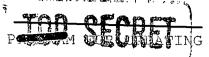
C05027263

Approved for Release: 2024/06/10 C05027263

OUTGOING NRL SPECIAL PROJECTS CONTROL NUMBER

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ING THE SITES PRIOR TO MISSION 7106 in November 1968.

- 1. Due to the/overhead interrogation from each of the command sites it will be necessary to add the command antenna which will be trainable in elevation as well as azimuth.
- 2. MISSION 7106 will have a new command frequency so the command antenna must be made capable of handling both the old and the new frequency...a design which has been accomplished by Mr. Withrow.

SCHEDULE I	OR	DEPL	OYMENT	OF	THE	COMMAND	ANTENNA	SYSTEMS
		in J in	uly mid Aug	gust	-			
		in	late 0	octo	ber			

- 4. The second generation Analog to Digital Data System is under development and will be in prototype testing stage befor the end of April. Long lead time procurements for the production systems are already under contract; with five month production phase and a release to production anticipated about mid May, these systems will be deployed about mid October.
- is almost reddy to go to procurement and at the cost of \$280K it is a modest procurement which should allow for partial delivery on or about 1 July 1968. It is essential that the system overseas be back-fitted with a floating head disc unit to expand core to accommodate some of the future routines.
- 6. Considerable Environmental engineering must be done at each of the sites where this digital system is to be utilized to minimize the demands of the environment upon the performance of the system...temperature, power, humidity and dust variations with time are severe influences on this system and must be carefully with the system is to operate and with these remote sites. Mr. Hellrich and Mr. Wales are to make an expresering survey trip

in late April/early May to assure the solution to all the environmental

enterface problems. Approved for Release: 2024/06/10 C05027263

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How Well are we doing in
2. Against targets where the location of the emittor is known, the Ephemeris has been improved to the best available in the xxxx time and
accuracy. Against these same targets with standard SPASUR ephemeris
the locations in error. This indicates
the criticalness of the ephemeris on this near real-time operation.
3. The accuracy of location of any emittor through the
analysis is largely dependant upon the karakara analysis is largely dependant upon the karakara analysis is largely dependent
<u> </u>
4. Computer Software is aimed at two distict areas:
I. Geographic Location Sort where all the data from a given pass
is sorted by comparing
an/itterative II. P-7 is the computer routine which by/reduction in errot process,
will provide/x geographic coordinates of the sixx emittor when kwm a series
of up to are fed into the computer. This
routine is useful in
5. PRF sort is adjustable from to pps
hea.

honande and baeman

SEARCH FOR SIGNALS OF INTEREST (SOI SEARCH)

- 1. NSA has sent a list of these high priority signals to each site
- 2. Each site must upon detection of any of these signals file a msg.
- 3. NSA Manifold $\frac{1}{2}$ shop(K-44) then procedes to analyze the tape recordings where these SOI intercepts were reported and responds with a message correcting the initial signal characteristics which were reported by the site. These two messages differ only in the ability of the two teams and their respective complexes of equipment.
 - 4. The value of the SOI report from the site
 - (all alerts the community to new or unique signals, variants in parameters and allows the community to deploy other resources against these targets as they are disclosed.
 - (b) The major value of this routine is that it utilizes the site personnel too view the virgin unrecorded data to appraise it against ktortortortority signals, thus selecting out the majority of these highest priority signals.
 - (c) It also provides the opportunity to effect a Quality Control assurance on the data recordings being prepared for NSA...If trouble xdxm does occur in the receiving, recording or timing systems the SOI search will detect it immediately and not depend upon the analysis at NSA which takes months.

CONTROL SYSTEM ONLY



SUMMARY OF POPPY PERFORMANCE HIGH-LIGHTS.
Historic summary.
II Shipborne signal summary
TI SHIPSOINE SIGNAL SAMMALI
V. Observational accuracy of PRI now the most accuract available
major improvement occuring with the combination of the adaptive thresholder
and the Analog to digital data conversion system so that the time errors
normally resultant with variations in signal amplitud
and distortions of time in the recording and playback of the analog data
are not suffered in the digital system today.
VI. NSA data processing is now automated to a much greater extent than
was possible during the past when they were using the IBM 7094 system.
The new CDC-6400 automatically takes the digitized data from
or the AUDICO digitized data from other sites and sort PRF and Scan and
then goes through the location analysis
and gives the 95% confidence areas. Ephemeris is the major limitation
to this highly sophisticated and automated system at this time and it has
not been given the attention which it deserves at NSA.
VII. Ephemeri's correction potential It is planned that each of the MISSION 7/106 payloads will carry an
It is planned that each of the Mission 700 partodas with
This system is not yet Flight Certified but it is
well along. The system will when interrogated in flight, provide the beacon
type/position enhancement for purposes of ephemeris calibration or gener-
ation. The orbital altitude for the past three launches has been much bette
than one should expect from the Agnea system so the need for this
system has not been essential.
HANDLE VIA BYEMAN GONTROL SYSTEM ONLY

ELINT Collectopm Experiments Proposed for Mission 7106:

in preparation of this proposal
The Naval Research Laboratory has Auttempted to be responsive
to the requirements for GEneral Search and for EOB collection which
have been promulgated by the COMOR in so far as they are compatible
with the basic POPPY system. POPPY has demonstrated the capability
for measurement of

with all bands, R &D YIG
be possible/one band at a time except for the/Comb-Filter bands and those
bands where the collection frequency exceeds 9.5 Gc. The criterion of
replenishment will be important in the finalx selection of thexx
particular collection frequency-bands, but for the purposes of guidance,
thexx following experiments are precommended at this time:

Band #	7106A	7106 B	
1.	153 - 165	153 - 165	
2.	165 - 200	165 - 200	
3.	820 - 1085*	820 - 1085	
4.	1080 - 1400	1400 - 1800	
5.	1800 - 2500	2500 4100**	
6.		5850 - 6700	
7.	7000 - 10000****	7850 - 8450	
8.	8100 - 8600	8100 - 8600	
9. HAT of	8600 - 93 40	8600 - 9340	
10.	-9340 - 9600	9340 - 9600	MANDLE VIA BYEMAN
11.	9600 - 10000	14.8 - 15.1Gc	CONTROL SYSTEM ONLY