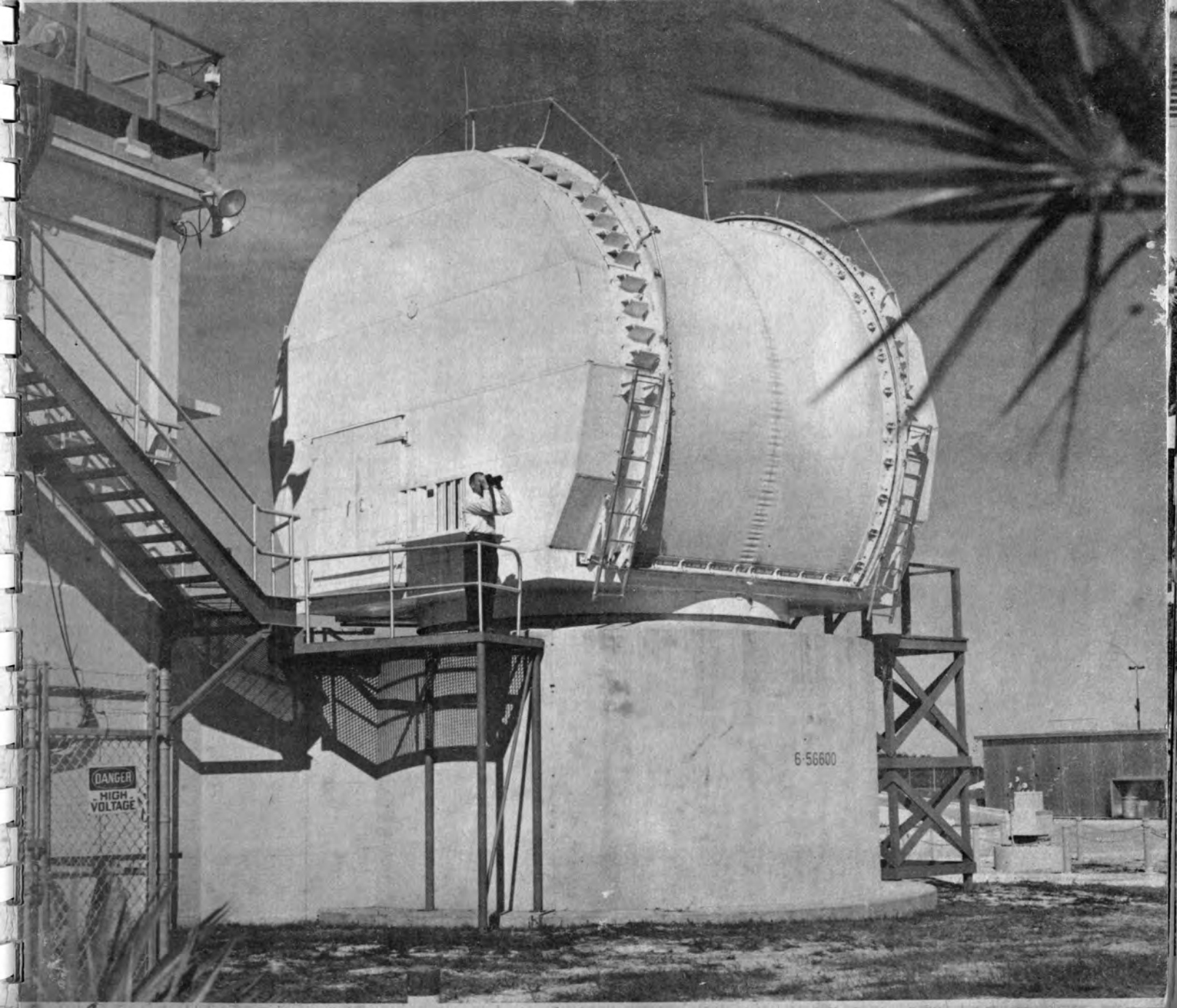




THE PICTORIAL 10 YEAR HISTORY
OF

THE BIG
COUNT DOWN

The GE logo is a circular emblem with the letters 'GE' in a stylized, cursive font. The 'G' and 'E' are intertwined, with the 'G' having a small circle at its top and the 'E' having a small circle at its bottom. The logo is positioned between the words 'THE' and 'BIG' on the top line, and 'COUNT' and 'DOWN' on the bottom line.

At Cape Canaveral / Cape Kennedy

Radio Guidance

MOD I, SYS 1&2

MOD I, SYS 4

MOD III, SYS 1

HEAVY MILITARY ELECTRONICS DEPT.

DEFENSE SYSTEMS DEPT.

RADIO GUIDANCE OPERATION

SPECIAL INFORMATION PRODUCTS DEPT.

In The Beginning

CQ 8342
11/17/58 0825 EST

MSG FOR H B HOEPER SS311

CC- G T SMILEY SS311 PLS RELAY TO COURT ST
D E UREN UT8048
D D WHITECRAFT ING7484
G JEFFERY SD6411
M MC GLAMERY LITTLETON 759

RECAP OF FRIDAY NIGHT EXERCISE--ALMOST AS HARD RECONSTRUCTING AS IT WAS
LIVING THRU--

COMPANY CONFIDENTIAL -- URGENT, URGENT

1. FIRST TROUBLES DEVELOPED IN PRE-COUNT. TRACK NO 1 HAD EXCESSIVE
DROP-OUTS IN AZIMUTH. ONLY SPARE CONVERTER OF CAPE RECEIVED FIRST
OF WEEK AND CHECKED OUT F-1 FOR WED TEST-APPARENTLY BAD, ONLY OTHER
SPARE AT SAN SAL. REPLACED DIODE PACKAGE AND RAN FAST SPEED DIGIT
CHECK, NO DROP OUT IN 3 REV CW AND CCW, DECIDED TO TRUST FIX TO
EXTENT OF NOT SCRAPPING SYS NO 2 BY PULLING ONE OF THEIR NORDENS.

2. TRACK NO 2 DEVELOPED THREE UNEXPLAINABLE SKIPS OF APPROX $\frac{1}{2}$
SECOND EACH IN TRANSMITTED MESSAGE-COMplete MESSAGE MISSING ADURING
SPECIAL CHECKS RUN IN PRECOUNT. REPLACED ENCODER. FOUND BAD TUBE
IN PULLED ENCODER. RAN ADDITIONAL CHECKS WITH COMPUTER. ALL
OK.

3. ENTERED FORMAL COUNT WITH SYS NO 1 PRIMARY. BOTH SYSTEMS GO ON

BASIS OF VERY EXHAUSTIVE CHECKS AND CONSTANT SURVEILLANCE OFR
EVIDENCE OF PREVIOUS TROUBLES REAPPEARING.

4. NEXT ITEM, NOT TROUBLE BUT WORRYSOME--SYS NO 1 FELL BEHIND IN
COUNT IN TAKING IP TURNAROUND AND CHICKING FOR PROPER IP PB INTERROGA-
TION FREQUENCY. CHECKED 10 MC HIGHER THAN WHAT SHOULD HAVE BEEN
SET IN LAB. CHECKED ON BASIS OF FREQUENCY FOR BEST LOCK, AND
MEASURED FREQ WITH FLAME SITES AS FURTHER CHECK. RECHECKED DURING
HOLD AT T-70 AND FOUND BACK DOWN TO NORMAL, BUT DISCOVERED RB NOT
BEING INTERROGATED. WHEN RB INTERROGATED FREQ WENT BACK UP. NO
ANSWER TO THIS ONE YET. NOTIFIED SYSTEM NO 4 TO TUNE XMIT 10
MC HIGHER THAN NORMAL.

5. AT TIME OF BRINGING SYS NO 2 UP FOR DATA LINK TEST, 2032 EST,
T-88 MIN, TRACK NO 2 NOTED SAME LOW AMPLITUDE OF LSD IN MESSAGE
AS HAD CAUSED GRIEF IN PREVIOUS TEST. ADJUSTED BIAS IN ZERO
CHANNEL, STARTED UP WITH DATA LINK AND LSD SAGGED AGAIN, FOLLOWED
BY COMPLETE LOSS OF ZEROS. FOUND ZERO PULSE FORMING BOARD /1272/
DEFECTIVE. REPLACED WITH SPARE BOARD. DIDN'T WORK. REPLACED
2 BUM TUBES IN ORIG BOARD. REINSERTED ORIG BOARD. DIDN'T WORK.
FOUND CLAMP DIODE BURNED OUT DUE TO SHORTED TUBE. SAME DIODE, SAME
TUBE BOTH BOARDS. REPLACED WITH BOARD FROM TRACK NO 1. DIDN'T
WORK. FOUND OPEN PIN IN PLUG TO BOARD. REWIRED TO SPARE PIN.
WORKED OK WITH TRACK NO 1 BOARD. READJUSTED ZERO AND ONE CHANNELS,
BACK IN BUSINESS AT 2210 EST T-50 MINUTES. TOTAL OUT TIME
APPROX 100 MINUTES.

6. COUNT PICKED UP AT END OF PROGRAMMED HOLD ON SCHEDULE AT 2150 EST
NOTIFIED BH OF SYS NO 2 NO GO STATUS, BUT THAT WE WERE PROCEEDING
WITH SYS NO 1. NO HOLD REQUESTED.

7. SYS NO 1 STARTED FINAL ACQUISITION PREP ABOUT ON SCHEDULE AT T-40 MIN. AT T-24 MIN REPORTED UNABLE TO ALIGN ELECTRICAL AND OPTICAL AXIS. OFF SEVERAL TENTHS AND HAVING DIFFICULTY WARPING SAIL TO BRING ELECTRICAL BS INTO ZERO. NOTIFIED BH AND REQUESTED 20 MINUTE HOLD.

8. HOLD CALLED AT T-120 MIN AT 2241 EST.

9. HOLD CALLORESIGHT TROUBLE CLEARED AT 2248 EST, BUT MAINTAINED REQUESTED 20 MIN HOLD TO GIVE TRACK NO 1 APPROX 10 MIN TO GET BACK ON SCHED IN ACQUISITION PREP.

10. JUST PRIOR TO EXPIRATION OF HOLD, AT 2259 EST, TRACK NO 1 REPORTED 12TH DIGIT IN AZIMUTH DROPPING. REQUESTED 10 MIN ADDITIONAL HOLD. REPLACED THYRATRON IN OUTPUT REGISTER. OK AT 2302 EST TOLD BH OK TO PICK UP.

11. COUNT PICKED UP AT T-20 AT 2304. UNABLE TO WORK IN SYS NO 2 LOOP TEST DURING HOLD-INTERFERE WITH SYS NO 1 ACQ PREP.

12. AT T-18 MIN, 2306 EST, TRACK NO 1 REPORTED MASSIVE DROP OUTS IN AZIMUTH. NOTIFIED BH. RECYCLED TO T-45 MIN. GAVE ESTIMATE OF 30 MINUTES. TRACK NO 1 STARTED REPLACING DIODE PACKAGE.

13. CRANKED UP SYS NO 2 FAST FOR BEACON CHECKS AND LOOP TEST. A/B REPORTED SKIPPING MESSAGES, TRACK NO 2 REPORTED NOISY MESSAGE STRUCTURE INTO ENCODER. RF SHIELD FOR PULSE FORMING BOARD NOT REPLACED AT COMPLETION OF REPAIRS TO CONNECTOR. SHUT DOWN TO REPLACE SHIELD. MEANWHILE, NEW DIODE PACKAGE IN TRACK NO 1 NOT CLEARING TROUBLE. TRIED SECOND PACKAGE.

14. AT 2330 EST REQUESTED HOLD EXTENDED TO 2400 EST.

15. AT 2325 STARTED SYS NO 2 LOOP TEST WITH A/B. SOLID GO EXCEPT NO COMMANDS PRIOR TO RUNNING RANGE OUT AT 98 SEC. CHECKED RECORDS AND FOUND THAT IN EXCITEMENT TRACK NO 2 HAD SET INITIAL RANGE AT 4.5 MI INSTEAD OF REQUIRED 5.0 MI, PLUS OR MINUS 100 FT.

16. AT 2345 EST RULED LOOP TEST OK AND SYS NO 2 IN GO CONDITION. MEANWHILE, 2ND DIODE PACKAGE APPARENTLY CLEARED TROUBLE AND NO DROPOUTS EVIDENT AFTER TWO FAST SPEED REVS IN CW AND CCW DIRECTION. HOWEVER, ELECTRICAL AXIS WAS FOUND OFF SEVERAL TENTHS AGAIN AND TRACK NO 1 BACK IN THEIR ALIGNMENT TROUBLE.

17. AT 2354 EST REQUESTED HOLD EXTENDED TO 0010 EST.

18. AT 2356 EST TRACK NO 1 REPORTED BORESIGHTING OK AND READY TO PICK UP. DECIDED TO KEEP SYS NO 1 PRIMARY, BUT SWITCH TO SYS NO 2 AT FIRST SIGN OF AZIMUTH DROPOUTS IN SYS NO 1. NOTIFIED BH AT 0001 EST READY TO PICK UP.

19. AT 0006 EST COUNT PICKED UP AT T-45 MIN.

20. AT 0028 EST, T-21 MIN SYS NO 1 REPORTED MASSIVE DROPUTS AGAIN. SWITCHED TO SYS NO 2 IMMEDIATELY.

21. AT 0032 EST NOTIFIED BY SYS NO 2 PRIMARY, SYS NO 1 NO-GO, NO HOLD REQUESTED.

22. AT 0046 EST, PU SYSTEM REPORTED ONE-FIFTH SCALE READINGS. HOLD at T-5 MIN.

23. 0050 EST - SCRUB FOR PU.

AND THAT'S ALL SHE WROTE. ONE MORE LIKE THAT AND I'LL TURN IN MY SUIT--BEFORE I'M ASKED, THAT IS. TOTAL HOLD CHARGED TO GE WAS 1 HR AND 45 MIN - ALL AFTER T-35 MIN.

STATUS OF TROUBLES EXPERIENCED DURING TEST AS OF 1600 EST, 11/16/58--

1. A/B - NO TROUBLES DURING TEST OTHER THAN FREQ QUESTION RE IP PB. NO INFO AT THIS TIME. INVESTIGATING.

2. SYS NO 1 AZIMUTH CONVERTER--CONVERTER DEFINITELY BAD FROM CHECKS RUN 11/15. APPARENTLY UNIT HEAT SENSITIVE. BEST ESTIMATE IS THAT OPENING OF COMPARTMENT TO REPLACE DIODE PACKAGES COOLED UNIT DOWN TO EXTENT OF GIVING PROPER OPERATION AND OBSCURING TRUE SOURCE OF TROUBLE. REPLACED DIODE PACKAGES CHECKED GOOD. SPARE UNIT RECEIVED FROM SAL AT 1700 EST 11/15 AND CHECKED OUT DEFECTIVE ALSO. APPARENTLY EITHER NEVER CHECKED OUT AS READY SPARE BY SYS NO 4 OR DAMAGED IN TRANSIT. INVESTIGATING WHILE WAITING FOR RECEIPT OF SYS NO 4 UNIT. TRACK NO 1 RECHECKED LOCAL UNIT BELIEVED TO BE DEFECTIVE. FOUND TROUBLE TO BE IN PREAMP. REPAIRED AND NORDEN NOW CHECKS OUT PERFECTLY AFTER EXTENSIVE DIGIT CHECK REVOLUTIONS AND BAKING. DON'T KNOW WHY EFFORT NOT MADE EARLIER TO GET SYS NO 3 SPARE EARLIER. DIDN'T KNOW THEY HAD ONE AND BELIEVED SHORTAGE HERE WAS COMMON KNOWLEDGE.

3. SYS NO 1 BORESIGHT TROUBLE--WENT THROUGH ALIGNMENT PROCEDURE FIVE TIMES 11/15 AND UNABLE TO DUPLICATE TROUBLE--ONLY REASONABLE ANSWER IS THAT OPERATORS GOT PROCEDURE SCREWED UP IN INITIAL TRY AND SPENT REST OF TIME TRYING TO BRING SAIL BACK INTO ORIGINAL ALIGNMENT. FIRST TIME TROUBLE OF THIS NATURE AND ERRORS OF THIS MAGNITUDE EVER EXPERIENCED IN ANY OF THE SYSTEMS.

4. SYS NO 2 MESSAGE TROUBLE--TRACK NO 2 WENT THRU EXHAUSTIVE CLEAN UP 11/15. CLOSE CHECKS BEFORE CLEANUP DISCLOSED FAIR AMOUNT OF HASH STILL IN TRANSMITTED MESSAGE STRUCTURE. REPLACED MAGGIE AND BAKING OVER WEEK-END. OVERHAULED SEVERAL BAD GROUNDS IN XMITR CABINET. REPLACED A FEW QUESTIONABLE TUBES. AT END OF WORK SAT NITE HAD OBTAINED MUCH CLEANER AND STABLE MESSAGE STRUCTURE AND EXCELLENT OVERALL XMTR OPERATION. BELIEVED TO BE IN VERY GOOD SHAPE NOW.

5. SYS NO 4 - NO TROUBLE WHAT SO EVER DURING TEST.

OBVIOUSLY GE IS VERY MUCH ON THE SPOT FOR ULTIMATE SCRUB OF THESE LAST TWO TESTS. BH DID NOT DUMP AT TIME OF FIRST HOLD OF T-120 MIN. NOR DID THEY AT TIME OF RECYCLE TO T-45 MIN FOR SECOND HOLD, BASED ON ORIGINAL ESTIMATE OF 30 MINUTES, CONTRARY TO NORMAL PRACTICE. GENERAL BELIEF IS THAT WE HELD LONG ENOUGH TO FREEZE UP THE WORKS.

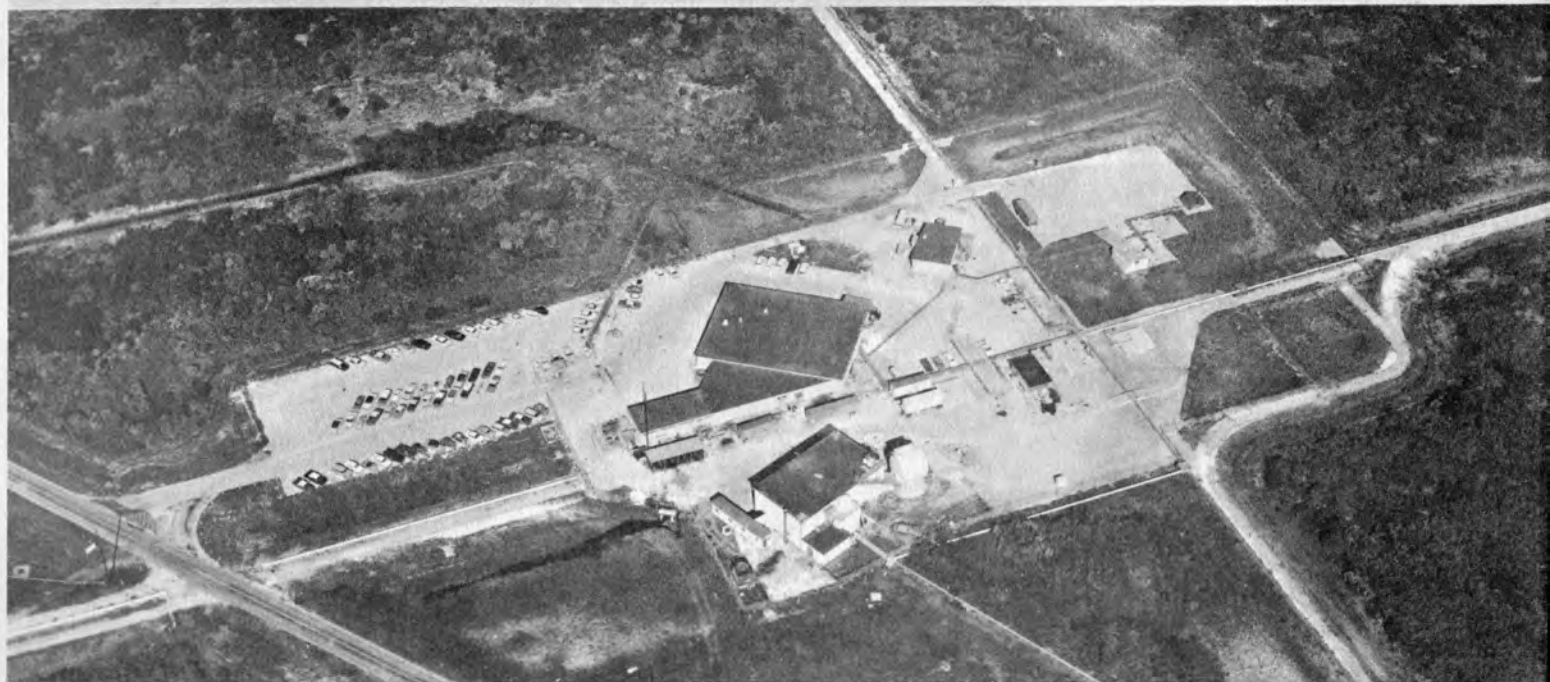
MONDAYS SCHEDULE AS OF NOW, 1700 EST, 11/16/58, IS AS FOLLOWS-

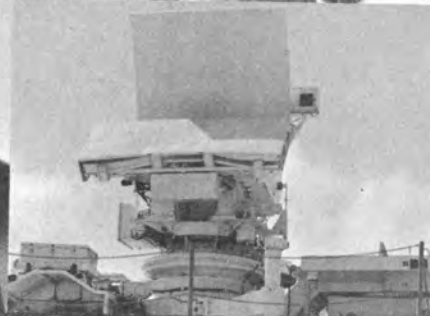
1. MOD II RDY TEST REHERSAL - 1500 EST T-TIME
2. B-111, FLT ACCEPT TEST - 1700 EST T-TIME
3. B-86, 3 STRIKES AND OUT - 2300 EST T-TIME

THURSDAYS SCHEDULE IS AS FOLLOWS-

1. MOD III RDY TEST - 1100 EST T-TIME
2. B-110/0 FORECAST/ - 1300 EST T-TIME

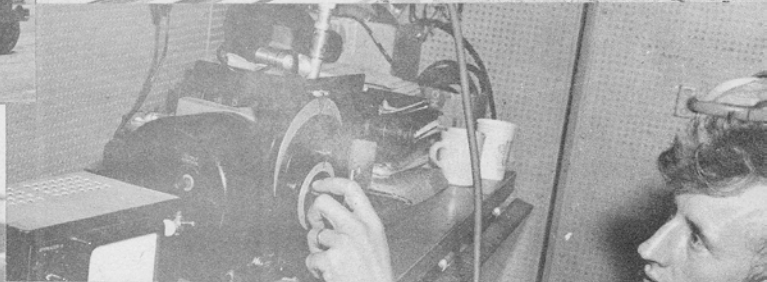
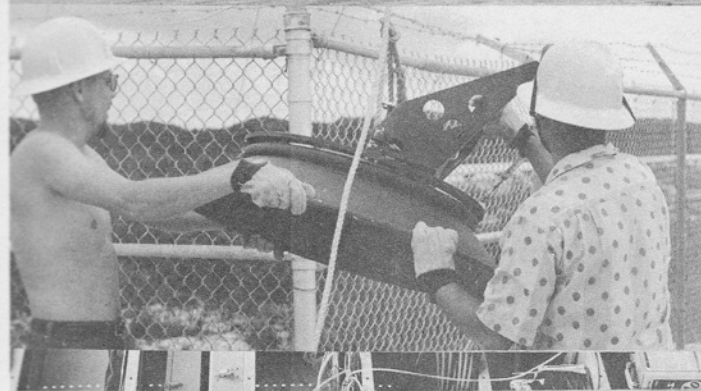
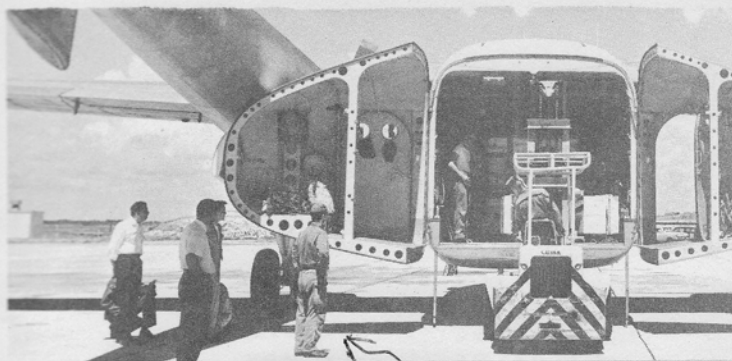
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CAPE CANAVERAL, FLORIDA







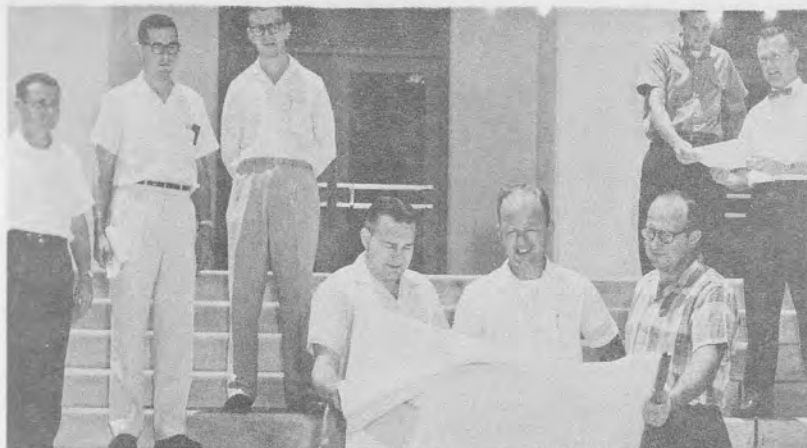




MOD I/MOD III LAUNCH HISTORY

<u>SPECIAL MISSIONS</u>	<u>MISSILE NUMBER</u>	<u>LAUNCH DATE</u>	<u>SPECIAL MISSIONS</u>	<u>MISSILE NUMBER</u>	<u>LAUNCH DATE</u>
	4A	6/11/57		11D	7/28/59
	6A	9/25/57		14D	8/11/59
	12A	12/17/57		11C	8/24/59
	10A	1/10/58	Mercury	10D	9/9/59
	11A	2/20/58		17D	9/16/59
	13A	2/7/58		18D	10/6/59
	15A	4/5/58		15D	10/24/59
	16A	6/3/58		22D	10/29/59
	3B	7/19/58		26D	10/29/59
	4B	8/2/58		28D	11/4/59
	5B	8/28/58	Atlas Able	20D	11/26/59
	6B	9/18/58		31D	12/8/59
	8B	9/15/58		C3	12/12/59
	9B	11/17/58		40D	12/18/59
	12B	11/28/58		43D	1/6/60
	10B	12/18/58		44D	1/26/60
	3C	12/23/58		C4	2/5/60
	13B	1/5/59		49D	2/11/60
	4C	1/27/59		G4	2/24/60
	11B	2/4/59		29D	2/26/60
	5C	2/20/59		C1	3/8/60
	7C	3/18/59		51D	3/10/60
	3D	4/14/59		G5	3/22/60
	7D	5/18/59		48D	4/7/60
	5D	6/5/59		C5	4/8/60
	8C	7/21/59		G6	4/21/60





PALACE BOWL

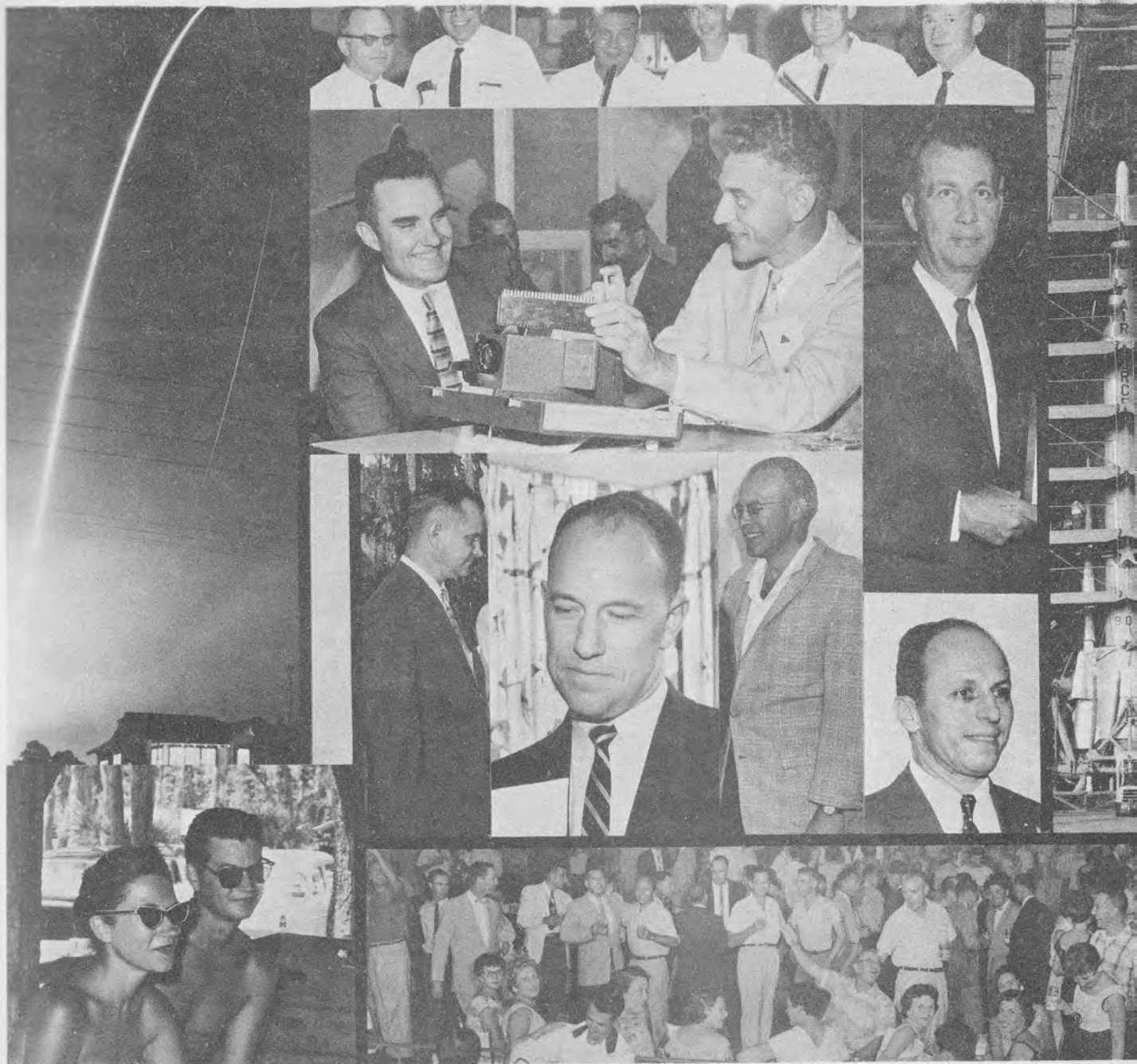
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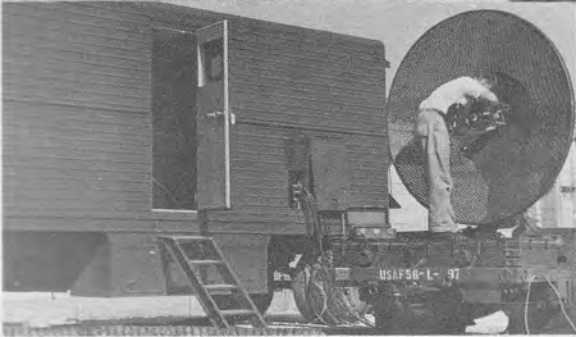
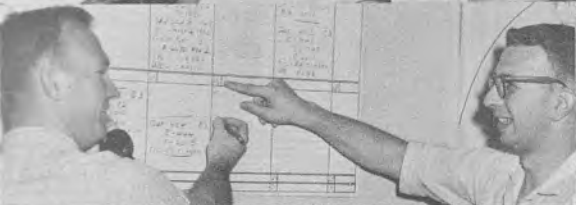
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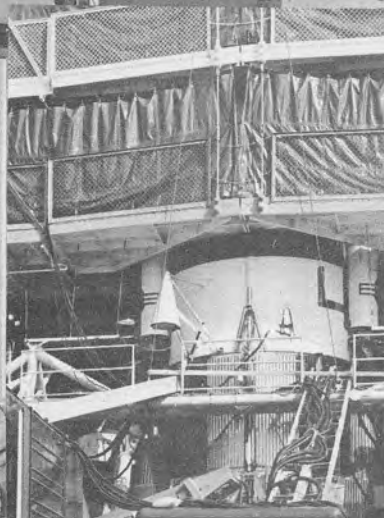
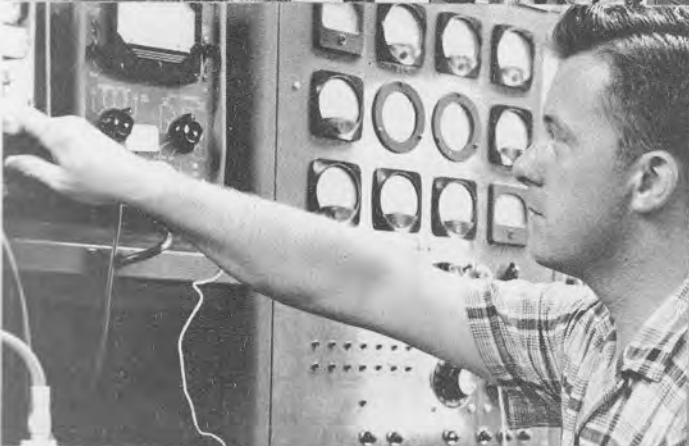
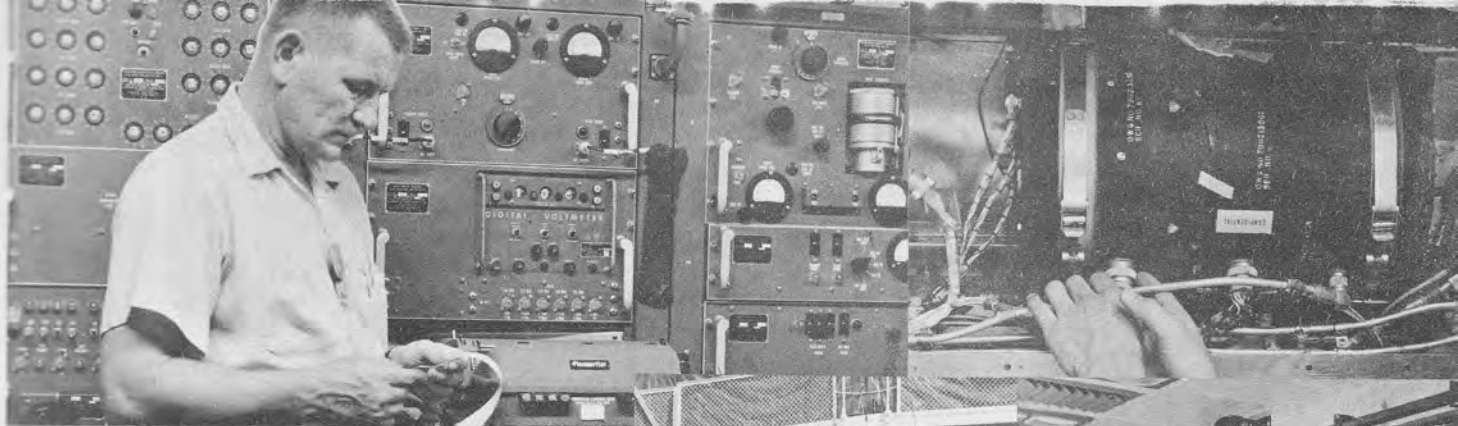


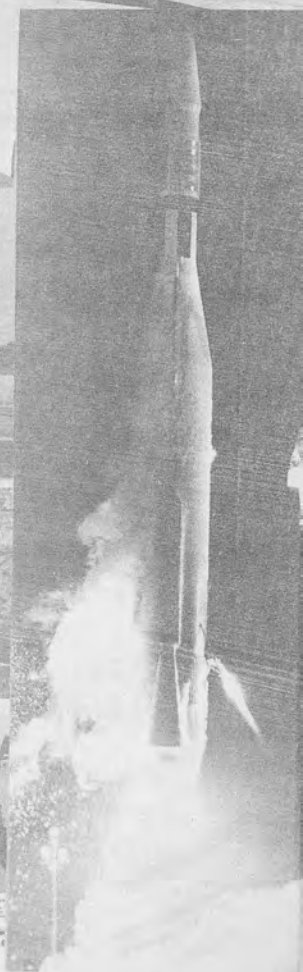
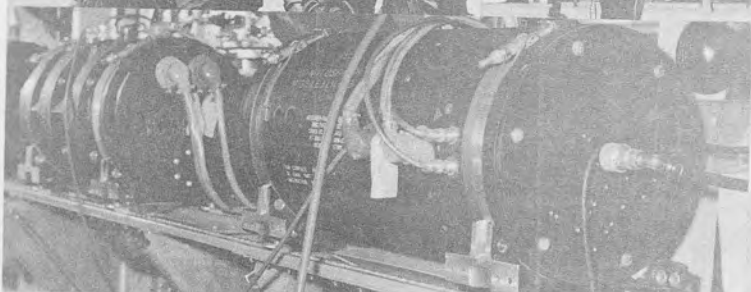






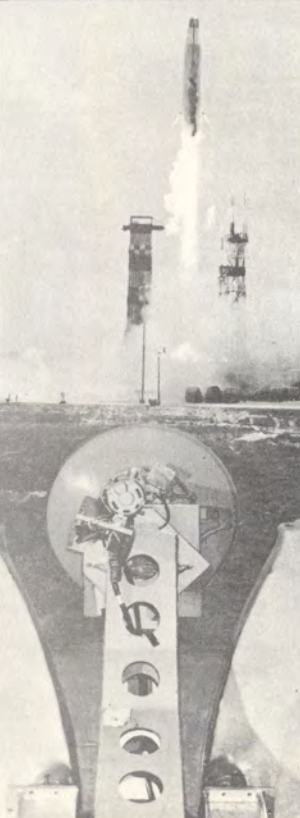
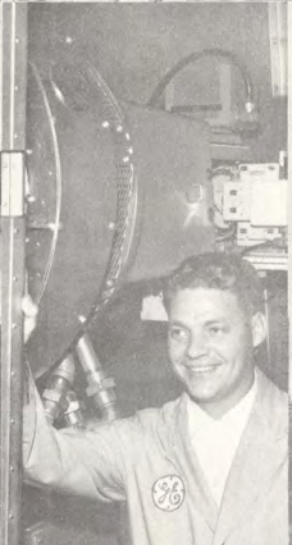
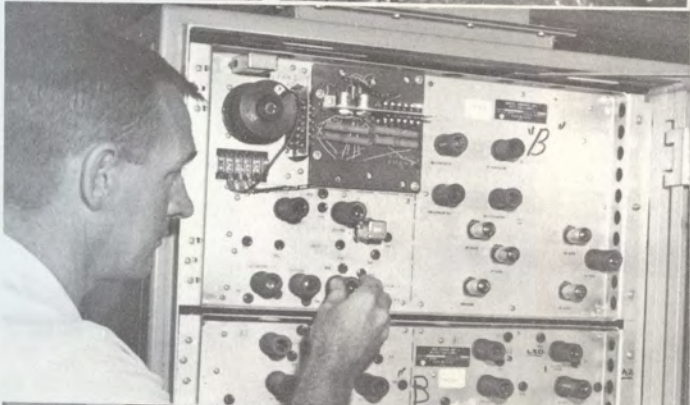
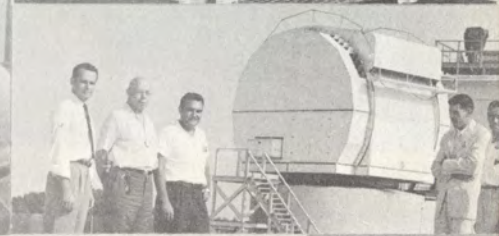
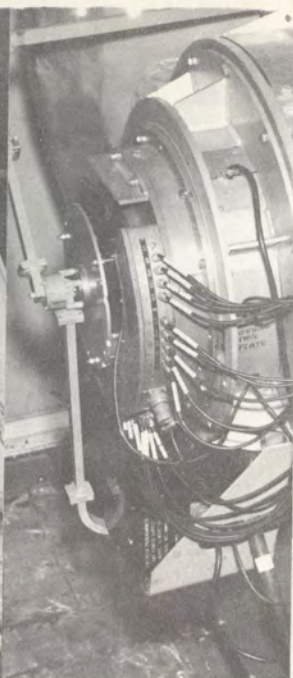




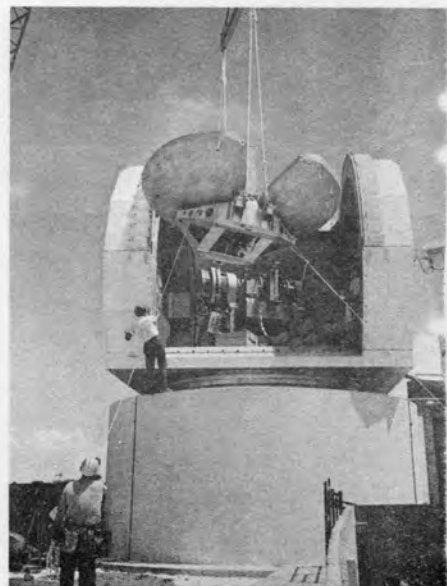
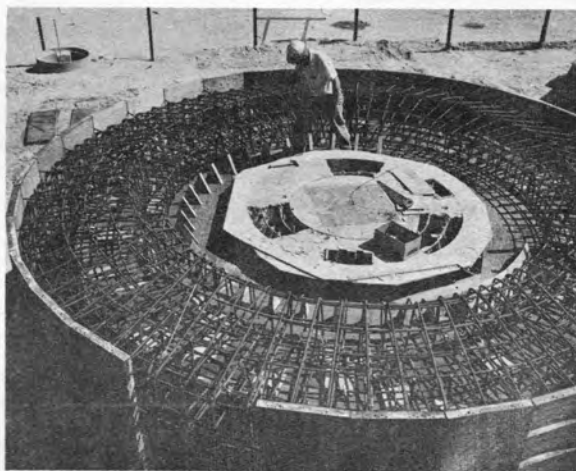


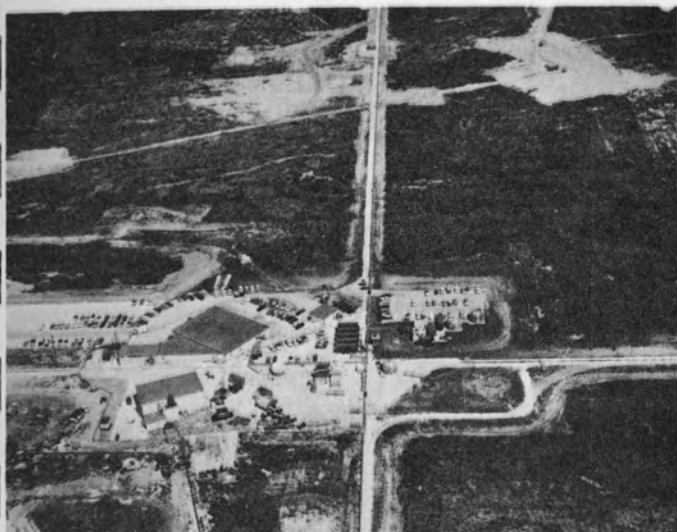
MOD I/MOD III LAUNCH HISTORY

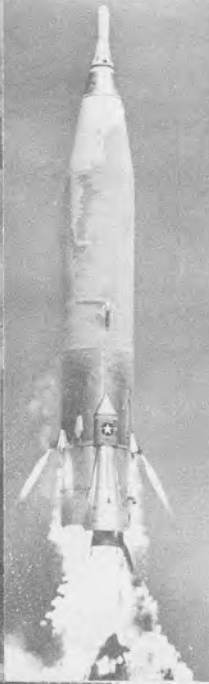
<u>SPECIAL MISSIONS</u>	<u>MISSILE NUMBER</u>	<u>LAUNCH DATE</u>	<u>SPECIAL MISSIONS</u>	<u>MISSILE NUMBER</u>	<u>LAUNCH DATE</u>
	C6	4/28/60		J6	10/24/60
	G7	5/13/60		83D	11/15/60
	56D	5/20/60		4E	11/29/60
	G9	5/22/60	Atlas Able	91D	12/15/60
Midas	45D	5/24/60		J10	1/20/61
	54D	6/11/60		90D	1/23/61
	62D	6/22/60		8E	1/24/61
	G10	6/24/60		J11	2/10/61
	27D	6/27/60		J13	2/20/61
	J2	7/1/60	MA-2	67D	2/21/61
	60D	7/7/60		9E	2/24/61
	J4	7/28/60		J12	3/2/61
MA-1	50D	7/29/60		13E	3/13/61
	32D	8/9/60		16E	3/24/61
	J7	8/10/60		J14	3/28/61
	66D	8/12/60		J15	3/31/61
	J5	8/30/60	Polaris	A2X12	4/11/61
	76D	9/16/60	MA-3	100D	4/25/61
	79D	9/19/60		12E	5/12/61
Atlas Able	80D	9/25/60		J16	5/23/61
	J8	9/28/60		18E	5/26/61
	G8	9/29/60	Polaris	82X5	6/12/61
	J3	10/7/60		17E	6/22/61
	3E	10/11/60		M1	6/23/61
	71D	10/13/60		22E	7/6/61
	55D	10/22/60		J18	7/20/61

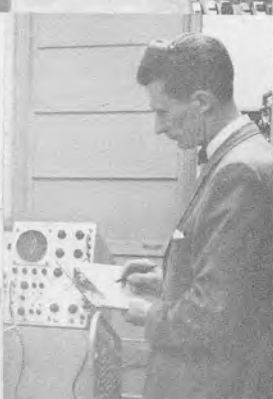
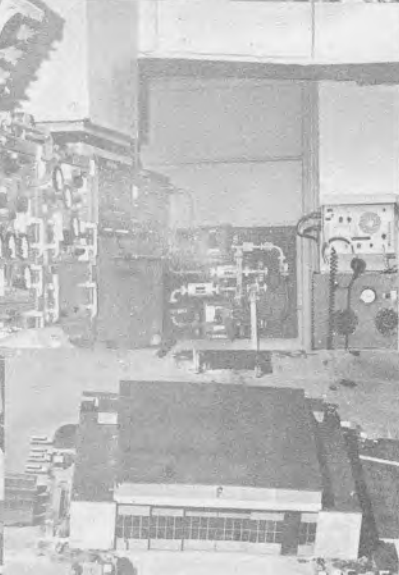
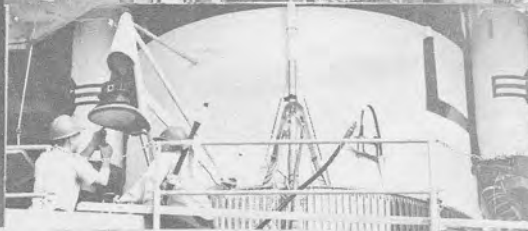


John

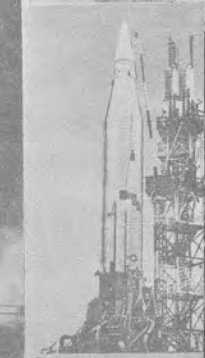
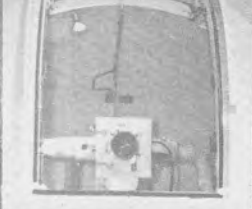
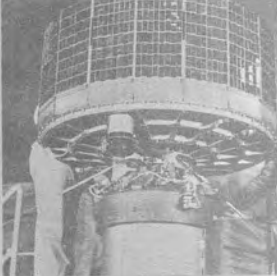


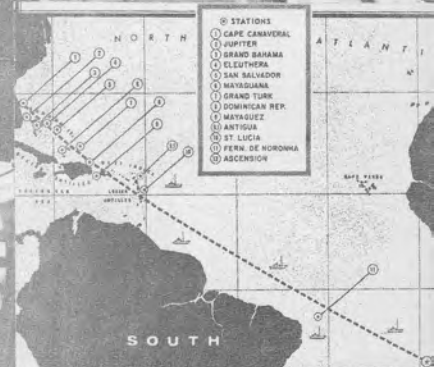
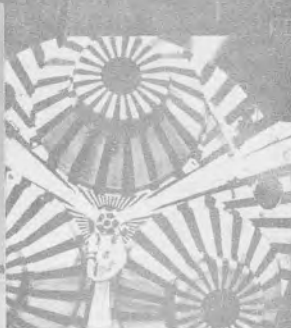
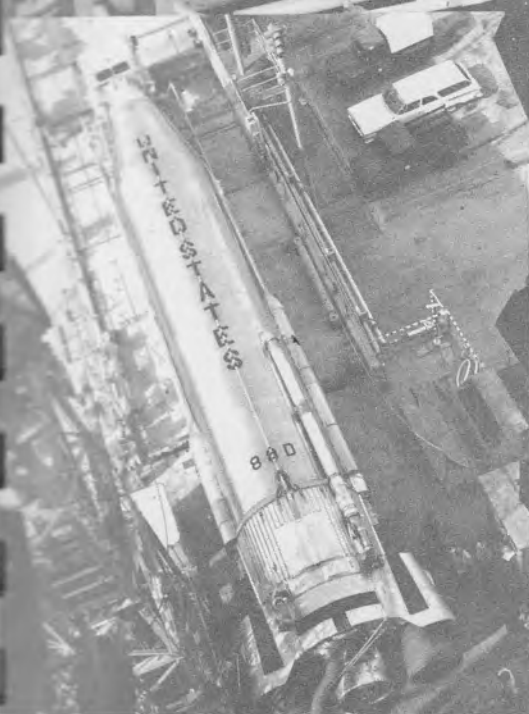
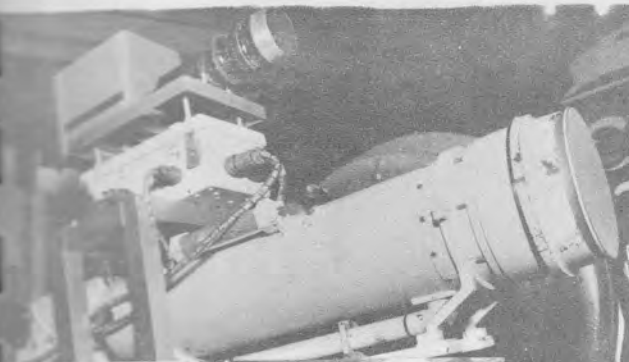


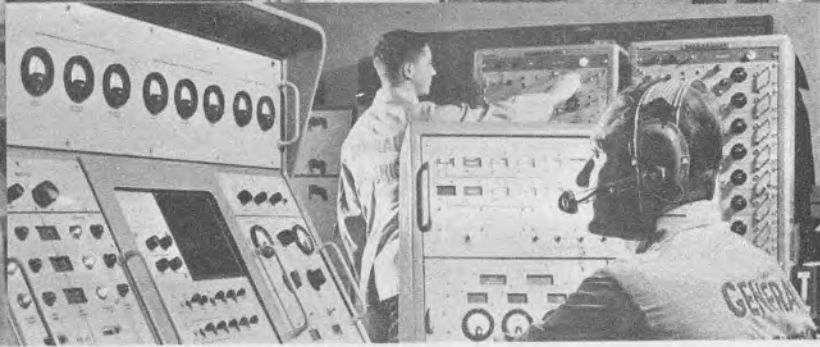
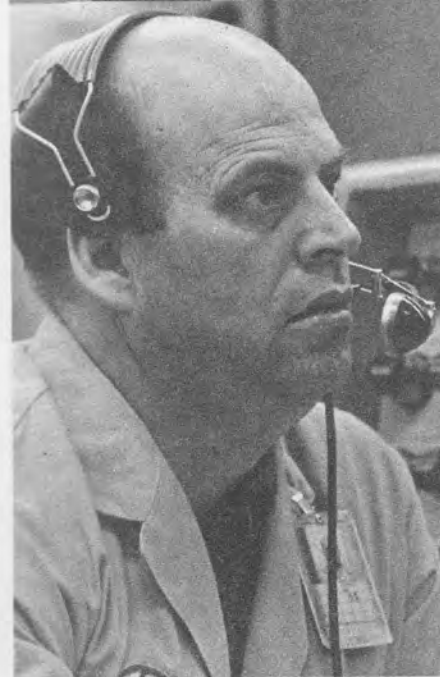
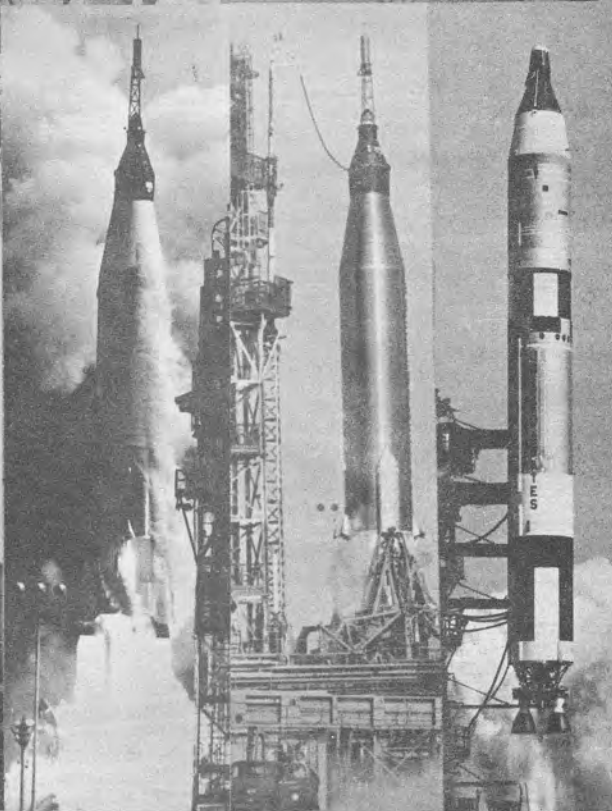
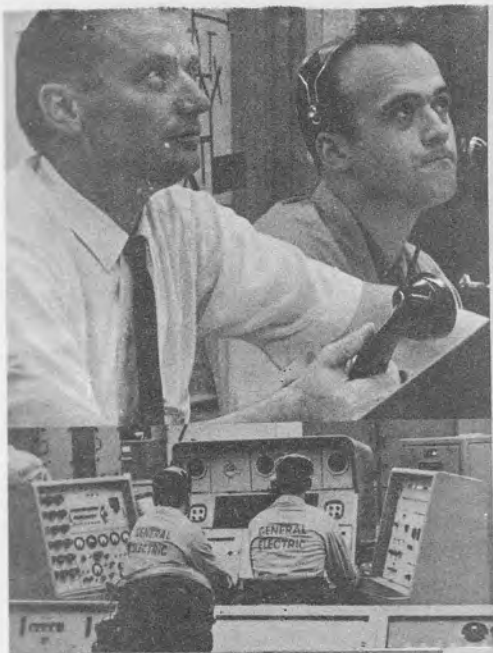












MOD I/MOD III LAUNCH HISTORY

<u>SPECIAL MISSIONS</u>	<u>MISSILE NUMBER</u>	<u>LAUNCH DATE</u>	<u>SPECIAL MISSIONS</u>	<u>MISSILE NUMBER</u>	<u>LAUNCH DATE</u>
	M2	7/25/61		M7	1/29/62
	21E	7/31/61		40E	2/13/62
	J19	8/3/61	MA-6	109D	2/20/62
	2F	8/8/61		M2	3/16/62
RA-1	111D	8/23/61		11F	4/9/62
	26E	9/8/61	RA-4	133D	4/23/62
	J17	9/6/61	MA-7	107D	5/24/62
	M3	9/7/61		N1	6/7/62
MA-4	88D	9/13/61		N6	7/11/62
	J20	9/28/61	MR-1	145D	7/22/62
	25E	10/2/61		N4	7/25/62
	30E	10/5/61		7F	8/13/62
	M4	10/6/61	MR-2	179D	8/27/62
	J21	10/24/61		N5	9/12/62
	32E	11/10/61		8F	9/19/62
RA-2	117D	11/18/61		113D	10/3/62
	J22	11/21/61		N9	10/12/62
	4F	11/22/61	RA-5	215D	10/18/62
MA-5	93D	11/29/61		14F	10/19/62
	M5	11/29/61		N12	10/26/62
	35E	12/1/61		16F	11/7/62
	5F	12/12/61		21F	12/5/62
	M6	12/15/61		N11	12/7/62
	36E	12/19/61		N13	12/19/62
	6F	12/20/61		N15	1/10/63
RA-3	121D	1/26/62		N16	2/6/63



RAINARD R L
5 58 7420



LENES R J
GE 26 5 58



BECKETT R W
10 15 56 9384



HANKAL R E
8 24 59 5979



JACOBSEN A S
2 11 60 9052



MURATORE D
2 2 59 7605



DENNIS P B
4 22 59 2391



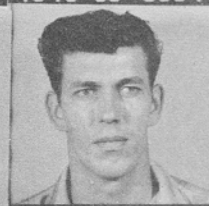
STRIETER
5009 6 10



MINER J E
2 2 59 5187



NELSON B B
26 8 58 6839



FAUBLE F H
GE 9 8 58 0399



NELSON V W
25 4 57 3566



FERGUSON F L
30 10 58 6398



MCCARTY T J
2 28 59 GE



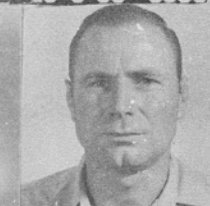
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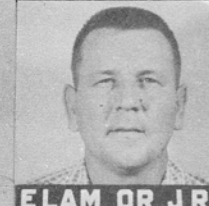
ORGERA
6 1 59



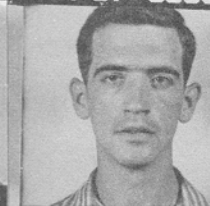
MC DONALD J F
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MITCHELL O
8 20 57 7934



ELAM O R JR
7 25 57 8805



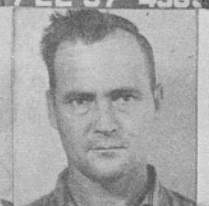
SMITH J W
3 24 58 7085



KOONIAN M
5 10 59 0358



DIESCH W P
3362 25 01 60



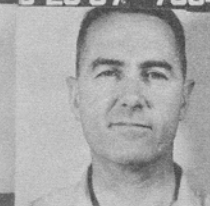
POPELL P
2 11 59



DAVIS T
6 5 57



PREECE R G
2 24 58 8892
HME GE



PAGE H C
4 22 58 5606



HAWKINS R A
GE 9 8 58 6622



NIDA T T
6 4 59 9169



ROBINSON C D
29 2 60



ANDERSON A D
12 9 57 1100



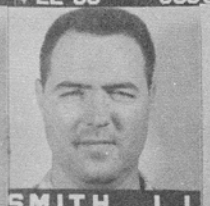
EULER E C
4 24 58



WAGNER



LATHAM R



SMITH J J
7 25 57 2361



GILBERT W
7 25 57 06725



JESTER A
7 25 57 1049



COFFIN B



MASSEY C A
7 25 57 5298



BREWER C A
4 9 57 4915



CORMACK
7 25 57



CAVENDER P A
27 10 58 7019



FAUBLE S A
25 3 58 5302



ST LAURENT F A
11 18 57 4523



MCLENNAN C A
GE122958 2192



FEHRIBACH S H
5 1 57 3552



SCHELL G P
6 10 58 0769



VICK MP
4 24 58 1202



KING A
11 18 57 8860



ARGO J E
6 24 59 2728



CREECH M L
11 21 57 8906



MCCOY D A
21560 2856



MACKEY L S
4 21 58 7973



LYONS N H
3 7 57 4401



SUNDBERG B M
9 9 58 6226



DE RUSHA R L
G E 0998



WILSON G E
5 26 58 2496



BRUMMITT L M
3 19 58 3002



OSTEN M J
11 20 58 6588



FARRIS J A
5 10 59 8043



PEREIRA B J
11 8 58 9294



MOORE E J
GE 6 9 58 0



WEBB Y
9 24 58 3580



TAYLOR E C L
12 30 57 5778



GUPTON P A
4835



WOODS D J



STROUD L V
22 7 58 9561



THOMPSON P
11 12 59 4974



DUMOUCHEL M M
2 2 59 2279



GRITTER B J



WHITEHEAD D



KAINZ E J
12 5 59 1290



PUCKETT M D A
11 20 58 5705



ROBERTS M B
12 23 57 1810



MCCLAIN E



HICKMAN L B

MOD I/MOD III LAUNCH HISTORY

<u>SPECIAL MISSIONS</u>	<u>MISSILE NUMBER</u>	<u>LAUNCH DATE</u>	<u>SPECIAL MISSIONS</u>	<u>MISSILE NUMBER</u>	<u>LAUNCH DATE</u>
	134F	3/1/63	MR-D	288D	11/28/64
	N18	3/21/63	GT-2	GLV-2	1/19/65
	N21	4/19/63	RA-8	196D	2/17/65
	135F	4/26/63	RA-9	204D	3/21/65
	N14	5/9/63	GT-3	GLV-3	3/23/65
MA-9	130D	5/15/63	FIRE-2	264D	5/22/65
	N17	5/24/63	GT-4	GLV-4	6/3/65
	N20	5/29/63	VS-3	225D	7/20/65
	N24	8/21/63	GT-5	GLV-5	8/21/65
VS-1	197D	10/16/63	GAATV-6	5301	10/25/65
	136F	10/28/63	GT-7	GLV-7	12/4/65
	N25	11/1/63	GT-6A	GLV-6	12/15/65
	N29	12/12/63	GAATV-8	5302	3/16/66
	N31	1/15/64	OA0-A1	5001	4/8/66
RA-6	199D	1/30/64	GAATV-9	5303	5/17/66
	5E	2/25/64	ATDA-9	5304	6/1/66
	N32	2/26/64	GT-9A	GLV-9	6/3/66
	N33	3/23/64	OGO-B	5601	6/6/66
	137F	4/1/64	GAATV-10	5305	7/18/66
GT-1	GLV-1	4/8/64	GT-10	GLV-10	7/18/66
	N3-A	4/9/64			
FIRE-1	263D	4/14/64			
VS-2	216D	7/17/64			
RA-7	250D	7/28/64			
OGO-A	195D	9/4/64			
MR-C	289D	11/5/64			

Some of The Survivors







↑
My Hero











SYSTEM MILESTONESETR TIME SCALEPERFORMANCE MILESTONES