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NRL SPECIAL PROJECTS CONTROL NUMBER

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TOP SECRET

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108/73

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OFFICE

NAVY SPACE PROJECT OFFICE NATIONAL RECONNAISSANCE OFFICE, PROGRAM C

WASHINGTON, D.C. OFFICE OF THE DIRECTOR

PME-106-5 1 8 DEC 1973

MEMORANDUM FOR: DIRECTOR, NRO STAFF (SS4, SS4A AND SS7)

DIRECTOR, CENTRAL INTELLIGENCE AGENCY (OSI)

CHIEF OF NAVAL OPERATIONS (OP094W) COMMANDER, NAVAL SECURITY GROUP

DIRECTOR, NAVAL RESEARCH LABORATORY (1000 AND 7030) DIRECTOR, NATIONAL SECURITY AGENCY (W2 AND R24)

Subj: POPPY Technical Operations Group (TOG) Meeting; report of

Encl:

- (1) Agenda
- (2) List of Attendees
- (3) Minimum Daily Voltage Plot
- (4) Collection Highlights
- (5) Flow of Reptile Data within NSA
- (6) NRL: 281310Z NOV 73 CITE 1673, Subj: Mission 7107 Phase VI Engineering Evaluation Wrap-Up
- 1. A POPPY TOG meeting was held at the Naval Research Laboratory (NRL) at 0930 on 29 November 1973. The agenda and a list of attendees are forwarded as enclosures (1) and (2).
- 2.. The following specific items were discussed:
 - a. Status. (NRL)

The 7107 satellites are in stable health and producing useful data. Their orbit is currently experiencing minimum sun exposure (approximately 70%) and will remain so until early January.

Γhe	current	satellite	:	spa	cing	is:
					-	

The plot of minimum daily voltage is provided as enclosure (3). The plot is stable but very slowly declining.

b. Collection Highlights. (NSG)

Enclosure (4) was presented.

It was noted that, on the transit of the SVERDLOV and the KASHIN from the vicinity of Japan to the Phillipine Islands, HF EMCON was employed and so was able to supply unique ocean surveillance information during this leg of their transit to the Indian Ocean.

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PME-106-5

Subj: POPPY Technical Operations Group (TOG) Meeting; report of
c. Processing Highlights. (NSA)
A partial solution to the POPPY digital tape header problem, discussed at the previous TOG meeting, was briefly described. The main problem centered around two RF bands being assigned the same in the same downlink (DL). Since this occurs on only about five percent of the collections (due to a DL activation malfunction), it has been decided that the multiple RF band will not be processed. used a blowup of enclosure (5) to brief how POPPY (REPTILE) data are routed to the cognizant analysts.
Two main paths are followed:
(1) Messages are transmitted via CRITICOMM (now DIN/DSSCS) and enter the chain through T-COMM for automatic reading in TIDE for and for hard copy dissemination to the branches indicated for all traffic.
(2) Tapes are ARFCOS delivered and subsequently processed by after which selected reports enter the finished file (MARTINI) for reporting to users.
For CY 1972, the following numbers were quoted:
9418 signals identified by on POPPY digital tapes.
6199 signals processed through to the finished file, of which
2146 were used by DIA in reports to users,
932 of which matched EOB gap list requirements, and
10 were signals unique to 7107.
then described how W2 takes DIA priorities to establish the requirements for technical intelligence collection and processing. The analysis organization was discussed, as was the feedback to the POPPY system on whether a particular collection(s) and subsequent processing satisfied the requirement.
Project DEPARTURE, which uses an SEL 810 and field site software, is used to perform an extension of the analysis begun at the sites, particularly for signals on which SLM (Signal Level Measurements) have been taken.
In order to allow recovery from the tape archives of a signal that is known (by processing) to be on POPPY recordings, RF/PRF scan histograms are maintained. Compiling data in this way can also provide a perspective on

TYPE AND CONTROL SYSTEM

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Subj: POPPY Technical Operations Group (TOG) Meeting; report of

the history of types of signals seen by individual sites.

d. Engineering Evaluation. (NRL)

Enclosure (6) was used to report on the latest engineering evaluation performed at bn 14-15 November. When the high noise levels in the command frequency range were discussed, the NSG representatives inquired about the source and suggested that further action be taken to identify and possibly eliminate the source. LT Morgan offered to pursue this item.

The test described in paragraph 5 of enclosure (6) was initiated at SPO request, in response to CNO direction to ascertain how U.S. ship locations might be determined. Further results will be reported as available.

Mr. Turner, a CSC (Computer Science Corporation) employee, was introduced as the new Technical Representative at The last Technical Representative was recalled several months ago to assist in

e. JWG for Ocean Surveillance. (PME 106-4)

formerly of the NRO SOC, recently assigned Chairman of the JWG, gave a synopsis of his view of the JWG, and solicited comments from TOG members.

The JWG was organized two years ago on the West Coast to determine what techniques could be used by Program A ELINT systems to help solve O/S problems. Within the last month, Chairmanship has passed from the original Program A to Program C. Further POPPY involvement in JWG activities is anticipated.

3. The next TOG meeting is scheduled for 20 December 1973 at the SPO.

GENERAL DECLASSIFICATION SCHEDULE OF EXECUTIVE ORDER TIGS LESS ENEMPTION CATE GORY 502 DECLASSIFY ON IMP DET

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TOP	SECTI	thi-	LIST	OF.	ATTE	NDEES	
	SPO					•	
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	NRL:	Mr. Mayo Mr. Lawton Mr. Frankovi Mr. Turner (
	NRO SOC:						
	NSA:		(R-24) (R-24) (A-81) (V-38) (W-22) (W-24)				
	NSG:	LT Morgan	·				

Enclosure (1) to

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AGENDA

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COLLECTION HIGHLIGHTS
PROCESSING HIGHLIGHTS
ENGINEERING EVALUATION

JWG FOR OCEAN SURVEILLANCE

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Enclosure (2) to

CONTROL NOBYE - 59863/7

CONTROL SYSTEM ONLY





COLLECTION HIGHLIGHTS

ELECTRONIC ORDER OF BATTLE/TECHNICAL INTELLIGENCE

PROJECT FLAVOR: OVER 300 INTERCEPTS OF TARGET EMITTERS WERE REPORTED SINCE LAST MEETING. THE MAJORITY OF THOSE BEING SA-6'S. ALSO REPORTED WERE INTERCEPTS OF THE EMITTERS. THERE HAS BEEN A STEADY DECLINE IN SA-6 ACTIVITY FROM IN THE LAST TWO WEEKS, ESPECIALLY FROM
SLM INTERCEPT OF TARGET EMITTERS HAS BEEN LIGHT THE PAST MONTH. SITES HAVE REPORTED SLM INTERCEPT FROM THE SA-X-8, SA-6, SA-N-4, AND SA-N-3 MISSILE SYSTEMS. THE AND ASSORTED FIRE CONTROL RADARS WERE ALSO INTERCEPTED IN SLM.
SOME OF THE MORE INTERESTING TECHNICAL INTELLIGENCE ITEMS REPORTED BY THE FIELD SITES ARE AS FOLLOWS:
HAVE CONFIRMED. THROUGH GEOLOCATION, THAT THE CAPABLE OF OPERATING IN A 49
PPS PRF MODE.
B. WAS GEOPOSITIONED BY TO THE NAN-NING AREA OF CHINA. SITE ANALYSTS ORIGINALLY SUSPECTED EMISSION WAS A NEW PRF MODE OF THE EMITTER. HOWEVER, UPON EXAMINATION OF SLM DATA THEY FOUND A PRESENT OF APPROXIMATELY 9 USEC. THIS WOULD WHICH EXHIBITS THEY NOW FEEL THE INTERCEPTS ARE PROBABLY OF THE CHICOM DEVELOPMENTAL T4106.
C. HAS BEEN FOLLOWING TWO NANUCHKA MISSILE PATROL CRAFT IN THE MEDITERRANEAN THROUGH INTERCEPT OF THE SA-N-4 MISSILE SYSTEM FITTED ABOARD THESE VESSELS. SITE HAS OBSERVED TWO STI STAGGER MODES OF THE EMITTER WHICH WAS EQUATED TO NANUCHKA 978. THE TWO STAGGER MODES EXHIBITED MEDIAN PRF'S OF 1947.4 PPS AND 1571.0 PPS WITH STAGGED LEGS OF 508.1/518.7 USEC AND 629.4/644.0 USEC RESPECTIVELY
OCEAN SURVEILLANCE:
EUROPEAN:
CONTINUES TO MONITOR SOVIET SURFACE ACTION IN THE MEDITERRANEAN THE SURFACE FORCE HAS LESSENED SOMEWHAT DUE TO RETURN TO BLACK SEA AND NORTH FLEET OF UNITS WHICH HAD BEEN ON EXTENDED OOA DEPLOYMENTS. IN THE SPACE OF THREE WEEKS, THREE SEPARATE TRANSITS FROM THE MED TO THE NORTH FLEET WERE MONITORED BY TRANSITS TOTALED FOUR SURFACE COMBATANTS AND
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Enclosure (4) to
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BYEMAN CONTROL SYSTEM

Enclosure (4) to

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TAP	A KRESTA WAS ALSO OBSERVED ENT	ERING THE NORWEGIAN SEA FROM THE SURFACE UNITS.
	STABLISHED PRF TO	HULL CORRELATIONS ON THE NEW
•		MED. THE MOD KILDEN IS THE FIRST
•		THE OLD KRUPNYY CLASS, THAT IS FITTED
		DOES NOT HAVE A SURFACE TO AIR CAPA-
		ED WITH SS-N-12 SURFACE TO SURFACE
	MISSILES.	
	·	
	PACIFIC:	
	MONITORED THE TRANSIT OF	A SVERDLOV COMMAND CRUISER AND A
	KASHIN FROM THE SEA OF JAPAN TO	THE WESTERN INDIAN OCEAN. TRANSIT
		ENT OF A U.S. TASK FORCE TO THE WESTERN
•		ITORED TRANSIT OF A CHILIKIN CLASS O'LER
		GERING IN THE AREA AND IS APPARENTLY
		ORISKANY FROM SUBIC TO INDIAN OCEAN
	AND WILL PROBABLY ACT AS A SHAD	OW.
		MARKED TH TRANSMISSION OF THEIR
	20,000TH ITEM IN 1973.	
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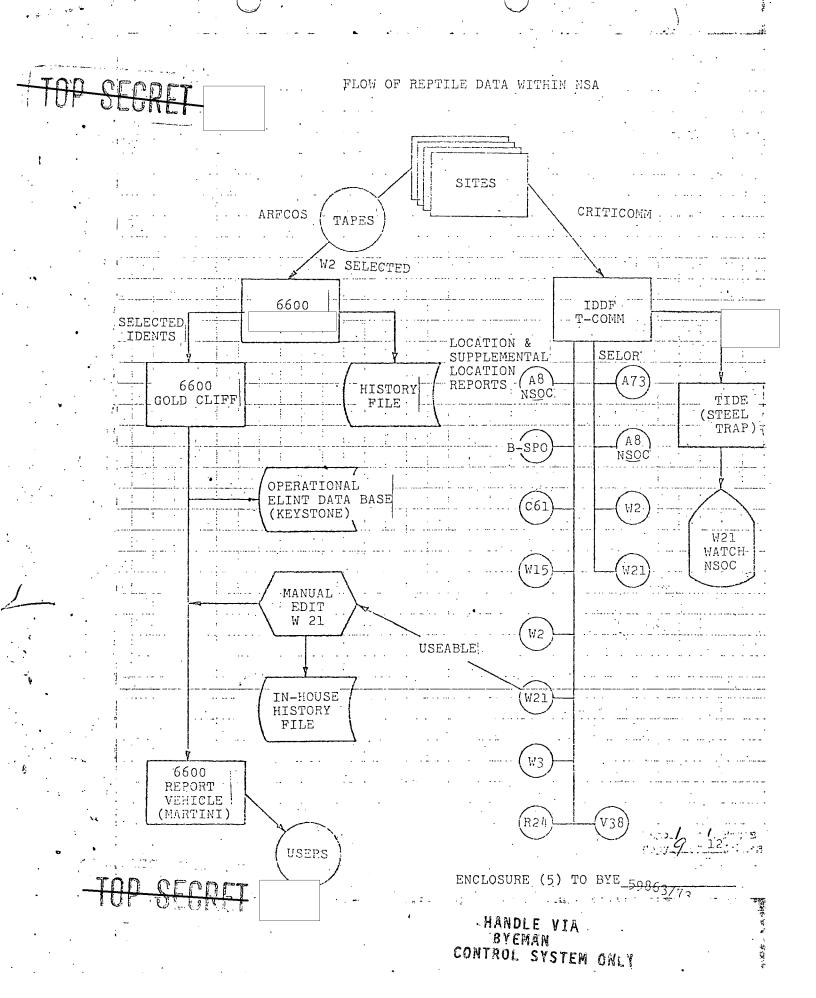
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A PARA TOTAL TOTAL TOTAL TOTAL	
COMCENT FOR M221, WSA SUBJ: MIESION 7107 PHASE VI EMGINEZRIMG EVALUATION WRAP-	gp
A. CITE US12 22132UZ MAY 73 1. PERSONNEL HAVE COMPLETED A SYSTEM EVALUATION	
1. PERSONNEL HAVE COMPLETED A SYSTEM EVALUATION AT SYSTEM HEALTH REMAINS STABLE. SPACECRAFT	Pina.
TOP SECRET	
PAGE 2 D673 TOPSECRET VOLTAGES WERE CHECKED ON EVERY REV BEFORE PERFORMING ANY TESTS AND IN EVERY CASE THE VOLTAGE READINGS WERE	
EXCELLENT. SOLAR CELL DEGRADATION APPEARS AS EXPECTED.	
THE ATPERIOD OF MINIMUM SUNLIGHT IN THE NORTHERN HEMISPHERE CONTINUES THRU THE REMAINDER OF THE CALENDAR YEAR.	
WILL CONTINUE TO MONITOR ATAND WILL REFORT	
ANY SIGNIFICANT CHANGES. 2. THE AGC LEVELS ON VARIOUS SATELLITE COMMAND RECEIVERS	
WERE COSERVED AND HIGH NOISE LEVELS EXISTED DURING THE	
EARLY EVENING HOURS IN THE AREA. THIS PROBABLY ACCOUNTS FOR SOME OF THE PREVIOUS COMMANDING	
PROBLEMS ENCOUNTERED AT	
3A. OPTIONS NO LONGER USABLE OPT-1	
NO PROBLEM OBSERVED	스러 취임 이 시 기술(12학교 기업 22년) 기계 경기로 시하기를 기업되는 최고 있습니다.
71076: NO PROBLEM OBSERVED 7107C: BAND 5, 8 & 13 BAND 10, 13 & 13	
1270: BAND 10, 11 & 21 0 0 0 BAND 8, 10, 14, 16 & 22	
NOTE: 71376:BAND 5 OPT 1 AND 71370 BAND 11 OPT 1,	
The second secon	· · · · · · · · · · · · · · · · · · ·
PAGE 3 STOPS LORET	
CHANGES SINCE LAST ENGINEERING EVALUATION (REF A).	
8. INTERMITTANT OPERATION OBSERVED IN 71270 BAND 21	
OPT 1, 71070 BAND 5 OPT 1, AND BAND 9 OPT 2. C. SLN OPT #1 STILL INOPERATIVE IN 71070.	
SLM OPT #2 STILL INOPERATIVE IN 7107C.	
4. A MINOR PROBLEM WAS OBSERVED IN 71070. WHEN USING THE UL COMMAND MATRIX FOR COMMANDING DATA LINKS ON	
71070 OULY, II HAS BEEN FOUND THAT DL S IS INTER-	
CHANGED WITH DL 2. THE CORRECT TONE PAIR FOR DL 2 IS 1000. THE CORRECT TONE PAIR FOR DL 6 IS 1110.	
7 5. PERSONNEL COLLECTED FIRE CONTROL RADAR FROM	
THE ON A NUMBER OF RESULTS WERE POSITIVE AND WILL BE	
DISCUSSED AT THE MENT TOG MEETING.	TTT
G. PERSONNEL WISH TO THANK PERSONNEL FOR THE COOPERATION AND ASSISTANCE DURING PHASE VI OF THE	EIR HANDLE VIA BYEMAN
EVALUATION ZARE	CONTROL SYSTEM ONLY
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