

INCOMING
NRL SPECIAL PROJECTS CONTROL NUMBER

B1242-92

TS / BB

DATE
680712

ORIGINATOR	! SERIAL NO.
	! MESSAGE

ENCLOSURES
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RECEIVED!	COPY	NUMBERS
920601	!	1

! RECEIPT NO.	!
! H/C	!

SUBJECT			
SEM	MSG	OBS	ON

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TO	NO.	ENCL		OUT	RET'D	

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NRRL INCOMING DOCUMENT

DES / SHEET

COPY NO.

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DATE -

FINISH FILE

TWX258/070711Z

BT

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Control

R 061530Z

FM

TO DIRNSA

INFO COMNAVSECGRU

COMNAVINTCOM

YSNKLDC/NRL

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TO R

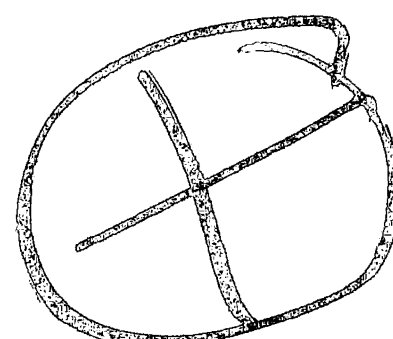
0939
7-8-68~~TOP SECRET~~ BBBB EARPOP BYEMAN CHANNELS

OBSERVATIONS ON [] INTERCEPT

1. [] RECORDED 350-550 AND 196-553 MC/S BAND ON 7105C/D ORBIT 5497. OPERATING IN []
2. FOLLOWING IS BASED ON BELIEF THAT EMITTER IS LOCATED AT []

PART	SATELLITE	UP-TIME	DOWN-TIME	AZIMUTH	ELEV
1	DELTA	0631:59Z	0632:05Z	329.0 - 330.5	26.4
2	CHARLIE	0632:51Z	0632:54Z	319.5 - 320.1	24.9
3	CHARLIE	0633:28Z	0633:35Z	328.8 - 330.5	26.2
4	DELTA	0633:40Z	0633:42Z	355.4 - 355.6	25.3
5	CHARLIE	0635:09Z	0635:13Z	355.0 - 355.6	25.1

5614



PART 1: TWO BEAMS RECEIVED WITH DISPLACEMENT OF 15.8 MSEC. APPARANT RANDOM PULSING FOLLOWING AN ILLUMINATION BY EITHER BEAM PROBABLY DUE TO BREAKING UP OF CW BY POPPY SYSTEM. BEAM DISPLACEMENT EXCEEDS WAVE TRAVEL TIME FROM THE

SATELLITE AND BACK BY 4.1 MSEC. ALLOWING FOR A SHORT PROVESSING LAG THIS WOULD INDICATE THAT A RETURNING ECHO TRIGGERS A SECOND BEAM FOR RANGE DETERMINATION.

PART 2: ILLUMINATIONS NOT ARRIVING IN PRECISE 10.0 CPS PHASE. ASSUME MOST OF THE HITS ARE BROKEN CW. PHASING

THESE ILLUMINATIONS WITH THE SECOND BEAM IN PARTS 1 AND 3 INDICATES A SECTOR OF 31 DEGREES FOR THE WESTERN LEVEL OF DOGHOUSE.

PART 3: SAME CHARACTERISTICS AS PART 2. ILLUMINATIONS IN EXACT 10.0 CPS PHASE WITH EARLIER HITS ON DELTA AT THIS AZIMUTH INDICATING VONTINUOUS SCANNING. BEAMS RECEIVED SIMULTANEOUSLY FOR .8 SEC AT AZIMUTH 329.5.

PART 4: SPARSE ILLUMINATION, BUT ONE BEAM IS DEFINITE. POSSIBLY A SECOND BEAM HITS FOR 1 OR 2 CYCLES.

PART 5: TWO BEAMS RECEIVED WITH DISPLACEMENT OF 18.9 MSEC, WHICH EXCEEDS 2-WAY WAVE TRAVEL TIME BY 7.0 MSEC. SECOND BEAM IN EXACT PHASE WITH EARLIER HITS ON DELTA AT THIS AZIMUTH. THE BEAMS HIT SIMULTANEOUSLY FOR 2.2 SEC AT AZIMUTH 355.1 TO 355.6. BROKEN CW LASTS FOR UP TO 2.4 MSEC.

420

via BYEMAN

TWX332
/131235Z
BT
XXXXX

253

TOR 0815
7-15-68

R 121150Z
FM [REDACTED]
TO DIRNSA
INFO COMNAVSECGRU
COMNAVINTCOM
YSNKLDC/NRL
ZEM

5614 Rudy

~~TOP SECRET~~ BBBBBB EARPOP BYEMAN CHANNELS
OBSERVATIONS ON [REDACTED] INTERCEPT OF 6 JULY 68

A. MY 061530Z

1. [REDACTED] RECORDED 350-550 AND 196-553 MC/S BANDS ON
7105C/D ORBIT 559&. OPERATING IN [REDACTED] WITH
[REDACTED]

2. INTERCEPT OCCURRED AS FOLLOWS:

	PART	SATELLITE	UP-TIME	DOWN-TIME	AZIMUTH	ELEV
1	CHARLIE	0548:00Z	0548:10Z	325.7 - 327.7	20.0 -.4	
2	CHARLIE	0548:16Z	0548:24Z	329.2 - 330.6	20.6 -.9	
3	DELTA	0548:41Z	0548:46Z	354.3 - 355.2	22.2 -.1	
4	VHARLIE	0550:06Z	0550:12Z	354.2 - 355.2	22.1 -.0	

0AGT 1: VERY STABLE HITS WITH SLIGHT DOPPLER. HAS

APPEARANCE OF A PULSE RADAR.

PART 2: DUAL BEAM WITH BROKEN [REDACTED] BEAMS
DISPLACED BY 15809 USEC WHICH MATCHES BEAM DISPLACEMENT
AT THIS AZIMUTH FOR INTERCEPT REPORTED REF A. AND NEGATES
THE POSSIBILITY THAT THE SECOND BEAM IS TRIGGERED BY
AN ECHO FROM THE FIRST. IN ALL RESPECTS CHARACTERISTICS
MATCH THE 29 JUNE INTERCEPT AT THIS AZIMUTH.

PART 3: DUAL BEAM WITH BROKEN CW ON BOTH BEAMS. BEAM
DISPLACEMENT OF 18942 USEC AGAIN MATCHING THAT REPORTED
REF A. AT THIS AZIMUTH. DUAL BEAMS HIT SIMULTANEOUSLY
FOR 2.9 SEC AT AZIMUTH 354.5 TO 355.2 DEGREES.

PART 4: SAME CHARACTERISTICS AS PART 3 AND SAME AS THOSE
REPORTED REF A. AT THIS AZIMUTH. BEAMS HIT SIMULTANEOUSLY
FOR 3.5 SEC AT AZIMUTH 354.3 TO 355.1. HITS IN EXACT
PHASE WITH EARLIER HITS ON DELTA AT THIS AZIMUTH.

3. REGARDING THE CENTER OF PARTS 1 AND 2 AS BORESIGHT
AND EXAMINING THE DIFFERENCE IN PHASE INDICATES
A SECTOR OF 23.0 DEGREES FOR THE WESTERN LEVEL IN
COMPARISON TO THE 31.0 DEGREES REPORTED REF A.

4. THROUGH EACH OF THE FOUR PARTS OF INTERCEPT DOPPLER
SHIFT IN DATA MATCHES ALMOST PRECISELY THE COMPUTED
CYCLE TO CYCLE DOPPLER SHIFT FROM EOB SITE 17-25414
TO THE APPROPRIATE SATELLITE TO THE STATION.

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