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DRAFT

COPY NO. ____
20 Pages
(Including Cover Sheet)

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CORONA "M" FLIGHT DATA BOOK

SYSTEM NO. M-23

VEHICLE NO. 1412

MISSION NO. 9057

Prepared by: [redacted]

Checked by: [redacted]

Approved by: [redacted]
(Engineering Manager)

Approved by: [redacted]
(Proje[illegible] Manager)

Approved by: [redacted]
(SE[illegible])

[redacted]

DRAFT

SYSTEM NO. M-23
VEHICLE NO. 1412
MISSION NO. 9057
CAMERA NOS. 120 121

[redacted]

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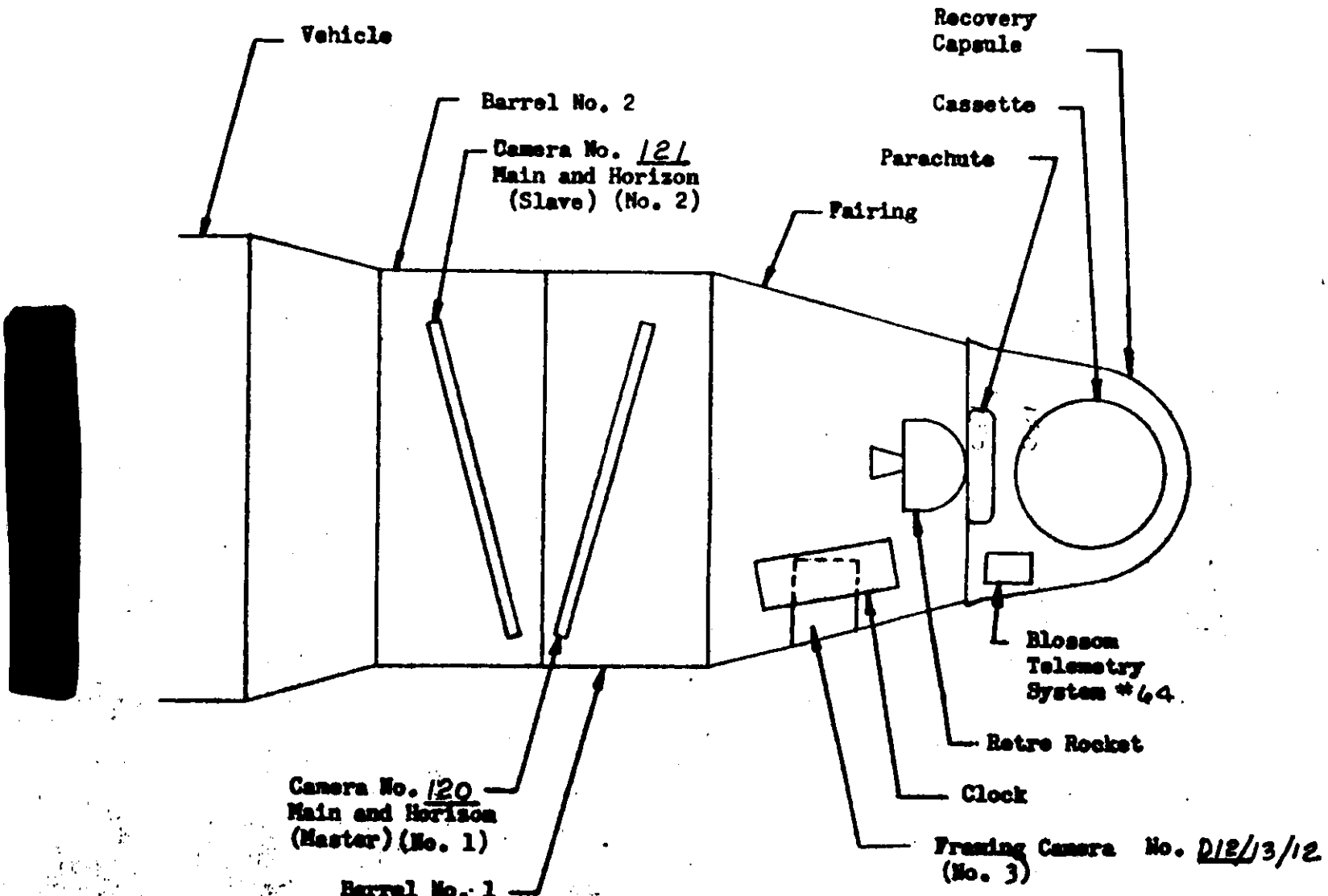
[redacted]

SYSTEM NO. M-23
VEHICLE NO. 1412
MISSION NO. 9057
CAMERA NOS. 120/121



VEHICLE LAYOUT

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SYSTEM NO. M-23
VEHICLE NO. 1412
MISSION NO. 9057
CAMERA NOS. 120&121

[redacted]

GENERAL FLIGHT DATA:

Main Camera No. 1 Serial No. 120

Main Camera No. 2 Serial No. 121

Framing Camera Serial No. D12/13/12

Launch Date July 18, 1963

Orbital Parameters: (Rev. 10)

Period 90.48 Min. Eccentricity .014

Perigee 114 NM Perigee Latitude 35.41 Deg. N

Apogee 215 NM Inclination Angle 82.8 Deg. N

Recovery Revolution No. 65

Recovery Date July 22, 1963

REMARKS:

[redacted]

[redacted]

SYSTEM NO. M-23
VEHICLE NO. 1412
MISSION NO. 9057
CAMERA NOS. 120 & 121

[redacted]

PRE-LAUNCH INFORMATION:

Command settings at launch:

Command	8	9	10	11	12	N/A
Setting	3	1	5	4	11	N/A

	Camera NO. 120	Camera NO. 121
Main Optics Slit Width	.200 in.	.200 in.
Main Optics Filter Type	WRATTEN 21	WRATTEN 21
Horizon Optics Exp. Time	1/100 sec.	1/100 sec.
Horizon Optics Aperture	F 6.8	F 6.8
Horizon Optics Filter Type	WRATTEN 25	WRATTEN 25

Framing Camera (S/I) Settings:	Terrain Lens (INDEX)	Stellar Lens
Exposure Time	1/500 sec.	2 sec.
Aperture Setting	F 4.5	F 1.9
Filter Type	WRATTEN 21	NONE

Ratio: On- Framing Camera (S/I) Frame Per 7 Camera No. 1 Frames.

Film:	Camera No. 120	Camera No. 121	Framing Camera (S/I) Terrain (INDEX)	Stellar
Type	7J23 (S0132)	7J23 (S0132)	7J33 (S0130)	S0130/S01
Length	7800 ft.	7800 ft.	135 ft.	75
Splices	1	1	NONE	1
Expl. Data	7-13-10-2	7-13-10-2	1-6-2-3	8400/440

[redacted]

SYSTEM NUMBER [redacted]

VEHICLE NUMBER 1412

MISSION NUMBER 9057

PANORAMIC CAMERA NUMBERS 120 AND 121

STELLAR/INDEX CAMERA NUMBER 012/13/12

PERFORMANCE ESTIMATE

REV	PROG	CAM No.	PAN F.L.	SI F.L.	LAT. ON	LAT. OFF	TIME ON DD-HH-MM	TOT NO	DUR SEC.	SOLAR ON	SOLAR OFF	EXPOS. ON	EXPOS. OFF
LAUNCH		120	202										
LAUNCH		121	364										
1-	1-1	120	28	04	106	164	190112	3	305	127	9	14	6.3	5.9
1-	1-1	121	28		164	162	190112	3	305	127	8	13	6.2	5.8
1-	1-2	120	28	08	167	173	190115	3	480	98	16	19	5.7	5.5
1-	1-2	121	28		166	172	190115	3	480	98	15	19	5.7	5.5
2-	1-1	120	30	04	162	170	190244	3	403	126	13	18	5.9	5.5
2-	1-1	121	30		161	169	190244	3	403	126	12	17	5.9	5.5
2-	1-2	120	35	05	271	264	190255	3	1064	115	34	36	4.4	4.2
2-	1-2	121	35		270	264	190255	3	1064	115	34	36	4.4	4.2
3-	1-1	120	27	04	282	274	190334	3	1067	90	26	31	4.4	4.3
3-	1-1	121	27		281	274	190334	3	1067	90	27	31	4.4	4.3
4-	2-2	120	45	07	264	252	190501	3	1489	137	38	39	3.8	3.7
4-	2-2	121	45		263	251	190501	3	1489	137	37	38	3.8	3.7
5-	2-1	120	24	03	304	313	190916	3	***	134	23	18	7.4	7.4
5-	2-1	121	24		302	310	190916	3	***	134	24	19	7.4	7.4
7-	2-2	120	107	16	249	240	191031	3	1536	286	37	38	3.8	3.5
7-	2-1	121	106		250	242	191031	3	1536	286	37	38	3.8	3.5
8-	2-1	120	107	15	253	244	191201	3	1494	290	37	39	3.8	3.5

[redacted]

[redacted]

[redacted]

8-	1-1	121	107		264	245	191201		3	1494	290	36	39	3.8	3.5
9-	1-0	120	10	01	140	142	191312		3	342	45	-1	0	6.5	6.3
9-	1-0	121	10		138	140	191312		3	342	45	-2	0	6.5	6.3
9-	1-1	120	118	17	261	240	191331		3	1514	322	37	38	4.0	3.6
9-	1-1	121	119		263	241	191331		3	1514	322	37	38	4.0	3.6
9-	1-2	120	39	06	233	226	191338		3	1934	108	37	36	3.6	3.6
9-	1-2	121	39		234	227	191338		3	1934	108	38	36	3.7	3.7
10-	1-1	120	40	09	164	173	200253		3	758	148	13	19	5.1	4.8
10-	1-1	121	40		162	172	200253		3	758	148	12	18	5.1	4.8
10-	1-2	120	59	09	270	259	200303		3	1404	174	35	36	4.0	3.8
10-	1-2	121	58		271	260	200303		3	1404	174	34	38	4.0	3.8
21-	1-1	120	45	06	272	265	200739		3	1658	121	34	37	3.6	3.5
21-	1-1	121	45		273	266	200739		3	1658	121	34	36	3.7	3.5
23-	1-1	120	46	07	275	265	201034		3	1355	165	33	37	4.9	4.7
23-	1-1	121	46		276	266	201034		3	1355	165	32	36	4.9	4.7
23-	1-2	120	137	14	260	238	201039		3	1597	333	38	39	4.5	4.1
23-	1-2	121	137		261	239	201038		3	1597	333	38	40	4.5	4.1
24-	1-1	120	10	03	140	142	201149		3	401	44	-2	0	6.3	6.2
24-	1-1	121	10		139	141	201149		3	401	44	-3	-1	6.3	6.1
24-	1-1	120	144	26	272	238	201206		3	1411	519	34	39	4.7	4.0
24-	1-1	121	144		273	239	201206		3	1411	519	34	40	4.7	4.0
25-	1-1	120	140	20	252	239	201334		3	1557	350	37	40	4.4	4.0
25-	1-1	121	139		253	240	201334		3	1557	350	37	40	4.4	4.0
26-	1-2	120	40	05	230	222	201347		3	2036	124	38	36	4.1	4.1
26-	1-2	121	41		231	223	201347		3	2036	124	39	37	4.1	4.1
28-	1-1	120	31	05	180	263	210435		8	1097	118	23	27	5.0	4.8

[redacted]

[redacted]

[redacted]

35-	1-1	121	31		179	183	210435	8	1097	118	23	27	5.0	4.8
35-	1-2	120	34	05	275	268	210440	8	1400	116	33	36	4.6	4.4
35-	1-2	121	34		276	269	210440	8	1400	116	33	36	4.6	4.4
35-	1-3	120	55	07	259	248	210444	8	1639	170	39	41	3.5	3.1
35-	1-3	121	54		260	249	210444	8	1639	170	39	41	3.5	3.1
36-	1-1	120	29	05	275	270	210610	8	1387	100	33	35	3.9	3.7
36-	1-1	121	30		277	271	210610	8	1387	100	32	35	3.9	3.7
36-	1-2	120	112	15	253	239	210616	8	1733	212	40	41	3.3	3.1
36-	1-2	121	111		254	240	210616	8	1733	212	40	41	3.3	3.1
37-	2-1	120	50	07	256	247	210746	8	1701	135	40	41	3.3	3.2
37-	2-1	121	50		257	248	210746	8	1701	135	40	41	3.3	3.2
37-	2-2	120	95	09	231	224	210752	8	2073	104	40	39	3.1	3.1
37-	2-2	121	95		232	225	210752	8	2073	104	40	39	3.1	3.1
38-	1-1	120	50	11	260	247	210915	8	1632	201	39	41	3.5	3.3
38-	1-1	121	50		261	248	210915	8	1632	201	38	41	3.5	3.3
38-	1-2	120	102	15	244	226	210919	8	1876	270	41	39	3.1	3.1
38-	1-2	121	102		245	227	210919	8	1876	270	41	39	3.1	3.1
39-	2-1	120	33	04	261	252	211046	8	1633	135	39	41	3.5	3.4
39-	2-1	121	33		262	253	211046	8	1633	135	38	40	3.5	3.4
39-	2-2	120	65	10	245	240	211049	8	1814	136	41	41	3.1	3.1
39-	2-2	121	65		250	241	211049	8	1814	136	41	41	3.1	3.1
40-	1-1	120	11	02	140	143	211156	8	460	47	-3	-2	5.5	5.4
40-	1-1	121	11		138	141	211156	8	460	47	-4	-3	5.5	5.4
41-	1-2	120	46	14	250	244	211347	8	1648	240	39	41	3.4	3.1
41-	1-2	121	46		251	245	211347	8	1648	240	38	41	3.4	3.1
41-	1-3	120	26	04	242	236	211351	8	1924	86	41	41	3.1	3.1

[redacted]

41-	1-2	121	28		243	237	211351	-	8	1924	86	41	41	3.1	3.1
44-	1-1	120	34	04	155	163	211802		8	724	126	6	11	5.0	4.8
44-	1-1	121	34		154	162	211802		8	724	126	5	10	5.0	4.8
44-	1-2	120	29	05	168	174	211806		8	928	98	15	19	4.7	4.5
44-	1-2	121	29		167	173	211806		8	928	98	14	18	4.7	4.5
46-	1-1	120	35	05	169	176	212107		8	968	118	15	20	4.6	4.4
46-	1-1	121	35		168	175	212107		8	968	118	14	19	4.6	4.4
50-	2-1	120	29	04	165	173	220307		8	907	142	11	17	4.7	4.5
50-	2-1	121	29		163	172	220307		8	907	142	11	17	4.7	4.5
51-	2-1	120	27	04	275	260	220447		8	1473	109	33	36	3.7	3.5
51-	2-1	121	27		276	269	220447		8	1473	109	33	34	3.7	3.5
52-	2-1	120	120	17	257	240	220622		8	1756	254	40	42	3.2	3.1
52-	2-1	121	120		257	241	220622		8	1756	254	40	42	3.2	3.1
54-	1-1	120	167	26	246	216	220925		8	1743	478	42	38	3.3	3.1
54-	1-1	121	167		240	217	220925		8	1743	478	42	38	3.3	3.1
55-	1-1	120	116	17	294	294	221055		8	1672	295	41	42	3.4	3.1
55-	2-1	121	116		295	295	221055		8	1672	295	41	42	3.4	3.1
57-	1-2	120	11	02	137	142	221204		8	509	45	-5	-3	5.4	5.3
57-	1-2	121	11		138	140	221204		8	509	45	-6	-4	5.4	5.3
58-	1-1	120	116	16	241	242	221323		8	1656	320	38	42	3.4	3.1
58-	1-1	121	116		244	243	221323		8	1656	320	38	42	3.4	3.1

[illegible] CYCLE COUNTER INDICATES FILM SUPPLY DEPLETION

DURING THE ABOVE OPERATION.

59-	1-1	120	47	07	258	248	221455		8	1794	109	41	42	3.2	3.1
59-	1-1	121	47		256	248	221455		8	1794	109	41	42	3.2	3.1
61-	1-1	120	101	14	186	177	230141		8	793	372	4	20	4.9	4.3

[redacted]

65- 1-1 121 100 152 175 230141 6 793 372 3 19 4.9 4.3

65- 1-2 120 59 09 274 263 230154 6 1544 179 33 38 3.6 3.3

65- 1-2 121 60 275 264 230154 6 1544 179 33 38 3.6 3.3

FRAMES TO FEET, PAN X 2.636, STELLAR X 0.099, INDEX X 0.198

AAA BB C DDD EEE FF GHH III JJJJJJ KK LLLL MMM NN OO PPP QQQ

A REV. NUMBER

B PROGRAM NUMBER

C OPERATION NUMBER

D MSN. CAMERA SERIAL NUMBER (MASTER IS EVEN, SLAVE IS ODD)

E EST. NO OF PAN FRAMES, BASED ON COUNTER READINGS INFLITE

F EST. NUMBER OF STELLAR/INDEX FRAMES

G QUADRANT (QUAD I IS NORTHBOUND FROM ASCENDING NODE)

H EST. LATITUDE OF FIRST FORMAT CENTER IN PASS

I EST. LATITUDE OF LAST FORMAT CENTER IN PASS

J EST. GMT AT OPERATE COMMAND ON

K PASS NUMBER

L EST. TIME UP RAMP IN SECONDS TO OPERATE COMMAND

M EST. SECONDS DURATION OF OPERATION, BETWEEN ON AND OFF

N PLAT ELEVATION AT ITEM H

O PLAT ELEVATION AT ITEM I

P EST. MILLISECONDS EXPOSURE TIME AT ITEM H

Q EST. MILLISECONDS EXPOSURE TIME AT ITEM I

[redacted]

[redacted]

[redacted]

NOTE DUE TO A MALFUNCTION OF THE CYCLE COUNTER FOR INSTRUMENT NUMBER TWO, IT HAS BEEN ASSUMED THAT THE NUMBER OF PAN FRAMES USED BY INSTRUMENT NUMBER TWO WAS EQUAL TO THE NUMBER USED BY INSTRUMENT NUMBER ONE FOR ALL STEREO OPERATIONS.

*** OPERATION 6-02-3 WAS TAKEN AFTER THE END OF THE RAMP WAS REACHED FOR REV. 6.

[redacted]

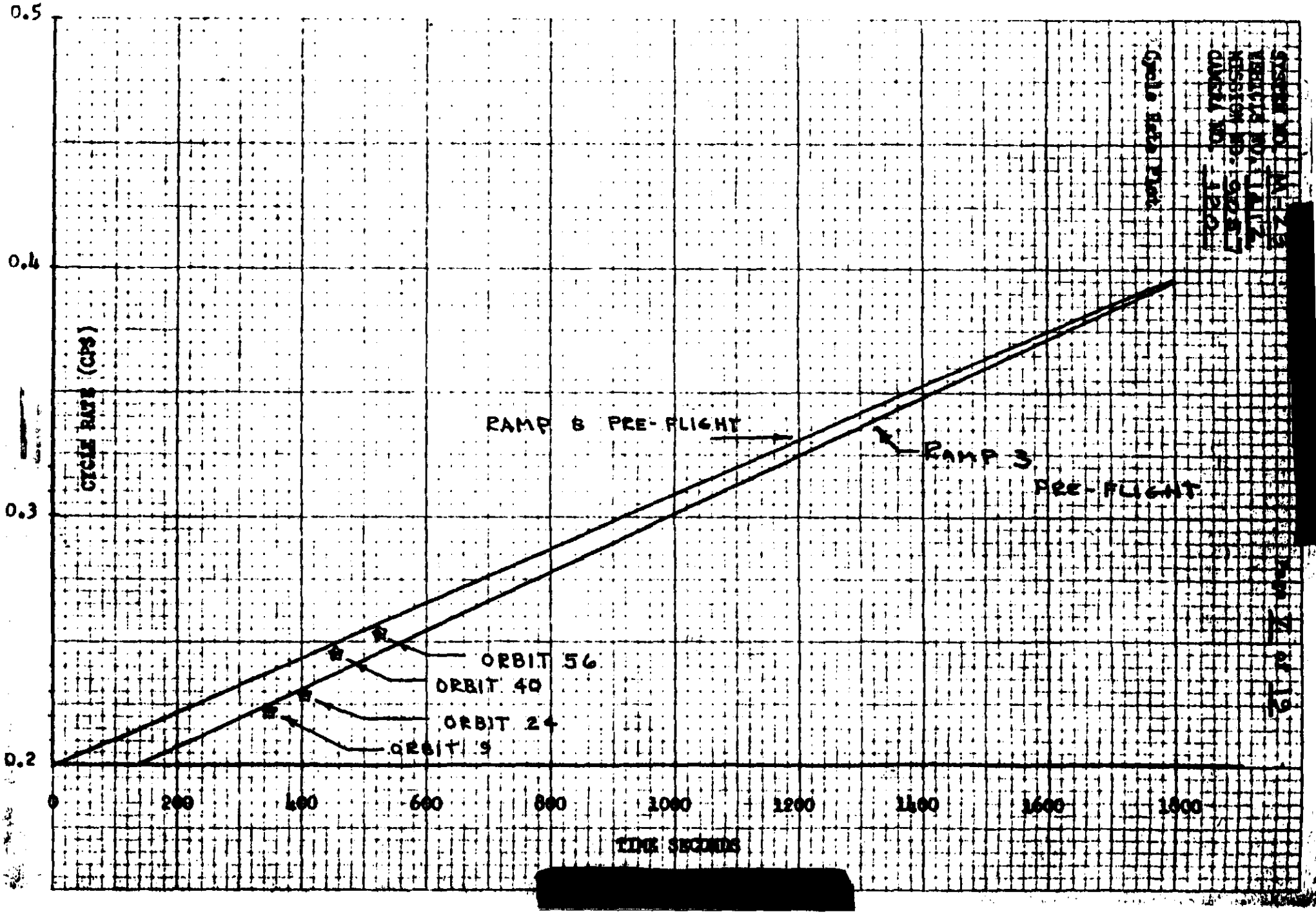
SYSTEM NO. M-23
VEHICLE NO. 1412
MISSION NO. 9057
CAMERA NOS. 120, 121

PRE-FLIGHT CYCLE PERIOD. (CAMERA NO. 120)

V/H NO.	RAMP TIME	CYCLE PERIOD SECONDS	FMC RATE RAD./ SECOND	FMC RATE IN./ SECOND	SCAN RATE RAD./ SECOND	SCAN RATE IN./ SECOND	EXPOSURE MILLISEC
[illegible]	0	5.40	.015	.375	1.163	27.925	7.162
3	1800	2.52	.033	.803	2.493	59.839	3.342
5	0	5.02	.016	.403	1.251	30.039	6.658
6	1800	2.52	.033	.803	2.493	59.839	3.342

IN-FLIGHT CYCLE PERIOD. (CAMERA NO. 120)

REV NO.	V/H NO.	RAMP TIME	CYCLE PERIOD SECONDS	FMC RATE RAD./ SECOND	FMC RATE IN./ SECOND	SCAN RATE RAD./ SECOND	SCAN RATE IN./ SECOND	EXPOSURE MILLISEC
[illegible]	3	344	4.47	.016	.453	1.405	33.733	5.929
44	5	402	4.33	.018	.465	1.444	34.665	5.769
40	6	459	4.06	.020	.496	1.547	37.141	5.385
58	[illegible]	324	3.94	.021	.513	1.594	38.273	5.226


0.5
0.4
0.3
0.2
CYCLE RATE (CPS)
RAMP B PRE-FLIGHT
RAMP 3
PRE-FLIGHT
ORBIT 56
ORBIT 40
ORBIT 24
ORBIT 9
0
200
400
600
800
1000
1200
1400
1600
1800
TIME SECONDS

[redacted]

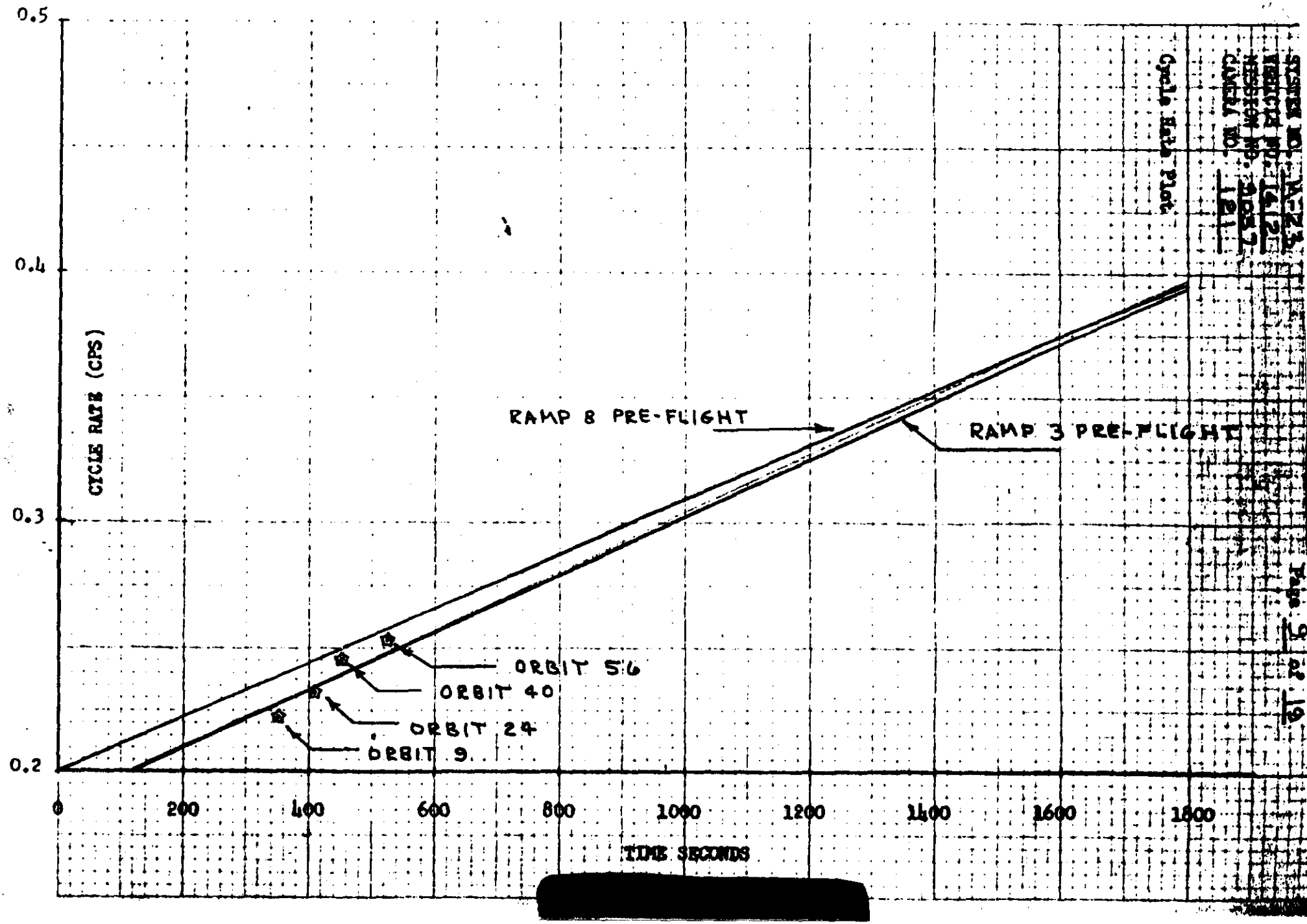
SYSTEM NO. M-23
VEHICLE NO. 1412
MISSION NO. 9057
CAMERA NOS. 120, 121

PRE-FLIGHT CYCLE PERIOD. (CAMERA NO. 121)

V/H	RANGE	CYCLE PERIOD	FMC RATE		SCAN RATE		
NO.	TIME	SECONDS	RAD./ SECOND	IN./ SECOND	RAD./ SECOND	IN./ SECOND	EXPOSURE MILLISEC
3	0	5.39	.018	.375	1.165	27.977	7.149
1	1800	2.69	.032	.761	2.425	58.222	3.435
4	0	5.01	.016	.404	1.254	30.099	6.645
-	1800	2.51	.033	.806	2.503	60.076	3.329

IN-FLIGHT CYCLE PERIOD. (CAMERA NO. 121)

V/H	RANGE	CYCLE PERIOD	FMC RATE		SCAN RATE		
NO.	TIME	SECONDS	RAD./ SECOND	IN./ SECOND	RAD./ SECOND	IN./ SECOND	EXPOSURE MILLISEC
-	-	344	4.46	.018	.454	1.409	33.810	5.915
34	-	433	4.35	.018	.455	1.444	34.665	5.769
-0		484	4.06	.020	.469	1.547	37.141	5.385
5-		514	3.94	.021	.513	1.594	38.273	5.226


0.5
0.4
0.3
0.2
CYCLE RATE (CPS)
0
200
400
600
800
1000
1200
1400
1600
1800
TIME SECONDS
RAMP 8 PRE-FLIGHT
RAMP 3 PRE-FLIGHT
ORBIT 56
ORBIT 40
ORBIT 24
ORBIT 9
Cycle Rate Plot
SYSTEM NO. MP23
VEHICLE NO. 1412
MISSION NO. APS-7
DATE 9 Feb 19

VEHICLE NO. 1412
MISSION NO. 9057
CAMERA NOS. 120 & 121

LENS DATA SUMMARY: (Main Camera No. 120)

Lens Serial No. 0622435-I-36

Filter Type WRATTEN 21

Equivalent Operational Focal Length 609.602 MM

Resolution:

Static:

	Lines/MM	Film Type	Target Contrast
Bench Test	289.0	S0132	HIGH
BENCH TEST	163.5	S0132	LOW

Dynamic:

Itek Post Vibration	196	S0132	HIGH
Itek Post Vibration	142	S0132	LOW
AP	195	S0132	HIGH
AP	83	S0132	LOW
Other			

Note: Itek Post Vibration Resolution of 121 lines/MM Reported In

Message No. _____ Dated _____

Distortion - Positive (Pincushion)

Angle Off Axis Deg.	3	2	1	0	359	358	357		
Distortion Millimeters	.005	.003	.001	.000	.001	.003	.008		

[redacted]

LENS DATA SUMMARY: (Horizon Cameras for Main Camera No. 120)

	Take-Up	Supply
Lens Serial No.	810100	810104
Exposure Time	1/100 Sec.	1/100 Sec.
Filter Type	WRATTEN 25	WRATTEN 25
Aperture	F 6.8	F6.8
Operational Focal Length	* 81.7 MM	89.5 MM

* AS REPORTED IN INST. LOG

Radial Distortion:

10° off Axis	.007 MM	.003 MM
20° off Axis	.051 MM	.026 MM
Tangential Distortion (Maximum Vector)	5 MM	7 MM

Resolution:

NOT AVAILABLE

Angle off Axis Deg.	0	5	10	15	20	25	27.5	0	5	10	15	20	25	27.5
Radial Resolution														
Tangential Resolution														

_____ Lines/MM Avg. _____ Lines /MM Avg.

Note:

1. Distortion and resolution are read at equivalent operational focal length.
2. Resolution in lines per mm on SUPER XX film and HIGH contrast target.

[redacted]

SYSTEM NO. M-23
VEHICLE NO. 1412
MISSION NO. 9057
CAMERA NOS. 120/121

CRADLE

LENS DATA SUMMARY: (Main Camera No. 121)

Lens Serial No. 066435-I-34

Filter Type WRATTEN 21

Equivalent Operational Focal Length 609.602 MM

Resolution:

Static:

	Lines/MM	Film Type	Target Contrast
Bench Test			
Other			

Dynamic:

Itek ~~Pre~~ Post-Vibration	170	SO132	HIGH
Itek Post Vibration	137	SO132	LOW
AP	166	SO132	HIGH
AP	81.7	SO132	LOW
Other			

Note: Itek Post Vibration Resolution of 121 lines/MM Reported In Message No. _____ dated _____

Distortion - Positive (Pincushion)

Angle Off Axis Deg.	3	2	1	0	359	358	357		
Distortion Millimeters	.005	.004	.000	.000	.000	.001	.004		

[redacted]

SECRET

LENS DATA SUMMARY: (Horison Cameras for Main Camera No. 121)

	Take-Up	Supply
Lens Serial No.	810106	810107
Exposure Time	1/100 Sec.	1/100 Sec.
Filter Type	WRATTEN 25	WRATTEN 25
Aperture	F6.8	F6.8
Operational Focal Length	89.2 MM	89.5 MM
Radial Distortion:		
10° off Axis	.005 MM	.008 MM
20° off Axis	.036 MM	.058 MM
Tangential Distortion (Maximum Vector)	5 MM	8 MM
Resolution:		

Angle off Axis Deg.	0	5	10	15	20	25	27.5	0	5	10	15	20	25	27.5
Radial Resolution	56	49	35	29	29	26	24	51	47	39	27	27	26	22
Tangential Resolution	56	47	34	28	25	24	20	51	44	37	29	25	23	19

34.4 Lines/MM Avg. 33.3 Lines/MM Avg.

Note:

1. Distortion and resolution are read at equivalent operational focal length.
2. Resolution in lines per mm on Super XX film and HIGH contrast target.

[redacted]

VEHICLE NO. 1412
MISSION NO. 9057
CAMERA NOS. 120112

DEFINITION OF MAIN CAMERA FORMAT CALIBRATIONS:

1.0 Measurements are made with respect to collimator targets fixed with respect to the mechanical interface between the total payload assembly and the Agena vehicle with the position of the total payload being changed for each instrument calibration.

2.0 Three targets are aligned to be coplanar with ± 5" of arc. The longitudinal axis of the vehicle (Z axis) is so positioned to form an angle of 105.00° ± 5" to the target plane for camera number one calibrations and an angle of 75.00° ± 5" to the target plane for camera number two calibrations.

2.1 One target, Target 1, is in the ZX plane (Nadir) imaging on the Terrain format.

2.2 The second and third targets are at angles of 75.00° ± 5" from target one and are imaged on the horizon formats.

3.0 The indicated center of format of the main cameras is given by the intersecti of a line through the center of mass of the central shrinkage marker drawn normal to the edge of format containing the shrinkage marker and a line paral to the same edge located at a position half-way between the format edges.

4.0 The indicated principal points of the horizon cameras are the points of inter section of lines joining opposite fiducials.

5.0 Xvo and Yvo are the offsets of Target 1 from the indicated center of format as defined in Paragraph 3.

6.0 Xs, Ys and Xt, Yt are the offsets of Targets 2 and 3 from the indicated principal points of the supply and take-up horizon cameras respectively.

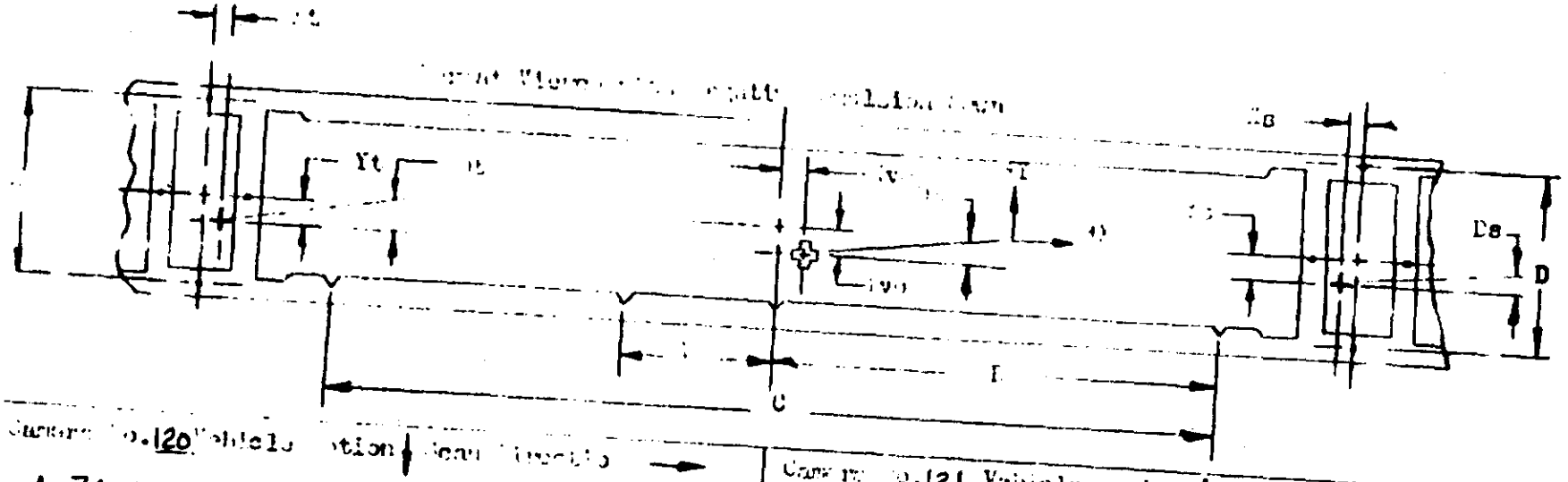
7.0 The indicated flight direction is the direction of vehicle travel during orbi The forward edge of format is the edge opposite the shrinkage markers for camera number One and is the edge containing the shrinkage markers for camera number Two.

8.0 Dimensions A, B, and C are the spacings of the shrinkage markers. Dimensions D and E are the spacings of the F Axis fiducials. Techniques for exact measurement of these dimensions have not been developed. The figures quoted are measurements made on hard processed film without control of shrinkage.

9.0 The format dimensions are measured to the best estimate of format edge.

10.0 Measurement of the angle between the indicated axis of the main cameras and the line of intersection of the plane defined in Paragraph 2 on the format is made by positioning one target for each horizon format normal ± 5" of arc to the plane defined in Paragraph 2. Measured from the indicated center of format.

11.0 Measurement of the angle between the indicated axis of the horizon cameras a the line of intersection of the plane defined in Paragraph 2 on the format is made by positioning one target for each horizon format normal ± 5" of arc to the plane defined in Paragraph 2. Dimensions delta sub S (Ds) and delta sub T (Dt) are the angles for the supply and take-up formats res ectively. These angles are taken from the indicated center of format.



Camera No. 120 Vehicle Motion ← Scan Direction

A	76.150	Xs	-.330
B	355.130	Ys	-.203
C	710.380	Yvo	-.440
D	56.443	Yvo	+1.90
E	56.440	Ds	-7.0 MIN
Xt	+.085	Dm	-17.0 MIN
Yt	+.111	Dt	-46.0 MIN

Format Dimensions:

	Main	Take-Up	Supply
Height	55.9	53.3	53.3
Width	755.9	22.9	22.9

Camera No. 121 Vehicle Motion → Scan Direction

A	76.290	Xs	+.534
B	355.030	Ys	-.145
C	710.340	Xv	+.350
D	56.565	Yv	-.430
E	56.478	Ds	-49.0 MIN
Xt	+.559	Dm	7.0 MIN
Yt	+.332	Dt	-10.0 MIN

Format Dimensions:

	Main	Take-Up	Supply
Height	56.1	53.3	53.3
Width	754.8	22.9	22.9

Notes:
1. All dimensions are in millimeters and are average dimensions of three formats.
2. Height of main format is taken at center of format.
3. Format sign convention

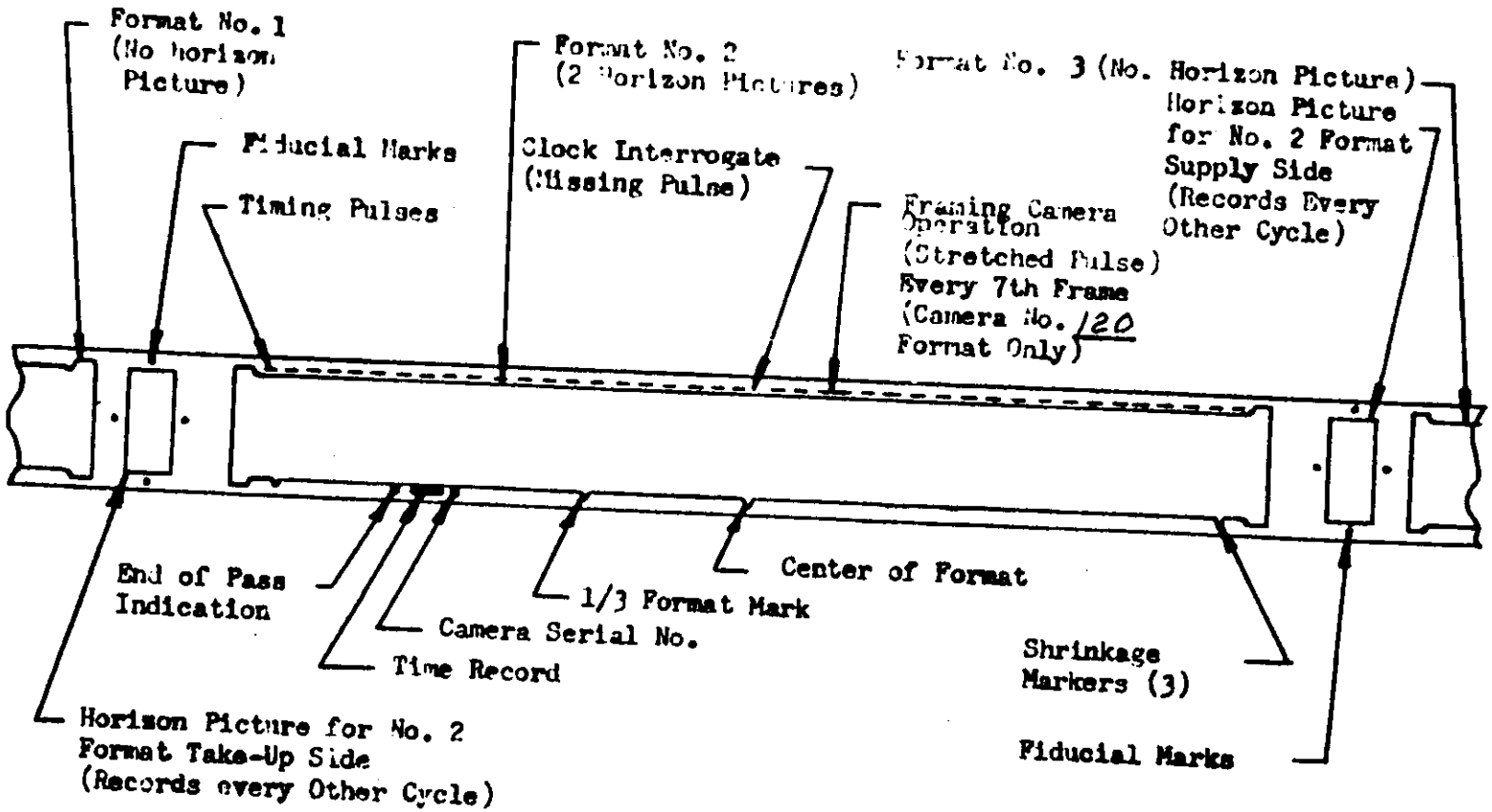
-X +Y	+X +Y
-X -Y	+X -Y

[redacted]

FINAL DIMENSIONS (MAIN CAMERA)

VEHICLE NO. 1412
MISSION NO. 9057
CAMERA NOS. 120/121

[redacted]



Camera No. 120

Viewed With Negative Emulsion Down

Film Transport ←

Scan →

Vehicle Motion ↓

Camera No. 121

Viewed With Negative Emulsion Down

Film Transport ←

Scan →

Vehicle Motion ↑

FORMAT LAYOUT (MAIN CAMERAS)

VEHICLE NO. 1412
MISSION NO. 9057
CAMERA NOS. 120, 121

(INDEX)

LENS DATA SUMMARY: (Framing Camera No. D12) (TERRAIN Lens)

Lens Serial No. 810923

Reseau Serial No. 13

Filter Type WRATTEN 21

Aperture F 4.5

Exposure Time 1/500 Sec.

Equivalent Focal Length 38.20 MM Operational Focal Length 38.35 MM

Resolution: 88 Lines/MM AWAR

Angle off axis	0	10	20	30	35
Resolution L/MM High Contrast	85/71	78/75	115/84	119/80	102/34
Resolution L/MM Low Contrast	38/48	57/58	79/70	90/65	71/35

Note: Resolution data read from So130 Film

Distortion:

NOT RECORDED

Angle off Axis Deg.	0	10	20	30	35				
Distortion Millimeters									

Perpendicularity of Reseau to Optical Axis .019 MM IN 57.15 MM

Date of Stellar Calibration _____

Knee Calibration _____ Deg. _____ Min. _____ Sec.

Location of Principal Point:

X -.011 MM Y -.016 MM

[redacted]

DRAFT

LENS DATA SUMMARY: (Framing Camera No. 012) (STELLAR Lens)

Lens Serial No. 80080

Reseau Serial No. 12

Filter Type NONE

Aperture F1.9

Exposure Time 2 Sec.

Equivalent Focal Length 83.70 MM Operational Focal Length 83.62 M

Resolution: _____ Lines/MM AWAR

Angle off axis					
Resolution L/MM High Contrast					
Resolution L/MM Low Contrast					

Note: Resolution data read from _____ Film

Distortion:

Angle off Axis Deg.									
Distortion Millimeters									

Perpendicularity of Reseau to Optical Axis .000 IN 35 MM

Date of Stellar Calibration _____

Knee Calibration _____ Deg. _____ Min. _____ Sec.

Location of Principal Point:

X +.191 MM Y +.045 MM

[redacted]

DRAFT

SYSTEM NO. M-23
VEHICLE NO. 19-12
MISSION NO. 9057
CAMERA NOS. 120 / 121

PRELIMINARY CLOCK CORRELATION:

Rev. No.	System Time	Clock Time	Delta Sys. Time	Delta Clock Time	Diff.
LAUNCH	474.358	518281.850	—	—	—
9	47594.708	28531.305	47120.350	47120.366	.016
24	42618.641	109955.254	81423.933	81423.949	.016
40	43065.030	196801.644	86846.389	86846.390	.06
56	43469.980	283606.624	86804.950	86804.980	.03
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—