the greatest improvement in Ocean Surveillance capability is anticipated are (1) timeliness of reporting mobile targets location through processing speed and power, (2) the on-site hardware sorting ability which can make X-Band available for timely local-processing. (3) CONUS site dedicated to Ocean Surveillance operations and training.

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II- R&D Spacecraft for Mission 7107, Proposal for

A- Technical Design Concept:

Monopulse Downward looking DF system to enhance [redacted] in geometries where [redacted] is least accurate.

Combine in a single mission the [redacted] and Monopulse downward looking DF together improve probability of intercept and accuracy to meet the current ACNO(I) requirements as promulgated.

600 nm circular intercept area centered on nadir.

2650 to 2850 MHz

one degree monopulse DF accuracy

On-board processor to select [redacted] emitter or others by command.

emphasis on Circular Scanning high power emitters.

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Top Secret [redacted]

III- Budget Revision of Ref (a)

A- Reasons for revision

Failure analysis on Mission 7106 more demanding than estimated.
Costs inflated beyond those of 7106 which was basis of estimee.
Extension of the technical goals of the Mission beyond than used in Ref (a).
R&D Spacecraft never priced out before.

B- Deficit in FY-71 Funding at NRL
C- FY-72 estimate for Mission 7107.
D- [redacted]

16 month

Table #2 gives the new/revision of the last third FY-70 plus FY-71 estimates for funding required for Mission 7107. Table 3 gives Mission 7107 cost estimate for FY-72 [redacted] Several factors have caused revision of the budget estimate of Reference (a):

(1) The failure analysis of the two spacecraft which suffered in-flight command system loss in Mission 7106 in February 1970, required much more extensive analysis than was estimated in Reference (a) the costs shown in Column #1 of Table 2 indicates these expenses. This failure analysis was imperative before the design of Mission 7107 could proceed with confidence.

(2) Another factor in the requirement for budgetary revision of Mission 7107 has been the manner and extent of the cost inflation now being experienced. Ref (a) used the 7106 development as the basis for cost estimate for Mission 7107 and now that the market place has been sampled for this development cycle it is painfully apparent that the costs have risen far beyond that anticipated in Ref (a). Column #2 of Table #2 delineate these inflationary costs.

(3) The changes in the design concept and design goals through increased operational requirements on Mission 7107 beyond those imposed at the time of Ref (a) are shown priced out in Column #4 of Table #2. Specifically these costs are itemized in Table #3. Note that the Payload portion of these costs totals to $495K, with $260K being devoted to improvements in the frequency spectrum above 10½ GHz, for general search as well as for emitter geopositioning. The USIB requirement and the NRO requirement for Mission 7107 have imposed this change since the submission of Ref (a). Parametric/Versatility measurement requirements have been imposed by NSA in order to improve the processibility of Program C parametric measurements. In the past these capabilities have had for each individual collection system, its own unique calibration characteristic. Thus precluding the computerized reduction of the data. In Mission 7107 the design goal is for each collection system's parametric measurement calibration to be identical with that of the other parts of the spectrum, and also to embrace a much wider dynamic range so that the amplitude measurements, for example, can define the first order side lobes as well as the main beam.

In addition to these increased operational requirement being imposed on Mission 7107 beyond those invisioned at the time of Ref (a) there are two more. (1) A ranging system between the operational spacecraft to enhance the capability of monitoring the in-flight orbital station-keeping microthruster action. This will also pioneer for this program the essential elements of spacecraft-to-spacecraft communications for what ever Slave/Master arrangement it might imply. This is a first natural step toward relaying Program "C" data via another high altitude system back to a central processor

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(2) the other area of technical intensification [redacted] on the program has occured by [redacted] the reflection on the spacecraft command system of a requirement for twice as many operational commands as were available in Mission 7106. Thus Mission 7107 will have 160 discrete operational commands available in each of the primary spacecraft as compared to only 80 available in Mission 7106.

So far the areas of the spacecraft have been discussed relative to the intensified operational requirements being imposed on the program. There are several anrea where the ground collection analysis and data-delay calibration systems must be improved...(1) the requirement placed upon the overseas sites to perform a Quality Assessment, Initial data scan for Signals Of Interest (SOI), using the magnetic tape recordings made for NSA analysis, has brought about a dangerous balance between doing the job quickly to get the tape off to NSA and doing the job well and thoroughly. These are both desirable but not compatible so improvement is essential in this vital part of our operations. It has been determined that a Uniform QC-Complex and Standard Operating Proceedure should be developed for all sites so that the measurements will all be made alike, with the same resolution accuracy....$125K is required to complete this vital improvement in the collection and Quality Assessment part of the Program "C" ground systems.

(2)In the past there has been a "Calibration Signal" recorded on the beginning or at the end of each data tape so that the analysis community could determine the preciese delay values associated with each receiver channel; thus imrpoving the overall measurement of [redacted] by giving a calibration value of the instrumental error. This calibration signal has not been immune to the environment of the collection site since it reflects the noise seen through the antenna. A modification is proposed to isolate the antenna noise from this calibration data. An estimated $25K is needed to carry out this important improvement to the system.

(3) the System Quick-Check at each site is made weekly and involves sending a signal from the operator position out a coaxial line to a direction coupler at the base of the antenna so that a known signal is fed into the input of the receiving system just below the receiving antenna. This system has been used for years and periodically it has been found to inadequately describe the system readiness...particularily in the area beyond the direction coupler, the receiving antenna system and its coaxial cable phaseing harness. It has been proposed that a small test antenna be installed remote from the precent data receiving antennas so that the test signal can be radiated into the receiving system through the ready [redacted] thus making the entire receiving system subject to test.

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This improved system test and calibration test antenna will require about an additional $25K to equip this system at [redacted]

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(b)

Top Secret [redacted]

Top Secret

28 October 1970:

FROM: DIRECTOR, NAVAL RESEARCH Laboratory
Washington D.C. 20390

TO: Director, Program "C"

Subj: Technical and Budgetary Briefing (FY-71) for Mission 7107 given To NRO Staff on 26 October by NRL Briefing team.

1. R&D Spacecraft for Mission 7107, Technical Proposal for.

The requirements for Ocean Surveillance ~~xxxxxxxxxx~~ promulgated by ACNO(I) clearly identified the weighting factors of (1)proximity of threat ship to a US Ship, (2) [redacted] (3) Political Climate and (4) the Missile carrying craft. In addition to weighting each of these categories of Threat there was a stated requirement for timeliness and accuracy and probability of intercept. Examination of these requirements shows that Program "C" demonstrated capability to date does not meet the probability of intercept requirement and on certain of the intercept geometries the accuracy is not adequate. These shortcomings in the present Program "C" system are therefore important considerations in the design concepts for an R&D Spacecraft to be launched along with Mission 7107, and used in a fashion to enhance the overall operational capability for the total mission.

Thus a Hybrid System utilizing both the primary spacecraft of Mission 7107 and an another R&D spacecraft has been developed. The R&D spacecraft will contain among other systems, a [redacted]

[redacted]

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5614-321:ED:bf
2 October 1970

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MEMORANDUM

From: E. L. Dix
To: H. O. Lorenzen

Subj: Interim Systems Analysis Group, suggested tasks for

1. The requirements for Program C systems analysis tend to fall into two related but distinguishable categories. On the one hand, an immediate need exists to study and improve the performance of the system as it exists today. At the same time, the response of NRL to the basic USIB requirements must be reviewed from a long range point of view so that advances in technology and the increased capability of NRL can be combined to provide the best possible system performance to meet both national and ocean surveillance needs now and in the foreseeable future.

2. The following items are suggested under the category of present system improvement possibilities. This list is by no means complete nor has any attempt been made to assign priorities.

a. Re-evaluate all sources of error, identify relative contribution to location error, and recommend hardware or software changes required to reduce end product errors and reduce processing time.

b. Study propagation anamolies and polarization diversity, particularly with regard to channel A reception and command transmission. This effort should also examine a new D. L. frequency.

c. Examine system changes required to reduce the requirement for averaging to obtain acceptable location accuracy. The goal of this effort would be to approach monopulse location capability.

d. Perform trade-off analysis of brute-force numerical augmentation of Program C, both in air and on ground, to improve time over target and probability of intercept. Make cost effectiveness comparison with other programs.

e. Investigate possible means of improving SPASUR data transmission techniques to improve quality of ephemeris data.

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f. Study the feasibility of more frequent orbital velocity corrections to maintain [redacted] to less than [redacted] Should be possible to make ephemeris data accuracy acceptable 100% of the time. Will require a technique for measuring [redacted] as well as range rate [redacted] per day.

3. The suggested list of study topics in this paragraph are primarily directed toward the formulation of future concepts. Again no claim is made for completeness or priority ordering.

a. Explore feasibility of adding high sensitivity downward looking conical or fan beam coverage to provide [redacted] measurements of [redacted] intercept toroid now used. Probably would require slanting coverage [redacted] The goal here would be to provide horizon to horizon location capability with about equal accuracy in selectable bands.

b. The possibility of providing downward location capability using true mono-pulse techniques should be investigated for ocean surveillance coverage. This would supplement present techniques as in (a) above.

c. Study the problems associated with relay of data via a high altitude or synchronous or semi-synchronous satellite. Will involve programmable pointing of directional antenna from spacecraft. Probably need stiffer 3 axis stabilization system.

d. Investigate on-board digitizing and processing for both [redacted] techniques. Compare to ground processing.

e. Examine impact of providing a direct transpond 5MHZ BW frequency translated data down link for selective use to produce technical information on new targets.

f. Study the problems associated with frequency translating a number of bands into a common frequency measuring system for selectable use.

g. Study application of other than ELINT sensors for meeting the requirements for ocean surveillance. Include data handling aspects of each.

h. Examine presently available ocean surveillance data collection systems as a guide to providing most needed additional information.

i. Compare direct transmittal of ocean surveillance data to Fleet Flagships, etc., versus relay to CONUS and retransmittal to the fleet via conventional communications channels.

4. Although many of the items listed reflect the thoughts of a number of people in Program C, a planning meeting with the key NRL people would be helpful in expanding or otherwise modifying this list. Of particular urgency is the need to assign priorities to the final list and match tasks with people so work can start.

5. In anticipation of having such a meeting, I am sending a copy of this memorandum to Reid Mayo, Pete Wilhelm, and Capt. [redacted] so they may be prepared in advance. If you consider it appropriate, a copy can be sent to [redacted] so that he will be aware of NRL's activities in this area.

E. L. Dix

E. L. DIX

[redacted] SECRET [redacted]

5614-321:ED:bf
2 October 1970

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MEMORANDUM

From: E. L. Dix
To: H. O. Lorenzen

Subj: Interim Systems Analysis Group, suggested tasks for

1. The requirements for Program C systems analysis tend to fall into two related but distinguishable categories. On the one hand, an immediate need exists to study and improve the performance of the system as it exists today. At the same time, the response of NRL to the basic USIB requirements must be reviewed from a long range point of view so that advances in technology and the increased capability of NRL can be combined to provide the best possible system performance to meet both national and ocean surveillance needs now and in the foreseeable future.

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e. Investigate possible means of improving SPASUR data transmission techniques to improve quality of ephemeris data.

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[redacted] SECRET [redacted]

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g. Study application of other than ELINT sensors for meeting the requirements for ocean surveillance. Include data handling aspects of each.

h. Examine presently available ocean surveillance data collection systems as a guide to providing most needed additional information.

Study modulation methods and error correction coding for digital data down link

[redacted] to combine

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~~SECRET~~ [redacted]

Compare direct transmittal of ocean surveillance data to Fleet Flagships, etc., versus relay to CONUS and retransmittal to the fleet via conventional communications channels.

4. Although many of the items listed reflect the thoughts of a number of people in Program C, a planning meeting with the key NRL people would be helpful in expanding or otherwise modifying this list. Of particular urgency is the need to assign priorities to the final list and match tasks with people so work can start.

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E. L. DIX

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~~SECRET~~ [redacted]

~~SECRET~~

5614-321:ED:bf
2 October 1970

Ed Dix recently returned to NRL from ComSat & he is trying to influence Lorenzen to place him in the Analysis seat for Poppy.

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MEMORANDUM

From: E. L. Dix
To: H. O. Lorenzen

Subj: Interim Systems Analysis Group, suggested tasks for

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DATE
2 Oct 1970

ORIGINATOR	SERIAL NO.	ENCLOSURES
CIA PROGRAM C	BYE-66427/70	

DATE REC'D IN NRL	COPIES REC'D	COPY NOS.	RECEIPT NUMBER
8 Oct 1970	One	1	NRL-007/70

SUBJECT

NRL Support in Defining [redacted]

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4000 - please arrange [illegible] C/1000

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4000													
5000													
5600													
5614													
5170													

Code 5614 has the action. Please arrange meeting with codes 4000 & 1000 present.

AB

[redacted]

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RR RUXQAAJ
DE RUXQAA 415 2632141
ZNY XXXXX SSS
R 102130Z
BT
XXXXX
[redacted]596

TOR ~~SECRET~~
Handle via BYEMAN Control System
1006
7107 10-12-70
5614
5170

~~S E C R E T~~ 102130Z OCT 70 CITE WHIG3328
PROBE INFO [redacted]
BYEMAN
SUBJ: MSN 7107 AFT RACK SPACECRAFT
REQUEST THAT PROBE PROVIDE THE WHIG STAFF WITH A FIRM PROPOSAL FOR THE FIFTH "R&D" 7107 SPACECRAFT BY 15 OCT 70. THE PROPOSAL SHOULD INCLUDE A DETAILED DESCRIPTION OF THE PAYLOADS AND PERTINENT COST INFORMATION. IF THE MAJOR AFT RACK SPACE IS NOT USED BY PROGRAM "C", THEN A PROGRAM "A" VEHICLE CAN BE CONSIDERED FOR THE 2707 POPPY AGENA.
~~S E C R E T~~
BT

~~SECRET~~
Handle via BYEMAN Control System

~~TOP SECRET~~

Handle via BYEMAN Control System

DE S321 GA PLS KK

R&D Spacecraft (7107)

TWX644
RR RUXQAAJ
DE RUAQAA 483 2871750
ZNY XXXXX VVV
R 141749Z
ST
XXXXX
[redacted]616

TOR 1430 10-14-70 5614

~~T O P S E C R E T~~ 141749Z OCT 70 CITE PROBE 24-70
PRIORITY WHIG, INFO [redacted]
~~EARPOP~~
MISSION 7107 R&D SPACECRAFT
A. WHIG 3328 102130Z OCT 70
1. CONCEPTS FOR THE 7107 R&D SPACECRAFT HAVE RECENTLY UNDERGONE A ~~TOP SECRET~~ 70
CHANGE OF DIRECTION. A FIRM PROPOSAL CONTAINING DETAILED DESCRIPTI[redacted]
COST INFORMATION AND CALENDAR IMPACT WILL BE AVAILABLE 26 OCT.
REQUEST PRESENTATION AT THAT TIME VICE 15 OCT AS REQUESTED REF A.
115
#0001

Handle via BYEMAN Control System

NNNNIWX867
RR RUXQAAJ
DE RUXQAA 912 3020242
ZNY XXXXX VVV
R 290240Z
BT
XXXXX
[redacted] 739 CONCERT 851
CONCERT PASS MARGO

TOR 0840 Z
Handle via BYEMAN Control System
10-29-70

R+D
7106

5614
5170

HANDLE VIA
BYEMAN-TALENT-KEYHOLE-COMINT
CONTROL SYSTEMS JOINTLY

HANDLE VIA
BYEMAN-TALENT-KEYHOLE-COMINT
CONTROL SYSTEMS JOINTLY

~~S E C R E T~~ BBBBB ~~EARPOP~~ BYEMAN CHANNELS
R 282006Z OCT CITE PROBE 25-70
ROUTINE MARGO INFO [redacted] WAHOO WHIG
POPPY MISSION 7106 EXPERIMENTAL R&D SATELLITE
A. MARGO 834-70 161930Z OCT 70
B. PROBE LTR BYE 66411-70 OF 15 SEPT 70
1. REF A REQUESTED INFO CONCERNING MISSION 7106 R&D SATELLITE.
2. REF B FORWARDED AN EVALUATION OF THE R&D PAYLOAD TO WHIG. A COPY OF REF B IS BEING FURNISHED MARGO.
3. IF REQUIRED FURTHER DETAILED INFORMATION IS AVAILABLE ON THE RF MEASUREMENT EXPERIMENT
~~S E C R E T~~
BT

Handle via BYEMAN Control System

TOR 0840

SECRET
Handle via BYEMAN Control System

R+D (7106) 10-19

5614

5170

TWX651
RR RUKGAAJ
DE RUKGAA 560 2892130
ZNY XXXXX VVV
R 161930Z
BT
XXXXX
[redacted]

~~S E C R E T~~ 161930Z OCT 70 CITE MARGO 654-70.
ROUTINE PROBE INFO [redacted] WAHOO, WHIG
~~EARPOP~~
SUBJECT: POPPY MISSION 7106 EXPERIMENTAL R & D SATELLITE
1. REQUEST INFORMATION CONCERNING THE SPECIAL R&D EXPERIMENTAL SATELLITE WHICH WAS LAUNCHED WITH MISSION 7106.
2. OF PARTICULAR INTEREST ARE:
   A. THE NATURE OF THE VARIOUS EXPERIMENTS ON BOARD INCLUDING THE RF MEASUREMENT EXPERIMENT WHICH THIS OFFICE NEEDS TO ACCOMPLISH A TCG ASSIGNED ACTION ITEM.
   B. THE TECHNIQUES USED IN IMPLEMENTING THE EXPERIMENT
   C. THE METHOD OF INFORMATION READOUT FROM THE SATELLITE
   D. THE RESULTS OF THE ENGINEERING EVALUATION INCLUDING ACCURACY OF MEASUREMENTS AND ANY DIFFICULTIES ENCOUNTERED IN DATA REDUCTION.
3. THIS INFORMATION WILL BE USED BY ANALYSTS WHO ARE EVALUATING PRESENT AND FUTURE ANALYTIC REQUIREMENTS.
~~S E C R E T~~
BT

SECRET

Handle via BYEMAN Control System

NNNN
TWX658
PP RUXQAAJ
DE RUXQAA 503 2880206
ZNY XXXXX VVV
P 150205Z
BT
XXXXX
[redacted]523

~~TOP SECRET~~ [redacted]
Handle via BYEMAN
Control System

P R 142122Z
FM COMNAVSECGRU
[redacted]
INFO DIRNSA
CNO
COMNAVINTCOM
SSO DIA
YSNKCAC/SAFSS (SOC)
ZEN
~~T O P S E C R E T~~ BBUSS ~~EANFOR~~ BYEMAN CONTROL SYSTEM
CNO HOLD AND PASS TO NRL
DIRNSA FOR K4 AND A67
SAFSS (SOC) FOR [redacted]
SPECIAL TASK 17-017-70 (S)
A. MY 092122Z OCT 70
1. REPORT LOCATIONS EMITTERS SPECIFIED SUBJECT TASK FOR ALL BALTIC SEA VICE BOUNDARIES ESTAB PARA 1D, REF A.
GP-1
090
#0005

Ship Tasking

TOR 0852
10-15-70

~~TOP SECRET~~ [redacted] 6/14
Handle via BYEMAN
Control System

TNX763
PP RUXGAAJ
DE RUXGAA 607 2921745
ZNYXX

PP RUXGAAJ
DE RUXGAA 607 2921745
ZNY XXXXX VVV
P 191744Z
ST
XXXXX
[redacted]SS1

~~TOP SECRET~~ [redacted]

~~TOP-SECRET~~
Handle via BYEMAN
Control System

R 191210Z
[redacted]
TO COMNAVSECGRU
SSO DIA
INFO CNO
COMNAVINTCOM
DIRNSA
ZEN

~~T O P S E C R E T~~ SUBJ EARFOR BYEMAN CHANNELS
SSO DIA KEEP INFO FOR DIAXX PASS INFO SAFES(FOR SOC)
DIRNSA FOR K4 AND A67
SOC FOR [redacted]
CNO HOLD AND PASS TO NRL
SPECIAL TASK 17-017-70 SUMMARY
A. YOUR 092122Z OCT 70
B. YOUR 132043Z OCT 70
C. YOUR 142122Z OCT 70
1. REF A IMPLEMENTED SPECIAL COLLECTION TASK 17-017-70 FOR PERIOD 09 THROUGH 13 OCT 70, AND REF B EXTENDED PERIOD TASK THROUGH 18 OCT 70.
2. REF A DIRECTED THAT ONLY EMITTERS LOCATED IN A SPECIFIED AREA OF THE BALTIC WOULD BE REPORTED AS PART OF TASK; HOWEVER, REF C EXTENDED THE AREA OF INTEREST TO INCLUDE THE ENTIRE BALTIC SEA. DURING THE TASK PERIOD, THIS STA LOCATED A TOTAL OF SEVEN SHIPBORNE EMITTERS IN THE BALTIC SEA(4[redacted] AND [redacted] FOUR OF THESE LOCATIONS WERE MADE PRIOR EXTENSION OF THE AREA OF INTEREST, AND WERE NOT WITHIN THE SPECIFIED BOUNDARIES FOR OPERATIONAL IMMEDIATE REPORTING UNDER THIS TASK. THREE LOCATIONS WERE FORWARDED UNDER TASK 17-017-70. SEVERAL SLIN NAT EMITTERS WERE INTERCEPTED BUT DATA WAS NOT OF SUFFICIENT QUALITY FOR LOCATION. NO [redacted] EMITTERS WERE HEARD THIS PERIOD.
3. CONSIDER FOL REMARKS PRIMARY CAUSE FOR PAUCITY REPORTS UNDER THIS TASK:
A. NUMBER OF EMITTERS NORMALLY HEARD IN BANDS TASKED DURING THIS PERIOD WAS CONSIDERABLY BELOW THE NORM. THERE WAS A DEFINITE DROP IN THE NUMBER OF EMITTERS ILLUMINATING THE SATELLITES.
B. FOR ADDITIONAL OPERATIONAL IMMEDIATE REPORTS WOULD HAVE BEEN SENT UNDER TASK IF BOUNDARIES FOR AREA OF INTEREST HAD INCLUDED THE ENTIRE BALTIC FROM THE BEGINNING OF TASK.
330
#0007

Sig Tasking

TOR 1400
10-19-70
5614

~~TOP-SECRET~~
Handle via BYEMAN
Control System

~~TOP-SECRET~~
Handle via BYEMAN
Control System

~~TOP SECRET~~ [redacted]

HANDLE VIA BYEMAN
CONTROL SYSTEM ONLY