206

PROGRAM REPORT

VOLUME 17

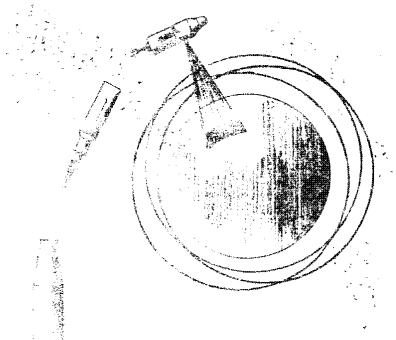
APPENDIXES 32 AND 33

Approved for Release: 2024/01/30 C05099025

THIS DOCUMENT CONTAINS 283 PAGES
NOVEMBER 1967

206

PROGRAM REPORT



VOLUME 17

APPENDIXES 32 AND 33

Approved for Release: 2024/01/30 C05099025

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APPENDIX 32

PROGRAM REQUIREMENTS DOCUMENT

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PROGRAM 206 AF 13200

PROGRAM REQUIREMENTS DOCUMENT

HEADQUARTERS PACIFIC MISSILE RANGE
POINT MUGU CALIFORNIA

PRD

PROGRAM 206
AF 132000

NOV 1962

HEADQUARTERS, PACIFIC MISSILE RANGE

POINT MUGU, CALIFORNIA

ENCL (1) TO PMR SERIAL 00778
OF 23 NOV 1962

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PROGRAM APPROVAL AUTHORITY

1. SECURITY CLASSIFICATION

2. PAGE 010
3. DATE 22 October 1962
4. REPLACES PAGE(S) 010
DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: None
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

9. DOD: NONE USAF: 1-1
10. DOD: DO AFSC:1A
11. INITIATION DATE: 1 November 1962
12. COMPLETION DATE: 1 July 1964
13. SPONSORING AGENCY: SSD, AFSC
14. TESTING AGENCY:
15. CONTRACT NUMBER:

16. AUTHORITY (References)

Outline Development Plan (ODP), Program 483A; Headquarters, Space Systems Division (SSD), Air Force Systems Command (AFSC), SSZX-1, dated 9 November 1961

17. REMARKS

This document contains support requirements for Program 206. Revisions will update data included in this document. The general requirements are similar to other programs employing the Atlas/Agena-D launch vehicle.

18. APPROVAL

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William F. Sampson
Systems Engineering Director
Program 206
Aerospace Corporation

19. APPROVAL

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for Q. A. Riepe, Col USAF
Director for
Program 206
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for CLAIR E. EWING
Colonel USAF
Deputy Commander,
Air Force, PMR

20. PROGRAM MANAGER

21.

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PROGRAM REQUIREMENTS REVISION CONTROL SHEET

1. SECURITY CLASSIFICATION

2. PAGE 030

3. DATE 22 October 1962

4. REPLACES PAGE(S) 030 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

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All, except as noted below Additions: 030.1 151.3 152.6 152.13 152.14 153.6 153.7 155.0.5 155.1.2 155.2.3 159.17 159.18 162.6	1	22 October 1962				This Program Requirements Document for Program 206, dated 22 Oct. 1962, constitutes a revision in its entirety of the previous submittal of Program 206 Program Requirements Document dated 1 May 1962. This revision reflects the following individual page additions and deletions with respect to the 1 May 1962 issue.	W.F. Sampson Aerospace Corporation				

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				4. REPLACES PAGE(S) DATED	Original

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6. PROGRAM EQUIPMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

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3. DATE 22 October 1962

4. REPLACES PAGE(S) 040.1 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

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			(NO TITLE) CARTESIAN COORDINATE GRAPH SHEET				

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SYSTEM SECURITY CLASSIFICATION

1. SECURITY CLASSIFICATION

2. PAGE 050

3. DATED 22 October 1962

4. REPLACES PAGE(S) 050 DATED 1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

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B. PRIME CONTRACTOR (CONNECTION WITH PROGRAM)				
C. LISTS OF CONTRACTORS, ASSOCIATE CONTRACTORS AND/OR SUB-CONTRACTORS ON TEST PROGRAM				
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E. TITLE OF R & D PROGRAM (Program 206)				
F. TEST VEHICLE OR MISSILE NAME (Aerospace Vehicle)				
G. TYPE DESIGNATION (BAL., SSM, SPACE, ETC.)				
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(2) VIEWED FROM INSIDE LAUNCH COMPLEX				
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Q. GUIDANCE SYSTEM — DESCRIPTION				
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R. CONTROL SYSTEM — DESCRIPTION				
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S. WARHEAD — DESCRIPTION				
T. NOSE CONE — TYPE				
T. NOSE CONE — DESCRIPTION				
U. CAPSULE — TYPE				
U. CAPSULE — DESCRIPTION				
V. TARGETS — TYPE				
V. TARGETS — DESCRIPTION				
W.				

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(2) CONTROL AND GUIDANCE SYSTEM				
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TECHNICAL REFERENCES

1. SECURITY CLASSIFICATION: —

2. PAGE: 060

3. DATE: 22 October 1962

4. REPLACES PAGE(S): 060 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. PRD PAGE REFERENCE	11. TITLE	12. CLASS S	C	U	13. PUBLISHER AND DATE	14. SOURCE
159	Model Specification of Atlas Booster Vehicle, USAF Model SM-65-D (Modified), Convair Model 27, Report AZD-27-0028				General Dynamics/Astronautics 15 January 1961	General Dynamics/Astronautics
159	Atlas D Space Booster System Description Report AE61-0553				General Dynamics/Astronautics	General Dynamics/Astronautics
155	M-79 Squib LMSD DCS 1067061				LMSC, 14 January 1962	LMSC 206 Program Office
155	Destruct Assembly, Shaped Charge LMSD DCS 1067259				ORDCO, 3 August 1960	LMSC 206 Program Office
155	Agena D Advance Vehicle Description LMSC A081462				LMSC, 9 January 1962	LMSC 206 Program Office
150	Model Specification, Engine, Rocket, Liquid Propellant, USAF Model XLR-81-BA-9, LMSD 445986				LMSC, 1 May 1960	LMSC 206 Program Office
					NOTE: Requests for technical references for the satellite vehicle shall be directed to the program technical manager	William F. Sampson Aerospace Corporation P.O. Box 95085 Los Angeles 45, California

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5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)--169

10. WORD OR ABBREVIATION	11. DEFINITION OR MEANING
A/V	Aerospace Vehicle
AGE	Aerospace Ground Equipment
BECO	Booster Engine Cut Off
c/o	Checkout
DPL	Dual Propellant Loading
EMI	Electro-Magnetic Interference
FIC	Frequency Interference Control
GD/A	General Dynamics/Astronautics
GE/MSVD	General Electric/Missiles and Space Vehicles Division
IRFNA	Inhibited Red Fuming Nitric Acid
IRIG	Inter-Range Instrumentation Group
IRP	Inertial Reference Package
LC	Launch Control
LOB	Launch Operations Building
LOCC	Launch Operations Control Center
LOV	Loss of Vision
LOX	Liquid Oxygen
LMSC	Lockheed Missiles and Space Company
MAB	Missile Assembly Building
MFSS	Missile Flight Safety Subsystem
MOPS	Missile Operations Intercom System
OCV	Orbital Control Vehicle
PMR	Pacific Missile Range
PALC II	Point Arguello Launch Complex Number Two
PU	Propellant Utilization
RSC	Range Safety Command
SECO	Sustainer Engine Cut Off
SD	San Diego
STA	Satellite Test Annex
S/V	Satellite Vehicle
TLM	Telemetering
UDMH	Unsymmetrical Dimethyl Hydrazine
VECO	Vernier Engine Cut Off
VAFB	Vandenberg Air Force Base
VSB	Vehicle Service Building

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KEY PERSONNEL

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2. PAGE 110
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4. REPLACES PAGE(S) 110
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5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

10. NAME	11. POSITION AND ORGANIZATION	12. PROJECT RESPONSIBILITY	13. BUSINESS ADDRESS	14. TELEPHONE NO.
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Col Q.A. Riepe (USAF)	Director, Program 206, SSZX	Management for SSD	Headquarters SSD (SSZX) Col Riepe, AF Unit PO	OS 9-4661 Ext 1444
	Project Officer Test Planning Office	Test planning	Hq SSD (SSOT) [redacted] AF Unit PO	OS 9-4661 Ext 4203
	Range & Facilities Operations, 206 Program Office	Test operations planning	Hq SSD (SSZXO) [redacted] AF Unit PO	OS 9-4661 Ext 3738
	Aerospace Corporation			
William F. Sampson Ellis Lapin	Systems Engineering Director Associate Systems Eng. Director Program 206	General systems engineering and technical direction	Aerospace Corporation PO Box 95085 Los Angeles 45, Calif.	OS 9-4661 Ext 4282
L.E. Lundquist	Systems Operations & Evaluation, 206 Program Office	Systems test & evaluation	Aerospace Corporation PO Box 95085 Los Angeles 45, Calif.	OS 9-4661 Ext 4033/4129
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[redacted]	Project Officer, 6595th Aerospace Test Wing	Program 206 project officer for 6595th ATW	6595th Aerospace Test Wing (VWZSM) PO Box 1567 Vandenberg AFB, Calif.	Santa Maria, Calif. 866-1611 866-3771
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	Program Manager, Air Force Office, PMR	Program 206	PO Box #3 Pt. Mugu, Calif.	Hunter 6-8331 Ext 7416

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KEY PERSONNEL

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2. PAGE 110.1
3. DATE 22 October 1962
4. REPLACES PAGE(S) 110.1
DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. NAME	11. POSITION AND ORGANIZATION	12. PROJECT RESPONSIBILITY	13. BUSINESS ADDRESS	14. TELEPHONE NO.
	AFO/PMR (Cont)			
	Program Planning Office	PMR program manager	Code 124.4 Pt. Mugu, Calif.	Hunter 6-8331 Ext 8609
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	Technical Programs Staff	Range development coordinator	Code 3101-23 Pt. Mugu, Calif.	Hunter 6-8331 Ext 7731
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Campbell, R.S.	Ass't Program Director, Atlas/Agena Program Office		" " "	Ext 1825
Chamberlain, S.B.	Project Engineer	PMR space boosters	" " "	Ext 3162
Malloy, T.L.	Manager	Launch operations	" " "	Ext 1823
Martin, R.R.	Asst. Project Engineer	Program 206	" " "	Ext 3162
Johnston, C.A.	Chief Test Conductor	PMR space boosters	General Dynamics/Astronautics Vandenberg Air Force Base Post Office Box 1536 Lompoc, California	REgent 4-4351 Ext 8-5045 8-5129
Munizza, D.	Asst. Test Conductor	PALC II	" "	Ext 8-8143
Holder, R.F.	Asst. Test Conductor	MAB 3	" "	Ext 8-4960
Newton, K.F.	Base Manager	VAFB Operations	" "	Ext 8-5209

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1. SECURITY CLASSIFICATION

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KEY PERSONNEL

1. SECURITY CLASSIFICATION:
2. PAGE: 110.2
3. DATE: 22 October 1962
4. REPLACES PAGE(S): 110.2 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. NAME	11. POSITION AND ORGANIZATION	12. PROJECT RESPONSIBILITY	13. BUSINESS ADDRESS	14. TELEPHONE NO.
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Cowles, L.B.	General Manager, Advance Space Vehicle Section		Valley Forge Space Tech Center PO Box 8555 Philadelphia 1, Pa.	Ext 969-2141/-2
Katzen, J.	Program Manager, 206 Program Office		Advance Space Vehicle Section PO Box 8661 Philadelphia 1, Pa.	Ext 969-5072/3
Brainard, John	Manager Field Operations, Program 206		Advance Space Vehicle Section PO Box 8661 Philadelphia 1, Pa.	Ext 969-5784
Binegar, J.	Manager Flight Test Operations, Program 206		Advance Space Vehicle Section PO Box 8661 Philadelphia 1. Pa.	Ext 866-7148

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1. SECURITY CLASSIFICATION:
9. REVISION NO.: 1

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KEY PERSONNEL

1. SECURITY CLASSIFICATION

2. PAGE 110.3
3. DATE 22 October 1962
4. REPLACES PAGE(S) 110.3 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. NAME	11. POSITION AND ORGANIZATION	12. PROJECT RESPONSIBILITY	13. BUSINESS ADDRESS	14. TELEPHONE NO.
	LMSC - Sunnyvale			
Plummer, J.W.	Director Military Programs 60-03		LMSC (Bldg 104) PO Box 504 Sunnyvale, Calif.	Ext. 2-8793
Huntley, H.W.	Manager Booster Systems 65-10	Project manager	LMSC (Bldg 524) PO Box 504 Sunnyvale, Calif.	Ext. 2-3072
Hart, Jr., J.T.	Asst. Manager Booster Systems 65-10	Assistant project manager	LMSC (Bldg 524) PO Box 504 Sunnyvale, Calif.	Ext. 2-3072
Harley, John	Manager Booster Systems Engineering 65-12	Project engineer	LMSC (Bldg 524) PO Box 504 Sunnyvale, Calif.	Ext. 2-3683
Benn, Donald G.	Assistant to Manager Booster Systems for 206 Program 65-10	Assistant to project manager for requirements	LMSC (Bldg 524) PO Box 504 Sunnyvale, Calif.	Ext. 2-3356
Beverage, R.J.	Manager System Operations Planning and Test Direction	Test planning	LMSC (Bldg 519) PO Box 504 Sunnyvale, Calif.	Ext. 2-1383

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1. SECURITY CLASSIFICATION

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PERSONNEL ASSIGNMENT SCHEDULE

1. SECURITY CLASSIFICATION

2. PAGE 111

3. DATE 22 October 1962

4. REPLACES PAGE(S) 111 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. LOCATION	11. PERSONNEL CATEGORY	12. NUMBER OF PERSONNEL ASSIGNED/MONTH-QUARTER																			
		FY						FY 1962						FY 1963				FY 1964			
		CY 1963									CY 1962			CY 1963				CY 1964			
		J	F	M	A	M	J	J	A	S	O	N	D	1	2	3	4	1	2	3	4
General Electric	CONTRACTOR (Incl. sub-contractor)																				
	ADMINISTRATIVE																				
	ENGINEERING										61	61	61	88	88	88	72	56	33		
	TECHNICIAN										41	41	41	75	75	75	57	43	20		
	CIVIL SERVICE																				
	ADMINISTRATIVE																				
	ENGINEERING																				
	TECHNICIAN																				
	MILITARY																				
	OFFICERS																				
	ENLISTED																				
	TOTAL																				
	CONTRACTOR (Incl. sub-contractor)																				
	ADMINISTRATIVE																				
	ENGINEERING																				
	TECHNICIAN																				
	CIVIL SERVICE																				
	ADMINISTRATIVE																				
	ENGINEERING																				
	TECHNICIAN																				
	MILITARY																				
	OFFICERS																				
	ENLISTED																				
	TOTAL										102	102	102	163	163	163	129	99	53		

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1. SECURITY CLASSIFICATION

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PERSONNEL ASSIGNMENT SCHEDULE

1. SECURITY CLASSIFICATION

2. PAGE 111.1

3. DATE 22 October 1962

4. REPLACES PAGE(S) 111.1 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. LOCATION	11. PERSONNEL CATEGORY	12. NUMBER OF PERSONNEL ASSIGNED/MONTH-QUARTER																					
		FY 1963												FY 1964				FY				FY	
		CY 1963												CY 1964				CY				CY	
		J	F	M	A	M	J	J	A	S	O	N	D	1	2	3	4	1	2	3	4	1	2
LMSC, Vandenberg Main Base	CONTRACTOR (Incl. sub-contractor)																						
	ADMINISTRATIVE	50 →																					
	ENGINEERING	80 →																					
	TECHNICIAN	152 →																					
	CIVIL SERVICE																						
	ADMINISTRATIVE																						
	ENGINEERING																						
	TECHNICIAN																						
	MILITARY																						
	OFFICERS																						
	ENLISTED																						
	TOTAL	282 →																					
LMSC, Point Arguello Launch Site	CONTRACTOR (Incl. sub-contractor)																						
	ADMINISTRATIVE	17 →																					
	ENGINEERING	23 →																					
	TECHNICIAN	40 →																					
	CIVIL SERVICE																						
	ADMINISTRATIVE																						
	ENGINEERING																						
	TECHNICIAN																						
	MILITARY																						
	OFFICERS																						
	ENLISTED																						
	TOTAL	80 →																					
Vandenberg Tracking Station		Personnel Requirements																					

NOTE: Personnel listed in PRD 111, 111.1, and 111.2 represent anticipated levels for Program 206. The majority of these personnel and their facilities presently exist at PMR or VAFB and will be supporting other programs simultaneously with providing Program 206 support.

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

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PERSONNEL ASSIGNMENT SCHEDULE

1. SECURITY CLASSIFICATION

2. PAGE 111.2

3. DATE 22 October 1962

4. REPLACES PAGE(S) 111.2 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. LOCATION	11. PERSONNEL CATEGORY	12. NUMBER OF PERSONNEL ASSIGNED/MONTH-QUARTER FY 1963 CY 1963 J	F	M	A	M	J	J	A	S	O	N	D	FY 1964 CY 1964 1	2	3	4	FY	CY 1	2	3	4	FY	CY 1	2
GD/Astronautics PALC II	CONTRACTOR (Incl. sub-contractor)																								
	ADMINISTRATIVE	16	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→								
	ENGINEERING	45	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→								
	TECHNICIAN	217	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→								
	CIVIL SERVICE																								
	ADMINISTRATIVE																								
	ENGINEERING																								
	TECHNICIAN																								
	MILITARY																								
	OFFICERS																								
	ENLISTED																								
	TOTAL	278	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→								
GD/Astronautics	CONTRACTOR (Incl. sub-contractor)																								
	ADMINISTRATIVE	5	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→								
	ENGINEERING	15	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→								
	TECHNICIAN	60	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→								
	CIVIL SERVICE																								
	ADMINISTRATIVE																								
	ENGINEERING																								
	TECHNICIAN																								
	MILITARY																								
	OFFICERS																								
	ENLISTED	20	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→								
	TOTAL	100	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→								

NOTE: Personnel listed in PRD 111, 111.1, and 111.2 represent anticipated levels for Program 206. The majority of these personnel and their facilities presently exist at PMR or VAFB and will be supporting other programs simultaneously with providing Program 206 support.

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

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PROGRAM OPERATIONS SCHEDULE

1. SECURITY CLASSIFICATION

2. PAGE 120

3. DATE 22 October 1962

4. REPLACES PAGE(S) 120 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

14. NUMBER OF OPERATIONS AND/OR RECOVERIES/MONTH-QUARTER

10. TEST CODE LTR.	11. TEST SERIES/CATEGORIES	12. RANGE HRS/ TEST (1)	FY 1963 / CY 1963 J	F	M	A	M	J	FY 1964 J	A	S	O	N	D	CY 1964 1	2	FY 3	4	FY CY 1	2	3	4	FY CY 1	2	3	4
A	LAUNCH (Satellite Vehicle)	8						1		1	1	1	1		2	3										
B	Dress Rehearsal or DPL	8						1		1	1	1	1		2	3										
	DRY RUNS (FAT, F-1 DAY ETC.)																									
	STATIC FIRINGS (FRF, ETC.)																									
	STAGE I																									
	STAGE II																									
	STAGE III																									
C	SIMULATED FLIGHTS	20						2		2	2	2	2		4	6										
D	AIRBORNE INSTRUMENTATION TESTS Guidance Flyby	5					1		1	1	1	1	1		2	3										
E	Tracking Station/TLM Ship	5					1		1	1	1	1	1		2	3										
	GROUND INSTRUMENTATION TESTS																									
F	MFSS Functional C/O	4					2		2	1	2	2	1		4	5										
G	Electromagnetic Interference (EMI)	8		One Test Prior to First Launch																						
H	Ground Guidance Loop Test	2					3		3	3	3	3	3		6	9										
I	Compatibility Test	6					3		3	3	3	3	3		6	3										
	13. PLANNED RECOVERIES																									
	NOSE CONE																									
	CAPSULE - DATA/UNMANNED																									
	CAPSULE - MANNED																									

NOTE: Range hours per test are test total duration and do not indicate scheduled range time for frequency clearance, etc.

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

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61778

SIX-MONTH VEHICLE TEST FORECAST

1. SECURITY CLASSIFICATION

2. PAGE 120.1
3. DATE 22 October 1962
4. REPLACES PAGE(S) 120.1 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. TEST DATE MO.	DAY	T-TIME	13. DD NUMBER	14. TEST NUMBER	15. TEST VEHICLE NO	16. APPROX RANGE NO.	17. FLIGHT DURATION	18. AIMING POINT COORDINATES	19. T. TEL. YES	NO	20. RECOV. YES	NO	21. RS DATA YES	NO	22. CONFIGURATION AND REMARKS
		(1963)					(Atlas/ Agena/SV)										
1	A	6	27				201D/4801/ 951										
2	A	8	15				190D/4802/ 952										
3	A	9	20				212D/4803/ 953										
4	A	10	25				224D/4804/ 954										
5	A	11	27				227D/4805/ 955										
		(1964)															
6	A	1	31				7101/4806/ 956										

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

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PROGRAM OBJECTIVES

1. SECURITY CLASSIFICATION

2. PAGE 130

3. DATE 22 October 1962

4. REPLACES PAGE(S) 130 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. CATEGORY PRIM	12. CATEGORY OTHER	13. OBJECTIVES	14. TEST LOCATION	15. TEST AGENCY	16. TECHNICAL RANGE SERVICES
1	A	X		Satellite Vehicle - Launch Demonstrate the capability of the Atlas/Agena D to boost the Program 206 satellite vehicle into a circular near-polar orbit of approximately 95 n mi altitude	PALC No. 2	6595th Aerospace Test Wing	GE guidance ground station, range safety instrumentation, range ship instrumentation, launch support instrumentation, range control, frequency control, meteorology, test data, range timing, other range operations support, communications and aircraft support
2	B	X		Dress Rehearsal or DPL This is a launch countdown dry run to insure equipment readiness and to alert and train operations personnel, and includes a dual tanking of the booster. A dress rehearsal will be conducted only once per program.	PALC No. 2	6595th Aerospace Test Wing	Same as Item 1 for a dress rehearsal. A booster dual tanking requires only fire, safety, and frequency clearance on booster telemetry.

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

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PROGRAM OBJECTIVES

1. SECURITY CLASSIFICATION

2. PAGE 130.1

3. DATE 22 October 1962

4. REPLACES PAGE(S) 130.1 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. CATEGORY PRIM	12. CATEGORY OTHER	13. OBJECTIVES	14. TEST LOCATION	15. TEST AGENCY	16. TECHNICAL RANGE SERVICES
3	C	X		Simulated Flight 1. Demonstrate compatibility and proper functioning of the Satellite Vehicle/Agena/Atlas electrical and electronic systems 2. Demonstrate proper programmer functioning 3. Validate pyrotechnique array firing sequences 4. Demonstrate satisfactory umbilical release devices and vehicle operation on internal power 5. Check destruct system signals 6. Demonstrate vehicle-to-TLM station operation	PALC No. 2	6595th Aerospace Test Wing	GE ground guidance station, range control, frequency control, range timing, communications, tracking station support
4	D	X		Guidance Flyby Dynamically check the guidance station including guidance rate and track equipment and the guidance computer	VAFB 65-1 Guidance Station	6595th Aerospace Test Wing	GE 65-1 guidance station radar tracking, air-to-ground communication, test aircraft
5	E	X		Tracking Station and TLM Ship Assure optimum operation of the tracking station and TLM ship during a mission	VAFB, other tracking stations, and TLM ship	6594th Aerospace Test Wing	Tracking and telemetry network, test aircraft
6	F	X		MFSS Functional Checkout Check out destruct capability and establish overall system integrity	PALC No. 2	6595th Aerospace Test Wing	Range safety control, general range operations support

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SECURITY CLASSIFICATION

9. REVISION NO. 1

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PROGRAM OBJECTIVES

1. SECURITY CLASSIFICATION

2. PAGE 130.2
3. DATE 22 October 1962
4. REPLACES PAGE(S) 130.2
DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. CATEGORY PRIM	12. CATEGORY OTHER	13. OBJECTIVES	14. TEST LOCATION	15. TEST AGENCY	16. TECHNICAL RANGE SERVICES
7	G	X		Electromagnetic Interference (EMI) Ascertain the absence of interference difficulties resulting from simultaneous operation of all rf and other electromagnetic systems	PALC No. 2	6595th ATW	GE ground guidance station, range safety, all tracking and instrumentation stations, frequency control, communications and other range operation support
8	H	X		Ground Guidance Loop Test Establish confidence in the guidance flight control system, including the radio tracking system and guidance computer	PALC No. 2	6595th ATW	GE ground guidance station
9	I	X		Compatibility Test Assure electrical compatibility between the aerospace vehicle and aerospace ground equipment (AGE) and demonstrate ability to operate in a closed loop checkout mode	PALC No. 2	6595th ATW GE IMSC GE-MSVD	PALC No. 2, limited instrumentation stations, and frequency control

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

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PROGRAM DESCRIPTION

1. SECURITY CLASSIFICATION

2. PAGE 140

3. DATE 22 October 1962

4. REPLACES PAGE(S): 140 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. PROGRAM DESCRIPTION	PREPARATION TIME	PRE-OPERATION TIME	OPERATION TIME	POST OP. TIME	NUMBER OF OPERATIONS	NUMBER OF PERSONNEL	AVAILABILITY DATE	TEST PHASE COMPLETION DATE
1	A	Aerospace Vehicle - Launch								
2		Ascent Trajectory - The launch phase includes countdown, launch, and injection into orbit. The launch vehicle will consist of an Atlas D booster first stage, an Agena D second stage, and a satellite vehicle. The launch trajectories will be on azimuths of approximately 170 to 200 degrees. During first stage burning, the launch vehicle will be under control of the GE Mark II guidance system, which will determine velocity cutoff to place the second stage and satellite vehicle in a coast trajectory. The first stage trajectory will be lofted in order to maintain the look angles with respect to radio guidance antennae required by the guidance system. After a coast period, when Atlas/Agena separation occurs, the ullage rockets on the Agena will fire to settle the fuel and the Agena will burn at a constant nose-up attitude as sensed by horizon sensors. Agena cutoff will be accomplished by a velocimeter so as to place the satellite vehicle in a near-circular orbit at approximately 95 nautical miles altitude.	4 w	2 d	8 h	1 w	10 flights (basic)	150**	Jan 1963	June 1964
3		Nominal Ascent Trajectory - The ascent trajectory is initiated with a 15-second vertical rise of the aerospace vehicle, followed by an open-loop, auto-pilot controlled pitch program which causes the vehicle to follow a path approximately that of a zero-lift turn until booster cutoff. After booster cutoff, engines are jettisoned and the sustainer phase of active guidance ensues. During sustainer operation the vehicle flies at essentially constant inertial pitch rate, the rate being computed to produce the desired coast ellipse at Atlas sustainer cutoff. A short vernier phase follows, during which time the velocity vector is trimmed and vehicle attitude is stabilized. At vernier cutoff the Agena-D vehicle is separated from the Atlas by means of retrorockets attached to the Atlas. The Agena D vehicle then coasts nominally for approximately 55* seconds during which time the horizon sensor fairings are jettisoned and the vehicle is pitched over to an attitude of 12.3* degrees nose up relative to the local horizon. This attitude relative to the local horizontal is maintained by means of the horizon sensors through the Agena burning								

* Coast time and pitch attitude angles are subject to change.

** Total estimate involved in launch

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1. SECURITY CLASSIFICATION

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PROGRAM DESCRIPTION

1. SECURITY CLASSIFICATION

2. PAGE 140 -1

3. DATE 22 October 1962

4. REPLACES PAGE(S) 140.1 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. PROGRAM DESCRIPTION	13. PREPARATION TIME	14. PRE-OPERATION TIME	15. OPERATION TIME	16. POST OP. TIME	17. NUMBER OF OPERATIONS	18. NUMBER OF PERSONNEL	19. AVAILABILITY DATE	20. TEST PHASE COMPLETION DATE
3 (Cont)		Satellite Vehicle - Launch (Continued) program and is precomputed to provide the desired orbital condition after the Agena accelerates through a prescribed velocity increment. Agena cutoff is initiated by a velocity meter. The satellite vehicle is then separated from the Agena. The Agena will reenter the Earth's atmosphere after separation.								
4	B	Dress Rehearsal or DPL The dress rehearsal consists of a realistic countdown without firing the Atlas engines. A complete launch countdown through commit will be conducted and the Atlas will be tanked with fuel and LOX to flight capacity. The Agena-D and satellite vehicle will not be tanked. The dress rehearsal will simulate as nearly as possible an actual launch, with all range personnel participating. After the first firing, generally a DPL will be conducted rather than a full dress rehearsal. The DPL will consist of a dual propellant loading (fuel and LOX) of the Atlas and an Atlas countdown through commit without firing the Atlas engines and without complete range instrumentation.	1 d	0 d	6 to 8 h	1 d	1 each flight (DPL)	150*	--	R-7 d

* Total estimate involved in this activity.

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SECURITY CLASSIFICATION

9. REVISION NO. 1

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PROGRAM DESCRIPTION

1. SECURITY CLASSIFICATION

2. PAGE 140.2

3. DATE 22 October 1962

4. REPLACES PAGE(S) 140.2 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. PROGRAM DESCRIPTION	13. PREPARATION TIME	14. PRE-OPERATION TIME	15. OPERATION TIME	16. POST OP. TIME	17. NUMBER OF OPERATIONS	18. NUMBER OF PERSONNEL	19. AVAILABILITY DATE	20. TEST PHASE COMPLETION DATE
5	C	Simulated Flight This test is to be a realistic exercise of satellite vehicle functions. The Atlas, satellite vehicle, and the Agena will not be tanked.	1 d	0	20 h	0	2 each flight	300	--	R-12 d
6	D	Guidance Flyby The guidance flyby test will be an aircraft flight approximately along the launch azimuth. The aircraft will carry an Atlas guidance simulator and will be tracked by the GE ground guidance station and range radar. No PMR range requirements other than frequency interference control will be in effect.	1 d	6 h	5 h	1 d	1 each flight	37	--	R-10 to R-0 d
7	E	Tracking Station and TLM Ship This will include calibration of all equipment and recorders, and aircraft flight by an aircraft carrying TLM and beacon simulator equipment.	---	1 d	5 h	1 d	1 each flight	--	--	R-1 d
8	F	Missile Flight Safety System Functional Checkout Booster MFSS operation will be in conjunction with the telemetry system and the range safety control center and will include stimulus applied to the destruct system and monitoring signals via the telemetry data link.	1 d	4 h	1 d	--	2 each flight	20	--	R-10 d and R-1 d

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1. SECURITY CLASSIFICATION

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PROGRAM DESCRIPTION

1. SECURITY CLASSIFICATION

2. PAGE 140.3

3. DATE 22 October 1962

4. REPLACES PAGE(S) 140.3 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. PROGRAM DESCRIPTION	13. PREPARATION TIME	14. PRE-OPERATION TIME	15. OPERATION TIME	16. POST OP. TIME	17. NUMBER OF OPERATIONS	18. NUMBER OF PERSONNEL	19. AVAILABILITY DATE	20. TEST PHASE COMPLETION DATE
9	G	Electromagnetic Interference Operation check of all rf systems with all satellite vehicle, Agena, Atlas, and range rf systems operating simultaneously. Requires PMR support for FIC only.	1 d	4 h	8 h	--	1 each pad	20	--	R-15 d
10	H	Ground Guidance Loop Test Booster flight control and guidance systems operating in conjunction with the ground guidance station through a 5-minute simulated flight. Requires PMR support for FIC only.	2 h	2 h	2 h	--	3 each flight	56	--	R-9, R-7, and R-1 d
11	I	Compatibility Test The AGE will be connected to an A/V simulator and tested for proper system function and control. The AGE will then be connected to the A/V, with power cautiously switched on and monitored. The balance of the control functions will then be exercised and monitored. Limited rf radiation will be employed.	1 d	0	6 h	0	3 each flight	50 to 150	--	R-20 to R-1 d

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1. SECURITY CLASSIFICATION

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TRAJECTORY DATA - PLAN VIEW			1. SECURITY CLASSIFICATION	2. PAGE 141
				3. DATE 22 October 1962
5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER	4. REPLACES PAGE(S) 141 DATED 1 May 1962
PROGRAM 206	NONE	206	Aerospace AF04(695)-169	TEST CODE

10. PLAN VIEW (INCLUDING LAUNCH AZIMUTH AND IMPACT POINT(S) OF TEST VEHICLE OR MISSILE STAGES).

This information will be supplied when available.

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25	NRD		1

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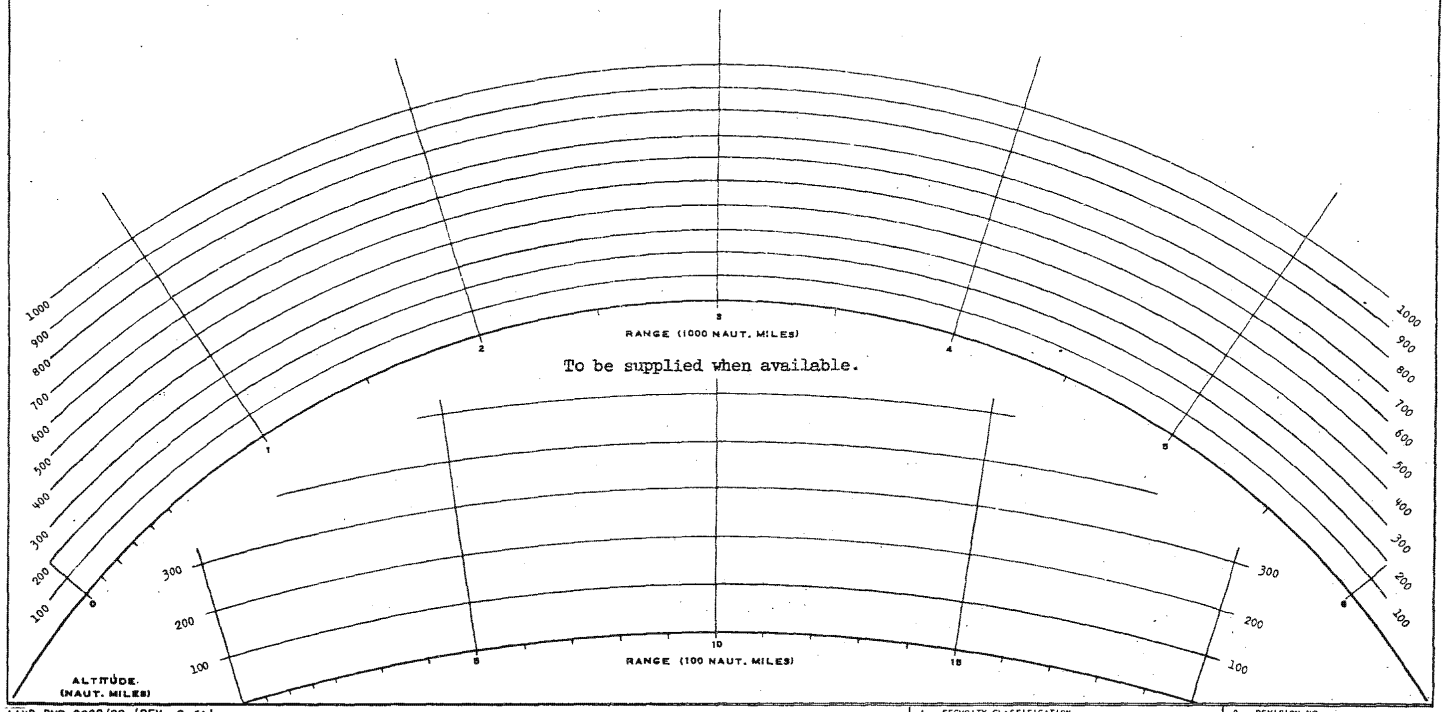
TRAJECTORY DATA - FULL RANGE

1. SECURITY CLASSIFICATION	2. PAGE 142
	3. DATE 22 October 1962
	4. REPLACES PAGE(S) 142
	DATED 1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

10. PLANNED TRAJECTORY(S) (INCLUDING BURNOUT, SEPARATION AND IMPACT POINT(S) OF TEST VEHICLE OR MISSILE STAGE(S))

TEST CODE



To be supplied when available.

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1. SECURITY CLASSIFICATION	9. REVISION NO.
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TRAJECTORY DATA - LAUNCH

1. SECURITY CLASSIFICATION

2. PAGE 143

3. DATE 22 October 1962

4. REPLACES PAGE(S) 143 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

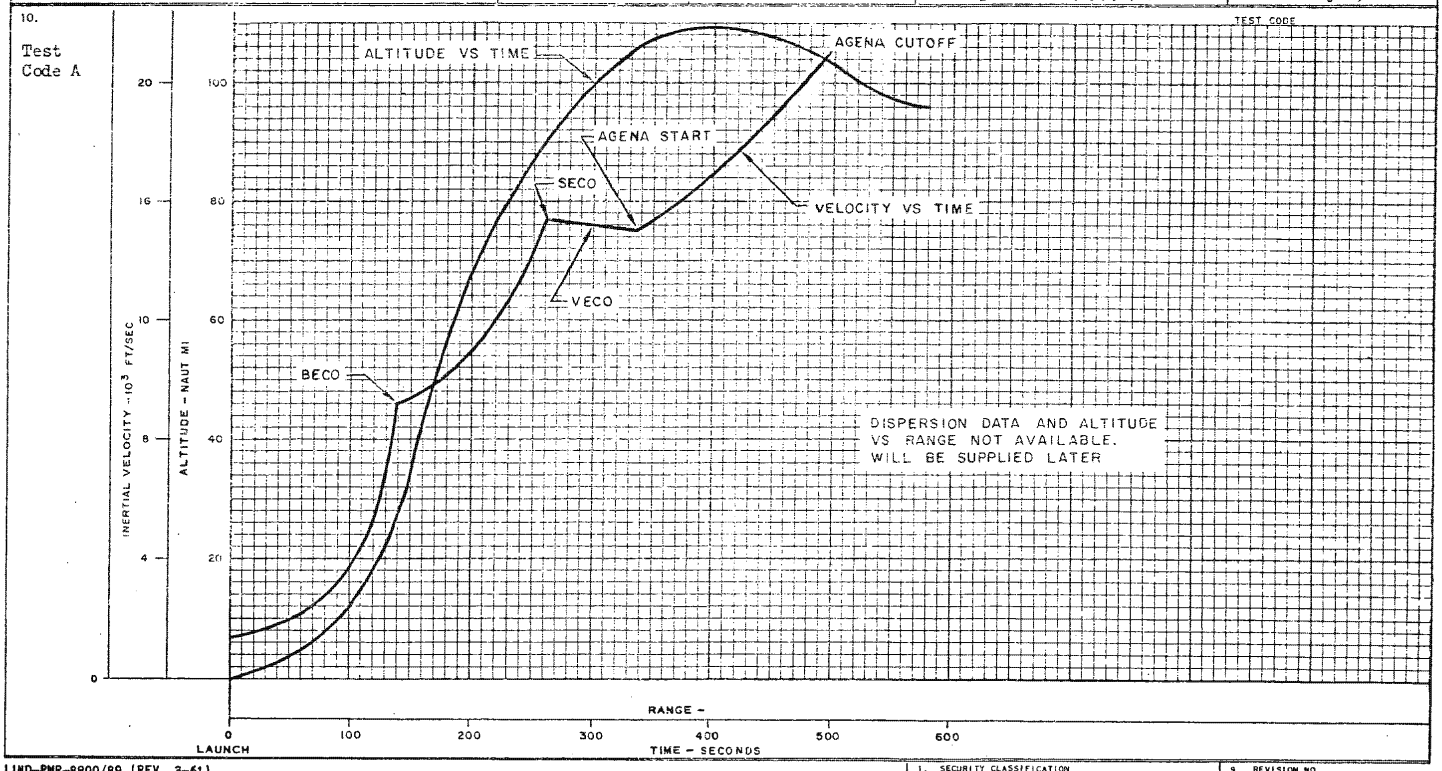
6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. Test Code A

TEST CODE



IND-PMR-8800/89 (REV. 3-61)

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

00778

VEHICLE DESCRIPTION

1. SECURITY CLASSIFICATION:
2. PAGE: 150
3. DATE: 22 October 1962
4. REPLACES PAGE(S): 150 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. TEST CODE AND SERIES: A
11. VEHICLE NAME: ----
12. XX SPACE SATELLITE ___ BALLISTIC CRUISE
13. TYPE AND DESIGNATION: Aerospace Vehicle
14. LAUNCH AZIMUTH - DEGREES T.: 170 to 195
15. LAUNCH ELEVATION - DEGREES: 90
16. TRAJECTORY AZIMUTH - DEGREES T.:
17.

23. PAYLOAD (DESCRIPTION)

*CHARACTERISTIC PER STAGE	TOTAL	(1) Atlas D	(2) Adapter (Atlas-Agena)	(3) Agena-D W/O Adapter	(4) Satellite Vehicle
18. PHYSICAL DIMENSIONS - FEET					
A. LENGTH (2)	110.3(1)	69.2(1)	12.0	23.25	17.5'
B. DIAMETER	10.0	10.0	5.0	5.0	5.0'
C. WIDTH - MAX.	16.3	16.3	5.9	6.9	5.0'
19. WEIGHTS - POUNDS (Target)					
A. DRY (EMPTY - NO PROPELLANTS)		11,913	404	1,371	3459
B. PROPELLANT OR FUEL (Liftoff)		75,839	-	3,752	170
C. OXIDIZER (Liftoff)		170,427	-	9,619	187
D. GASES		159	-	20	229
E. MISCELLANEOUS		219		5	-
F. DESTRUCT MATERIALS			14		-
G. AT LAUNCH		258,557	418	14,767	4045
H. AT BURNOUT		6,413	416	1,485(6)	4025 (8)
20. PROPULSION SYSTEM					
A. TYPE ENGINE		Liquid	-	Liquid	Liquid
B. MANUFACTURER		Rocketdyne	-	Bell Aero.Co.	Rocketdyne
C. DESIGNATION		(3)			Se 5-2
D. NUMBER OF ENGINES		B=1,S-1,V=2	-	1	
E. SPECIFIC IMPULSE - ISP		(4)	-	292.2 (vac)	285
F. THRUST - POUNDS/ENG.		(5)	-	16,115 (vac)	50
G. THRUST DURATION - SEC.			-	240(1st and 2nd Burn)	N/A
21. PROPELLANTS AND GASES					
A. PROPELLANT OR FUEL		RP-1		UDMH	75% N_2H_4 25% MMH
B. OXIDIZER		LO_2		IRFNA	N_2O_4
C. GASES		He		He, N_2CF_4(7)	GN_2/Freon/GN_2,10% Freon
D. GAS PRESSURE - PSI		3000		3600	5000/4800/3000
E.					
22. PERFORMANCE					
A. RANGE-					Orbital
B. ALTITUDE-					
C. MAX. VELOCITY-					25,600 fps
D. MAX. ACCELERATION-G					7.1
E. TIME - T+ SEC.					600 to orbit

24. GUIDANCE SYSTEM

GE Mark II Guidance System: See PRD 159.

*Estimated information. Corrected information will be supplied later.

Notes:

(1) Turbine exhaust duct protrudes an additional 14 inches aft.
(2) Lengths specified are overall lengths of individual sections. When the vehicle is assembled some sections extend into others.
(3) Booster (B) - YLR89-NA-7
Sustainer (S) - YLR105-NA-7
Vernier (V) - YLR101-NA-13
(4) B = 251
S = 215
V = 207.6
(5) B = 309,000
S = 57,000
V = 2,000
(6) Weight at end of second burn.
(7) N_2CF_4 used for cold gas attitude control.
(8) At Agena separation

*(Type in name or number of stage or phase)

LND-PMR-6300/52 (REV. 3-61)
28

1. SECURITY CLASSIFICATION:
9. REVISION NO.: 1

GM 778

DRAWING - MISSILE OR VEHICLE (Aerospace Vehicle)

1. SECURITY CLASSIFICATION

2. PAGE 151

3. DATE 22 October 1962

4. REPLACES PAGE(S) 151 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

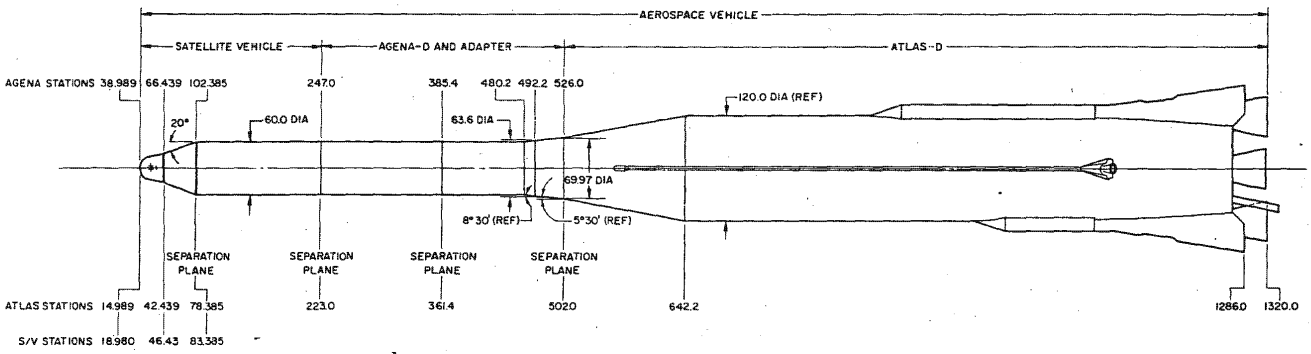
6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

TEST CODE

10. DIMENSIONAL DRAWING OF MISSILE OR VEHICLE SHOWING PAINT PATTERN, CHARACTERISTIC MARKINGS, LOCATION OF ANTENNAE, ETC.



LMD-PMR-8800/93 (REV. 3-61)

29

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

00778

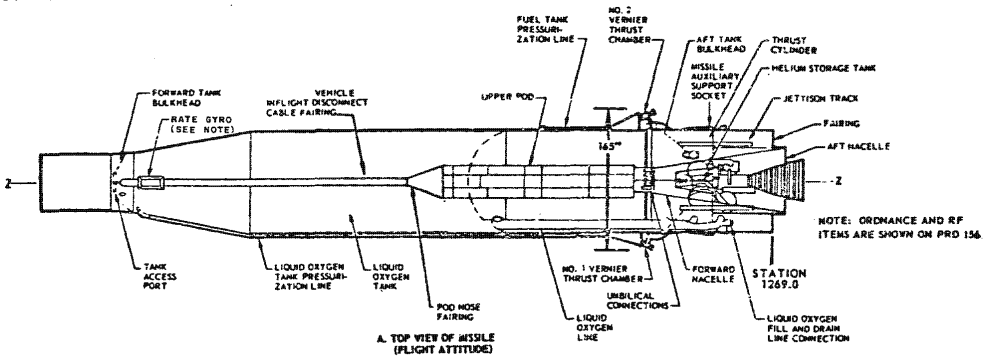
DRAWING - MISSILE OR VEHICLE (ATLAS)

1. SECURITY CLASSIFICATION	2. PAGE 151.1
	3. DATE 22 October 1962
	4. REPLACES PAGE(S) 151.1 DATED 1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AFO4(695)-169

TEST CODE

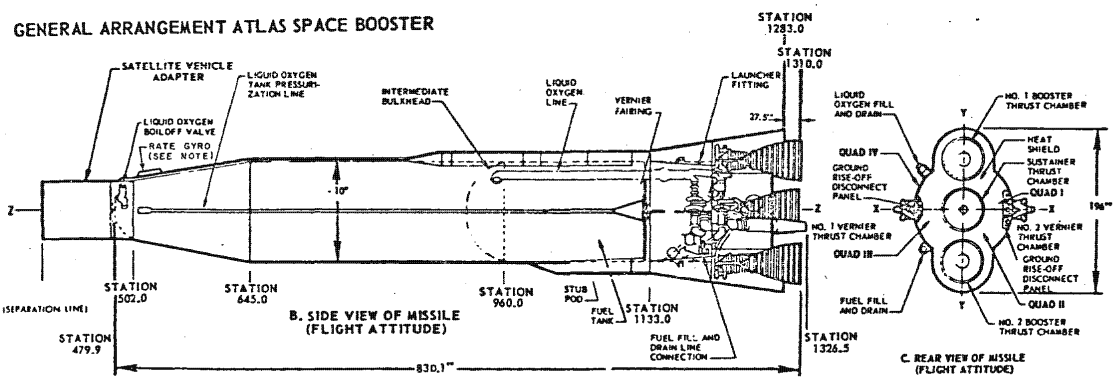
10. DIMENSIONAL DRAWING OF MISSILE OR VEHICLE SHOWING PAINT PATTERN, CHARACTERISTIC MARKINGS, LOCATION OF ANTENNAE, ETC.



A. TOP VIEW OF MISSILE (FLIGHT ATTITUDE)

Notes:
1. For the first four (4) missiles, the roll rate gyro will be packaged in the displacement gyro canister and the pitch and yaw rate gyros will be relocated forward at Sta. 521.
2. Subsequent to the first 4 missiles the pitch and yaw rate gyros will be relocated in the Atlas/Agena Adapter section.

GENERAL ARRANGEMENT ATLAS SPACE BOOSTER



B. SIDE VIEW OF MISSILE (FLIGHT ATTITUDE)

C. REAR VIEW OF MISSILE (FLIGHT ATTITUDE)

1. SECURITY CLASSIFICATION	9. REVISION NO.
	1

AFBD-PHR-6300/93 (REV. 3-61)

30

DRAWING - MISSILE OR VEHICLE (AGENA D)

1. SECURITY CLASSIFICATION

2. PAGE 151.2

3. DATE 22 October 1962

4. REPLACES PAGE(S) 151.2

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

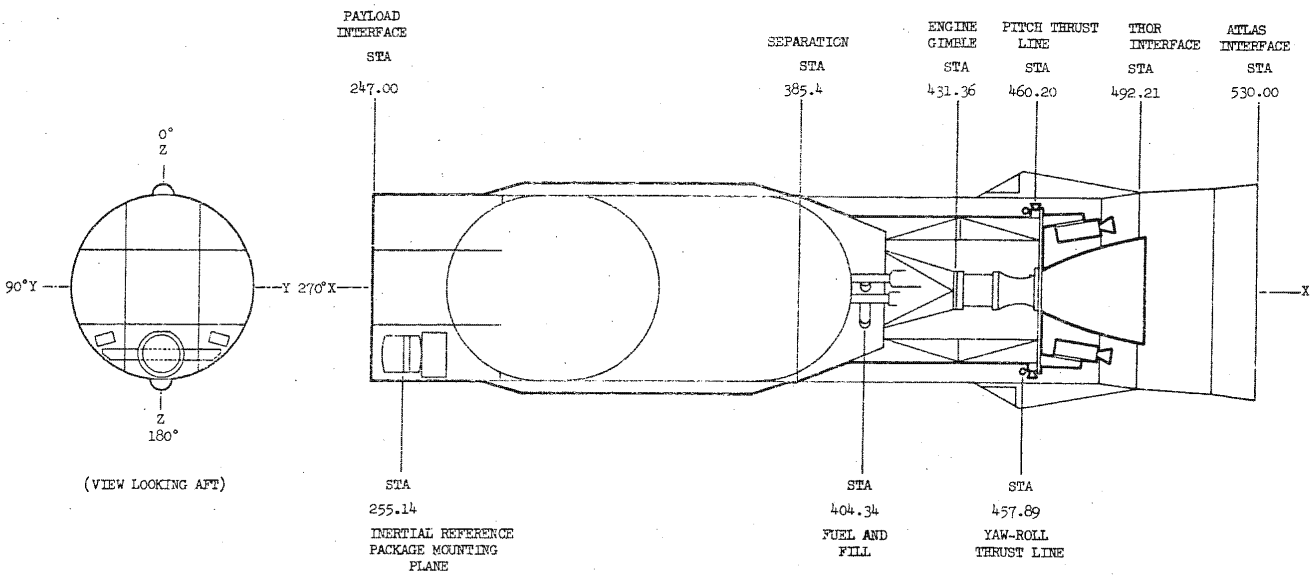
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

DATED 1 May 1962

10. DIMENSIONAL DRAWING OF MISSILE OR VEHICLE SHOWING PAINT PATTERN, CHARACTERISTIC MARKINGS, LOCATION OF ANTENNAE, ETC.

TEST CODE

GENERAL ARRANGEMENT



IIND-PMR-8d00/53 (REV. 3-61)

31

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

00778

DRAWING - MISSILE OR VEHICLE

1. SECURITY CLASSIFICATION

2. PAGE 151 .3

3. DATE 22 October 1962

4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PROGRAM 206

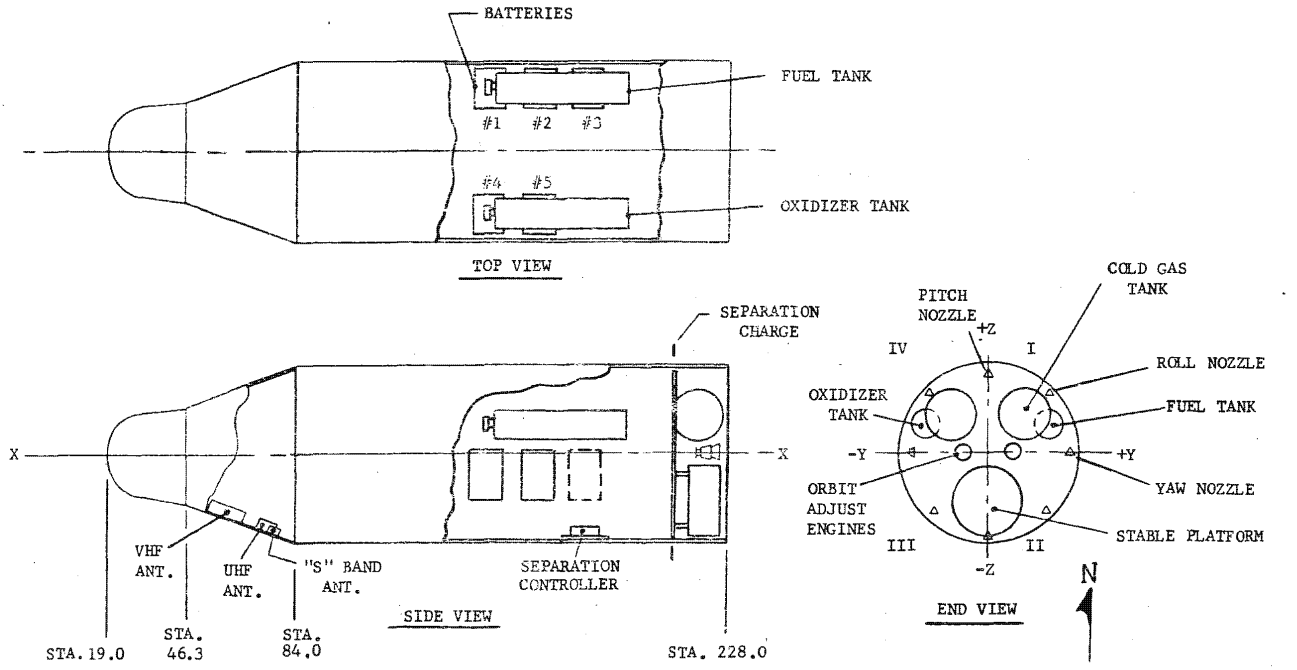
6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

TEST CODE

10. DIMENSIONAL DRAWING OF MISSILE OR VEHICLE SHOWING PAINT PATTERN, CHARACTERISTIC MARKINGS, LOCATION OF ANTENNAE, ETC.



IIND-PtR-8800/93 (REV. 3-61)

32

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

AA228

TELEMETRY SYSTEM (ATLAS D)

1. SECURITY CLASSIFICATION:

2. PAGE 152

3. DATE 22 October 1962

4. REPLACES PAGE(S) 152

DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. GENERAL INFORMATION

A. TEST CODE: A,B,C,F,G,I

B. LINK FREQUENCY: 249.9 MC

C. BAND WIDTH: 300 KC

D. MAX. DEVIATION: ± 150 KC

E. MIN. DEVIATION: ± 105 KC

F. NUMBER OF CHANNELS: 9 IRIG
COMMUTATED: 2

G. NUMBER OF SEGMENTS/CHANNEL:

CHANNEL	-	SEGMENTS
15	-	60
16	-	60

H. STATE NON-IRIG PARTICULARS:

11. TRANSMITTER CHARACTERISTICS

A. LOCATION: Atlas D Booster STAGE

B. TYPE: Crystal controlled

C. MODEL: 1411077-1068854

D. MANUFACTURER: Cubic Corp.

E. TYPE OF MODULATION: PAM/FM/FM

F. EFFECTIVE RADIATED POWER 25 WATTS
at output of package

G. CENTER FREQUENCY TOLERANCE IN PERCENTAGE OF FREQUENCY: 0.01 %

H. PEAK PULSE POWER-PULSE REPETITION FREQUENCY AND PULSE WIDTH (PCM)

FREQUENCY PULSE WIDTH

Not Applicable

I. CODING AND/OR MODULATION CHARACTERISTICS (PCM):

Not Applicable

J. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS TRANSMITTER?

☐ YES ☒ NO

NOTE: TRANSMITTING SYSTEMS WHICH REQUIRE EXTENSIVE PERIODS OF RF CHECKOUT TIME WILL BE REQUIRED TO BE EQUIPPED WITH A CLOSED LOOP OR NON-RADIATING CHECKOUT DEVISE.

12. ANTENNA CHARACTERISTICS

A. LOCATION: STA. 892 1023 2250 450 °AZ
WITH REFERENCE TO TRUE NORTH WHEN MISSILE IS ON LAUNCH PAD.

B. TYPE: Probe fed cavity

C. MODEL: GD/A P/N 27-12507-1
and 27-12507-3

D. MANUFACTURER: Creative Engineering

E. PREDOMINANT POLARIZATION: Linear

F. GAIN IN DB ABOVE ISOTROPIC: 1 to 2 db

G. DIRECTIVITY AND BEAMWIDTH IN AZIMUTH AND ELEVATION - ½ POWER:

Essentially omnidirectional

H. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS ANTENNA?

☐ YES ☒ NO

I. INDICATE THE AVAILABILITY DATE OF THE ANTENNA PATTERN MEASUREMENTS.

Refer to PRD 152.1 and 152.2

13. DATA TO BE TRANSMITTED & REMARKS

The telemetry system consists of an AN/DKT-17 (GFAE) signal conditioner and power control unit, plus an auxiliary signal conditioner.

IND-PMR-8800/94 (REV. 3-61)

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1. SECURITY CLASSIFICATION:

9. REVISION NO. 1

ANTENNA PATTERN (ATLAS D)

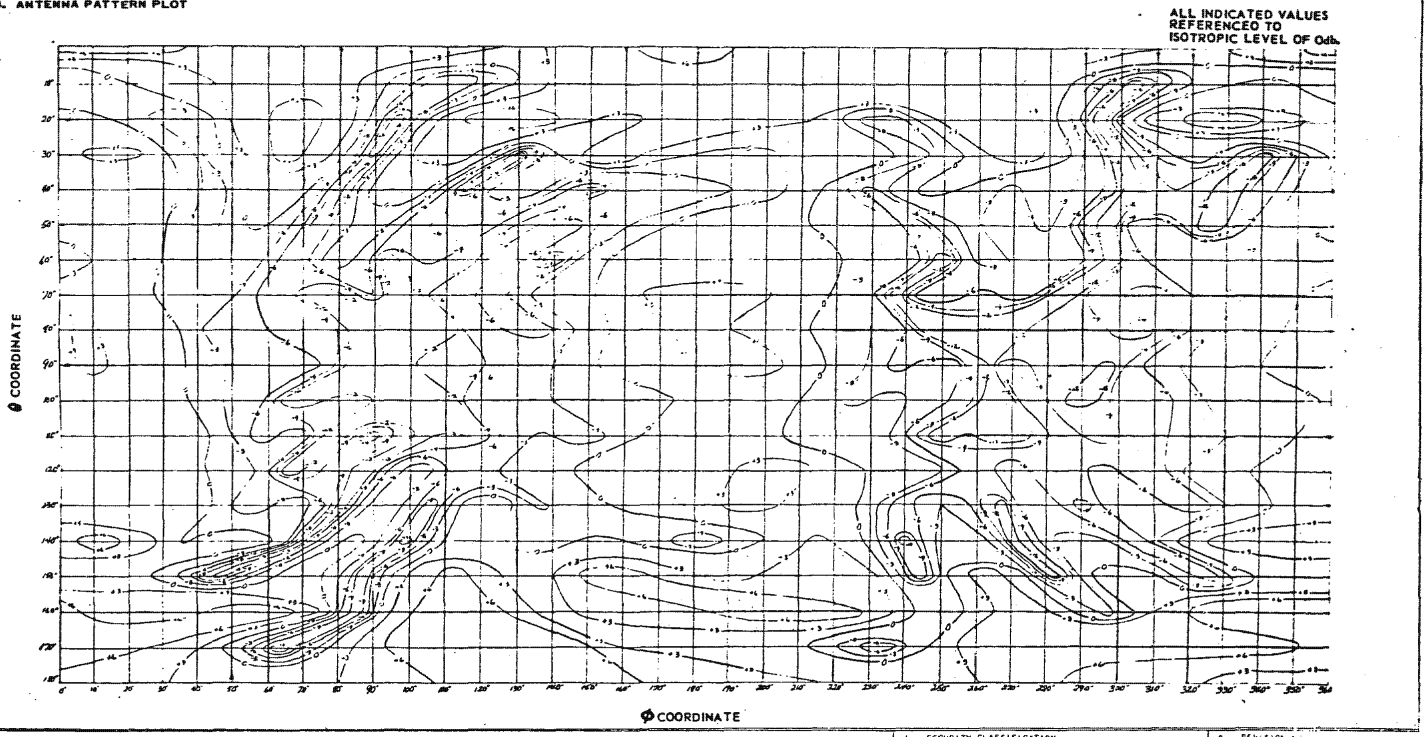
1. SECURITY CLASSIFICATION

2. PAGE 152.1
3. DATE 22 October 1962
4. REPLACES PAGE(S) 152.1
DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. TEST CODE | 11. PRD PAGE NO. | 12. INSTRUMENTATION SYSTEM | 14. - 18. (SEE REVERSE SIDE OF FORM)

13. ANTENNA PATTERN PLOT



IIND-PHR-8800/150 (REV. 3-61)

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

00778

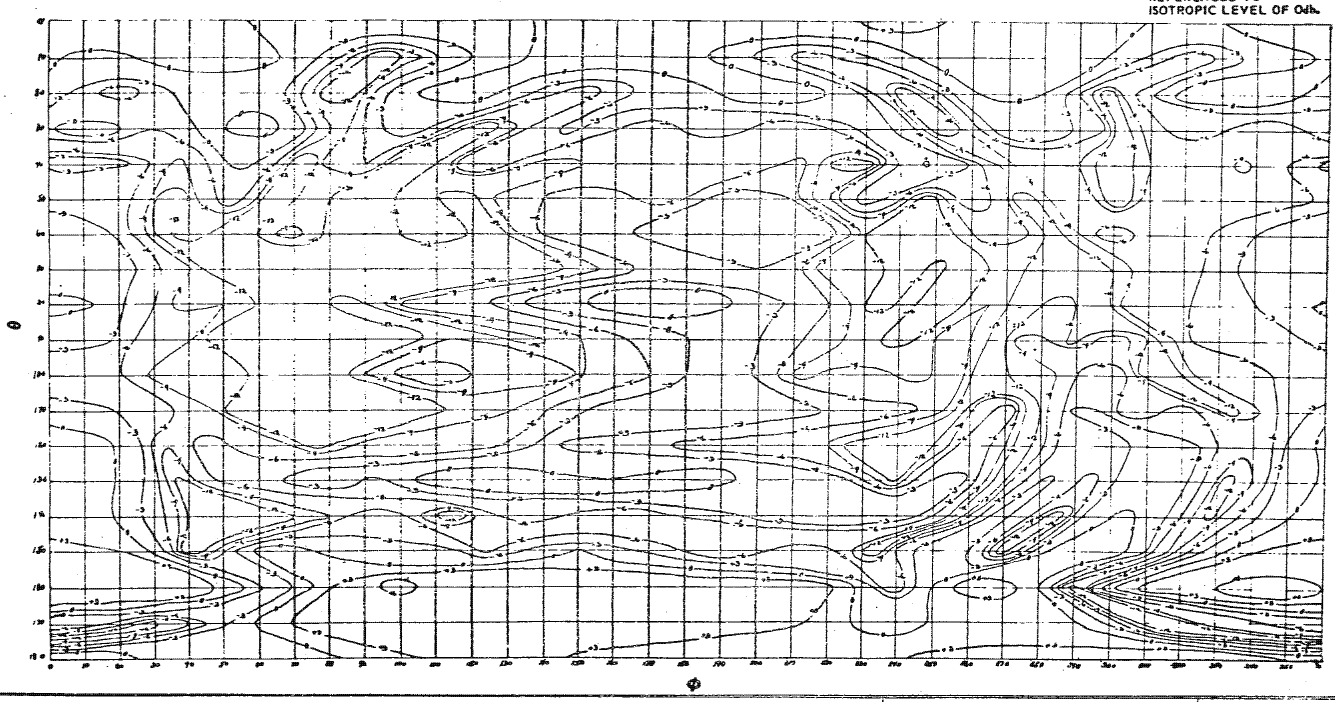
ANTENNA PATTERN(ATLAS D)	1. SECURITY CLASSIFICATION	2. PAGE 152.2
		3. DATE 22 October 1962
		4. REPLACES PAGE(S) 152.2

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER	DATED 1 May 1962
PROGRAM 206	NONE	206	Aerospace AF04(695)-169	

10. TEST CODE	11. PRD PAGE NO.	12. INSTRUMENTATION SYSTEM	14. - 18. (SEE REVERSE SIDE OF FORM)

13. ANTENNA PATTERN PLOT

ALL INDICATED VALUES REFERENCED TO ISOTROPIC LEVEL OF 0db.



IND-PMR-8800/150 (REV. 3-61)	1. SECURITY CLASSIFICATION	9. REVISION NO.
35		1

00778

ANTENNA PATTERN (ATLAS D)			1. SECURITY CLASSIFICATION	2. PAGE 152.3 3. DATE 22 October 1962 4. REPLACES PAGE(S) 152.3 DATED 1 May 1962
5. PROGRAM TITLE PROGRAM 206	6. PROGRAM REQUIREMENT CODE NONE	7. SYSTEM CODE 206	8. CONTRACTOR/CONTRACT NUMBER Aerospace AF04(695)-169	
10. TEST CODE	11. PRD PAGE NO.	12. INSTRUMENTATION SYSTEM		14. - 18. (SEE REVERSE SIDE OF FORM)

14 General Information

A. Antenna type: Cavity

B. Frequency Range of Operations:
Transmitter: 215 Mc to 260 Mc
Receiver: 215 Mc to 265 Mc

C. Coverage Required:
T-1 m to T+6 m

D. Frequency used for Pattern Measurements: 2300 Mc

E. Model Scale 1/10

15 Transmitter Information: Total Power Level at Transmitter Antenna: F = 249.9 Mc, nominal 41.5 dbm

16 Receiver Information: Minimum Power Level Required at Receiver Antenna System: F = 215-265 Mc: Unknown dbm

17 Polarization Information:
Polarization Vector(s):
Linear: $\theta = 90^{\circ}$; $\phi = 0^{\circ}$, 180°

Note: This page is a continuation of PRD 152.1 and 152.2

IND-PMR-8800/150 (REV. 3-61)		1. SECURITY CLASSIFICATION	9. REVISION NO.
36	NARD		1

00778

TELEMETRY SYSTEM

1. SECURITY CLASSIFICATION

2. PAGE 152.4

3. DATE 22 October 1962

4. REPLACES PAGE(S) 152.4 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. GENERAL INFORMATION

A. TEST CODE: A,B,C,E,G,I

B. LINK FREQUENCY: 231.4 MC

C. BAND WIDTH: ± 150 KC

D. MAX. DEVIATION: 125 KC

E. MIN. DEVIATION: 115 ± 10 KC

F. NUMBER OF CHANNELS: 7 IRIG
COMMUTATED: 2

G. NUMBER OF SEGMENTS / CHANNEL:

CHANNEL	SEGMENTS
15	60
16	60

H. STATE NON-IRIG PARTICULARS:

All commutator points used for data, calibration, or sync. 100% duty cycle non-return to zero between adjacent points.

11. TRANSMITTER CHARACTERISTICS

A. LOCATION: Agena-D STAGE

B. TYPE: Crystal controlled FM/FM

C. MODEL: #1313413-5xx (Complete part number is dependent on link frequency)

D. MANUFACTURER: United Electro Dynamics

E. TYPE OF MODULATION: PAM/FM/FM

F. EFFECTIVE RADIATED POWER 8 WATTS

G. CENTER FREQUENCY TOLERANCE IN PERCENTAGE OF FREQUENCY: 0.01 %

H. PEAK PULSE POWER - PULSE REPETITION FREQUENCY AND PULSE WIDTH (PCM)

FREQUENCY PULSE WIDTH

Not Applicable

I. CODING AND/OR MODULATION CHARACTERISTICS (PCM): Not Applicable

J. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS TRANSMITTER?

☐ YES ☒ NO

NOTE: TRANSMITTING SYSTEMS WHICH REQUIRE EXTENSIVE PERIODS OF RF CHECKOUT TIME WILL BE REQUIRED TO BE EQUIPPED WITH A CLOSED LOOP OR NON-RADIATING CHECKOUT DEVISE.

12. ANTENNA CHARACTERISTICS

A. LOCATION: STA. °AZ WITH REFERENCE TO TRUE NORTH WHEN MISSILE IS ON LAUNCH PAD.

B. TYPE: Slot Cavity - Ascent

C. MODEL: 1310511 Ascent

D. MANUFACTURER: LMSC

E. PREDOMINANT POLARIZATION: Vertical

F. GAIN IN DB ABOVE ISOTROPIC: +6 maximum

G. DIRECTIVITY AND BEAMWIDTH IN AZIMUTH AND ELEVATION - ½ POWER:

H. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS ANTENNA?

☐ YES ☐ NO

I. INDICATE THE AVAILABILITY DATE OF THE ANTENNA PATTERN MEASUREMENTS.

Refer to PRD 152.3 and 152.4

13. DATA TO BE TRANSMITTED & REMARKS

1. Provides Agena-D performance data

2. Required during checkout and flight

IND-PMR-8800/94 (REV. 3-61)

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1. SECURITY CLASSIFICATION

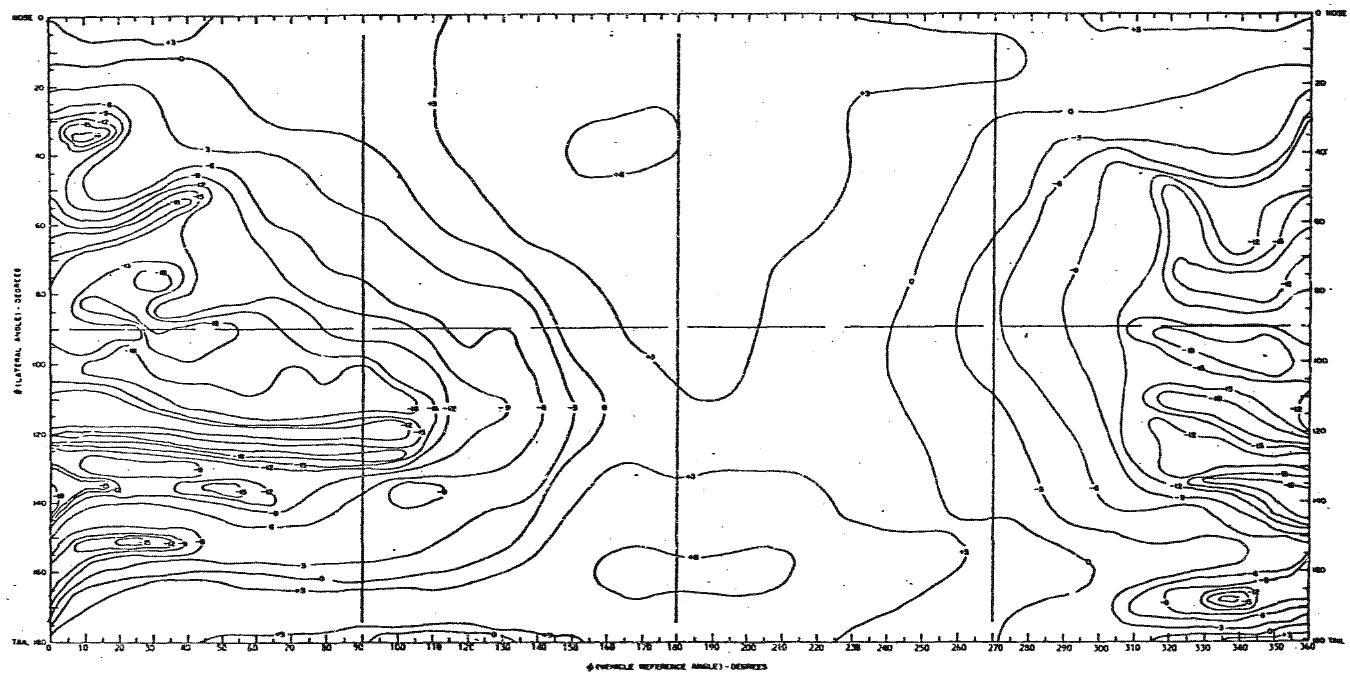
9. REVISION NO. 1

ANTENNA PATTERN (AGENA D)	1. SECURITY CLASSIFICATION	2. PAGE 152.5
		3. DATE 22 October 1962
		4. REPLACES PAGE(S) 152.5

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER	DATED 1 May 1962
PROGRAM 206	NONE	206	Aerospace AF 04(695)-169	

10. TEST CODE	11. PRD PAGE NO.	12. INSTRUMENTATION SYSTEM	14. - 18. (SEE REVERSE SIDE OF FORM)

13. ANTENNA PATTERN PLOT



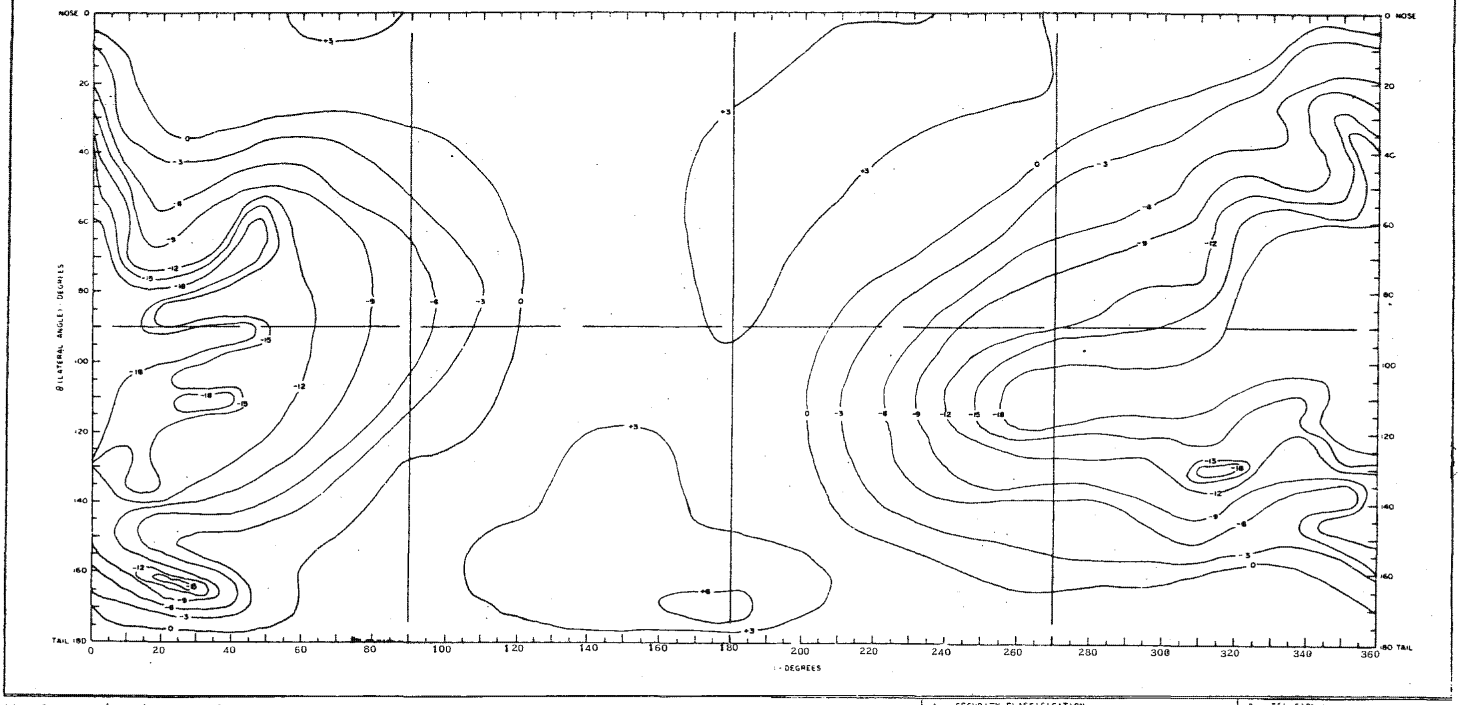
IIND-PHR-8800/150 (REV. 3-61)	1. SECURITY CLASSIFICATION	9. REVISION NO.
38		1

ANTENNA PATTERN AGENA D	1. SECURITY CLASSIFICATION	2. PAGE 152.6
		3. DATE 22 October 1962
		4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

10. TEST CODE	11. PRD PAGE NO.	12. INSTRUMENTATION SYSTEM	14. - 18. (SEE REVERSE SIDE OF FORM)

13. ANTENNA PATTERN PLOT



IND-PMR-8800/150 (REV. 3-61)

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1. SECURITY CLASSIFICATION	9. REVISION NO.
	1

TELEMETRY SYSTEM (SATELLITE VEHICLE - XMTR #2, LAUNCH)

1. SECURITY CLASSIFICATION:

2. PAGE: 152 .7

3. DATE: 22 October 1962

4. REPLACES PAGE(S): 152.6 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. GENERAL INFORMATION

A. TEST CODE: A,B,C,E,G,I

B. LINK FREQUENCY: 248.6 MC

C. BAND WIDTH: 500 KC

D. MAX. DEVIATION: ±125 KC

E. MIN. DEVIATION: ±75 KC

F. NUMBER OF CHANNELS: 10
COMMUTATED: 2

G. NUMBER OF SEGMENTS/CHANNEL:

CHANNEL	SEGMENTS
15, 16	30

H. STATE NON-IRIG PARTICULARS:

11. TRANSMITTER CHARACTERISTICS

A. LOCATION: Satellite vehicle STAGE

B. TYPE: Crystal controlled FM

C. MODEL: GE

D. MANUFACTURER: GE

E. TYPE OF MODULATION: FM/FM
PAM/FM/FM

F. EFFECTIVE RADIATED POWER: 8 WATTS

G. CENTER FREQUENCY TOLERANCE IN PERCENTAGE OF FREQUENCY: 0.01 %

H. PEAK PULSE POWER-PULSE REPETITION FREQUENCY AND PULSE WIDTH (PCM)

FREQUENCY	PULSE WIDTH

I. CODING AND/OR MODULATION CHARACTERISTICS (PCM): N/A

J. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS TRANSMITTER?
☐ YES ☒ NO

NOTE: TRANSMITTING SYSTEMS WHICH REQUIRE EXTENSIVE PERIODS OF RF CHECKOUT TIME WILL BE REQUIRED TO BE EQUIPPED WITH A CLOSED LOOP OR NON-RADIATING CHECKOUT DEVISE.

12. ANTENNA CHARACTERISTICS

A. LOCATION: STA. 73.38* °AZ
WITH REFERENCE TO TRUE NORTH WHEN MISSILE IS ON LAUNCH PAD.

B. TYPE: Cavity back slot

C. MODEL: GE

D. MANUFACTURER: General Electric Co.

E. PREDOMINANT POLARIZATION: Linear EØ

F. GAIN IN DB ABOVE ISOTROPIC:
See PRD 152.8

G. DIRECTIVITY AND BEAMWIDTH IN AZIMUTH AND ELEVATION - ½ POWER:
See PRD 152.8

H. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS ANTENNA?
☐ YES ☒ NO

I. INDICATE THE AVAILABILITY DATE OF THE ANTENNA PATTERN MEASUREMENTS.
See PRD 152.8

J. Insertion Loss: 3 db maximum
Impedance: 50 ohms nominal
Bandwidth for 2:1 VSWR: 300 kc minimum

* SV station

13. DATA TO BE TRANSMITTED & REMARKS

1. Real time transmission of satellite vehicle performance data.

2. Approximately 58 measurements multiplexed PAM/FM/FM and FM/FM.

IND-PMR-8800/94 (REV. 3-61)

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NRD

1. SECURITY CLASSIFICATION:

9. REVISION NO.: 1

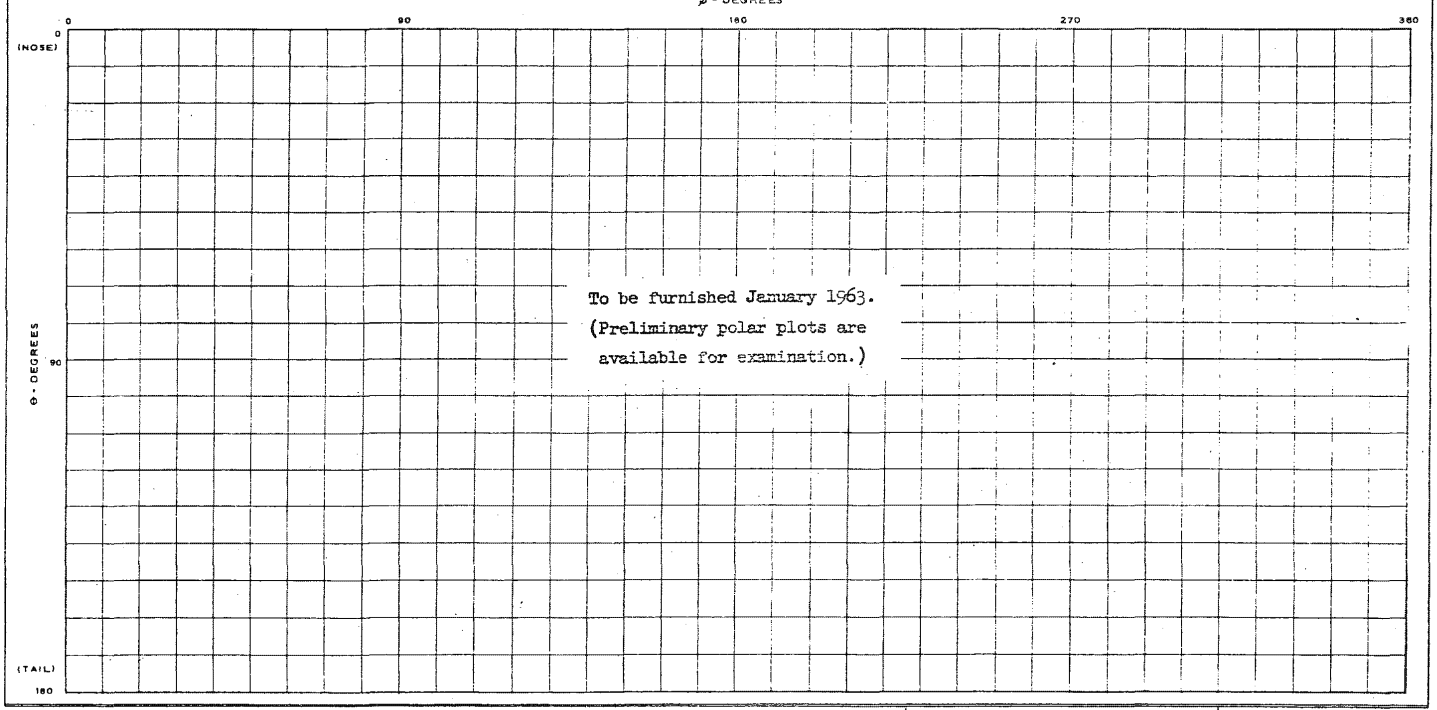
ANTENNA PATTERN (SATELLITE VEHICLE - CHANNEL I, LAUNCH)

1. SECURITY CLASSIFICATION	2. PAGE 152.8
	3. DATE 22 October 1962
	4. REPLACES PAGE(S) 152.7
	DATED 1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

10. TEST CODE	11. PRD PAGE NO.	12. INSTRUMENTATION SYSTEM	14. - 18. (SEE REVERSE SIDE OF FORM)

13. ANTENNA PATTERN PLOT



IND-PMR-8800/150 (REV. 3-61)

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1. SECURITY CLASSIFICATION	9. REVISION NO.
	1

TELEMETRY SYSTEM (SATELLITE VEHICLE - XMTR #1, LAUNCH)

1. SECURITY CLASSIFICATION

2. PAGE 152.9

3. DATE 22 October 1962

4. REPLACES PAGE(S) 152.8 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. GENERAL INFORMATION

A. TEST CODE: A,B,C,E,G,I

B. LINK FREQUENCY: 258.5 MC

C. BAND WIDTH: 500 kc KC

D. MAX. DEVIATION: ±125 KC

E. MIN. DEVIATION: ±75 KC

F. NUMBER OF CHANNELS: 4
COMMUTATED: 1

G. NUMBER OF SEGMENTS/CHANNEL:

CHANNEL	SEGMENTS
13	30

H. STATE NON-IRIG PARTICULARS:

None

11. TRANSMITTER CHARACTERISTICS

A. LOCATION: Satellite vehicle STAGE

B. TYPE: Crystal controlled FM-FM

C. MODEL: GE

D. MANUFACTURER: GE

E. TYPE OF MODULATION: FM/FM, PAM/FM/FM

F. EFFECTIVE RADIATED POWER 8 WATTS

G. CENTER FREQUENCY TOLERANCE IN PERCENTAGE OF FREQUENCY: 0.01 %

H. PEAK PULSE POWER-PULSE REPETITION FREQUENCY AND PULSE WIDTH (PCM)
FREQUENCY PULSE WIDTH

I. CODING AND/OR MODULATION CHARACTERISTICS (PCM):

J. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS TRANSMITTER?
☐ YES ☒ NO

NOTE: TRANSMITTING SYSTEMS WHICH REQUIRE EXTENSIVE PERIODS OF RF CHECKOUT TIME WILL BE REQUIRED TO BE EQUIPPED WITH A CLOSED LOOP OR NON-RADIATING CHECKOUT DEVICE.

12. ANTENNA CHARACTERISTICS

A. LOCATION: STA. 73.38* °AZ
WITH REFERENCE TO TRUE NORTH WHEN MISSILE IS ON LAUNCH PAD.

B. TYPE: Cavity back slot

C. MODEL: GE

D. MANUFACTURER: GE

E. PREDOMINANT POLARIZATION: Linear EØ

F. GAIN IN DB ABOVE ISOTROPIC:
See PRD 152.10

G. DIRECTIVITY AND BEAMWIDTH IN AZIMUTH AND ELEVATION - ½ POWER:
See PRD 152.10

H. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS ANTENNA?
☐ YES ☒ NO

I. INDICATE THE AVAILABILITY DATE OF THE ANTENNA PATTERN MEASUREMENTS.

See PRD 152.10

J. Insertion Loss: 3 db maximum
Impedance: 50 ohm nominal
Bandwidth for 2:1 VSWR: 300 kc minimum

*SV station

13. DATA TO BE TRANSMITTED & REMARKS

1. Transmission of vibration, vehicle clock time, and monitoring of EUC system during powered flight

2. Required during checkout and flight

IND-PMR-8800/94 (REV. 3-61)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

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NRD

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

ANTENNA PATTERN (SATELLITE VEHICLE - CHANNEL II LAUNCH)

1. SECURITY CLASSIFICATION:

2. PAGE: 152.10

3. DATE: 22 October 1962

4. REPLACES PAGE(S): 152.9 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

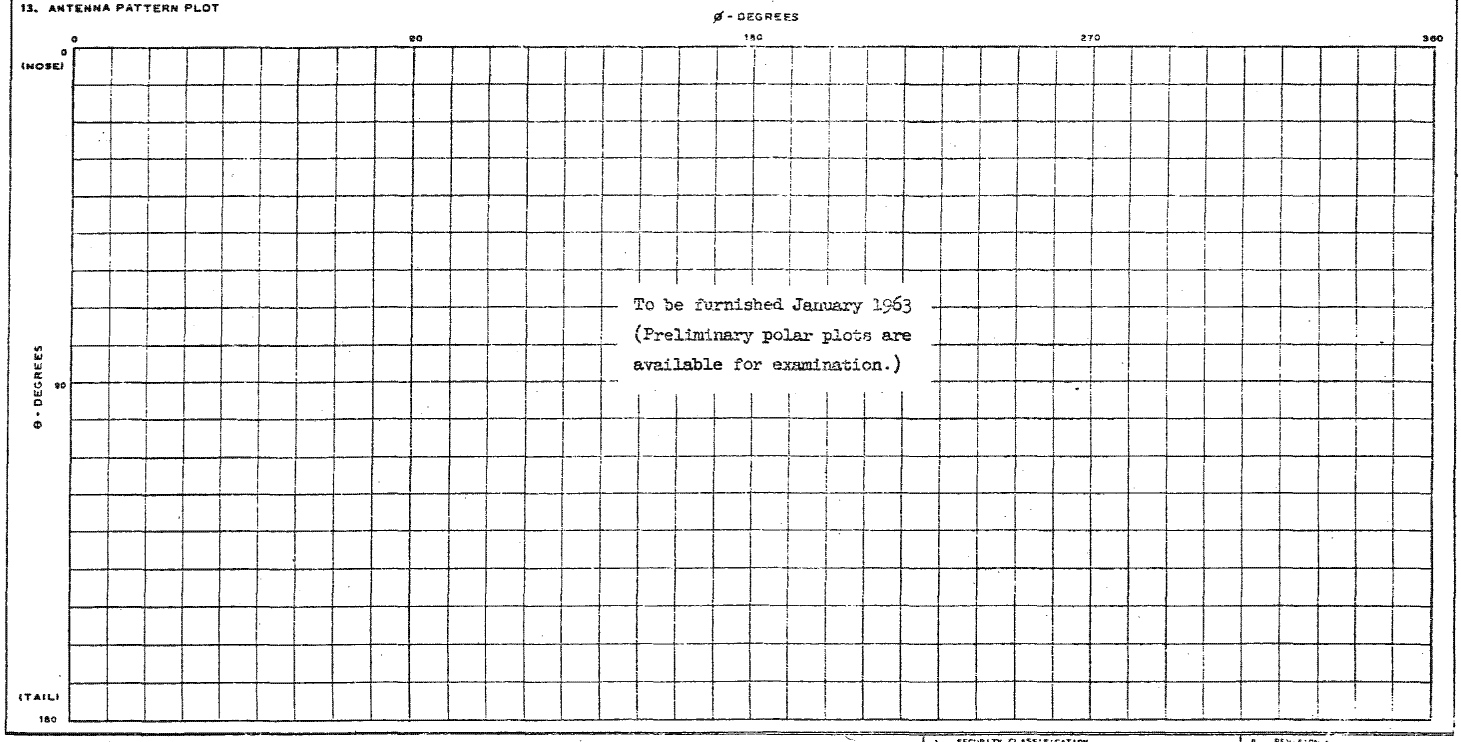
10. TEST CODE

11. PRD PAGE NO.

12. INSTRUMENTATION SYSTEM

14. - 18. (SEE REVERSE SIDE OF FORM)

13. ANTENNA PATTERN PLOT



IND-PMR-8800/150 (REV. 3-61)

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1. SECURITY CLASSIFICATION:

9. REVISION NO.: 1

11778

TELEMETRY SYSTEM (SATELLITE VEHICLE, XMTR #1 ORBITAL FUNCTION)

1. SECURITY CLASSIFICATION

2. PAGE 152.11

3. DATE 22 October 1962

4. REPLACES PAGE(S) 152.10 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. GENERAL INFORMATION

A. TEST CODE: C,G,E

B. LINK FREQUENCY: 258.5 MC

C. BAND WIDTH: 500 KC

D. MAX. DEVIATION: ±125 KC

E. MIN. DEVIATION: ±75 KC

F. NUMBER OF CHANNELS: 8 or 4
COMMUTATED: 3 or 1

G. NUMBER OF SEGMENTS/CHANNEL:

CHANNEL	SEGMENTS
12, 14	30
10	90
or	
13	30

H. STATE NON-IRIG PARTICULARS:

One 90 x 1/18 channel to be recorded and simultaneously transmitted on the real time xmitter, XMTR #2.

11. TRANSMITTER CHARACTERISTICS

A. LOCATION: Satellite vehicle STAGE

B. TYPE: Crystal controlled FM/FM

C. MODEL: GE

D. MANUFACTURER: GE

E. TYPE OF MODULATION: PAM/FM/FM
FM/FM

F. EFFECTIVE RADIATED POWER 8 WATTS

G. CENTER FREQUENCY TOLERANCE IN PERCENTAGE OF FREQUENCY: 0.01 %

H. PEAK PULSE POWER-PULSE REPETITION FREQUENCY AND PULSE WIDTH (PCM)
FREQUENCY PULSE WIDTH

I. CODING AND/OR MODULATION CHARACTERISTICS (PCM):

J. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS TRANSMITTER?
☐ YES ☒ NO

NOTE: TRANSMITTING SYSTEMS WHICH REQUIRE EXTENSIVE PERIODS OF RF CHECKOUT TIME WILL BE REQUIRED TO BE EQUIPPED WITH A CLOSED LOOP OR NON-RADIATING CHECKOUT DEVICE.

12. ANTENNA CHARACTERISTICS

A. LOCATION: STA. 73.38* °AZ
WITH REFERENCE TO TRUE NORTH WHEN MISSILE IS ON LAUNCH PAD.

B. TYPE: Cavity back slot

C. MODEL: GE

D. MANUFACTURER: GE

E. PREDOMINANT POLARIZATION: Linear EØ

F. GAIN IN DB ABOVE ISOTROPIC:
See PRD 152.10

G. DIRECTIVITY AND BEAMWIDTH IN AZIMUTH AND ELEVATION - ½ POWER:
See PRD 152.10

H. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS ANTENNA?
☐ YES ☒ NO

I. INDICATE THE AVAILABILITY DATE OF THE ANTENNA PATTERN MEASUREMENTS.
See PRD 152.10

J. Insertion loss: 3 db maximum
Impedance 50 ohm nominal
Bandwidth for 2:1 VSWR: 300 kc minimum

*SV station

13. DATA TO BE TRANSMITTED & REMARKS

1. Playback of S/V performance data: recorded at 7.5 inches per second and played back at 30 in/sec
2. Required for checkout & flight
3. When T/R not used, can transmit 3 continuous channels (A, C, E, & 13)
4. Should this transmitter fail, its input signal may be switched to Transmitter #2. If Transmitter #2 fails, its input may be switched to this transmitter. This capability should be tested during pre-launch operations.

IND-PMR-8800/94 (REV. 3-61)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

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NRD

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

TELEMETRY SYSTEM (SATELLITE VEHICLE, XMTR #2 ORBITAL FUNCTION)

1. SECURITY CLASSIFICATION

2. PAGE 152.12

3. DATE 22 October 1962

4. REPLACES PAGE(S) 152.11 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. GENERAL INFORMATION

A. TEST CODE: C,G,E

B. LINK FREQUENCY: 248.6 MC

C. BAND WIDTH: 500 KC

D. MAX. DEVIATION: ±125 KC

E. MIN. DEVIATION: ±75 KC

F. NUMBER OF CHANNELS: 12
COMMUTATED: 5

G. NUMBER OF SEGMENTS/CHANNEL:

CHANNEL	SEGMENTS
15,16,12,14	30
10	90

H. STATE NON-IRIG PARTICULARS:

One 90 x 1/18 channel

11. TRANSMITTER CHARACTERISTICS

A. LOCATION: Satellite vehicle STAGE

B. TYPE: Crystal controlled FM/FM

C. MODEL: GE

D. MANUFACTURER: GE

E. TYPE OF MODULATION: PAM/FM/FM
FM/FM

F. EFFECTIVE RADIATED POWER 8 WATTS

G. CENTER FREQUENCY TOLERANCE IN PERCENTAGE OF FREQUENCY: 0.01 %

H. PEAK PULSE POWER-PULSE REPETITION FREQUENCY AND PULSE WIDTH (PCM)

FREQUENCY PULSE WIDTH

I. CODING AND/OR MODULATION CHARACTERISTICS (PCM):

J. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS TRANSMITTER?

☐ YES ☒ NO

NOTE: TRANSMITTING SYSTEMS WHICH REQUIRE EXTENSIVE PERIODS OF RF CHECKOUT TIME WILL BE REQUIRED TO BE EQUIPPED WITH A CLOSED LOOP OR NON-RADIATING CHECKOUT DEVICE.

12. ANTENNA CHARACTERISTICS

A. LOCATION: STA. 73.38* °AZ
WITH REFERENCE TO TRUE NORTH WHEN MISSILE IS ON LAUNCH PAD.

B. TYPE: Cavity back slot

C. MODEL: GE

D. MANUFACTURER:

E. PREDOMINANT POLARIZATION:
Linear Eø

F. GAIN IN DB ABOVE ISOTROPIC:
See PRD 152.8

G. DIRECTIVITY AND BEAMWIDTH IN AZIMUTH AND ELEVATION - ½ POWER:
See PRD 152.8

H. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS ANTENNA?

☐ YES ☒ NO

I. INDICATE THE AVAILABILITY DATE OF THE ANTENNA PATTERN MEASUREMENTS.
See PRD 152.8

J. Insertion Loss: 3 db maximum
Impedance: 50 ohm nominal
Bandwidth for 2:1 VSWR: 300 kc minimum

*SV station

13. DATA TO BE TRANSMITTED & REMARKS

1. Real time S/V performance
2. Required for checkout & flight
3. Should this transmitter fail, its input signal may be switched to Transmitter #1. If Transmitter #1 fails, its input may be switched to this transmitter. This capability should be tested during pre-launch operations.

IIND-PMR-8800/94 (REV. 3-61)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

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NRD

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

TELEMETRY SYSTEM SATELLITE VEHICLE TRANSMITTER #3

1. SECURITY CLASSIFICATION

2. PAGE 152.13

3. DATE 22 October 1962

4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. GENERAL INFORMATION

A. TEST CODE: C,G,E,I

B. LINK FREQUENCY: 242.0 MC

C. BAND WIDTH: 300 KC

D. MAX. DEVIATION: ± 120 KC

E. MIN. DEVIATION: ± 75 KC

F. NUMBER OF CHANNELS: 4
COMMUTATED: Zero

G. NUMBER OF SEGMENTS / CHANNEL:
CHANNEL - SEGMENTS

N/A

H. STATE NON-IRIG PARTICULARS:

None

11. TRANSMITTER CHARACTERISTICS

A. LOCATION: 5V STAGE

B. TYPE: Solid-state

C. MODEL: 103C4277-G12

D. MANUFACTURER: GE

E. TYPE OF MODULATION: FM/FM

F. EFFECTIVE RADIATED POWER 2 WATTS

G. CENTER FREQUENCY TOLERANCE IN PERCENTAGE OF FREQUENCY: 0.01 %

H. PEAK PULSE POWER - PULSE REPETITION FREQUENCY AND PULSE WIDTH (PCM)
FREQUENCY PULSE WIDTH

N/A

I. CODING AND/OR MODULATION CHARACTERISTICS (PCM):

N/A

J. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS TRANSMITTER?
☐ YES ☒ NO

NOTE: TRANSMITTING SYSTEMS WHICH REQUIRE EXTENSIVE PERIODS OF RF CHECKOUT TIME WILL BE REQUIRED TO BE EQUIPPED WITH A CLOSED LOOP OR NON-RADIATING CHECKOUT DEVICE.

12. ANTENNA CHARACTERISTICS

A. LOCATION: STA. 38.0 °AZ
WITH REFERENCE TO TRUE NORTH WHEN MISSILE IS ON LAUNCH PAD.

B. TYPE: 1/4-wave, stub

C. MODEL: 765D237-62

D. MANUFACTURER: GE

E. PREDOMINANT POLARIZATION: Vertical

F. GAIN IN DB ABOVE ISOTROPIC:
2 db above isotrophic

G. DIRECTIVITY AND BEAMWIDTH IN AZIMUTH AND ELEVATION - ½ POWER:
omni-directional AZ 40°
elevation 1/2 power

H. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS ANTENNA?
☐ YES ☒ NO

I. INDICATE THE AVAILABILITY DATE OF THE ANTENNA PATTERN MEASUREMENTS.

j. Insertion loss: ±5 db
Impedance: 50 ohm nominal
Bandwidth for 2:1 VSWR:
±300 kc minimum

13. DATA TO BE TRANSMITTED & REMARKS

1. Real time transmission of satellite during flight.

2. Approximately 20 parameters monitored.

3. Required during checkout and flight.

IND-PMR-8800/94 (REV. 3-61)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

ANTENNA PATTERN SATELLITE VEHICLE TRANSMITTER #3

1. SECURITY CLASSIFICATION

2. PAGE 1521L

3. DATE 22 October 1962

4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PROGRAM 205

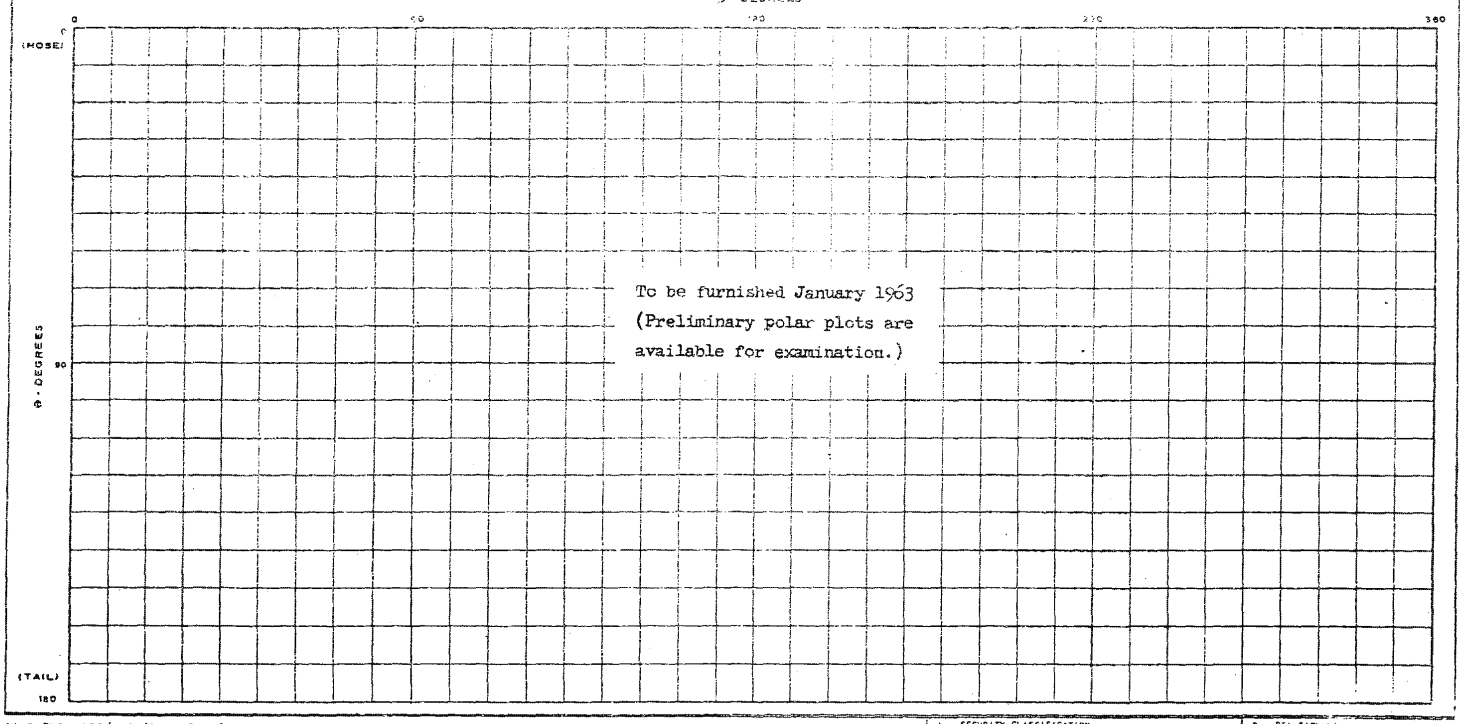
6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM NO.: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-269

10. TEST CODE | 11. PRD PAGE NO. | 12. INSTRUMENTATION SYSTEM | 14. | 18. (SEE REVERSE SIDE OF FORM)

13. ANTENNA PATTERN PLOT



IND-PMR-8800/150 (REV. 3-61)

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

TRANSPONDERS AND BEACONS (MARK II ATLAS RATE BEACON)

PAGE 153 | DATE 22 October 1962 | SUPERSEDES PAGE(S) 153 | DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206 | 6. PROGRAM REQUIREMENT CODE: NONE | 7. SYSTEM DATA: 206 | CONTRACT OR GRANT NUMBER(S): Aerospace AF04(695)-169

10. GENERAL INFORMATION

A. TEST CODE: A,B,C,D,G,H
B. PURPOSE:
- ☐ RANGE SAFETY-IMPACT PREDICTION
- ☐ MIDCOURSE TRAJECTORY DATA
- ☐ TERMINAL TRAJECTORY DATA
- ☐ TELEMETRY
- ☒ Atlas guidance
- ☒ (range rate)

C. LOCATION: Atlas D STAGE
D. TYPE: ☒ TRANSPONDER ☐ BEACON
E. MODEL: Mark II
F. MANUFACTURER: GE
G. INTERROGATION PULSE CODE
CAPABILITIES: N/A
☐ SINGLE PULSE ☐ DOUBLE PULSES
DOUBLE PULSE SPACING
± US
± US
± US
☐ TRIPLE PULSES
PULSE SPACINGS
FIRST & SECOND PULSES
± US
± US
± US
SECOND & THIRD PULSES
± US
± US
± US
H. COMMAND CONTROL CODE
CAPABILITIES: N/A
NUMBER OF COMMAND CHANNELS AVAILABLE:
TYPE OF PULSE MODULATION:
I. POWER REQUIREMENTS:
28 VOLTS, 140 WATTS

11. TRANSMITTER CHARACTERISTICS

A. FREQUENCY RANGE: 2300 + 0.22 MC
B. ☐ TUNABLE ☒ FIXED TUNED
C. BANDWIDTH AT 3DB: MC,
AND AT 60DB: MC
D. EMISSION: ☐ AM, ☐ FM, ☐ PULSE, ☐ COMPOSITE NONSTANDARD CW
E. FREQUENCY STABILITY: ± N/A MC/C°
F. AVERAGE POWER: 5.3 WATTS
G. PEAK PULSE POWER: N/A WATTS
H. MAXIMUM PRF: N/A PPS
I. PULSE WIDTHS: N/A US, US, US
AT 3DB POINTS
J. FIXED DELAY SETTINGS: N/A US, US
K. MAXIMUM DELAY VARIATION WITH SIGNAL STRENGTH FROM 10DBM TO WITHIN 5DBM OF MAXIMUM SENSITIVITY OF RECEIVER: N/A US
L. RECOVERY TIME: N/A US
M. MINIMUM FREQUENCY SEPARATION REQUIRED BETWEEN TRANSMITTER AND RECEIVER 1150 MC
N. NOMINAL WARM-UP TIME: 2 MINUTES
O. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS TRANSMITTER? ☐ YES ☒ NO
(IF YES, PROVIDE ONE COPY)
P. ATTACH A PLOT OF ANTENNA INPUT POWER VS TRANSMITTER FREQUENCY.
N/A

Input power does not affect transmitter frequency-keyed system.

12. RECEIVER CHARACTERISTICS

A. FREQUENCY RANGE: 1150 ± 0.11 MC
B. ☐ TUNABLE ☒ FIXED TUNED
C. INTERMEDIATE FREQUENCY:
D. LOCAL OSCILLATOR FREQUENCY ☐ ABOVE, ☐ BELOW INTERROGATION FREQUENCY
E. METHOD OF FREQUENCY CONTROL:
F. FREQUENCY STABILITY: ± 0.11 MC
G. SENSITIVITY:
MAXIMUM: DBM AT MC
MINIMUM: DBM AT MC
NOMINAL: -90 DBM AT 1150 MC
H. SELECTIVITY: (OVERALL) N/A
3DB MC
20DB MC
60DB MC
I. TYPE AGC: Limited
J. AGC TIME CONST: N/A US
K. RECOVERY TIME TO 3DB POINT: N/A US
L. NOMINAL WARM-UP TIME: 2 MINUTES
M. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS RECEIVER COVERING THE FREQUENCY RANGE 100 MC TO 10,000 MC?
☐ YES ☒ NO (IF YES, PROVIDE ONE COPY)

13. ANTENNA CHARACTERISTICS

A. LOCATION: STA. , °AZ
(2) Slotted STA. 1045 , 225 °AZ
STA. , °AZ
STA. , °AZ
WITH REFERENCE TO TRUE NORTH AFTER THE VEHICLE IS ERECTED ON THE LAUNCH PAD.
B. TYPE: Traveling-wave
C. MODEL: Mark II
D. MANUFACTURER: GE
E. FREQUENCY RANGE: L- and M-band MC
F. ☐ TUNABLE ☒ FIXED TUNED
G. PREDOMINANT POLARIZATION: (CHECK ONLY ONE)
- ☒ VERTICAL
- ☐ HORIZONTAL
- ☐ CIRCULAR: SENSE: ☐ LH ☐ RH
- ☐ OTHER

H. MAXIMUM GAIN IN DB WITH RESPECT TO
ISOTROPIC: 11 10.0 DB
I. MAXIMUM NULL IN DB WITH RESPECT TO
ISOTROPIC: To be supplied later DB
(WITHIN 60° FOR AZUSA, 120 FOR RADAR, OF LONGITUDINAL AXIS OF MAIN LOBE).
J. MAIN LOBE BEAMWIDTH IN DEGREES AT 3DB POINTS:
ELEVATION: 20 / 45 , AZIMUTH 35, 60
K. INDICATE AVAILABILITY DATE OF ANTENNA PATTERN MEASUREMENTS Not Required
L. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS ANTENNA? ☐ YES ☒ NO
(IF YES, PROVIDE ONE COPY)
M. USE APPROPRIATE SPARE FORMS FOR ANTENNA PATTERN AND ANTENNA SYSTEM SCHEMATIC.
Not required

NOTE: QUANTITATIVE DATA FURNISHED ON THIS PAGE SHOULD BE MEASURED VALUES AFTER NOMINAL WARMUP TIME, WHERE APPLICABLE. THE DATA SOURCES OF UNMEASURED VALUES SHOULD BE INDICATED BY FOOTNOTE.

IND-PHR-8800/95 (REV. 3-61)
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8. SECURITY CLASSIFICATION

9. REVISION NO. 1

TRANSPONDERS AND BEACONS (MARK II ATLAS GUIDANCE PULSE BEACON)

1. SECURITY CLASSIFICATION

2. PAGE 153.1

3. DATED 22 October 1962

4. REPLACES PAGE(S) 153.1 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR CONTRACT NUMBER: Aerospace AFO4(695)-169

10. GENERAL INFORMATION

A. TEST CODE: A,B,C,D,G,H

B. PURPOSE: Pulse beacon

- ☐ RANGE SAFETY-IMPACT PREDICTION
- ☐ MIDCOURSE TRAJECTORY DATA
- ☐ TERMINAL TRAJECTORY DATA
- ☐ TELEMETRY
- ☒ Atlas guidance
- ☒ Position data

C. LOCATION: Atlas D STAGE

D. TYPE: ☒ TRANSPONDER ☐ BEACON

E. MODEL: Mark II

F. MANUFACTURER: GE

G. INTERROGATION PULSE CODE CAPABILITIES: N/A

☐ SINGLE PULSE ☐ DOUBLE PULSES

DOUBLE PULSE SPACING

± US

± US

± US

☒ TRIPLE PULSES

PULSE SPACINGS

FIRST & SECOND PULSES

6.1 ± 0.05 US

± US

± US

SECOND & THIRD PULSES

6.1 ± 0.05 US

± US

± US

H. COMMAND CONTROL CODE CAPABILITIES: N/A

NUMBER OF COMMAND CHANNELS AVAILABLE: 1

TYPE OF PULSE MODULATION: constant

I. POWER REQUIREMENTS: 28 VOLTS, 42 WATTS

11. TRANSMITTER CHARACTERISTICS

A. FREQUENCY RANGE: 8850 ± 20 MC

B. ☐ TUNABLE ☒ FIXED TUNED

C. BANDWIDTH AT 3DB: MC, AND AT 60DB: N/A MC

D. EMISSION: ☐ AM, ☐ FM, ☒ PULSE, ☐ COMPOSITE NONSTANDARD

E. FREQUENCY STABILITY: ± N/A MC/C°

F. AVERAGE POWER: 0.3 WATTS

G. PEAK PULSE POWER: 1.51 x 10^3 WATTS

H. MAXIMUM PRF: 142 PPS

I. PULSE WIDTHS: 2 US, US, US AT 3DB POINTS

J. FIXED DELAY SETTINGS: N/A US, US

K. MAXIMUM DELAY VARIATION WITH SIGNAL STRENGTH FROM 1DBM TO WITHIN 5DBM OF MAXIMUM SENSITIVITY OF RECEIVER: ±0.1 US

L. RECOVERY TIME: N/A US

M. MINIMUM FREQUENCY SEPARATION REQUIRED BETWEEN TRANSMITTER AND RECEIVER 85 MC

N. NOMINAL WARM-UP TIME: 2 MINUTES

O. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS TRANSMITTER? ☐ YES ☒ NO (IF YES, PROVIDE ONE COPY)

P. ATTACH A PLOT OF ANTENNA INPUT POWER VS TRANSMITTER FREQUENCY.

N/A

12. RECEIVER CHARACTERISTICS

A. FREQUENCY RANGE: 8935 ± 1.0 MC

B. ☐ TUNABLE ☒ FIXED TUNED

C. INTERMEDIATE FREQUENCY: 30 Mc

D. LOCAL OSCILLATOR FREQUENCY ☐ ABOVE, ☒ BELOW INTERROGATION FREQUENCY

E. METHOD OF FREQUENCY CONTROL:

F. FREQUENCY STABILITY: ± 1.0 MC

G. SENSITIVITY:

MAXIMUM:	DBM AT	MC
MINIMUM:	DBM AT	MC
NOMINAL: -70	DBM AT 8935	MC

H. SELECTIVITY; (OVERALL)

3DB N/A	MC
20DB	MC
60DB	MC

I. TYPE AGC: Gated

J. AGC TIME CONST: N/A US

K. RECOVERY TIME TO 3DB POINT: N/A US

L. NOMINAL WARM-UP TIME: 2 MINUTES

M. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS RECEIVER COVERING THE FREQUENCY RANGE 100 MC TO 10,000 MC?

☐ YES ☒ NO (IF YES, PROVIDE ONE COPY)

13. ANTENNA CHARACTERISTICS

A. LOCATION: STA. 918 , 45 °AZ

STA. 1045 , 225 °AZ

STA. , °AZ

STA. , °AZ

WITH REFERENCE TO TRUE NORTH AFTER THE VEHICLE IS ERECTED ON THE LAUNCH PAD.

B. TYPE: Traveling-wave, slot

C. MODEL: Mark II

D. MANUFACTURER: GE

E. FREQUENCY RANGE: X-band MC

F. ☐ TUNABLE ☒ FIXED TUNED

G. PREDOMINANT POLARIZATION: (CHECK ONLY ONE)

- ☒ VERTICAL
- ☐ HORIZONTAL
- ☐ CIRCULAR: SENSE: ☐ LH ☐ RH
- ☐ OTHER

H. MAXIMUM GAIN IN DB WITH RESPECT TO ISOTROPIC: 13, 11 DB

I. MAXIMUM NULL IN DB WITH RESPECT TO ISOTROPIC: To be supplied later DB (WITHIN 60° FOR AZUSA, 120 FOR RADAR, OF LONGITUDINAL AXIS OF MAIN LOBE).

J. MAIN LOBE BEAMWIDTH IN DEGREES AT 3DB POINTS: ELEVATION: 13, 35 . AZIMUTH 19, 35

K. INDICATE AVAILABILITY DATE OF ANTENNA PATTERN MEASUREMENTS Not required

L. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS ANTENNA? ☐ YES ☒ NO (IF YES, PROVIDE ONE COPY)

M. USE APPROPRIATE SPARE FORMS FOR ANTENNA PATTERN AND ANTENNA SYSTEM SCHEMATIC. Not required

NOTE: QUANTITATIVE DATA FURNISHED ON THIS PAGE SHOULD BE MEASURED VALUES AFTER NOMINAL WARMUP TIME, WHERE APPLICABLE. THE DATA SOURCES OF UNMEASURED VALUES SHOULD BE INDICATED BY FOOTNOTE.

IND-PMR-8800/95 (REV. 3-61)

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NRD

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

TRANSPONDERS AND BEACONS (SATELLITE VEHICLE S-BAND TRANSPONDER)

SECURITY CLASSIFICATION

2. PAGE 153.2
3. DATE 22 October 1962
4. REPLACES PAGE(S) 153.2 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. GENERAL INFORMATION

A. TEST CODE: A,B,E,G,I
B. PURPOSE:
- [ ] RANGE SAFETY-IMPACT PREDICTION
- [ ] MIDCOURSE TRAJECTORY DATA
- [X] TERMINAL TRAJECTORY DATA
- [ ] TELEMETRY
- [X] Orbit tracking and
- [ ] primary command link

C. LOCATION: Re-entry vehicle
D. TYPE: [X] TRANSPONDER [ ] BEACON
E. MODEL: Not yet available
F. MANUFACTURER: AVION
G. INTERROGATION PULSE CODE CAPABILITIES:
[ ] SINGLE PULSE [X] DOUBLE PULSES
DOUBLE PULSE SPACING
36 ± 0.05 US
± US
± US
[X] TRIPLE PULSES 36 ± .05 US
PULSE SPACINGS
FIRST & SECOND PULSES
5 ± 0.25 US
11 ± 0.25 US
19 ± 0.25 US
First & THIRD PULSES
36 ± 0.05 US
± US
± US
H. COMMAND CONTROL CODE CAPABILITIES:
NUMBER OF COMMAND CHANNELS AVAILABLE: Unlimited
TYPE OF PULSE MODULATION: Position of center pulse
I. POWER REQUIREMENTS: 24 - 30 dc VOLTS, 40 - 60 WATTS

11. TRANSMITTER CHARACTERISTICS

A. FREQUENCY RANGE: 2920 MC
B. [X] TUNABLE [ ] FIXED TUNED
C. BANDWIDTH AT 3DB: MC,
AND AT 60DB: MC
D. EMISSION: [ ] AM, [ ] FM, [X] PULSE, [ ] COMPOSITE NONSTANDARD
E. FREQUENCY STABILITY: ± 2 MC/C°
F. AVERAGE POWER: 0.5 (at 410 pps) WATTS
G. PEAK PULSE POWER: 1200 WATTS
H. MAXIMUM PRF: 2000 PPS
I. PULSE WIDTHS: US, US, US
AT 3DB POINTS 0.8 + 0.2
J. FIXED DELAY SETTINGS: US, US
K. MAXIMUM DELAY VARIATION WITH SIGNAL STRENGTH FROM 10DBM TO WITHIN 5DBM OF MAXIMUM SENSITIVITY OF RECEIVER: US
L. RECOVERY TIME: 200 US
M. MINIMUM FREQUENCY SEPARATION REQUIRED BETWEEN TRANSMITTER AND RECEIVER 70 MC
N. NOMINAL WARM-UP TIME: 3 MINUTES
O. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS TRANSMITTER? [ ] YES [X] NO (IF YES, PROVIDE ONE COPY)
P. ATTACH A PLOT OF ANTENNA INPUT POWER VS TRANSMITTER FREQUENCY.

NOTE: The video output of the S-band beacon receiver will feed a pulse position demodulator. This will not affect normal S-band transponder operation.

12. RECEIVER CHARACTERISTICS

A. FREQUENCY RANGE: 2850 MC
B. [X] TUNABLE [ ] FIXED TUNED
C. INTERMEDIATE FREQUENCY: 50 Mc
D. LOCAL OSCILLATOR FREQUENCY [X] ABOVE, [ ] BELOW INTERROGATION FREQUENCY
E. METHOD OF FREQUENCY CONTROL: Pre-selected cavity
F. FREQUENCY STABILITY: ± 2 MC
G. SENSITIVITY:

MAXIMUM:	-70	DBM AT	2900	MC
MINIMUM:	-65	DBM AT	2900	MC
NOMINAL:	-68	DBM AT	2900	MC

H. SELECTIVITY: (OVERALL)
3DB 8 ± 2 MC
20DB 20 ± 2 MC
60DB 40 ± 2 MC
I. TYPE AGC: None
J. AGC TIME CONST: None US
K. RECOVERY TIME TO 3DB POINT: 10 US
L. NOMINAL WARM-UP TIME: 3 MINUTES
M. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS RECEIVER COVERING THE FREQUENCY RANGE 100 MC TO 10,000 MC? [ ] YES [X] NO (IF YES, PROVIDE ONE COPY)

13. ANTENNA CHARACTERISTICS

A. LOCATION: STA. Not yet determined °AZ
STA. , °AZ
STA. , °AZ
STA. , °AZ
WITH REFERENCE TO TRUE NORTH AFTER THE VEHICLE IS ERECTED ON THE LAUNCH PAD.
B. TYPE: Cavity back slot
C. MODEL:
D. MANUFACTURER:
E. FREQUENCY RANGE: MC
F. [ ] TUNABLE [ ] FIXED TUNED
G. PREDOMINANT POLARIZATION: (CHECK ONLY ONE)
[X] VERTICAL
[ ] HORIZONTAL
[ ] CIRCULAR: SENSE: [ ] LH [ ] RH
[ ] OTHER
H. MAXIMUM GAIN IN DB WITH RESPECT TO ISOTROPIC: +3 DB
I. MAXIMUM NULL IN DB WITH RESPECT TO ISOTROPIC: -12 DB
(WITHIN 60° FOR AZUSA, 120 FOR RADAR, OF LONGITUDINAL AXIS OF MAIN LOBE).
J. MAIN LOBE BEAMWIDTH IN DEGREES AT 3DB POINTS:
ELEVATION: , AZIMUTH
K. INDICATE AVAILABILITY DATE OF ANTENNA PATTERN MEASUREMENTS
L. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS ANTENNA? [ ] YES [X] NO (IF YES, PROVIDE ONE COPY)
M. USE APPROPRIATE SPARE FORMS FOR ANTENNA PATTERN AND ANTENNA SYSTEM SCHEMATIC.
Antenna pattern available in August 1962.

NOTE: QUANTITATIVE DATA FURNISHED ON THIS PAGE SHOULD BE MEASURED VALUES AFTER NOMINAL WARMUP TIME, WHERE APPLICABLE. THE DATA SOURCES OF UNMEASURED VALUES SHOULD BE INDICATED BY FOOTNOTE.

IND-PMR-8800/95 (REV. 3-61)
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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

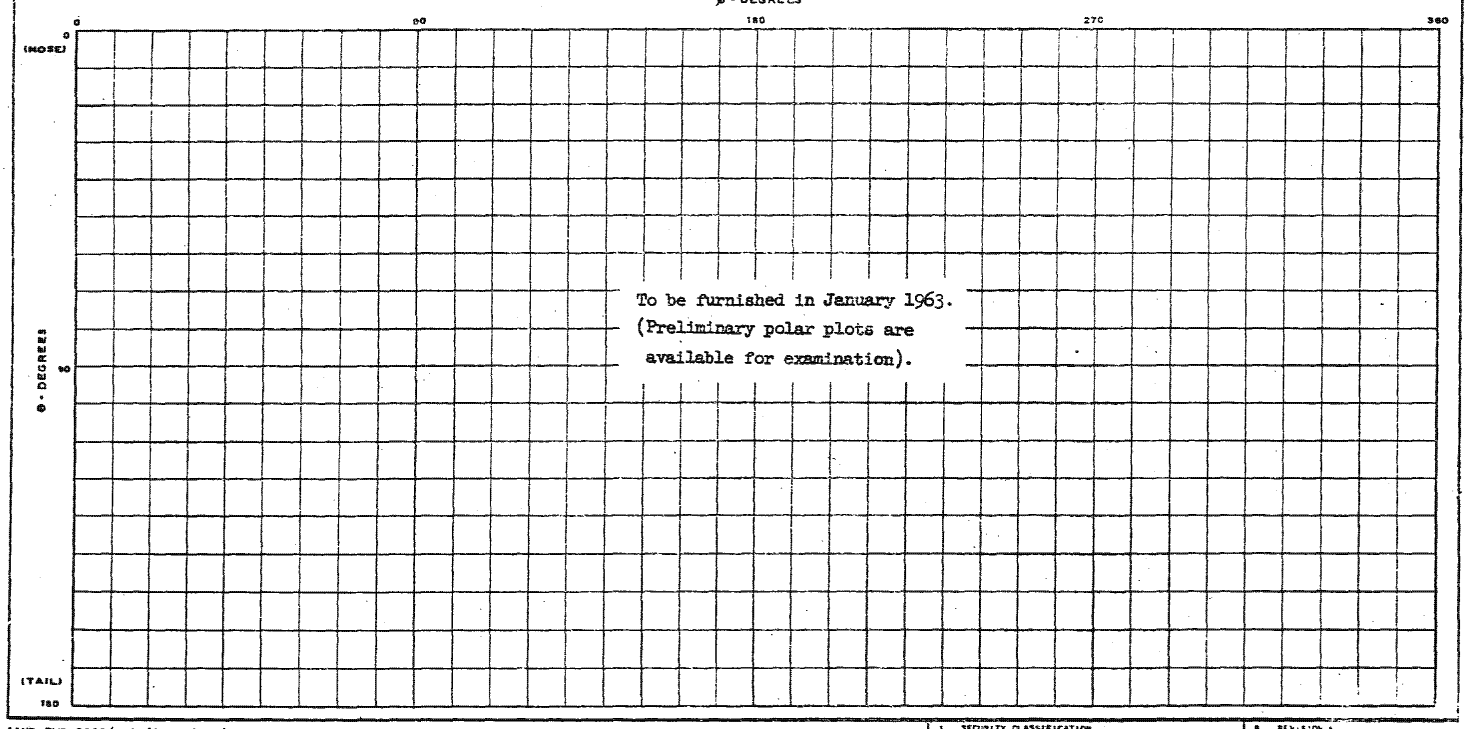
ANTENNA PATTERN

1. SECURITY CLASSIFICATION	2. PAGE 153.3
	3. DATE 22 October 1962
	4. REPLACES PAGE(S) 153.3
	DATED 1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

10. TEST CODE	11. PRD PAGE NO.	12. INSTRUMENTATION SYSTEM	14. - 18. (SEE REVERSE SIDE OF FORM)

13. ANTENNA PATTERN PLOT



IND-PMR-8800/150 (REV. 3-61)	1. SECURITY CLASSIFICATION	9. REVISION NO.
51		1

A1778

TRANSPONDERS AND BEACONS (UHF DOPPLER TRANSPONDER)

2. PAGE 153.4
3. DATE 22 October 1962
4. REPLACES PAGE(S) 153.4 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR CONTRACT NUMBER: Aerospace AF04(695)-169

10. GENERAL INFORMATION

A. TEST CODE: A,B,C,E,G
B. PURPOSE:
☐ RANGE SAFETY-IMPACT PREDICTION
☐ MIDCOURSE TRAJECTORY DATA
☐ TERMINAL TRAJECTORY DATA
☐ TELEMETRY
☐
☐
C. LOCATION: STAGE
D. TYPE: ☐ TRANSPONDER ☐ BEACON
E. MODEL:
F. MANUFACTURER:
G. INTERROGATION PULSE CODE CAPABILITIES:
☐ SINGLE PULSE ☐ DOUBLE PULSES
DOUBLE PULSE SPACING
± US
± US
± US
☐ TRIPLE PULSES
PULSE SPACINGS
FIRST & SECOND PULSES
± US
± US
± US
SECOND & THIRD PULSES
± US
± US
± US
H. COMMAND CONTROL CODE CAPABILITIES:
NUMBER OF COMMAND CHANNELS AVAILABLE:
TYPE OF PULSE MODULATION:
I. POWER REQUIREMENTS:
VOLTS, WATTS

11. TRANSMITTER CHARACTERISTICS

A. FREQUENCY RANGE: 400-403 MC
B. ☐ TUNABLE ☐ FIXED TUNED
C. BANDWIDTH AT 3DB: MC,
AND AT 60DB: MC
D. EMISSION: ☐ AM, ☐ FM, ☐ PULSE,
☒ CW (Phase-lock)
E. FREQUENCY STABILITY: ± MC/C°
F. AVERAGE POWER: WATTS
G. PEAK PULSE POWER: WATTS
H. MAXIMUM PRF: PPS
I. PULSE WIDTHS: US, US, US
AT 3DB POINTS
J. FIXED DELAY SETTINGS: US, US
K. MAXIMUM DELAY VARIATION WITH SIGNAL STRENGTH FROM 1DBM TO WITHIN 5 DBM OF MAXIMUM SENSITIVITY OF RECEIVER: US
L. RECOVERY TIME: US
M. MINIMUM FREQUENCY SEPARATION REQUIRED BETWEEN TRANSMITTER AND RECEIVER MC
N. NOMINAL WARM-UP TIME: MINUTES
O. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS TRANSMITTER? ☐ YES ☐ NO
(IF YES, PROVIDE ONE COPY)
P. ATTACH A PLOT OF ANTENNA INPUT POWER VS TRANSMITTER FREQUENCY.

12. RECEIVER CHARACTERISTICS

A. FREQUENCY RANGE: 375-378 MC
B. ☐ TUNABLE ☐ FIXED TUNED
C. INTERMEDIATE FREQUENCY:
D. LOCAL OSCILLATOR FREQUENCY ☐ ABOVE,
☐ BELOW INTERROGATION FREQUENCY
E. METHOD OF FREQUENCY CONTROL:
F. FREQUENCY STABILITY: ± MC
G. SENSITIVITY:
MAXIMUM: -110 DBM AT 375-378 MC
MINIMUM: -10 DBM AT 375-378 MC
NOMINAL: DBM AT MC
H. SELECTIVITY: (OVERALL)
3DB MC
20DB MC
60DB MC
I. TYPE AGC:
J. AGC TIME CONST: US
K. RECOVERY TIME TO 3DB POINT: US
L. NOMINAL WARM-UP TIME: MINUTES
M. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS RECEIVER COVERING THE FREQUENCY RANGE 100 MC TO 10,000 MC?
☐ YES ☐ NO (IF YES, PROVIDE ONE COPY)

13. ANTENNA CHARACTERISTICS

A. LOCATION: STA. , °AZ
STA. , °AZ
STA. , °AZ
STA. , °AZ
WITH REFERENCE TO TRUE NORTH AFTER THE VEHICLE IS ERECTED ON THE LAUNCH PAD.
B. TYPE:
C. MODEL:
D. MANUFACTURER:
E. FREQUENCY RANGE: MC
F. ☐ TUNABLE ☐ FIXED TUNED
G. PREDOMINANT POLARIZATION: (CHECK ONLY ONE)
☐ VERTICAL
☐ HORIZONTAL
☐ CIRCULAR: SENSE: ☐ LH ☐ RH
☐ OTHER
H. MAXIMUM GAIN IN DB WITH RESPECT TO ISOTROPIC: DB
I. MAXIMUM NULL IN DB WITH RESPECT TO ISOTROPIC: DB
(WITHIN 60° FOR AZUSA, 120 FOR RADAR, OF LONGITUDINAL AXIS OF MAIN LOBE).
J. MAIN LOBE BEAMWIDTH IN DEGREES AT 3DB POINTS:
ELEVATION: AZIMUTH
K. INDICATE AVAILABILITY DATE OF ANTENNA PATTERN MEASUREMENTS
L. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS ANTENNA? ☐ YES ☐ NO
(IF YES, PROVIDE ONE COPY)
M. USE APPROPRIATE SPARE FORMS FOR ANTENNA D PATTERN AND ANTENNA SYSTEM SCHEMATIC.

Available 30 June 1962

NOTE: QUANTITATIVE DATA FURNISHED ON THIS PAGE SHOULD BE MEASURED VALUES AFTER NOMINAL WARMUP TIME, WHERE APPLICABLE. THE DATA SOURCES OF UNMEASURED VALUES SHOULD BE INDICATED BY FOOTNOTE.

IND-PMR-8800/95 (REV. 3-61)
PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.
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NRD

9. REVISION NO. 1

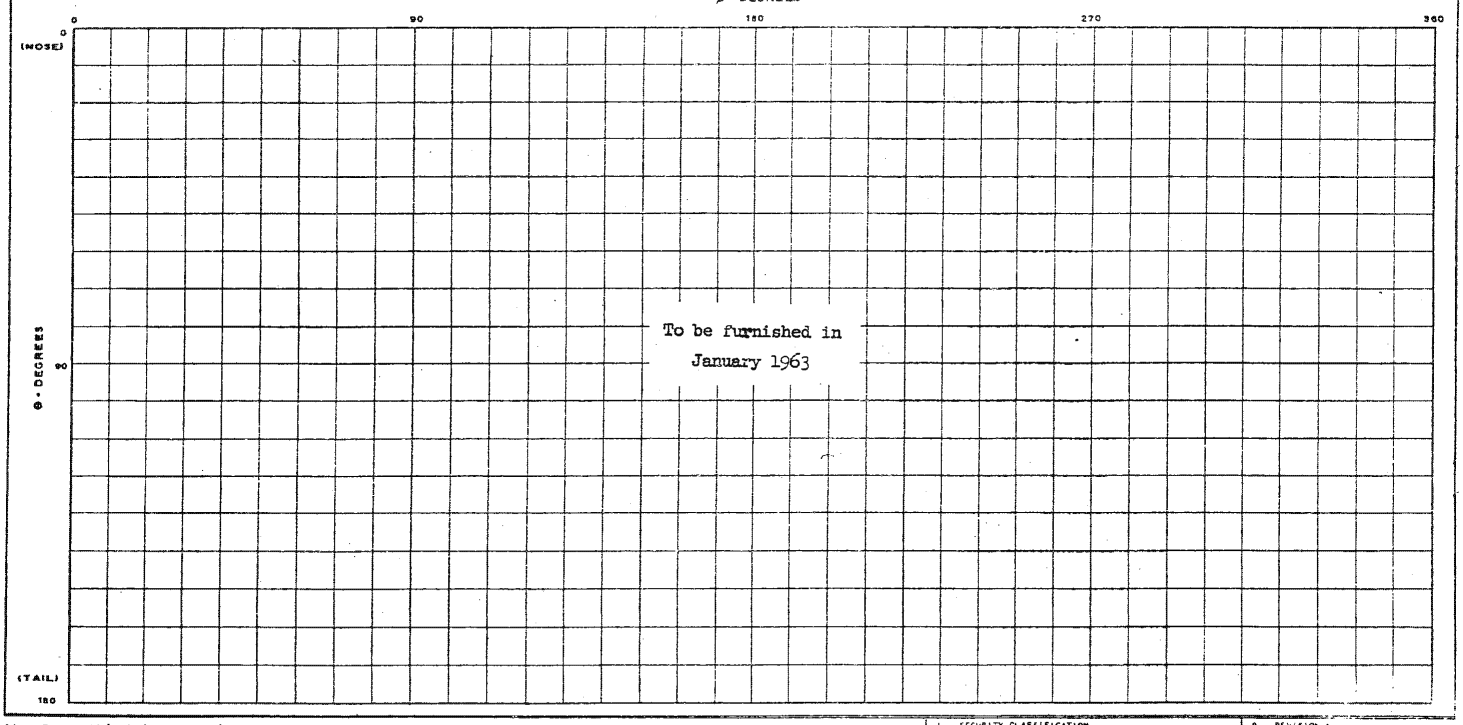
00778

ANTENNA PATTERN

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER	7. SECURITY CLASSIFICATION	2. PAGE / 3. DATE / 4. REPLACES PAGE(S)
PROGRAM 206	NONE	206	Aerospace AF04(695)-169		153.5 / 22 October 1962 / 153.5 DATED 1 May 1962

10. TEST CODE A.B.E.C. | 11. PRD PAGE NO. 153.4 | 12. INSTRUMENTATION SYSTEM UHF Rate Beacon, XMIT Link | 14. - 18. (SEE REVERSE SIDE OF FORM)

13. ANTENNA PATTERN PLOT



IND-PMR-8800/150 (REV. 3-61)

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1. SECURITY CLASSIFICATION | 9. REVISION NO. 1

00778

TRANSPONDERS AND BEACONS SATELLITE VEHICLE

1. SECURITY CLASSIFICATION

2. PAGE 153.6

3. DATE 22 October 1962

4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. GENERAL INFORMATION

A. TEST CODE: C,G,E,I

B. PURPOSE: *

- [ ] RANGE SAFETY-IMPACT PREDICTION
- [ ] MIDCOURSE TRAJECTORY DATA
- [ ] TERMINAL TRAJECTORY DATA
- [ ] TELEMETRY

C. LOCATION: STAGE

D. TYPE: [ ] TRANSPONDER [X] BEACON

E. MODEL: 764D637-G6

F. MANUFACTURER: GE

G. INTERROGATION PULSE CODE CAPABILITIES:

[ ] SINGLE PULSE [ ] DOUBLE PULSES

DOUBLE PULSE SPACING

± US

± N/A US

± US

[ ] TRIPLE PULSES

PULSE SPACINGS

FIRST & SECOND PULSES

± US

± N/A US

± US

SECOND & THIRD PULSES

± US

± N/A US

± US

H. COMMAND CONTROL CODE CAPABILITIES:

NUMBER OF COMMAND CHANNELS AVAILABLE:

TYPE OF PULSE MODULATION:

I. POWER REQUIREMENTS:

VOLTS. WATTS

11. TRANSMITTER CHARACTERISTICS

A. FREQUENCY RANGE: 235.0 MC

B. [ ] TUNABLE [X] FIXED TUNED

C. BANDWIDTH AT 3DB: .06 MC,

AND AT 60DB: Approx. 10 MC

D. EMISSION: [ ] AM, [ ] FM, [X] PULSE, [ ] COMPOSITE NONSTANDARD

E. FREQUENCY STABILITY: ± .01% ~~MC~~ G2

F. AVERAGE POWER: .21 WATTS

G. PEAK PULSE POWER: 7 WATTS

H. MAXIMUM PRF: 1500 PPS

I. PULSE WIDTHS: 33 US, US, US AT 3DB POINTS

J. FIXED DELAY SETTINGS: NA US, US

K. MAXIMUM DELAY VARIATION WITH SIGNAL STRENGTH FROM 10DBM TO WITHIN 5 DBM OF MAXIMUM SENSITIVITY OF RECEIVER: NA US

L. RECOVERY TIME: NA US

M. MINIMUM FREQUENCY SEPARATION REQUIRED BETWEEN TRANSMITTER AND RECEIVER NA MC

N. NOMINAL WARM-UP TIME: 1.25 MINUTES

O. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS TRANSMITTER? [X] YES [ ] NO (IF YES, PROVIDE ONE COPY)

P. ATTACH A PLOT OF ANTENNA INPUT POWER VS TRANSMITTER FREQUENCY. N/A

*Available on Need-to-know basis.

12. RECEIVER CHARACTERISTICS

A. FREQUENCY RANGE: MC

B. [ ] TUNABLE [ ] FIXED TUNED

C. INTERMEDIATE FREQUENCY:

D. LOCAL OSCILLATOR FREQUENCY [ ] ABOVE, [ ] BELOW INTERROGATION FREQUENCY

E. METHOD OF FREQUENCY CONTROL:

F. FREQUENCY STABILITY: ± MC

G. SENSITIVITY:

MAXIMUM: DBM AT MC

MINIMUM: DBM AT MC

NOMINAL: DBM AT MC

H. SELECTIVITY: (OVERALL)

3DB MC

20DB MC

60DB MC

I. TYPE AGC:

J. AGC TIME CONST: US

K. RECOVERY TIME TO 3DB POINT: US

L. NOMINAL WARM-UP TIME: MINUTES

M. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS RECEIVER COVERING THE FREQUENCY RANGE 100 MC TO 10,000 MC?

[ ] YES [ ] NO (IF YES, PROVIDE ONE COPY)

13. ANTENNA CHARACTERISTICS

A. LOCATION: STA. . °AZ

STA. . °AZ

STA. . °AZ

STA. . °AZ

WITH REFERENCE TO TRUE NORTH AFTER THE VEHICLE IS ERECTED ON THE LAUNCH PAD.

B. TYPE: 1/4 Wave Stub

C. MODEL: 765D237-G2

D. MANUFACTURER: GE

E. FREQUENCY RANGE: 225-260 MC

F. [ ] TUNABLE [X] FIXED TUNED

G. PREDOMINANT POLARIZATION; (CHECK ONLY ONE)

[X] VERTICAL

[ ] HORIZONTAL

[ ] CIRCULAR: SENSE: [ ] LH [ ] RH

[ ] OTHER

H. MAXIMUM GAIN IN DB WITH RESPECT TO ISOTROPIC: +2 DB

I. MAXIMUM NULL IN DB WITH RESPECT TO ISOTROPIC: -3 DB (WITHIN 60° FOR AZUSA, 120 FOR RADAR, OF LONGITUDINAL AXIS OF MAIN LOBE).

J. MAIN LOBE BEAMWIDTH IN DEGREES AT 3DB POINTS:

ELEVATION: 50° , AZIMUTH

K. INDICATE AVAILABILITY DATE OF ANTENNA PATTERN MEASUREMENTS

L. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS ANTENNA? [ ] YES [X] NO (IF YES, PROVIDE ONE COPY)

M. USE APPROPRIATE SPARE FORMS FOR ANTENNA PATTERN AND ANTENNA SYSTEM SCHEMATIC.

NOTE: QUANTITATIVE DATA FURNISHED ON THIS PAGE SHOULD BE MEASURED VALUES AFTER NOMINAL WARMUP TIME, WHERE APPLICABLE. THE DATA SOURCES OF UNMEASURED VALUES SHOULD BE INDICATED BY FOOTNOTE.

IND-PMR-8800/95 (REV. 3-61)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

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NRD

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

ANTENNA PATTERN TRANSPONDERS AND BEACONS SATELLITE VEHICLE

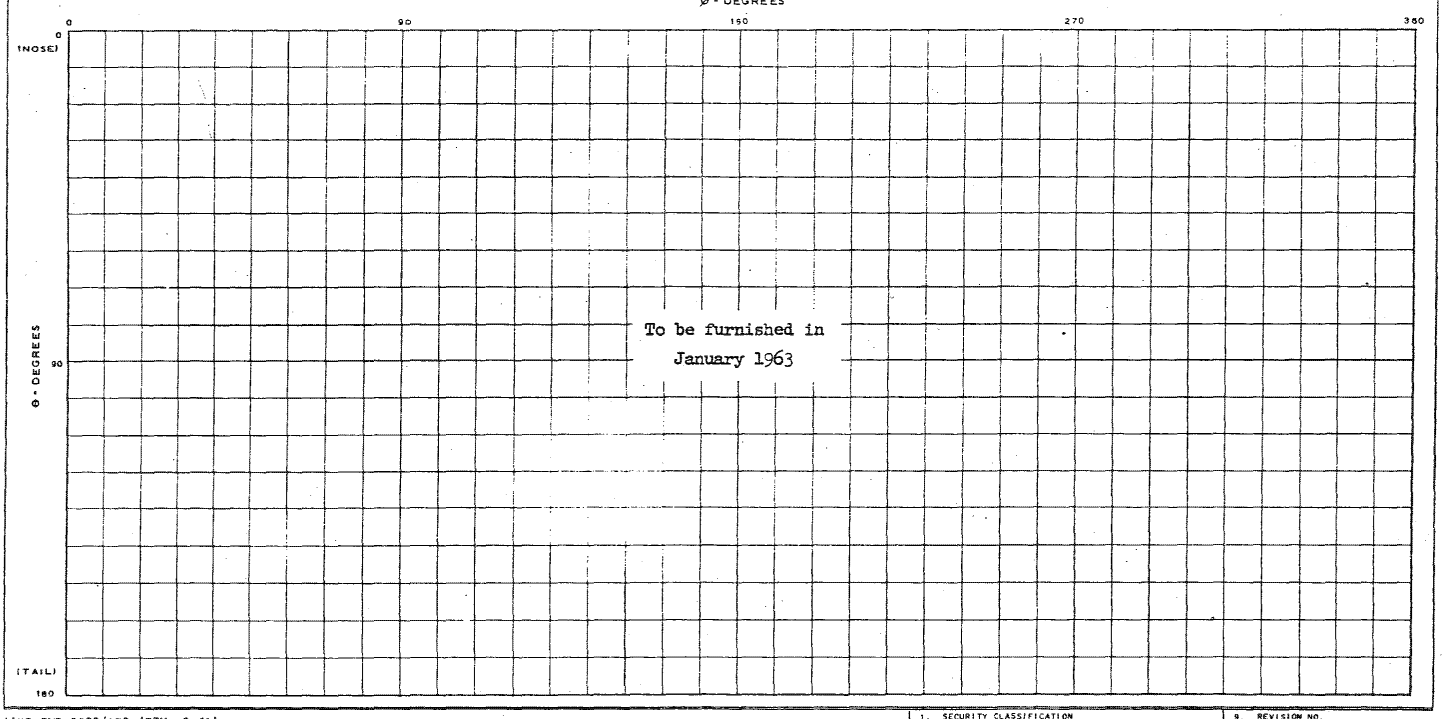
5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

1. SECURITY CLASSIFICATION

2. PAGE 153.7
3. DATE 22 October 196
4. REPLACES PAGE(S) Original DATED

10. TEST CODE A,B,E,C, | 11. PRD PAGE NO. 153.6 | 12. INSTRUMENTATION SYSTEM | 14. - 18. (SEE REVERSE SIDE OF FORM)

13. ANTENNA PATTERN PLOT



IND-PMR-8800/150 (REV. 3-61)

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1. SECURITY CLASSIFICATION

9. REVISION NO.

1

COMMAND CONTROL/DESTRUCT SYSTEM

5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM ELEMENT CODE: NONE	7. SYSTEM CODE: 206	8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169	2. PAGE: 154	3. DATE: 22 October 1962
				4. REPLACES PAGE(S): 154	DATED: 1 May 1962

10. GENERAL INFORMATION

A. TEST CODE: A,B,C,F,G

B. TRANSMISSION OF COMMAND FUNCTIONS: TYPE: [X] ON-OFF [ ] PROPORTIONAL

C. NO. OF ON-OFF CHANNELS TO BE TRANSMITTED: 3

D. BANDWIDTH OF PROPORTIONAL CHANNELS N/A KC INCLUSIVE.

E. REAL-TIME MONITORING OF TRANSMITTED COMMAND FUNCTIONS REQUIRED: [X] YES [ ] NO

F. A FLIGHT-CONTROL CONSOLE [X] WILL [ ] WILL NOT BE USED.

G. PORTION, OR DURATION, OF FLIGHT THROUGHOUT WHICH RADIO COMMAND IS REQUIRED: Atlas powered flight phase

H. IN-FLIGHT TELEMETERED DATA: CHANNEL # R-F LINK # None WILL BE USED TO TRANSMIT COMMAND CONTROL SIGNAL INTENSITY FROM MISSILEBORNE RECEIVER.

I. DOES COMMAND RECEIVER HAVE A REMOTE TURN-OFF CAPABILITY? [ ] YES [X] NO

11. RECEIVER CHARACTERISTICS

A. LOCATION: Atlas D First STAGE.

B. TYPE: FM

C. MODEL: P/N AD-319600

D. MANUFACTURER: AVCO, Crosley Division

E. NUMBER INSTALLED: 2

F. FREQUENCY RANGE: 405-420 MC

G. [ ] TUNABLE [X] FIXED TUNED

H. INTERMEDIATE FREQUENCY: 1ST 50.3 MC, 2ND 10.7 MC

I. LOCAL OSCILLATOR FREQUENCY [ ] ABOVE, [X] BELOW COMMAND TRANSMITTER FREQUENCY.

J. METHOD OF FREQUENCY CONTROL: 1ST OSC: Crystal, 2ND OSC: Crystal

K. FREQUENCY STABILITY: ± 0.020 MC

L. SENSITIVITY:
MAXIMUM: DBM AT MC
MINIMUM: DBM AT MC
NOMINAL: -93 DBM AT Carrier freq. MC

M. SELECTIVITY; (OVERALL)
3DB 0.20 MC
20DB 0.44 MC
60DB 1.10 MC

N. BANDWIDTH (FOR A GIVEN OPTIMUM SIGNAL) AT;
6DB DOWN 300 KC
40DB DOWN 700 KC
80DB DOWN 1600 KC

O. DEVIATION REQUIRED: ± 60 KC

P. CAPTURE RATIO: 0.6

Q. SPURIOUS RESPONSE REJECTION: 60 DB

R. ATTACH A PLOT OF SIGNAL PLUS NOISE TO NOISE RATIO IN DB VERSUS INPUT SIGNAL IN UV OVER A RANGE OF 1-100 UV.

S. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS RECEIVER? [ ] YES [X] NO (IF YES, PROVIDE ONE COPY)

12. ANTENNA CHARACTERISTICS

A. LOCATION:
STA. 1023 , 225° AZ,
STA. 892 , 45° AZ,
STA. , AZ,
STA. , AZ,
WITH REFERENCE TO TRUE NORTH AFTER THE VEHICLE IS ERECTED ON THE LAUNCH PAD.

B. TYPE: Cavity

C. MODEL: P/N 27-12507-1 and -3

D. MANUFACTURER: Creative Engineering

E. FREQUENCY RANGE: 405-420 Mc

F. [ ] TUNABLE [X] FIXED TUNED

G. PREDOMINANT POLARIZATION; (CHECK ONLY ONE)
[X] VERTICAL
[ ] HORIZONTAL
[ ] CIRCULAR; SENSE: [ ] LH [ ] RH
[ ] OTHER

H. MAXIMUM GAIN IN DB WITH RESPECT TO ISOTROPIC: 3 DB

I. MAXIMUM NULL IN DB WITH RESPECT TO ISOTROPIC: -30 DB

J. LOSS IN TRANSMISSION LINES: 2 DB AT Carrier freq. MC

K. ANTENNA DIPLEXER: 0.4 DB LOSS AT Carrier freq MC

L. REQUIRED SIGNAL STRENGTH - CALCULATED 950 UV/METER, ASSUMING LEFT-HAND-SENSED, CIRCULARLY POLARIZED TRANSMITTING ANTENNA.

M. ATTACH ANTENNA PATTERN MEASUREMENTS AND A SCHEMATIC OF ANTENNA SYSTEM. See PRD 154.1, 154.2, 154.3

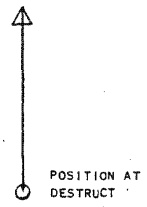
N. IS THERE AVAILABLE A SPECTRUM RESPONSE REPORT ON THIS ANTENNA? [ ] YES [X] NO (IF YES, PROVIDE ONE COPY)

13. DESTRUCT CONTROL SYSTEM DESCRIPTION

See PRD 159

14. DISPERSION PATTERN AFTER INFLIGHT DESTRUCTION

Will be provided in range safety report.



IND-PMR-8800/96 (REV. 3-61)

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9. REVISION NO. 1

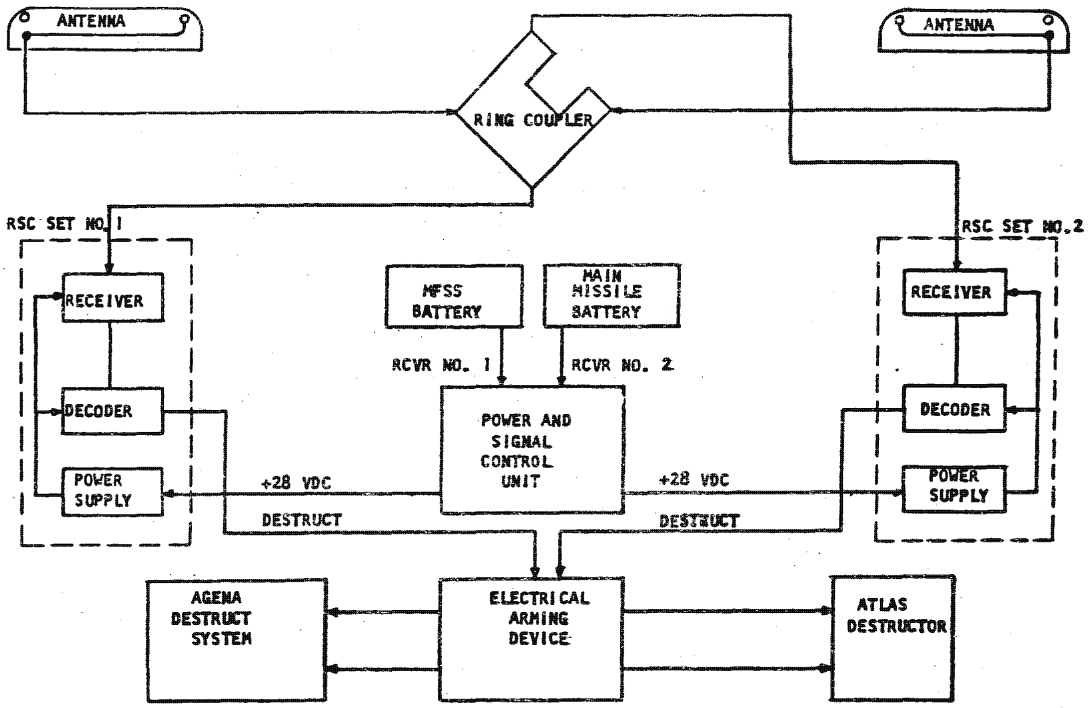
60778

COMMAND CONTROL/DESTRUCT SYSTEM
(RANGE SAFETY COMMAND SUBSYSTEM)

1. SECURITY CLASSIFICATION	2. PAGE 154.1
	3. DATE 22 October 1962
	4. REPLACES PAGE(S) 154.1 DATED 1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

10. SKETCHES, DIAGRAMS, ETC.



IND-PMR-880C/155 (REV. 3-61)
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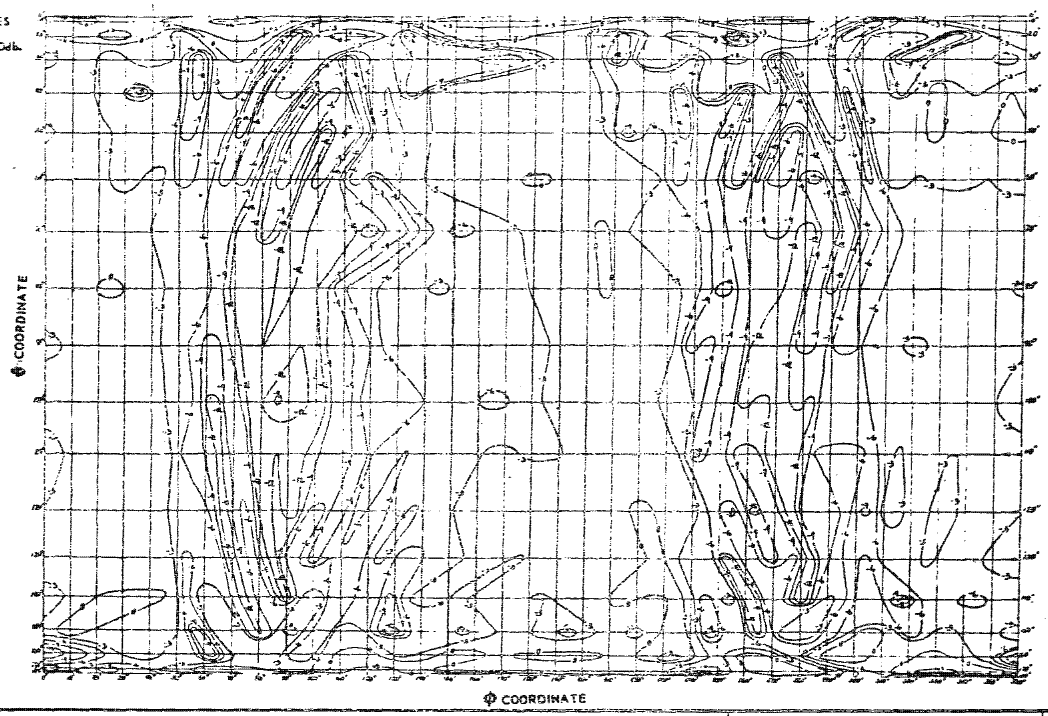
1. SECURITY CLASSIFICATION	9. REVISION NO. 1

ANTENNA PATTERN (RANGE SAFETY COMMAND ANTENNA BEFORE STAGING)			2. PAGE 154.2	
			3. DATE 22 October 1962	
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT CODE: NONE	7. SYSTEM CODE: 206	8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169	4. REPLACES PAGE(S): 154.2 DATED 1 May 1962
10. TEST CODE	11. PRD PAGE NO.	12. INSTRUMENTATION SYSTEM		14. - 18. (SEE REVERSE SIDE OF FORM)

13. ANTENNA PATTERN PLOT

ALL INDICATED VALUES REFERENCED TO ISOTROPIC LEVEL OF 0db.



IIND-PMR-8800/150 (REV. 3-61)

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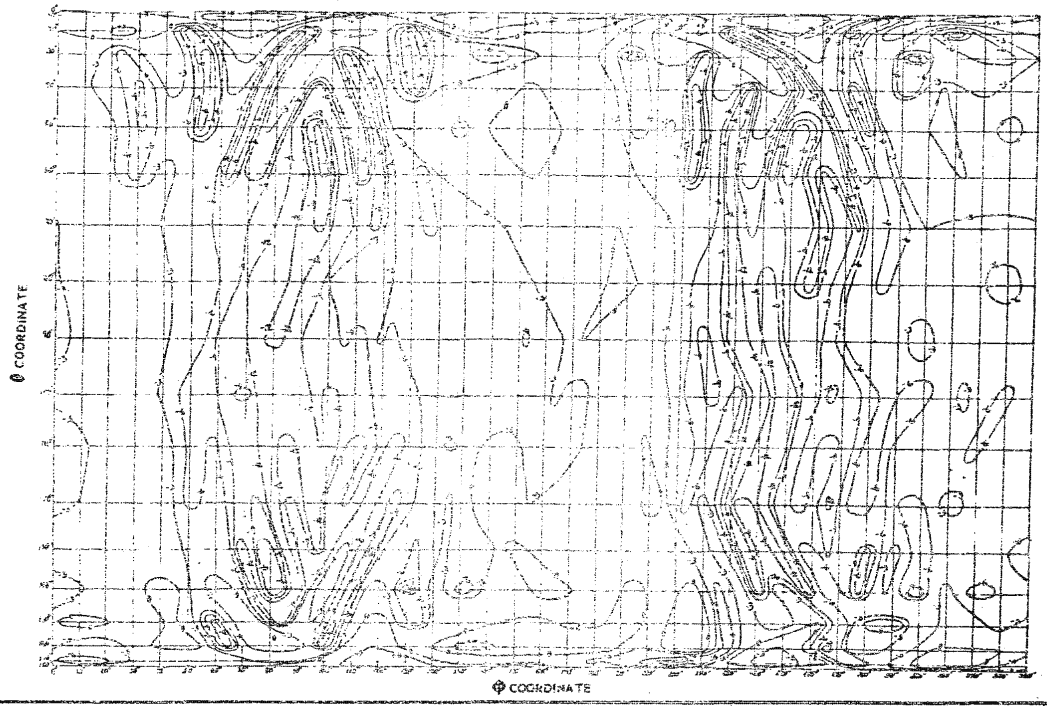
1. SECURITY CLASSIFICATION	RANGE SAFETY COMMAND ANTENNA CIRCULAR POLARIZATION - BEFORE STAGING CONDITION	9. REVISION NO. 1

ANTENNA PATTERN (RANGE SAFETY COMMAND ANTENNA - AFTER STAGING)			1. SECURITY CLASSIFICATION	2. PAGE 154.3 3. DATE 22 October 1962 4. REPLACES PAGE(S) 154.3 DATED 1 May 1962
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT CODE: NONE	7. SYSTEM CODE: 206	8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169	
10. TEST CODE	11. PRD PAGE NO.	12. INSTRUMENTATION SYSTEM		14. - 18. (SEE REVERSE SIDE OF FORM)

13. ANTENNA PATTERN PLOT



ALL INDICATED VALUES REFERENCED TO ISOTROPIC LEVEL OF 0db.

HD-PMR-8800/150 (REV. 3-61)

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RANGE SAFETY COMMAND ANTENNA
CIRCULAR POLARIZATION - AFTER STAGING CONDITION

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

ANTENNA PATTERN	1. SECURITY CLASSIFICATION	2. PAGE 154.4 3. DATE 22 October 1962 4. REPLACES PAGE(S) 154.4 DATED 1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NO.
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

10. TEST CODE	11. PRD PAGE NO.	12. INSTRUMENTATION SYSTEM	14. - 18. (SEE REVERSE SIDE OF FORM)

13. ANTENNA PATTERN PLOT

14. General Information

A. Antenna Type: Cavity

B. Frequency Range of Operations:
Transmitter: 406 Mc to 549 Mc
Receiver: 405 Mc to 420 Mc

C. Coverage required:

T + 0 sec to T + SECO sec

D. Frequency Used for Pattern

Measurements: 4200 Mc

E. Model Scale: 1/10

15. Transmitter Information: Total Power Level at Transmitter Antenna System:

F = 406-549 Mc; Unknown dbm

16. Receiver Information: Minimum Power Level Required at Receiver Antenna System:

F = 405-420 Mc; -87 dbm

17. Polarization Information:
Polarization Vector(s):

Linear: $\theta = 90^{\circ}$; $\phi = 0^{\circ}$, 180°

Note: This page is a continuation of pages 154.2 and 154.3

NAVMAT-PMR-8800/150 (REV. 3-61)	1. SECURITY CLASSIFICATION	9. REVISION NO.
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ORDNANCE ITEMS (ATLAS)

1. SECURITY CLASSIFICATION

2. PAGE 155.0
3. DATE 22 October 1962
4. REPLACES PAGE(S) 155.0 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACT/SUBCONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. COMMERCIAL MFGR	COMMERCIAL NOMENCLATURE	COMMERCIAL STOCK NO.	13. MILITARY NOMENCLATURE	MILITARY STOCK NO.	MIL STD	MISSILE SYSTEM	14. NO.	15. PURPOSE	16. LOCATION
1	A	Rocketdyne	Vernier Igniter	650291					2	Ignite LO2/RP-1 mixture in vernier engine thrust chamber	One on each vernier thrust chamber
2	A	Rocketdyne	Gas Generator Igniter (Booster	650717					2	Ignite LO2/RP-1 mixture in booster gas generator	Booster engine gas generator
3	A	Rocketdyne	Gas Generator Igniter (Sustainer)	650717					2	Ignite LO2/RP-1 mixture in sustainer gas generator	Sustainer engine gas generator
4	A	Rocketdyne	Thrust Chamber Igniter (Booster)	650580					2	Ignite LO2/RP-1 mixture in booster thrust chamber	One on each booster thrust chamber
5	A	Rocketdyne	Thrust Chamber Igniter (Sustainer)	650580					1	Ignite LO2/RP-1 mixture in sustainer thrust chamber	Sustainer thrust chamber
6	A	Beckman/ Whitley	Destructor	GD/A 27-04306-5					1	Rupture missile tank for destruction of missile	Long equipment pod, Sta. 960
7	A	Conax Corp.	Explosive Valve	GD/A 27-04340-3					1	Release helium from booster supply to pneumatically actuated staging release fittings	B-2 engine nacelle, Sta. 1165
8	A	Eagle Picher	Main Missile battery	GD/A 27-06359-3 Eagle Pitcher 4000A					1	Activate main missile battery	Long equipment pod, Sta. 1095

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

ORDNANCE ITEMS (ATLAS)

Security Classification: [illegible]

Page: 155.0.1

Date: 22 October 1962

Replaces Page(s): 155.0.1 Dated 1 May 1962

Program Title: PROGRAM 206

Program Element Code: [illegible]

System Code: 206

Contractor Contract Number: Aerospace AF04(695)-[illegible]

Item No.	Test Code	Commercial: Mfgr	Commercial: Nomenclature	Commercial: Stock No.	Military: Nomenclature	Military: Stock No.	Mil Std	Missile System	No.	Purpose	Location
9	A	Yardney	Telemetry Battery Squib	19XPA2					1	Activate telemetry battery	Long equipment pod
10	A	Conax	Valve Assembly	GD/A 88-20916-001 Conax Nov-16-4A					2	Change LO2 tank pressure	Quadrant 1, Sta. 1206
		Later missiles will have hypergolic ignition in the thrust chambers Effectivity: Booster thrust chambers 0006-3 -22, and on Sustainer and vernier thrust chambers 0006-24, -5, -28, and on Missiles with booster hypergolic ignition will not have Item 4 Missiles with sustainer and vernier hypergolic ignition will not have Items 1 and 5									
11	A	Bendix	Telemetry Transmitter	AN/DKT-17					1	Transmit signals representing physical variables from missile to ground	Transmitter in long pod, Sta. 1041. One antenna in long pod, Sta. 892. One antenna in short pod, Sta. 1023.
12	A		Destruct Transmitter						1	Furnish signal to operate destruct system for destroying missile	Range safety operations center
13	A	General Electric	Mark II Rate Beacon						1	Provide rate information for missile guidance	Transmitter in short pod; 2 antennas in short pod
14	A	General Electric	Mark II Pulse Beacon						1	Provide position information for missile guidance	Transmitter in short pod; 2 antennas, 1 in each pod

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Security Classification: [illegible]

Revision No. 1

ORDNANCE ITEMS (ATLAS)

1. SECURITY CLASSIFICATION

2. PAGE 155.0.2

3. DATE 22 October 1962

4. REPLACES PAGE(S) 155.0.2

DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. COMMERCIAL MFGR	12. COMMERCIAL NOMENCLATURE	12. COMMERCIAL STOCK NO.	13. MILITARY NOMENCLATURE	13. MILITARY STOCK NO.	13. MIL STD	13. MISSILE SYSTEM	14. NO.	15. PURPOSE	16. LOCATION
15	A	General Electric	Ground Guidance Station; Mark II Rate Subsystem						1	Transmit signals to and receive signals from A/B rate beacon	VAFB
16	A	General Electric	Ground Guidance Station; Mark II Position Subsystem						1	Transmit steering and discrete commands to A/B pulse beacon; receive signals from pulse beacon	VAFB

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

ORDNANCE ITEMS (Agena D)

1. SECURITY CLASSIFICATION

2. PAGE 155.0-3
3. DATE 22 October 1962
4. REPLACES PAGE(S) 155.0.3
DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM NO.: 206
8. CONTRACT/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. COMMERCIAL MFGR	12. COMMERCIAL NOMENCLATURE	12. COMMERCIAL STOCK NO.	13. MILITARY NOMENCLATURE	13. MILITARY STOCK NO.	13. MIL STD	13. MISSILE SYSTEM	14. NO.	15. PURPOSE	15. LOCATION
17	A	U.S. Flare	Igniter, Retrorocket						2	Ignite retrorockets	
18	A	Atlantic Research	Retrorocket	*1062410-1					2	Booster retrograde	
19	A	Bernite	Igniter, Ullage Rocket						4	Ignite ullage rockets	
20	A	Aerojet General	Ullage Rocket	1062655-3					4	Ullage orientation	
21	A	B.A.C.	Engine Starter, Grain Igniter	8081-474-540-1					2	Engine start	
22	A	B.A.C.	Starter, Grain	8081-474-528-1					2	Engine start	
23	A	Conex Corp	Explosive Valve	8096-472-005-5					1	Fast shutdown	
24	A	LEC/SCTB	S&A Initiator	1312289-1					2	Vehicle destruct	
25	A	Ordco/SCTB	Shaped Charge	1062569-3					1	Vehicle destruct	
26	A	McCormick-Selph	Squib, Safe Abort Valve	1062152-5 Ty M79 Mod 8					2	Open safe / abort valve	
27	A	McCormick-Selph	Squib, Pin Pusher, Horizon Sensor	1307805 Ty M79 Mod 8					8	Release, horizon sensor fairing	

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

ORDNANCE ITEMS (AGENA D)

1. SECURITY CLASSIFICATION

2. PAGE 155.0.4
3. DATE 22 October 1962
4. REPLACES PAGE(S) 155.0.4
DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. COMMERCIAL MFGR	COMMERCIAL NOMENCLATURE	COMMERCIAL STOCK NO.	13. MILITARY NOMENCLATURE	MILITARY STOCK NO.	MIL STD	MISSILE SYSTEM	14. NO.	15. PURPOSE	16. LOCATION
28	A	McCormick-Selph	Squib, horizon sensor actuator	1311875 Ty M79 Mod 8					2	Actuate horizon sensor	
29	A	Du Pont	Detonator primer cord						2	Initiate separation primer cord	
30	A	Du Pont	MDF, 10 gr. primer cord	1341998-1					1	Separation of Agena D and booster adapter	
31	A	Universal Match Corp	Piston, explosive	GE Dwg. No. 111C1508					2	Releases hatch door	OCV
32		Thiokol	Initiator, Safe/Arm	GE Dwg. No. 825D615					4	Initiator for shaped charge	OCV
33		Thiokol	Transfer lead assembly.	GE Dwg. No. 131B4126					2	Transfer for shaped charge	OCV
34		Thiokol									
34		Thiokol	Shaped charge assembly	GE Dwg. No. 884D1244					1	SV/Agena separation	OCV
35		Conax	Initiator, explosive (valve)	GE Dwg. No. 131B4102					2	Pressurize OCV fuel tanks	OCV
36		Conax	Initiator, explosive (valve)	GE Dwg. No. 111C3795					2	Pressurize stab subsystem	OCV

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1. SECURITY CLASSIFICATION

9. REVISION NO.
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ORDNANCE ITEMS

1. SECURITY CLASSIFICATION

2. PAGE 155.0.5
3. DATE 22 October 1962
4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM PROCUREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. COMMERCIAL MFGR	COMMERCIAL NOMENCLATURE	COMMERCIAL STOCK NO.	13. MILITARY NOMENCLATURE	MILITARY STOCK NO.	MIL STD	MISSILE SYSTEM	14. NO.	15. PURPOSE	16. LOCATION
37		GE	TLM vhf transmitter & power amplifier	GE Dwg. No. 113C9710G1 113C9595G1					2	Transmit telemetry data	Adapter
38		GE	UHF rate beacon	GE Dwg. No. 893D238G1					1	Provide rate information	Adapter
39		ACF	S-band beacon	GE Dwg. No. 113C9517P1					1	Tracking & command with verlort radars	Adapter

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

ORDNANCE ITEMS (ATLAS)

1. SECURITY CLASSIFICATION

2. PAGE 155.1 of 0

3. DATE 22 October 1962

4. REPLACES PAGE(S) 155-1 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROJECT REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	17. STORAGE TEMPERATURE MINIMUM	STORAGE TEMPERATURE MAXIMUM	16. ARMING/FIRING CHARACTERISTICS TIMER	IMPACT	PROXIMITY	PRESSURE	BAROMETER	ACCELERATION	MECH SEPARATION	15. ELECTRICAL CHARACTERISTICS MIN FIRE CURRENT	MAX-SAFE NO-FIRE CURRENT	RESISTANCE	MAX TEST CURRENT
1	-50°F	+130°F								3.1	0.6	0.32 to 0.8	0.01
2	-50°F	+130°F								2.0	0.4	0.45 to 0.85	0.01
3	-50°F	+130°F								2.0	0.4	0.45 to 0.85	0.01
4	-50°F	+130°F								5.0	0.8	0.75 to 1.3	0.01
5	-50°F	+130°F								5.0	0.8	0.75 to 1.3	0.01
6	-65°F	+125°F								1.0	0.15	8.2 to 9.3 @ 70°F	0.01
7	-65°F	+125°F								1.0	0.20 up to 5 sec	0.8±0.4	0.01
8	-65°F	+125°F								25 to 30 Volts	0.32	23 ± 3	0.01
9										Not available. This battery is furnished as GFE as part of MRSS system.			
10	-65°F	+160°F								2.0	0.15	0.9	0.01

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

ORDNANCE ITEMS (AGENA D)

1. SECURITY CLASSIFICATION

2. PAGE 155.1.1
3. DATE 22 October 1962
4. REPLACES PAGE(S) 155.1.2 DATED 1 May 1962

5. PROGRAM TITLE PROGRAM 206
6. PROCUREMENT CODE NONE
7. SYSTEM CODE 206
8. CONTRACTOR CONTRACT NUMBER Aerospace AF04(695)-169

13. ITEM NO.	17. STORAGE TEMPERATURE MINIMUM	MAXIMUM	18. ARMING/FIRING CHARACTERISTICS TIMER	IMPACT	PROXIMITY	PRESSURE	BAROMETRIC	ACCELERATION	STAGE SEPARATION	19. ELECTRICAL CHARACTERISTICS MIN FIRE CURRENT	MAX SAFE NO FIRE CURRENT	RESISTANCE	MAX TEST CURRENT
11										3.0±0.15	0.2, 30m	0.70 to 1.30	
12						3000 psi				3.0	0.20	1.0±0.30	
13										1.50	0.25	2.0±0.25	
14	40° F	120° F				2500 psi		11.6g aft 1.5g fwd		1.5	0.25	0.70 to 1.30	
15		130° F								1.6	0.4	1.0±0.15	
16		130° F											
17		130° F								2.5	0.6, 1m	0.1 to 0.2	
18	50° F	90° F						12g, 10m		2.5	0.50	1.0±0.20	
19	50° F	90° F						12g, 1m		1.4	less than 1.0	1.0±0.1	
20	50° F	90° F				3700±700 psi		12g, 5m		2.0	0.50, 5m	.65±0.20	
21	50° F	90° F				3700±700 psi		12g, 5m		2.0	0.50, 5m	0.65±0.2	
22	50° F	90° F				3700±700 psi		12g, 5m		2.0	0.50, 5m	0.65±0.2	
23								15g, 10m		2.0	0.5, 5m	1.0±0.1	
24								15g, 10m		1.0	0.20	1.05±0.35	
25													

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

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ORDNANCE ITEMS (SATELLITE VEHICLE)

1. SECURITY CLASSIFICATION

2. PAGE 155.1 .2

3. DATE 22 October 1962

4. REPLACES PAGE(S) Original

DATED

5. PROGRAM TITLE PROGRAM 206

6. PROGRAM REQUIREMENT CODE NONE

7. SYSTEM CODE 206

8. CONTRACTOR/CONTRACT NUMBER Aerospace AF04(695)-169

10. ITEM NO.	17. STORAGE TEMPERATURE MINIMUM	MAXIMUM	18. ARMING/FIRING CHARACTERISTICS TIMER	IMPACT	PROXIMITY	PRESSURE	BAROMETER	ACCELERATION	MECH SEPARATION	19. ELECTRICAL CHARACTERISTICS MIN FIRE CURRENT	MAX-SAFE NO-FIRE CURRENT	RESISTANCE	MAX TEST CURRENT
26													
27													
28													
29													
30													
31	0° F	160° F								5 amp	1 amp/5m	0.4-0.55	10ma
32	-35°F	160° F								3.5 amp	1 amp/5m	0.12-0.18	10ma
33	-65°F	160° F								NA	NA	NA	NA
34	-65°F	160° F								NA	NA	NA	NA
35	-35°F	160° F								4 amp	1 amp/5m	0.05-0.12	NA
36										5 amp	1 amp/5m	0.03-0.09	NA
37													
38													
39													

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

ORDNANCE ITEMS (ATLAS)

1. SECURITY CLASSIFICATION

2. PAGE 155.2.0
3. DATE 22 October 1962
4. REPLACES PAGE(S) 155.2
DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	20. DRAWINGS: SHIPPING CONTAINER	PACKING	STORAGE	21. ICC: MARKINGS	PARA	CLASSIFICATION	22. CLASSIFICATION: SERVICE	COMPATIBILITY GROUP	COAST GUARD	23. RADIO FREQUENCY SOURCES: FREQUENCY RANGE	AVERAGE POWER	ANTENNA GAIN
1	*	*Ref. AE61-1103"Pyrophoric and Pyrotechnic Devices Used on GD/A Vehicles", dated 1 January 1962				C Explosive						
2	*					C Explosive						
3	*					C Explosive						
4	*					C Explosive						
5	*					C Explosive						
6	*					A Explosive						
7	*					C Explosive						
8	*					C Explosive						
9												
10	*					C Explosive						
11										229.9 Mc	25 Watt	Minimum 10 db from isotropic level

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11. SECURITY CLASSIFICATION

9. REVISION NO. 1

ORDNANCE ITEMS (ATLAS)

1. SECURITY CLASSIFICATION

2. PAGE 155.2 .1
3. DATE 22 October 1962
4. REPLACES PAGE(S) 152.2.1 DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

11. ITEM NO.	20. DRAWINGS			21. ICC			22. CLASSIFICATION			23. RADIO FREQUENCY SOURCES		
	SHIPPING CONTAINER	PACKING	STORAGE	MARKINGS	PARA	CLASSIFICATION	SERVICE	COMPATIBILITY GROUP	COAST GUARD	FREQUENCY RANGE	AVERAGE POWER	ANTENNA GAIN
12										416 Mc	500 w & 10 kw amplifier	10 db above half wave dipole
13										2300 Mc	Mod II:5 w Mark II:5.3 w	10 db nominal
14										8850 Mc	Mod II: 2.5 w Mark II: 0.3 w	13 db nominal
15										1150 Mc	500-700 w	24.0 db nominal
16										8935 Mc	65 kw peak	40.0 db nominal

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

ORDNANCE ITEMS (AGENA D)

1. SECURITY CLASSIFICATION	2. PAGE 155.2.2
	3. DATE 22 October 1962
	4. REPLACES PAGE(S) 152.2.2 DATED 1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

10. ITEM NO.	20. DRAWINGS			21. ICC			22. CLASSIFICATION			23. RADIO FREQUENCY SOURCES		
	SHIPPING CONTAINER	PACKING	STORAGE	MARKINGS	PARA	CLASSIFICATION	SERVICE	COMPATIBILITY GROUP	COAST GUARD	FREQUENCY RANGE	AVERAGE POWER	ANTENNA GAIN
17	ICC Reg. 49-CFR-71-78	ICC Reg. 49-CFR-71-78	AFM 32-6	ICC Reg. 49-CFR-71-78		B	3	B				
18	"	"	"	"		B	4	F				
19	"	"	"	"		B	4	F				
20	"	"	"	"		B	4	F				
21	"	"	"	"		B	3	B				
22	"	"	"	"		B	2	J				
23	"	"	"	"		C	1	E				
24	"	"	"	"		C	6	B				
25	"	"	"	"		A	10	I				
26	"	"	"	"		C	1	E				
27	"	"	"	"		C	1	E				
28	"	"	"	"		C	1	E				
29	"	"	"	"		C						
30	"	"	"	"		C						

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1. SECURITY CLASSIFICATION	9. REVISION NO.
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ORDNANCE ITEMS (SATELLITE VEHICLE)

1. SECURITY CLASSIFICATION

2. PAGE 155.2 .3

3. DATE 22 October 1962

4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	20. DRAWINGS: SHIPPING CONTAINER	DRAWINGS: PACKING	DRAWINGS: STORAGE	21. ICC: MARKINGS	ICC: PARA	ICC: CLASSIFICATION	22. CLASSIFICATION: SERVICE	CLASSIFICATION: COMPATIBILITY GROUP	CLASSIFICATION: COAST GUARD	23. RADIO FREQUENCY SOURCES: FREQUENCY RANGE	RADIO FREQUENCY SOURCES: AVERAGE POWER	RADIO FREQUENCY SOURCES: ANTENNA GAIN
31	ICC Reg. 49-CFR-71-78	ICC REG. 49-CFR-71-78	Group 1	ICC Reg. 49-CFR-71-78		C		BEN				
32	"	"	"	"		C		BEN				
33	"	"	--	"		C		--				
34	"	"	--	"		C		--				
35	"	"	Group 1	"		C		BEN				
36												
37										258.5 Mc 248.6 Mc	8 w 8w	--
38										400 - 403 Mc	1 w	--
39										2920 Mc	0.5 w	--

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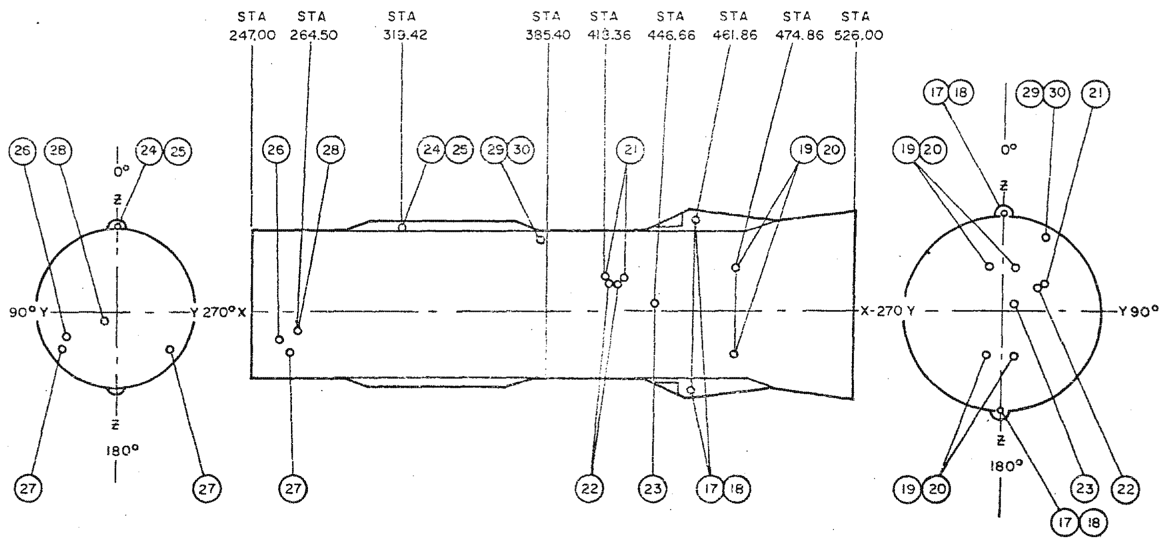
1. SECURITY CLASSIFICATION

9. REVISION NO. 1

DRAWING - MISSILE OR VEHICLE (AGENA D)

5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT CODE: NONE	206	Aerospace AF04(695)-169	PAGE 155.3 / DATE 22 October 1962 / REPLACES PAGE(S) 155.3 / DATED 1 May 1962

10. DIMENSIONAL DRAWING OF MISSILE OR VEHICLE SHOWING PAINT PATTERNS, CHARACTERISTIC MARKINGS, LOCATIONS ...



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1. SECURITY CLASSIFICATION	9. REVISION NO. 1

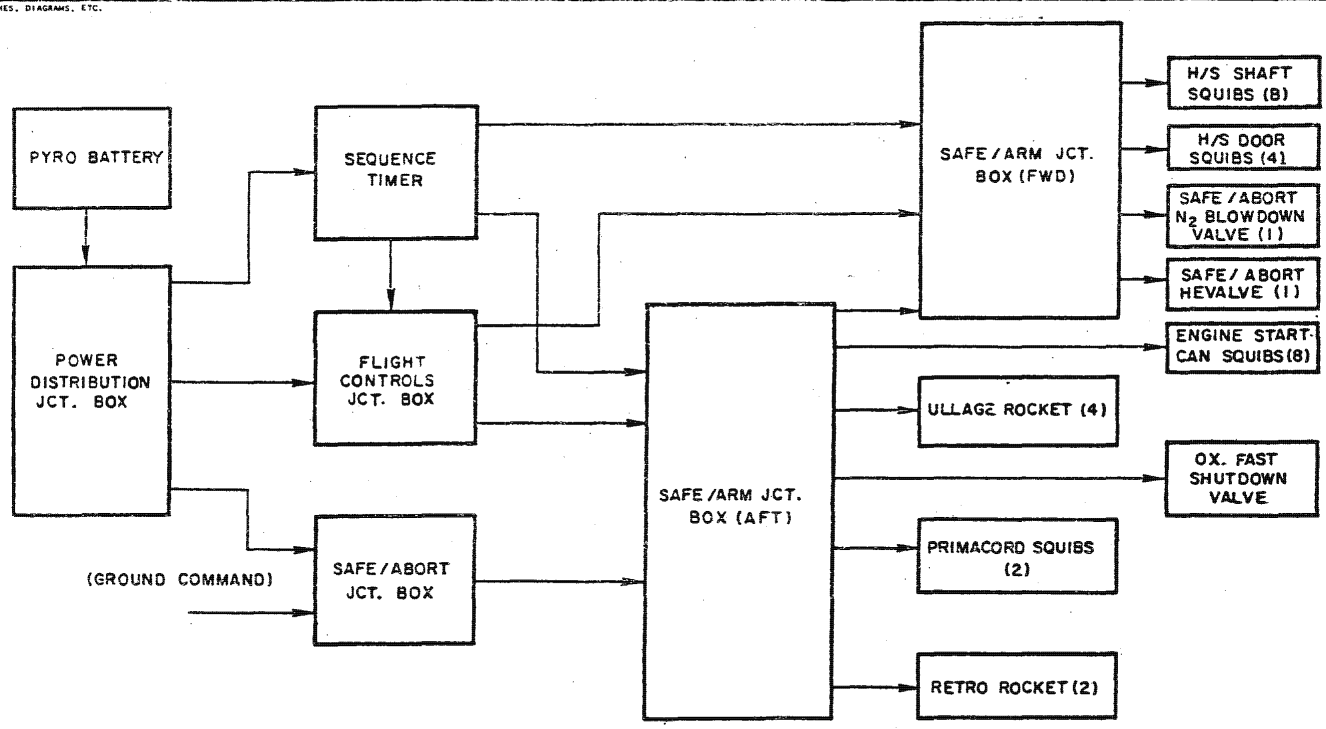
DRAWING - MISSILE OR VEHICLE (AGENA D - PYROTECHNICS)

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

1. SECURITY CLASSIFICATION

2. PAGE 155.4
3. DATE 22 October 1962
4. REPLACES PAGE(S) 155.4 DATED 1 May 1962

10. SKETCHES, DIAGRAMS, ETC.



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7. SECURITY CLASSIFICATION

8. REVISION NO. 1

DRAWINGS - ORDNANCE (ATLAS D)

1. SECURITY CLASSIFICATION

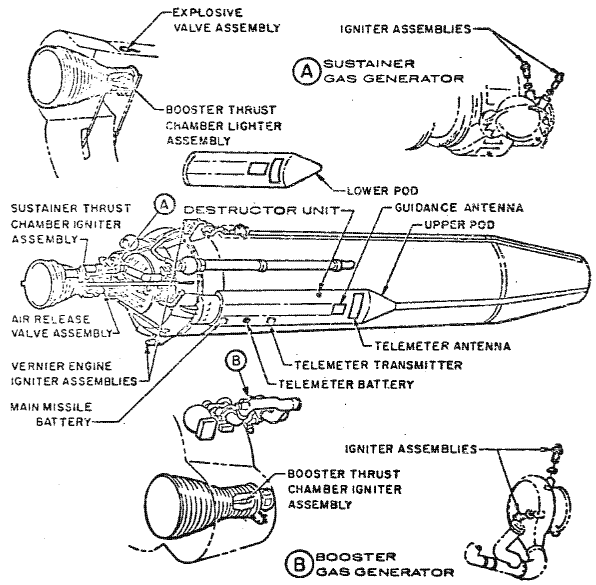
2. PAGE 156

3. DATE 22 October 1962

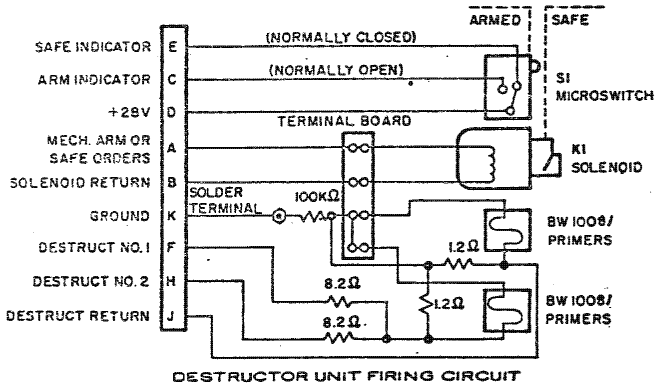
4. REPLACES PAGE(S) 156 DATED 1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

10. OUTLINE DRAWING SHOWING LOCATION OF ALL ORDNANCE ITEMS AND R.F. ITEMS



11. SCHEMATIC OF FIRING CIRCUITS



DESTRUCTOR UNIT FIRING CIRCUIT

IND-PMR-8000/95 (REV. 3-61)

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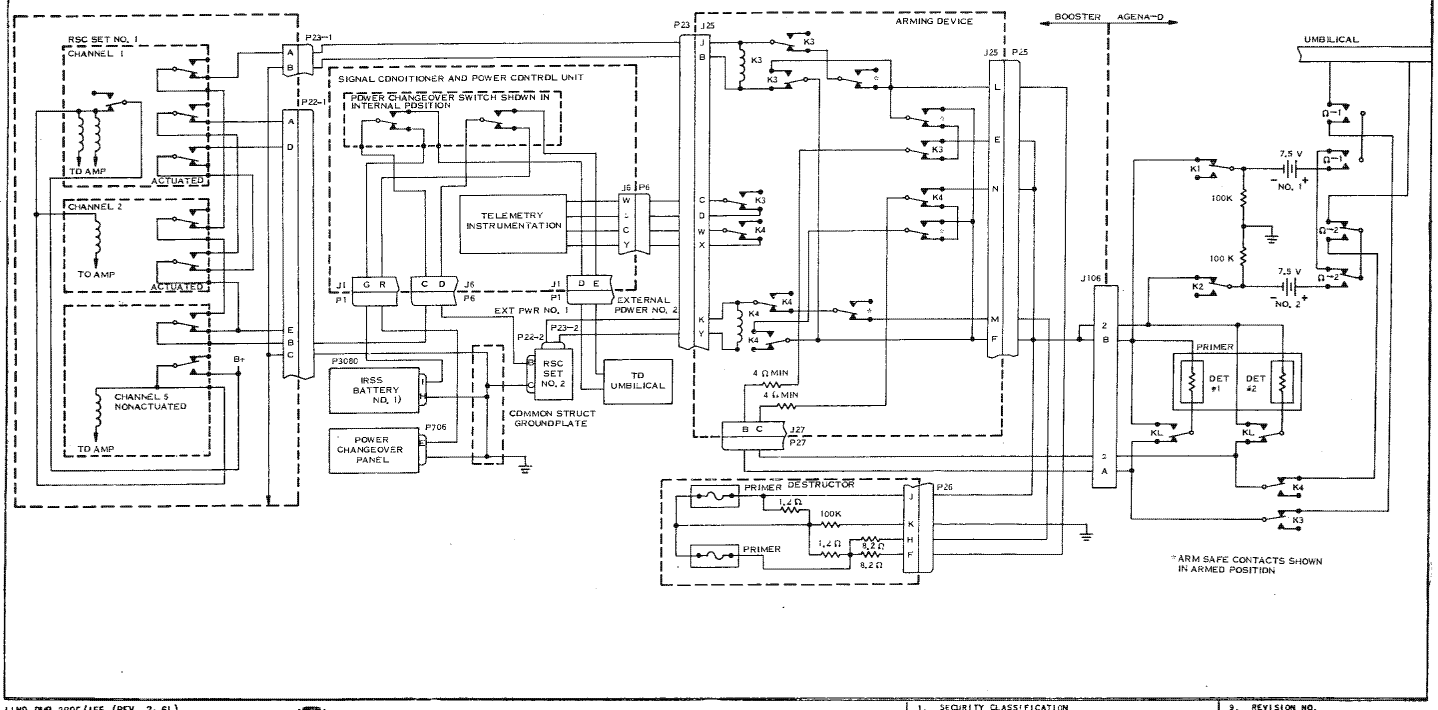
1. SECURITY CLASSIFICATION

9. REVISION NO. 1

DRAWING/ORDNANCE (DESTRUCT CIRCUIT, ATLAS D/AGENA D)

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

2. PAGE 156.1
3. DATE 22 October 1962
4. REPLACES PAGE(S) 156.1 DATED 1 May 1962



1. SECURITY CLASSIFICATION	9. REVISION NO.
	1

IIND-PSR-3800/155 (REV. 3-61)

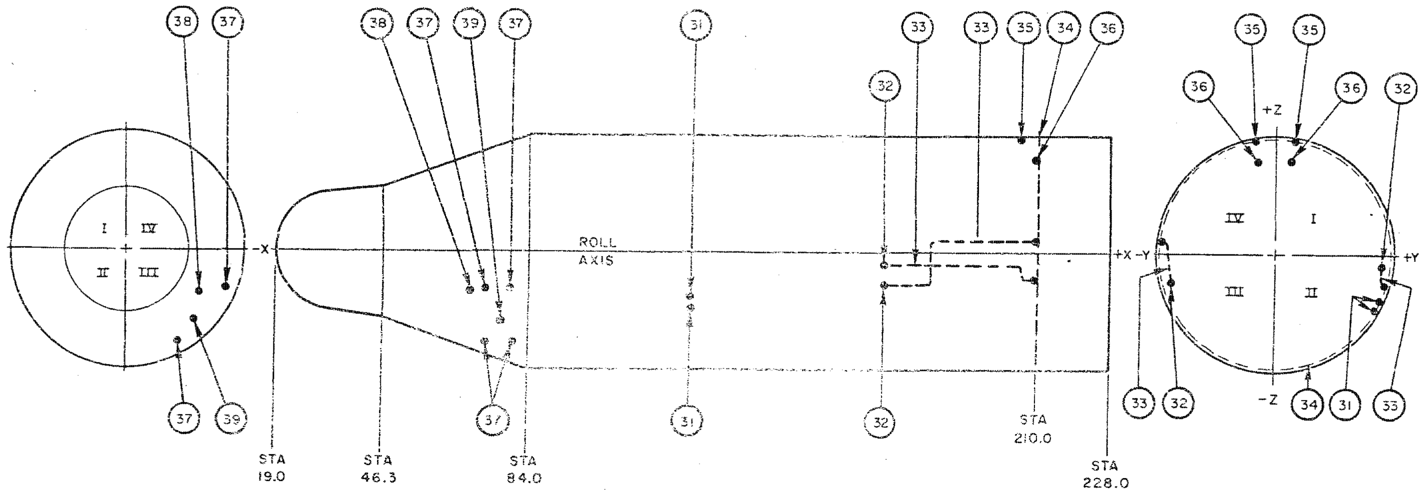
77

DRAWINGS - ORDNANCE (SATELLITE VEHICLE)

5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT CODE: NONE	7. SYSTEM CODE: 206	8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169	2. PAGE: 156.2; 3. DATE: 22 October 1962; 4. REPLACES PAGE(S): 156.2 DATED 1 May 1962

10. OUTLINE DRAWING SHOWING LOCATION OF ALL ORDNANCE ITEMS AND SUBSYSTEMS

11. SCHEMATIC OF FIRING CIRCUITS



HAD-PMR-0800/00 (REV. 3-61)

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

SYSTEM FUNCTIONAL DESCRIPTION (ATLAS)			1. SECURITY CLASSIFICATION	2. PAGE 159
				3. DATE 22 October 1962
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT CODE: NONE	7. SYSTEM CODE: 206	8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169	4. REPLACES PAGE(S): 159 DATED 1 May 1962

10. SUB SYSTEM/MAJOR COMPONENT	11. FUNCTIONAL CHARACTERISTICS	12. WEAPON SYSTEM FUNCTIONAL BLOCK DIAGRAM
AIRFRAME SUBSYSTEM	The Atlas missile is a hypersonic, long range, 1½-stage vehicle propelled by a liquid-fuel rocket engine system consisting of one booster, one sustainer, and two vernier engines. The missile is approximately 65 feet long and 10 feet in diameter, and consists primarily of two propellant tanks, a booster thrust structure, a booster separation system, and two electronic equipment pods. There are no external aerodynamic control surfaces. Stabilization and directional control in pitch, yaw, and roll is effected by gimbaling the engine thrust chambers. All electronic equipment, wiring, and propellant lines are located externally on the propellant tanks.	in contact with the aft periphery of the bulkhead, to jell due to the low temperature. The aft, or fuel tank bulkhead seals off the fuel tank and transmits the sustainer loads to the airframe through a sustainer thrust cone. The booster thrust structure adapter ring is sealed to the fuel tank at Station 1133. NOTE: The liquid oxygen tank differs from the "D" R and D in that the first nine skin sections (Sta. 502.00 to Sta. 667.00) were increased in thickness in order to provide additional strength for support of the satellite vehicle. Two equipment pods housing the missile electronic and electrical equipment are mounted on the Y-axis of the missile tank section. The Number One pod is located between Quadrants I and IV and the Number Two, or stub, pod is located between Quadrants II and III. A small bump pod which houses the missile rate gyros is located just forward of the Number One pod at Station 675. The two vernier engine thrust chambers are mounted at Station 1130 on the X-axis. NOTE: See PRD, 151.1 Note revising location of gyros for first four (4) missiles.
1. Propellant Tanks	The two propellant tanks are manufactured from thin stainless steel and are of all-welded monocoque-type construction requiring internal pressurization for structural strength and body rigidity. The tanks are sealed off by three bulkheads. The forward bulkhead at Station 502 seals off the liquid oxygen tank and has an access door and a liquid oxygen boil-off valve. The intermediate bulkhead separates the two propellant chambers and is an ellipsoidal shell composed of 0.020 in., 3/4 hard gauge stainless steel and mounted in the tank section at Station 960. An insulating blanket is attached to the aft concave surface of the bulkhead to 1) reduce the amount of liquid oxygen boil-off due to heat transfer and 2) retard the tendency of the fuel, which is	

IND-PNR-8800/101 (REV. 3-61) 79		1. SECURITY CLASSIFICATION	9. REVISION NO. 1

SYSTEM FUNCTIONAL DESCRIPTION (ATLAS)			1. SECURITY CLASSIFICATION	2. PAGE 159.1 3. DATE 22 October 1962 4. REPLACES PAGE(S) 159.1
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT CODE: NONE	7. SYSTEM CODE: 206	8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169	DATED 1 May 1962

10. SUB SYSTEM/MAJOR COMPONENT	11. FUNCTIONAL CHARACTERISTICS	12. WEAPON SYSTEM FUNCTIONAL BLOCK DIAGRAM
2. Booster Thrust Structure	The booster engine thrust structure and associated equipment is attached to the aft end of the body section by a separation mechanism which releases and separates at staging via jettison tracts, and consists of a thrust cylinder, nacelle, and fairing installation which forms a single compartment housing the propulsion system and its associated equipment. A radiation shield protects the inner aft section from the heat generated by the booster and sustainer engines.	
3. First Stage Separation System	The first stage separation system is a mechanical linkage which secures the booster structure to the main airframe structure during the first stage of flight and subsequently releases it at staging. The system consists essentially of ten jettison fittings between the booster thrust structure and the tank section adapter ring, a pneumatic tubing manifold interconnecting all the jettison fittings, a twin explosive-type pneumatic valve, and associated wiring. Operation of this system is initiated by the autopilot programmer at the end of the booster-stage flight. After release, gravitational and pressurized first stage disconnect forces combine to jettison the booster thrust structure.	

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SYSTEM FUNCTIONAL DESCRIPTION (ATLAS)			SECURITY CLASSIFICATION	2. PAGE 159.2 3. DATE 22 October 1962 4. REPLACES PAGE(S) 159.2 DATED 1 May 1962
5. PROGRAM TITLE PROGRAM 206	6. PROGRAM REQUIREMENT CODE NONE	7. SYSTEM CODE 206	8. CONTRACTOR/CONTRACT NUMBER Aerospace AF04(695)-219	

10. SUB SYSTEM/MAJOR COMPONENT	11. FUNCTIONAL CHARACTERISTICS	12. WEAPON SYSTEM FUNCTIONAL BLOCK DIAGRAM
PNEUMATIC SUBSYSTEM	The two prime functions of the pneumatic subsystem are to pressurize the vehicle propellant tanks and to provide pressure to actuate the engine controls. During ground operations helium is furnished at the desired pressure from a ground source. At launching and during flight helium for tank pressurization and engine control is supplied from spherical storage tanks located in the booster-engine section. The stored helium is chilled by liquid nitrogen before flight to increase its density two and one-half times, which allows storage of a greater weight of helium without a corresponding increase in storage volume. Prior to use the helium passes through a heat exchanger. Other uses of the helium are to pressurize the vernier-engine propellant tanks, lubricant tank, and hydraulic reservoir, actuate first-stage separation devices, and exclude propellants from the propellant utilization lines and manometers.	

(IND-PHR-6800/101 (REV. 3-61)
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NRD

1. SECURITY CLASSIFICATION	9. REVISION NO.
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SYSTEM FUNCTIONAL DESCRIPTION (ATLAS)			1. SECURITY CLASSIFICATION	2. PAGE 159.3 3. DATE 22 October 1962 4. REPLACES PAGE(S) 159.3 DATED 1 May 1962
5. PROGRAM TITLE PROGRAM 206	6. PROGRAM REQUIREMENT CODE NONE	7. SYSTEM CODE 206	8. CONTRACTOR/CONTRACT NO. Aerospace AF04(695)-169	

10. SUB SYSTEM/MAJOR COMPONENT	11. FUNCTIONAL CHARACTERISTICS	12. WEAPON SYSTEM FUNCTIONAL BLOCK DIAGRAM
FLIGHT CONTROL SUB-SYSTEM	The flight control subsystem provides a means for stabilization and directional control of the missile during the powered portion of flight by thrust vector directional control. Steering commands are generated by the flight programmer from launch until Atlas staging and by the flight programmer and guidance subsystem from staging until the end of powered flight. The flight control subsystem consists of a flight programmer package, a gyro package, a servo/amplifier/filter package, an excitation transformer package, and ten hydraulic servocylinders. The flight programmer performs the two prime functions of implementing the roll and pitch program, and timing the issuance of programmed commands to the control system. Inputs to the programmer from the guidance subsystem are discrete commands for staging, sustainer-engine cutoff, and vernier-engine cutoff, in addition to steering signals. The gyro package consists of three control channels for pitch, yaw, and roll. Each channel contains a gyro and a gyro signal amplifier. The rate gyros are physically housed in a separate package which is located to minimize its sensitivity to local bending modes. The servoamplifier/filter package consists of two portions, one incorporating three filter networks, one for each channel, and the other ten servoamplifiers, one for each engine actuator.	

SYSTEM FUNCTIONAL DESCRIPTION (ATLAS)			1. SECURITY CLASSIFICATION	2. PAGE 159.4 3. DATE 22 October 1962 4. REPLACES PAGE(S) 159.4
5. PROGRAM TITLE PROGRAM 206	6. PROGRAM REQUIREMENT CODE NONE	7. SYSTEM CODE 206	8. CONTRACTOR/CONTRACT NUMBER Aerospace AF04(695)-169	DATED 1 May 1962

10. SUB SYSTEM/MAJOR COMPONENT	11. FUNCTIONAL CHARACTERISTICS	12. WEAPON SYSTEM FUNCTIONAL BLOCK DIAGRAM
PROPULSION SUBSYSTEM	The three sub-engine assemblies composing the MA-5 rocket engine are dual YLR89-NA-7 low-altitude booster rocket engines, an YLR105-NA-7 high-altitude sustainer rocket engine, and two YLR101-NA-13 vernier rocket engines for roll, directional, and velocity trim. These assemblies together with electrical harnesses, interconnect lines, and the necessary start system components combine to form the MA-5 propulsion system. The design of the system is such that the various engines can be installed and removed independently of each other. Each of the rocket engines develops thrust by burning turbopump-fed liquid oxygen and RP-1 propellants. The vernier engines are fed propellants from the sustainer engine turbopump during mainstage, with small pressurized propellant tanks providing starting and solo operation following sustainer cutoff. Each thrust chamber attaches to the missile structure by a gimbal assembly which permits freedom of movement for directional control. Since the propulsion system is not designed for variable thrust, the rocket engine performance is demonstrated at specified rated thrust settings. A single-element heat exchanger in the gas generator exhaust system of the sustainer engine is available for heating missile gas supplies. Drives for hydraulic pumps are provided on the booster and sustainer turbopump accessory pads.	

IIND-PNR-880G/101 (REV. 3-61)		1. SECURITY CLASSIFICATION	9. REVISION NO.
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SYSTEM FUNCTIONAL DESCRIPTION (ATLAS)			1. SECURITY CLASSIFICATION	2. PAGE 159.5 3. DATE 22 October 1962 4. REPLACES PAGE(S) 159.5 DATED 1 May 1962
5. PROGRAM TITLE PROGRAM 206	6. PROGRAM REQUIREMENT CODE NONE	7. SYSTEM CODE 206	8. CONTRACTOR/CONTRACT NUMBER Aerospace AF04(695)-169	

10. SUB SYSTEM/MAJOR COMPONENT	11. FUNCTIONAL CHARACTERISTICS	12. WEAPON SYSTEM FUNCTIONAL BLOCK DIAGRAM
PROPELLANT UTILIZATION SUBSYSTEM	The propellant utilization (PU) subsystem provides a means of controlling propellant flow more accurately than would be possible by means of the fixed metering orifices in the propellant-feed system. Such control is necessary because unbalanced utilization of propellants by the engines might limit the performance of the vehicle. Therefore, propellant consumption is scheduled to result in minimum residual propellants. The scheduling is accomplished by a propellant utilization valve installed in the sustainer-engine fuel line. This valve is capable of causing a change of ± 15 percent in the propellant mixture ratio for the sustainer engine. The PU subsystem senses the mass of the propellants in the tanks by means of manometers. The manometer transducer outputs are compared electronically with a reference. Any error in the comparison is used to adjust the position of the PU valve to correct the mass ratio of the residual propellants.	

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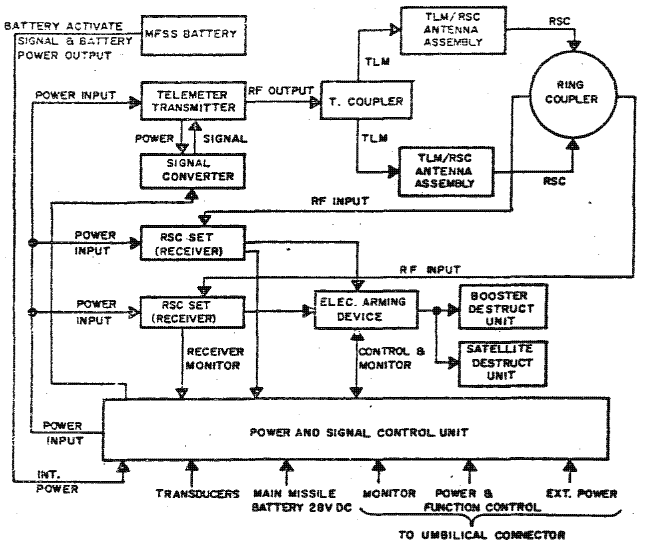
SYSTEM FUNCTIONAL DESCRIPTION (ATLAS)			1. SECURITY CLASSIFICATION	2. PAGE 159.6
				3. DATE 22 October 1962
				4. REPLACES PAGE(S) 159.6
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT CODE: NONE	7. SYSTEM CODE: 206	8. CONTRACTOR/CONTRACT NUMBER: Aerospace AFO4(695)-169	DATED 1 May 1962

10. SUB SYSTEM/MAJOR COMPONENT	11. FUNCTIONAL CHARACTERISTICS	12. WEAPON SYSTEM FUNCTIONAL BLOCK DIAGRAM
MISSILE FLIGHT SAFETY SUBSYSTEM	The booster vehicle will contain a compact range safety and telemeter kit. The kit makes up the missile flight safety subsystem. Although the range safety portion operates independently of the telemetering the two functions are interrelated from the standpoint of reliable range safety operation in that telemetry carrier reception at the ground stations provides necessary missile position and impact data.	

IIND-PHR-8800/101 (REV. 3-61)	1. SECURITY CLASSIFICATION	9. REVISION NO.
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SYSTEM FUNCTIONAL DESCRIPTION (ATLAS)			1. SECURITY CLASSIFICATION	2. PAGE 159.7 3. DATE 22 October 1962 4. REPLACES PAGE(S) 159.7
5. PROGRAM TITLE PROGRAM 206	6. PROGRAM REQUIREMENT CODE NONE	7. SYSTEM CODE 206	8. CONTRACTOR/CONTRACT NUMBER Aerospace AFO4(695)-169	DATED 1 May 1962

10. SUB SYSTEM/MAJOR COMPONENT	11. FUNCTIONAL CHARACTERISTICS	12. WEAPON SYSTEM FUNCTIONAL BLOCK DIAGRAM
RANGE SAFETY COMMAND	The Range Safety Command (RSC) portion of the subsystem has as its sole purpose the destruction of the flight vehicle in case erratic flight jeopardizes life or property. Destruction of the booster vehicle is accomplished by sending a specially modulated FM signal from the ground to the missileborne receivers; there, the signal is decoded and converted into a destruct command. An explosive charge (located outside the intermediate bulkhead) is detonated by the destruct signal, rupturing the propellant tanks and causing fuel and oxidizer to mix. When the propellants mix, a massive explosion occurs which totally destroys the booster vehicle. The Agena D vehicle will be destroyed in a similar manner by detonating an explosive charge located adjacent to the propellant tanks. The range safety command portion of the Atlas MFSS has been modified to be compatible with the destruct system of the Agena D. The latter is of command and lock-out design and can be actuated either by a ground-initiated command through the booster range safety command system, which will destroy booster and Agena D simultaneously, or as an automatic function resulting from premature separation during the boost phase, which will destroy only the Agena D. The Agena D destruct circuit is disabled at sustainer engine cutoff so that intentional separation of the Agena D will not initiate destructions.	The booster vehicle portion of the Flight Termination Subsystem (PRD 154.1) is composed of two receiver sets (each in turn composed of a receiver, decoder, logic circuitry, and a power supply), a ring coupler, an electric arming device, and a destructor unit. The subsystem also utilizes the antennas, the signal conditioner and power control unit, and the MFSS battery jointly with the Telemetry Subsystem. The Agena D-borne portion of the Flight Termination Subsystem consists of a destructor unit, the premature separation destruct mechanism, and the destruct circuitry. Two cross-baseline AME Cotar sites will be used for correlation tracking and ranging. The AME Cotar system is a passive missile-tracker using the RF radiation of the telemetry transmitter in the missile to measure the direction cosines between the space vectors to the missile from the center-lines of two cross-baseline ground-antenna fields. The AME Cotar System, in conjunction with the missileborne MFSS, provides the necessary trajectory data for determining impact points.

IIND-PWR-8800/101 (REV. 3-61) 86		1. SECURITY CLASSIFICATION	9. REVISION NO. 1

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SYSTEM FUNCTIONAL DESCRIPTION (ATLAS)			1. SECURITY CLASSIFICATION	2. PAGE 159.8 3. DATE 22 October 1962 4. REPLACES PAGE(S) 159.8
5. PROGRAM TITLE PROGRAM 206	6. PROGRAM REQUIREMENT CODE NONE	7. SYSTEM CODE 206	8. CONTRACTOR/CONTRACT NUMBER Aerospace AF04(695)-169	DATED 1 May 1962

10. SUB SYSTEM/MAJOR COMPONENT	11. FUNCTIONAL CHARACTERISTICS	12. WEAPON SYSTEM FUNCTIONAL BLOCK DIAGRAM
TELEMETRY	The telemetry portion of the subsystem monitors first-stage functions from before launch until after Atlas/Agena separation. The MFSS telemetry subsystem is modified to the extent of the addition of a signal conditioner/commutator package which is required for Channel 13. Channel 12 receives the axial string type accelerometer (U101A) output directly. A signal conditioner and power control package includes the function of a junction box, providing electrical matching of transducers to the government-furnished signal converter package and controlling power to the telemetry and range safety subsystems. The signal converter receives conditioned signals from the signal conditioner and power control unit and combines them into a signal which is fed to the transmitter. The signal converter chassis contains plug-in modules including a signal distribution unit, 7 subcarrier oscillator units, dual and single commutator units, a power converter, and a dual voltage regulator. The transmitter accepts a combined 7-channel signal which modulates the transmitter and is transmitted as a 25-watt FM/FM/rf carrier.	

IIND-PHR-8800/101 (REV. 3-61) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.	NRD	7. SECURITY CLASSIFICATION	9. REVISION NO. 1

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SYSTEM FUNCTIONAL DESCRIPTION (ATLAS)

1. SECURITY CLASSIFICATION

2. PAGE 159.9

3. DATE 22 October 1962

4. REPLACES PAGE(S) 159.9

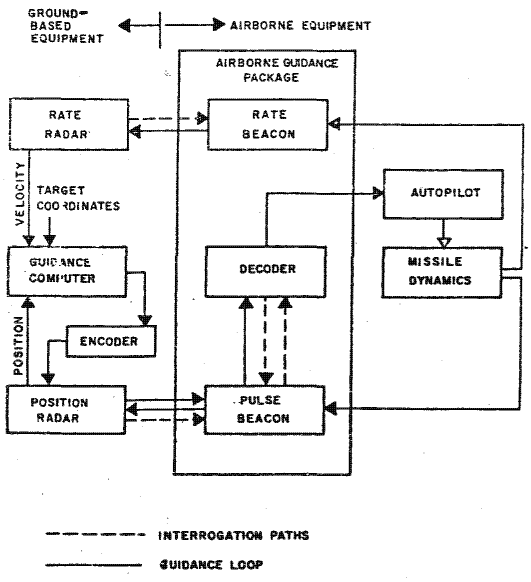
DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT: Aerospace AFO4(695)-169

10. SUB SYSTEM/MAJOR COMPONENT	11. FUNCTIONAL CHARACTERISTICS	12. WEAPON SYSTEM FUNCTIONAL BLOCK DIAGRAM
GE GUIDANCE SUBSYSTEM	The GE Mark II guidance subsystem is physically separable into the two areas of groundbased equipment and airborne equipment. The ground-based equipment consists of a monopulse X-band position radar, two outlying continuous-wave doppler rate receivers beside the central unit, and a digital guidance computer. The airborne equipment consists of a pulse beacon and a rate beacon which serve as the airborne transponders for the position and rate radars respectively, and a decoder which processes the guidance intelligence contained in the pulse train transmitted by the position radar.	

IIND-PWR-8800/101 (REV. 3-61)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

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NRD

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

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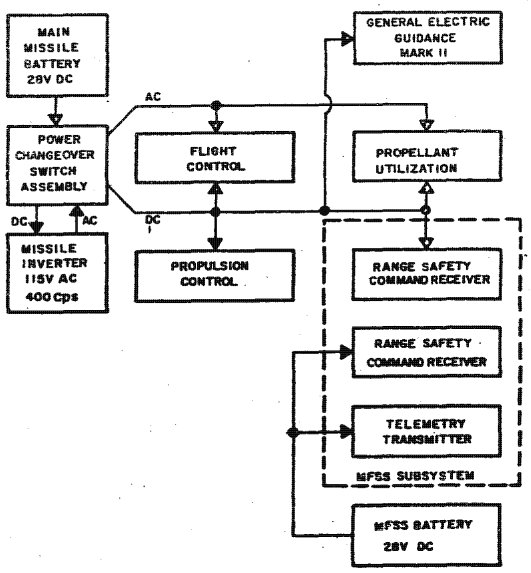
SYSTEM FUNCTIONAL DESCRIPTION (ATLAS)			1. SECURITY CLASSIFICATION	2. PAGE 159.10
				3. DATE 22 October 1962
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT CODE: NONE	7. SYSTEM CODE: 206	8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169	4. REPLACES PAGE(S): 159.10 DATED 1 May 1962

10. SUB SYSTEM/MAJOR COMPONENT	11. FUNCTIONAL CHARACTERISTICS	12. WEAPON SYSTEM FUNCTIONAL BLOCK DIAGRAM
MISSILE ELECTRICAL SUBSYSTEM	The missile electrical subsystem is composed of a 28v dc main missile battery and a 28v dc to 115v ac 3-phase 400-cps inverter. In addition, a changeover switch is provided for switching both ac and dc power from external to internal source through related cables and harnesses to the various canisters.	

IIND-PhR-8800/101 (REV. 3-61)		1. SECURITY CLASSIFICATION	9. REVISION NO.
PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.	NRD		1
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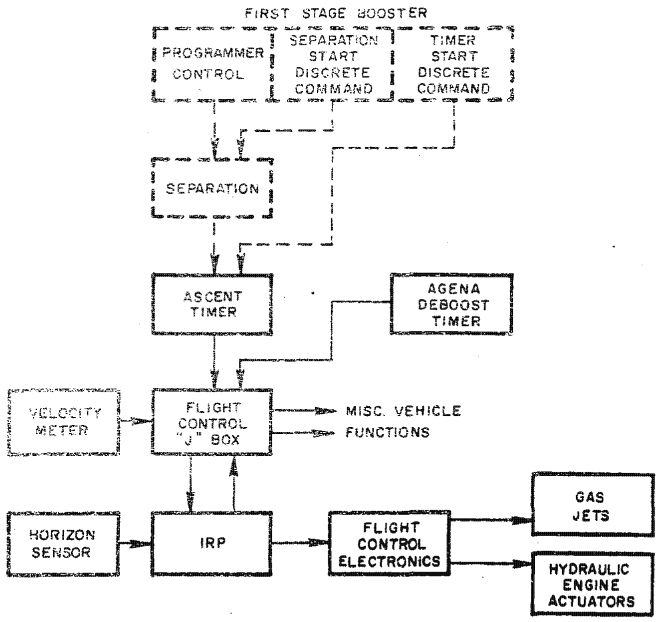
SYSTEM FUNCTIONAL DESCRIPTION (AGENA D)

1. SECURITY CLASSIFICATION

2. PAGE 159.11
3. DATE 22 October 1962
4. REPLACES PAGE(S) 159.11
DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACT/CPFF/IOC NUMBER: Aerospace AF04(695)-169

10. SUB SYSTEM/MAJOR COMPONENT	11. FUNCTIONAL CHARACTERISTICS	12. WEAPON SYSTEM FUNCTIONAL BLOCK DIAGRAM
AGENA VEHICLE		GUIDANCE SYSTEM
Airframe (See PRD 151.2 for inboard profile data)	The airframe is a monocoque assembly of aluminum and magnesium. The subsystem includes the forward equipment rack which contains various subsystem components used during launching and orbital life; propellant tanks and associated plumbing and umbilicals; rear equipment rack which includes separation devices, ullage rocket mounts, rocket engine mount, and gas pressure spheres. A booster adapter section includes retrorocket mounts and destruct pyrotechnics. The airframe subsystem includes the umbilical fittings, wiring harness, plumbing, and certain portions of the pneumatic and hydraulic system.	
Primary Propulsion	The satellite (Agena D) primary propulsion system utilizes a USAF YLR 81-BA-11 (Bell Model 8096) liquid-propellant rocket engine (rated thrust: 16000 lb). The propellants are IRFNA (Inhibited Red Fuming Nitric Acid) oxidizer and UDMH (unsymmetrical Di-Methyl Hydrazine) fuel. The engine is of single-thrust chamber design, gimballed for directional control in pitch and yaw, and has a dual start/burn capability. The primary system injects the vehicle into orbit.	



IND-PHR-8800/101 (REV. 3-61)
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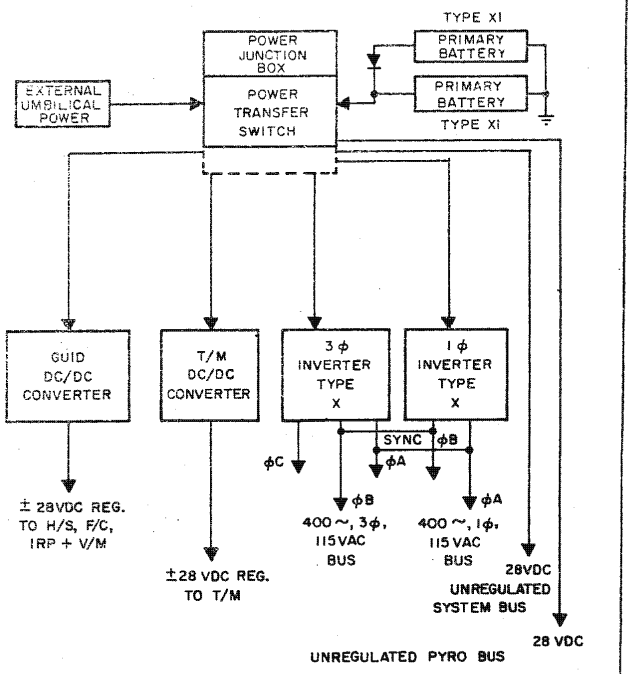
1. SECURITY CLASSIFICATION

9. REVISION NO. 1

SYSTEM FUNCTIONAL DESCRIPTION (AGENA D)

1. SECURITY CLASSIFICATION	2. PAGE 159.12
	3. DATE 22 October 1962
	4. REPLACES PAGE(S) 159.12 DATED 1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

10. SUB SYSTEM/MAJOR COMPONENT	11. FUNCTIONAL CHARACTERISTICS	12. WEAPON SYSTEM FUNCTIONAL BLOCK DIAGRAM
Auxiliary Power System	The basic 28 volt dc unregulated vehicle power is supplied by two Type IV primary batteries rated at 360 watt-hours and connected in parallel to give a total of 720 watt-hours in the range of 22.5 to 29.5 volts dc. One Type IV battery will be diode-isolated to supply 28 volts dc to the pyro bus. The vehicle subsystem power consists of two dc/dc converters: the guidance converter will supply ±28.3 volts dc ±1%, and the telemetry converter ±28.3 volts dc ±1%; single-phase, 400 cps, 115 volts ±1% for loads up to 100 watts; three-phase, 400 cps, 115 volts ±1% for balanced loads up to 200 watts. Two Type VI secondary batteries are provided to power the destruct system in the event of premature separation from the Stage I booster. One battery for each detonator supplies current at 7.5 volts.	

IIND-PHR-8800/101 (REV. 3-61)

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1. SECURITY CLASSIFICATION	9. REVISION NO.
	1

10778

SYSTEM FUNCTIONAL DESCRIPTION (AGENA D)			1. SECURITY CLASSIFICATION	2. PAGE 159.13 3. DATE 22 October 1962 4. REPLACES PAGE(S) 159.13
5. PROGRAM TITLE PROGRAM 206	6. PROGRAM REQUIREMENT CODE NONE	7. SYSTEM CODE 206	8. CONTRACTOR/CONTRACT NUMBER Aerospace AF04(695)-169	DATED 1 May 1962

10. SUB SYSTEM/MAJOR COMPONENT	11. FUNCTIONAL CHARACTERISTICS	12. WEAPON SYSTEM FUNCTIONAL BLOCK DIAGRAM
3. Missile Flight Safety Subsystem	Agena D Safety Subsystem Description The Agena D destruct charge will be detonated by a command destruct signal received through the first-stage booster command receiver. As a safeguard this destruct circuit employs 10-ohm current limiting resistors to provide additional rf energy interference protection and to limit the current supplied to the vehicle, thus assuring booster destruct in case of short circuiting of the squib circuit system. The Ledex switch is shown in the "Arm" position in the schematic diagram given in PRD 159.14. Premature Separation Destruct Premature separation of the first stage booster and the Agena D combination will initiate a destruct signal by means of the circuitry represented by the heavy lines in the PRD 159.14 schematic diagram. Two lanyard-operated separation switches, S-1 and S-2, act to close an auxiliary battery circuit, thus supplying energy to the destruct initiator squib through normally closed relay switches as indicated.	

IIND-PWR-8800/101 (REV. 3-61) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE. 92	NRD	1. SECURITY CLASSIFICATION	9. REVISION NO. 1

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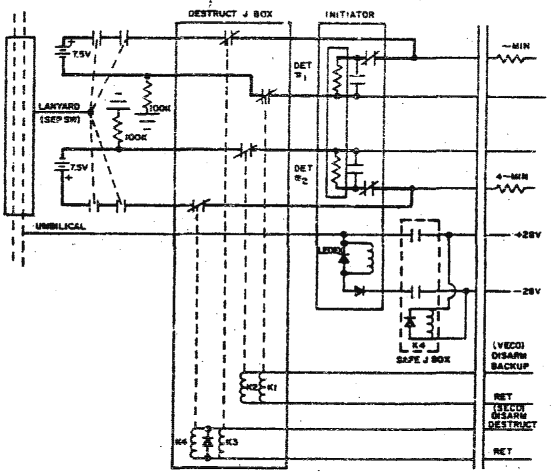
DRAWING - MISSILE OR TEST VEHICLE (AGENA D)

1. SECURITY CLASSIFICATION	2. PAGE 159.14
	3. DATE 22 October 1962
	4. REPLACES PAGE(S) 159.14
	DATED 1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF 04(695)-169

10. SKETCHES, DIAGRAMS, ETC.



Destruct System in Armed Position

AMD-PMR-880G/155 (REV. 3-61)
93

1. SECURITY CLASSIFICATION	9. REVISION NO.
	1

00778

SYSTEM FUNCTIONAL DESCRIPTION (AGENA D)

1. SECURITY CLASSIFICATION

2. PAGE 159.15

3. DATE 22 October 1962

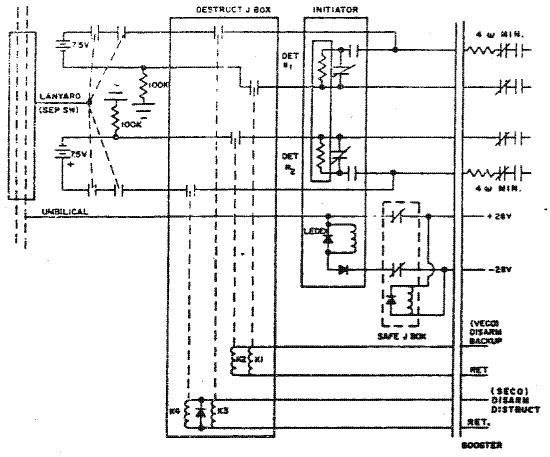
4. REPLACES PAGE(S) 159.15 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. SUB SYSTEM/MAJOR COMPONENT	11. FUNCTIONAL CHARACTERISTICS	12. WEAPON SYSTEM FUNCTIONAL BLOCK DIAGRAM
Mission Flight Safety Subsystem (Cont)	Destruct Disarm for Normal Separation In the course of normal flight sequence of events the booster discrete command system initiates a sustainer engine cutoff signal (SECO) which actuates the booster relay switch as indicated. The signal is received by Agena D Destruct J Box relays K4/K3 and K1/K2, which act to open the destruct circuit between the auxiliary batteries and the destruct initiator squib. Actuation of K4 Safe J Box relay also supplies a 28v dc signal to the Ledex safe/arm unit, which simultaneously breaks the squib firing circuits and places a short circuit across the squibs. Rotation of the Ledex switching unit also moves the firing train 90 degrees out of alignment with the initiator squib.	 Destruct System in Safe Position

IND-P-R-8800/101 (REV. 3-61)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

00778

SYSTEM FUNCTIONAL DESCRIPTION (AGENA D)			1. SECURITY CLASSIFICATION	2. PAGE 159.16 3. DATE 22 October 1962 4. REPLACES PAGE(S) 159.15
5. PROGRAM TITLE PROGRAM 206	6. PROGRAM REQUIREMENT CODE NONE	7. SYSTEM CODE 206	8. CONTRACTOR/CONTRACT NUMBER Aerospace AF04(695)-169	DATED 1 May 1962

10. SUB SYSTEM/MAJOR COMPONENT	11. FUNCTIONAL CHARACTERISTICS	12. WEAPON SYSTEM FUNCTIONAL BLOCK DIAGRAM
Guidance and Control (See block diagram PRD 159.11)	The Agena-D guidance and control subsystem includes equipment used from initial separation (booster/Agena) through the injection phase. Initial separation, although initially dependent on a booster guidance signal, is finally dependent on the ascent timer which has been started subsequent to booster SECO and prior to booster VECO by a signal from the booster guidance system. A booster signal also uncages vehicle guidance gyros and disarms the destruct charge (prior to separation). After separation and during ascent, Agena vehicle attitude reference is maintained by means of the IRP (intertial reference package) plus a horizon sensor. The Agena ascent timer provides the necessary start signals for the Agena engine as well as signals to initiate other vehicle functions. A velocity meter provides the signal for Agena engine cutoff. Agena flight control depends on gas reaction jets during Agena coast, roll gas jets plus engine gimballing during Agena boost, and gas reaction jets during the preseparation phase.	Guidance System (Diagram - Page 159.11)

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1. SECURITY CLASSIFICATION	9. REVISION NO.
	1

SYSTEM FUNCTIONAL DESCRIPTION (SATELLITE VEHICLE)			1. SECURITY CLASSIFICATION	2. PAGE 155 17 3. DATE 22 October 1962 4. REPLACES PAGE(S) Original DATED
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT CODE: NONE	7. SYSTEM CODE: 206	8. CONTRACTOR/CONTRACT NUMBER: Aerospace AFO4(695)-169	

10. SUB SYSTEM/MAJOR COMPONENT	11. FUNCTIONAL CHARACTERISTICS	12. WEAPON SYSTEM FUNCTIONAL BLOCK DIAGRAM
SATELLITE VEHICLE	The mission of the Atlas D and Agena D is to orbit a satellite vehicle. The total flight system consists of an Atlas D, an Agena D, and the satellite vehicle (SV). The complete flight system is assembled at the pad. The only interfaces existing between the SV and Agena are mechanical. Propellant loading, final countdown, and launch occurs at the pad, and is monitored and controlled from the LOB. High-pressure gases will be loaded at the VSB prior to final mating. The most important responsibility of the VAFB tracking station in participating in SV systems testing on the pad is loading of the initial flight program in the SV programmer during final countdown. The SV airborne clock is started at a prescribed time before launch. The Agena D and the SV are separated from the Atlas following initial boost and vernier cutoff, as previously described, and then coast to a designated altitude. During the coast, all fairing and hatches are ejected and the Agena control system reorients the vehicle into proper altitude prior to ignition. The Agena primary propulsion system is then ignited and commanded to shut down when the appropriate velocity has been attained. Injection altitude and velocity for standard operational flights will be biased	

IIND-PWR-8800/101 (REV. 3-61) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE. 96	NRD	1. SECURITY CLASSIFICATION	9. REVISION NO. 1

00778

SYSTEM FUNCTIONAL DESCRIPTION (SATELLITE VEHICLE)			1. SECURITY CLASSIFICATION	2. PAGE 159 .18
				3. DATE 22 October 1962
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT CODE: NONE	7. SYSTEM CODE: 206	8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169	4. REPLACES PAGE(S): Original DATED

10. SUB SYSTEM/MAJOR COMPONENT	11. FUNCTIONAL CHARACTERISTICS	12. WEAPON SYSTEM FUNCTIONAL BLOCK DIAGRAM
SATELLITE VEHICLE (Cont)	high to guarantee sufficient time to determine the ephemeris and apply a correction impulse before the orbit has decayed to an unbearable altitude. Nominally the correction will be velocity decrements. Agena/SV separation occurs after Agena cutoff. The separation signal is initiated by a stored command from the SV command programmer. A switch mounted on the section of the SV remaining on the Agena after separation signals the Agena when separation occurs. The orbit-adjust subsystem provides initial orbit correction and orbit correction as required during a mission.	

AMD-PWR-3800/101 (REV. 3-61)		1. SECURITY CLASSIFICATION	9. REVISION NO.
PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.	NRD		

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RANGE USER'S INSTRUMENTATION (ATLAS)			1. SECURITY CLASSIFICATION	2. PAGE 160
				3. DATE 22 October 1962
				4. REPLACES PAGE(S) 160
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT CODE: NONE	7. SYSTEM CODE: 206	8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169	DATED 1 May 1962

10. ITEM NO.	11. TEST CODE	12. BRIEF DESCRIPTION OF ALL RANGE USER'S ELECTRONIC, OPTICAL AND OTHER GROUND INSTRUMENTATION EQUIPMENT TO BE USED DURING THE TEST PROGRAM
1		GE Mark II ground guidance tracker position subsystem
2		GE Mark II ground guidance tracker rate subsystem
3		Telemetry receivers (2) - One located near MAB 3 and one located on hill near PALC 1
4		GE Mark II ground pulse radar receiver
5		GE Mark II ground rate sensing receivers

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1. SECURITY CLASSIFICATION	9. REVISION NO.
	1

11. SECURITY CLASSIFICATION	2. PAGE 160.1
RANGE USER'S INSTRUMENTATION (AGENA D)	3. DATE 22 October 1962
	4. REPLACES PAGE(S) 160.1
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206	8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169
	DATED 1 May 1962

10. ITEM NO.	11. TEST CODE	12. BRIEF DESCRIPTION OF ALL RANGE USER'S ELECTRONIC, OPTICAL AND OTHER GROUND INSTRUMENTATION EQUIPMENT TO BE USED DURING THE TEST PROGRAM
1	B,C,C	Rf antenna and test equipment to provide rf link between launch pad and telemetry stations.
2	A,B,C	VERLORT radar for providing tracking information in the form of azimuth and elevation angles and slant range with the aid of a vehicle-borne S-band transponder, as well as a command capability through use of command pulses.
3	A,B,C E,G	VHF telemetry receiving station for receiving telemetry data from the Agena.
4	A,B,C, E,G	Doppler transmitting and receiving station, including a VHF three-axis 60-foot parabolic antenna, for obtaining Doppler information on a non-interference basis.
5	A,B,F, E,G	TLM-18 autotracker for VHF telemetry and angle-tracking data.
6	A,B,C	Tri-helix antenna for acquisition of VHF telemetry signal.

IIND-PMR-8800/102 (REV. 3-61)	11. SECURITY CLASSIFICATION	9. REVISION NO.
99		1

11778

RANGE USER'S INSTRUMENTATION (G.E.)			1. SECURITY CLASSIFICATION	2. PAGE 160.2
				3. DATE 22 October 1962
				4. REPLACES PAGE(S) 160.2
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT CODE: NONE	7. SYSTEM CODE: 206	8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169	DATED 1 May 1962

10. ITEM NO.	11. TEST CODE	12. BRIEF DESCRIPTION OF ALL RANGE USER'S ELECTRONIC, OPTICAL AND OTHER GROUND INSTRUMENTATION EQUIPMENT TO BE USED DURING THE TEST PROGRAM
1	ABCGI	Satellite instrumentation ground monitor equipment (SIGME) (AGE End Item #88)

11ND-PMR-8800/102 (REV. 3-61)		13. SECURITY CLASSIFICATION	14. REVISION NO.
100	NRD		1

00778

INSTRUMENTATION - TRANSMITTERS (SURFACE/AIR/OTHER)(Atlas Rate Guidance)

2. PAGE 161
3. DATE 22 October 1962
4. REPLACES PAGE(S), 161 DATED 1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

10. TRANSMITTER CHARACTERISTICS

A. LOCATION: Mark II Ground Sta.

B. TYPE: Rate Subsystem
C. MODEL: Mark II
D. MANUFACTURER: General Electric
E. NUMBER OF EQUIPMENTS: One
[X] FIXED
[ ] MOBILE
F. TYPE OF SERVICE;
[ ] GND/GND. [X] GND/AIR. [ ] OTHER.

G. FREQUENCY RANGE: 1080-1170 MC
H. [ ] TUNABLE [X] FIXED TUNED
I. METHOD OF FREQUENCY CONTROL: Crystal
J. BANDWIDTH AT 3DB: MC,
AND AT 60DB: MC
K. EMISSION: [ ] AM, [ ] FM, [ ] PULSE,
[ ] COMPOSITE NONSTANDARD
L. FREQUENCY STABILITY: ± MC
M. AVERAGE POWER: 700 WATTS
N. PEAK PULSE POWER: WATTS
O. MAXIMUM PRF: PPS
P. PULSE WIDTHS: US, US, US
AT 3DB POINTS.
Q. HARMONIC SUPPRESSION; 2ND DB,
3RD DB, 4TH DB.
R. CODING AND/OR MODULATION: None

S. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS TRANSMITTER: [ ] YES [X] NO
(IF YES, PROVIDE ONE COPY)

NOTE: TRANSMITTING SYSTEMS WHICH REQUIRE EXTENSIVE PERIODS OF RF CHECKOUT TIME WILL BE REQUIRED TO BE EQUIPPED WITH A CLOSED LOOP OR NON-RADIATING CHECKOUT DEVISE.

11. ANTENNA CHARACTERISTICS

A. LOCATION: Mark II Ground Sta.

B. TYPE:
C. MODEL:
D. MANUFACTURER: General Electric
E. FREQUENCY RANGE: 1080-1170 MC
F. [ ] TUNABLE [X] FIXED TUNED
G. PREDOMINANT POLARIZATION; (CHECK ONLY ONE)
[X] VERTICAL
[ ] HORIZONTAL
[ ] CIRCULAR: SENSE: [ ] LH [ ] RH
[ ] OTHER
H. MAXIMUM GAIN IN DB WITH RESPECT TO ISOTROPIC: 20 DB
I. MAIN LOBE BEAMWIDTH IN DEGREES AT 3DB POINTS; ELEVATION 5° , AZIMUTH 5°
J. RATE OF ROTATION - INDICATE IF FIXED RPM, [ ] FIXED
K. IS THERE AVAILABLE A SPECTRUM RESPONSE REPORT ON THIS ANTENNA? [ ] YES [X] NO
(IF YES, PROVIDE ONE COPY)

12. PURPOSE AND REMARKS

TEST CODE:

IND-PMR-8800/103 (REV. 3-61)

101

NRD

I. SECURITY CLASSIFICATION

9. REVISION NO. 1

INSTRUMENTATION - TRANSMITTERS (SURFACE/AIR/OTHER)(Atlas Position Guidance)

1. SECURITY CLASSIFICATION:

2. PAGE 161 .1

3. DATE 22 October 1962

4. REPLACES PAGE(S) 161.1 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. TRANSMITTER CHARACTERISTICS

A. LOCATION: Mark II Ground Sta.

B. TYPE: Magnitron

C. MODEL: Mark II

D. MANUFACTURER: General Electric

E. NUMBER OF EQUIPMENTS:
- [X] FIXED
- [ ] MOBILE

F. TYPE OF SERVICE:
- [ ] GND/GND. [X] GND/AIR. [ ] OTHER.

G. FREQUENCY RANGE: 8500-9600 MC

H. [ ] TUNABLE [X] FIXED TUNED

I. METHOD OF FREQUENCY CONTROL:

J. BANDWIDTH AT 3DB: MC,
AND AT 60DB: MC

K. EMISSION: [ ] AM, [ ] FM, [X] PULSE,
[ ] COMPOSITE NONSTANDARD

L. FREQUENCY STABILITY: ± MC

M. AVERAGE POWER: WATTS

N. PEAK PULSE POWER: 65K WATTS

O. MAXIMUM PRF: 140 messages/sec PPS

P. PULSE WIDTHS: 0.5 US, US, US
AT 3DB POINTS.

Q. HARMONIC SUPPRESSION: 2ND DB,
3RD DB, 4TH DB.

R. CODING AND/OR MODULATION:
14-Pulse message

S. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS TRANSMITTER: [ ] YES [X] NO
(IF YES, PROVIDE ONE COPY)

NOTE: TRANSMITTING SYSTEMS WHICH REQUIRE EXTENSIVE PERIODS OF RF CHECKOUT TIME WILL BE REQUIRED TO BE EQUIPPED WITH A CLOSED LOOP OR NON-RADIATING CHECKOUT DEVISE.

11. ANTENNA CHARACTERISTICS

A. LOCATION: Mark II Ground Sta.

B. TYPE: Hornfeed reflector

C. MODEL:

D. MANUFACTURER: General Electric

E. FREQUENCY RANGE: 8500-9600 MC

F. [ ] TUNABLE [X] FIXED TUNED

G. PREDOMINANT POLARIZATION: (CHECK ONLY ONE)
- [X] VERTICAL
- [ ] HORIZONTAL
- [ ] CIRCULAR: SENSE: [ ] LH [ ] RH
- [ ] OTHER

H. MAXIMUM GAIN IN DB WITH RESPECT TO ISOTROPIC: 40 DB

I. MAIN LOBE BEAMWIDTH IN DEGREES AT 3DB POINTS: ELEVATION 2° , AZIMUTH 2°

J. RATE OF ROTATION - INDICATE IF FIXED
variable RPM, [ ] FIXED

K. IS THERE AVAILABLE A SPECTRUM RESPONSE REPORT ON THIS ANTENNA? [ ] YES [X] NO
(IF YES, PROVIDE ONE COPY)

12. PURPOSE AND REMARKS

TEST CODE:

IND-PMR-8800/103 (REV. 3-61)
102

11. SECURITY CLASSIFICATION:

9. REVISION NO. 1

INSTRUMENTATION - TRANSMITTERS (SURFACE/AIR/OTHER) (VERLORT RADAR)

1. SECURITY CLASSIFICATION:

2. PAGE: 161.2

3. DATE: 22 October 1962

4. REPLACES PAGE(S): 161.2 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

TEST CODE:

10. TRANSMITTER CHARACTERISTICS

A. LOCATION: VTS

B. TYPE: Verlort

C. MODEL: SCR 584 (modified)

D. MANUFACTURER: Reeves (modification)

E. NUMBER OF EQUIPMENTS:
- ☐ FIXED
- ☒ MOBILE

F. TYPE OF SERVICE:
- ☐ GND/GND, ☒ GND/AIR, ☐ OTHER.

G. FREQUENCY RANGE: 2700-3000 MC

H. ☒ TUNABLE ☐ FIXED TUNED

I. METHOD OF FREQUENCY CONTROL: AFC crystal controlled

J. BANDWIDTH AT 3DB: MC,
AND AT 60DB: MC

K. EMISSION: ☐ AM, ☐ FM, ☒ PULSE, ☐ COMPOSITE NONSTANDARD

L. FREQUENCY STABILITY: ± 25 MC

M. AVERAGE POWER: 800 at 410 pps WATTS

N. PEAK PULSE POWER: 315 kw WATTS

O. MAXIMUM PRF: 630 PPS

P. PULSE WIDTHS: 0.8 US, ±0.1 US, US AT 3DB POINTS.

Q. HARMONIC SUPPRESSION; 2ND DB, 3RD DB, 4TH DB.

R. CODING AND/OR MODULATION: 3-pulse code

S. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS TRANSMITTER: ☐ YES ☒ NO (IF YES, PROVIDE ONE COPY)

NOTE: TRANSMITTING SYSTEMS WHICH REQUIRE EXTENSIVE PERIODS OF RF CHECKOUT TIME WILL BE REQUIRED TO BE EQUIPPED WITH A CLOSED LOOP OR NON-RADIATING CHECKOUT DEVISE.

11. ANTENNA CHARACTERISTICS

A. LOCATION: VTS

B. TYPE: 10-ft parabolic reflector

C. MODEL:

D. MANUFACTURER:

E. FREQUENCY RANGE: 2700-3000 MC

F. ☐ TUNABLE ☒ FIXED TUNED

G. PREDOMINANT POLARIZATION: (CHECK ONLY ONE)
- ☐ VERTICAL
- ☐ HORIZONTAL
- ☒ CIRCULAR: SENSE: ☐ LH ☐ RH
- ☐ OTHER

H. MAXIMUM GAIN IN DB WITH RESPECT TO ISOTROPIC: 37 DB

I. MAIN LOBE BEAMWIDTH IN DEGREES AT 3DB POINTS; ELEVATION 2.5° , AZIMUTH

J. RATE OF ROTATION - INDICATE IF FIXED
Not known RPM, ☐ FIXED

K. IS THERE AVAILABLE A SPECTRUM RESPONSE REPORT ON THIS ANTENNA? ☐ YES ☒ NO (IF YES, PROVIDE ONE COPY)

12. PURPOSE AND REMARKS

Tracking during launch phase

IND-PMR-6800/103 (REV. 3-61)

103

1. SECURITY CLASSIFICATION:

9. REVISION NO. 1

80778

INSTRUMENTATION - TRANSMITTERS (SURFACE/AIR/OTHER) (DOPPLER)

1. SECURITY CLASSIFICATION:

2. PAGE 161.3

3. DATE 22 October 1962

4. REPLACES PAGE(S) 161.3 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

TEST CODE:

10. TRANSMITTER CHARACTERISTICS

A. LOCATION: VTS

B. TYPE: CW, crystal-controlled

C. MODEL: Not known

D. MANUFACTURER: STL

E. NUMBER OF EQUIPMENTS:
- [X] FIXED
- [ ] MOBILE

F. TYPE OF SERVICE:
- [ ] GND/GND. [X] GND/AIR. [ ] OTHER.

G. FREQUENCY RANGE: 375.360 MC

H. [ ] TUNABLE [X] FIXED TUNED

I. METHOD OF FREQUENCY CONTROL: Crystal-controlled

J. BANDWIDTH AT 3DB: NA MC, AND AT 60DB: MC

K. EMISSION: [ ] AM, [ ] FM, [ ] PULSE, [ ] COMPOSITE NONSTANDARD x CW

L. FREQUENCY STABILITY: ± 0.0004 MC

M. AVERAGE POWER: 1000 WATTS

N. PEAK PULSE POWER: NA WATTS

O. MAXIMUM PRF: NA PPS

P. PULSE WIDTHS: NA US, US, US AT 3DB POINTS.

Q. HARMONIC SUPPRESSION: 2ND NA DB, 3RD DB, 4TH DB.

R. CODING AND/OR MODULATION: NA

S. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS TRANSMITTER: [ ] YES [X] NO (IF YES, PROVIDE ONE COPY)

NOTE: TRANSMITTING SYSTEMS WHICH REQUIRE EXTENSIVE PERIODS OF RF CHECKOUT TIME WILL BE REQUIRED TO BE EQUIPPED WITH A CLOSED LOOP OR NON-RADIATING CHECKOUT DEVISE.

11. ANTENNA CHARACTERISTICS

A. LOCATION: VTS

B. TYPE: 60', 3-axis parabolic

C. MODEL: Not known

D. MANUFACTURER: Philco

E. FREQUENCY RANGE: 375.360 MC

F. [ ] TUNABLE [X] FIXED TUNED

G. PREDOMINANT POLARIZATION: (CHECK ONLY ONE)
- [X] VERTICAL
- [X] HORIZONTAL
- OR [X] CIRCULAR: SENSE: [X] LH [ ] RH
- [ ] OTHER

H. MAXIMUM GAIN IN DB WITH RESPECT TO ISOTROPIC: 34 DB

I. MAIN LOBE BEAMWIDTH IN DEGREES AT 3DB POINTS: ELEVATION 5° , AZIMUTH 5°

J. RATE OF ROTATION - INDICATE IF FIXED: NA RPM, [ ] FIXED

K. IS THERE AVAILABLE A SPECTRUM RESPONSE REPORT ON THIS ANTENNA? [ ] YES [X] NO (IF YES, PROVIDE ONE COPY)

12. PURPOSE AND REMARKS

Required for positive indication of proper transponder operation at liftoff. Desired for Doppler range rate and angle track data until vehicle crosses horizon as seen from launch site.

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7. SECURITY CLASSIFICATION

9. REVISION NO. 1

INSTRUMENTATION - RECEIVERS (SURFACE/AIR/OTHERS) (ATLAS GUIDANCE)

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

1. SECURITY CLASSIFICATION:

2. PAGE 162

3. DATE 22 October 1962

4. REPLACES PAGE(S) 162 DATED 1 May 1962

TEST CODE:

10. RECEIVER CHARACTERISTICS	11. ANTENNA CHARACTERISTICS	12. PURPOSE AND REMARKS
A. LOCATION: VAFB	A. LOCATION: VAFB	Ground radio guidance subsystem used during Atlas D portion of powered flight.
B. TYPE: Rate subsystem	B. TYPE: 5-Station, cruciform	
C. MODEL: Mark II	C. MODEL: Mark II	
D. MANUFACTURER: General Electric	D. MANUFACTURER: General Electric	
E. NO. OF EQUIPMENTS - FIXED OR MOBILE: One fixed	E. DIRECTIVITY AND BEAMWIDTH IN AZIMUTH & ELEVATION - ½ POWER: $10^{o} \pm 2^{o}$	
F. RECEIVING FREQ. TOLERANCES IN PERCENTAGE: Not known	F. RATE OF ROTATION, INDICATE IF FIXED: Fixed	
G. METHOD OF RECEIVER FREQ. CONTROL: AFC	G. FREQ. RANGE OF ANTENNA: 2200-2300 Mc	
H. INTERMEDIATE FREQ.: 30 Mc	H. POLARIZATION: Vertical	
I. RCVR. SELECTIVITY IN DB-3DB, 20DB & 60DB: Not known	I. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS ANTENNA? ☐ YES ☒ NO	
J. RCVR. SENSITIVITY: -108 DBM		
K. LOCAL OSCILLATOR FREQUENCY (ABOVE OR BELOW): Not known		
L. SPURIOUS RESPONSE REJECTION: DB		
M. CODED AND/OR MODULATION: None		
N. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS RECEIVER? ☐ YES ☒ NO		
O. Receiving Frequency: 2300 ± 0.22 Mc		

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1. SECURITY CLASSIFICATION:

9. REVISION NO. 1

00778

INSTRUMENTATION - RECEIVERS (SURFACE/AIR/OTHERS) (ATLAS GUIDANCE)

1. SECURITY CLASSIFICATION

2. PAGE 162.1

3. DATE 22 October 1962

4. REPLACES PAGE(S) 162.1 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

TEST CODE:

10. RECEIVER CHARACTERISTICS	11. ANTENNA CHARACTERISTICS	12. PURPOSE AND REMARKS
A. LOCATION: VAFB	A. LOCATION: VAFB	Ground radio guidance subsystem used during Atlas D portion of powered flight
B. TYPE: Track subsystem	B. TYPE: Parabolic	
C. MODEL: Mark II	C. MODEL: II	
D. MANUFACTURER: General Electric	D. MANUFACTURER: General Electric	
E. NO. OF EQUIPMENTS - FIXED OR MOBILE: One fixed	E. DIRECTIVITY AND BEAMWIDTH IN AZIMUTH & ELEVATION - ½ POWER: Not known	
F. RECEIVING FREQ. TOLERANCES IN PERCENTAGE: Not known	F. RATE OF ROTATION, INDICATE IF FIXED: Not known	
G. METHOD OF RECEIVER FREQ. CONTROL: AFC	G. FREQ. RANGE OF ANTENNA: 8800-8950	
H. INTERMEDIATE FREQ.: 30 Mc	H. POLARIZATION: Vertical	
I. RCVR. SELECTIVITY IN DB-3DB, 20DB & 60DB: 6 Mc at 3 db	I. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS ANTENNA? ☐ YES ☒ NO	
J. RCVR. SENSITIVITY: Not known DBM		
K. LOCAL OSCILLATOR FREQUENCY (ABOVE OR BELOW): Not known		
L. SPURIOUS RESPONSE REJECTION: DB		
M. CODED AND/OR MODULATION: PCM		
N. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS RECEIVER? ☐ YES ☒ NO		
O. Receiving frequency: 8850 ± 20 Mc		

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

INSTRUMENTATION - RECEIVERS (SURFACE/AIR/OTHERS) (VHF TELEMETRY)

1. SECURITY CLASSIFICATION:

2. PAGE: 162.2

3. DATE: 22 October 1962

4. REPLACES PAGE(S): 162.2 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

TEST CODE:

10. RECEIVER CHARACTERISTICS	11. ANTENNA CHARACTERISTICS	12. PURPOSE AND REMARKS
A. LOCATION: TLM trailer	A. LOCATION: TLM trailer	Receive telemetry signals from Atlas D during checkout and flight.
B. TYPE: Special purpose	B. TYPE: Helical	
C. MODEL: 1412	C. MODEL:	
D. MANUFACTURER: Nems Clark	D. MANUFACTURER: Nems Clark	
E. NO. OF EQUIPMENTS - FIXED OR MOBILE: 2 trailers (mobile)	E. DIRECTIVITY AND BEAMWIDTH IN AZIMUTH & ELEVATION - ∮ POWER: 38-45°	One trailer parked at remote site (near launch site).
F. RECEIVING FREQ. TOLERANCES IN PERCENTAGE: ±0.01	F. RATE OF ROTATION, INDICATE IF FIXED: Manual	One trailer parked at MAB VAFB.
G. METHOD OF RECEIVER FREQ. CONTROL: Crystal	G. FREQ. RANGE OF ANTENNA: 215-260 Mc	
H. INTERMEDIATE FREQ.: 30 Mc - 5 Mc	H. POLARIZATION: LH (circular)	
I. RCVR. SELECTIVITY IN DB-3DB, 20DB & 60DB: 28 db	I. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS ANTENNA? ☐ YES ☒ NO	
J. RCVR. SENSITIVITY: 2 μv DBM		
K. LOCAL OSCILLATOR FREQUENCY (ABOVE OR BELOW) 30 Mc		
L. SPURIOUS RESPONSE REJECTION: 60 DB		
M. CODED AND/OR MODULATION: MOD/FM		
N. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS RECEIVER? ☐ YES ☒ NO		
O. Receiving Frequency: 249.9 Mc		

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1. SECURITY CLASSIFICATION:

9. REVISION NO.: 1

INSTRUMENTATION - RECEIVERS (SURFACE/AIR/OTHERS)
(TLM-18 TELEMETRY)

2. PAGE	152.3
3. DATE	22 October 1962
4. REPLACES PAGE(S)	162.3
DATED	1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

10. RECEIVER CHARACTERISTICS

A. LOCATION: VAFB - VTS
B. TYPE: VHF FM/FM telemetry
C. MODEL: 1302A
D. MANUFACTURER: Nems Clark
E. NO. OF EQUIPMENTS - FIXED ~~////~~ 3
F. RECEIVING FREQ. TOLERANCES IN PERCENTAGE: 1%
G. METHOD OF RECEIVER FREQ. CONTROL: AFC, crystal control
H. INTERMEDIATE FREQ.: 30 Mc
I. RCVR. SELECTIVITY IN DB-3DB, ~~////~~ & 60DB: 300 kc
J. RCVR. SENSITIVITY: DBM
K. LOCAL OSCILLATOR FREQUENCY (ABOVE OR BELOW):
L. SPURIOUS RESPONSE REJECTION: DB
M. ~~////~~ MODULATION: FM/MF
N. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS RECEIVER? [X] YES [ ] NO

O. Receiving Frequencies:

228.2 Mc
231.4 Mc
235 Mc
248.6 Mc
258 5 Mc

11. ANTENNA CHARACTERISTICS

A. LOCATION: VAFB - VTS
B. TYPE: VHF, 60 ft parabolic
C. MODEL: TLM-18 R1162
D. MANUFACTURER: Kennedy
E. DIRECTIVITY AND BEAMWIDTH IN AZIMUTH & ELEVATION - ½ POWER: 7.6 deg
F. RATE OF ROTATION, INDICATE IF FIXED: Auto track 6 deg per second
G. FREQ. RANGE OF ANTENNA: 215-260 Mc
H. POLARIZATION: Rotating linear/conical scan
I. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS ANTENNA? [X] YES [ ] NO

12. PURPOSE AND REMARKS

Receive telemetry signals from missile during checkout and flight.

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7. SECURITY CLASSIFICATION

9. REVISION NO. 1

16778

INSTRUMENTATION - RECEIVERS (SURFACE/AIR/OTHERS) (VERLORT RADAR)

1. SECURITY CLASSIFICATION:

2. PAGE: 162.4

3. DATE: 22 October 1962

4. REPLACES PAGE(S): 162.4 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

TEST CODE:

10. RECEIVER CHARACTERISTICS	11. ANTENNA CHARACTERISTICS	12. PURPOSE AND REMARKS
A. LOCATION: VAFB - VTS	A. LOCATION: VAFB - VTS	Tracking during launch phase
B. TYPE: Verlort	B. TYPE: 10' Parabolic reflector	
C. MODEL: SCR 584 (modified)	C. MODEL: Not known	
D. MANUFACTURER: Reeves (modification)	D. MANUFACTURER: Not known	
E. NO. OF EQUIPMENTS - FIXED OR MOBILE: 1	E. DIRECTIVITY AND BEAMWIDTH IN AZIMUTH & ELEVATION - ½ POWER: 7 deg. (during nutation) 2.5° beam width for dish	
F. RECEIVING FREQ. TOLERANCES IN PERCENTAGE: 2800-3000	F. RATE OF ROTATION, INDICATE IF FIXED: Not known	
G. METHOD OF RECEIVER FREQ. CONTROL: (AFC-Crystal Controlled Local Oscillator)	G. FREQ. RANGE OF ANTENNA: 2700-3000	
H. INTERMEDIATE FREQ. 30 Mc	H. POLARIZATION: Rotating linear/conical scan	
I. RCVR. SELECTIVITY IN DB-3DB, 20DB & 60DB:	I. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS ANTENNA? ☐ YES ☒ NO	
J. RCVR. SENSITIVITY: (Approx.) -90 DBM		
K. LOCAL OSCILLATOR FREQUENCY (ABOVE OR ~~BELOW~~):		
L. SPURIOUS RESPONSE REJECTION: Not known DB		
M. CODED AND/OR MODULATION: N/A		
N. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS RECEIVER? ☒ YES ☐ NO		
O. Receiving Frequency: 2920 Mc		

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1. SECURITY CLASSIFICATION:

9. REVISION NO.: 1

CC 771

INSTRUMENTATION - RECEIVERS (SURFACE/AIR/OTHERS) (DOPPLER)

2. PAGE	162.5
3. DATE	22 October 1962
4. REPLACES PAGE(S)	162.5
DATED	1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

10. RECEIVER CHARACTERISTICS

A. LOCATION: VAFB

B. TYPE: Coherent, phase-locked, cw

C. MODEL: Not known

D. MANUFACTURER: Not known

E. NO. OF EQUIPMENTS - FIXED OR MOBILE: Not known, fixed

F. RECEIVING FREQ. TOLERANCES IN PERCENTAGE: ±.01% including Doppler

G. METHOD OF RECEIVER FREQ. CONTROL: Phase

H. INTERMEDIATE FREQ.: 20 Mc and 5 Mc

I. RCVR. SELECTIVITY IN DB-3DB, 20DB & 60DB: Not known

J. RCVR. SENSITIVITY: -155 DBM

K. LOCAL OSCILLATOR FREQUENCY (ABOVE OR BELOW): Above

L. SPURIOUS RESPONSE REJECTION: 60 DB

M. CODED AND/OR MODULATION: None

N. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS RECEIVER? ☐ YES ☒ NO

O. Receiving Frequency: 400.384 Mc

11. ANTENNA CHARACTERISTICS

A. LOCATION: VAFB

B. TYPE: 60-ft, 3-axis, diplexed with xmitter described on PRD 161

C. MODEL: Not known

D. MANUFACTURER: Philco

E. DIRECTIVITY AND BEAMWIDTH IN AZIMUTH & ELEVATION - ½ POWER: 5°

F. RATE OF ROTATION, INDICATE IF FIXED: No

G. FREQ. RANGE OF ANTENNA: 350 to 450 Mc

H. POLARIZATION: Vertical, horizontal, or circular

I. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS ANTENNA? ☐ YES ☒ NO

12. PURPOSE AND REMARKS

Required for positive indication of proper transponder operation at liftoff. Desired for Doppler range rate and angle track data until vehicle crosses horizon as seen from launch site.

IND-PMR-8800/104 (REV. 3-61)

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SECURITY CLASSIFICATION

9. REVISION NO.

INSTRUMENTATION - RECEIVERS (SURFACE/AIR/OTHERS)

1. SECURITY CLASSIFICATION:

2. PAGE: 162 of 6

3. DATE: 22 October 1962

4. REPLACES PAGE(S) DATED: Original

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

TEST CODE:

10. RECEIVER CHARACTERISTICS	11. ANTENNA CHARACTERISTICS	12. PURPOSE AND REMARKS
A. LOCATION: MAB 3 Addition; LOB at PALC II B. TYPE: VHF C. MODEL: 1671 D. MANUFACTURER: Nems Clarke E. NO. OF EQUIPMENTS - FIXED OR MOBILE: Two per unit, fixed F. RECEIVING FREQ. TOLERANCES IN PERCENTAGE: 175-260 Mc G. METHOD OF RECEIVER FREQ. CONTROL: VFO H. INTERMEDIATE FREQ.: 21.4 Mc I. RCVR. SELECTIVITY IN DB-3DB, 20DB & 60DB: J. RCVR. SENSITIVITY: 8 μv for 23db S/N DBM K. LOCAL OSCILLATOR FREQUENCY (ABOVE OR ~~BELOW~~): L. SPURIOUS RESPONSE REJECTION: Later DB M. CODED AND/OR MODULATION: FM N. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS RECEIVER? ☐ YES ☒ NO	A. LOCATION: MAB 3 B. TYPE: VHF-BIFILAR HELIX C. MODEL: D. MANUFACTURER: E. DIRECTIVITY AND BEAMWIDTH IN AZIMUTH & ELEVATION - ½ POWER: F. RATE OF ROTATION, INDICATE IF FIXED: Fixed G. FREQ. RANGE OF ANTENNA: 215-260 Mc H. POLARIZATION: I. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS ANTENNA? ☐ YES ☐ NO	Item 88: Satellite instrument; ground monitor equipment (SIGME) T/M system checker

IND-PMR-8800/104 (REV. 3-61)

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1. SECURITY CLASSIFICATION:

9. REVISION NO.:

CC778

OCCUPATIONAL HAZARDS - MEDICAL (ATLAS)

1. SECURITY CLASSIFICATION

2. PAGE 170
3. DATE 22 October 1962
4. REPLACES PAGE(S) 170

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169
DATED 1 May 1962

10. ITEM NO.	11. TEST CODE	12. REPORT DATE	13. NAME OF REPORT
1.			* TYPE OF HAZARD
2.			* CHEMICAL AND PHYSICAL PROPERTIES OF HAZARDOUS MATERIALS
3.			* NOISE SPECTRUM REPORT
4.			* SOURCES OF IONIZING OR RADIO FREQUENCY RADIATION
5.			* STORAGE, DISPOSAL AND INSTALLATION OF HAZARDOUS MATERIALS
6.			* INJURY OR JOB-RELATED ILLNESS STATISTICS
7.			* PRECAUTIONS
8.			STATIC AND DYNAMIC PRESSURE FORCES, FRAGMENTATION DISTANCES WHICH HAVE OCCURRED DURING MISSILE EXPLOSIONS, IF AVAILABLE
9.			PRESSURE RANGES OF PNEUMATIC AND HYDRAULIC SYSTEMS, IF AVAILABLE
10.			NOZZLE TEMPERATURE AND PRESSURE, IF AVAILABLE

Items 2–10: See PRD 170.1

Item 1 (Type of Hazard):

Hazardous Operation	Type of Hazard
Dual Propellant Loading	Detonation Pressures & Fragmentation
LOX Tanking/Handling (no fuel)	Fire GOX Atmosphere Detonation
Fuel Tanking/Handling (no LOX)	Fire
Pressurize Airborne Bottles (Above 1500psi)	Rupture & Fragmentation
Fragmentation Press. on Missile Tanks (dry)	Rupture & Fragmentation
Fuel Leak Check (Seq 11 press. of 60psi)	Fire Due to Rupture and Spillage
Checkout of Solid Propellant Initiators	Detonation - Fragmentation
Solid Charge Handling and Installation	Detonation - Fragmentation
Hypergol Igniter Handling	Detonation
Erection & De-erection	Tank Rupture

* MANDATORY REPORT

1IND-PRR-8800/178 (REV. 12-61)
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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

OCCUPATIONAL HAZARDS - MEDICAL (ATLAS)

1. SECURITY CLASSIFICATION	2. PAGE 170.1
	3. DATE 22 October 1962
8. CONTRACTOR-CONTRACT NUMBER: Aerospace AF04(695)-169	4. REPLACES PAGE(S): Original; DATED

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE
PROGRAM 206	NONE	206

10. ITEM NO.	11. TEST CODE	12. REPORT DATE	13. NAME OF REPORT
1.			• TYPE OF HAZARD - Refer to Page 170.
2.			• CHEMICAL AND PHYSICAL PROPERTIES OF HAZARDOUS MATERIALS - Available from GD/A Industrial Hygienist: "The Handling & Storage of Liquid Propellants," dtd Mar 61, AFM160-39; AF Doc. "Dangerous Properties of Industrial
3.			Materials" by N.I. Sax, Reinhold Publ. Corp. Applicable MPS's (Mfg. Process Spec's).
4.			
5.			• NOISE SPECTRUM REPORT - American Industrial Hygiene Ass'n, Copyright 1958, p. 7-10, AF Pamphlet 32-2-1, "Noise Guide for Air Base Commanders"
6.			• SOURCES OF IONIZING OR RADIO FREQUENCY RADIATION - AF Pamphlet 160-6-6 "Permissible Doses from External Sources of Ionizing Radiation."
7.			
8.			• STORAGE, DISPOSAL AND INSTALLATION OF HAZARDOUS MATERIALS Storage: T.O. 11A-1-40, Ord M7-224, Ord.Corp.Manual, Army AF Regulation 86-6 "Quantity Distance Stds. for Storage of Mass Detonating Explosives"
9.			Disposal: VAFB Regulations; AF Disposal per AF Reg. 136-10 "Explosive Ord Disposal." Installation of hazardous materials per Note 1
10.			• INJURY OR JOB-RELATED ILLNESS STATISTICS - None attributed to a missile mishap (Note 2).
			• PRECAUTIONS - Refer to GD/A Safety Rules & Reg's; Copies avail from GD/A Chief Safety Engineer.
			STATIC AND DYNAMIC PRESSURE FORCES, FRAGMENTATION DISTANCES WHICH HAVE OCCURRED DURING MISSILE EXPLOSIONS, IF AVAILABLE - Refer to Accident Report, Msl. 9C, Pad 12, AMR.
			PRESSURE RANGES OF PNEUMATIC AND HYDRAULIC SYSTEMS, IF AVAILABLE - Refer Note 2 — Refer to Broadview Research Corp. Rept. #BRD-57-6A1.
			NOZZLE TEMPERATURE AND PRESSURE, IF AVAILABLE - Refer Note 2 — Refer to STL Rept.#GM-TR-59-0000-00579 "Explosive Potential."
			NOTES 1. GD/A complies with all safety regulations, policies, and directives as outlined in AF Manual 58-2, "1st Missile Division Manual," and with AF Safety Check List. For additional information contact M.G. Rustin, Safety Engineer, 576-5, VAFB.
			2. Specific questions should be referred to GD/A Chief Safety Engineer, Plant 71, San Diego.

FIND-DAR-6800/178 (REV. 12-61)
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1. SECURITY CLASSIFICATION
9. REVISION NO. 1

OCCUPATIONAL HAZARDS (AGENA D)

Page 170.2
Date 22 October 1962
Replaces pages: Original

Program Title: PROGRAM 206 | Program Requirement Code: NONE | System Code: 206 | Contract Number: LMSC AF04(695)-169

Item No.	Test Code	HAZARDOUS CONDITION	AREA AFFECTED AND DURATION OF EFFECT	COMPENSATING EQUIPMENT OR ACTION
UDMH	1	Toxic by inhalation; irritates eyes	Storage area and handling sites including the parts	Educate personnel on safeguards required. Safety showers available where UDMH is handled. Approved respiratory equipment.
	2	Flammable main in wide range of concentrations		No smoking, no matches, no open flames. Ground all equipment to prevent accumulation of static charge. Ventilate confined areas.
	3	Can be exploded by spark or open flame		UDMH is a toxic flammable compound requiring careful handling. All operations involving UDMH shall be approved by safety officer prior to execution.
	4	Hypergolic with some oxidants		
IRFNA		Liquid - Highly corrosive, severe burns to skin and eyes.	Storage area and handling sites including pad parts	Educate personnel on safeguards required. Protective clothing (cover all parts of body). Respiratory protection used shall be of the air supply or self-contained type.
		Vapor- Inhalation highly hazardous		Evacuate exposed or affected personnel immediately. Safety showers available in immediate area of operation Eye wash fountains Water hose and adequate water supply Oxides of nitrogen monitoring system Oxygen resuscitators
		Vapors, internal	Storage areas and as above	Sodium bicarbonate or sodium carbonate IRFNA is highly toxic, requires careful handling all operations involving handling shall be approved by safety officer prior to execution.
ALCOHOL W/CHLORIDE				

11PD-PIW-5050, 197 (12-61)
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Revision No. 1

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OCCUPATIONAL HAZARDS (AGENA D)

PAGE 170.3
DATE 22 October 1962
REPLACES PAGE(S) DATED Original

PROGRAM TITLE: PROGRAM 206 | PROGRAM REQUIREMENT CODE: NONE | SYSTEM CODE: 206 | CONTRACTOR CONTRACT NUMBER: LMSC AF 04(695)-169

	HAZARDOUS CONDITION	AREA AFFECTED AND DURATION OF EFFECT	COMPENSATING EQUIPMENT OR ACTION
Squibs	Minimum Hazard (small explosive charge)	Storage areas, launch pads, checkout areas.	Fire protection measures - compatibility storage-humidity control. Insure leads are shorted before installation - handle carefully. Use of non-sparking tools for installation - protection against static electricity. Safety clothing (especially shoes) - precautions against RF hazards.
Safe & Arm Initiator	Minimum Hazard (unless attached to destruct charge)	Storage areas, launch pads, checkout areas.	" "
M.D.F.	Minimum Hazard	Storage areas, launch pads, checkout areas.	" "
Explosive Valve	Minimum Hazard (squib loaded)	Storage areas, launch pads, checkout areas.	" "
Starter Grain	Maximum Hazard	Storage areas, launch pads, checkout areas.	" "
Engine Igniter	Maximum Hazard	Storage areas, launch pads, checkout areas.	" "
Ullage Rocket	Maximum Hazard (deflagration)	Storage areas, launch pads, checkout areas. (20 seconds - 120 lb thrust)	" "
Retro Rocket	Maximum Hazard (brisant)	Storage areas, launch pads, checkout areas. (1 second - 420 lb thrust)	" "
Shaped Charge	Maximum Hazard (high order detonation)	Storage areas, launch pads, checkout areas. (capable of penetrating 12-in. steel)	" "
Optional Destruct	Maximum Hazard (high order detonation)	Storage areas, launch pads, checkout areas. (capable of penetrating 12-in. steel)	" "

AFMD-PMR-3030,187 (12-61)

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NRO

REVISION NO. 1

OCCUPATIONAL HAZARDS - MEDICAL (S/V)

1. SECURITY CLASSIFICATION	2. PAGE 170.4	3. DATE 22 October 1962	4. REPLACES PAGE(S) Original

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR CONTRACT NUMBER	DATED
PROGRAM 206	NONE	206	Aerospace AF04(695)-169	

TEST CODE

Item No.	Test Code	Report Date	NAME OF REPORT
1		Sept 1961	Hydrazine Handling Manual, Published by Rocketdyne on Contract AF 33(616)-6939, Project No. 3148, Task #30196 Report R-3134 (Unclassified)
2		Sept 1961	Nitrogen Tetroxide Handling Manual, Published by Rocketdyne on Contract AF 33(616)-6939, Project No. 3148, Task #30196, Report R-3135 (Unclassified)
3		20 Aug 1962	Technical Manual Maintenance & Service Instructions SE-5-2 Propulsion System, Published by Rocketdyne, Report R-3619 (Confidential)

AFBSD-PMR-3850,197 (12-61)

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1. SECURITY CLASSIFICATION | 2. REVISION NO.

SUMMARY OF FREQUENCY UTILIZATION (ATLAS-AGENA)

SECURITY CLASSIFICATION

PAGE 100

22 October 1962

PROGRAM 206 | 6. PROGRAM REQUIREMENT CODE: NONE | 7. SYSTEM CODE: 206 | 8. CONTRACT#/CONTRACT NUMBER: Aerospace AF04(695)-169 | SUPERSEDES PREVIOUS: 190 | DATED: 1 May 1962

10 ITEM NO.	11 TEST CODE	12 FREQUENCY (MC)	13 EMISSION CHARACTERISTICS	14 PURPOSE	15 PROTECTION REQUIRED	16 EST. TIME OF USAGE PREFIR.	EST. TIME OF USAGE LAUNCH	17 SPECIAL FREQUENCY RANGE REQUESTS
1	A,B C,F G	416	VHF/FM	Furnishes signal to operate missile destruct system	± 0.5 Mc	8 h max	T + 5m	Monitor to prevent interference with operations
2	A,B C,F G	249.9	PAM/ FM/FM	Atlas telemetry transmitter	± 0.5 Mc	"	T + 10m	" "
3	J	2300+0.22	CW	GE Mark II airborne rate beacon for missile guidance	± 10.0 Mc	4 h max	T + 5m	" "
4	A,B C,F G,H	8850±20	Pulse	GE Mark II airborne pulse beacon for missile guidance	± 30.0 Mc	"	T + 5m	" "
5	A,B C,F G,H	1150±0.11	CW	GE Mark II ground guidance tracker (rate subsystem)	± 10.0 Mc	"	T + 5m min	"
6	A,B C,F G,H	8935±1.0	Pulse	GE Mark II ground guidance tracker (position subsystem)	± 10.0 Mc	"	T + 5m	"
7	A,B C,E G	231.4	VHF/ and FM/FM	Agena telemetry transmitter.	± 2.0 Mc	6 h	T + 10m	"

*Note: Non-IRIG standard

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Action Agency: PMP

1. SECURITY CLASSIFICATION

REPORT CONTROL NO. 1

SUMMARY OF FREQUENCY UTILIZATION (GE/ASPD)

5. PROGRAM TITLE	6. PROGRAM FREQUENCY PREVENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER	1. SECURITY CLASSIFICATION	2. PAGE 190.1
PROGRAM 206	NONE	206	Aerospace AF04(695)-169		3. DATE 22 October 1962
					4. REPLACES PAGE(S) 190.1
					DATED 1 May 1962

10. ITEM NO.	11. TEST CODE	12. FREQUENCY (Mc)	13. EMISSION CHARACTERISTICS	14. PURPOSE	15. PROTECTION REQUIRED	16. EST. TIME OF USAGE PRE-OP.	EST. TIME OF USAGE LAUNCH	17. SPECIAL MONITORING REQUESTS
8	A,B C,G	248.6	VHF/ PAM/ FM/FM	SV Channel I telemetry transmitter	± 2 Mc	6 h max	T + 10m	Monitor to prevent interference with operations
9	A,B, C,E, G	258.5	VHF/ PAM/ FM/FM	SV Channel II telemetry transmitter	± 2 Mc	6 h max	T + 10m	" "
10	A,B E,G	2850	Pulse	Verlort tracking radar (S-band command transmitter)	± 10 Mc	4 h max	T + 5m	" "
11	A,B D,E	2920	Pulse	S-band beacon transponder for orbit tracking	± 10 Mc	4 h max	"	" "
12	A,B C,E G	400.384	CW 10F2	Doppler beacon transponder	± 3 Mc	4 h max	"	" "
13	A,B, D,E, G	375.360	CW 10F2	Ground-based doppler transmitter/receiver and extractor	± 3 Mc	4 h max	"	" "
14	A, B, C, D, G	3-30	SSB	Voice and TTY tracking data network	To be furnished	4 h max	T-4 h (As required for the mission)	

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Action Agency: PMR

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

30778

SUMMARY OF FREQUENCY UTILIZATION

1. SECURITY CLASSIFICATION:

2. PAGE 122

3. DATE 22 October 1962

4. REPLACES PAGE(S) DATED Original

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. FREQUENCY	13. EMISSION CHARACTERISTICS	14. PURPOSE	PROJECTED PLOT	16. EST. TIME OF USAGE PRE-OP.	EST. TIME OF USAGE LAUNCH	17. SPECIAL MONITORING REQUESTS
15	ABCE GI	141.54 Mc	VHF-AM	Backup command transmitter (BUC)	± 2 Mc	4 h	None	Monitor to prevent interference with operations
16	ABCEG	242.0 Mc*	VHF/FM/FM	SV Channel III telemetry transmitter	± 2 Mc	4 h	None	"
17	ABCEG	235.0 Mc	Pulse	SV beacon	± 2 Mc	4 h	None	"

*Pending Approval

NRD-PMR-8800/199 (12-61)

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Action Agency: PMR

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

80778

GENERAL METRIC DATA

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR CONTRACT NUMBER	1. SECURITY CLASSIFICATION	2. PAGE 210
PROGRAM 206	NONE	206	Aerospace AF04(695)-169		3. DATE 22 October 1962
					4. REPLACES PAGE DATED 210 1 May 1962

10. ITEM NO.	11. TEST CODE	12. COORDINATE SYSTEM PREFERRED, POINT OF ORIGIN, NOTES, REMARKS AND OTHER GENERAL METRIC DATA
		DEFINITIONS
1	A	Earth Model Department of Defense World Geodetic System, 1960. (DODWGS 1960)
2	A	Coordinate Systems (Right-hand orthogonal coordinate system).
3	A	Launch Site Fixed Origin - The point where the geodetic vertical which bisects the line connecting the centers of the launch stand lock pins intersects the geoid. u, v, w Coordinates - u component is directed downrange along intersection of the plane tangent to the geoid at the origin and the vertical plane in which the vehicle initially pitches; v component is positive to the left of the u axis in the tangent plane; w component is positive upward along the geodetic vertical.
4	A	Earth Centered Inertial Origin - The center of the earth. x, y, z Coordinates - x component intersects the equator and the Greenwich Meridian at liftoff (t = o); y component intersects the equator and 90 deg east longitude at liftoff; z component passes through north pole.
5	A	Launch Azimuth The azimuth of the initial pitch plane.
6	A	Launcher Orientation The azimuth of the vehicle pitch plane after vehicle erection on the launch pad and prior to vehicle liftoff.
7	A	Trajectory Azimuth The azimuth of the earth-fixed vertical plane at the launcher origin which contains the satellite at the time of orbit injection.

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1. SECURITY CLASSIFICATION	9. REVISION NO.
	1

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GENERAL METRIC DATA			1. SECURITY CLASSIFICATION	2. PAGE 210.1
				3. DATE 22 October 1962
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT CODE: NONE	7. SYSTEM CODE: 206	8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169	4. REPLACES PAGE(S) 210.1 DATED 1 May 1962

10. ITEM NO.	11. TEST CODE	12. COORDINATE SYSTEM PREFERRED, POINT OF ORIGIN, NOTES, REMARKS AND OTHER GENERAL METRIC DATA
8	A	Accuracy Accuracy is specified as the difference between true and computed values and will be requested within the stated limits with a one-sigma probability (0.68).
9	A	Data Reduction Estimates of accuracy will be provided for all raw, unsmoothed reduced, and smoothed data. The methods which are to be employed for smoothing and for establishing accuracy estimates will be provided. A breakdown of the estimate of total error into proportional estimates of random, systematic, and other errors will be included. Also a tabulation is to be submitted which will correlate the accuracies of the processed data with the applicable data accuracy requirements specified in this document. A qualitative explanatory statement in each final data report will be submitted indicating the discrepancies which contributed to data inaccuracies.
10	A	Data Units Reduced position and velocity data will be in feet and feet/sec respectively. Time will be given in seconds. Angular data and locations in latitude and longitude will be in degrees and decimal parts of a degree unless otherwise specified.
11	A	Smoothing Intervals Accuracy requirements are stated in the absence of smoothing. When smoothing is used to obtain velocities, end point smoothing from discrete function times should be utilized. Polar coordinate data are to be unsmoothed in all cases.
12	A	Editing of Smoothed Data When smoothing is applied to the reduced data, data editing will be allowed. Obviously incorrect data may be removed as needed to a maximum of 25 percent of the data points collected per second and less than 10 percent in any 10-second period. A statement explaining all editing is required.
13	A	Timing Correlation will be 2 milliseconds during first and second stage powered flight and within 0.01 seconds between launch and the limit of PMR acquired data unless indicated otherwise. Range time will be recorded on all raw data.

METRIC LAUNCH DATA

1. SECURITY CLASSIFICATION:

2. PAGE 211

3. DATE 22 October 1962

4. REPLACES PAGE(S) 211

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

DATED 1 May 1962

10. ITEM NO.	11. TEST CODE	12. DATA REQUIRED	13. INTERVAL (RANGE-ALTITUDE-TIME)	14. DATA POINTS/SEC	15. REDUCED DATA ACCURACY — CLASS I	CLASS II	CLASS III	16. PURPOSE AND REMARKS
1	A	Position	Liftoff to T+15 seconds (2000 ft altitude)	4		10 ft	5 ft	a. Atlas trajectory determination b. Gross malfunction analysis
2	A	Velocity	Same as above	4	Consistent with position accuracy			NOTE: 1. No real time requirements. 2. Position data required in polar, curvilinear, and cartesian coordinates.
3	A	Position	T+15 seconds to Atlas/Agena separation	10		+10 ft at T+15 to ±2000 ft at separation	10 ft	3. Velocity data required in curvilinear and cartesian coordinates.
4	A	Velocity	Same as above	10	Consistent with position accuracy			

IIMD-PMR-6806/ICE (REV. 3-61)
122

Action Agency: PMR

1. SECURITY CLASSIFICATION:

9. REVISION NO. 1

METRIC LAUNCH DATA (VAFB REQUIREMENT)

SECURITY CLASSIFICATION

2. PAGE 211.1

3. DATE 22 October 1962

4. REPLACES PAGE(S) 211.1

DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. DATA REQUIRED	13. INTERVAL (RANGE-ALTITUDE-TIME)	14. DATA POINTS/SEC	15. REQUIRED DATA ACCURACY ± CLASS I	CLASS II	CLASS III	16. PURPOSE AND REMARKS
1	A	Position	Liftoff to Agena 1st burn ignition plus 10 seconds	1/4		1000 ft	500 ft	a. Atlas/Agena gross malfunction analysis b. Determination of ascent trajectory c. Aid in determination of radar acquisition angles for Kodiak NOTE: For the near real time computations the requested data must be relayed via SSB/RTTY to STC, Sunnyvale at a sampling rate of one per four seconds.

HMD-FMR-5200/ICE (REV. 3-61)

123

Action Agency: FMR

7. SECURITY CLASSIFICATION

9. REVISION NO. 1

METRIC MIDCOURSE DATA (AGENA D)

1. SECURITY CLASSIFICATION

2. PAGE 212

3. DATED 22 October 1962

4. REPLACES PAGE(S) 212

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

DATED 1 May 1962

10. ITEM NO.	11. TEST CODE	12. DATA REQUIRED	13. INTERVAL (RANGE-ALTITUDE-TIME)	14. DATA POINTS/SEC	15. REDUCED DATA ACCURACY CLASS I	CLASS II	CLASS III
1	A	Position	Atlas/Agena separation to Agena 1st burn ignition plus 30 seconds	4		2000 ft	1000 ft
2	A	Velocity	Same as above	1/4	Consistent with position data		
3	A	Position *	1st burn ignition plus 30 seconds to 1st burn cut-off plus 3 minutes	1/4		1000 ft	500 ft
4	A	Velocity	Same as above	1/4	Consistent with position data		

16. PURPOSE AND REMARKS

a. Agena D gross malfunction analysis.

b. Determination of orbit injection conditions.

c. Determination in near real time of the radar acquisition angles for Kodiak and Vandenberg.

d. The position data will be required in polar and curvilinear coordinates.

e. The velocity will be required in curvilinear coordinates only.

*NOTE: For the near real time computations polar position data must be relayed via SSB/RTTY to STC, Sunnyvale at a sampling rate of one per four seconds.

IIND-PMR-8300/107 (REV. 3-61)

124

Action Agency: PMR

17. SECURITY CLASSIFICATION

18. REVISION NO. 1

00778

OTHER METRIC DATA (AGENA D)

1. SECURITY CLASSIFICATION	2. PAGE 215
	3. DATE 22 October 1962
	4. REPLACES PAGE(S) 215
	DATED 1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. DATA REQUIRED, INTERVAL, DATA POINTS/SEC, ACCURACY, PURPOSE AND REMARKS
1	A	Analog recordings of **radar AGC and error voltages are required from each tracking radar.** The recordings are **to be at 10 mm/sec with ±3 db accuracy. Indicate antenna polarization** on each record to determine adequacy of radar tracking.
2	A	Range safety plotting **board charts are required. The plots are to be x vs y and x vs h** with 8-second timing pips to be used **for quick-look analysis of launch.**
3	A	Telemetry antenna **position (azimuth and elevation angles) vs time** is required **from each telemetry** station as an aid to orbit and Agena D re-entry **trajectory determination in the absence of radar tracking data.**
4	A	Radar station operators **logs are required with all radar data.**
5	A	Recording of Doppler **receiver output (frequency count vs time) are required from each downrange station. (Takeoff to Agena/ payload separation).**

IIND-PMP-6800/109 (REV. 3-61)
125

Action Agency: PMR

1. SECURITY CLASSIFICATION	9. REVISION NO.
	1

ENGINEERING SEQUENTIAL DATA

1. SECURITY CLASSIFICATION

2. PAGE 220

3. DATE 22 October 1962

4. REPLACES PAGE(S) 220 DATED 1 May 1962

5. PROGRAM TITLE: PALC II - PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. FILM SIZE MM	12. FILM TYPE	13. INTERVAL (RANGE-ALTITUDE-TIME)	14. ITEM TO BE VIEWED OR COVERED	15. PURPOSE AND REMARKS
1	A	16	Color	-2M to +1M	Coverage: Booster & upper stage to fill approximately 2/3 of frame; Picture area to include launch pad & surrounding service area Camera Speed: 24 frames per second Exposure: Launch pad area	General surveillance of launch pad area, supporting facilities, and vehicle (F.C.) Location: Camera Pad "G" Azimuth: Pad 3 - 049°T Pad 4 - 339°T
2	"	"	"	" "	Coverage: Booster & upper stage to fill lower 7/8 of frame Camera Speed: 24 frames per second Exposure: Booster skin	General surveillance of launcher, booster, and upper stage, primarily to provide long-run surveillance capability during pre-launch period and tanking operations (F.C.) Location: Camera Pad "A" Azimuth: 356°T
3	"	"	"	" "	Same as Item 2	Same as Item 2 except as follows: Location: Camera Pad "B" Azimuth: 125°T
4	"	"	"	" "	Same as Item 2	Same as Item 2 except as follows: Location: Camera Pad "C" Azimuth: 222°T
5	A	16	Color	-30S to +20S	Coverage: Booster & upper stage to fill lower 7/8 of frame Camera Speed: 96 frames per second Exposure: Booster skin	High-speed over-all surveillance & evaluation of all systems in relation to one another during ignition and liftoff (F.C.) Location: Camera Pad "A" Azimuth: 356°T
6	"	"	"	" "	Same as Item 5	Same as Item 5 except as follows: Location: Camera Pad "B" Azimuth: 125°T

IIND-PMR-8500/110 (REV. 12-61)

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NRD

Action Agency: 1369th Photo Squadron

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

ENGINEERING SEQUENTIAL DATA

5. PROGRAM TITLE	6. PROGRAM OR EQUIPMENT CODE	7. SYSTEM CODE	8. CONTRACT OR CONTRACT NUMBER
PALC II - PROGRAM 206	NONE	206	Aerospace AF04(695)-367

1. SECURITY CLASSIFICATION

2. PAGE 220.1
3. DATE 22 October 1962
4. REPLACES PAGE(S) Original DATED

9. ITEM NO.	10. TEST CODE	11. FILM SIZE (in)	11. FILM TYPE	12. INTERVAL (RANGE-ALTITUDE-TIME)	13. ITEM TO BE VIEWED OR COVERED	14. PURPOSE AND REMARKS
7	A	16	Color	-30S to +20S	Coverage: Same as Item 5	Same as Item 5 except as follows: Location: Camera Pad "C" Azimuth: 222°T
8	A	16	Color	-5S to +10S	Coverage: Booster engine section from top of flame deflector to vernier engines to fill frame Camera Speed: 400 frames per second Exposure: ½ stop under booster skin	High-speed study & verification of launcher release action; LOX and fuel rise-off disconnect action and booster electrical umbilical disconnect (F.C.) Location: Camera Pad "C" Azimuth: 222°T
9	"	"	"	" "	Same as Item 8	Same as Item 8 except as follows: Location: Camera Pad "D" Azimuth: 300°T
10	"	"	"	" "	Same as Item 8	Same as Item 8 except as follows: Location: Camera Pad "K" Azimuth: 095°T
11	A	70	Color	-5S to +10S	Coverage: Booster & upper stage to fill approximately lower 1/3 of frame at liftoff, and to cover first three full lengths of rise; Use 5-in. format to overlap Item 12. Camera Speed: 20 frames per second Exposure: Booster skin	High-resolution surveillance of all systems during and immediately following engine ignition and liftoff (F.C.) Location: Camera Pad "C" Azimuth: 222°T

IIND-PMR-8800/110 (REV. 12-61)

127

Action Agency: 1369th Photo Squadron

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

ENGINEERING SEQUENTIAL DATA

1. SECURITY CLASSIFICATION

2. PAGE 220.2

3. DATE 22 October 1962

4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PALC II - PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. FILM SIZE MM	12. FILM TYPE	13. INTERVAL (RANGE-ALTITUDE-TIME)	14. ITEM TO BE VIEWED OR COVERED	15. PURPOSE AND REMARKS.
12	A	70	Color	-5S to +15S	Coverage: Booster & upper stage to fill approximately lower 1/3 of frame at 3 full lengths after liftoff and to provide coverage during travel from plus 3 to plus 6 full lengths of rise; Use 5-in format to overlap Item 11. Camera Speed: 20 frames per second Exposure: Booster skin	High-resolution surveillance of all systems during the period immediately following liftoff (F.C.) Location: Camera Pad "C" Azimuth: 222°T
13	A	35	Color	-5S to LOV	Coverage: Vehicle to fill frame at liftoff Camera Speed:. 96 frames per second Exposure: Booster after liftoff	Evaluation of flight performance (T.C.) Location: Tracking Site 1
14	"	"	"	" "	Same as Item 13	Same as Item 13 except as follows: Location: Tracking Site 2
15	"	"	"	" "	Same as Item 13	Same as Item 13 except as follows: Location: Tracking Site 3
16	"	"	"	" "	Coverage: Booster engine section to fill frame at liftoff Camera Speed: 96 frames per second Exposure: Booster engine section after liftoff	Evaluation of engine flight performance and booster area study (T.C.) Location: Tracking Site 1
17	"	"	"	" "	Same as Item 16	Same as Item 16 except as follows: Location: Tracking Site 2
18	"	"	"	" "	Same as Item 16	Same as Item 16 except as follows: Location: Tracking Site 3

IIND-PMR-8800/110 (REV. 12-61)

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Action Agency: 1369th Photo Squadron

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

11778

ENGINEERING SEQUENTIAL DATA

1. SECURITY CLASSIFICATION

2. PAGE 220.2

3. DATE 22 October 1962

4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PAIC II - PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

SYSTEM NO.: 206

7. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

8. ITEM NO.	9. TEST CODE	10. FILM SIZE (IN)	10. FILM TYPE	11. INTERVAL (RANGE-ALTITUDE-TIME)	12. ITEM TO BE VIEWED OR COVERED	13. PURPOSE AND REMARKS

NOTES:

1. Items 1, 2, 3, & 4 to be operated intermittently from T-15M to T-2 as directed by test conductor. Ten minutes running time to be retained for committed run of each camera during launch.
2. Items 2, 3, & 4 to be provided for DPL tankings as well as launches. Tanking and launch footage from these cameras need not be processed unless so requested by test conductor.
3. Azimuth bearings and distances of camera pads, where given, are approximate.
4. Abbreviations: F.C. - Fixed Camera; T.C. - Tracking Camera: LOV - Limit of visibility.
5. Request use of Ektachrome Commercial (ECO) color film whenever light conditions permit.
6. Provide GD/A with 16 mm reduction color prints on Items 13 thru 18.

AFND-PMR-8800/110 (REV. 12-61)

129

Action Agency: 1369th Photo Squadron

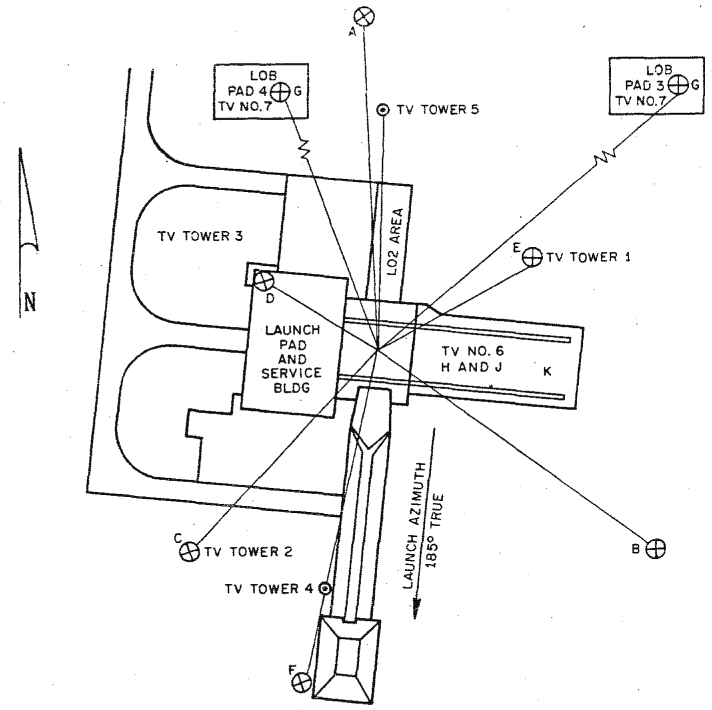
1. SECURITY CLASSIFICATION

9. REVISION NO. 1

00778

				220.4
				22 October 1962
PAIC II - PROGRAM 206	NONE	206	Aerospace AF04(695)- 169	Original

FIXED CAMERA STATION	DISTANCE FROM VEHICLE (FT)	TRUE AZIMUTH
A	350	356
B	350	125
C - TV #2	280	222
D - TV #3	148	300
E - TV #1	185	060
F	350	191
G Pad 3-TV#7	1400	049
G Pad 4-TV#7	1440	339
H - TV#6 On LMSC umbilical mast above umbilical connections		
J On LMSC umbilical mast below umbilical connections		
K On pad level at east end of pad beneath tower		
TV #4	250	
TV #5	250	



NRD

1

00178

TELEMETRY DATA (ATLAS)

SECURITY CLASSIFICATION

2. PAGE 230

3. DATE 22 October 1962

4. REPLACES PAGE(S) 230

DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. LINK FREQ -MC & TYPE	13. CHANNEL NO.	CHANNEL FREQ. -KC	CHANNEL DEV. -± %	CHANNEL NO. OF SEG	14. RATE, MEASURING -RPS, BPS	15. RECORDING INTERVAL (TIME, POSITION OR FLIGHT PHASE) CLASS I	CLASS II	CLASS III	16. DATA ACCURACY FINAL -± %	17. REQUIRED IN REAL TIME RECORDINGS TAPE	PEN	S.S.	OSC	CONS PRES	COM-PUT.	18. PURPOSE AND REMARKS
1	A,B	249.9	1	400	7.5	-	Continuous	T-1 m to T+6 m			5.0							Gross missile systems performance information. Calibration signals supplied by range user. Recording log should accompany the tape. Use original magnetic tape. 17kc speedlock, amplitude modulated ±50%, with IRIG B timing and voice annotation to be included. Telemetry data to be multiplexed with wow and flutter compensation. Record at 30 or 60 in/sec. Require signal strength to be recorded on tape as well as on Sanborn recorder. Original tapes from GD/A pad trailer and Navy required.
2	C,F	PAM/	9	3,900	7.5	-	"											
3		FM/FM	10	5,440	7.5	-	"											
4	G		11	7,350	7.5	-	"											
5			12	10,500	7.5	-	"											
6			13	14,500	7.5	60	5											
7			14	22,000	7.5	60	5											
8			15	30,000	7.5	60	10											

IRIG-PMR-8300/III (REV. 3-61)

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Action Agency: PMR & 6595th ATW

9. SECURITY CLASSIFICATION

9. REVISION NO. 1

00778

TELEMETRY DATA (AGENA D)

1. SECURITY CLASSIFICATION

2. PAGE 230.1

3. DATE 22 October 1962

4. REPLACES PAGE(S) 230.1

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

DATED 1 May 1962

10. ITEM NO.	11. TEST CODE	12. LINK FREQ -MC & TYPE	13. CHANNEL NO.	13. CHANNEL FREQ. -KC	13. CHANNEL DEV -± %	13. CHANNEL NO. OF SEG	14. RATE, MEASURING -RPS, BPS	15. RECORDING INTERVAL (TIME, POSITION OR FLIGHT PHASE) CLASS I	CLASS II	CLASS III	16. DATA ACCURACY FINAL -± %	17. REQUIRED IN REAL TIME RECORDINGS TAPE	PEN	S.S.	CO.	COMP PRES	COMP PUT.	18. PURPOSE AND REMARKS
1	A	231.4 PAM/ FM/FM	7	2.3	7.5		Cont.	From T-2 m to Agena/SV separation	Same as Class I	Same as Class II	5	x		x				Agena D performance data. Basic Agena D equipment will be monitored by Channels 7,8,9,11,14,15 and 16. Selected channels should be displayed for real time determination of event times.
			8	3.0	7.5													
			9	3.9	7.5													
			11	7.35	7.5													
			14	22.0	7.5													
			15	30.0	7.5	60	5 rps											
			16	40.0	7.5	60	5 rps											
2	A	Same as above							From ascent until loss of signal from down-range tracking ship									

IIND-PMR-8800/111 (REV. 3-61)

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Action Agency: PMR

11. SECURITY CLASSIFICATION

9. REVISION NO. 1

00778

TELEMETRY DATA (SATELLITE VEHICLE, XMTR NO. 2, LAUNCH)

1. SECURITY CLASSIFICATION

2. PAGE 230.2
3. DATE 22 October 1962
4. REPLACES PAGE(S) 230.2
DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. LINK FREQ-MC & TYPE	13. CHANNEL NO.	CHANNEL FREQ.-KC	CHANNEL DEV ±%	CHANNEL NO. OF SEG	14. RATE, MEASURING -RPS, BPS	15. RECORDING INTERVAL (TIME, POSITION OR FLIGHT PHASE) CLASS I	CLASS II	CLASS III	16. DATA ACCURACY FINAL ±%	17. REQUIRED IN REAL TIME: RECORDINGS TAPE	PEN	S.S.	OSC	CONS PRES	COM PUT.	18. PURPOSE AND REMARKS
1	A,B,C E,G,I	248.6 PAM/ FM/FM and FM/FM	8	3.0	7.5		Cont.		From early ascent until loss of signal at down-range TLM ship		Best Available (Desire ±5%)	X		X				Provides data on satellite vehicle performance.
2			9	3.9	7.5		Cont.					X		X				
3			10	5.4	7.5		Cont.					X		X				
4			11	7.35	7.5		Cont.					X		X				
5			12	10.5	7.5		Cont.					X		X				
6			13	14.5	7.5		Cont.					X		X				
7			14	22.0	7.5		Cont.					X		X				
8			15	30.0	7.5	30	5 rps					X		X				
9			16	40.0	7.5	30	5 rps					X		X				
10			17	52.5	7.5		Cont.					X		X				

1IND-PMR-8800/111 (REV. 3-61)
133

Action Agency: PMR

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

TELEMETRY DATA (SATELLITE VEHICLE, XMTR #1, LAUNCH)

1. SECURITY CLASSIFICATION:

2. PAGE 230.3
3. DATE 22 October 1962
4. REPLACES PAGE(S) 230.3 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. LINK FREQ-MC & TYPE	13. CHANNEL NO.	FREQ. -KC	DEV ±%	NO. OF SEG	14. RATE, MEASURING -RPS, BPS	15. RECORDING INTERVAL (TIME, POSITION OR FLIGHT PHASE) CLASS I	CLASS II	CLASS III	16. DATA ACCURACY FINAL-±%	17. REQUIRED IN REAL TIME RECORDINGS TAPE	PEN	S.S.	OSC	CORE PRES	COMPUT.	18. PURPOSE AND REMARKS
	A,B,C E,G,I	258.5																
1		FM/FM	A	22	15		Cont.		From liftoff to injection		Best Available (Desire ±5%)	X		X	X			1. Transmission of vibration data on Channels A and C, clock time on E, and monitor of BUC on Channel 13 during powered flight.
2		FM/FM	C	40	15		Cont.		"			X		X	X			
3		FM/FM	E	70	15		Cont.		"			X		X	X			
		PAM/ FM/FM	13	14.5	7.5	30	2.5 rps		"			X		X	X			

11NO-PMR-8800/111 (REV. 3-61)
134

Action Agency: PMR

9. SECURITY CLASSIFICATION:

5. REVISION NO. 1

TELEMETRY DATA (SATELLITE VEHICLE, XMTR #1, ORBITAL FUNCTION)

1. SECURITY CLASSIFICATION

2. PAGE 230.4

3. DATE 22 October 1962

4. REPLACES PAGE(S) 230.4

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACT/CONTRACT NUMBER: Aerospace AF04(695)-169

DATED 1 May 1962

10. ITEM NO.	11. TEST CODE	12. LINK FREQ-MC & TYPE	13. CHANNEL NO.	CHANNEL FREQ.-MC	CHANNEL DEV. -± %	CHANNEL NO. OF SEG	14. RATE, MEASURING -RPS, SPS	15. RECORDING INTERVAL (TIME, POSITION OR FLIGHT PHASE) CLASS I	CLASS II	CLASS III	16. DATA ACCURACY FINAL -± %	17. REQUIRED IN REAL TIME: RECORDINGS TAPE	PLY.	S.S.	DSC	COMB PRES	COMB PCT.	18. PURPOSE AND REMARKS
1	C,G,E	258.5 PAM/FM/FM & FM/FM	7	2.3	7.5	--	Cont.		On Command		Best Available (Desire ±8%)	X	X	X				Provides data on satellite vehicle performance.
2	"	"	8	3.0	"	--	Cont.		"		"	X	X	X				
3	"	"	9	3.9	"	--	Cont.		"		"	X	X	X				
4	"	"	10	5.4	"	90	1/18		"		"	X		X				
5	"	"	11	7.35	"		Cont.		"		"	X	X	X				At command, 16 minutes of data recorded during each Off period will be played back at 4 times recording speed.
6	"	"	12	10.5	"	30	2.5		"		"	X		X				
7	"	"	13	14.5		--	Cont.		"			X	X	X				
8	"	"	14	22	7.5	30	5		"		±8%	X		X				
9*	"	"	A	22	15%		Cont.		"		5%	X	X	X				
10*	"	"	C	40	15%		Cont.				5%	X	X	X				
11*	"	"	E	70	15%		Cont.		"		5%	X	X	X				
12*		"	13	14.5	7.5		2.5		"		5%	X		X				

*These items can be transmitted real time when playback of other items not desired.

LING-PHR-650/111 (REV. 3-61)

135

Action Agency: 6594th ATW

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

TELEMETRY DATA (SATELLITE VEHICLE, XMTR #2 ORBITAL FUNCTION)

1. SECURITY CLASSIFICATION:

2. PAGE: 230.5

3. DATE: 22 October 1962

4. REPLACES PAGE(S): 230.5

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. USAF PROCUREMENT CONTRACT NUMBER: Aerospace AF04(695)-169

DATE: 1 May 1962

10. ITEM NO.	11. TEST CODE	12. LINK FREQ-MC & TYPE	13. CHANNEL NO.	CHANNEL FREQ-MC	CHANNEL DEV -± %	CHANNEL NO. OF SEG	14. RATE, MEASURING -RPS, BPS	15. RECORDING INTERVAL (TIME, POSITION OR FLIGHT PHASE) CLASS I	CLASS II	CLASS III	16. DATA ACCURACY FINAL-± %	17. REQUIRED IN REAL TIME RECEIVINGS TAPE	PEN	S.S.	DIG	CONS PRES	CONV-PUT.	18. PURPOSE AND REMARKS
1	C,G,E	248.6 PAM/ FM/FM	7	2.3	7.5		Cont.		On Command		5%	X	X	X				1. Provide real time data for SV performance in orbit.
2	"	"	8	3.0	"		"		"		"	X	X	X				
3	"	"	9	3.9	"		"		"		"	X	X	X				
4	"	"	10	5.4	"	90	1/18 rps		"		"	X		X				
5	"	"	11	7.35	"		Cont.		"		"	X	X	X				
6	"	"	12	10.5	"	30	2.5 rps		"		"	X		X				
7	"	"	13	14.5	"	-												
7	"	"	13	14.5	"	-	Cont.		"		"	X	X	X				
8	"	"	14	22	"	30	5 rps		"		"	X		X				
9	"	"	15	30	"	30	2.5 rps		"		"	X		X				
10	"	"	16	40	"	30	5 rps		"		"	X		X				
11	"	"	17	52.5	"	-	Cont.		"		"	X	X	X				
12	"	"	18	70	"	-	"		"		"	X	X	X				

IND-PMR-8800/111 (REV. 3-61)

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Action Agency: 6594th ATW

1. SECURITY CLASSIFICATION:

2. REVISION NO. 1

10778

TELEMETRY DATA SATELLITE VEHICLE TRANSMITTERS

1. SECURITY CLASSIFICATION

2. PAGE 250 .6

3. DATE 22 October 1962

4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE PROGRAM 206

6. PROGRAM REQUIREMENT CODE NONE

7. SYSTEM CODE 206

8. CONTRACTOR/CONTRACT NUMBER Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. LINK FREQ-MC & TYPE	13. CHANNEL NO.	CHANNEL FREQ-MC	CHANNEL DEV ±KC	CHANNEL NO. OF SEG	14. RATE, MEASURING RPS, BPS	15. RECORDING INTERVAL (TIME, POSITION OR FLIGHT PHASE) CLASS I	CLASS II	CLASS III	16. DATA ACCURACY FINAL-± %	17. REQUIRED IN REAL TIME RECORDINGS TAPE	RECORDINGS FR	RECORDINGS S.S.	RECORDINGS SSC	17. REQUIRED IN REAL TIME CONF FREQ	17. REQUIRED IN REAL TIME CONF PLT.	18. PURPOSE AND REMARKS
1	C,G,E,		8	3.0	7.5		Cont.				5%	X		X	X			1. Real time performance of satellite vehicle during flight.
2			9	3.9	"		"				"	X		X	X			2. Required for check-out and flight.
3			10	5.4	"		"				"	X		X	X			
4			12	10.5	"		"				"							

HND-PAR-2600/111 (REV. 3-51)

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17. SECURITY CLASSIFICATION

Action Agency: 6594th ATW

19. REVISION NO. 1

OTHER TEST DATA			1. SECURITY CLASSIFICATION	2. PAGE 240
				3. DATE 22 October 1962
				4. REPLACES PAGE(S) 240
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT CODE: NONE	7. SYSTEM CODE: 206	8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169	DATED 1 May 1962

10. ITEM NO.	11. TEST CODE	12. DATA REQUIRED, INTERVAL, ACCURACY, PURPOSE, REMARKS, ETC.
1	A	Analog recordings of T/M signal strength and frequency deviation are required for each data link. This is in addition to the magnetic tape recordings of signal strength.
2	A	T/M station operators logs are required with all T/M data.
3	A	Event times for the following events are required to be transmitted in near real time over voice link from downrange stations to STC, Sunnyvale. a. Liftoff b. Booster cutoff c. Vernier cutoff d. Agena D/Atlas separation e. Agena D engine ignition (1st burn) f. Agena D engine cutoff (1st burn) g. Agena D/Payload separation
4	A	Cotar system printout: Liftoff to satellite separation +10 sec.*
5	A	AN/FPS-16 data: Liftoff to satellite separation +10 sec.*
6	A	Cine-theodolite data: Liftoff to satellite separation +10 sec.*
7	A	Ground guidance station data: Liftoff to limit of visibility.
8	A	Agena D telemetry and landline data: Countdown to separation*
9	A	Range safety plotting boards

* These items are for determination of vehicle trajectory and orbit injection conditions, determination of proper missile program performance, overall evaluation of missile performance and/or gross malfunction analysis, and information for flight reports.

IIND-PMR-6800/112 (REV. 3-61)				
138	Action Agency: Items 1 & 2 - 6594th ATW Item 7 - 6595th ATW Items 1 thru 6 - PMR		1. SECURITY CLASSIFICATION	9. REVISION NO. 1

A0778

FORECASTS

1. SECURITY CLASSIFICATION

2. PAGE 310

3. DATE 22 October 1962

4. REPLACES PAGE(S) 310

5. PROGRAM NO. PROGRAM 203

6. PROGRAM REQUIREMENT CODE NONE

7. SYSTEM CODE 206

8. CONTRACTOR/CONTRACT NUMBER Aerospace AF04(695)-169

DATED 1 May 1962

ITEM NO.	TEST TYPE	TIME REQ. REF.	FORECAST PARAMETERS (TYPE DATA, SURFACE, UPPER AIR, ALTITUDE, INTERVAL)	14. VALID TIME	15. LOCATION	16. PURPOSE AND REMARKS
			Items 1 - 8	Items 1-8		Items 1 - 8
1	A	T-3 d	Precipitation, winds aloft, surface winds, visibility to 50K feet, and cloud coverage. Critical elements may be obtained from minimal requirements, PRD 330.	From time of forecast until T-0	Launch area for Items 1 - 8	Determine launch area operations and schedule, calculate drag, predict drift of vehicle, and evaluate flight performance.
2		T-2 d				
3		T-1 d				
4		T-12 h				
5		T-6 h				
6		T-4 h				
7		T-2 h				
8		T-1 h				
			Items 9 - 11	Items 9-11		Items 9 - 11
9	A	T-1 d	Precipitation, visibility, surface winds, and state of the sea.	T-0 to T+6 h	TLM skips for Items 9-11	Determine capability of TLM ships to accomplish mission.
10		T-12 h				
11		T-4 h				
			Items 12 and 13	Items 12-13		Items 12 and 13
12	A	P-12 h*	Cloud cover, visibility, wind, and state of the sea.	At rendezvous time		Determine capability of data pickup aircraft to accomplish mission.
13		P-6 h				* P is rendezvous time of TLM ship and data-pickup aircraft.
			NOTE: T-3 will be general outlook information			

IIND-PMR-660C/113 (REV. 3-61)

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Action Agency: 3rd Weather Wing

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

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OBSERVATIONS

1. SECURITY CLASSIFICATION

2. PAGE 320

3. DATE 22 October 1962

4. REPLACES PAGE(S) 320

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

DATED: 1 May 1962

10. ITEM NO.	11. TEST CODE	12. DATA REQUIRED	13. SURFACE TIME -MIN	SURFACE LOCATION	SURFACE ACCURACY - ±	SURFACE CLASS	14. UPPER AIR TIME -MIN	UPPER AIR LOCATION	UPPER AIR INTERVALS	UPPER AIR ALT - K FT	UPPER AIR ACCURACY - ±	UPPER AIR CLASS	15. PURPOSE AND REMARKS
1	A	Pressure	T-12 h T- 4 h T- 2 h T- 1 h	Launch area	± 3 mb	I	T-12 h T- 4 h T- 2 h to T+15m	Launch area	1000 ft	0-50 50-90 90-110	± 3. mb ± 1.5 mb ± 1.5 mb	I II III	Items 1-5 Evaluate flight performance, predict drag, drift, etc, and determine feasibility of launch and adequacy of visual tracking instrumentation coverage. Times indicated are for balloon release. T-0 balloon is for post-flight analysis.
2	A	Precipitation	"	Launch area	±0.05 in.	I	"						
3	A	Temperature	"	Launch area	± 1°C	I	"	Launch area	1000 ft	0-50 50-90 90-110	± 1°C ± 3°C ± 3°C	I II III	
4	A	RH	"	Launch area	± 5%	I	"	Launch area	1000 ft 5000 ft	0-50 50-110	± 5%	I III	
5	A	Density	"				"	Launch area		0-50 50-110	± 0.6%	I II	Item 8 Determine wind or windshear flight effects and acceptability.
6	A	Cloud cover	"				"	Launch area		0-110	Best estimate of weather observer	I	NOTE (1) Times of observation are intended only as a guide in obtaining an accurate weather profile of the vehicle trajectory at time of launch and may be modified as necessary to obtain this objective. (2) Intervals shown intended only as a guide. Use standard radiosonde reporting format.
7	A	Visibility	"	Launch area to 50 n mi down-range	± 1000 ft	I	"	Launch area to 50 n mi down-range		0-50 50-110	± 5% ± 10%	I II	
8	A	Wind velocity speed, and direction	"	Launch area	± 3 knots ± 10°	I I	"	Launch area	1000 ft	0-110	± 3 knots ± 10°	I	

IIND-PMR-8800/114 (REV. 3-61)

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Action Agency: 3rd Weather Wing

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

C0778

OBSERVATIONS

1. SECURITY CLASSIFICATION

2. PAGE 320.1
3. DATE 22 October 1962
4. REPLACES PAGE(S) 320.1
DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. DATA REQUIRED	13. SURFACE TIME-MIN	SURFACE LOCATION	SURFACE ACCURACY - ±	SURFACE CLASS	14. UPPER AIR TIME - MIN	UPPER AIR LOCATION	UPPER AIR INTERVALS	UPPER AIR ALT - K FT	UPPER AIR ACCURACY - ±	UPPER AIR CLASS	15. PURPOSE AND REMARKS
		TLM SHIP AREA											Items 1-6
1	A	Pressure	With all status reports to STA and as specified by PMR	TLM Ship (Approx. 750 n mi downrange)	1 mb	II							Evaluate readiness of TLM ship to perform mission during approach to orbit injection.
2	A	Temperature			1° C	II							
3	A	Cloud cover			Best estimate of observer	II							
4	A	Visibility			1000 ft	II							
5	A	Wind velocity speed direct			3 knots 10°	II II							
6	A	State of surface of sea, direction, height, period			10° 1 ft 1 sec	II II II							

11ND-PMR-8800/114 (REV. 3-61)
141

Action Agency: 3rd Weather Wing

9. REVISION NO. 1 60778

MINIMA

1. SECURITY CLASSIFICATION

2. PAGE 330

3. DATE 22 October 1962

4. REPLACES PAGE(S) 330

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

DATED 1 May 1962

10. ITEM NO.	11. TEST CODE	12. MINIMA (MINIMUM CLOUD COVERAGE, SURFACE OR UPPER WIND VELOCITIES OR SHEARS, ICING, SEA STATE, ETC.)

LAUNCH AREA

1 A PRECIPITATION - Should not exceed 0.1" in one hour.*

2 A WIND ALOFT - Maximum wind speed 250 ft/sec between 30,000 and 40,000 feet.

3 A SURFACE WIND - Maximum allowable recorded surface wind from any direction using an AN/GM Q-11 will not exceed values listed here. For any other anemometer type these values will be re-evaluated by General Dynamics/Astronautics. It is recommended that the anemometer location is free from any obstructions and at least fifty feet above the base of the missile in order to avoid any unevenness of flow.

	Anamometer Height Above Ground (ft)					
	10	15	25	50	75	90
	Maximum Allowable Recorded Wind (mph)					
Atlas Empty - Agena Adapter Only	39.6	42.0	44.9	49.2	51.2	52.0
Atlas Full - Agena Adapter Only	37.3	39.8	42.3	46.4	48.2	49.0
Atlas Empty - Agena Empty	33.5	35.9	37.9	41.5	43.2	43.9
Atlas Empty - Agena Full	28.9	31.0	32.7	35.9	37.3	37.9
Atlas Fueled - Agena Full	25.8	27.7	29.2	32.0	33.3	33.8
Atlas Full - Agena Full	24.8	26.5	28.0	30.7	31.9	32.4
Minimum Phase II LO_2 Tanking Pressure	4.0 psi					

Note: Surface wind minima for the total Aerospace vehicle (i.e., Atlas, Agena & S/V) will be furnished when available.

4 A WIND SHEAR - Maximum wind shear of 0.033 ft/sec/ft of altitude for an interval of 1000 feet. Wind data for S/V is to be transmitted to STA prior to launch for analysis and go-ahead.

5 A VISIBILITY - Not less than one nautical mile or as determined by range safety officer.

6 A CLOUD COVERAGE - Cloud coverage not in excess of 5/10 up to 2000 feet altitude. Sky should be sufficiently clear for use of sky-screen equipment.

*This item required due to rigid control requirement on launch weight.

NOTE: Final launch weather visibility and ceiling requirements will be determined by Commander 6595th ATW.

IIND-PMR-8600/115 (REV. 3-61)

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Action Agency: 3rd Weather Wing

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

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NETWORK DRAWING (RADIO AND WIRE)

1. SECURITY CLASSIFICATION	2. PAGE 411
	3. DATE 22 October 1962
	4. REPLACES PAGE(S) 411
	DATED 1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER	TEST CODE
PROGRAM 206	NONE	206	Aerospace AF04(695)-169	

10. COMMUNICATIONS NETWORK DRAWING

Existing communications facilities within the sites will be used as detailed by PALC-2, Vandenberg AFB, Pt. Arguello, Calif. Project 818(050) communications outline drawings by Western Electric.

11NO-PHR-8800/196 (12-61)	Action Agency: 6595th ATW	1. SECURITY CLASSIFICATION	9. REVISION NO.
143			1

C0778

COMMUNICATIONS RECORDINGS

1. SECURITY CLASSIFICATION

2. PAGE 412

3. DATE 22 October 1962

4. REPLACES PAGE(S) 412

DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. REQUIRED RECORDINGS	13. TIME CORRELATION YES	13. TIME CORRELATION NO	14. DURATION OF RECORDINGS	15. PURPOSE AND REMARKS
1	A,B,C	Voice recording of all countdown nets	X		T-425 m to T+30 m	Recording of countdown tasks (capability of 7 channels).
2	A,B,C,F	Range safety communications	X		Launch to separation	Record of range safety communications.
						Note: Recordings from ships will not be required.

IIND-PMR-8800/124 (REV. 3-61)

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Action Agency: Item 1 - 6595th ATW
Item 2 - PMR

I. SECURITY CLASSIFICATION

9. REVISION NO. 1

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RADIO

1. SECURITY CLASSIFICATION

2. PAGE [illegible]

3. DATE 22 October 1952

4. REPLACES PAGE(S) 420

DATED 1 May 1952

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-113

10. ITEM NO.	11. TEST CODE	12. USE ADMIN.	12. USE OPS	13. TYPE OF SERVICE	14. QTY	15. LOCATION OF OPERATING TERMINALS STATION	BLDG.	ROOM	STATION, BLDG., ROOM, ETC.	16. PURPOSE AND REMARKS
1	A,E		x	HF radio link (SSB)	2				Aboard downrange radar/instrumentation ships.	For voice and RTTY (60 wpm) communications and data transmission between STA, VAFB and ships.
2	A,E		x	UHF radio link	1				Two-way voice circuit aboard downrange ships.	Homing and communications with data pickup aircraft.

IIND-PMR-8800/117 (REV. 3-61)

145

Action Agency: PMR

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

[illegible]

WIRE

1. SECURITY CLASSIFICATION

2. PAGE 430

3. DATE 22 October 1962

4. REPLACES PAGE(S) 430 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: LMSC AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. USE ADMIN.	12. USE OPS	13. TYPE OF SERVICE	14. QTY	15. LOCATION OF OPERATING TERMINALS STATION	BLDG.	ROOM	STATION, BLDG., ROOM, ETC.	16. PURPOSE AND REMARKS
1				Lease lines	2					
2				Lease lines	10		8310			
3			X	4-Unit operations control monitoring console	4		MAB LOCC		(2) MAB (2) LOCC	Test operations
4			X	Countdown clock system	7	VAFB	LOB	(7)	4 launch control rm; 2 Equipment room (1st floor); 1 GD-A instrument room (Basement)	VAFB - Operations
					2	Pt. Arguello launch pad and service Bldg.			2 LMSC instrument room (one in each building) 2 LMSC instrument room (one each)	Pt. Arguello - Operations
					2	VAFB MAB (2)			1 command room; 1 VCC	VAFB - Operations
					8	VAFB tracking station (8)			1 LMSC data van; 1 VHF bldg.; 2 DAP; 1 LMSC radar van; 1 command and transmitter; 1 UHF bldg.	VAFB - Operations
					1	VAFB LOCC			1 LOCC VAFB	VAFB - Operations
					1	Pt. Arguello Range safety			1 Range safety officer	Pt. Arguello - Operations
					1	VAFB GE Guidance			1 GE guidance bldg.	
					1	VAFB		MSTCR	1 Master station tracking control room	Pt. Arguello - Operations
					1	VAFB	8310	106	Ground electronics lab.	Testing operation
5				Liftoff circuits						
6			X	Backup and line linkages between PMR and STC	2					For TTY (60 wpm), data, and voice transmissions between PMR and STA
7	X	X	X	Voice quality circuit	5	VAFB	2208	2nd floor	Plant 71, San Diego	Supports all programs
										Note: Items 1 thru 4 are LMSC requirements.

IIND-PMR-8800/175 (3-61)

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NRD ACTION AGENCY: 6595th ATS

1. SECURITY CLASSIFICATION

8. REVISION NO. 1

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MOPS

1. SECURITY CLASSIFICATION

2. PAGE 431

3. DATE 22 October 1962

4. REPLACES PAGE(S) 431

DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AFC4(695)-169

10. TEST CODE:

11. LOCAL AREA

15. MOPS NET FUNCTION OR NAME

16. TYPE OF END INSTRUMENT

17. NUMBER OF HEADSETS

18. END INSTRUMENT TYPES

S - STANDARD OPERATOR END INSTRUMENT
A - ABBREVIATED OPERATOR END INSTRUMENT
W - WEATHERPROOF OPERATOR END INSTRUMENT
WS - WEATHERPROOF OPERATOR END INSTRUMENT WITH SPEAKER
SC - END INSTRUMENT / AMPLIFIER

12. STA NO.	13. STATION OR POSITION TITLE	14. LOCATION BLDG	14. LOCATION ROOM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

19. REMARKS/SPECIAL INSTRUCTIONS / REQUIREMENTS

Existing MOPS as defined by Western Electric Project 818(050) communications outline drawings will be used.

IND-PMR-8800/119 (REV. 3-61)

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Action Agency: 6595th ATW

SECURITY CLASSIFICATION

9. REVISION NO. 1

TELEPHONE (SATELLITE VEHICLE)

1. SECURITY CLASSIFICATION
2. PAGE 432
3. DATE 22 October 1962
4. REPLACES PAGE(S) 432 DATED 1 May 1962
5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AFO4(695)-169

10. ITEM NO.	11. TEST CODE	12. USE ADMIN.	12. USE OPS	13. NO. OF LINES & EXT. BY CLASS A LINE	A EXT	B LINE	B EXT	C LINE	C EXT	14. LOCATION OF TELEPHONES STA. NO.	BLDG	ROOM	OTHER	15. PURPOSE AND REMARKS
1	All	X		X 4							MAB	Lobby		
2	"	X		X 7							"	Office		1st floor downstairs
3	"	X		X 17							"	Office		2nd floor upstairs
4	"	X		X 1							"	Security		
5	"	X		X 1							"	Bonded Area		
6	"	X		X 1							"	R and D Office		
7	"		X	X 8							"	Test Bay		
8	"		X	X 2							PAICJI	LOB		
9	"		X	X 2							"	Transfer Room		
10*				4							VSB		Outside Lines	
11*				1							"		Security Line	

* NOTE: The following are in addition to existing system.

3 phones assembly room
1 phone personnel ready room
1 phone personnel preparation room
1 phone control room
1 phone guard station

Items 1 thru 9 are per existing installations.

IND-PMR-88G/120 (REV. 3-61)
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Action Agency: 6595th ATW

9. SECURITY CLASSIFICATION
9. REVISION NO. 1

00778

PUBLIC ADDRESS

1. SECURITY CLASSIFICATION	2. PAGE 434
	3. DATE 22 October 1962
	4. REPLACES PAGE(S): 434
	DATED 1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. PURPOSE	13. SPEAKER LOCATION	14. REMARKS
1	All	Countdown, system checkout, and general use	PALC II, MAB III	PA system will be utilized as presently installed.

LMD-PMR-8800/122 (REV. 3-61)

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NRD

Action Agency: 6595th ATW

1. SECURITY CLASSIFICATION	9. REVISION NO.
	1

00778

CLOSED LOOP TELEVISION

1. SECURITY CLASSIFICATION

2. PAGE 435
3. DATE 22 October 1962
4. REPLACES PAGE(S) 435
DATED 1 May 1962

5. PROGRAM TITLE: PAIC II - PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. TEST CODE	11. OPERATING TIME	12. SUBJECT	13. SUBJECT SIZE	14. SUBJECT LOCATION	15. MONITORING LOCATION	16. SUBJECTS MONITORED	17. NO. OF OBSERVERS	18. REMARKS (NIGHT OPERATIONS REQUIRED: ☒ YES ☐ NO)
As Req'd	T-400 to T+30	FS Surveillance	80 high	Launch pad	LOB	LOX ground disconnect and FS engines	50	Camera No. 1 All cameras are equipped with remote zoom lenses and remote pan and tilt.
	"	OS & FS Surveillance	120 high	"	"	OS & FS	50	Camera No. 2
	"	FS Surveillance	80 high	"	"	FS thrust section and launcher heads	50	Camera No. 3 See PRD 220.4 for TV camera location sketch
	- -	For upper stage contractor use	- - -	- - - -	- - - -			Camera No. 4
	- -	"	- - -	- - - -	- - - -			Camera No. 5
	- -	"	- - -	- - - -	- - - -			Camera No. 6
As Req'd	T-400 to T+30	OS & FS Surveillance	200 high	Launch pad	LOB	Launch pad area	50	

FS - First Stage
OS - Orbital Stage
LOB - Launch Operations Building

IIND-PMR-8800/123 (REV. 12-61)
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Action Agency: 6595th ATW

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

08778

TIMING (ATLAS)

1. SECURITY CLASSIFICATION

2. PAGE 440

3. DATE 22 October 1962

4. REPLACES PAGE(S) 440 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. TIMING SIGNAL: TIMING CODES & REP. RATES *	12. TIMING SIGNAL: CORRELATION ACCURACY ±	13. LOCATION OF RANGE END INSTRUMENT: STATION	BLDG. HGR OR BH. ND	ROOM NO.	RACK NO.	AMBIENT TEMP °F	SPACE AVAILABLE	14. RANGE USER'S RECORDING INSTRUMENT OR TRANSDUCER: QTY	TYPE & MODEL	RECORDING SPEED-CM/S	INPUT VOLTAGE-V	INPUT Z - OHMS	FREQUENCY RESPONSE-CPS	15. SEE NOTE

Timing data to be provided by 1 December 1962

* TP10C.5 - 14 DIGIT - 10PPS ELAPSED TIME CODE (1 kc/s Tone modulated)

TP1 - 1PPS (toneburst) (1 kc/s)

P100K - 100 KC/S SINUSOIDAL (Limited availability)

P1K - 1KC/S SINUSOIDAL

P100 - 100 CPS SINUSOIDAL

IRIG "A" - 1000 PPS (10 kc/s)

IRIG "B" - 100 PPS (1 kc/s)

IRIG "C" - 2 PPS (100 CPS)

IRIG "D" - 1 PPM (100 CPS)

THEODOLITE - 25 MS NULLS: NULLS CAN BE 20, 10, 4, 2 OR 1/SEC: OR EVERY 2, 4, OR 8/SEC.

IIND-PMR-8800/125 (REV. 12-81)

1S1

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

A1778

SERVICES

1. SECURITY CLASSIFICATION	2. PAGE 510
	3. DATE 22 October 1962
	4. REPLACES PAGES: 510 DATED 1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. TYPE OF SERVICE	13. FREQUENCY AND/OR DURATION	14. PURPOSE AND REMARKS
1	All	Fire protection (NMFPA responsibility)	Approximately five (5) hazardous tests per month. Each test eight (8) hours duration requiring one (1) fire truck and crew per test starting approximately 1 March 1963.	For hazardous testing during propellant transfers prior to and during static or launch operations at launch complex, Pt. Arguello.
2	"	Security guards	To be specified by the 6595th Test Wing.	For control of entries and departures at the launch site for security purposes during static firings guard services will be required at MAB at VAFB during flight operations at Pt. Arguello.
3	"	Escort service	Escort service starting approximately 1 January 1963 and each month following through June 1964.	Escorting of Program 206 vehicle from MAB, VAFB to launch complex and Pt. Arguello.
4	"	Medical (NMFPA responsibility)	Approximately five (5) hazardous tests per month. Each test eight (8) hours in duration requiring an ambulance and crew to provide emergency first aid for each test, starting 1 January 1963.	Provide first aid service to personnel performing activation and/or operations tasks at MAB, VAFB, and the launch complex at Pt. Arguello. Personnel should be capable of first aid treatment associated with hazardous operations involving concentrated nitric acid, UDMH, and high pressure gases.
5	"	Emergency hospitalization	As required.	Facilities should be within 15 minutes traveling time of the MAB, VAFB, and the 206 launch complex, Pt. Arguello.
6	"	Ambulance service (NMFPA responsibility)	As required. Must be available during any type of launch complex operation.	For removal of medical cases to emergency hospital. Ambulance complete with standby driver and medical personnel.
7	"	Wash stations	As required during all operations.	Cleanse personnel who have come in contact with hazardous fluids or gases.
8	A	Personnel protection	Each launching.	Eyewash and shower stations located in launch stands area and storage area. Protected structure housing launch/control equipment and launch personnel.

IIND-PHR-88CO/12a (REV. 3-61)
152

Action Agency: Items 1,2,3,4, & 6 - PMR
Item 5 - STRATAD
Items 7 & 8: 6595th ATW

1. SECURITY CLASSIFICATION	9. REVISION NO. 1

00778

SERVICES

1. SECURITY CLASSIFICATION:
2. PAGE: 510.1
3. DATE: 22 October 1962
4. REPLACES PAGE(S): 510.1 DATED 1 May 1962
5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. TYPE OF SERVICE	13. FREQUENCY AND/OR DURATION	14. PURPOSE AND REMARKS
9	All	Complex safety	Approximately five (5) hazardous tests per month. Each test eight (8) hours duration requiring one (1) fire truck and crew per test. Starting approximately 1 January 1963.	Provide control of personnel and safety provisions on pad during hazardous operations. Complex safety to be under supervision of launch control during countdown and launches and at other times as applicable.
10	"	Trash disposal (NMTPA Responsibility)	Regular basis starting approximately 1 Sept. 1962	Compliance with State and Federal industrial health codes
11	"	Messing: Cafeteria	Continuous use. Food service will be required at Pt. Arguello for approximately 300 personnel on a 2-shift basis starting approximately March 1963. Food service for approximately 80 personnel will be required at VAFB starting approximately March 1963 on a 2-shift basis.	To accommodate personnel performing operations tasks at both Pt. Arguello and MAB at VAFB, the cafeteria should have a second and third shift capability with first shift menus and a 24-hour snack bar service at Pt. Arguello.
12	"	Lunch wagon service	Service will be required at Pt. Arguello starting approximately 1 April 1963 during normal mealtimes and rest periods. Food service for VAFB, MAB area will be required approximately February 1962 during normal mealtimes and rest periods.	To accommodate personnel performing operations tasks at the MAB area, VAFB, and Pt. Arguello the caterer must be familiar with mealtimes and rest periods to accommodate uninterrupted work schedules

LIND-PMR-8800/128 (REV. 3-61)
153

Action Agency: Items 10 & 11 - PMR
Item 12 - STRATAD
Item 9 - 6595th ATW

1. SECURITY CLASSIFICATION:
9. REVISION NO.: 1

00778

SERVICES

1. SECURITY CLASSIFICATION:
2. PAGE: 510.2
3. DATE: 22 October 1962
4. REPLACES PAGE(S): 510.2 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. TYPE OF SERVICE	13. FREQUENCY AND/OR DURATION	14. PURPOSE AND REMARKS
13	All	Janitorial service	To be available starting approximately 1 December 1962 at Pt. Arguello for approximately 50,000 sq ft and 80 personnel in the MAB area of VAFB, for 2200 sq ft and 240 personnel in GD-A side, and 1800 sq ft in LMSD inspection and receiving area.	To comply with State and Federal industrial health codes.
14	"	Building maintenance	Maintenance will be required starting approximately 1 December 1962.	Keep buildings in continuous operation during the operations phases of the 206 Program. Maintenance to mean, but not be limited to ordinary or emergency repairs to buildings, utilities, heating, air-conditioning and plumbing equipment.
15	"	Roadway maintenance	Continuous maintenance required.	Keep roadways from MAB, VAFB, and to and around Pt. Arguello site in optimum condition for movement of the satellite vehicle, Atlas booster, Agena, GSE, and personnel.
16	"	Grounds maintenance	Continuous maintenance required.	Keep surrounding grounds and parking area free from fire hazards, excessive blowing sand, soil erosion, etc. at Pt. Arguello site and MAB, VAFB.
17	"	General machine shop, MAB area, VAFB	To support operational activities beginning approximately 1 March 1963.	Fabricate, modify, or repair metal parts and assemblies, both machined and formed.
18	"	Mechanical shop, MAB area, VAFB	To support operational activities beginning approximately 1 March 1963.	Facilities are required for bending, flaring, and presetting tubing up to 3-in. diameter. Hydrostatic equipment up to 30,000 psig is required. Equipment to be supplied under a facilities contract.

IIND-PWR-88C9/12B (REV. 3-61)
154

Action Agency: Items 13,14,17, & 18 - 6595th ATW
Items 15 & 16 - STRATAD

7. SECURITY CLASSIFICATION:
9. REVISION NO.: 1

00778

SERVICES

1. SECURITY CLASSIFICATION	2. PAGE 510.3
	3. DATE 22 October 1962
	4. REPLACES PAGE(S) 510.3
	DATED 1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. TYPE OF SERVICE	13. FREQUENCY AND/OR DURATION	14. PURPOSE AND REMARKS
19	All	Wood shop, MAB area, VAFB	To support operational activities beginning approximately 1 March 1963.	Perform maintenance-type repairs, fabricate mockups, platforms and support structures.
20	"	Preventative maintenance shop MAB area, VAFB	To support operational activities beginning approximately 1 March 1963.	Perform maintenance and repair of mechanical and electrical equipment. This will require the capability for welding, plumbing, painting, electrical, and hydraulic/pneumatic repair functions. Equipment to be supplied under facilities contract.
21	"	Mechanical laboratory, MAB area, VAFB	To support operational activities, beginning approximately 1 March 1963.	Fabrication and testing of special flex-hoses and tubing, disassembly and assembly, calibration, and testing of special gages, flowmeters, valves, etc. Hydraulic flow bench, 4000 psi at 10 gpm and a pneumatic test bench to 12,000 psi is required.
22	"	Mechanical component cleaning and service facility, VAFB	To support orperational activities, beginning approximately 1 March 1963.	Disassemble, clean, lubricate, and reassemble peculiar components requiring special cleaning services. Also, clean tubing, piping, flex-lines, etc, requiring special cleaning techniques. .Facility should have the following cleaning capability: vacuum flowing, brushing, flushing, and pickling cleaning; vapor solvent and detergent degreasing; steam cleaning and/or sonic cleaning. This facility is available under GDA subcontract (Planetech, Inc.) as a common use AFSC contractor support facility in Bldg. 3318, VAFB under WCMR contract administration. It is capable of accomplishing this function in accordance with AFBM (ARDC) Exhibit 61-3, dated 6 February 1961, "Specification for Cleaning and Inspection of Liquid Oxygen, Liquid Nitrogen, Gaseous Nitrogen, Helium and Fuel Handling Systems."

IND-PAR-8809/12a (REV. 3-61)
155

Action Agency: Items 19 - 21 - 6595th ATW
Item 22 - WCMR

1. SECURITY CLASSIFICATION	9. REVISION NO.
	1

00778

SERVICES			1. SECURITY CLASSIFICATION	2. PAGE 510.4 3. DATE 22 October 1962 4. REPLACES PAGE(S) 510.4 DATED 1 May 1962
5. PROGRAM TITLE PROGRAM 206	6. PROGRAM REQUIREMENT CODE NONE	7. SYSTEM CODE 206	8. CONTRACTOR/CONTRACT NUMBER Aerospace AF04(695)-169	

10. ITEM NO.	11. TEST CODE	12. TYPE OF SERVICE	13. FREQUENCY AND/OR DURATION	14. PURPOSE AND REMARKS
23	All	Chemical and metallurgical laboratory, Bldg. 7422, VAFB.	To support operational activities beginning approximately 1 March 1963.	For analysis of all gases and liquids used in the Atlas, Agena-D, and satellite vehicles, aerospace ground equipment (AGE), and fixed facility equipment. AFLC support responsibility.
24	"	High-energy propellant disposal area.	To be in continuous use starting approximately 1 March 1963.	For disposal of hazardous missile propellants and special fluids. Disposal is the responsibility of WCMR until taken over by ISTRATAD.
25	"	High-energy propellant storage and handling area.	" "	For receipt, storage, handling, and delivery of high-energy propellants. Storage and handling area under LMSC management and operation until such time as ISTRATAD personnel can be trained to take over operation of this common base support facility.
26	"	Booster propellant storage and disposal area.	" "	For receipt, storage, handling, delivery, and disposal of booster propellants.
27	"	Precision measurement equipment laboratory	As required	NOTE: Unless otherwise specified, services listed are a VAFB responsibility in accordance with Hq. 1st Missile Division (DPLC) (SAC) "Policy for Support of Weapon System Contractors at VAFB and Pt. Arguello" dated 23 May 1960 and subsequent revisions thereof.

AFND-PMR-8809/128 (REV. 3-61)
156

Action Agency: Item 23 - AFLC
Items 24 thru 27 - STRATAD

7. SECURITY CLASSIFICATION

9. REVISION NO. 1

VEHICLES AND GROUND HANDLING EQUIPMENT (GD/A)

1. SECURITY CLASSIFICATION

2. PAGE 52C

3. DATE 22 October 1962

4. REPLACES PAGE(S) 520 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. NAME & NOMENCLATURE	12. CAPACITY	13. PURPOSE	14. % USED	15. RUF OR RF	16. NUMBER REQUIRED/QUARTER FY 63 CY 63 1	2	3	4	FY 64 CY 64 1	2	3	4	FY 65 CY 65 1	2	3	4	FY CY 1	2	3	4	FY
1	Station Wagon*	9 Pass.	Transportation of GD-A personnel from complex to MAB building	100	RUF	4	4	4	4	4	4											
2	Truck, Panel*	1-2 ton	Movement of electronic equipment between and within various areas	90	RUF	2	2	2	2	2	2											
3	Pickup*	1-2 ton	Movement of hardware and equipment between and within various areas	90	RUF	8	8	8	8	8	8											
4	Truck, stake platform w/hydraulic lift tail gate, 2-speed rear axle*	2 ton	Same as Item 3	90	RUF	1	1	1	1	1	1											
5	Truck - Tractor*	Compatible w/standard 5th wheel trailer	For moving missile-handling trailers w/missiles from MAB to complex areas	90	RUF	3	3	3	3	3	3											
6	Truck, fork lift*	8000 lb	For moving loads in warehouse and complex area	90	RUF	2	2	2	2	2	2											
7	Semi-trailer,* low bed	14 ton 30 ft	General movement of equipment and hardware to and from complex areas	90	RUF	1	1	1	1	1	1											
8	Semi-trailer,* compressed gas cylinder type*	(35,000 scf at 2400 psi)	Transporting high pressure gases(helium) from tank car siding to complex	90	RUF	12	12	12	12	12	12											
9	Bus*	32 Pass.	Personal transportation between VAFB and Santa Maria	90	RUF	1	1	1	1	1	1											

*This equipment will be used to support all GD/A programs.

NOTE: These items may be provided from Supply Contract AF 04(694)-214

IND-PMR-8800/131 (REV. 3-61)

157

Action Agency: 6595th ATW

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

11770

VEHICLES AND GROUND HANDLING EQUIPMENT (LMSC)

SECURITY CLASSIFICATION

2. PAGE 520.1

3. DATE 22 October 1962

4. REPLACES PAGE(S) 520.1

DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR-CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. NAME & NOMENCLATURE	12. CAPACITY	13. PURPOSE	14. % USED	15. RUF OR RF	16. NUMBER REQUIRED / QUARTER FY CY 1	2	3	4	FY CY 1	2	3	4	FY CY 1	2	3	4	FY CY 1	2	3	4
1	Bus	33 Pass.	Transport personnel from launch complex	90	RUF	1	1	1	1	1	1										
2	Truck, panel or pickup	1/2 ton	MAB area, VAFB movement of material within and between various areas	90	RUF	5	5	5	5	5	5										
3	Truck stake platform w/hydraulic tailgate	1-1/2 ton	Some as Item 2	90	RUF	2	2	2	2	2	2										
4	Truck-tractor	Compatable w/ std. 5th wheel	For moving Agena handling trailer within complex area	90	RUF	1	1	1	1	1	1										
5	Truck, fork lift	Trailer 5000 lb	For moving loads in warehouse area	90	RUF	2	2	2	2	2	2										
6	Sedan	6 Pass.	Personnel Transportation	100	RUF	6	6	6	6	6	6										
7	Station wagon	9 Pass.	Same as 6	100	RUF	7	7	7	7	7	7										
8	Tractor, "Clarkat20" or equivalent	----	To move AGE trailer	90	RUF	1	1	1	1	1	1										
9	Trailer, 4-wheel Merc.4-310-215m	----	General hauling	90	RUF	5	5	5	5	5	5										
10	Trailer, Inst. Tobey 1355	----	Inst. hauling	90	RUF	2	5	5	5	5	5										

NOTE: These items may be provided from Supply Contract AF 04(694)-214

AFSCM-PMR-8300/131 (REV. 3-61)

158

Action Agency: 6595th ATW

17. SECURITY CLASSIFICATION

18. REVISION NO. 1

00778

VEHICLES AND GROUND HANDLING EQUIPMENT (GE)

SECURITY CLASSIFICATION

2. PAGE 520.2

3. DATE 22 October 1962

4. REPLACES PAGE(S): 520.2 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. NAME & NOMENCLATURE	12. CAPACITY	13. PURPOSE	14. % USED	15. RUF OR RF	16. NUMBER REQUIRED/QUARTER															
						FY		FY 1962		FY 1963				FY 1964				FY 1965			FY
						CY 1962				CY 1963				CY 1964				CY			
						1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	Closed Panel Truck	1-1/2 Ton	Material movement	70					1	1	1	1	1	1	1	1					
2	Ranchero Type Pick-up		Passenger & bulky material transport	65					2	3	4	4	4	4	3	2					
3	Station Wagon	9 Pass.	Passenger & material transport	75				2	3	4	4	4	4	4	3	2					
4	Bus	30 Pass.	Shuttle service to PAD area at restricted times	30						1	1	1	1	1	1	1					

NOTE: These items may be provided from Supply Contract AF 04(694)-214

IIND-PWR-6800/131 (REV. 3-61)

159

Action Agency: 6595th ATW

7. SECURITY CLASSIFICATION

9. REVISION NO. 1

CC778

PROPELLANTS, GASES AND CHEMICALS (FOR MISSILE OR TEST VEHICLE) (ATLAS)

1. SECURITY CLASSIFICATION:

2. PAGE 530

3. DATE 22 October 1962

4. REPLACES PAGE 530

DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. NAME/DESIGNATION	12. MILITARY SPECIFICATION NUMBER	13. UNITS: 1000	SCF	POUNDS	GALLONS	10 x x	14. RUF OR RF	15. QUANTITY REQUIRED/QUARTER: FY 63 CY 63 Q1	Q2	FY 64 CY 64 Q3	Q4	Q1	Q2	FY Q3	Q4	FY Q1	Q2	Q3	Q4	FY Q1	Q2	FY Q3	Q4
	DEIONIZED WATER				X																			
	DISTILLED WATER				X																			
	ETHYL ALCOHOL				X																			
	FLUORINE (LIQUID)				X																			
1	HELIUM	Bureau of Mines, Grade		X			3	RUF		100	100	100	100	100										
	HYDRAZINE	A			X																			
	HYDROGEN (LIQUID)		X																					
	HYDROGEN (GAS)			X																				
	HYDROGEN PEROXIDE - 75%				X																			
	HYDROGEN PEROXIDE - 90%				X																			
	JP-4				X																			
2	NITROGEN - LIN (LIQUID)	MIL-P-27401A	X				O	RUF		14	14	14	14	14										
	NITROGEN - GAN (GASEOUS)			X																				
	NITROGEN TETROXIDE				X																			
3	OXYGEN - LOX (LIQUID)	MIL-P-25508C	X				O	RUF		192	192	192	192	192										
4	RP-1	MIL-P-R25576B				X	3	RUF		24	24	24	24	24										
	UDMH				X																			
	AFNA				X																			

IND-P&R-8006/13Z (REV. 3-61)

160

Action Agency: STRATAD

1. SECURITY CLASSIFICATION:

9. REVISION NO. 1

PROPELLANTS, GASES AND CHEMICALS (FOR MISSILE OR TEST VEHICLE) (AGENA D)

1. SECURITY CLASSIFICATION

2. PAGE 530.1

3. DATE 22 October 1962

4. REPLACES PAGE(S) 530.1 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. NAME/DESIGNATION	12. MILITARY SPECIFICATION NUMBER	13. UNITS	14. RUF OR RF	15. QUANTITY REQUIRED/QUARTER															
					FY 63				FY 64				FY 65				FY		FY	
					CY 63				CY 64				CY				CY			
					1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	DEIONIZED WATER 1000	Commercial	X	3	RUF		2	3	2	2	2	2								
	DISTILLED WATER		X																	
	ETHYL ALCOHOL		X																	
	FLUORINE (LIQUID)		X																	
	HELIUM 60	Grade A	X	3			180	120	120	120	120	120								
	HYDRAZINE		X																	
	HYDROGEN (LIQUID)		X																	
	HYDROGEN (GAS)		X																	
	HYDROGEN PEROXIDE - 75%		X																	
	HYDROGEN PEROXIDE - 90%		X																	
	IRFNA	MIL-P-7254E, Type IIIB	X	3	RUF		36	24	24	24	24	24								
	NITROGEN - LIN (LIQUID)		X																	
	NITROGEN - GAN (GASEOUS) 400,000	MIL-P-27401A Grd A	X	4	RUF		120	80	80	80	80	80								
	NITROGEN TETROXIDE	Type I	X																	
	OXYGEN - LOX (LIQUID)		X																	
	RP-1		X																	
	UDMH 5.0	MIL-D-25604B Amd. I	X	3	RUF		15	10	10	10	10	10								
	WFNA		X																	
	Tetrafluoromethane Pure	LAC-31-4000A	X	2			18	12	12	12	12	12								

NAVWEPS-PER-0600/132 (REV. 3-61)

161

Action Agency: Items 5, 6, & 8 - STRATAD
Items 7, 9, & 10 - 6595th ATW

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

PROPELLANTS, GASES AND CHEMICALS (GE)
(FOR MISSILE OR TEST VEHICLE)

7. SECURITY CLASSIFICATION:

2. PAGE 530.2
3. DATE 22 October 1962
4. REPLACES PAGE(S) 530.2
DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. NAME/DESIGNATION	12. MILITARY SPECIFICATION NUMBER	13. UNITS: LONS	SCF	POUNDS	GALLONS	X 10	14. RUF OR RF	15. QUANTITY REQUIRED/QUARTER: FY 1963 CY 1963 (1 2 3 4)	FY 1964 CY 1964 (1 2 3 4)	FY 1965 CY (1 2 3 4)	FY CY (1 2 3 4)	FY CY (1 2 3 4)
	DEIONIZED WATER					X							
	DISTILLED WATER					X							
	ETHYL ALCOHOL					X							
	FLUORINE (LIQUID)					X							
	HELIUM			X			0	RUF	500 500 500 500 500				
	HYDRAZINE (CFE)*					X	2	RUF	12 8 8 8 8				
	HYDROGEN (LIQUID)		X										
	HYDROGEN (GAS)			X									
	HYDROGEN PEROXIDE - 75%					X							
	HYDROGEN PEROXIDE - 90%					X							
	IRFNA					X							
	NITROGEN - LIN (LIQUID)		X										
	NITROGEN - GAN (GASEOUS)			X			3	RUF	12 8 8 8 8				
	NITROGEN TETROXIDE					X	2	RUF	15 10 10 10 10				
	OXYGEN - LOX (LIQUID)		X										
	RP-1					X							
	UDMH					X							
	WFNA					X							
	Freon (CFE)*					X	2	RUF	12 8 8 8 8				
	Liquid Air					X	0	RUF	70 70 70 70 70				

*Contractor-furnished equipment.

HHD-PAR-2600/132 (REV. 3-61)
162

Action Agency: Items 11 & 13 - STRATAD
Items 12,14,15, & 16 - 6595th ATW

7. SECURITY CLASSIFICATION:

9. REVISION NO. 1

11770

AIRCRAFT AND GROUND VEHICLE FUELS

1. SECURITY CLASSIFICATION

2. PAGE 531

3. DATE 22 October 1962

4. REPLACES PAGE(S) 531 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. NAME/DESIGNATION	12. MILITARY SPECIFICATION NUMBER	13. UNITS TONS	SQF	POUNDS	GALLONS	X 10 X	14. RUF OR RF	15. QUANTITY REQUIRED/QUARTER FY 1963 CY 1963 1	2	FY 1964 CY 1963 3	4	CY 1964 1	2	FY 1965 CY 1964 3	4	CY 1	2	FY 3	4	FY CY 1	2	3	4	FY
	AVIATION FUEL - GRADE 80					X																			
	AVIATION FUEL - 91/96					X	0																		
	AVIATION FUEL - 100-130					X																			
	AVIATION FUEL - 115/145					X																			
	JP-3					X																			
	JP-4					X																			
	JP-5					X																			
	AUTOMOTIVE GASOLINE - REG.	VV-G-76				Y	3	RUF	7.0	10.5	7.0	7.0	7.0	7.0	(LMSC requirement)										
		VV-G-76				X	3	RUF	3	3	3	3	3	3	(GD/A requirement)										
	DIESEL FUEL - GRADE DF-2					X																			

(IND-PMR-6800/133 (REV. 3-61))

163

Action Agency: 6595th ATW

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

00778

AIRCRAFT AND GROUND VEHICLE FUELS (GE)

1. SECURITY CLASSIFICATION

2. PAGE 531.1

3. DATE 22 October 1962

4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. NAME/DESIGNATION	12. MILITARY SPECIFICATION NUMBER	13. UNITS: TONS	SCF	POUNDS	GALLONS	X 10 X	14. RUF DR RF	15. QUANTITY REQUIRED/QUARTER: FY	CY	1	2	3	4
									FY	CY 1963				
									FY 1964	CY 1964				
	AVIATION FUEL - GRADE 80					X								
	AVIATION FUEL - 91/96					X	0							
	AVIATION FUEL - 100-130					X								
	AVIATION FUEL - 115/145					X								
	JP-3					X								
	JP-4					X								
	JP-5					X								
1	AUTOMOTIVE GASOLINE - REG.					X	O				500	1750		
	DIESEL FUEL - GRADE DF-2					X								

FY	CY	1	2	3	4
FY 1965	CY 1964	2500	2500	2500	2500
	CY 1965	2500	2000	1300	

IIND-PMR-8800/133 (REV. 3-61)

164

Action Agency: 6595th ATW

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

MISCELLANEOUS LUBRICANTS, HYDRAULIC FLUIDS, PRESERVATIVES, ETC. (ATLAS)

1. SECURITY CLASSIFICATION

2. PAGE 532

3. DATE 22 October 1962

4. REPLACES PAGE(S) 532

DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. NAME/DESIGNATION	12. MILITARY SPECIFICATION NUMBER	13. UNITS				14. RUF OR RF	15. QUANTITY REQUIRED/QUARTER															
			TONS	SCF	POUNDS	GALLONS	10 X	FY 1963		FY 1964		FY 1965		FY		FY							
								CY 1963				CY 1964		CY				CY					
								1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	Oil, light, mobile DTE	Industrial				X	O	4	→	→	→	→											
2	Oil, HM, Mobil DTE	Industrial				X		20	→	→	→	→											
3	Oil, H, Mobil DTE	Industrial				X		5	→	→	→	→											
4	Oil, Delvac 730	Industrial				X		20	→	→	→	→											
5	Oil, Delvac 930	Industrial				X		5	→	→	→	→											
6	Oil, Gen Refrig #300	Fed Spec VVL-825				X		6	→	→	→	→											
7	Oil, Hydraulic	MIL-H-5606				X		20	→	→	→	→											
8	Oil, Mobil, #600	Industrial				X		4	→	→	→	→											
9	Grease, Mobilcote #0	Industrial						9	→	→	→	→											
10	Grease, Mobil D	Industrial			X			16	→	→	→	→											
11	Grease, BPM #5	MIL-G-3278A			X			16	→	→	→	→											
12	Grease, Pegas Mobilcote S	Industrial			16-oz cans			6	→	→	→	→											
13	Mobil Compound BB	Industrial			X			3	→	→	→	→											
14	Turex # 351	Industrial				X		6	→	→	→	→											
15	KEL-F-90	Industrial			X			4	→	→	→	→											
16	Aquasoro rust preventive	Industrial				X		5	→	→	→	→											
17	Trichlorethylene	MIL-T-27602				X		36	→	→	→	→											
18	MD 40 rust preventive	Industrial				X		12	→	→	→	→											
19	Antifreeze, Prestone	Industrial				X		5	→	→	→	→											
20	Paint, light blue	MIL-L-7178A				X		1	→	→	→	→											
21	Paint, insignia blue	MIL-L-7178A				X		1	→	→	→	→											
22	Paint, light green	MIL-L-7178A				X		1	→	→	→	→											
23	Paint, light yellow	MIL-L-7178A				X		2	→	→	→	→											
24	Paint, orange yellow	MIL-L-7178A				X		13	→	→	→	→											
25	Paint, insignia red	MIL-L-7178A				X		3	→	→	→	→											
26	Paint, insignia white	MIL-L-7178A				X		3	→	→	→	→											
27	Paint, aircraft gray	MIL-L-7178A				X		13	→	→	→	→											
28	Paint, engine gray	MIL-L-7178A				X		2	→	→	→	→											
29	Paint, interior green	MIL-L-7178A				X		1	→	→	→	→											
30	Paint, gloss black	MIL-L-7178A				X		1	→	→	→	→											
31	Paint, aircraft gray	MIL-E-7729				X		5	→	→	→	→											
32	Paint, strata blue	MIL-E-7729				X		13	→	→	→	→											
33	Paint, latex masonry white	Industrial				X		6	→	→	→	→											
34	Paint, aluminum, high-gloss	Industrial				X	O	1	→	→	→	→											

IND-PMR-6800/134 (REV. 3-61)

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Action Agency: 6595th ATW

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

AD 778

MISCELLANEOUS LUBRICANTS, HYDRAULIC FLUIDS, PRESERVATIVES, ETC. (ATLAS)

1. SECURITY CLASSIFICATION

2. PAGE 532 .1

3. DATE 22 October 1962

4. REPLACES PAGE(S) 532.1

DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. NAME/DESIGNATION	12. MILITARY SPECIFICATION NUMBER	13. UNITS: TONS	SQ FT	POUNDS	GALLONS	X 10 X	14. RUF OR RF	15. QUANTITY REQUIRED/QUARTER: FY 1963 CY 1963 1	2	3	4	FY 1964 CY 1964 1	2	3	4	FY CY 1	2	3	4	FY CY 1	2	3	4	FY CY 1	2	3	4
35	Paint, aluminum, high-gloss	Industrial				X	0		1	→	→	→	→	→													
36	Primer, zinc chromate, green	MIL-P-6889A				X			13	→	→	→	→	→													
37	Primer, zinc chromate, yellow	MIL-P-6889A				X			3	→	→	→	→	→													
38	Thinner, dope & lacquer (Cellulose-Nitrate)	Fed Spec. TT-T-266a				X			30	→	→	→	→	→													
39	Thinner, paint, volatile Mineral spirits	Fed Spec. TT-T-291a				X	0		4	→	→	→	→	→													
40	Dry nitrogen	MIL-N-6011	X				1		80	→	→	→	→	→													
41	Argon	None	X				0		200	→	→	→	→	→													
42	Oxygen	None	X				0		80	→	→	→	→	→													
43	Acetylene	None	X				0		80	→	→	→	→	→													
44	Distilled water	None				X	0		40	→	→	→	→	→													
45	Halo carbon	CD/A-0-750/40				X	0		20	→	→	→	→	→													

LIND-PMR-6800/134 (REV. 3-61)

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NRD

Action Agency: 6595th ATW

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

00778

MISCELLANEOUS LUBRICANTS, HYDRAULIC FLUIDS, PRESERVATIVES, ETC. (AGENA D)

1. SECURITY CLASSIFICATION

2. PAGE 532.2

3. DATE 22 October 1962

4. REPLACES PAGE(S) 532.2 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. NAME/DESIGNATION	12. MILITARY SPECIFICATION NUMBER	13. UNITS: TONS	SCF	POUNDS	GALLONS	X 10 X	14. RUF OR RF	15. QUANTITY REQUIRED/QUARTER: FY 62 CY 63 1	2	FY 63 CY 63 3	4	FY 63 CY 63 1	2	FY 64 CY 64 3	4	FY CY 1	2	FY CY 3	4	FY
	Methylene chloride	Mil-D-6998A, grd A Amd				X	2	RUF	5.5	16.5	11.0	11.0	11.0	11.0							
	Isopropyl alcohol	MIL-E-5566, Amd 3				X	2	RUF	1	3	2	2	2	2							
	Methyl alcohol	O-M 232D, grd A				X	2	RUF	8.5	25.5	17.0	17.0	17.0	17.0							
	Tetrachloroethylene	MIL-T-27602				X	0	RUF	50	150	100	100	100	100							
	Synthetic oil	MIL-L-7808D		X			0	RUF	20	60	40	40	40	40							

IIND-PMR-6600/134 (REV. 3-61)

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NRD

Action Agency: 6595th ATW

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

CHEMICAL AND PHYSICAL ANALYSIS (ATLAS)

1. SECURITY CLASSIFICATION

2. PAGE 540

3. DATE 22 October 1962

4. REPLACES PAGE(S) 540 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. NAME/DESIGNATION	13. MIL. SPEC. NO.	14. DETAILS OF ANALYSIS REQUIRED	15. SAMPLING TIMES
1	NA	Helium	U.S. Bureau of Mines Grade A	Analyze to meet GD/A Spec. 0-73010	30-d intervals
2		Nitrogen, liquid & gas	MIL-P-27401A	Meet listed specifications	30-d intervals
3		Lubricating oil, aircraft	MIL-L-6086		Samples to be taken before servicing
4		Hydraulic fluid	MIL-H-5606(A)	Particle size	As required
5		RP-1	MIL-R-25576(B)	API & particle size	T-3 d
6		Liquid oxygen (LO_2)	MIL-O-25508(C)	Particle size	30-d intervals
7		Trichlorethelene, stabilized, degreasing	MIL-T-7003		
8		Trichlorethelene, missile grade	MIL-T-27602		
9		Preservative compound	MIL-C-14201		
10		Grease, gimbal bearing	MIL-G-7118		

IIND-PMR-8800/135 (REV. 3-61)

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Action Agency: AFLC

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

CHEMICAL AND PHYSICAL ANALYSIS (AGENA D)

1. SECURITY CLASSIFICATION

2. PAGE 540.1

3. DATE 22 October 1962

4. REPLACES PAGE(S) 540.1 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. NAME/DESIGNATION	13. MIL. SPEC. NO.	14. DETAILS OF ANALYSIS REQUIRED	15. SAMPLING TIMES
1	NA	Inhibited red fuming nitric acid (IRFNA)	MIL-P-7254E, Type III B	Determine percentage of constituents to MIL specification and residual solids contents.	Upon receipt of shipment and between T6-T2 day
2		Unsymmetrical dimethyl-hydrazine (UDMH)	MIL-D-25604B, Amd. I	Determine compliance with specification with particular attention to transmittance factor.	Upon receipt of shipment and between T6-T2 day
3		Tetrafluoromethane	LAC-31-4000A	Determine percentage of CF_4/N_2 (gaseous chromatic graphic analysis) per LMSC 1303937F.	Upon receipt of shipment and between T6-T2 day
4		Gaseous nitrogen	MIL-P-27401A, Grade A, Type I	Meet listed specifications.	T-3 day results in 36 hr and a delivery sample taken before engine servicing on T-1 day
5		Methylene chloride	MIL-D-6998A Grade A	Percent of iron oxides by weight.	Upon receipt and certification prior to use
6		Methyl alcohol	O-M 232D Grade A	Percent of iron oxides by weight.	Upon receipt and certification prior to use
7		Isopropyl alcohol	MIL-F-5566 Amd. 3	Meet listed specifications.	Upon receipt and certification prior to use
8		Trichloroethylene	MIL-T-27602	Meet listed specification.	Upon receipt and certification prior to use

IND-PAR-8860/135 (REV. 3-61)

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Action Agency: AFLC

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

AC778

CHEMICAL AND PHYSICAL ANALYSIS (SATELLITE VEHICLE)

1. SECURITY CLASSIFICATION:

2. PAGE 540.2

3. DATE 22 October 1962

4. REPLACES PAGE S. 540.2 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TEST CODE	12. NAME/DESIGNATION	13. MIL. SPEC. NO.	14. DETAILS OF ANALYSIS REQUIRED	15. SAMPLING TIMES
1	NA	Nitrogen	MIL-P-27401A (Propellant, Nitrogen, pressurizing)	Compliance with specification	Upon receipt of shipment, and prior to launch
2		Freon	GE-MSD Spec 171A8202 (Carbon etraflouride- Limits of Acceptability)	Compliance with specification	Upon receipt of shipment and prior to launch
3		Hydrazine & monomethyl hydrazine (MMH)	MIL-P-26536 (Propellant, Hydrazine); SVS 4200 (Fuel Requirements for Space Engines)	Compliance with specification	Upon receipt of shipment and prior to launch
4		Nitrogen etroxide	MIL-P-26539 (Propellant, Nitrogen Tetroxide)	Compliance with specification	Upon receipt of shipment and prior to launch

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Action Agency: AFLC

7. SECURITY CLASSIFICATION:

9. REVISION NO. 1

00778

TEST INSTRUMENT MAINTENANCE AND CALIBRATION (GD/A)

1. SECURITY CLASSIFICATION

2. PAGE 560

3. DATE 22 October 1962

4. REPLACES PAGE(S) 560 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AFO4(695)-169

RANGE USER'S PRECISION ELECTRONIC OR MECHANICAL MEASURING INSTRUMENTS

10. ITEM NO.	11. NAME/DESIGNATION	RANGE OR SCALE & UNITS	QTY	NAME OF MANUFACTURER	MODEL NUMBER	SERIAL NO.	RANGE USER CONTROL NO.	12. CALIBRATION CYCLE-MONTHS	CALIBRATION TIME-DAYS	CALIBRATION IN PLACE YES	CALIBRATION IN PLACE NO	13. LOCATION STA. NO.	13. LOCATION BLDG OR HGR OR BH NO.	14. ACCURACY REQUIRED
1	Isolation transformer		4	General Radio	578A			6						
2	Differential voltmeter		2	John Fluke	803			3						
3	VTVM		4	H/P	400H			4						
4	Wheatstone bridge		2	L/N	4735			4						
5	Microammeter		2	Kintel	203			3						
6	Dc microvoltmeter		2	Kintel	202B			3						
7	Wave analyzer		2	General Radio	736A			3						
8	Resistor set (DEC)		4	General Radio	1432P			4						
9	Inductor decade		2	General Radio	1490B			6						
10	Capacitor set (DEC)		6					6						
11	Dc voltmeter		2	Weston	931 (50)			3						
12	Transformer rectifier		1	Reg. Co.	3X300C20			6						
13	Z-bridge		1	Electro-Scientific	250 DA			3						
14	Electronic counter		2	H/P	524D			3						
15	Megohmeter		2	General Radio	1862B			3						
16	Oscilloscope		3	Tektronix	535A			3						
17	Oscilloscope		4	Tektronix	310A			3						
18	Ratio transformer		2	Gertsch	RT-4			6						
19	Harmonic wave analyzer		1	H/P	300A			3						
20	Generator		1	H/P	202A			3						
21	Audio oscillator		1	H/P	200CD			4						
22	Audio generator		2	H/P	205AG			3						
23	Square wave generator		2	Tektronix	105			3						
24	Dc power supply		2	H/P	712B			6						
25	Ac power supply		1	Sorenson	500S			6						
26	Pulse generator		1	H/P	212A			3						
27	Recorder		2	Brush	B1264			3						
28	Hypot		1	Assoc. Res.	JR414			3						
29	Tube tester		1	Mark Sales	123A			3						
30	power oscillator		1	Maxson	M1141			3						

IND-PMR-8800/136 (REV. 3-61)

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Action Agency: STRATAD

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

CA1778

TEST INSTRUMENT MAINTENANCE AND CALIBRATION (GD/A)

1. SECURITY CLASSIFICATION

2. PAGE 560 .1

3. DATE 22 October 1962

4. REPLACES PAGE(S) 560.1 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. RANGE USER'S PRECISION ELECTRONIC OR MECHANICAL MEASURING INSTRUMENTS: NAME/DESIGNATION	RANGE OR SCALE & UNITS	QTY	NAME OF MANUFACTURER	MODEL NUMBER	SERIAL NO.	RANGE USER CONTROL NO.	12. CALIBRATION: CYCLE - MONTHS	TIME - DAYS	IN PLACE: YES	IN PLACE: NO	13. LOCATION: STA. NO.	LOCATION: BLDG OR HGR OR BH NO.	14. ACCURACY REQUIRED
31	Dc precision voltage source		1	Kintel	301			3						
32	Voltmeter, thermal transfer		1	Holt instrumental	TV1									
33	Wheatstone bridge		4	L/N	5300									
34	Oscillator		1	H/P	205G									
35	SHF signal generator		1	H/P	620A									
36	Generator, audio signal		1	H/P	206A									
37	Wave analyzer		1	H/P	302A									
38	Oscilloscope w/scopemobile		1	Textronix	524									
39	Phasemeter		1	Maxson	1010									
40	Potentiometer, Dauphinee		1	Sensitive Research	9144									
41	Standard cell rack		1	Eppley labs	1010									
42	Meter, EPUT		2	Berkeley	7360									
43	Pneumatic pump		2	Futurecraft	90255									
44	Dead weight tester		1	Rusko Instrument	120									
45	Dead weight tester		1	Manning-Maxwell-Moore	1305B100									
46	Power supply		1	General Radio	1116A									
47	Signal source		1	FXR Inc	1X772A									
48	Counter		1	Beckman	7350									
49	Ratio transformer		1	Gertsch	RT7R									
50	Meter calibrator		1	RFL	829									
51	Manometer		1	Merriam	34EH10TM									
52	Multimeter		2	Simpson	260 or 269									
53	Multimeter		4	Triplett	630A									
54	Oscilloscope		1	Textronix	545									
55	Signal generator		1	Maxson	1241									
56	Signal generator		1	FXR	X772A									
57	RF attenuator		2	H/P	X382A									
58	Directional coupler		1	H/P	X752D									
59	Directional coupler		1	Nordson	3003-30									
60	Frequency meter		1	H/P	X532B									
61	Coax fixed attenuator		6	Stoddard	95133									
62	Power meter		1	H/P	430C									
63	SWR indicator		1	H/P	415B									
64	Thermistor		2	H/P	477B									

Note: Items 1 thru 64 are under cognizance of GD/A

IIND-PMR-8800/136 (REV. 3-61)

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Action Agency: STRATAD

7. SECURITY CLASSIFICATION

9. REVISION NO. 1

00778

TEST INSTRUMENT MAINTENANCE AND CALIBRATION

1. SECURITY CLASSIFICATION

2. PAGE 560 .2

3. DATE 22 October 1962

4. REPLACES PAGE(S) DATED Original

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

RANGE USER'S PRECISION ELECTRONIC OR MECHANICAL MEASURING INSTRUMENTS

10. ITEM NO.	11. NAME/DESIGNATION	RANGE OR SCALE & UNITS	QTY	NAME OF MANUFACTURER	MODEL NUMBER	SERIAL NO.	RANGE USER CONTROL NO.	12. CALIBRATION CYCLE - MONTHS	CALIBRATION TIME - DAYS	CALIBRATION IN PLACE YES	CALIBRATION IN PLACE NO	13. LOCATION STA. NO.	LOCATION BLDG OR HGR OR BH NO.	14. ACCURACY REQUIRED
824	Frequency counter		2	Hewlett-Packard	524D									
825	Frequency converter		2	Hewlett-Packard	525A									
826	Frequency converter		1	Hewlett-Packard	525B									
827	Video amplifier		1	Hewlett-Packard	526A									
828	Time interval unit		1	Hewlett-Packard	526B									
829	Phase unit		2	Hewlett-Packard	526D									
830	Frequency converter		2	Hewlett-Packard	525C									
831	Transfer oscillator		1	Hewlett-Packard	540B									
832	Variable attenuator		2	Hewlett-Packard	380A									
833	Differential voltmeter		1	J.C. Fluke Co.	803									
834	Precision attenuator		1	Hewlett-Packard	375A									
835	Waveguide coax adapters		8	Hewlett-Packard	S281A									
836	Pulse generator		2	Hewlett-Packard	212A									
837	Precision attenuators		1	Hewlett-Packard	355A									
838	Precision attenuator		1	Hewlett-Packard	355B									
839	Low-power termination		1	Hewlett-Packard	S910A									
840	High-power termination		1	Hewlett-Packard	S912A									
841	Adjustable shorts		1	Hewlett-Packard	S920A									
842	Dual directional couplers		2	Hewlett-Packard	767D									
843	Crystal, wide-band detector		4	Hewlett-Packard	420A									
844	Signal generator		1	Hewlett-Packard	616B									
845	Generator, square wave		1	Hewlett-Packard	211A									
846	Power meter, microwave		2	Hewlett-Packard	430C									
847	Telemetry oscillator		1	Hewlett-Packard	200T									
848	Thermistor mount		2	Hewlett-Packard	477E									
849	Power resistor decade box		2	Clarostat Mfg	240C									
850	Hickok tube tester		1	Hickok or equiv.	539B									
851	Electronic frequency meter and counter		1	Westport Electric	WE-120									
852	Step attenuator		1	Stoddard Aircraft	90540									
853	Power supply		3	Electro Products Lab	EFB									
854	Autotransformer		1	General Radio	W10MT									

IIND-PMR-8800/136 (REV. 3-61)

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Action Agency: STRATAD

7. SECURITY CLASSIFICATION

9. REVISION NO. 1

C0770

TEST INSTRUMENT MAINTENANCE AND CALIBRATION

1. SECURITY CLASSIFICATION

2. PAGE 560.3

3. DATE 22 October 1962

4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

RANGE USER'S PRECISION ELECTRONIC OR MECHANICAL MEASURING INSTRUMENTS

10. ITEM NO.	11. NAME/DESIGNATION	RANGE OR SCALE & UNITS	QTY	NAME OF MANUFACTURER	MODEL NUMBER	SERIAL NO.	RANGE USER CONTROL NO.	12. CALIBRATION: CYCLE - MONTHS	TIME - DAYS	IN PLACE: YES	IN PLACE: NO	13. LOCATION: STA. NO.	BLDG OR HGR OR BH NO.	14. ACCURACY REQUIRED
855	Crystal test set		1	Audio Frequency Lab	531									
856	Tunnel diode tester		1	Texas Instruments	530B									
857	Video crystal test set		1	Airborne Instru.	393									
858	Microwave crystal test set		1	Airborne Instru.	391									
859	Noise generator		1	Polytechnic Research	904									
860	Calorimetric power meter		1	Polytechnic Research	N-680									
861	DBL stub tuner		1	Polytechnic Research	306-A									
862	Directional coupler		1	P.R.D.	432-10									
863	Directional coupler		1	Hewlett-Packard	764D									
864	Senior volt-ohmyst		5	RCA	WV98C									
865	Signal generator		1	Boonton Radio Corp.	202-G									
867	Noise & field intensity meter		1	Empire Devices	NF-112									
868	25-amp power supply		1	Harrison Lab	520A									
869	Voltage reference source		1	Epsco Inc	VR-607									
870	Diode recovery unit		1	Tektronix	S									
871	Preamplifier, low level, ac differential		3	Tektronix	E									
872	Oscilloscope		3	Tektronix	545A									
873	Dual trace dc preamplifier		3	Tektronix	C-A									
874	Simpson volt/ohm/ milliammeter		4	Simpson Electric	269									
875	Fast-rise dc preamplifier		3	Tektronix	K									
876	Wide-band high-gain preamplifier		3	Tektronix	B									
877	Mobile oscilloscope carts		5	Tektronix	500/53A									
878	Vacuum tube voltmeter		3	Hewlett-Packard	400H									
879	Igniter tester		2	Alinco Mfg	1015AF									

IND-PMR-8600/136 (REV. 3-61)
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Action Agency: STRATAD

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

M-770

TEST INSTRUMENT MAINTENANCE AND CALIBRATION

1. SECURITY CLASSIFICATION

2. PAGE 560

3. DATE 22 October 1962

4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

RANGE USER'S PRECISION ELECTRONIC OR MECHANICAL MEASURING INSTRUMENTS

10. ITEM NO.	11. NAME/DESIGNATION	RANGE OR SCALE & UNITS	QTY	NAME OF MANUFACTURER	MODEL NUMBER	SERIAL NO.	RANGE USER CONTROL NO.	13. CALIBRATION CYCLE - MONTHS	CALIBRATION TIME - DAYS	CALIBRATION IN PLACE YES	CALIBRATION IN PLACE NO	12. LOCATION STA. NO.	LOCATION BLDG OR HGR OR EH NO.	14. ACCURACY REQUIRED
880	Dummy load,electrical resistor		2	M.C. Jones Elect.	634N									
882	Decade capacitor sets		2	Cornel-Dubilier	386H									
883	Simpson volt/ohm/milliam-meter		5	Simpson Electric	260									
884	Dual beam oscilloscope		2	Tektronix	555									
885	Time-base unit		2	Tektronix	21									
886	Time-base unit		2	Tektronix	22									
887	Widerange oscillator		2	Hewlett-Packard	200CD									
888	Bolometer		2	Hewlett-Packard	476A									
889	Voltmeter		3	Hewlett-Packard	410B									
890	Multi-hole couplers		2	Hewlett-Packard	S752									
891	Millivoltmeter, rf		3	Hewlett-Packard	411A									
892	Clip-on milliameter		2	Hewlett-Packard	428B									
893	Frequency meter		1	Hewlett-Packard	536A									
895	Ferrite isolater		2	Precision research	1211									
896	Accessory probe kit		2	Hewlett-Packard	411A-21G									
897	Memo-scope oscilloscope		1	Hughes Industrial	105									
899	Dual trace preamplifier		1	Hughes Industrial	05-2									
900	Wide-band preamplifier		1	Hughes Industrial	05-1									
901	High gain differential preamplifier		1	Hughes Industrial	05-3									
902	Multitracer		1	Hughes Industrial										
903	Dc ammeter		1	Daystron Inc.	901									
904	Distortion analyzer		1	Hewlett-Packard	330B									
905	Ratio meter		1	Hewlett-Packard	416A									
906	Termaline wattmeter		2	Bird electronic	612									
907	Thruline wattmeter		1	Bird electronic	43									
908	Resistance meter		1	Hathaway instruments	C-6B									
909	Transistorized regulated power supply		1	Kepco Corp	SM36-15MX									

IND-PWR-6800/136 (REV. 3-61)

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Action Agency: STRATAD

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

00778

DOCUMENTARY PHOTOGRAPHY

1. SECURITY CLASSIFICATION

2. PAGE 570

3. DATE 22 October 1962

4. REPLACES PAGE(S) 570 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

ITEM NO.	TEST CODE	FILM SIZE	FILM TYPE	ITEM TO BE VIEWED OR COVERED	LOCATION	PURPOSE AND REMARKS
1	A	4x5	B & W and color	Launch area and vehicle	PALC II	As directed by contractor photo personnel.

1180-PMP-6506.201 (12-61)

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NRD Action Agency: 1369th Photo Squadron

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

00778

SURFACE LOGISTICS SCHEDULE

1. SECURITY CLASSIFICATION

2. PAGE 610

3. DATE 22 October 1962

4. REPLACES PAGE(S) 510

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-139

DATED 1 May 1962

10. ITEM NO.	11. TRIP FREQ/QTR OR TEST CODE	12. LOCATION (NO. OR NAME OF STATION, BASE, CENTER ETC.) FROM	TO	13. LOAD PERSONNEL	LOAD LBS X 10^3	14. SEE NOTE	15. NUMBER OF PASSENGERS AND QUANTITY OF CARGO/QTR.
1	As reqd	VAFB/Pt. Arguello	VAFB	x			200 per test (33 passenger bus)
2	As reqd	VAFB/Santa Maria	VAFB		3		10 per test (1/3-ton pickup)
3	As reqd	VAFB	Pt. Arguello		4		100 per test
4	As reqd	Pt. Arguello	VAFB		3		10 per test
5	1/day	VAFB	Santa Maria and other local towns		0		1000 per quarter
6	2/day	VAFB	Santa Maria	x			1000
7	As reqd	VAFB	MAB	x			900

	FY 1962 CY 1962				FY 1963 CY 1963				FY 1964 CY 1964				FY			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
5									5000	5000	5000	5000	5000	5000		
6									1000	1000	1000	1000	1000	1000		
7									900	900	900	900	900	900		

Additional requirements will be placed on VAFB motor pool to meet specific needs on a random basis.

11 ND-PHR-8800/138 (REV. 3-61)

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ACTION AGENCY: 6595th ATW

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

00778

AIR LOGISTICS SCHEDULE (LMSC REQUIREMENTS VAFB)

1. SECURITY CLASSIFICATION

2. PAGE 620

3. DATE 22 October 1962

4. REPLACES PAGES 620 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

10. ITEM NO.	11. TRIP FREQ/QTR OR TEST CODE	12. LOCATION (NO. OR NAME OF STATION, BASE, CENTER ETC.) FROM	TO	13. LOAD PER-SONNEL	LOAD LBS x 10^X	14. SEE NOTE	15. NUMBER OF PASSENGERS AND QUANTITY OF CARGO/QTR. FY 1962 CY 1962 1	2	3	4	FY 1963 CY 1963 1	2	3	4	FY 1964 CY 1964 1	2	3	4	FY CY 1	2	3	4	FY CY 1	2	3	4
1	1 Round trip/day, 5 days/ week	San Diego	VAFB	x		1&3					1134	1134	1134	1134	1134	1134									
2	1 round trip/day, 5 days/ week	San Diego	VAFB		3						315	315	315	315	315	315									
3	2 round trips/ week	Moffet Field (USAF-MATS)	VAFB	x		3					400 80	400 80	400 80	400 80	400 80	400 80									
4	To be furnished	GE, Philadelphia (USAF-MATS)	VAFB		3	3					(To be furnished)														

1 Load figure represents GD/A allotment of space on BSD flight, which supports all GD/A operations at VAFB.

2 Load figure is maximum capacity of aircraft. This flight supports all GD/A operations at VAFB. Aircraft furnished to GD/A under bailment agreement AF33(600)-2515.

3 Items 1 & 2 - GD/A requirement
Item 3 - LMSC requirement
Item 4 - GD/MSVD requirement

IND-PHR-8800/130 (REV. 2-61)

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1. SECURITY CLASSIFICATION

9. REVISION NO. 1

ACTION AGENCY: 6595th ATW

00778

SALVAGE AND DISPOSITION (ATLAS)

5. PROGRAM TITLE: PROGRAM 206 | 6. PROGRAM REQUIREMENT CODE: NONE | 7. SYSTEM CODE: 206 | 8. CONTRACTOR CONTRACT NUMBER: Aerospace AF04(695)-169 | 3. DATE: 22 October 1962 | 4. REVISED PAGES: 720 | DATED: 1 May 1962

10. ITEM NO.	11. TEST CODE	12. COMPONENT	13. WEIGHT-POUNDS	14. LOCATION	15. PURPOSE, DISPOSITION, SPECIAL INSTRUCTIONS AND HAZARDS
1	As req'd	RSC receivers (2)	11.4ea	Upper pod Sta. 979 Sta. 1000	Classified range safety command destruct receivers
2	"	Booster destruct unit	5.7	Next to intermediate bulkhead in upper (long) equipment pod, Sta. 960	Hazardous. Contains one (1) pound of RDX explosive manual disarming of destruct unit from outside of package required prior to removal of unit.
3	"	Booster thrust structure	6074	Aft section - 1st stage	Evaluation purposes.
4	"	Telemetry transmitter	19.6	In line and forward of 2 batteries in long pod, Sta. 1041	Evaluation purposes.
5	"	GE Mark II airborne guidance equipment			Classified guidance equipment Also required for evaluation purposes
		Pulse beacon	9.5	Short pod, Sta. 1058	
		Rate beacon	15.	Short pod, Sta. 1065	
		Decorder	12.9	Short pod, Sta. 1066	
6	"	Flight control equipment			Classified flight control equipment Also required for evaluation purposes
		Gyro cannister	81.7	Long pod, Sta. 990	
		A/P programmer	59.4	Long pod, Sta. 1018	
		A/P servo amps	37.8	Long pod, Sta. 1004	
		A/P rate gyros	11.6	Bump pod, Sta. 675	
					Note: All units on this page should be removed and returned to GD/A for disposition.

NAVWEPS-0200/141 (REV. 3-61)
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NRD

Action Agency: PMR

17. SECURITY CLASSIFICATION

9. REVISION NO. 1

C0778

SALVAGE AND DISPOSITION (AGENA)

2. PAGE 1

3. DATE 22 October 1962

4. RELATED PERIOD 720.1

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACT OR IN-HOUSE NUMBER: Aerospace AF04(695)-169

DATED 1 May 1962

10. ITEM NO.	12. TEST CODE	13. COMPONENT	15. WEIGHT-POUNDS	14. LOCATION	16. PURPOSE, DISPOSITION, SPECIAL INSTRUCTIONS AND HAZARDS
1	A	Agena-D destruct initiator and destruct charge	9 lbs	Bottom fairing (Sta. 403.0)	Hazardous. Contains 1.2 lb. comp. B, and 25 grains of RDX explosive. Manual disarming of destruct unit from outside of package required prior to removal of unit.
2	A	Retrorockets	5 lbs	Fairing at station (Sta.475.0)	Hazardous. Contains 2.25 lb propellant (class C explosive).
3	A	Engine igniter	0.58lbs	Aft equipment rack (Sta.425.0)	Hazardous. Contains Hercules and Bullseye ignition powder.
4	A	Transmitter, telemetry	12.78	Forward equipment rack (Sta. 255.14)	Inspection and evaluation purposes.
					NOTE: Items 1 through 4 should be removed and returned to LMSD for disposition.

11. AD-PMR-3200/141 (REV. 3-61)

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Action Agency: PMR

17. SECURITY CLASSIFICATION

18. REVISION NO. 1

SALVAGE AND DISPOSITION (SATELLITE VEHICLE)

1. SECURITY CLASSIFICATION	2. PAGE 720.2
	3. DATE 22 October 1962
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206	8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169
4. REPLACES PAGE(S): 720.2	DATED 1 May 1962

10. ITEM NO.	11. TEST CODE	12. COMPONENT	13. WEIGHT-POUNDS	14. LOCATION	15. PURPOSE, DISPOSITION, SPECIAL INSTRUCTIONS AND HAZARDS
1	A	Satellite Vehicle	4050 max	Forward end of Agena-D	1. Hazards: 170 lb hydrazine; 187 lb nitrogen tetroxide; Shaped charges and squibs, Class B & C; Solid rocket engine, Class B; Pressurized N_2 and Freon 14 at pressures from 2000 to 5000 psi 2. Disposition: All efforts within reason must be made to recover the SV or its parts in case of missile destruction during the launch phase following either land or water impact. The recovered parts are to be returned to GE/ASPD. 3. The Air Force will support the Navy in all salvage operations.

AFMTC-PMR-0000/141 (REV. 3-61)
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Action Agency: PMR and 6595th ATW for Note 3.

1. SECURITY CLASSIFICATION

9. REVISION NO. 1

C0778

SEACRAFT REQUIREMENTS (LAUNCH)

1. SECURITY CLASSIFICATION	2. PAGE 820
	3. DATE 22 October 1962
	4. REPLACES PAGE(S) 820 DATED 1 May 1962

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

10. TYPE AND FUNCTION	CY 1962												CY 1963		CY	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	1	2
Telemetry and Tracking Ship (Launch)																
11. NO. OF OPERATIONS one per launching					1		1	1	1	1		1	3	1		
12. TOTAL TIME REQUIRED ON STATION 2 days/launch																

13. MAXIMUM RANGE
To be supplied N.M. FROM VAFB

14. BEARING (True)
Flight path approx. 170-200 DEG. FROM north

15. MAXIMUM SPEED
15 k

16. DESCRIPTION OF OPERATION

In general the ship will perform the following functions:

a) Receive and record telemetry data from the Agena & satellite vehicles with coverage to overlap VAFB and extend to approximately 2200 n mi downrange.

b) Provide near real time transmission of angle and range track data to STA, Sunnyvale along with ships position and attitude data.

17. EQUIPMENT TO BE INSTALLED ON SEACRAFT

a) Standard IRIG FM/FM (215-265 Mc) receiving station with magnetic tape recording equipment; noise figure: 4 db; IF signal-to-noise ratio: 18 db.

b) Air pickup gear

c) Communication equipment: dual single side band; communication with 60 wpm teletype with alternate voice.

d) Provision for digital/TTY readout of tracking data together with ships pitch, roll, and yaw.

10. TYPE AND FUNCTION	CY												CY		CY	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	1	2
11. NO. OF OPERATIONS																
12. TOTAL TIME REQUIRED ON STATION																

13. MAXIMUM RANGE
_____ N.M. FROM _____

14. BEARING (True)
_____ DEG. FROM _____

15. MAXIMUM SPEED

16. DESCRIPTION OF OPERATION

c) Demodulate, monitor, and transmit in near real time to STA a limited number of essential telemetered vehicle functions for use in orbit computations. (See PRD 230)

d) Track 5-position S-band transponder in the satellite vehicle.

17. EQUIPMENT TO BE INSTALLED ON SEACRAFT

e) Provision for visual monitoring of selected TLM data.

f) Oscillograph and direct write recording equipment.

g) Appropriate timing equipment.

h) Subcarrier discriminators for demodulating selected telemetry data in near real time.

i) Precision tracking radar to provide trajectory data to accuracy and range is listed on PRD 211.

10. TYPE AND FUNCTION	CY												CY		CY	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	1	2
11. NO. OF OPERATIONS																
12. TOTAL TIME REQUIRED ON STATION																

13. MAXIMUM RANGE
_____ N.M. FROM _____

14. BEARING (True)
_____ DEG. FROM _____

15. MAXIMUM SPEED

16. DESCRIPTION OF OPERATION

17. EQUIPMENT TO BE INSTALLED ON SEACRAFT

NAVWEPS-8800/144 (REV. 3-61)

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Action Agency: PMR

1. SECURITY CLASSIFICATION	9. REVISION NO.
	1

A-7778

DATA PROCESSING AND DISPOSITION

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR CONTRACT NUMBER
PROGRAM 206	NONE	206	Aerospace AF04(695)-169

1. SECURITY CLASSIFICATION
2. PAGE 1 OF
3. DATE 22 October 1962
4. REPLACES PREV. ISSUE DATED 9/10

9. ITEM NO.	10. TEST TYPE	11. DATA	12. REFERENCE: PAGE NUMBER	12. REFERENCE: ITEM NO.	13. QTY: ORIG.	13. QTY: CYS	14. FINAL RECIPIENT	15. TIME REQ'D.	16. MAW	16. STD	16. PHOTO	17. DESIRED DATA PRESENTATION & REMARKS
		Data will be provided by January 1963										

IIMD-PMR-8800/146 (REV. 3-61)
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NRD

18. SECURITY CLASSIFICATION
19. REVISION NO. 1

CC778

FACILITIES GENERAL (GD/A)

2. PAGE 1010
3. DATE 22 October 1962
4. REPLACES PAGE(S) 1010
DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 206
8. CONTRACTOR CONTRACT NUMBER: Aerospace AF04(695)-163

10. ITEM NO.	11. TEST CODE	12. LOCATION	13. TYPE OF FACILITY	14. SITE DESIRED	15. ASSIGNED	NEW	EXISTING	16. SCHEDULE FY 1963 CY 1962 Q1	Q2	Q3	Q4	CY 1963 Q1	Q2	Q3	Q4	FY 1964 CY 1963 Q1	Q2	Q3	Q4	CY 1964 Q1	Q2	Q3	Q4
1	Con-	VAFB	Missile assembly building adm.space,labs,C/O area(1)	MAB 3 VAFB	X							X	X	X	X	X	X						
2	tinu- ous use	VAFB	Missile assembly building adm.space,labs,C/O area	MAB 5 VAFB		X							X	X	X	X	X						
3		VAFB	GE Mod II guidance sta	VAFB	X							X	X	X	X	X	X						
4		VAFB	Administrative area (2)	2200 Area VAFB	X							X	X	X	X	X	X						
5		VAFB	Technical support bldg; shops, storage	VAFB	X							X	X	X	X	X	X						
6		VAFB	Pyrotechnic storage area	51st Munitions Squadron Storage	X							X	X	X	X	X	X						
7		VAFB	Class A explosive storage area	Area	X							X	X	X	X	X	X						
8		VAFB	Material handling area: records,stores,shpg & recvy.	3300 Area VAFB	X							X	X	X	X	X	X						
9		VAFB	Educational service bldg: classroom,presentations	Bldg 2004 VAFB	X							X	X	X	X	X	X						
10		VAFB	Subcontractor support area	2300 & 2400	X							X	X	X	X	X	X						
11		VAFB	Administrative space, shops, supply, storage	Tech.Supt.Bldg NMFPA		X						X	X	X	X	X	X						
12		PMR	Launch & service bldgs(2)	NMFPA		X						X	X	X	X	X	X						
13		PMR	Launch operations bldg	NMFPA		X						X	X	X	X	X	X						
14		PMR	Emergency electrical power	NMFPA	X							X	X	X	X	X	X						
15		PMR	Telemetry trailer site	NMFPA		X						X	X	X	X	X	X						

(1) Adequate parking facilities should be provided in all areas.

(2) These facilities will not be required after MAB is occupied.

(3) Items 1 thru 15 will be used for all GD/A programs.

AFND-PMR-8600/147 (REV. 3-61)
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Action Agency: 6595th ATW

9. SECURITY CLASSIFICATION

9. REVISION NO. 1

CC778

FACILITIES GENERAL

Page: 1010 .1
Date: 22 October 1962
Original

Program Title: PROGRAM 206 | Program Requirement Code: NONE | System Code: 206 | Contractor Contract No.: Aerospace AF04(695)-169

Item No.	Dept Code	Action	Type of Facility	Site Desired	Assigned	Existing	CY 1962				CY 1963				CY 1964							
							1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1		VAFB	Administrative area	Bldg 2317		X			X	X	X	X	X	X	X	X	X	NOTE 2				
2		VAFB	Missile assembly bldg	Bldg 8310	X				X	X	X	X	X	X	X	X	X	NOTE 2				
3		PMR	Vehicle support bldg	PALC-2, VAFB	X					X	X	X	X	X	X	X	X	NOTE 2				
4		VAFB	Explosives bunker (Note3)	Bunker Area		X			X	X	X	X	X	X	X	X	X					
5		PMR	Hard base storage bldg (Note 1)	Building		X			X	X	X											

(Schedule: FY 1962, FY 1963, FY 1964)

NOTE 1 - Storage required for N_2H_4 and freon.

NOTE 2 - Adequate parking facilities should be provided

NOTE 3 - Storage required for Class A, B, and C explosives.

(NRO-PMR-6600/147 (REV. 3-61)
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Action Agency: 6595th ATW

Revision No. 1

CC 778

DRAWINGS - FACILITIES			1. SECURITY CLASSIFICATION	2. PAGE 1011
				3. DATE 22 October 1962
5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER	4. REPLACES PAGE(S) 1011
PROGRAM 206	NONE	206	Aerospace AF04(695)-169	DATED 1 May 1962

10. DRAWING OF LAUNCHER

Reference: Kaiser Engineers A & E drawings prepared for Department of the Air Force, Air Force Ballistic Missile Division (ARDC), Launch Complex No. 2, Point Arguello, California

11. REFERENCES (Drawings)

NMD-PMR-8600/149 (REV. 3-61) 187	NRD	1. SECURITY CLASSIFICATION	9. REVISION NO. 1

CC778

LAUNCH FACILITIES

1. SECURITY CLASSIFICATION

2. PAGE 1020

3. DATE 22 October 1962

4. REPLACES PAGE(S) 1020 DATED 1 May 1962

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 206

8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF04(695)-169

LAUNCH PAD/PLATFORM

10. TYPE: LAND/STATIONARY

11. SIZE: See Item 14

12. LOCATION: Fixed by approved AGE drawings

13. SIMULATOR — A. TYPE: N/A; B. GFE/CFE: N/A

14. DESCRIPTION OF LAUNCH PAD OR PLATFORM

The launch and service building is approximately 148 x 99 ft. On each side of the building are concrete aprons 90 x 100 ft and 80 x 130 ft, where LO_2 and fuel are stored. The service tower tracks are on a concrete runway about 80 ft wide with tracks 60 ft apart. The waste channel downstream of the concrete, or dry, flame deflector is 40 ft wide for 240 feet with a 60 x 70 ft retention basin at the end.

Reference Kaiser Engineers A&E drawings prepared for Department of the Air Force, Air Force Ballistic Missile Division (ARDC), Launch Complex No. 2 Point Arguello, California

26. DESCRIPTION OF LAUNCH OPERATION

The missile arrives at the pad on a missile handling trailer. The launcher and erector trunnion are rotated to mating position. The missile service tower is positioned over launcher, platforms in the clear. Missile and trailer fasten to launcher and trunnion and hoists are connected to the front of trailer. Missile and trailer are hoisted to vertical, the trailer is unlatched and lowered to pad, and then removed. Erector trunnion assembly also is removed. Missile tanks are pressurized at all times unless in stretch. LO_2, fuel helium, nitrogen, and electrical power are connected to missile. When satellite is ready for launch, Atlas is fueled and final-checked in about 25 minutes. It can be launched immediately or placed in a "hold" condition for one hour maximum.

LAUNCHER

15. TYPE	16. SIZE	17. WEIGHT	18. GFE/CFE
Hold Down	Length 22', width 16', ht 16'	58,000 lb	CFE

LAUNCHER CHARACTERISTICS	AZIMUTH	ELEVATION
ATTITUDE	19. Level on 185° true	20. 90°
POSITION ACCURACY (DESIRED)	21. Not availabe	22. Not available
POSITION ACCURACY (REQUIRED)	23. Not available	24. Not available

25. DESCRIPTION OF LAUNCHER

The launcher is an assembly of welded tubular steel designed to rotate 90 degrees to attach the missile and missile trailer, which supports the missile during erection. The launcher supports the vertical missile at four points, two of which are inserted pins and two are balancing cylinders designed to support the missile in 60-mph winds. As the missile rises on launch the initial missile movement unlocks the pins and retracts them, freeing the missile for flight. Release cylinders are vented at a specific rate to control initial missile acceleration.

27. DESCRIPTION OF POSITIONING METHODS AND EQUIPMENT

Equipment required to position launcher includes 2 35-ton mobile cranes, 2 jig transits, 2 surveyors transits, measuring tapes and scales, and timbers. Ten to fifteen men with steel pry bars will also be required. The launcher is moved into approximate position by the cranes, placed on timbers, and positioned accurately using transits. Launcher support positions are shot in and supports are secured to the concrete pad. The launcher is then lowered and bolted to the supports, timbers are removed, and the launcher is leveled by adjusting the launcher supports.

APPENDIX 33

ORBITAL REQUIREMENTS DOCUMENT

Approved for Release: 2024/01/30 C05099025

REPORT NO.
TOR-46([illegible])-2

(U) Program 206 Orbital Requirements Document

1 JUNE 1965

Prepared by PROGRAM 206 OFFICE
AEROSPACE CORPORATION
El Segundo, California

Prepared for SECRETARY AIR FORCE SPECIAL PROJECTS
LOS ANGELES AIR FORCE STATION
Los Angeles, California

LIST OF EFFECTIVE PAGES

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1130.1

FOREWORD

Program 206 orbital requirements were originally set forth in Aerospace Corporation Report No. TOR-930(2123)-2, Volumes I and II. These reports were subsequently revised several times to include changes and updated material. The present report supersedes and replaces these volumes and their revisions.

APPROVAL AUTHORITY

1. SECURITY CLASSIFICATION				2. PAGE 010	
				3. DATE 1 June 1965	
				4. REPLACES PAGE(S) Original	
				DATED	
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT NO.: NONE	7. SYSTEM CODE: 75664014	8. CONTRACTOR/CONTRACTOR NUMBER: Aerospace Corp/AF 04(695)-469		
10. PRECEDENCE RATING: 1-1	11. PRIORITY: A-1	12. CONTRACT NUMBER: See Box 18	13. FIRST PASS DATE: 12 July 1963	14. EXPECTED SATELLITE: Life: 5 days	15. SPONSORING AGENCY: SAFSP	16. MANAGEMENT AGENCY: Aerospace Corporation

17. AUTHORITY (REFERENCES)

a. Air Force Message AFCVC, 26 September 1961
b. Outline Development Plan, Program 483A, 9 November 1961, SSZX-1
c. Air Force Letter AFSMP-RD, dated February 19, 1962

18. REMARKS:

a. Not releasable to Foreign Nationals.
b. Contracts:

(1) Aerospace Corporation - AF 04(695)-469
(2) General Electric Co. - AF 04(695)-76
(3) General Electric Co. - AF 04(695)-155
(4) General Electric Co. - AF 04(695)-432
(5) General Electric Co. - AF 04(695)-580
(6) Space Technology Laboratories, Inc. - AF 04(695)-145
(7) Space Technology Laboratories, Inc. - AF 04(695)-622
(8) Lockheed Missiles and Space Company - AF 04(695)-93

19. DOCUMENT RELEASE	20. MANAGEMENT AGENCY APPROVAL	
PREPARATION RESPONSIBILITY (CONTRACTOR)	PROGRAM MANAGER (CONTRACTOR)	PROJECT CHIEF (SPONSORING AGENCY)
	J. D. Sorrels Systems Engineering Director Program 206 Aerospace Corporation	William G. King, Jr. Col USAF Deputy Director,

SSD FORM JAN 62 25

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6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp/AF 04(695)-469

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SECURITY CLASSIFICATION OF SUBJECT MATTER

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5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp/AF 04(695)-469

10. ITEM	11. SECURITY CLASSIFICATION S	C	U	OTHER
A. ORBITAL PROGRAM				
B. PRIME CONTRACTOR (CONNECTION WITH PROGRAM)				
C. LISTS OF CONTRACTORS, ASSOCIATE CONTRACTORS AND/OR SUB-CONTRACTORS ON TEST PROGRAM				
D. PRODUCTION, PROCUREMENT, AND SUPPLY INFORMATION				
E. TITLE OF SATELLITE PROGRAM Program 206				
F. TEST VEHICLE NAME (Satellite Vehicle)				
G. ORBITAL DESIGNATION				
H. CONFIGURATION				
(1) EXTERNAL				
(2) STRUCTURAL				
(3) INTERNAL				
I. PHYSICAL DIMENSIONS				
J. VELOCITY AND ALTITUDE				
K. COUNTERMEASURE INFORMATION. PROVEN AND UNPROVEN				TS
L. FIRST PASS DATE				
M. EXPECTED LIFE				
N. STATUS AND PROGRESS REPORTS				
O. TEST AND PERFORMANCE INFORMATION.				
P. ORBITAL CORRECTION SYSTEM — TYPE				
P. ORBITAL CORRECTION SYSTEM — DESCRIPTION				
Q. GUIDANCE SYSTEM — TYPE				
Q. GUIDANCE SYSTEM — DESCRIPTION				
R. CONTROL SYSTEM — TYPE				
R. CONTROL SYSTEM — DESCRIPTION				
S. PAYLOAD SYSTEM — TYPE				
S. PAYLOAD SYSTEM — DESCRIPTION				
T. SATELLITE STRUCTURE — TYPE				
T. SATELLITE STRUCTURE — DESCRIPTION				
U. CAPSULE — TYPE				
U. CAPSULE — DESCRIPTION				
V. TRACKING AIDS — TYPE				
V. TRACKING AIDS — DESCRIPTION				
W. MISSION OBJECTIVES				

10. ITEM	11. SECURITY CLASSIFICATION S	C	U	OTHER
X. DRAWINGS, SKETCHES, PHOTOGRAPHS, EXTERNAL OR INTERNAL VIEWS, AND DESIGN INFORMATION. (INCLUDING ENGINEERING NOTES, COMPUTATIONS AND MODELS OR MOCK-UPS RELATIVE TO SYSTEMS OF SATELLITE)				
(1) PAYLOAD SYSTEM				
(2) CONTROL SYSTEMS (ATTITUDE/ORIENTATION)				
(3) ORBITAL CORRECTION SYSTEM				
(4) SATELLITE STRUCTURE				
(5) EJECTABLE/RECOVERY OBJECTS				
(6) FUNCTIONAL SYSTEMS				
(7)				
Y. OPERATIONAL CONCEPTS				
Z.				
AA. INSTRUMENTATION (INTERNAL)				
BB. INSTRUMENTATION (EXTERNAL)				
CC. TRAINING EQUIPMENT				
DD. GROUND SUPPORT EQUIPMENT				
EE. RAW DATA				
FF. REDUCED DATA				
GG. TECHNICAL PUBLICATIONS				
HH.				
II.				

12. SECURITY GUIDE(S) AND DOCUMENT(S)	13. CONFIRMATION – OFFICE SECURITY ADVISOR

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PROGRAM MISSION			1. SECURITY CLASSIFICATION	2. PAGE 110 3. DATE 1 June 1965 4. REPLACES PAGE(S) ORIGINAL DATED
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT NO.: NONE	7. SYSTEM CODE: 75664014	8. CONTRACTOR/CONTRACTOR NUMBER: Aerospace Corp/AF 04(695)-469	

10. MISSION AND/OR BASIC PURPOSE OF PROGRAM

Support of a classified space program (U).

11. PURPOSE OF EACH SATELLITE

(1-10) To develop and demonstrate capability of achieving an accurate orbit and accomplishing calldown and accurate impact at a preselected point.

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PROGRAM OBJECTIVES

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2. PAGE 120
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5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp/AF 04(695)-469

10. ITEM NO.	11. TEST CODE	12. TEST AND PERFORMANCE OBJECTIVES	13. RESPONSIBLE AGENCY	14. ORBIT/PHASE REFERENCE	15. PURPOSE AND REMARKS
		Refer to "Program 206 System Test Plan" for definition of program test and performance objectives. Refer to "Program 206 System Test Objectives" for definition of test and performance objectives for each flight vehicle.			

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CONTRACTOR/AGENCY PROGRAM SUPPORT RESPONSIBILITIES

1. SECURITY CLASSIFICATION
2. PAGE 130
3. DATE 1 June 1965
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5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR CONTRACT NUMBER: Aerospace Corp/AF 04(695)-469

10. ITEM NO.	11. CONTRACTOR/AGENCY	12. TEST CODE	13. BASIC RESPONSIBILITY	14. LIST OF PRIMARY RESPONSIBILITIES
1			Program Management.	
2	Aerospace Corporation		General Systems Engineering and Technical Direction.	
3	General Electric ASPD		Satellite Vehicle.	
4	Hq Space Systems Division, SSO		Satellite Control Facilities and Re-entry Support	
5	6594th Aerospace Test Wing		On-Orbit and Re-entry Operations	
6	Space Technology Laboratories, Inc.		Program generation as necessary for mission planning, orbit selection and orbit control.	
7	Lockheed Missile & Space Company		206 S-01B vehicle.	

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CONTRACTOR/AGENCY OPERATIONS RESPONSIBILITY

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5. PROGRAM TITLE	6. PROGRAM REQUIREMENT NO.	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
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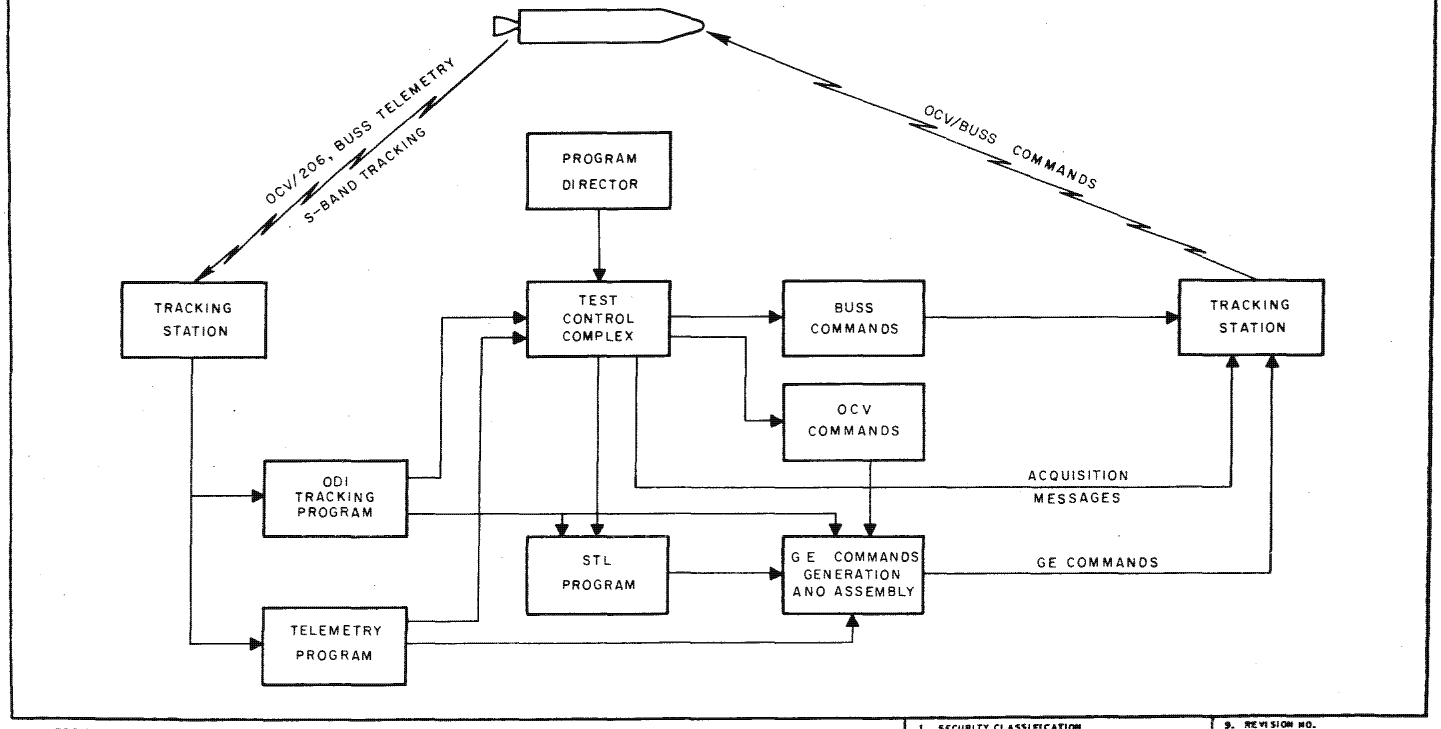
10. PROGRAM OPERATIONS FUNCTIONAL DIAGRAM

11. TEST CODE



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PROGRAM SUMMARY – FUNCTIONAL DESCRIPTION

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2. PAGE 142

3. DATE 1 June 1965

4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT NO. NONE

7. SYSTEM CODE: 75664014

8. CONTRACTOR/CONTRACT NUMBER: AF 04(695)-469

10. ITEM NO.	11. PROGRAM IN-ORBIT OPERATIONS (SATELLITE AND GROUND SUPPORT FUNCTIONS)	12. ORBIT PHASE	13. OPERATION PERIOD	14. PURPOSE
1	Telemetry and tracking during orbit injection.	Ascent	Prelaunch to orbit injection	Establish initial orbit conditions.
2	Tracking station contacts, tracking, and telemetry readout at each station commanding, as directed by STC.	On-orbit	All station passes as applicable	Supply tracking, telemetry, and command capability to assure positive SV vehicle control.
3	Orbit computation and command generation by STC.	On-orbit	Continuous during operation	Assure adequate SV control
4	Orbit corrections in vehicle as commanded by commands inserted.	On-orbit	As required	Maintain satisfactory orbit conditions.
5	Preparation for and execution of RV Deboost Maneuver	End of orbit	At required time for proper RV re-entry	Perform adequate RV Re-entry Operations
6	Tracking and telemetry during re-entry.	Re-entry	During re-entry	Allow recovery of capsule.
7	Back-up Stabilization and Command System.	Re-entry	At required time for re-entry	Provide secondary system for vehicle stabilization and re-entry initiation commands.
8	Telemetry and tracking during OCV solo operations.	Post re-entry (OCV on orbit)	All station passes as applicable	Post-separation satellite operations.
9.	Preparation for and execution of OCV Deboost Maneuver	End of flight	At required time for satisfactory OCV deboost	Perform adequate OCV deboost operations.

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ORBITAL VEHICLE DESCRIPTION

1. SECURITY CLASSIFICATION	2. PAGE 210
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5. PROGRAM TITLE	6. PROGRAM REQUIREMENT NO.	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	75664014	Aerospace Corp./AF 04(695)-469

10. SATELLITE GEOMETRY — TEST CODE:

See Figure 2-1, Inboard Profile, SV in Program Plan (GE Document No. DIN 63SD4849, 6 December 1963)

11. CONSTRUCTION

A TYPE:
Monocoque

B MATERIALS
Aluminum

12. STABILIZATION

A ORIENTATION DETERMINATION SYSTEMS:
IR and Orbital Rate Sensing

B ORIENTATION CORRECTION TECHNIQUES:
Cold Gas (freon)

C ATTITUDE CONTROL SYSTEM:
Integrating Gyro System

D SPIN RATES:
None; Vehicle stabilized in orbit

13. TRACKING AIDS:

A T/M TRANSMISSION: *
FM/FM 248.6 Mc
FM/FM 258.5 Mc

B BEACON TRANSMISSION:
S-Band Beacon Receiver 2850 Mc
Beacon Transmit 2920 Mc

C REFLECTORS:

D OTHER:
*See notes on pages 620 thru 620.4 for use of these frequencies.

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ORBITAL VEHICLE PERFORMANCE CRITERIA

1. SECURITY CLASSIFICATION	2. PAGE 220
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5. PROGRAM TITLE	6. PROGRAM REQUIREMENT NO.	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	75664014	Aerospace Corp./AF 04(695)-469

10. SATELLITE SYSTEM CAPABILITIES

A. SYSTEM PERFORMANCE, FULL RATING:

Altitude Range - 75 to 400 nautical miles
Period Range - 87.5 to 89 minutes
Inclination Range - 80 to 130 degrees
Near Circular Orbit
Eccentricity Range - 0 to 0.045

B. BACKUP SYSTEMS:

Back-up Stabilization and Command Subsystem (BUSS)

C. RESIDUAL CHARACTERISTICS:

None

11. SPECIAL SATELLITE FEATURES:

1. Control of orbit in flight.
2. R/V air snatch, recovery following water impact as back-up.

13. TEST CODE:

12. SATELLITE LIFE

A. RATED LIFE, TIME IN ORBIT

TOTAL SYSTEM LIFE, FULL RATING: 5 days
EFFECTIVE MISSION LIFE: 5 days
RESIDUAL SYSTEM LIFE: (Limited by power use)
SCHEDULED DEORBIT/REENTRY: 5th day

B. ALTERNATE RATINGS, FAILURE CONTINGENCIES:

Later

C. SATELLITE SERVICE TERMINATION CAPABILITIES:

On command at selected times after 1 orbit.

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5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT NO.: NONE	7. SYSTEM CODE: 75664014	8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(647)-469	

10. ORBITAL INJECTION CONDITIONS

According to output of orbit selection module

A. INJECTION POSITION, GEOCENTRIC
- ANGLE OF RIGHT ASCENSION (LONGITUDE)
- ANGLE OF DECLINATION (LATITUDE):
- RADIUS

B. INJECTION VELOCITY
- ANGLE OF VECTOR WITH EARTH RADIUS:
- ANGLE WITH LONGITUDE:
- ANGLE WITH LATITUDE:
- SPEED:

C. SIDEREAL TIME OF INJECTION

D. SUPPLEMENTARY REQUIREMENTS

11. ORBITAL ADJUSTMENTS

According to Mission Planning System commands:

A. SCHEDULE OF ADJUSTMENTS:
- NUMBER PER SATELLITE: _____
- ORBITAL TIMES: _____
- PERIODS REQUIRED:
- PURPOSE:

B. ORBITAL POSITION, GEOCENTRIC POINT OF ADJUSTMENT:
- LONGITUDE _____
- LATITUDE _____
- RADIUS _____

C. ORBITAL CORRECTION
- RATE OR TIMING:
- ELLIPTICAL CHANGES:

CHANGE IN INCIDENCE ANGLE OF THE ORBITAL PLANE:

12. ORBIT CORRECTION METHODS **13. TEST CODE**

The mission planning system receives tracking and telemetry data, OCV capability input, and operational requirements input and computes the orbit adjustment that meets the greatest number of mission objectives. Generated commands are assembled and transmitted to the commanding tracking station for transmission to the OCV, which receives, stores, and executes the commands at the proper times. Orbit adjustments are accomplished by adding positive or negative velocity increments along the inertial velocity vector. Adjustments are nominally made at perigee during specified revolutions.

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INITIATION OF ORBIT

1. SECURITY CLASSIFICATION

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5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF 04(695)-469

10. ORBITAL INJECTION CONDITIONS

A. INJECTION POSITION, GEOCENTRIC (nominal)
- ANGLE OF RIGHT ASCENSION (LONGITUDE): 124.28°
- ANGLE OF DECLINATION (LATITUDE): 14.345°N
- RADIUS: 21,486,435 ft

B. INJECTION VELOCITY (nominal)
- ANGLE OF VECTOR WITH EARTH RADIUS: 0.0574 deg
- ANGLE WITH LONGITUDE: 185.83 deg
- ANGLE WITH LATITUDE:
- SPEED: 25,650 fps

C. SIDEREAL TIME OF INJECTION

Noon (nominal)

D. SUPPLEMENTARY REQUIREMENTS

NOTES: 1) This information pertains to the early Block II vehicles

2) Although not a part of Program 206, a GFE package will be injected as a separate satellite by the Agena 206/S-01A vehicle following separation of the OCV from the Agena (on selected flights). Appropriate weight, CG, and aerodynamic drag corrections for the launch and ascent computations are required in connection with this package, and are an integral part of the LMSC Mass Properties report.

11. ORBITAL ADJUSTMENTS

A. SCHEDULE OF ADJUSTMENTS:
- NUMBER PER SATELLITE: _____
- ORBITAL TIMES: _____
- PERIODS REQUIRED:
- PURPOSE:

B. ORBITAL POSITION, GEOCENTRIC POINT OF ADJUSTMENT:
- LONGITUDE _____
- LATITUDE _____
- RADIUS _____

C. ORBITAL CORRECTION
- RATE OR TIMING:
- ELLIPTICAL CHANGES:

CHANGE IN INCIDENCE ANGLE OF THE ORBITAL PLANE:

12. ORBIT CORRECTION METHODS **13. TEST CODE**

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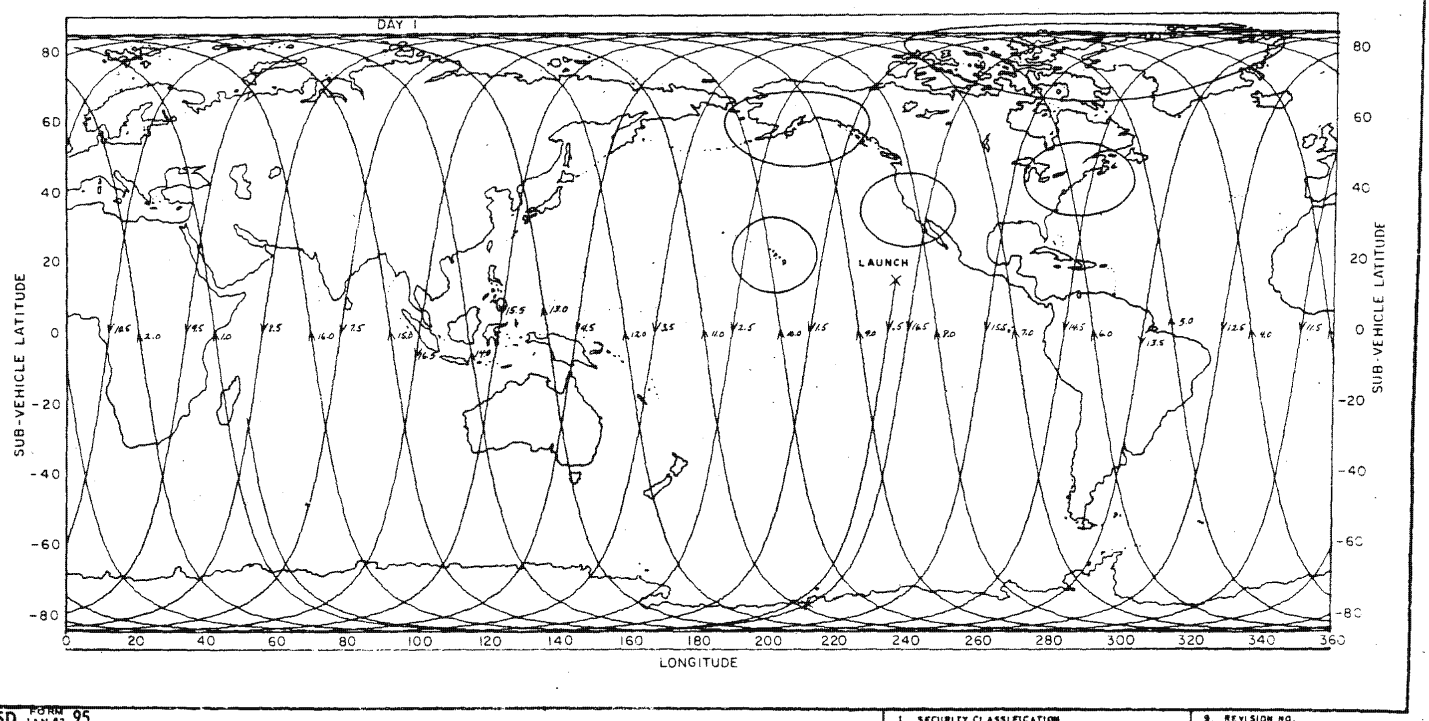
EARTH PROJECTION (Typical, first day)			1. SECURITY CLASSIFICATION	2. Page 340 3. DATE 1 June 1965 4. REPLACES PAGE(S) ORIGINAL DATED
5. PROGRAM TITLE PROGRAM 206	6. PROGRAM REQUIREMENT NO. NONE	7. SYSTEM CODE 75664014	8. CONTRACTOR/CONTRACT NUMBER Aerospace Corp./AF 04(695)-469	



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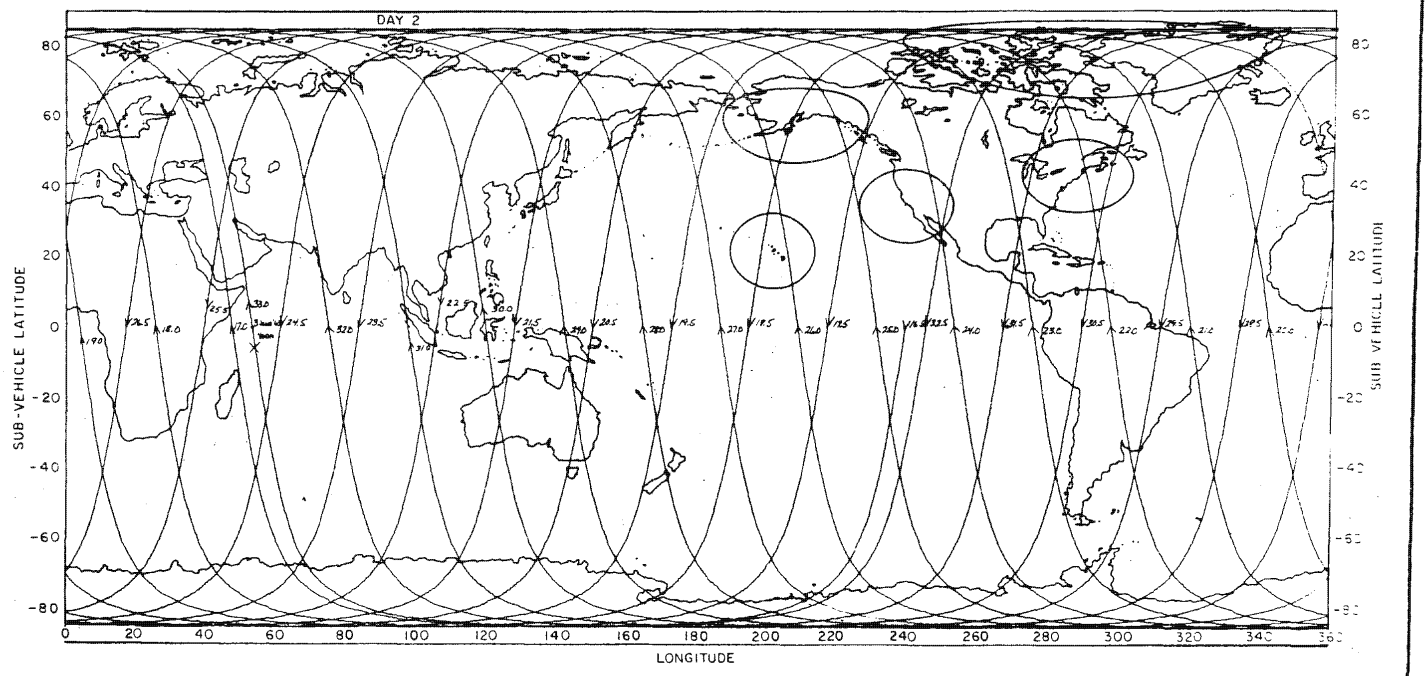
EARTH PROJECTION (Typical, second day)			1. SECURITY CLASSIFICATION	2. Page 346.1 3. DATE 1 June 1965 4. REPLACES PAGE(S) ORIGINAL DATED
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT NO.: NONE	7. SYSTEM CODE: 75664014	8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469	



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TRACKING & ACQUISITION - MEASUREMENTS

1. SECURITY CLASSIFICATION

2. PAGE 410

3. DATE 1 June 1965

4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 75664014

8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

10. ITEM NO.	11. TEST CODE	12. MEASUREMENT AND INTERVAL TAKEN	13. DATA REQUIRED	14. LOCATION LONG.	14. LOCATION LAT.	15. DATA ACCURACY CLASS I	15. DATA ACCURACY CLASS II	15. DATA ACCURACY CLASS III	16. PURPOSE & REMARKS
1	A,B	80-135 n mi, 1st orbit	Azimuth Elevation Range	One per four seconds		Noise 1 mr rms, bias 1 mr 1σ; noise 200 ft rms, bias 125 ft 1σ.			Ephemeris determination for an early orbit determination.
2	A,B	80-135 n mi, all station passes	Azimuth Elevation Range	One per four seconds		Noise 3 mr rms, bias 3 mr 1σ; noise 200 ft rms, bias 125 ft 1σ.			Ephemeris determination and prediction for orbit maintenance through correct control and orbit adjustment as required for mission accomplishment.
3	A,B	135-50 n mi, re-entry pass	Azimuth Elevation	As available					To allow detection of nominal performance.

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TRACKING SYSTEM REQUIREMENTS

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5. PROGRAM TITLE	6. PROGRAM REQUIREMENT NO.	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NO.
PROGRAM 206	NONE	75664014	Aerospace Corp./AF04(695)-469

10. SATELLITE TRACK METHODS

Azimuth, elevation, range — Verlort or Prelort Radar
Azimuth and elevation angles — Telemetry Angle

11. SPECIAL TRACKING NET REQUIREMENTS

A. EQUIPMENT

B. OPERATING

12. SPECIAL STATION CAPABILITIES

C. OVERALL CAPABILITIES

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PROPOSED TRACKING SITE LOCATIONS

2. PAGE 432
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5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO. NONE
7. SYSTEM CODE 75664014
8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

10. ITEM NO.	11. TEST CODE	12. STATION DESIGNATION	13. LOCATION LONGITUDE	13. LOCATION LATITUDE	14. MISSION OF STATION	15. CRITICAL PARAMETERS	16. PAGE REFERENCES
1		VTS	120.5°W	35.0°N	Command as directed. Tracking and telemetry reception during launch and each pass on orbit.		
2		TTS	68.5°W	76.5°N	Command as directed. Tracking and telemetry reception during each pass on orbit.		
3		KTS	152.5°	57.8°N	Command as directed. Tracking and telemetry reception during each pass on orbit.		
4		HTS	158.3°W	21.6°N	Command as directed. Tracking and telemetry reception during each pass on orbit.		
5		NHS*	71.7°W	43.0°N	Command as directed. Tracking and telemetry reception during each pass on orbit.		

*For use as a backup station, not as a primary station.

17. SYSTEMS REQUIRED	STATIONS
1. S-Band radar	1-5
2. 200-Mc tracking and data acquisition	1-5
3. Data handling equipment	1-5
4. Intrastation communications	1-5
5. Interstation communications	1-5
6. Boresight and alignment	1-5
7. Command capability, digital (GE)	1-5
8. Timing equipment	1-5
9. Control and display	1-5
10. Cryptographic equipment	1-5
11. Zeke command capability	1-5
12. Telemetry data recording	1-5

NOTE: Telemetry recording is required during the reentry maneuver and during OCV/206 S-01A separation.

SSD FORM JAN 62 50

9. REVISION NO.

SATELLITE TRACKING CHARACTERISTICS

2. PAGE 440
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

10. RADAR CROSS-SECTION EVALUATION

A. CONFIGURATION FACTORS

GEOMETRY SIZE: Cylindrical, 12,000 sq in.
L = 20 ft, dia = 5 ft

SKIN MATERIAL: 2024 Aluminum

REFLECTORS: None

OTHER: None

B. SYSTEM FACTORS

ATTITUDE OF LONGITUDINAL AXIS:
ANGLE WITH ORBITAL PLANE 0 DEGREES,
SPACIALLY FIXED
ANGLE WITH LOCAL VERTICAL 90 DEGREES,
EARTH FIXED Yes

ROTATIONAL RATES IN REFERENCE TO LOCAL VERTICAL:
AXIAL _____ RPM
LONGITUDINAL _____ RPM

OTHER:

C. CROSS-SECTION PATTERN

RANGE OF GROUND STATION ASPECT ANGLES:

MAXIMUM CROSS-SECTION Not available M^2
MINIMUM CROSS-SECTION Not available M^2

11. TRACKING AIDS

TYPE & DESIGNATION	TRANSMISSION PERIOD (SEC.)	PERIODS OF OPERATION (NUMBER PASS)	RADIATED POWER (WATTS)	TYPE OF TRANSMISSION	FREQ. (MC)	TYPE/LOCATION OF ANTENNA	ASSOCIATED GROUND EQUIPMENT
A. TELEMETRY							
NON-INTERROGATED							
Low Frequency	360-720	Each station pass	8-12	PAM/FM/FM	248.6	Cavity back slot, ±20° from bottom	TIM Receivers
High Frequency	360-720		8-12	PAM/FM/FM	258.5		
SRV		Continuous from 75 seconds prior to separation (See Note)	1.5-2	FM/FM	242.0	See Note	TIM Receiver
INTERROGATED							
None							
B. TRACKING BEACONS							
NON-INTERROGATED							
S-Band	360-720	Each station pass	1 kw peak	Pulse	2850(Rev) 2920(TX)	Cavity back helix bottom only	S-Band Radar
INTERROGATED							
C. OTHER							

NOTE: SRV telemetry is continuous from 75 seconds prior to separation. Hi and Lo Frequency Antennas are located at ± 19° from bottom of conical adapter at Station 57. SRV antenna is a $\frac{1}{4}$ wave dipole located at Station 38.

SSD FORM JAN 62 53

9. REVISION NO.

SATELLITE ACTIVE TRACKING SYSTEM

1. SECURITY CLASSIFICATION

2. PAGE 460

3. DATE 1 June 1965

4. REPLACES PAGE'S ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT NO.: NONE

7. SYSTEM CODE: 75664014

8. CONTRACTOR CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

10. PURPOSE OF BEACON SYSTEM

The S-band pulse beacon consists of (1) a superheterodyhe receiver which accepts two or three pulse-coded rf inputs, detects and shapes these pulses, and decodes the first and last pulse, (2) a transmitter which transmits an uncoded response, and (3) a transistorized power supply.

The beacon provides the shaped video pulse train as an output to the command decoding equipment.

11. SYSTEM DESCRIPTION

A. BEACONS

DESIGNATION: S-Band

TYPE OF TRANSMISSION: Pulse

FREQUENCY: 2920 ± 5 Mc

NUMBER OF BEACONS USED: One

TURN-ON METHOD: Stored Command

TURN-OFF METHOD: Command and Timer

BEACON FUNCTIONAL DESCRIPTION:
Generates 1-microsecond pulses in response to properly spaced interrogations.

B. DECODER

DESIGNATION: Tracking Interrogation

TYPE: Multivibrator Time Comparison

CODING SYSTEMS AVAILABLE: Pulse Spacing

DECODER FUNCTIONAL DESCRIPTION:
Pulses on frequency checked for a predetermined spacing of 36 ±0.5 μs. Reply initiated to all pairs with those characteristics.

C. ANTENNAS

TYPE: Cavity-Backed Helix

FIXED TUNE [X] TUNABLE [ ]

LOCATION: θ = 60° & ϕ = 180°
Beam Width: See Page 461.1

ORIENTATION: Longitudinal

POWER OUTPUT: 1000 watts (peak)

FREQUENCY RANGE: 2850 ±5 Mc 2920 ±5 Mc

BEAM WIDTH: N/A

MAXIMUM SIDE LOBES:

E-PLANE

H-PLANE

SPECIAL CHARACTERISTICS:

-15 db theoretical null at θ = 68° and ϕ = 183°

PATTERN AVAILABILITY:
See page 461.1

POLARIZATION CHARACTERISTICS:
Linear

* FURNISH ANTENNA PATTERN ON SSD FORM NO. 92 OR 93.

SSD FORM JAN 62 55

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1. SECURITY CLASSIFICATION

9. REVISION NO.

PULSE BEACON

1. SECURITY CLASSIFICATION:
2. PAGE 461
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL DATE:
5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp. AF 04(695)-469

10. BEACON CHARACTERISTICS

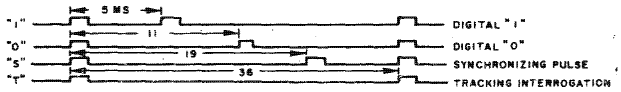
A. BEACON FUNCTION:
1. Tracking and acquisition
2. Receiver for command functions

B. SPECIAL INTERROGATION AND REPLY CAPABILITIES:
MAXIMUM DELAY VARIATION ±0.1 μs
OTHER FEATURES: Must be interrogated by only one command radar at a time.

C. MESSAGE TYPE: ☐ PAM, ☐ PDM, ☒ PULSE POSITION, ☐ PULSE IN/OUT (PRESENCE)
☐ OTHER MODULATION –
PULSE WIDTH .8 ±0.2 μs, PULSE FREQUENCY 410 to 630 PPS (pulse groups)
MESSAGES PER SEQUENCE (RECYCLE) 1; RECYCLE TIME 1600 μs

MESSAGE NO.	"1"	"0"	"S"	"T"		
PULSE DIGITS	3	3	3	2		
LENGTH, μs	36	36	36	36		
SPACING, μs (TO NEXT MESSAGE)	2439	2439	2439	2439	(Pulse group period at 410 pps)	

CODE FORM:



D. OPERATING PARAMETERS OF UNIT: -3
POWER REQUIREMENTS 28 +6 VOLTS 39 WATTS
MINIMUM FREQ. SEPARATION BETWEEN TRANSMITTER AND RECEIVER 45 MC
SYSTEM FREQUENCY STABILITY N/A ± CPS A.: CARRIER FREQ.
TRANSMITTER: OPERATING POWER N/A WATTS
WARM-UP TIME 1 MINUTES; RECOVERY TIME Less than 200 μs
RECEIVER: OPERATING POWER N/A WATTS
WARM-UP TIME 1 MINUTES: RECOVERY TIME Less than 200μs

11. TRANSMITTER CAPABILITIES

A. TYPE:
☐ TUNABLE; ☒ FIXED TUNED

B. EMISSION:

C. FREQUENCY
RANGE 2920 MC
STABILITY ±2 MC/24 hrs

D. BANDWIDTH AT 3 DB: N/A MC
AND AT 60 DB: N/A MC

E. POWER OUTPUT
AVERAGE 0.2 to 2 WATTS
PEAK PULSE 1000 WATTS

F. PLOT OF ANTENNA INPUT POWER VS. TRANSMITTER FREQUENCY
☐ AVAILABLE; ☒ NOT AVAILABLE; ☐ ATTACHED

G. SPECTRUM ANALYSIS
☐ AVAILABLE; ☐ NOT AVAILABLE; ☐ ATTACHED

H. SPECIAL FEATURES
Rep. rate is either 410, 512, 585, or 630 pps.

12. RECEIVER CAPABILITIES

A. TYPE
☒ Superhet ☒ Fixed tuned

B. SUBSYSTEM FEATURES
AUTO. GAIN CONTROL TYPE: None
AGC TIME CONSTANT REQUIRED: None
LOCAL OSCILLATOR HAS FREQUENCY SET
☒ ABOVE, ☐ BELOW, INTEROGATION FREQUENCY
OTHER FEATURES:

C. FREQUENCY
RANGE 2850 MC
STABILITY ±5 Mc
METHOD OF CONTROL:
Tuned circuit

D. SELECTIVITY (OVERALL)
3 DB 10 ±2 Mc
40 DB 35 Mc max

E. SENSITIVITY
MAXIMUM
MINIMUM

F. PLOT OF SIGNAL/NOISE RATIO VS. INPUT SIGNAL LEVEL
☐ AVAILABLE, ☒ NOT AVAILABLE, ☐ ATTACHED

G. SPECTRUM ANALYSIS OVER FREQUENCY RANGE 10^2 TO 10^4 MC
☐ AVAILABLE; ☒ NOT AVAILABLE; ☐ ATTACHED

H. SPECIAL FEATURES

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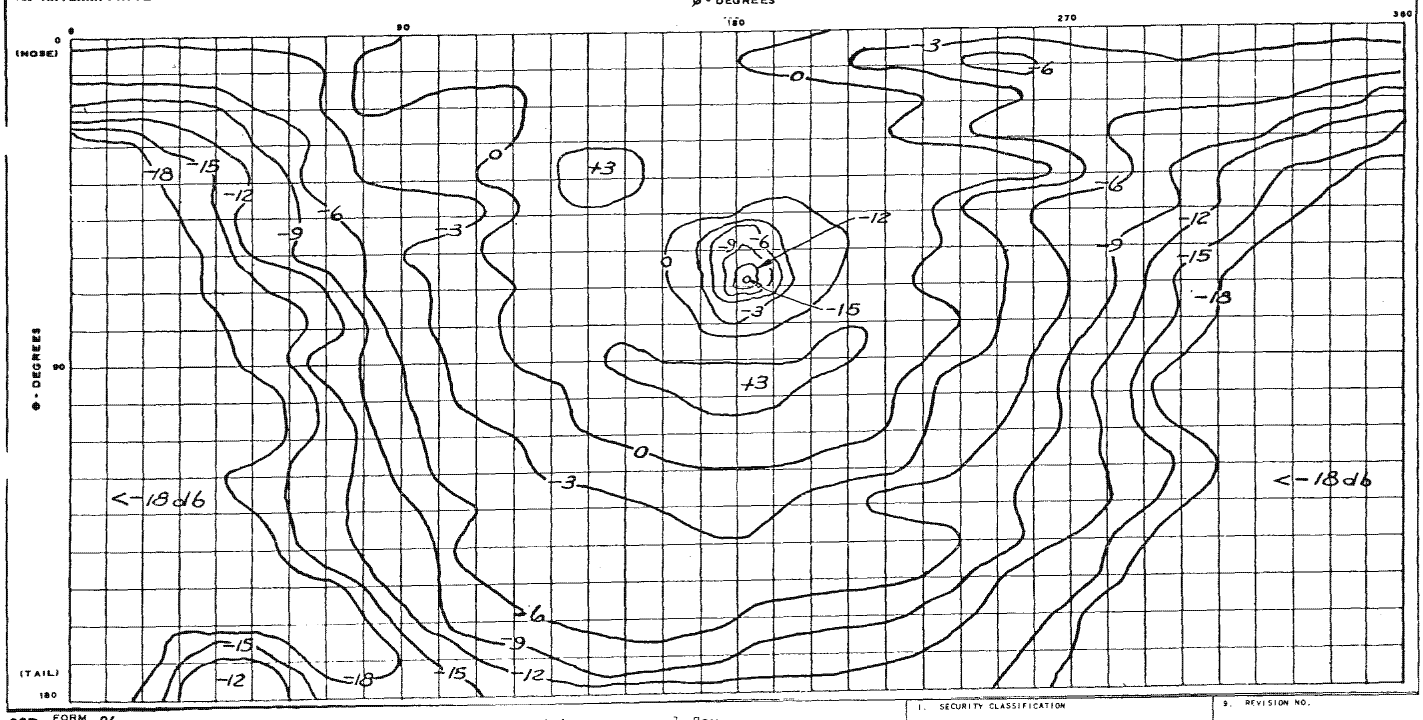
1. SECURITY CLASSIFICATION:
9. REVISION NO.

ANTENNA PATTERN (SV)			1. SECURITY CLASSIFICATION	2. PAGE 461.1 3. DATE 1 June 1965 4. REPLACES PAGE(S) ORIGINAL DATED
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT CODE: NONE	7. SYSTEM CODE: 75664014	8. CONTRACTOR/CONTRACT NUMBER: Aerospace AF 04(695)-469	
10. TEST CODE	11. PRD PAGE NO.	12. INSTRUMENTATION SYSTEM: S-Band Beacon		

13. ANTENNA PATTERN PLOT



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NOTE: Circularly polarized pickup was used for these measurements. 3 db loss included in this plot.

1. SECURITY CLASSIFICATION	9. REVISION NO.

GENERAL EPHEMERIS REQUIREMENTS

2. PAGE 510
3. DAT 1 June 1965
4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT NO.	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	75664014	Aerospace Corp./AF 04(695)-469

10. PURPOSE OF EPHEMERIS

Provide information adequate for acquisition, command, and orbital control of the satellite vehicle.

Provide best-fit ephemeris on a post flight basis, utilizing all available tracking data to allow postflight evaluation of on-orbit accuracies.

11. SOURCES OF DATA

Nominal mission profile and injection parameters will be supplied by Aerospace Corporation. On-orbit updating is based on processing digital S-Band Radar and angle-tracking data collected by SCF tracking and acquisition stations. Stations providing tracking data to STA are VTS, NHS,* KTS, and TTS.

*NHS is available as a backup station, not a primary station.

12. CRITICAL ORBITAL PARAMETERS

Orbit period.

Orbit plane inclination.

Time at which satellite reaches epoch perigee altitude.

Altitude of perigee.

Probable error in above parameters.

13. SPECIAL OR SUPPLEMENTAL INFORMATION

Telemetered times of events connected with injection, orbit adjust, and deboost for accurate simulation of powered flight segments.

Nominal performance characteristics of propulsion systems and attitude control systems utilized for orbit adjust and deboost.

14. UTILIZATION OF EPHEMERIS

a. Computation of acquisition data for tracking and acquisition stations.

b. Computation of satellite vehicle control commands for command programs.

c. Impact prediction programs use ephemeris information.

d. Ephemeris-based displays and printed data for station and control center operation, data analysis, and mission monitoring and direction by 6594th ATW.

e. Evaluation of on-orbit performance from post flight ephemeris data.

15. FREQUENCY OF DETERMINATION

a. Valid Interval:

Up to 24 hours, including any programmed orbit corrections.

b. Up-Dating Period:

After tracking pass as required by ORD 520 Item 12.

c. Revisions:

Postflight and as required, utilizing all tracking data.

SSD FORM JAN 62 58
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1. SECURITY CLASSIFICATION	9. REVISION NO.

METHODS OF EPHEMERIS DETERMINATION

2. PAGE 520
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT NO.	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	75664014	Aerospace Corp./AF 04(695)-469

10. METHOD OF DETERMINATION

A. GENERAL

The orbital elements which best fit the tracking data in the least squares sense are determined. The differential equations of motion are integrated from the epoch with these osculating elements for the desired time, which yields the satellite ephemeris. The accuracy of the orbit determination program must be as great as possible.

The ephemeris must be capable of being integrated through orbital adjustment periods, and must contain an associated set of orbital parameters (i.e., X, Y, Z, $\dot{X}$, $\dot{Y}$, $\dot{Z}$, etc.) useful for orbital computations in a high speed digital computer.

B. SPECIAL REQUIREMENTS, CRITICAL ORBITAL ELEMENTS

11. PERMISSIBLE ASSUMPTIONS

DOD-WGS coordinate system.

Geopotential harmonics through fourth order

Seventh-parameter yields average drag factor.

Aerospace TOR-269(4110-01)-13 Satellite Control Facility Geodetic Data Book.

12. REQUIRED ACCURACIES

Satellite spatial position errors on-orbit with up to four orbits predicted:

In-track	± 4.0 n mi, 3σ
Cross-track	± 2.0 n mi, 3σ
Altitude	± 0.5 n mi, 3σ

The above numbers include the following error sources:

Station position
Data bias
Random noise error
Computation error

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11. SECURITY CLASSIFICATION

9. REVISION NO.

EPHEMERIS FORMAT & DISTRIBUTION

1. SECURITY CLASSIFICATION	2. PAGE 530
	3. DATE 1 June 1965
	4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT NO.	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	75664014	Aerospace Corp./AF 04(695)-469

10. EPHEMERIS FORMAT

A. REPORT PRESENTATION

Computer language magnetic tapes.
Computer printed listings.

B. DATA FORMAT (GENERAL, TABULAR, GRAPHIC, ETC.)

Tabular/time-correlated

C. SPECIAL REQUIREMENTS

Transfer of orbit parameters to other operating subprograms possible in real time.

11. COORDINATE SYSTEMS

DOD-WGS coordinate system for ground locations.
Earth-centered inertial cartesian coordinate system for spatial locations, referenced to the vernal equinox of date.

12. DISTRIBUTION

A. RECEIPIENTS AND NO. OF COPIES

B. ISSUE OF FIRST DRAFT:

C. ISSUE OF FINAL EPHEMERIS:

D. UP-DATING FREQUENCY:

E. ISSUE OF EPHEMERIS REVISION:

SSD FORM JAN 62 60
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1. SECURITY CLASSIFICATION	9. REVISION NO.

GENERAL INFORMATION SYSTEM REQUIREMENTS

1. SECURITY CLASSIFICATION

2. PAGE 610

3. DATE 1 June 1965

4. REPLACES PAGE(S) ORIGINAL DATED

5. TEST PROGRAM: PROGRAM 206

6. PROGRAM REQUIREMENT NO. NONE

7. AFDC SYSTEM CODE: 75664014

8. CONTRACTOR: Aerospace Corp./AF04(695)-469

TEST CODE:

10. FUNCTIONS TO BE PERFORMED:

a. Telemetry

Transmission of environmental information, command system verification and status, and attitude and orbit control status.

b. Primary Command System

Transmission of real-time and stored commands to the vehicle for all orbit operations.

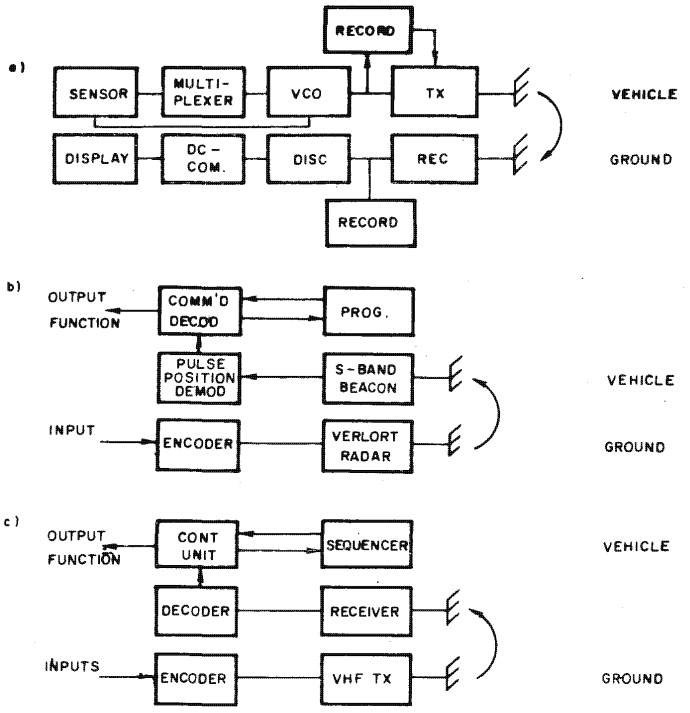
c. Back-Up, Stabilization, and Command System

Transmission of real-time commands required to start deboost sequence and/or to turn on primary command system and telemetry.

d. Tracking

S-band beacon used for command reception also serves as tracking system transponder

11. GROUND/ORBIT LINK FEATURES



SSD FORM JAN 62 61
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1. SECURITY CLASSIFICATION

9. REVISION NO.

DATA TRANSMISSION FORMAT

2. PAGE 611
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT NO.	7. SYSTEM CODE	8. CONTRACTOR / CONTRACT NUMBER
PROGRAM 206	NONE	75664014	Aerospace Corp./AF 04(659)-469

10. SPECIAL SATELLITE DATA TRANSMISSION REQUIREMENTS

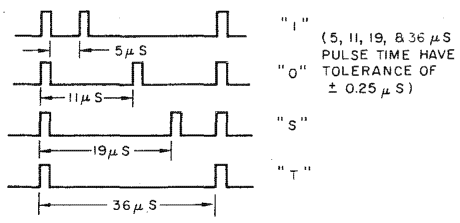
1. Vehicle Time data
2. Command verification
3. Secure command count

11. REQUIRED DATA RATE AND FORMAT CAPABILITIES

1. 500 pps, 23-bit, binary coded, 0.1-second resolution; read out each 0.8 second; pulse width 1 millisecond.
2. 22-24 millisecond pulse, 50 percent full-scale accept, 100 percent full-scale reject, (5-13 m sec)
3. Decommutation of Pulses 6 thru 12 30 x 5 PAM on 40 kc real time. Read 7-bit binary number, LSD Pin 6.
4. Accept pulse is triggered by "S" following a valid command. Reject pulse is triggered by "S" not following a valid command.

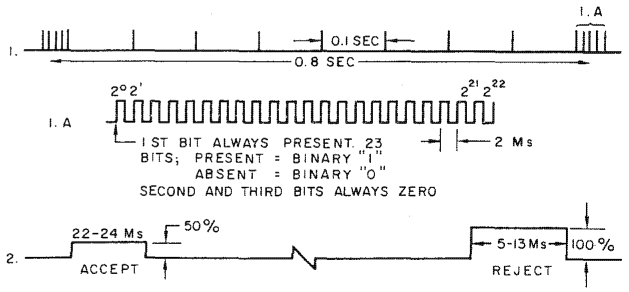
12. SPECIAL MEASUREMENT IDENTIFICATION REQUIREMENTS *

S-BAND COMMAND FORMAT



* ALSO SEE CLASSIFIED FORMS IN ADDENDUM

13. COMPOSITE FORMAT FOR A UNIT TIME PERIOD



SSD FORM JAN 62 62
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1. SECURITY CLASSIFICATION
9. REVISION NO.

SYSTEM DESCRIPTION BLOCK II TELEMETRY

1. SECURITY CLASSIFICATION

2. 612

3. DATE 1 June 1965

4. REPLACES PAGE(S) ORIGINAL

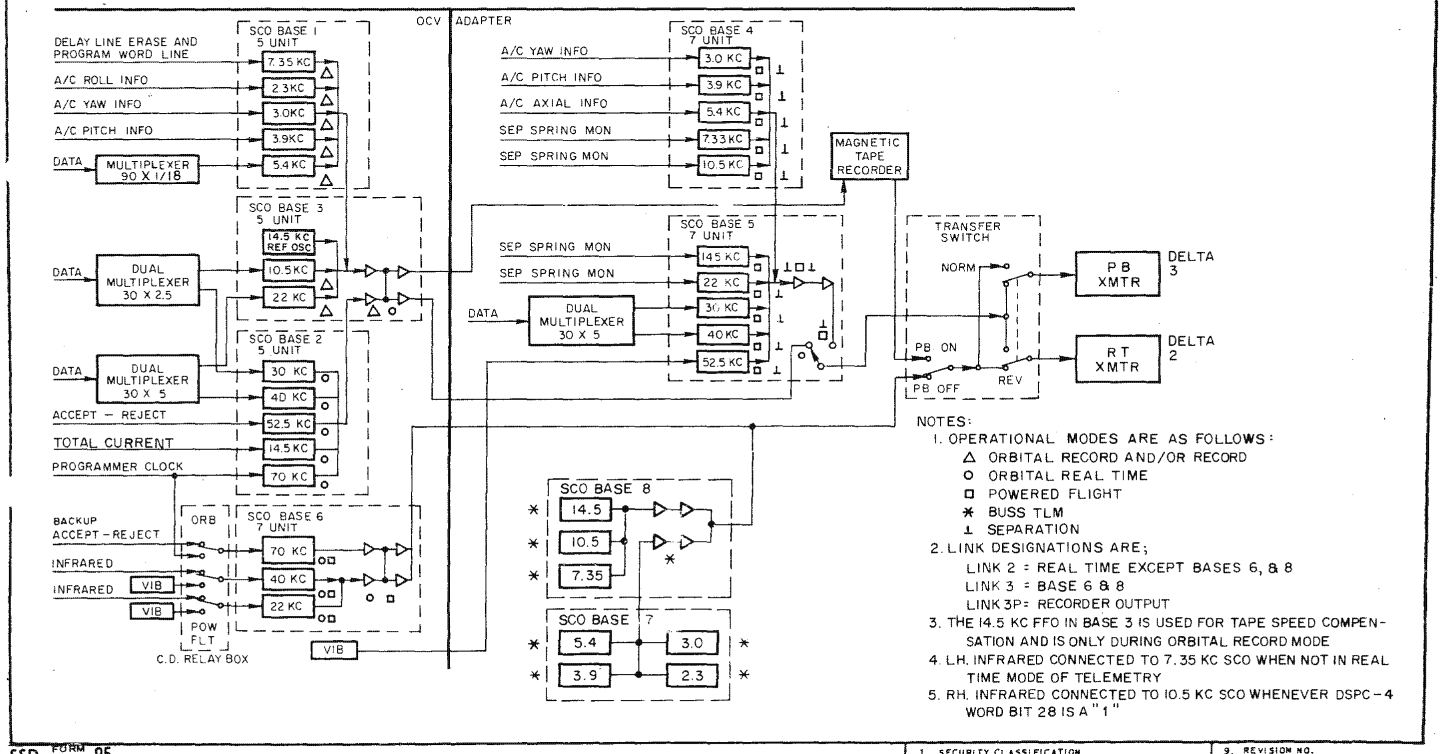
DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT NO.: NONE

7. SYSTEM CODE: 75664014

8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp/AF 04(695)-469



NOTES:

1. OPERATIONAL MODES ARE AS FOLLOWS:
   - △ ORBITAL RECORD AND/OR RECORD
   - ○ ORBITAL REAL TIME
   - □ POWERED FLIGHT
   - ✱ BUSS TLM
   - ⊥ SEPARATION
2. LINK DESIGNATIONS ARE;
   - LINK 2 = REAL TIME EXCEPT BASES 6, & 8
   - LINK 3 = BASE 6 & 8
   - LINK 3P= RECORDER OUTPUT
3. THE 14.5 KC FFO IN BASE 3 IS USED FOR TAPE SPEED COMPENSATION AND IS ONLY DURING ORBITAL RECORD MODE
4. LH. INFRARED CONNECTED TO 7.35 KC SCO WHEN NOT IN REAL TIME MODE OF TELEMETRY
5. RH. INFRARED CONNECTED TO 10.5 KC SCO WHENEVER DSPC-4 WORD BIT 28 IS A "1"

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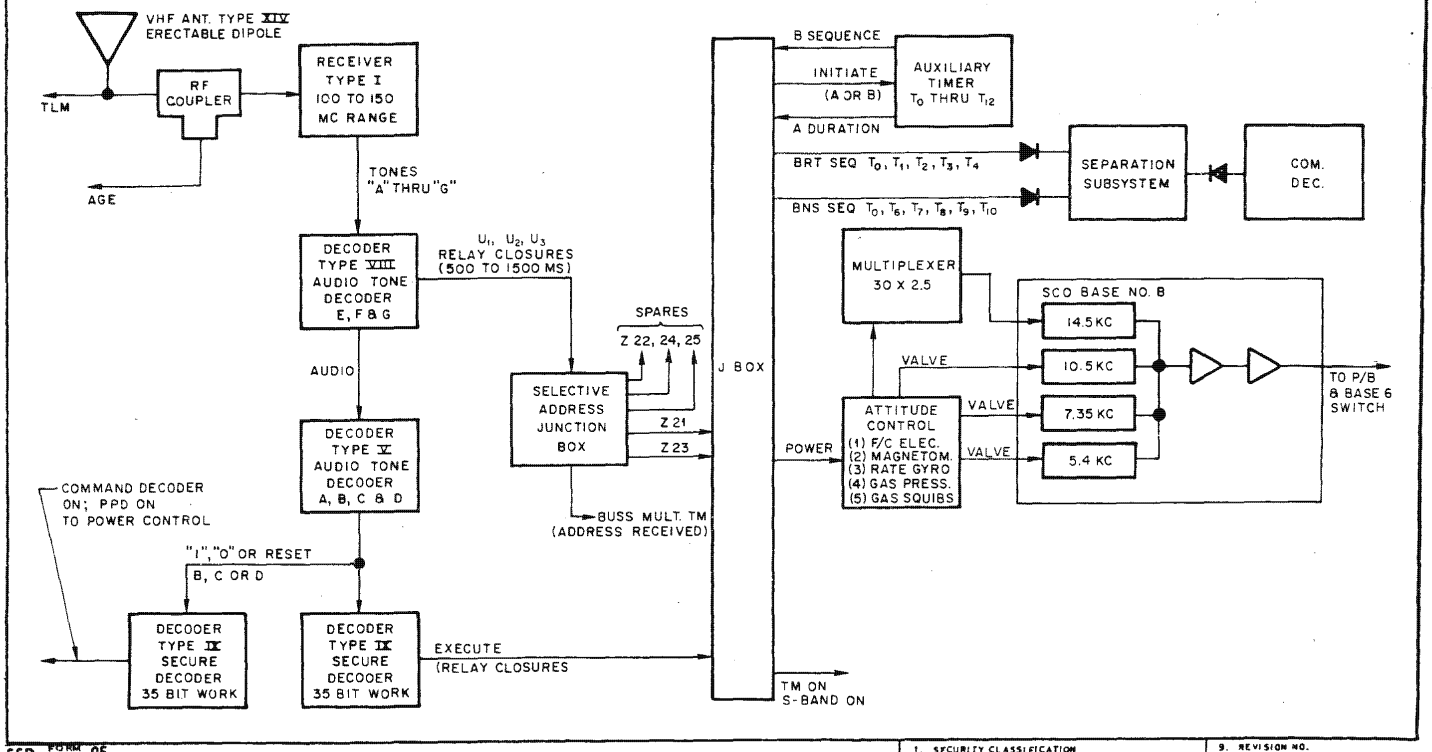
1. SECURITY CLASSIFICATION

9. REVISION NO.

SYSTEM DESCRIPTION; BUSS CONTROL AND TELEMETRY

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT NO.	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER	1. SECURITY CLASSIFICATION	2. 612.1
PROGRAM 206	NONE	75664014	AF 04(695)-469		3. DATE 1 June 1965
					4. REPLACES PAGE(S) ORIGINAL
					DATED



SSD FORM 95 JAN 62
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1. SECURITY CLASSIFICATION	9. REVISION NO.

TELEMETRY TRANSMISSION CHARACTERISTICS REAL TIME DATA (ORBIT) (BASES 1, 2, AND 3)

1. SECURITY CLASSIFICATION

2. PAGE 620

3. DATE 1 June 1965

4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT NO. NONE

7. SYSTEM CODE: 75664014

8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp/AF 04(695)-469

10. TRANSMITTER CAPABILITIES:

A. SERVICE:

EQUIPMENT STATUS [X] MISSION [X]

ENVIRONMENTAL [ ] OTHER [ ]

B. TRANSMISSION FEATURES:

TRANSMISSION INITIATED BY: Command

MODULATION TYPE: PAM/FM/FM

FREQUENCY OF LINK *248.6 Mc (normal) (Δ2)

EFFECTIVE RADIATED POWER: 258.5 Mc (Alternate) (Δ3)

3 watts

C. FREQUENCY CAPABILITIES:

RANGE OF DATA RATES

DEVIATIONS: MAX ±180 kc MIN. ____

FREQUENCY STABILITY: ±0.01%

FREQUENCY CONTROL METHOD: Crystal referenced

D. BAND WIDTH:

EMITTED SPECTRUM WIDTH AT

3 DB: 300 kc

60 DB:

E. MAXIMUM DUTY CYCLE: Continuous

*The choice of whether the low frequency (248.6 Mc) transmitter or the high frequency (258.5 Mc) transmitter is used for this data may be made by real time command.

11. SPECIAL MODULATION REQUIREMENTS:

A. MODULATION FEATURES:

PAM/FM/FM
FM/FM

B. CONTINUOUS MEASUREMENT SIGNALS:

NUMBER OF MEASUREMENTS: 7

SUBCARRIER CENTER FREQUENCY & DEVIATION:

70 kc, 52.5 kc, 14.5 kc, 7.35 kc, 3.9 kc, 3.0 kc, 2.3 kc, 1.7kc ±7.5% deviation.

C. SAMPLED DATA SIGNALS:

MULTIPLEXED CHANNELS

NUMBER: (See Note)

MESSAGE SEGMENTS/CHANNEL: 30, 90

RATE: 5, 2.5, 1/18

PULSE MESSAGE:

NUMBER OF MEASUREMENTS:

FRAME RATE:

MAXIMUM PRF:

PEAK PULSE POWER:

PULSE WIDTH (50% AMPLITUDE):

SINUSOIDAL MESSAGE:

NUMBER OF MEASUREMENTS:

FREQUENCY:

CYCLES/FRAME:

DATA/FRAME:

12. ANTENNA CAPABILITIES:

A. ANTENNA SERVICE:

SINGLE [X] MULTIPLE [ ]

B. TYPE: TUNABLE [ ] FIXED TUNED [X]

Cavity-backed slot

C. FREQUENCY RANGE: 240-260 Mc

D. POWER RANGE: 15 watts

E. MAXIMUM GAIN ABOVE ISOTOPIC: 0 db

F. BEAMWIDTH: N/A

MAIN LOBE AT 3DB POINTS:

E PLANE:

H PLANE:

MAXIMUM SIDE LOBES:

G. POLARIZATION, PREDOMINANT TYPE: Linear

H. SIGHTING: Antenna pattern directed approx 20° right (Δ3) or left (Δ2) of pitch plane, and 20° forward, looking down from vehicle. See pgs. 620.5 and 620.6.

LOCATION OF ANTENNA: Station 57

ATTITUDE CONTROLABILITY: Fixed to vehicle

AXIAL ROTATION: Antenna rolls with vehicle

SSD FORM JAN 62 63

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NOTE: 5.4 kc, ±7.5%; 10.5 kc, 22 kc, 30 kc, 40 kc, ±7.5%.

1. SECURITY CLASSIFICATION

9. REVISION NO.

TELEMETRY TRANSMISSION CHARACTERISTICS SUPPLEMENTAL REAL TIME DATA

1. SECURITY CLASSIFICATION

2. PAGE 620.1
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT NO. NONE

7. SYSTEM CODE: 75664014

8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp/AF 04(695)-469

10. TRANSMITTER CAPABILITIES:

A. SERVICE:
EQUIPMENT STATUS [X] MISSION [X]
ENVIRONMENTAL [ ] OTHER [ ]

B. TRANSMISSION FEATURES:
TRANSMISSION INITIATED BY:

MODULATION TYPE
FM/FM
*Normal: 258.5 Mc (Δ3)
*Alternate: 248.6 Mc (Δ2)
FREQUENCY OF LINK
EFFECTIVE RADIATED POWER:
8 watts

C. FREQUENCY CAPABILITIES:
RANGE OF DATA RATES
DEVIATIONS: MAX ±180 kc MIN. ____
FREQUENCY STABILITY: ± 0.01%
FREQUENCY CONTROL METHOD:
Crystal referenced

D. BAND WIDTH:
EMITTED SPECTRUM WIDTH AT
3 DB: 300 kc
60 DB:

E. MAXIMUM DUTY CYCLE: Continuous

*The choice of whether the high frequency (258.5 Mc) transmitter or the low frequency (248.6 Mc) transmitter is used for this data may be made by real time command.

11. SPECIAL MODULATION REQUIREMENTS:

A. MODULATION FEATURES:
FM/FM

B. CONTINUOUS MEASUREMENT SIGNALS:
NUMBER OF MEASUREMENTS: 3
SUBCARRIER CENTER FREQUENCY & DEVIATION:
52.5 kc, 40 kc, 22 kc, 10.5kc, 7.35kc
±7.5% deviation (See Note)

C. SAMPLED DATA SIGNALS:

MULTIPLEXED CHANNELS
NUMBER: 1 at 14.5kc ±7.5%
MESSAGE SEGMENTS/CHANNEL: 30
RATE: 2.5

PULSE MESSAGE:
NUMBER OF MEASUREMENTS:
FRAME RATE:
MAXIMUM PRF:
PEAK PULSE POWER:
PULSE WIDTH (50% AMPLITUDE):

SINUSOIDAL MESSAGE:
NUMBER OF MEASUREMENTS:
FREQUENCY:
CYCLES/FRAME:
DATA/FRAME:

12. ANTENNA CAPABILITIES:

A. ANTENNA SERVICE:
SINGLE [X] MULTIPLE [ ]

B. TYPE: TUNABLE [ ] FIXED TUNED [X]
Cavity backed slot

C. FREQUENCY RANGE:
240-260 Mc

D. POWER RANGE:
15 watts

E. MAXIMUM GAIN ABOVE ISOTOPIC:
0 db

F. BEAMWIDTH:
MAIN LOBE AT 3DB POINTS:
E PLANE:
H PLANE:
MAXIMUM SIDE LOBES:

G. POLARIZATION, PREDOMINANT TYPE: Linear

H. SIGHTING: Antenna pattern directed approx 20° right (Δ3) or left (Δ2) of pitch plane, and 20° forward, looking down from vehicle. See pgs. 620.5 and 620.6.
LOCATION OF ANTENNA: Station 57
ATTITUDE CONTROLABILITY: Fixed to vehicle
AXIAL ROTATION: ±45° stabilized

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NOTE: In separation mode, Base 6 on which these SCO's appear, will not be energized.

1. SECURITY CLASSIFICATION

9. REVISION NO.

TELEMETRY TRANSMISSION CHARACTERISTICS

RECORDED DATA (ORBIT) (BASES 1 AND 3)

1. SECURITY CLASSIFICATION

2. PAGE 620.2
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL
DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT NO. NONE

7. SYSTEM CODE: 75664014

8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

10. TRANSMITTER CAPABILITIES:

A. SERVICE:
EQUIPMENT STATUS ☐; MISSION ☐
ENVIRONMENTAL ☐; OTHER ☐

B. TRANSMISSION FEATURES:
TRANSMISSION INITIATED BY: Command
MODULATION TYPE: PAM/FM/FM

FREQUENCY OF LINK *Normal: 258.5 Mc (3)
EFFECTIVE RADIATED POWER: *Alternate: 248.6 Mc (2)
8 to 12 watts

C. FREQUENCY CAPABILITIES:
RANGE OF DATA RATES
DEVIATIONS: MAX ±180 kc MIN. _____
FREQUENCY STABILITY: ±0.01%
FREQUENCY CONTROL METHOD: Precision reference tone referenced

D. BAND WIDTH:
EMITTED SPECTRUM WIDTH AT
3 DB: 300 kc
60 DB:

E. MAXIMUM DUTY CYCLE: Continuous

*The choice of whether the high frequency (258.5 Mc) transmitter or the low frequency (248.6 Mc) transmitter is used for this data may be made by real time command.

11. SPECIAL MODULATION REQUIREMENTS:

A. MODULATION FEATURES:
PAM/FM/FM and FM/FM
Data recorded at 7.5 IPS playback at 30 IPS for readout of 16 minutes of data in four minutes.
Continuous loop tape. Recording erases previously recorded data underneath.

B. CONTINUOUS MEASUREMENT SIGNALS:
NUMBER OF MEASUREMENTS:
SUBCARRIER CENTER FREQUENCY & DEVIATION: (See Note)

C. SAMPLED DATA SIGNALS:
MULTIPLEXED CHANNELS
NUMBER: 3;5.4 kc ± 6.5%;10.5 kc,22 kc, ±7.5% deviation
MESSAGE SEGMENTS/CHANNEL: 30, 90
RATE: 5, 2.5, 1/18

PULSE MESSAGE:
NUMBER OF MEASUREMENTS:
FRAME RATE:
MAXIMUM PRF:
PEAK PULSE POWER:
PULSE WIDTH (50% AMPLITUDE):

SINUSOIDAL MESSAGE:
NUMBER OF MEASUREMENTS:
FREQUENCY:
CYCLES/FRAME:
DATA/FRAME:

12. ANTENNA CAPABILITIES:

A. ANTENNA SERVICE:
SINGLE ☒ MULTIPLE ☐

B. TYPE: TUNABLE ☐ FIXED TUNED ☒
Cavity-backed slot

C. FREQUENCY RANGE: 240-260 Mc

D. POWER RANGE: 15 watts

E. MAXIMUM GAIN ABOVE ISOTOPIC: 0 db

F. BEAMWIDTH:
MAIN LOBE AT 3DB POINTS:
E PLANE:
H PLANE:
MAXIMUM SIDE LOBES:

G. POLARIZATION, PREDOMINANT TYPE: Linear

H. SIGHTING: Antenna pattern directed approx 20° right (3) or left (2) of pitch plane, & 20° forward, looking down from vehicle. See pgs 620.5 and 620.6.

LOCATION OF ANTENNA: Station 57

ATTITUDE CONTROLABILITY: Fixed to vehicle

AXIAL ROTATION: Antenna rotates with vehicle

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NOTE: 7.35 kc, 3.9 kc, 3.0 kc, 2.3 kc, 1.7kc; ±7.5% dev; 14.5 kc channel is fixed frequency oscillator used for tape speed compensation. Frequency error due to tape speed variation deviates the tone's frequency.

1. SECURITY CLASSIFICATION

9. REVISION NO.

TELEMETRY TRANSMISSION CHARACTERISTICS (SRV TELEMETRY)

1. SECURITY CLASSIFICATION
2. PAGE 620.3
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

10. TRANSMITTER CAPABILITIES:

A. SERVICE:
EQUIPMENT STATUS [X]; MISSION [X]
ENVIRONMENTAL [ ]; OTHER [ ]

B. TRANSMISSION FEATURES:
TRANSMISSION INITIATED BY:
Stored command. 75 seconds prior to separation.
MODULATION TYPE
FM/FM

FREQUENCY OF LINK 242.0 Mc (Δ4)
EFFECTIVE RADIATED POWER:
1.5 - 2 watts

C. FREQUENCY CAPABILITIES:
RANGE OF DATA RATES
DEVIATIONS: MAX ±60 kc MIN. _____
FREQUENCY STABILITY: ± 0.01%
FREQUENCY CONTROL METHOD:
Crystal referenced

D. BAND WIDTH:
EMITTED SPECTRUM WIDTH AT
3 DB: 100 kc
60 DB:

E. MAXIMUM DUTY CYCLE:
Continuous

11. SPECIAL MODULATION REQUIREMENTS:

A. MODULATION FEATURES:
FM/FM
Multiple levels as event monitoring.

B. CONTINUOUS MEASUREMENT SIGNALS:
NUMBER OF MEASUREMENTS: 4
SUBCARRIER CENTER FREQUENCY & DEVIATION:
3.0 kc, 3.9 kc 5.4 kc; ±6.5% deviation; 10.5 kc ±7.0%

C. SAMPLED DATA SIGNALS:
MULTIPLEXED CHANNELS
NUMBER:
MESSAGE SEGMENTS/CHANNEL:
RATE:

PULSE MESSAGE:
NUMBER OF MEASUREMENTS:
FRAME RATE:
MAXIMUM PRF:
PEAK PULSE POWER:
PULSE WIDTH (50% AMPLITUDE):

SINUSOIDAL MESSAGE:
NUMBER OF MEASUREMENTS:
FREQUENCY:
CYCLES/FRAME:
DATA/FRAME:

12. ANTENNA CAPABILITIES:

A. ANTENNA SERVICE:
SINGLE [ ] MULTIPLE [ ]

B. TYPE: TUNABLE [ ] FIXED TUNED [X]

C. FREQUENCY RANGE:
241 - 243 Mc
D. POWER RANGE:
15 watts
E. MAXIMUM GAIN ABOVE ISOTOPIC:
3 db
F. BEAMWIDTH:
MAIN LOBE AT 3DB POINTS:
E PLANE:
H PLANE:
MAXIMUM SIDE LOBES:

G. POLARIZATION, PREDOMINANT TYPE: Linear

H. SIGHTING: Antenna pattern directed approx 20° right (Δ3) or left (Δ2) of pitch plane, & 20° forward, looking down from vehicle. See pgs 620.5 and 620.6.
LOCATION OF ANTENNA: Station 38
ATTITUDE CONTROLABILITY:
Fixed to vehicle.
AXIAL ROTATION:
Antenna rotates at 80 RPM during engine burn and at 10 RPM after burn.

I. Antenna Patterns available in SPRD No. 13260.

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1. SECURITY CLASSIFICATION
9. REVISION NO.

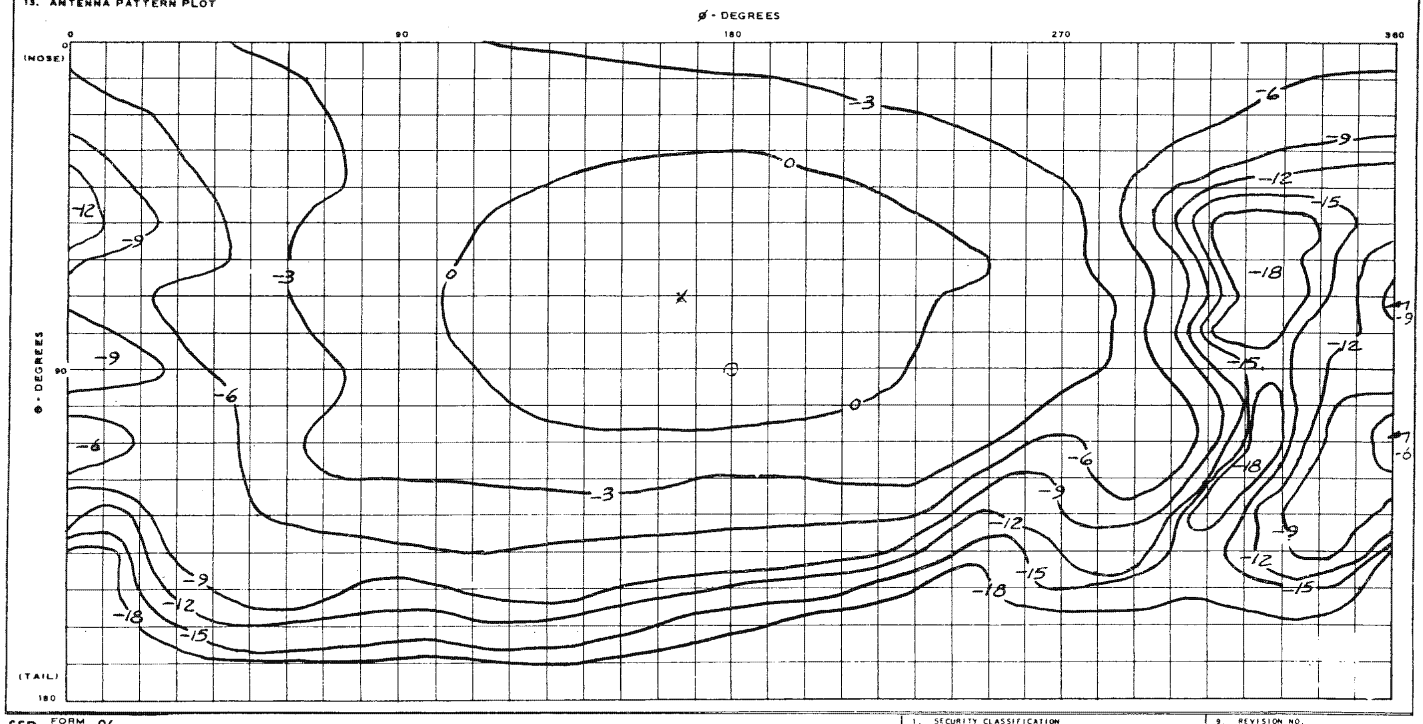
ANTENNA PATTERN (SATELLITE VEHICLE - XMTR #1) (Δ3)

1. SECURITY CLASSIFICATION

2. PAGE 620.4
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp/AF 04(695)-469
10. TEST CODE
11. PRD PAGE NO.
12. INSTRUMENTATION SYSTEM: VHF Antenna High Frequency

13. ANTENNA PATTERN PLOT



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1. SECURITY CLASSIFICATION
9. REVISION NO.

ANTENNA PATTERN (SATELLITE VEHICLE - XMTR #2) (Δ2)

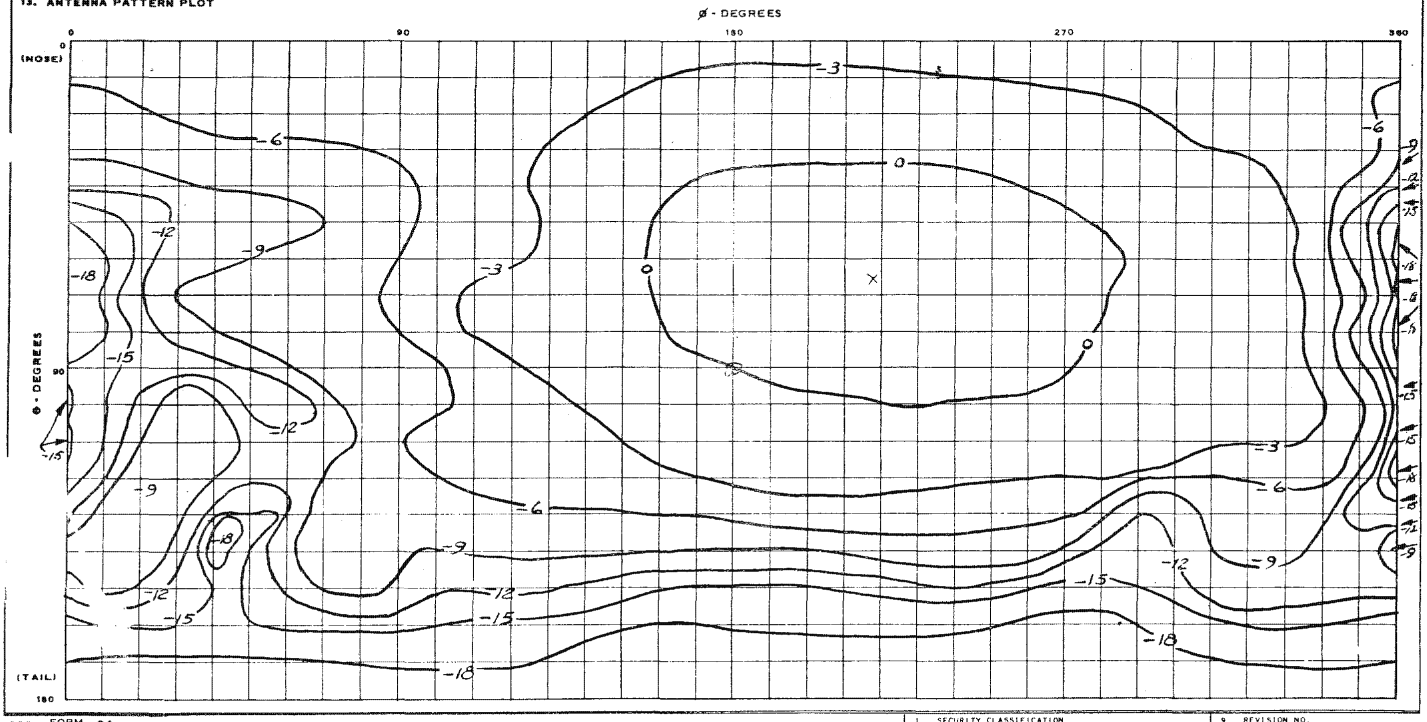
1. SECURITY CLASSIFICATION

2. PAGE 620.5
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT CODE: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp/AF 04(695)-469

10. TEST CODE
11. PRD PAGE NO.
12. INSTRUMENTATION SYSTEM: VHF Antenna Low Frequency

13. ANTENNA PATTERN PLOT



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1. SECURITY CLASSIFICATION
9. REVISION NO.

SPECIAL STATION TELEMETRY RECEIVING REQUIREMENTS

1. SECURITY CLASSIFICATION	2. PAGE 630
	3. DATE 1 June 1965
	4. REPLACES PAGE(S) Original
	DATED

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT NO.	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	75664014	Aerospace Corp/AF 04(695)-469

10. UNIQUE STATION REQUIREMENTS

1. Time Comparison

   Required for relating vehicle time with ground time from 52.5 kc ±7.5%

2. Command Functions

   Receive and convert Accept/Reject signal on 52.5 kc ±7.5% (or 52.5 kc ±7.5% SCO for backup) for presentation to encoder with real-time scope display; provide real-time oscilloscope display of 7.35 kc ±7.5% SCO, Program Word Line/Delay Line Erase at all command stations.

3. Recovery Recording

   The three transmitters, Δ2, Δ3, and Δ4 radiating during de-boost and de-orbit sequence can all be recorded at Kodiak. Over Hula, Δ2 and Δ3 can be recorded, and possibly Δ4 with an independent ground antenna. Δ4 must also be recorded via telemetry aircraft north of the recovery area. Recording of Δ2 and Δ3 by the telemetry aircraft may also be required.

4. Recording of Agena Δ1 Info on Early Station passes

   Although not a Program 206 requirement, certain tracking stations will make magnetic tape recordings of Δ1 transmissions from the Agena 206/S-01A vehicle following injection of the OCV into orbit. It is mandatory that these recordings be accomplished without interference with the normal Program 206 tracking, commanding, and recording operations. Detailed information on this Δ1 recording is contained in the "GFE #2 Orbital Requirements Document."

11. SUGGESTED LOCATION OF RECEIVING STATIONS

Primary	Backup
1 VTS	1 NHS
2 TTS	
3 KTS	
4 HTS	

12. RECORDING, DATA PROCESSING & RETRANSMISSION INSTRUCTIONS

1. Record all telemetry received signals on original (virgin) magnetic tape with ground time. Degaussed tape may be used for dub or duplicate recordings.
2. Provide vehicle time comparison in near real time.
3. Record all A & B coded data channels for presentation and near real time reduction as required.
4. Produce orbital recorder data post pass. This will require playback of ground tape recorded data at 1/4 speed and use of 14.5 kc compensation on discriminators.
5. Provide means for switching discriminators which feed the particular decommutators within thirty seconds, while maintaining the same commutation rate.
6. Provide means for switching receivers which feed the particular bank of discriminators in thirty seconds.
7. Utilize existing redundant receiving and recording equipment for recording of Δ1 information up to 7200 seconds following launch. Monitor operation of 206 recording to assure that 206 requirements are being met during use of station equipment for recording Δ1 link. (See page 850.)

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SATELLITE MEASUREMENTS – SYSTEM REQUIREMENTS

1. SECURITY CLASSIFICATION

2. PAGE 640

3. DATE 1 June 1965

4. REPLACES PAGE(S) Original

DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT NO.: None

7. SYSTEM CODE: 75664014

8. CONTRACTOR/CONTRACT NUMBER: AF 04(695)-469

Band	10. MEAS. CODE	11. SENSOR TYPE	12. MEASUREMENT RANGE	13. ACCURACY	14. PRIORITY	15. SAMPLING RATE	16. PROPOSED SCHEDULE OF TRANSMISSION &/OR STORAGE	17. SPECIAL REQUIREMENTS (UNIQUE TRANSDUCER REQUIREMENTS) (OUTPUT RANGES)
* 6	1.7	Volt Div	Discrete Levels		B	Continuous	Orbital Real Time & Record	
7	2.3	Rate	±0.05 Deg/Sec		B	"	(Link 2) (Link 3P)	Stab Gyro roll rate output-fine
* 8	3.0	Rate	"		B	"		Stab Gyro pitch rate output-fine
* 9	3.9	Rate	"		B	"		Stab Gyro yaw rate output-fine
10	5.4	Multiplexed	-		B, C, D	90x1/18		All See pages 640.1, 640.2, 640.3
*11	7.35	Voltage Div	Discrete Levels		A	Continuous		TT&C Program word line/delay line erase (in real time only)
	"	Infrared	0 to 5 volts		B	"		Stab L.H. IR preamp (other than real time)
12	10.5	Multiplexed	-		A,B,C	30x2.5		Stab/GFE/OA/thermal/TT&C (see Page 640.4 & note)
13	14.5	Oscillator			C	Continuous		TT&C Tape speed compensation
14	22.0	Multiplexed	-		A,B,C	30x5		Stab/GFE/TT&C (see Page 640.5)
*13	14.5	Current	0 to 50 amps		C	"	Orbital Real Time	EP&D Current operational batteries total
15	30.0	Multiplexed	-		A,B	30x2.5		GFE, EP&D TT&C GFE (see Page 640.6)
1o	40.0	Multiplexed	-		A,B,C, D	30x2.5		Stab, TT&C, EP&SD thermal (see Page 640.7)
17	52.5	Voltage Div	Discrete Levels		A	Continuous		TT&C Command verification
18	70	Digital	9.7 days	0.1 sec resolution	A	"		TT&C Vehicle clock 500 PPS
10	5.4	Voltage Div	Discrete Levels		B	"	Orbital Real Time	Buss P axis valve
11	7.35	Voltage Div	"		B	"	(Link 3)	Buss Q axis valve
12	10.5	Voltage Div	"		B	"		Buss R axis valve
13	14.5	Multiplexed	-		B,C	30x2.5		Buss Sep (see Page 640.8)
*14	22.0	Infrared	0 to 5 volts		B	Continuous		Stab L.H. IR preamp.
*16	40.0	Infrared	0 to 5 volts		B			Stab R.H. IR preamp
*17	52.5	Voltage Div	Discrete Levels		A			TT&C Back-up command verification

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NOTE: If DSPC 4 word 2 Bit 28 is "1" during TM Operation, Multiplexer will be replaced by RH IR, Pre-amp Output.

1. SECURITY CLASSIFICATION

9. REVISION NO. MT

SATELLITE MEASUREMENTS – SYSTEM REQUIREMENTS

1. SECURITY CLASSIFICATION
2. PAGE 640.1
3. DATE 1 June 1965
4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: None
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: AF 04(695)-469

Band	10. MEAS. CODE	11. SENSOR TYPE	12. MEASUREMENT RANGE	13. ACCURACY	14. PRIORITY	15. SAMPLING RATE	16. PROPOSED SCHEDULE OF TRANSMISSION &/OR STORAGE	17. SPECIAL REQUIREMENTS (UNIQUE TRANSDUCER REQUIREMENTS) (OUTPUT RANGES)
10	Pin 1	Voltage Div	-		-	1per 18sec	Orbital Real Time & Record Link 2 & 3 P	TT&C 10 percent calibration
	2	"	-		-			TT&C 50 percent calibration
	3	"	-		-			TT&C 100 percent calibration
	4	Temp.	-80 to +200°F		D			H30 Thrust cone temperature
	*5	-	-		-			Exp. Fet No 2
	*6	-	-		-			Exp. Fet No 3
	*7	-	-		-			Exp. Fet No 4
	*8	Temp.	162.5 to 167.5°F		D			Stab Temp tars platform roll
	*9	"	162.5 to 167.5°F		D			Stab Temp tars platform pitch
	10	"	162.5 to 167.5°F		D			Stab Temp tars platform yaw
	11	Voltage	22.8 to 29.2VAC		D			Stab Voltage gyro: 400 cycle
	*12	Spare	5 volt buss		-			-
	13	Voltage	9.0 to 11.0 VDC		C			Stab DC power supply +10 DC
	14	"	23.9 to 29.1 VDC		C			Stab DC power supply +26.5 VDC
	15	Pressure	0 to 100 psia		D			Stab Pressure regulator low output
	16	"	0 to 600 psia		D			Stab Pressure regulator high output
	*17	Temp.	0 to 130°F		B			Thermo Temp Sta. 84 at 180°
	*18	-	-		-			Exp. Fet No. 5
	*19	-	-		-			Exp. Fet No. 6
	20	Temp.	50 to 100°F		C			Stab Temp tars electronics
	21	Voltage	25 to 27 VAC		C			Stab Tars gyro wheel PWR
	*22	Temp.	0 to 130°F		B			Thermo temp Sta 104 at 270°
	23	"	0 to 130°F		B			Thermo temp Sta 104 at 25°
	*24	"	0 to 130°F		B			Thermo temp Sta 104 at 90°

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1. SECURITY CLASSIFICATION
9. REVISION NO. MT

SATELLITE MEASUREMENTS – SYSTEM REQUIREMENTS

2. PAGE 640.2
3. DATE 1 June 1965
4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: None
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: AF 04(695)-469

Band	10. MEAS. CODE	11. SENSOR TYPE	12. MEASUREMENT RANGE	13. ACCURACY	14. PRIORITY	15. SAMPLING RATE	16. PROPOSED SCHEDULE OF TRANSMISSION &/OR STORAGE	17. SPECIAL REQUIREMENTS (UNIQUE TRANSDUCER REQUIREMENTS) (OUTPUT RANGES)
10	Pin					1 per 18sec	Orbital Real Time & Record	-
	*25	Spare	5V buss		-		Link 2 3P	
	26	Temp.	0 to 130°F		D			Thermo Temp Sta. 127 at 180°
	*27	"	-40 to +266°F		D			Stab Temp R.H. scanner
	28	"	0 to 130°F		D			Thermo Temp Sta 190 at 180°
	*29	Spare	5V buss		-			-
	*30	Voltage	0 to 15.5 VDC		C			H-30 Voltage H30 Battery No. 1
	*31	Temp.	-80		D			Stab Temp. pitch gyro case
	32	Rate	+/-.05deg/sec		C			Stab Gyro yaw rate output fine
	33	Temp.	-80 to +200°F		D			Thermo Temp. outside insul Sta. 215
	34	"	0 to 130°F		D			Temp Tars electronics
	*35	-	-		-			Exp Fet No. 7
	*36	-	-		-			Exp Fet No. 8
	37	Temp.	-80 to +200°F		D			Thermo Temp. OCV skin Sta. 190 at 60°
	38	"	-80 to +200°F		D			Thermo Temp. OCV skin Sta. 190 at 120°
	39	"	+32 to +500°F		D			Thermo Temp. Liner Sta. 190 at 2°
	40	"	+32 to +500°F		D			Thermo Temp Liner Sta. 190 at 182°
	41	"	-80 to +200°F		D			Thermo Temp Liner Sta. 190 at 240°
	42	"	-80 to +200°F		D			Thermo Temp Liner Sta. 190 at 300°
	*43	-	-		-			Exp Fet No. 9
	*44	Temp.	-80 to +200°F		D			TT&C Temp. Power Amplifier
	*45	-	-		-			Exp Fet No. 10
	46	Voltage Div	-		-			TT&C 100 percent calibration
	47	"	-		-			TT&C 50 percent calibration
	48	"	-		-			TT&C 10 percent calibration
	49	Temp.	0 to 130°F		D			Thermo Temp inside insul. Sta. 190 at 60°
	50	"	0 to 130°F		D			Thermo Temp inside insul. Sta. 190 at 300°
	51	-	-		C			GFE 1-4
	52	-	-		C			GFE 1-6
	53	-	-		C			GFE 1-7
	54	-	-		C			GFE 1-8

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1. SECURITY CLASSIFICATION:
9. REVISION NO.: MT

SATELLITE MEASUREMENTS – SYSTEM REQUIREMENTS

1. SECURITY CLASSIFICATION

2. PAGE 640.3

3. DATE 1 June 1965

4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT NO.: None

7. SYSTEM CODE: 75664014

8. CONTRACTOR/CONTRACT NUMBER: AF 04(695)-469

Band	10. MEAS. CODE	11. SENSOR TYPE	12. MEASUREMENT RANGE	13. ACCURACY	14. PRIORITY	15. SAMPLING RATE	16. PROPOSED SCHEDULE OF TRANSMISSION &/OR STORAGE	17. SPECIAL REQUIREMENTS (UNIQUE TRANSDUCER REQUIREMENTS) (OUTPUT RANGES)
10	55	-	-	-	C	1 per 18sec	Orbital Real Time & Record	GFE 1-9
	56	-	-	-	C		Link 2 & 3P	GFE 1-10
	57	-	-	-	C			GFE 1-5
	58	Digital	One	-	C			TT&C Recorder Counter (LSD)
	59	"	Two	-	C			TT&C Recorder Counter
	60	"	Four	-	C			TT&C Recorder Counter (MSD)
	61	Pressure	0 to 5000 psia		C			OA Press. OCV N2 Reg. Inlet
	62	Temp.	0 to 130°F		D			Thermo Temp. Decoder Prog. Plate
	63	"	-80 to +200°F		D			Thermo Temp. Sta. 64 at 0°
	64	"	-80 to +200°F		D			Thermo Temp. Sta. 64 at 60°
	65	"	-80 to 200°F		D			Thermo Temp. Sta. 64 at 120°
	66	"	-80 to +200°F		D			Thermo Temp. D.C. Power Supply
	67	Voltage	22 to 27 VDC		C			Stab D.C. pwr. supply +24.5 V
	68	"	23.9 to 29.1		C			Stab D.C. pwr. supply -26.5 V
	69	"	-22 to -27 VDC		C			Stab D.C. pwr. supply -24.5 V
	70	"	-9.0 to -11.0	VDC	C			Stab D.C. pwr. supply - -10 V
	71	Rate	+/-.05°/sec		C			Stab Gyro roll rate output
	*72	Spare	5V Buss		-			-
	*73	Temp.	-80 to +200°F		C			Thermo Piggyback #6
	74	"	-80 to +200°F		D			Thermo Temp. Sta. 64 at 240°
	75	"	-80 to +200°F		D			Thermo Temp. Sta. 64 at 300°
	*76	"	-40 to +266°F		D			EP&SD Temp. Op. Bat No. 5
	77	"	-80 to +200°F		D			Thermo Temp. Sta 77.5 aft. eqip. struct.
	78	"	-80 to +200°F		D			Thermo Temp. Sta. 64 at 180°
	79	"	-80 to +200°F		D			Thermo Temp. VHF Antenna
	80	"	-40 to +266°F		D			EP&SD Temp. Op. Bat No. 1
	81	"	-40 to +266°F		D			EP&SD Temp. Op-Bat No. 2
	82	"	0 to 130°F		D			EP&SD Temp. Op. Bat No. 3
	83	"	0 to 130°F		D			EP&SD Temp. Op. Bat No. 4
	*84	"	-80 to +200°F		D			TT&C Temp. Recorder
	85	Rate	+/- .05deg/sec		C	1per 18sec	Orbital Real Time & Record	Stab Gyro Pitch Rate Output Fine
	*86	Temp.	0 to 130°F		D			Thermo Temp. Adapter Structure
	*87	"	-40 to +266°F		D			Stab Temp. L.H. Scanner
	88	"	0 to 130°F		D			OA Temp. Hot Gas Solenoid Valve
	89	Voltage Div						TT&C Frame Synch
	90	Voltage Div						TT&C Frame Synch

9. REVISION NO. MT

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SATELLITE MEASUREMENTS – SYSTEM REQUIREMENTS

1. SECURITY CLASSIFICATION
2. PAGE 640.4
3. DATE 1 June 1965
4. REPLACES PAGE(S) Original DATED
5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: None
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: AF 04(695)-469

Band	10. MEAS. CODE	11. SENSOR TYPE	12. MEASUREMENT RANGE	13. ACCURACY	14. PRIORITY	15. SAMPLING RATE	16. PROPOSED SCHEDULE OF TRANSMISSION &/OR STORAGE	17. SPECIAL REQUIREMENTS (UNIQUE TRANSDUCER REQUIREMENTS) (OUTPUT RANGES)
	Pin							
12	* 1	Voltage Div	Discrete Levels		C	2.5 /sec.	Orbital Real Time & Record (Link 2)	P.B. Piggyback #1
	* 2	-	-		B			GFE GFE 1-29
	* 3	-	-		A			GFE GFE 1-21
	* 4	Voltage	0 to 24.5 V		C			GFE 22 Volt Monitor
	5	Voltage Div	-		-			TT&C 10 Percent Calibration
	6	-	-		B			GFE GFE 1-11
	* 7	Digital	Discrete Levels		C			TT&C Recorder Counter (LSD)
	8	-	-		A			GFE GFE 1-22
1	* 9	Temp.	-40 to +266°F		B			Thermo Temp. Backface Skirt Sta. 32
	10	-	-		B			GFE GFE 2-15
	11	-	-		B			GFE GFE 1-18
	12	-	-		A			GFE GFE 1-23
	13	-	-		B			GFE GFE 1-26
	*14	Digital	Discrete Levels		C			TT&C Recorder Counter
	15	Voltage Div	-		-			TT&C 50 Percent Calibration
2	*16	Temp.	-40 to 266°F		B			Thermo Temp. Backface Skirt Sta. 32
	*17	-	-		B			GFE GFE 2-2
	*18	-	-		A			GFE GFE 1-21
	*19	Voltage Div	Discrete Levels		B			Stab Yaw Torque On
	*20	Digital	"		C			TT&C Recorder Counter (MSD)
	21	Pressure	0 to 350 psia		B			OA OCV Oxidizer
	22	"	0 to 350 psia		B			OA OCV Fuel
	23	Temp.	+40 to 590°F		B			Thermo Temp Stagnation Point
	*24	Spare	5V Buss		-			-
	25	Voltage Div	-		-			TT&C 90 Percent Calibration
	26	Temp.	0 to 130°F		B			Thermo Temp. Sect V Htr. Sta 104
	27	Voltage Div	Discrete Levels		B			Sep Computer Events
	28	"	"		B			Sep Computer Phase
	29	"	-		-			TT&C Frame Sync
	30	"	-		-			TT&C Frame Sync
1	* 9	Temp.	0 to 130°F		D			Thermo Temp. of Capsule (Veh 969 & Subsequent)
2	*16	"	0 to 130°F		D			Thermo Temp. of Recovery Battery (Veh 969 & Sub)

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1. SECURITY CLASSIFICATION
9. REVISION NO. MT

SATELLITE MEASUREMENTS – SYSTEM REQUIREMENTS

2. PAGE 640.5
3. DATE 1 June 1965
4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: None
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: AF 04(695)-469

Band	10. MEAS. CODE	11. SENSOR TYPE	12. MEASUREMENT RANGE	13. ACCURACY	14. PRIORITY	15. SAMPLING RATE	16. PROPOSED SCHEDULE OF TRANSMISSION &/OR STORAGE	17. SPECIAL REQUIREMENTS (UNIQUE TRANSDUCER REQUIREMENTS) (OUTPUT RANGES)
	Pin							
14	1	-	-	-	B	5/sec	Orbital Real Time & Record	GFE 1-13
	2	-	-	-	B		(Link 2) (Link 3P)	GFE 1-14
	3	-	-	-	C			GFE 1-19
	* 4	Voltage Div	Discrete Levels		C			TT&C Command Decoder Busy
	5	"	-		-			TT&C 10 Percent Calibration
	6	Rate	+/-5 deg/sec		B			Stab Gyro. Roll Rate Output, Coarse
	7	Voltage	+/-3 deg		B			Stab Roll Attitude Error
	8	"	+/-3 deg		B			Stab Pitch Attitude Error
	9	"	+/-3 deg		B			Stab Yaw Attitude Error
	10	-	-		B			GFE 1-25
	*11	Voltage Div	Discrete Levels		C			Stab Roll Attitude Control Amp. Out
	*12	"	"		C			Stab Pitch Attitude Control Amp. Out
	*13	"	"		C			Stab Yaw Attitude Control Amp. Out
	14	-	-		A			GFE 1-3
	15	Voltage Div	-		-			TT&C 50 Percent Calibration
	16	-	-		A			GFE 1-12
	17	-	-		B			GFE 1-17
	18	-	-		B			GFE 1-16
	19	-	-		A			GFE 1-20
	20	-	-		A			GFE 1-27
	*21	Voltage	-24 to +24 V		C			Stab Roll Torque Motor Voltage
	*22	"	-24 to +24 V		C			Stab Pitch Torque Motor Voltage
	*23	"	+/-5 deg		B			Stab Roll IR Computer Out
	*24	"	+/-5 deg		B			Stab Pitch IR Computer Out
	25	Voltage Div	-		-			TT&C 90 Percent Calibration
	*26	Rate	+/-1.5 deg/sec		B			Stab Gyro Pitch Rate Out, Coarse
	*27	Voltage Div	Discrete Levels		B			Stab Inhibit Transfer
	*28	Rate	+/-1.5 deg/sec		B			Stab Gyro Yaw Rate Out, Coarse
	29	Frame Sync.	-		-			-
	30	"	-		-			-

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1. SECURITY CLASSIFICATION

9. REVISION NO. MT

1. SECURITY CLASSIFICATION	2. 640.6
	3. DATE 1 June 1965
	4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT NO.	7. SYSTEM CODE	8. CONTRACT/CONTRACT NUMBER
PROGRAM 206	None	75664014	AF 04(695)-469

Band	10. MEAS. CODE	11. SENSOR TYPE	12. MEASUREMENT RANGE	13. ACCURACY	14. PRIORITY	15. SAMPLING RATE	16. PROPOSED SCHEDULE OF TRANSMISSION &/OR STORAGE	17. SPECIAL REQUIREMENTS (UNIQUE TRANSDUCER REQUIREMENTS) (OUTPUT RANGES)
15	Pin					2.5/sec	Orbital Real Time (Link 2)	
	* 1	Spare	5 V Buss					-
	* 2	"	5 V Buss					-
	* 3	"	5 V Buss					-
	4	-	-		B			GFE 1-28
	5	Voltage Div	-		-			TT&C 10 Percent Calibration
	6	Temp.			A			TT&C Temp. S-Band Beacon (Int.)
	7	Voltage	0 to 1600 PPS		A			TT&C S-Band Beacon Interrogate
	8	"	0 to 1600 PPS		A			TT&C S-Band Beacon Transmit
	9	Spare	5 V Buss		-			-
	*10	"	5 V Buss		-			-
	*11	Magnetom.	+/-550M Gauss		B			Buss P Axis Magnetometer
	*12	"	+/-550 M Gauss		B			Buss Q Axis Magnetometer
	*13	Spare	5 V Buss		-			-
	*14	"	5 V Buss		-			-
	15	Voltage Div	-		-			TT&C 50 Percent Calibration
	*16	-	-		-			Exp Fet No. 1
	*17	Spare	5 V Buss		-			-
	18	Voltage	24 to 31 VDC		B			EP&SD Voltage Prog. Backup Batt.
	19	Pressure	0 to 5000 psia		B			OA Press. OCV N2 Reg. Inlet
	20	Current	0 to 10A		B			EP&SD Current Op. Battery No. 1
	21	"	0 to 10A		B			EP&SD Current Op. Battery No. 2
	22	"	0 to 10A		B			EP&SD Current Op. Battery No. 3
	23	"	0 to 10A		B			EP&SD Current Op. Battery No. 4
	24	"	0 to 10A		B			EP&SD Current Op. Battery No. 5
	25	Voltage Div	-		-			TT&C 90 Percent Calibration
	26	Magnetom.	+/-550M Gauss		B			Buss R Axis Magnetometer
	27	Spare	5 Volt Buss		-			-
	*28	Voltage Div	-		-			TT&C 0 Percent Calibration
	29	Frame Sync						
	30	Frame Sync						

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1. SECURITY CLASSIFICATION	9. REVISION NO.

SATELLITE MEASUREMENTS – SYSTEM REQUIREMENTS

2. PAGE 640.7
3. DATE 1 June 1965
4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: None
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: AF 04(695)-469

Band	10. MEAS. CODE	11. SENSOR TYPE	12. MEASUREMENT RANGE	13. ACCURACY	14. PRIORITY	15. SAMPLING RATE	16. PROPOSED SCHEDULE OF TRANSMISSION &/OR STORAGE	17. SPECIAL REQUIREMENTS (UNIQUE TRANSDUCER REQUIREMENTS) (OUTPUT RANGES)
16	Pin							
	1	Voltage	+/-50 deg	-	D	5/sec	Orbital Real Time (Link 2)	Stab ER Roll Demodulator
	2	"	+15 to -70 deg		D			Stab EP Pitch Demodulator
	3	"	+/-2 deg		D			Stab EY Yaw Demodulator
	4	Voltage Div	Discrete Levels		B			H 30 H30 Continuity & Events
	5	"	-		-			TT&C 10 Percent Calibration Level
	6	Digital	0 or 100%		B			TT&C Secure Word Count 1 LSD
	7	"	0 or 100%		B			TT&C Secure Word Count 2
	8	"	0 or 100%		B			TT&C Secure Word Count 3
	9	"	0 or 100%		B			TT&C Secure Word Count 4
	10	"	0 or 100%		B			TT&C Secure Word Count 5
	11	"	0 or 100%		B			TT&C Secure Word Count 6
	12	"	0 or 100%		B			TT&C Secure Word Count 7
	13	Voltage Div	Discrete Levels		A			TT&C Delay Line 1 and 2 Full
	14	"	"		A			TT&C Delay Line 3 and 4 Full
	15	"	-		-			TT&C 50% Calibration Level
	*16	Spare	5 V Buss		-			-
	*17	Temp.	-80/+200°F		B			Thermo Temp. Cold Gas Tank at 38 Deg.
	*18	"	-80/+200°F		B			Thermo Temp. Cold Gas Tank at 321 Deg.
	19	AMP-HR	0/30 AH		B			EP&SD Ampere Hour Meter Total
	20	"	0/120 AH		B			EP&SD Ampere Hour Meter Total
	21	"	0/480 AH		B			EP&SD Ampere Hour Meter Total
	*22	Temp.	0/150°F		B			OA Temp. OCV Oxidizer Tank (Int)
	*23	"	0/150°F		B			OA Temp. OCV Fuel Tank (Int)
	24	Voltage	24 to 31 VDC		C			EP&SD Command Decoder Voltage Monitor
	25	Voltage Div	-		-			TT&C 90 Percent Calibration
	26	Voltage	23 to 33 VDC		B			EP&SD Voltage OCV Batteries
	27	Pressure	0 to 5000 psia		B			Stab Press. Attitude Control Storage Tank
	*28	Voltage Div	Discrete Levels		C			Stab Cold Gas Pressure Switch
	29	Frame Sync	-		-			-
	30	Frame Sync	-		-			-

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1. SECURITY CLASSIFICATION:
9. REVISION NO.: MT

SATELLITE MEASUREMENTS – SYSTEM REQUIREMENTS

2. PAGE 640.8
3. DATE 1 June 1965
4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: None
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: AF 04(695)-469

Band	10. MEAS. CODE	11. SENSOR TYPE	12. MEASUREMENT RANGE	13. ACCURACY	14. PRIORITY	15. SAMPLING RATE	16. PROPOSED SCHEDULE OF TRANSMISSION &/OR STORAGE	17. SPECIAL REQUIREMENTS (UNIQUE TRANSDUCER REQUIREMENTS) (OUTPUT RANGES)
13	Pin							
	* 1	Magnetom.	+/-550M Gauss	-	B	2.5/sec.	Orbital Real Time (Link 3)	Buss P Axis Magnetometer
	* 2	"	+/-550M Gauss		B			Buss Q Axis Magnetometer
	* 3	"	+/- 550M Gauss		B			Buss R Axis Magnetometer
	* 4	Voltage Div	Discrete Levels		B			Buss Selective Address Monitor
	5	"	-		-			TT&C 10 Percent Calibration
	6	"	Discrete Levels		B			Buss Mode & Event Monitor
	* 7	"	"		B			Sep Separation No. 6
	8	"	"		B			Buss Power Monitor
	9	Spare	5 V Buss		-			-
	10	Voltage Div	Discrete Levels		B			Buss Event Monitor
	*11	"	"		B			Sep Separation No. 4
	12	"	"		B			Buss Secure Command Monitor
	13	"	"		B			Buss Command Monitor - PPD On
	*14	"	"		B			Sep Separation No. 5
	15	"	-		-			TT&C 50 Percent Calibration
	16	Pressure	0 to 4000 psia		B			Buss Buss Gas Pressure
	*17	Voltage Div	Discrete Levels		B			Sep Separation No. 7
	18	Voltage	26 to 33 VDC		C			Buss Voltage Monitor
	19	Temp.	-50/+150°F		C			Buss Temp. Magnetometer Electronics
	20	"	-50/+150°F		C			Buss Temp. Auxiliary Timer
	21	"	-50/+150°F		C			Buss Temp. F/C Electronics
	22	"	-100/+200°F		B			Buss Buss Gas Temperature
	*23	Voltage Div	Discrete Levels		B			Sep Separation No. 2
	*24	-	-		-			Exp Fet No. 15
	25	Voltage Div	-		-			TT&C 90 Percent Calibration
	*26	-	-		-			Exp Fet No. 15
	27	Voltage Div	Discrete Levels		C			Buss Antenna/Magnetometer Erection
	*28	-	-		-			Exp Fet No. 16
	29	Frame Sync	-		-			-
	30	"	-		-			-

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1. SECURITY CLASSIFICATION
9. REVISION NO. MT

SATELLITE MEASUREMENTS – SYSTEM REQUIREMENTS

1. SECURITY CLASSIFICATION	2. PAGE 640.9
	3. DATE 1 June 1965
	4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT NO.	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	75664014	AF 04(695)-469

10. MEAS. CODE	11. SENSOR TYPE	12. MEASUREMENT RANGE	13. ACCURACY	14. PRIORITY	15. SAMPLING RATE	16. PROPOSED SCHEDULE OF TRANSMISSION &/OR STORAGE	17. SPECIAL REQUIREMENTS (UNIQUE TRANSDUCER REQUIREMENTS) (OUTPUT RANGES)
SRV	Telemetry						
10.5kc	Axial Acceleration Accelerometer	0 - 6g or 0 - -40g		B	Continuous	Re-entry	H-30 Axial Acceleration Switch at thrust-cone separation to 0 - -40 g.
8.9kc	Voltage Div.	Discrete Levels		B	Continuous	Re-entry	H-30 Separation and re-entry event monitors
8.0kc	Voltage Div.	Discrete Levels		B	Continuous	Re-entry	H-30 Ejection Programmer Event Sequence

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1. SECURITY CLASSIFICATION	9. REVISION NO.
	MT

GENERAL COMMAND REQUIREMENTS

1. SECURITY CLASSIFICATION:
2. PAGE 710
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTER /CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

10. ITEM NO.	11. TEST CODE	12. COMMAND (TITLE/DESIGNATION)	13. CHARACTERISTICS: PRIMARY TO MISSION	SECONDARY TO MISSION	OPERATIONS CONTROL	PERFORMANCE CONTROL	STATUS CONTROL	RELAYED	UNIQUE	PERIODIC	CODED (STD)	CODED (SPECIAL)*	SAT. VERIFIED**	STATION VERIFIED***	14. SIGNAL SOURCE	15. TRANSMITTING STATION	16. FIRST TRANSMISSION	17. DISCUSSION, FUNCTION & PURPOSE
1		SSPC 1, Control No. 1	x			x	x						x	x	STC	All		
2		SSPC 2, TT&C Control	x			x	x						x	x	STC	All		
3		DSPC 1, Secure Commd	x			x	x					x	x	x	STC	All		
4		DSPC 2, Control No 2	x			x	x						x	x	STC	All		
5		DSPC 3, Control No 3	x			x	x						x	x	STC	All		
6		DSPC 4, Att. & Vel.	x			x	x						x	x	STC	All		
7		DSPC 5, Misc	x			x	x						x	x	STC	All		
8		RTC 1	x			x	x						x	x	STC	All		Enable Programmer Line 1
9		RTC 2	x			x	x						x	x	STC	All		Enable Programmer Line 2
10		RTC 3	x			x	x						x	x	STC	All		Enable Programmer Line 3
11		RTC 4	x			x	x						x	x	STC	All		Enable Programmer Line 4
12		SPARE																
13		RTC 6	x			x	x						x	x	STC	All		Spare
14		RTC 7	x			x	x						x	x	STC	All		Telemetry Transmitter Normal
15		RTC 8	x			x	x						x	x	STC	All		Telemetry Transmitter Reverse
16		RTC 9	x			x	x						x	x	STC	All		PPD Off
17		SPARE													STC			
18		RTC 11	x			x	x						x	x	STC	All		GFE C17A
19		RTC 12	x			x	x						x	x	STC	All		GFE C18A
20		RTC 13	x			x	x						x	x	STC	All		Recorder PB On

* SEE ADDENDUM WITH CLASSIFIED FORMAT

** FOR SATELLITE VERIFICATION METHOD, SEE PAGE NO. ———

*** FOR STATION VERIFICATION METHOD, SEE PAGE NO. ———

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1. SECURITY CLASSIFICATION
9. REVISION NO.

GENERAL COMMAND REQUIREMENTS

2. PAGE 710-1
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL
DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTER / CONTRACT NUMBER: Aerospace Corp/AF 04 (695)-469

10. ITEM NO.	11. TEST CODE	12. COMMAND (TITLE/DESIGNATION)	13. CHARACTERISTICS: PRIMARY TO MISSION	SECONDARY TO MISSION	OPERATIONS CONTROL	PERFORMANCE CONTROL	STATUS CONTROL	RELAYED	UNIQUE	PERIODIC	CODED (STDI	CODED (SPECIAL)*	SAT. VERIFIED**	STATION VERIFIED***	14. SIGNAL SOURCE	15. TRANSMITTING STATION	16. FIRST TRANSMISSION	17. DISCUSSION, FUNCTION & PURPOSE
21		RTC 14	x		x	x							x	x	STC	All		Recorder PB Off
22		RTC 15	x		x	x							x	x	STC	All		IR scanner search mode.
23		RTC 16	x		x	x							x	x	STC	All		Buss Voltage Dropping Module Bypass
24		Real Time Enable	x		x	x			x				x	x	STC	All		Enables decoder for receipt and execution of RTC's.
25		Erase Delay Lines	x		x	x			x				x	x	STC	All		Erases delay lines.
26		Zeke 23		x		x			x				x	x	STC	All		BUSS Real Time; Turns on T & T
27		BUSS Next Station		x		x			x				x	x	STC	All		BUSS Next Orbit; Turns on T & T
28		K1K Zeke 31		x		x			x				x	x	STC	All		BUSS Execute
29		K1K Zeke 32		x		x			x				x	x	STC	All		Enable Primary Command
30		ZEKE 26		x		x			x				x	x	STC	All		Enable Subsequent Commands

*See Addendum with Classified Format
**For Satellite Verification Method, See Page No. ___
***For Station Verification Method, See Page No. ___

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SPECIAL COMMAND CAPABILITY REQUIREMENTS

1. SECURITY CLASSIFICATION

2. PAGE 730

3. DATE 1 June 1965

4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE

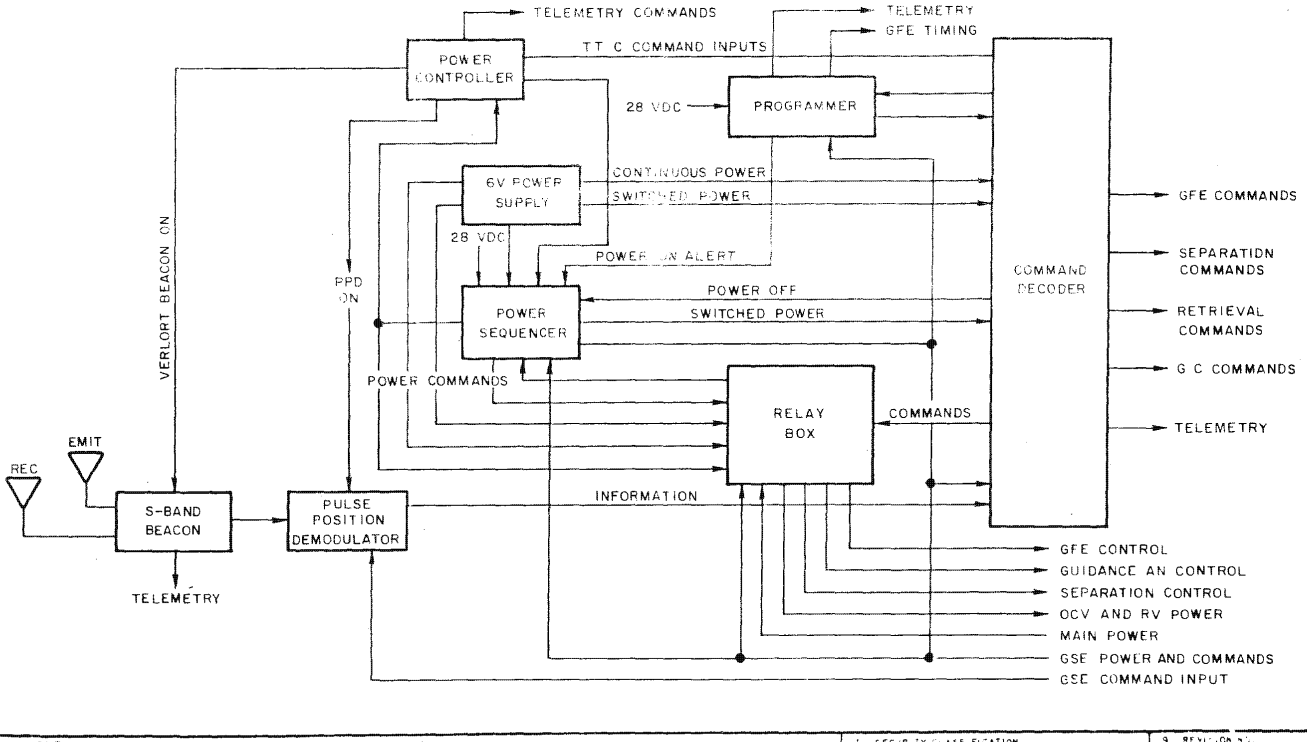
6. PROGRAM REQUIREMENT NO.

7. SYSTEM CODE 75(6)-02

8. CONTRACTOR/CONTRACT NUMBER Aerojet-Gen. Corp./AF 04(695)-469

9. SKETCHES, DIAGRAMS, ETC.

11. TEST CODE



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NOTE: For BUSS control see page 612.1

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7. SECURITY CLASSIFICATION

9. REVISION NO.

PRIMARY COMMAND FORMAT

1. SECURITY CLASSIFICATION	2. 740
	3. DATE 1 June 1965
	4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT NO.	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 266	NONE	75664014	Aerospace Corp./AF 04(647)-469

NUMBER	FUNCTION	BIT FORMAT	RESULTING ACTION
	Real Time Command (RTC)	1	Parity
		2-7	Function bits: Bits 2, 3, 4, & 5 decoder
			Function bits: Bits for 16 possible commands
	Single Stored Programmer Commands (SSPC)	1-3	Preamble in programmer; not transmitted.
		4-26	Time code
		27	Time parity 4-27 even.
		28	Programmer Code "0" indicates Pulse 28.
		29-31	Decoder input adress determines how function bits are translated.
		32-39	Function bits
		40	Parity bits 24-40 even.
	Dual Stored Programmer Commands (DSPC)	1-40	Same as SSPC.
		41-43	Preamble in programmer; not transmitted.
	Transmitted as Two 37-Bit Commands	44-66	Function bits
		67	Parity (44-67)
		68	Programmer Code "1" indicates Pulse 68.
		69-79	Function bits
		80	Parity (44-80)
	Each command must be preceeded and followed by an "S" pulse. Two "T" bits must be transmitted between the 37th information bit and the following "S" pulse.		

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1. SECURITY CLASSIFICATION	9. REVISION NO.

PRIMARY COMMAND FORMAT

1. SECURITY CLASSIFICATION

2. 740.1

3. DATE 1 June 1965

4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT NO.: NONE

7. SYSTEM CODE: 75664014

8. CONTRACTOR/CONTRACT NUMBER: AF 04(695)-469

NUMBER	FUNCTION	BIT FORMAT							RESULTING ACTION
	Real Time Commands	P	LSD					MSD	
		1	2	3	4	5	6	7	PPD NRZ data shunted to programmer Lines 1,2,3, and 4. Return to real time mode is by unique stored command or implicit with stored command to turn on PPD.
RTC 1	Enable Programmer Line 1	0	0	0	0	0	0	0	
RTC 2	Line 2	1	1	0	0	0	0	0	
RTC 3	Line 3	1	0	1	0	0	0	0	
RTC 4	Line 4	0	1	1	0	0	0	0	
RTC 5	SPARE								
RTC 6	Spare								
RTC 7	Telemetry Transmitter Normal	0	0	1	1	0	0	0	Set latch relay. Real time data to the low frequency transmitter; playback or supplemental data to the high frequency transmitter.
RTC 8	Telemetry Transmitter Reverse	1	1	1	1	0	0	0	Reset latch relay; reverses No. 7.
RTC 9	Pulse Position Demod (PPD) OFF	1	0	0	0	1	0	0	
RTC 10	Spare								
RTC 11	GFE 1-C17	0	0	1	0	1	0	0	
RTC 12	GFE 1-C18	1	1	1	0	1	0	0	
RTC 13	Recorder Playback ON	0	0	0	1	1	0	0	
RTC 14	Recorder Playback OFF	1	1	0	1	1	0	0	
RTC 15	Search ON	1	0	1	1	1	0	0	
RTC 16	BUSS Voltage Stepdown Module Bypass	0	1	1	1	1	0	0	

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1. SECURITY CLASSIFICATION

9. REVISION NO.

PRIMARY COMMAND FORMAT

1. SECURITY CLASSIFICATION

2. 740.2

3. DATE 1 June 1965

4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT NO.: NONE

7. SYSTEM CODE: 75664014

8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(647)-469

NUMBER	FUNCTION	BIT FORMAT	RESULTING ACTION
CCPC 1	Computer Phase A	32 - 1	
	Computer Phase B	32 - 0	
	Recorder ON	33 - 1	Turns on recorder in slow speed record mode as well as SCO units and multiplexers which are to be recorded.
	Recorder OFF	33 - 0	Turns OFF the above.
	Piggyback 1-1	34 - 1	
	Piggyback 1-0	34 - 0	
	Piggyback 2-1	35 - 1	
	Piggyback 2-0	35 - 0	
	GFE 1-C25	36 - 1 36 - 0	
	Yaw Dead Band, Fine	37 - 1	Selects fine attitude control amplifier, yaw.
	Yaw Dead Band, Coarse	37 - 0	Selects coarse attitude control amplifier, yaw.
	Pitch Dead Band, Fine	38 - 1	Selects fine attitude control amplifier, pitch.
	Pitch Dead Band, Coarse	38 - 0	Selects coarse attitude control amplifier, pitch.
	Roll Dead Band, Fine	39 - 1	Selects fine attitude control amplifier, roll.
	Roll Dead Band, Coarse	39 - 0	Selects coarse attitude control amplifier, roll.

SSD FORM 52 JAN 62 95

1. SECURITY CLASSIFICATION

9. REVISION NO.

PRIMARY COMMAND FORMAT

1. SECURITY CLASSIFICATION

2. 740.3

3. DATE 1 June 1965

4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT NO.: NONE

7. SYSTEM CODE: 75664014

8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

NUMBER	FUNCTION	BIT FORMAT	RESULTING ACTION
SSPC 2	TM Real Time ON	32 - 1	Turns ON both telemetry transmitters with multiplexers, SCO units, sensors, etc required for real time telemetry reference oscillator.
	TM Real Time OFF	32 - 0	Turns OFF the above.
	Recorder Playback, ON	33 - 1	Tape recorder in high speed playback.
	Recorder Playback OFF	33 - 0	Turns OFF tape recorder.
	Verlort Beacon ON	34 - 1	Turns ON Verlort beacon.
	Verlort Beacon OFF	34 - 0	Turns OFF Verlort beacon.
	Pulse Position Demod. ON	36 - 1	Turns ON PPD, and Steps secure word memory unit.
	Pulse Position Demod. OFF	36 - 0	Turns PPD OFF.
	GFE 1C25 ON	37 - 1	Turns BUSS TM ON (1) or OFF (0)
	GFE 1C25 OFF	37 - 0	
	Store Command Reset	38-0, 39-0	Every stored command resets timer for 6 or 12 minutes.
	Timer Reset Inhibit	38-1, 39-0	Prevents timer reset until runout
	12 Minutes	38-0, 39-1	Operates as a 12 minute timer until runout
	±6 v dc Supply OFF	38-1, 39-1	Removes 28v from 6-v power supply supporting command decoder and turns OFF OCV sensors.

FORM 95 JAN 62

1. SECURITY CLASSIFICATION

9. REVISION NO.

PRIMARY COMMAND FORMAT

1. SECURITY CLASSIFICATION

2. 740.4
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

NUMBER	FUNCTION	BIT FORMAT	RESULTING ACTION
DSPC 1	Security Key	32 - 39 44 - 66 69 - 73	Enable following bits.
	OCV Spin-Up	74 - 1	Spins OCV
	Engine No. 1 ON	75 - 1 75 - 0	Turns Engine No. 1 ON. Not required
	Engine No. 2 ON	76 - 1 76 - 0	Turns Engine No. 2 ON. Not required
	Disconnect No. 1	77 - 1	
	H30 Arm	78 - 1 78 - 0	Turns ON H30 TM, turns ON H30 beacon, and arms recovery programmer.
	Spare	79	

SSD FORM 95 JAN 62 54

1. SECURITY CLASSIFICATION

9. REVISION NO.

PRIMARY COMMAND FORMAT			1. SECURITY CLASSIFICATION	2. 740.5 3. DATE 1 June 1965 4. REPLACES PAGE(S) ORIGINAL DATED
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT NO.: NONE	7. SYSTEM CODE: 75664014	8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469	

NUMBER	FUNCTION	BIT FORMAT	RESULTING ACTION
DSPC 2	GFE 1-C1 to GFE 1-C6 at T_1	32 to 37	
	Duration T_3 - T_2	38, 39, 44	38 39 44 Time (seconds) 0 0 0 3.0 1 0 0 4.2 0 1 0 5.4 1 1 0 6.6 0 0 1 7.8 1 0 1 9.0 0 1 1 10.2 1 1 1 11.4
	Roll Angle at T_2	45 to 51	Provides angle for roll maneuver between T_2 and T_3.
	Roll Rate at T_2	52, 53	Sets rate of change in roll maneuver T_3 - T_2.
	Duration T_2 - T_1 & T_4 - T_3	54 - 57 0 0 0 0 1 0 0 0 0 1 0 0 1 1 0 0 0 0 1 0 1 0 1 0 0 1 1 0 1 1 1 0 0 0 0 1 1 0 0 1 0 1 0 1	Time (seconds) 3.5 3.9 4.3 4.7 5.1 5.5 5.9 6.3 6.7 7.1 7.5

SSD FORM 95 JAN 62

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1. SECURITY CLASSIFICATION | 9. REVISION NO.

PRIMARY COMMAND FORMAT

1. SECURITY CLASSIFICATION

2. 740.6

3. DATE 1 June 1965

4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT NO.: NONE

7. SYSTEM CODE: 75664014

8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp/AF 04(695)-469

NUMBER	FUNCTION	BIT FORMAT	RESULTING ACTION
DSPC 2	Duration T_2 - T_1 (continued)		Time (seconds)
		1 1 0 1	7.9
		0 0 1 1	8.3
		1 0 1 1	8.7
		0 1 1 1	9.1
		1 1 1 1	9.5
	GFE 1-C1 to GFE 1-C6 at T_2	58 to 63	
	Roll Angle at T_4	64, 65, 66 and 69, 70, 71, 72	Provides angle for roll maneuver between T_4 and T_1 of next sequence.
	Roll Rate at T_4	73, 74	Provides roll rate for above maneuver.
	GFE 1-C8 to GFE 1-C9 at T_4	75, 76	
	GFE 1-C10 to GFE 1-C12 at T_4	77 - 79	

SSD FORM 95 JAN 62

1. SECURITY CLASSIFICATION

9. REVISION NO.

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PRIMARY COMMAND FORMAT

1. SECURITY CLASSIFICATION

2. 740.7
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL
DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp/AF 04(695)-469

NUMBER	FUNCTION	BIT FORMAT	RESULTING ACTION
DSPC 3	GFE1-C1 to GFE 1-C6	32 thru 37	
	Duration $T_2 - T_1$	38 thru 39, 44 thru 51	
	Spares	52 - 63	
	Roll Angle at T_2	64,65,66,69,70,71,72	
	Roll Rate at T_2	73, 74	
	GFE1-C8 to GFE1-C9 at T_2	75, 76	
	GFE1-C10 to GFE1-C12 at T_2	77, 78, 79	

38	39	44	45	46	47	48	49	50	51	Time
0	1	1	1	1	1	1	1	1	1	.1
1	0	1	1	1	1	1	1	1	1	.2
0	0	1	1	1	1	1	1	1	1	.3
1	1	0	1	1	1	1	1	1	1	.4
0	0	1	0	0	0	0	0	0	0	101.9
1	1	0	0	0	0	0	0	0	0	102.0
0	1	0	0	0	0	0	0	0	0	102.1
1	0	0	0	0	0	0	0	0	0	102.2
0	0	0	0	0	0	0	0	0	0	102.3
1	1	1	1	1	1	1	1	1	1	102.4

SSD FORM 95 JAN 62
57

1. SECURITY CLASSIFICATION

9. REVISION NO.

PRIMARY COMMAND FORMAT

2. 740.8
3. DATE 1 June 1965
4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: AF 04(695)-469

NUMBER	FUNCTION	BIT FORMAT	RESULTING ACTION
DSPC4	Recorder ON OFF	59-1 59-0	Turns on recorder in slow speed record mode as well as associated multiplexers and SCO units.
	Yaw Low Level ON	60-1	Low pneumatic torque.
	Yaw High Level ON	60-0	High pneumatic torque.
	Pitch Low Level ON	61-1	Low pneumatic torque.
	Pitch High Level ON	61-0	High pneumatic torque.
	Roll Low Level ON	62-1	Low pneumatic torque.
	Roll High Level ON	62-0	High pneumatic torque.
	Spare	63	
	Yaw Dead Band Fine	64-1	Selects fine band yaw control.
	Yaw Dead Band Coarse	64-0	Selects coarse band yaw control.
	IR off & Disc. #1 enable	65-1	Enables execution of IR off and Disc. #1
	IR off & Disc. #1 disable	65-0	Disables above
	ACA off & Spin-up enable	66-1	Enables execution of ACA off (DSPC-5 Bit 62) and Spin-up On (DSPC-1 Bit 74)
	ACA off & Spin-up disable	66-0	Disables above.
	Pitch Dead Band Fine	69-1	Selects fine band pitch control.
	Pitch Dead Band Coarse	69-0	Selects coarse band pitch control.
	Roll Dead Band Fine	70-1	Selects fine band roll control.
	Roll Dead Band Coarse	70-0	Selects coarse band roll control.
	RH IR Pre Amp Record	71-1	Connects RH IR to 10.5 KC S.C.O. and disconnects 30 x 2.5 multiplexer
	RH IR Pre Amp		Disconnect RH IR from 10.5 KC S.C.O. and connects 30 x 2.5 multiplexer

SSD FORM 95 JAN 62
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1. SECURITY CLASSIFICATION
9. REVISION NO.

PRIMARY COMMAND FORMAT

2. 740.9
3. DATE 1 June 1965
4. REPLACES PAGE(S) Original
DATED

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT NO.	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	75664014	AF 04(695)-469

NUMBER	FUNCTION	BIT FORMAT	RESULTING ACTION
DSPC4 (con't.)	Fly Forward	72-1	Returns to gyro compass forward control and turns off yawing torque.
	Yawing Torque ON	73-1	Vehicle yaws at 0.5 deg/sec.
	Yawing Torque Not ON	73-0	Nothing.
	GFE 1-C20 & GFE 1-C21 enable	74-1	
	GFE 1-C20 & GFE 1-C21 disable	74-0	
	Fly Reverse	75	Reverses gyro compass and turns OFF yawing torques; uncages yaw gyro.
	GFE 1-20 SET	76-1	
	GFE 1-C20 RESET	76-0	
	GFE 1-C21 SET	77-1	
	GFE 1-C21 RESET	77-0	
	Rate Roofs OFF	78-1	Removes rate limits.
	Rate Roofs ON	78-0	Limits rates of angular change when in fine dead band.
	GFE 1-C24	79-1	
	GFE 1-C24	79-0	

SSD FORM JAN 62 95
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1. SECURITY CLASSIFICATION
9. REVISION NO.

PRIMARY COMMAND FORMAT

2. 740.10
3. DATE 1 June 1965
4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: AF 04(695)-469

NUMBER	FUNCTION	BIT FORMAT	RESULTING ACTION
DSPC 5	Spare	32	
	Separate OCV/Agena	33-1	Fire OCV/Agena separation squib.
		33-0	Nothing.
	Uncage Roll and Pitch Gyros	34-1	Uncage roll and pitch gyros.
		34-0	Nothing.
	Predac Bypass	35-1	Used to over-ride roll commands to simulate a roll zero command prior to pitch down.
	Predac Normal	35-0	Nothing.
	Uncage Yaw Gyro	36-1	Uncage yaw gyro.
		36-0	Nothing.
	Battery Reset	37-1	Controller Power Transfer Reset.
		37-0	Nothing.
	Computer Prearm	38-1	
		38-0	Nothing.
	Pitch Zero	39-1	Vehicle in horizontal position.
		39-0	Nothing.
	Pitch Down	44-1	Vehicle in pitch down position.
		44-0	Nothing.
	GFE Environ. Control ON	45-1	Turns on GFE environmental control.
		45-0	No action.
	GFE Environ. Control OFF	46-1	Turns off GFE environmental control.
		46-0	No action.

SSD FORM 95 JAN 62
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1. SECURITY CLASSIFICATION
9. REVISION NO.

PRIMARY COMMAND FORMAT

2. 740.11
3. DATE 1 June 1965
4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: AF 04(695)-469

NUMBER	FUNCTION	BIT FORMAT	RESULTING ACTION
DSPC 5 (con't.)	OCV Propellant Tank Pressure	47-1	Pressurizes OCV propellant tanks.
		47-0	Nothing.
	OCV Attitude Control Pressure	48-1	Pressurizes attitude control gas system.
		48-0	Nothing.
		49-1	Nothing.
	OCV Spin-up Off	49-0	OCV Spin-up Off
	IR Signal On	50-1	Connects output of IR sensors to platform torquing electronics.
	IR Signal Off	50-0	Disconnect IR sensors.
	Search Off	51-1	Disconnects Roll & Yaw Torquer Motors from Torquer electronics eliminating effect of drift of electronics on platform.
	Spare	51-0	Nothing
	Spare	52-1	Nothing
	Spare	52-0	Nothing
	Spares	53, 54	
	GFE 1-C15 OFF	55-1	
	GFE 1-C15 ON	55-0	
	Spare	56-1	Nothing
		56-0	Nothing
	FEC 3-1	57-1	
	FEC 3-0	57-0	
	GFE 1-C16 SET	58-1	
	GFE 1-C16 RESET	58-0	

SSD FORM 95 JAN 62
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11. SECURITY CLASSIFICATION
9. REVISION NO.

PRIMARY COMMAND FORMAT

2. 740.12
3. DATE 1 June 1965
4. REPLACES PAGE(S) Original DATED

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT NO.	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER
PROGRAM 206	NONE	75664014	AF 04(695)-469

NUMBER	FUNCTION	BIT FORMAT	RESULTING ACTION
DSPC5 (con't.)	Spare	59-1	Nothing
	Spare	59-0	Nothing
	H30 Transfer	60-1	Initiate H30 SRV battery and in-flight disconnect.
		60-0	Nothing
	GFE1-C24	61-1	
		61-0	
	Attitude Control ON	62-1	Energize attitude control subsystem.
	Attitude Control OFF	62-0	De-energize attitude control subsystem.
	Spare	63 - 72	
	Computer Timer Bypass	73-1	Bypasses timer associated with computer operation.
	Computer Timer Normal	73-0	Returns to normal state.
	FEC 4-1	74-1	To be used as required by experiments.
	FEC 5-1	75-1	To be used as required by experiments.
	FEC 5-0	75-0	
	H30 Arm	76-1	Turn on T/C battery in capsule
		76-0	Nothing.
	S/A 3 & 4	77-1	Activates S/A 3 and 4
		77-0	Nothing.
	Spare	78-1	
	Spare	78-0	
	Adapter/SRV	79-1	Separates SRV from OCV Firing pin puller squibs.
		79-0	Nothing.
DSPC 6	Not Implemented		

FORM SSD JAN 62 95
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1. SECURITY CLASSIFICATION
9. REVISION NO.

BLOCK II BACK UP STABLIZATION AND COMMAND SYSTEM

1. SECURITY CLASS:

2. PAGE 750
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM 206

6. PROGRAM REQUIREMENT CODE: NONE

7. SYSTEM CODE: 75664014

8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

10. CHARACTERISTICS

A. TEST CODE:

B. DESIGNATION:

C. TYPE & PURPOSE:

D. BEACON CHARACTERISTICS:

E. POWER REQUIREMENTS: 25.5 ± 3.5 VDC
3 WATTS

F. CONFIGURATION:

G. SYSTEM OPERATION

BLOCK DIAGRAM ON PAGE 612.1

SEE SYSTEM DESCRIPTION - PAGE 750.2

11. TRANSMITTER CHARACTERISTICS N/A

A. FREQUENCY RANGE:

B. TUNABLE ☐ FIXED-TUNED ☐

C. BANDWIDTH AT 3DB
AND AT 60DB

D. EMISSION: ☐ AM ☐ PM ☐ PULSE
☐ COMPOSITE NONSTANDARD

E. FREQUENCY STABILITY:

F. AVERAGE POWER:

G. FIXED DELAY:

H. MAXIMUM VARIATION WITH SIGNAL STRENGTH TO WITHIN 5DBM OF MAXIMUM SENSITIVITY OF RECEIVER:

I. TIME:

J. MINIMUM FREQUENCY SEPARATION REQUIRED BETWEEN TRANSMITTER AND RECEIVER:

K. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS TRANSMITTER
☐ YES ☐ NO
(IF YES, PROVIDE ONE COPY)

L. ATTACH A PLOT OF ANTENNA INPUT POWER VS. TRANSMITTER FREQUENCY.

12. RECEIVER CHARACTERISTICS

A. FREQUENCY RANGE: 100 to 150 mcps
FREQUENCY CARRIER: 141.54 mcps (S.V.951 - 963)
137.64 mcps (S.V.964 and subsequent)

B. TUNABLE ☐ FIXED-TUNED ☒

C. INTERMEDIATE FREQUENCY:

D. LOCAL OSCILLATOR FREQUENCY ☐ ABOVE, ☐ BELOW INTERROGATION FREQUENCY

E. METHOD OF FREQUENCY CONTROL:

F. FREQUENCY STABILITY: ±2 Kcps @ -20° to +70°

G. SENSITIVITY:
MAXIMUM: 1.5 uv 75% mod. input for
MINIMUM: 2000 uv 3 volts across 50 ohm
NOMINAL: output

H. SELECTIVITY: (OVERALL)
6DB: 3.5 + 7-1 Kcps
20 DB:
60DB: 110 Kcps

I. IS THERE AVAILABLE A SPECTRUM ANALYSIS REPORT ON THIS RECEIVER COVERING THE FREQUENCY RANGE 100 NC TO 10,000 MC?
☐ YES ☒ NO
(IF YES, PROVIDE ONE COPY)

J. SPECIAL FEATURES:
a. Erectable dipole antenna at station 169
b. Antenna pattern on page 750.1
c. Amplitude Modulated Signal

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1. SECURITY CLASS:

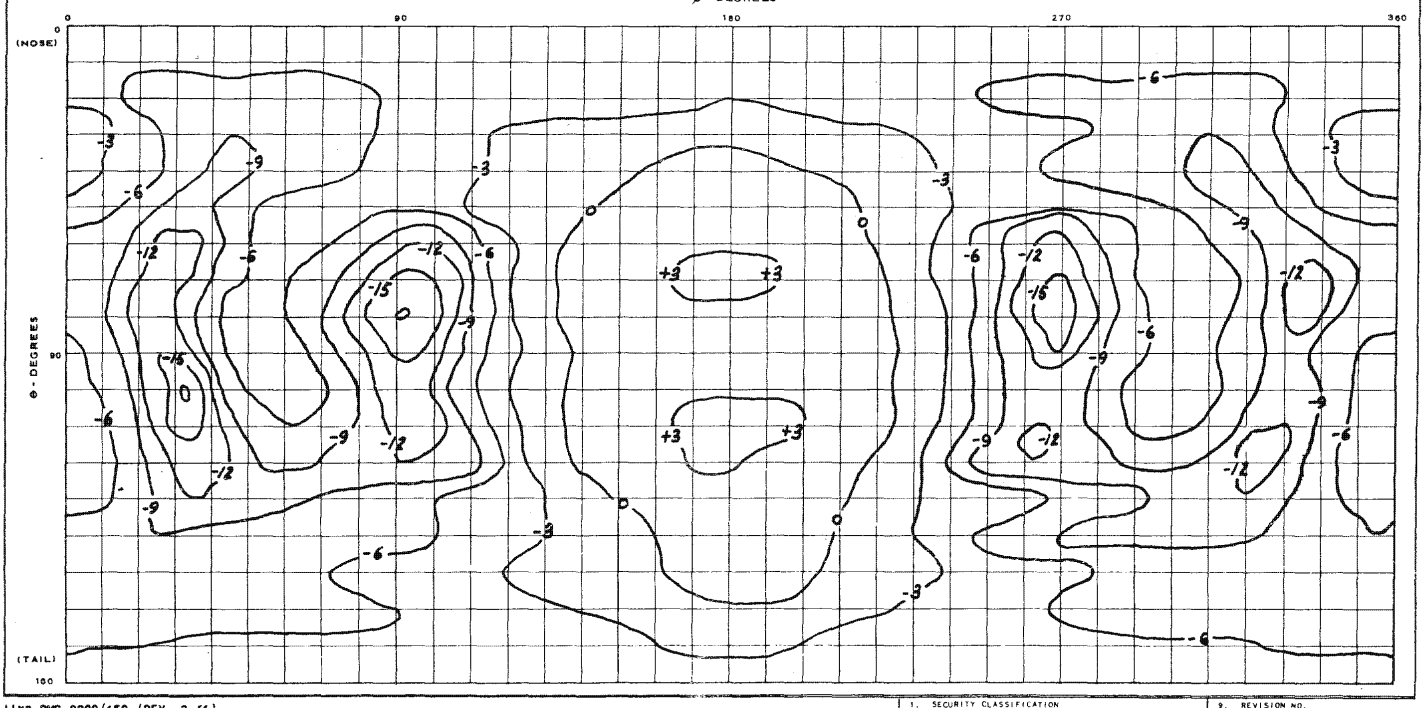
9. REVISION NO.

ANTENNA PATTERN (SV) BUSS	1. SECURITY CLASSIFICATION	2. PAGE 750.1
		3. DATE 1 June 1965
		4. REPLACES PAGE(S) ORIGINAL

5. PROGRAM TITLE	6. PROGRAM REQUIREMENT CODE	7. SYSTEM CODE	8. CONTRACTOR/CONTRACT NUMBER	DATED
Program 206	NONE	75664014	Aerospace AF04(695)-469	

10. TEST CODE	11. PRD PAGE NO.	12. INSTRUMENTATION SYSTEM	14. - 18. (SEE REVERSE SIDE OF FORM)
		VHF BUSS, Receive Antenna	

13. ANTENNA PATTERN PLOT



IND-PMR-8800/150 (REV. 3-61)

1. SECURITY CLASSIFICATION	9. REVISION NO.

64

BACKUP STABILIZATION SUBSYSTEM VHF COMMAND SYSTEM				2. 750.2 3. DATE 1 June 1965 4. REPLACES PAGE(S) ORIGINAL DATED
5. PROGRAM TITLE PROGRAM 206	6. PROGRAM REQUIREMENT NO. NONE	7. SYSTEM CODE 75664014	8. CONTRACTOR/CONTRACT NUMBER Aerospace Corp./AF 04(695)-469	

The function of the BUSS Command System is to activeate the BUSS Attitude Control Subsystem and to control the sequence of events for mission termination through the Separation Programmer of the Satellite Vehicle Separation Subsystem. There is direct radio access to the BUSS Subsystem at all times subsequent to orbit injection. Access will be by amplitude modulated VHF carrier. There will be two possible modes of operation. The BUSS Real Time Mode (BRT) terminates the mission in the same orbit in which the command is transmitted. The BUSS Next Station Mode (BNS) is transmitted from POGO and terminates at KODI. The BUSS termination sequence is redundant to a similar sequence furnished by the Satellite Vehicle Primary Command System. The performance of the BUSS Subsystem is monitored by the primary telemetry system on the playback transmitter (Delta 3) provided that the signal data recorder has been commanded to the OFF position.

Command Structure

A selective address for the BUSS System has been incorporated into vehicles 964 and subsequent.

Commands are inserted into the BUSS System to choose a specific mode of operation and to execute the chosen mode. i.e., to choose either the BRT or the BNS mode. The mode is selected by one of two commands following the vehicle address command. The vehicle address is the tone pair "EG", which enables receipt of mode commands for approximately 7 seconds. In addition to the selection of the recovery mode, the mode commands turn on the BUSS control electronics and the primary telemetry system in the proper configuration to monitor BUSS. The mode is executed by a secure command consisting of a 35 bit word, the logical components of which consist of single audio tones. A second secure word is available to command access to the primary command system.

The command structure is as follows:

Command	Tone	Result
Unsecure	EG	Vehicle address
Unsecure	GE	Arm mode "BNS"
Unsecure	FG	Arm mode "BRT"
Secure	A	Power supply enable
Secure	B	Logical "1"
Secure	C	Logical "0"
Secure	D	Reset

The audio tone frequencies are:

A	4.3 kcps	E	4.9 kcps
B	4.1 kcps	F	5.1 kcps
C	4.5 kcps	G	5.3 kcps
D	4.7 kcps		

SSD FORM JAN 62 95

9. REVISION NO.

TRACKING NET OPERATIONS REQUIREMENTS				2. PAGE 810
				3. DATE 1 June 1965
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT NO.: NONE	7. SYSTEM CODE: 75664014	8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469	4. REPLACES PAGE(S): ORIGINAL; DATED:

10. DESCRIPTION

11. TEST CODE

1. The SCF tracking station net must support Program 206 in connection with the following activities:

   a. Operational readiness tests.

   b. Integrated tracking system tests.

   c. Operational tracking, telemetry reception, and command transmission as required.

   d. Transmission of the data in Item c, above to STC in real time or as required.

   e. Magnetic record of TM data and signal strength should be made at each station pass.

2. The above activities will be implemented as scheduled by STC in support of Program 206 launch schedules.

3. Tracking instrumentation will be calibrated as immediately prior to each operation as is practical, with calibrations checked just prior to each pass to insure continued data accuracy. Any deviations from the allowable range will be reported to STC immediately.

4. Inability to comply with the operations schedule will be reported to STC when known, along with an estimate of time required to regain a state of readiness.

SSD FORM JAN62 73

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7. SECURITY CLASSIFICATION

9. REVISION NO.

COMMUNICATIONS – GENERAL CRITERIA

1. SECURITY CLASSIFICATION
2. PAGE 830
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR / CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

10. CATEGORY	11. TYPES	12. BAND WIDTH	13. RATE	14. CHECK SYSTEM	15. PERMISSIBLE ERROR RATE	16. STATIONS FROM	16. STATIONS TO	17. SCHEDULE OF OPERATIONS	18. TRANSMISSION TIME INTERVAL	19. SPECIAL MESSAGE CHARACTERISTICS	20. REMARKS
1. Command Transmission	Crypto	As required to transmit information	40 bits per second each way, 8000 command message bits in 3.5 minutes or less, 17,000 bits in 7.5 minutes or less.	Bit-by-bit comparison by computer after round-trip transmission.	1 in 10^5 with 0.98 probability	See below	See below	Variable, as required by orbit. North-to-south and south-to-north station passes on 24-hr basis during operations.	3.5 minutes for simultaneous two-way transmission of 8000 bits, 7.5 minutes for 17,000 bits.		
2. Telemetry Data Ground Transmission		As required for information.	See Remarks	None	1 in 10^5 with 0.98 probability	"	"	"	During pass and subsequent 30-minute interval		Selected or compressed telemetry data in real time, plus post-pass, as supplied by Augmented system. TM & Track data to be time-shared for most effective use of 1200 bit/sec data lines.
3. Tracking		As required for data	See Remarks	None	1 in 10^5 with 0.98 probability	"	"	"	During pass		

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1. SECURITY CLASSIFICATION
9. REVISION NO.

COMMUNICATIONS – GENERAL CRITERIA

1. SECURITY CLASSIFICATION

2. PAGE 830.1

3. DATE 1 June 1965

4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT NO.: NONE

7. SYSTEM CODE: 75664014

8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)469

10. CATEGORY	11. TYPES	12. BAND WIDTH	13. RATE	14. CHECK SYSTEM	15. PERMISSIBLE ERROR RATE	16. STATIONS FROM	16. STATIONS TO	17. SCHEDULE OF OPERATIONS	18. TRANSMISSION TIME INTERVAL	19. SPECIAL MESSAGE CHARACTERISTICS	20. REMARKS
4.Special TLM	Micro-wave	Suffi-cient for two-100kc base band TLM channels	As Required	None	1 in 10^4 with 0.98 probability	VTS	STC	All VTS station passes	During VTS passes and launch		Analog strip chart recordings are required twice per day at the STC for detail analysis of vehicle health.
As above											Minimum requirement if 100 wpm TTY system is used. See Note (1)
1,2,3,4						VTS	STA				a, b, c, e, f
1,2,3						HTS	STA				a, b, c, d
1,2,3						KTS	STA				a, b, c, d
1,2,3						TTS	STA				a, b

NOTES (1) Interstation TTY lines for 100 wpm TTY system if used are defined as (a) 100-wpm crypto TTY: full duplex (b) 100-wpm TTY/alternate voice: full duplex (c) 60-wpm TTY: half duplex (d) 60-wpm TTY/voice: half duplex and SSB radio circuit (e) two voice circuits to VAFB launch complex (f) 60-wpm TTY: half duplex to launch control area.

(2) 1200 bit/second Augmentation lines will transmit TLM data and Track data.

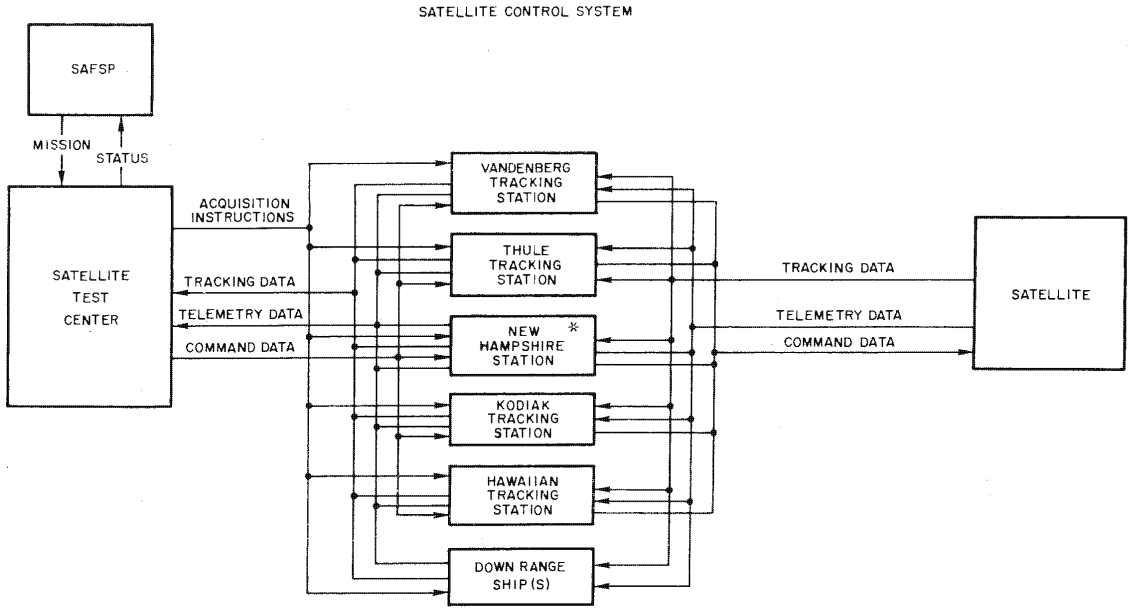
(3) All data yielding any information on the nature or degree of success of Program 206 will be classified SECRET and must be transmitted by cryptographically secure techniques.

SSD FORM JAN 62 48

9. REVISION NO.

COMMUNICATIONS – SYSTEM DESCRIPTION			1. SECURITY CLASSIFICATION	2. PAGE 831
				3. DATE 1 June 1965
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT NO.: NONE	7. SYSTEM CODE: 75664014	8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469	4. REPLACES PAGE(S): ORIGINAL DATED

10. COMMUNICATION SYSTEM DIAGRAMMATIC:



* NHS required for backup; not as a primary station

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1. SECURITY CLASSIFICATION | 9. REVISION NO.

COMMUNICATIONS – RECORDINGS

1. SECURITY CLASSIFICATION

2. PAGE 832
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL
DATED

5. PROGRAM TITLE [illegible]

6. PROGRAM REQUIREMENT NO [illegible]

7. SYSTEM CODE 75664014

8. CONTRACTOR CONTRACT NUMBER Aerospace Corp./AF 04(647)-469

10. ITEM NO.	11. TEST CODE	12. REQUIRED RECORDINGS	13. TIME CORRELATION YES	13. TIME CORRELATION NO	14. DURATION OF RECORDINGS	15. PURPOSE AND REMARKS
1	A	STC to Tracking Station, Voice Circuits	X		During all active station passes.	Postflight evaluation and occasionally for post-pass evaluation.
2	A	Command Lists	X		During command-list transmissions between STC and stations.	Postflight evaluation and occasionally for post-pass evaluation.
3	A	Telemetry Data	X		During transmission of telemetry information.	Postflight evaluation and occasionally for post-pass evaluation.
4	A	Tracking Data	X		During transmission of tracking information.	Postflight evaluation and occasionally for post-pass evaluation.

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1. SECURITY CLASSIFICATION

9. REVISION NO.

SYSTEM TIMING – PROGRAM FUNCTIONAL TIMING REQUIREMENTS;

1. SECURITY CLASSIFICATION

2. PAGE 840

3. DATE 1 June 1965

4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT NO. NONE

7. SYSTEM CODE: 75664014

8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

10. TEST CODE	11. TIMING SYSTEMS (*)	12. SIGNAL SOURCE	13. TYPE OF TRANSMISSION: MODULATION CODING	14. ACCURACY OF SYSTEM: ABSOLUTE	14. ACCURACY OF SYSTEM: RELATIVE*	15. TIME-DEPENDENT FUNCTIONS: OPERATION	15. TIME-DEPENDENT FUNCTIONS: MEASUREMENT	15. TIME-DEPENDENT FUNCTIONS: EVENT	15. TIME-DEPENDENT FUNCTIONS: DATA PROCESSING	15. TIME-DEPENDENT FUNCTIONS: OTHER	16. UTILIZATION: EVENT CONTROL	16. UTILIZATION: DATA CORRELATION	17. DISTRIBUTION: TRACK NET STATIONS	17. DISTRIBUTION: CONTROL AREAS	17. DISTRIBUTION: OTHER
A	SCF Type A	WWV correlated local frequency standard	Hard Wire: (See ORD 842)		1 ms	All tracking, telemetry, acquisition, and control data will carry the time reference code.							VTS TIS NHS* KTS HTS		

*NHS will be used for backup only, not as a primary station.

(*) DESIGNATES NEW REQUIREMENT. * BETWEEN TWO DESIGNATED DATA STATIONS.

1. SECURITY CLASSIFICATION

9. REVISION NO.

SSD FORM 20

SYSTEM TIMING – DESIGNATIONS AND ACCURACIES

1. SECURITY CLASSIFICATION

2. PAGE 841

3. DATE 1 June 1965

4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT NO. NONE

7. SYSTEM CODE 75664014

8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

10. TEST CODE	11. TIMING REQUIREMENT / DESIGNATION FOR FUNCTIONAL USE	12. SYSTEM RESOLUTION / MICRO SECONDS	13. TIME BASE / START OF CYCLE	14. TIME CODE SYSTEM / CODE FORMAT	15. CODE RATES / FRAMES PER SECOND	15. CODE RATES / BITS PER SECOND	16. CODE RESOLUTION / MILI SECONDS	17. TIME CORRELATION / LOCAL, MILISEC	17. TIME CORRELATION / SYSTEM, MILISEC	18. REMARKS & SPECIAL CRITERIA
	ULTIMATE REFERENCE SYSTEMS									
A B	All tracking, telemetry, acquisition, and control data will be labeled. WWV or WWVH signals correlated to local frequency standards.	1000	24 hrs	binary	1	20	4000	1 ms	5 ms	Time code format: Augmentation 17-bit time code.
	OPERATING REFERENCE SYSTEMS									
A B	Time reference for satellite vehicle stored commands. Clock in satellite vehicle only. Telemetry signals received correlated to local time generated by SCF-Augmented System.	10,000	9.7 days	binary	1.25	500	100	10 ms	10 ms	

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1. SECURITY CLASSIFICATION

9. REVISION NO.

SYSTEM TIMING – SUGGESTED CODE METHODS

1. SECURITY CLASSIFICATION:
2. PAGE: 842
3. DATE: 1 June 1965
4. REPLACES PAGE NO. / DATED: ORIGINAL

5. PROGRAM: PROGRAM 2.5
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR / CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469
9. TIMING SYSTEM: Augmented 17-bit
10. TYPE OF TRANSMISSION: TTY
11. STATUS: EXISTING [X]: PROJECTED [ ]: PROPOSED [ ]
12. TEST CODE:

13. CODE SYSTEM:

A. TYPE: PULSE WIDTH [X], AMPLITUDE [ ], PRESENCE [ ], POSITION [ ]
OTHER _____
CODING BY BINARY [ ], BINARY CODE DECIMAL [ ]
OTHER _____ SYSTEMS.

B. FORMAT: READ CODE SERIALLY [X], IN PARALLEL [ ]
(SEE NO. 15, CODE DIAGRAM, BELOW.)

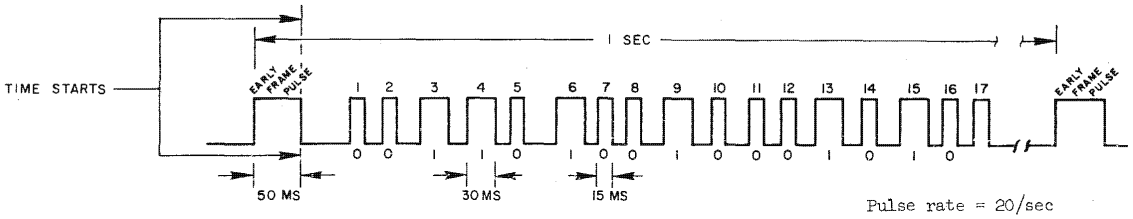
C. CODE RATE: 17 DIGIT, 20 PPS.

D. FRAME RATE: 1 FRAMES/SEC

E. PULSE DURATION:
REFERENCE MARKER 50 m SEC
INDEX MARKER (0) 15 m SEC
CODE DIGIT (1) 30 m SEC

F. CODE RESOLUTION
1 second.

14. CODE DIAGRAM AND/OR SYSTEM DESCRIPTION



Pulse rate = 20/sec

Time is equal to binary readout converted to decimal.

Readout refers to trailing edge of preceding Early Frame Pulse.

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11. SECURITY CLASSIFICATION:
9. REVISION NO.

ADJUNCT OPERATIONS – TEST AND/OR DEVELOPMENT REQUIREMENTS

1. SECURITY CLASSIFICATION
2. PAGE 850
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

10. ITEM NO.	11. TEST CODE	12. OPERATION	13. REFERENCE REQUIREMENTS	14. EFFECTIVITY LOCATION	14. EFFECTIVITY DATE	15. REMARKS
1	A	Operate the OCV and adapter as a development vehicle after the SRV has been separated and deboosted		After SRV re-entry.		Mission capability will become a reality in a much shorter time, inasmuch as experience can be gained earlier and non-nominal condition tests may be performed.
2		(See Page 630). Record information received over transmission link Δ1 during at least one station pass per rev.		On selected flights; up to 7200 seconds after launch.		This recording is not a Program 206 requirement and is to be accomplished without interfering with 206 operation.

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1. SECURITY CLASSIFICATION
9. REVISION NO.

ADJUNCT OPERATIONS – METEOROLOGICAL MEASUREMENTS

1. SECURITY CLASSIFICATION:
2. PAGE 851
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: Program 206
6. PROGRAM REQUIREMENT NO. None
7. SYSTEM CODE 75664014
8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04 (695)-469

10. ITEM NO.	11. TEST CODE	12. DATA REQUIRED	13. STATION	14. TIME AND LOCATION				15. MEASUREMENT ACCURACY	16. PURPOSE AND REMARKS
				DATE (LOCAL)	TIME (LOCAL)	INTERVALS	ALT-K FT		
1		Geomagnetic amplitude A_k (analog of A_p)	Malibu, Calif. Fredericksburg, Va.	2 days prior to planned operations through flight.		24 h	N/A	±1 Gamma	Required as input to the time-variant atmosphere model in the Orbit Determination and Mission Planning programs.
2		Solar Flux (F_{10})	National Research Council Ottawa, Canada	2 days prior to planned operations through flight.		24 h	N/A	±2%	Same as Item 1. The 24-hour interval data is regularly available by TWX from North Atlantic Radio Warning Service, Ft. Belvoir, Va.
3		Ionospheric Absorption above Artic Circle (PCA)	Defense Research Board, Ottawa, Canada; College, Alaska	2 days prior to planned operations through flight.		24 h	Ionosphere	±1 db	For required 1-day A_p predictions.
4		Radio Propagation Predictions	RCA, New York; Ft. Belvoir, Va; Boulder, Colo.	2 days prior to planned operations through flight.		24 h	N/A	N/A	For required 5-day advance A_p predictions.
5		Solar Flare Observations	Ft. Belvoir, Va.	As they occur.		N/A	N/A	N/A	For required 2-day A_p predictions.

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1. SECURITY CLASSIFICATION
9. REVISION NO.

GENERAL DATA PROCESSING REQUIREMENTS

1. SECURITY CLASSIFICATION
2. PAGE 910
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL DATED

5. TEST PROGRAM: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. ARDC SYSTEM CODE: 75664014
8. CONTRACTOR: Aerospace Corp./AF 04(695)-469

10. TYPE OF DATA	11. BIT RATE	12. DATA RATE	13. QUANTITY	14. TYPE OF PROCESSING	15. RECORDING	16. DISPLAYS	17. EVALUATION &/OR VERIFICATION	18. DISPOSITION	19. AVAILABILITY TIME RAW	RED	PHOTO	20. REMARKS
TRACKING S-Band Radar (All stations)		One set R,A,E, each four seconds.	Maximum Number station passes per day, 3-6 min duration each.	See Remarks	Punch paper tape or magnetic tape record of digitized data.	See Remarks	See Remarks	Processed digital data transmitted to STC for ephemeris computation by CDC 1604 computer	See Remarks			Equipment for analog to digital processing and transmission of data to STC will be at least equivalent to existing equipment as far as accuracy and time availability of data at STC are concerned.
TELEMETRY PAM/FM/FM Real Time Link	A readout of approximately 45 commutated points from 4 different channels must be provided on each station pass, 3-6 minutes duration. Special readouts of points on additional channels will be required on selected passes.				Magnetic tape recording of base band (0-100kc)			Processed data transmitted to STC by voice and TTY (or equivalent).	See Remarks			Up to one-half of these points will be received during the pass and the remainder within 30 minutes after the pass. (See ORD 910.1)
COMMAND Requirement for Recording Transmitted Command Message	410-630 bits/second depending on S-Band Radar PRF.		13000 bits in one complete command message.	Detect command modulation of radiated S-band rf.	Magnetic tape recording of detected information from the radar only.			Magnetic tape to be transferred to STC post flight.				Equipment for processing data and recording on magnetic tape can be equivalent to existing equipment at tracking stations.
PAY LOAD Not Applicable				This recording to be maintained separate from all other recordings.								
OTHER Telemetry Playback Link	Processing as necessary to recover data which has been telemetered to ground at 4 times recorded speed will be required (see CRD 640 - 640.15).				Magnetic tape recording of base band (0-100kc).			Processed data transmitted to STC by voice and TTY (or equivalent).	See Remarks			These points will be required at STC within one-half hour after the station pass. ATTACH: 1. FORMATS 2. FLOW CHART

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1. SECURITY CLASSIFICATION
9. REVISION NO.

GENERAL DATA PROCESSING REQUIREMENTS

1. SECURITY CLASSIFICATION
2. PAGE 910.1
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL DATE:

5. TEST PROGRAM [illegible] 236
6. PROGRAM REQUIREMENT NO. NONE
7. ARDC SYSTEM CODE 75664014
8. CONTRACTOR Aerospace Corp./AF 04(695)-469

10. TYPE OF DATA	11. BIT RATE	12. DATA RATE	13. QUANTITY	14. TYPE OF PROCESSING	15. RECORDING	16. DISPLAYS	17. EVALUATION &/OR VERIFICATION	18. DISPOSITION	19. AVAILABILITY TIME RAW	RED	PHOTO	20. REMARKS
TRACKING												
TELEMETRY (continued from ORD 910) PAM/FM/FM Real Time Link	Four continuous channels will be required. The 52.5-kc continuous channel provides verification data for the command link. The discriminated output of this channel must be fed to appropriate command equipment. The 7.35-kc continuous channel provides addressed programmer line identification and delay line erase monitoring. The outputs of both the 52.5 kc and the 7.35 kc channels will be displayed in real time on oscilloscope(s). The 70-kc continuous channel contains vehicle time data. The discriminated output must be correlated with ground system time, with resultant data transcribed to STC for use in generating correct command messages. Time correlation data will be required every station pass. (See ORD 841 and Item 2, ORD 920, 920.1).										
COMMAND												
PAY LOAD												
OTHER												ATTACH: 1. FORMATS 2. FLOW CHART

SSD FORM JAN 62 85
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1. SECURITY CLASSIFICATION
9. REVISION NO.

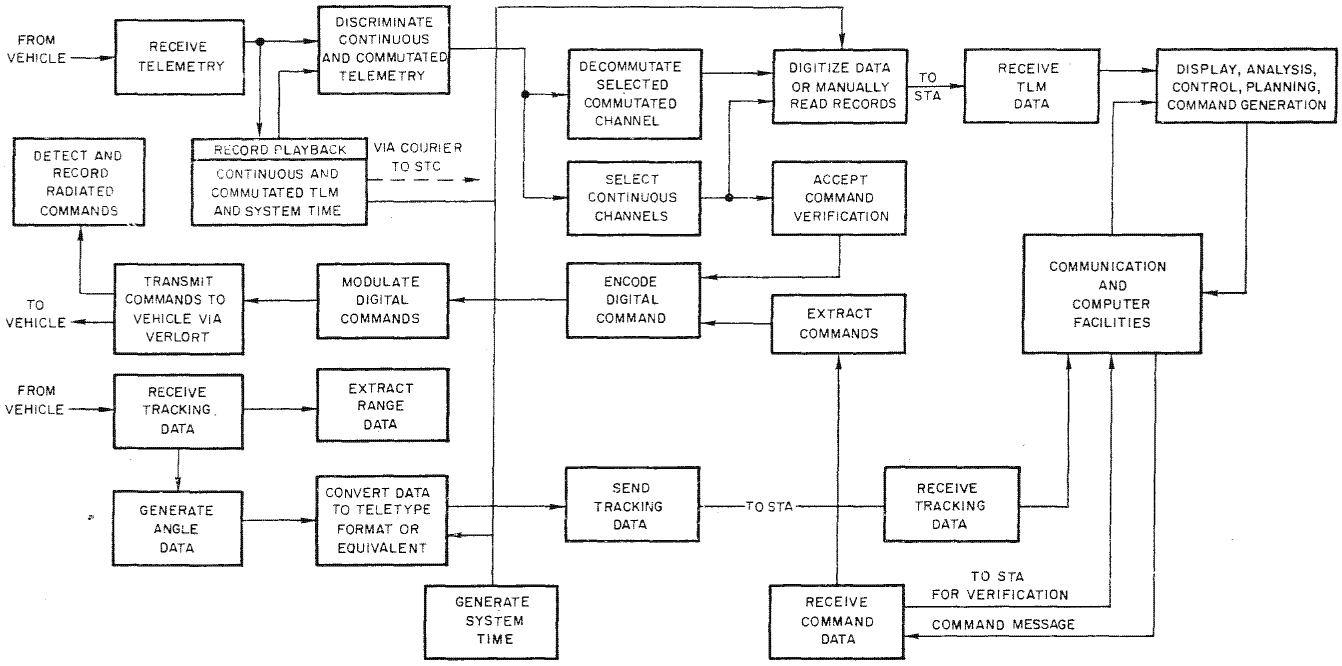
DATA FLOW SYSTEM

1. SECURITY CLASSIFICATION
2. PAGE 911
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL
DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: 10KE
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

10. DATA FLOW DIAGRAM

TEST CODE



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1. SECURITY CLASSIFICATION
9. REVISION NO.

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DATA DISTRIBUTION

1. SECURITY CLASSIFICATION

2. PAGE 920

3. DATE 1 June 1965

4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT NO.: NONE

7. SYSTEM CODE: 75664014

8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

10. ITEM NO.	11. TEST CODE	12. DATA OUTPUT	13. REFERENCE PAGE NUMBER	13. REFERENCE ITEM NO.	14. QTY ORIG.	14. QTY CYS	15. FINAL RECIPIENT	16. TIME REQ'D.	17. RAW	17. RED	17. PHOTO	DESIRED DATA PRESENTATION & REMARKS
1		All Listings Generated by CDC 1604 Computer										Note: Pages 920, 920.3 give only Technical Advisor Staff requirements and do not include 6594th ATW data requirements. See Section D-6 of Tech Ops Order for further information. For detailed list of distribution from Aerospace to Final Recipients, see "Data Handling & Distribution Plan, Program 206". This plan includes GE and LMSC requirements for computer listings.
		a. On-Line (During Operations)				4	STC Aerospace Technical Advisor Office	See Remarks				One copy of on-line listing will be made available immediately. The other copy will be made available post-flight.
		b. Off-Line (During Operations)				4	Same as above	"				Both copies will be made available as soon as printed.
		c. Best-Fit Ephemeris				4		24 h after flight				
2		Processed Telemetry Data				4	Same as above	See Remarks				1. Current SCF (Non-Augie) Configuration: Selected points by voice readout from two commutated channels in real time, and post pass telemetry report of selected points (determined prior to flight) from any of five commutated channels. In addition, voice readout and/or post pass reporting of certain preselected continuous channels will be required. 2. AUGIE Configuration: a. Printouts will be in the formats as used in Modes 1,2,3,5,10,11,12, and 13 as used previously on this program. b. Telemetry points shall be identified only by the link-channel-pin assignment.

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1. SECURITY CLASSIFICATION

9. REVISION NO.

DATA DISTRIBUTION

1. SECURITY CLASSIFICATION:
2. PAGE: 920.1
3. DATE: 1 June 1965
4. REPLACES PAGE(S): ORIGINAL
DATED:

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp/AF 04(695)-469

10. ITEM NO.	11. TEST CODE	12. DATA OUTPUT	13. REFERENCE PAGE NUMBER	13. REFERENCE ITEM NO.	14. QTY ORIG.	14. QTY CYS	15. FINAL RECIPIENT	16. TIME REQ'D.	17. RAW	17. RED	17. PHOTO	DESIRED DATA PRESENTATION & REMARKS
2		(Continued)										c. All points shall be reported in percent of band width. d. Out of band, high (OBH) and out of band, low (OBL) data shall be identified; noisy data shall be printed, not suppressed. e. A minimum amount of event format reporting shall be used consistent with the requirement to restrict telemetry data reports to one printer. Where event format reporting is used the only difference between it and fixed format shall be a reduction in the sampling rate and use of other than columnar tabulation. f. Event format reporting shall be used only for steady state quantities; event printouts shall be in percent of band width and identified as to link-channel-pin assignment. Event printout intervals should be approximately 5 seconds. Fixed format points should have priority over event format points.
3		Magnetic tape recordings of telemetry data recorded during all passes at all stations.			1	1	STC Aerospace Technical Advisor Office	See Remarks				The STC Aerospace Technical Advisor Office will transfer originals to Aerospace Corporation, El Segundo, California for permanent retention. Copies will be forwarded to General Electric Co. Philadelphia, through the GE local field office It is noted that copying facilities in the Sunnyvale, California area may be required to produce the copies. The time required will be minimum consistent with capabilities for transferring records from outlying tracking stations.

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1. SECURITY CLASSIFICATION
9. REVISION NO.

DATA DISTRIBUTION

1. SECURITY CLASSIFICATION

2. PAGE 920.2
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACT NUMBER: Aerospace Corp/AF 04(695)-469

10. ITEM NO.	11. TEST CODE	12. DATA OUTPUT	13. REFERENCE PAGE NUMBER	13. REFERENCE ITEM NO.	14. QTY ORIG.	14. QTY CYS	15. FINAL RECIPIENT	16. TIME REQ'D.	17. RAW	17. RED	17. PHOTO	DESIRED DATA PRESENTATION & REMARKS
4		Magnetic tape recordings of telemetry data recorded during passes 8 and 16 at VTS.			1		Aerospace Technical Advisor Advisor at VAFB					TLM tapes of Delta 2 & 3, Revs 8 and 16 are to be released to the Aerospace Technical Advisor at VAFB within one (1) hour after vehicle fade of VTS. This requirement repeats in a similar manner for each day of orbit life.
5		Magnetic tape recordings as described on Page 630.			1		STC Aerospace Technical Advisor Office	Routing Mail				The STC Aerospace Technical Advisor Office will transfer these Δ1 recordings to LMSC, Sunnyvale, California, unless the Δ1 data is recorded on the same tape as Program 206 data; in that case, a copy of the Δ1 recordings will be submitted to LMSC.
6		Computer Magnetic Tapes					STC Aerospace Technical Advisor Office					
		a. Reset				1		24 hr after flight				Reset tapes containing results of best-fit ephemeris computation. Other resets upon special request.
		b. HISTREVE				1		24 hr after flight				
7		Analog Records										
		a. Oscillograms of telemetry data obtained at STC or tracking stations.			1		Same as above	See Remarks				Special request only
		b. Pen records showing equipment performance at tracking stations.			1		Same as above	24 hr after flight				Data to coincide with selected telemetry.

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1. SECURITY CLASSIFICATION

9. REVISION NO.

DATA DISTRIBUTION

1. SECURITY CLASSIFICATION
2. PAGE 920.3
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 236
6. PROGRAM REQUIREMENT NO: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

10. ITEM NO.	11. TEST CODE	12. DATA OUTPUT	13. REFERENCE PAGE NUMBER	13. REFERENCE ITEM NO.	14. QTY ORIG.	14. QTY CYS	15. FINAL RECIPIENT	16. TIME REQ'D.	17. RAW	17. CLEAR	17. OTHER	DESIRED DATA PRESENTATION & REMARKS
8		Raw Tracking Data (Punched paper tape or equivalent under augmentation system)			1		STC Aerospace Technical Advisor Office	See Remarks				Special Request Only
9		Teletype Messages relative to operations such as station status, performance summaries, time correlations, etc.				3	STC Aerospace Technical Advisor Office	When transmitted				

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1. SECURITY CLASSIFICATION
9. REVISION NO.

CONTRACTOR ASSIGNED FACILITIES

1. SECURITY CLASSIFICATION
2. PAGE 1010
3. DATE 1 June 1965
4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO. NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

10. ITEM NO.	11. TEST CODE	12. LEAD-TIME, MONTHS	13. TYPE OF FACILITY	14. QTY	15. USEABLE AREA SQ. FT. (EACH)	16. LOCATION	17. PURPOSE
1		6	Office	1	600	STC, Sunnyvale	Office to be occupied by permanently assigned Aerospace Corporation personnel involved in the Technical Advisor function.
2		1	Report Writing Room	1	600	STC, Sunnyvale	The room is to be used for data analysis and report writing by Aerospace Corporation and Associate Contractor personnel during and for one week following an operation.
3		1	Technical Advisor Room	1	600	STC, Sunnyvale	The Test Advisor Room is required to support test direction functions during an operation. The room will require the following equipment: CDC 166 Line Printer (After SCF augmentation is introduced) TV Monitors Teletype Monitors Time Displays Voice Line Speakers Secure Telephones Administrative Telephones Computation Equipment (furnished by Aerospace Corporation) Furniture Note: The useable area of 600 square feet is considered a minimum for initial operations. This requirement could be satisfied by assignment of two of the presently planned Test Director rooms.

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1. SECURITY CLASSIFICATION
9. REVISION NO.

CONTRACTOR OPERATIONS PERSONNEL SCHEDULE

1. SECURITY CLASSIFICATION:
2. PAGE: 1030
3. DATE: 1 June 1965
4. REPLACES PAGE(S): ORIGINAL
DATED:

5. PROGRAM TITLE: PROGRAM 206
6. PROGRAM REQUIREMENT NO.: NONE
7. SYSTEM CODE: 75664014
8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

10. STATION LOCATION	11. PERSONNEL (CONTRACTOR/FUNCTION)	INSTALLATION	OPERATIONS	TRANSIENT	OTHER
STC	GE - Technical Advisor Staff		x		
STC	Aerospace/Program Field Office				
STC	*Aerospace/TA		x	x	

12. NETWORK PERSONNEL, NUMBER/QUARTER

	FY				FY				FY				FY				FY			
	CY				CY				CY				CY				CY			
	1ST		2ND		3RD		4TH		1ST		2ND		3RD		4TH		1ST		2ND	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
STC GE - Technical Advisor Staff											12		12		12		12		12	
STC Aerospace/Program Field Office							2		3		6		6		6		6		6	
STC *Aerospace/TA											9		9		9		9		9	

13. REMARKS

*In addition to Program Field Office personnel during operations. Personnel from Los Angeles.

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1. SECURITY CLASSIFICATION:
9. REVISION NO.

PROGRAM KEY PERSONNEL

1. SECURITY CLASSIFICATION

2. PAGE 1110

3. DATE 1 June 1965

4. REPLACES PAGE(S) ORIGINAL DATED

5. PROGRAM TITLE: PROGRAM 206

6. PROGRAM REQUIREMENT NO: NONE

7. SYSTEM CODE: 75664014

8. CONTRACTOR CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469

10. NAME	11. POSITION	12. ORGANIZATION	13. LOCATION	14. TELEPHONE NO.
Col. W. G. King, Jr.	Deputy Director,	Air Force		
	Chief, Operations Div.	"		
	Chief, Systems Integration Div.	"		
	Chief, Resources & Prog. Control Div.	"		
J.D. Sorrels	General Systems Engineering Director, Program 206	Aerospace		
J.W. Luecht	General Systems Engineering Associate Director, Program 206	"		
L. C. Lidstrom	Mgr., STC	"		
J. E. Kent	Mgr., VAFB	"		
L. Binegar	General Mgr., ASPD	GE ASPD	King of Prussia, Pa.	
J. Katzen	Acting Mgr., Engineering	"	"	
K. W. Murray	Acting Mgr., Programs	"	"	
J S. Brainard	Mgr., Field Operations	"	Vandenberg AFB	

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1. SECURITY CLASSIFICATION

9. REVISION NO.

TECHNICAL REFERENCES

1. SECURITY CLASSIFICATION				2. PAGE 1120
				3. DATE 1 June 1965
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT NO.: NONE	7. SYSTEM CODE: 75664014	8. CONTRACTOR/CONTRACT NUMBER: Aerospace Corp./AF 04(695)-469	4. REPLACES PAGE(S): ORIGINAL DATED

10. SC SR PAGE REFERENCE	11. TITLE	12. SECURITY CLASSIFICATION	13. PUBLISHER AND DATE	14. SOURCE
			NOTES: 1. Requests for technical references for the satellite vehicle will be directed to the Program Director	

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1. SECURITY CLASSIFICATION	9. REVISION NO.

DEFINITIONS – SPECIAL			1. SECURITY CLASSIFICATION	2. PAGE 1130 3. DATE 1 June 1965 4. REPLACES PAGE(S) ORIGINAL DATED
5. PROGRAM TITLE PROGRAM 206	6. PROGRAM REQUIREMENT NO. NONE	7. SYSTEM CODE 75664014	8. CONTRACTOR CONTRACT NUMBER Aerospace Corp./AF 04(695)-469	

TERMINOLOGY	11. DEFINITION OR MEANING
MODE	
ORT	Orbital Real Time
OREC	Orbital Record
RY	Re-Entry (Separation Phase)
PF	Powered Flight
SUBSYSTEM	
ENV	Environmental
SYS	Systems, Aerophysics
EPD	Electrical Power and Distribution
T&C	Tracking and Command
G&C	Guidance and Control
D/O	Guidance and Control, Deorbit
O/A	Guidance Control, Orbit Adjust
GFE	Government Furnished Equipment
RETR	Retrieval

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1. SECURITY CLASSIFICATION	9. REVISION NO.

DEFINITIONS – SPECIAL			1. SECURITY CLASSIFICATION	2. PAGE 1130.1 3. DATE 1 June 1965 4. REPLACES PAGE(S) ORIGINAL DATED
5. PROGRAM TITLE: PROGRAM 206	6. PROGRAM REQUIREMENT NO: NONE	7. SYSTEM CODE: 75664014	8. CONTRACTOR CONTRACT NUMBER: Aerospace Corp./AF 04 (695)-469	

TERMINOLOGY	11. DEFINITION OR MEANING
PRIORITY	
A	Real time telemetry data required while commanding the vehicle. Telemetry in this category will receive real time processing.
B	Telemetry data indicating possible off-nominal performance for which corrective commands may be generated. As a minimum requirement this data will be processed in near real time. Real time processing is acceptable.
C	Telemetry data required to provide the basis for any required redesign in the event of off-nominal operation. This data will be processed post-flight.
D	Telemetry data required to establish verification of achieving of mission objectives and to provide basis for state-of-art advancement. This data will be processed post-flight.

NOTE: Any priority includes all lower priority requirements.

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