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36 Pages
(Including Cover Sheet)

CORONA "J" FLIGHT DATA BOOK

SYSTEM NO. J-23

VEHICLE NO. 1618

MISSION NO. 1023

CAMERA NOS. 170 & 171

Prepared by:

Checked by:

Approved by:

Approved by:

[REDACTED]
Program Manager

Declassified and Released by the N R O
in Accordance with E. O. 12958
on NOV 26 1997

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NO. _____

SYSTEM NO. J-23
VEHICLE NO. 161B
MISSION NO. 1023
CAMERA NOS. 170 & 171

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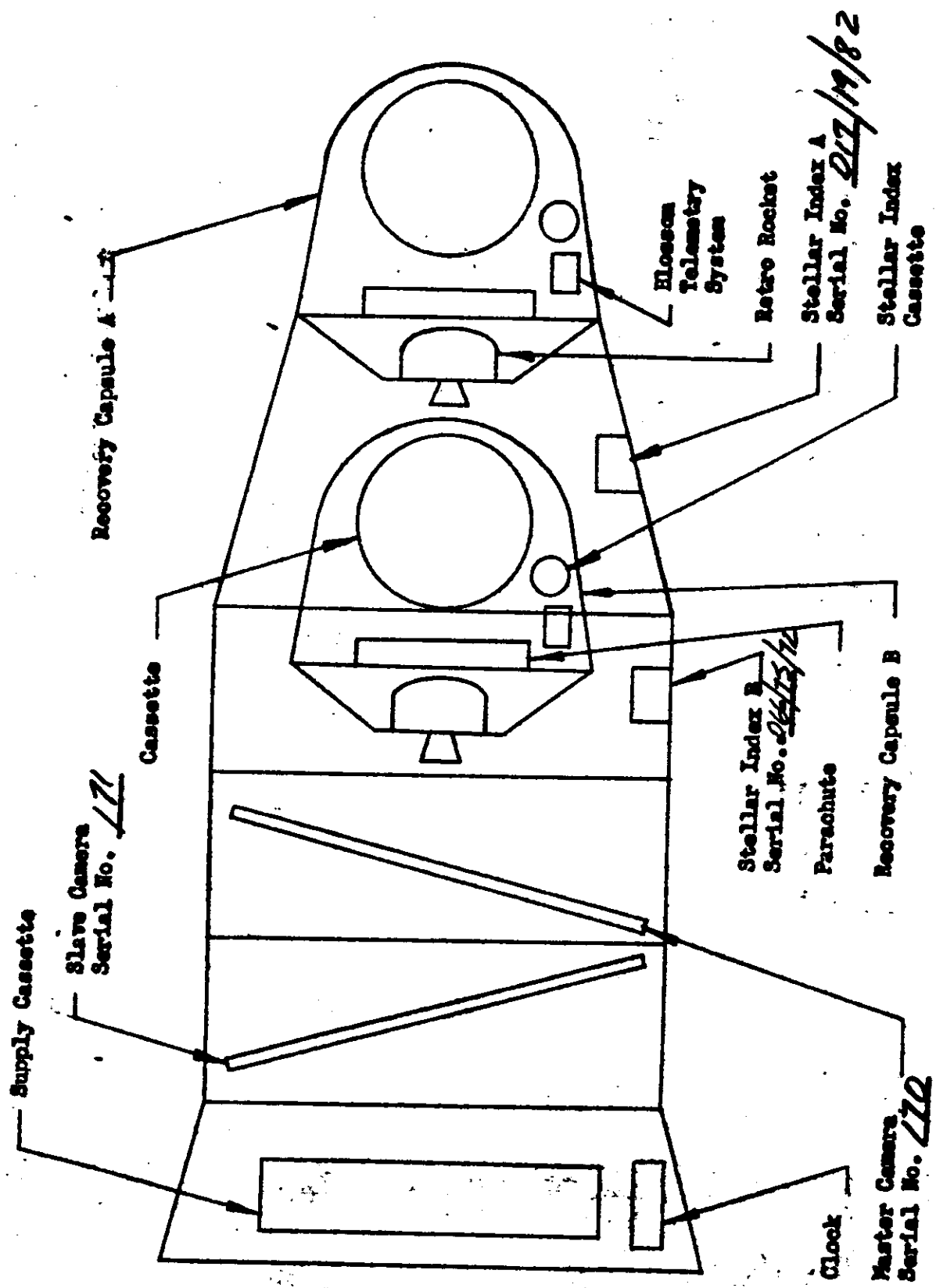
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SYSTEM NO. J-23
VEHICLE NO. 1618
MISSION NO. 1023
CAMERA NOS. 170 & 171

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VEHICLE LAYOUT:

NO. [REDACTED]



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SYSTEM NO. J-23
VEHICLE NO. 1610
MISSION NO. 1023
CAMERA NOS. 170 & 171

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GENERAL FLIGHT DATA:

Master Camera Serial No. 170

Slave Camera Serial No. 171

Stellar Index "A" Serial No. D17/19/02

Stellar Index "B" Serial No. D66/15/72

Launch Date 8/17/65

Reactivation Date N/A

Reactivation Orbit No. N/A

Orbital Parameters: (Rev. 40)

Period 90.38 Min. Eccentricity .075

Perigee 97.8 NM Perigee Latitude 29.046 Deg. N

Apogee 223.8 NM Inclination Angle 70.039 Deg. N

Recovery Orbit No. 81

Recovery Date 8/22/65

REMARKS: CALIBRATION DATA FOR HORIZON OPTICS NOT COMPLETE. WILL BE SUPPLIED LATER IF AVAILABLE.

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SYSTEM NO. T-23
 VEHICLE NO. 1418
 MISSION NO. 1023
 CAMERA NOS. 170 & 171

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LENS SETTINGS AND FILM TYPES:

NO. [REDACTED]

Panoramic Camera Settings:

Panoramic Optics Slit Width
 Panoramic Optics Filter Type
 Horizon Optics Exp. Time
 Horizon Optics Aperture
 Horizon Optics Filter Type

Camera No. <u>170</u>	Camera No. <u>171</u>
<u>0.225</u> in.	<u>0.150</u> in.
<u>WRITTEN 25</u>	<u>WRITTEN 21</u>
<u>1/100</u> sec.	<u>1/100</u> sec.
<u>F 6.8 Supply</u> <u>F 8.0 TAKE UP</u>	<u>F 8.0 Supply</u> <u>F 6.8 TAKE UP</u>
<u>WRITTEN 25</u>	<u>WRITTEN 25</u>

Stellar Index Camera Settings:

	Stellar Index A		Stellar Index B	
	Stellar	Index	Stellar	Index
Exposure Time	<u>2 Sec</u>	<u>1/500 Sec</u>	<u>2 Sec</u>	<u>1/500 Sec</u>
Aperture Setting	<u>F1.8</u>	<u>F4.5</u>	<u>F1.8</u>	<u>F4.5</u>
Filter Type	<u>NONE</u>	<u>WRITTEN 21</u>	<u>NONE</u>	<u>WRITTEN 21</u>
Ratio: One Stellar Index Frame Per	<u>7</u>		Master Camera Frames.	

Film:

Panoramic Cameras:

Type
 Length
 Splices
 Emul. Data

Camera No. <u>170</u>	Camera No. <u>171</u>
<u>3404</u>	<u>3404</u>
<u>16000</u> ft.	<u>16000</u> ft.
<u>4</u>	<u>3</u>
<u>208-1-5-5</u>	<u>208-1-5-5</u>

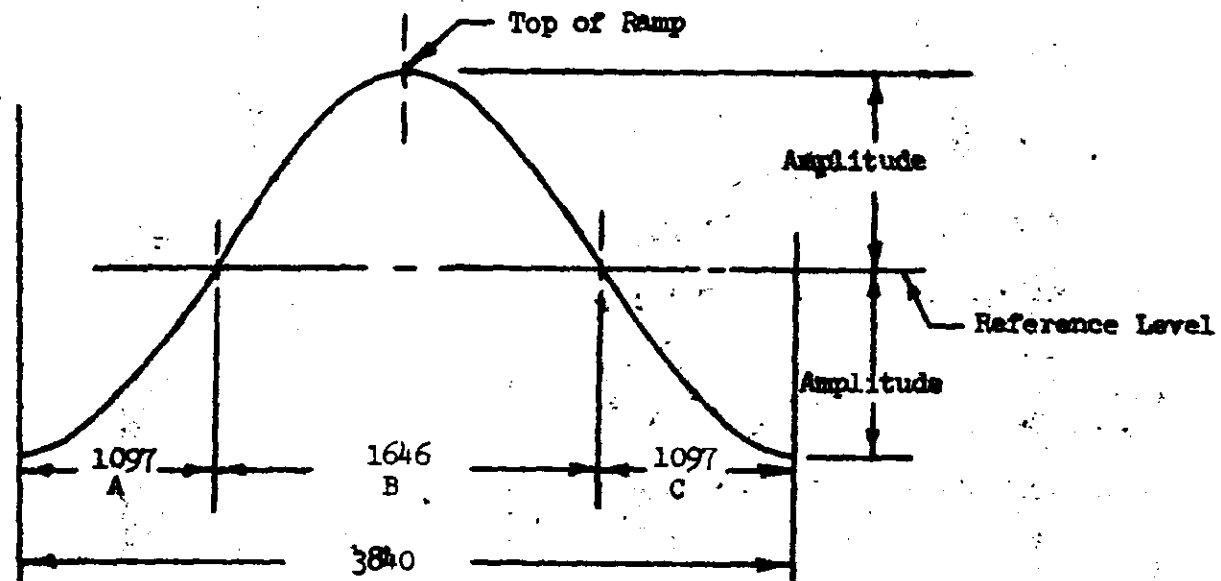
Stellar Index Cameras:

	Stellar Index A		Stellar Index B	
	Stellar	Index	Stellar	Index
Type	<u>3401</u>	<u>3408</u>	<u>3401</u>	<u>3408</u>
Emul. Data	<u>124-35-8-5</u>	<u>104-24-6-5</u>	<u>124-35-8-5</u>	<u>104-24-6-5</u>

SYSTEM NO. J-23
 VEHICLE NO. 1618
 MISSION NO. 1023
 CAMERA NOS. 170 & 171

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V/H RAMP CONFIGURATION AND CONSTANTS:



Cycle Rate Computation:

- A. 0 to 1097 Sec Up Ramp: $CPS = R+A \sin(1.5 X - 1.5707963)$
- B. 1097 to 2743 Sec Up Ramp: $CPS = R+A \sin(2 X - 2.0943951) \leq .4625$
- C. 2743 to 3840 Sec Up Ramp: $CPS = R+A \sin(1.5 X - 0.7853982)$

FMC Rate Computation:

$$FMC \text{ Rate (In/Sec)} = 2 \pi \left(\frac{0.3223}{CP} \right) = 2.02507 \times CPS$$

$$FMC \text{ Rate (Radians/Sec)} = 2 \pi \left(\frac{0.3224}{24 CP} \right) = 0.84378 \times CPS$$

Scan Velocity Computation:

$$\text{Scan Velocity (In/Sec)} = \frac{48 \pi}{CP} = 150.796 \times CPS$$

$$\text{Scan Velocity (Radians/Sec)} = \frac{48 \pi}{24 CP} = 6.28319 \times CPS$$

$$\text{Exposure Time (Milliseconds)} = 1000 \left(\frac{CP \times SLIT}{48 \pi} \right) = 6.63146 \left(\frac{SLIT}{CPS} \right)$$

WHERE: $X = \frac{\text{Time Up Ramp (Seconds)}}{1097.6942}$ $R = \frac{1}{2} (CPS_{top} + CPS_{bottom})$
 $A = \frac{1}{2} (CPS_{top} - CPS_{bottom})$ $CP = \text{Camera Cycle Period in Sec/Cycle}$
 CPS = Camera Cycle Rate in Cycles/Sec
 SLIT = Slit Width in Inches

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SYSTEM NO. J-23
 VEHICLE NO. 161B
 MISSION NO. 1023
 CAMERA NOS. 170 & 173

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CYCLE PERIOD DATA:

NO. [REDACTED]

PRE-FLIGHT CYCLE PERIODS:

V/H Ramp Level	V/H Ramp Amplitude	Cycle Period Seconds		Time Up Ramp Sec
		Master	Slave	
7	3	4.692	4.701	235
7	3	2.216	2.209	1685
7	3	4.659	4.667	265
7	3	2.209	2.206	1805
7	3	4.627	4.635	285
7	3	2.211	2.206	1752
7	3	2.209	2.204	1795

IN-FLIGHT CYCLE PERIODS

V/H Ramp Level	V/H Ramp Amplitude	Cycle Period Seconds		Orbit No.	Time Up Ramp Sec
		Master	Slave		
7	3	4.730	4.750	9	235
7	3	2.260	2.277	16	1685
7	3	4.696	4.724	25	265
7	3	2.252	2.249	31	1805
7	3	4.675	4.700	41	285
7	3	2.260	2.262	47	1752
7	3	2.255	2.255	63	1795

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SYSTEM NO. F23
 VEHICLE NO. 1618
 MISSION NO. 1023
 CAMERA NOS. 120 & 171

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NO. [REDACTED]

LENS DATA SUMMARY: Master Camera No. 170
 Lens Serial No. 1592435
 Slit Width 0.225 Inch
 Filter Type WRITTEN 25
 Equivalent Operational Focal Length 609.602 MM

Resolution:

Static:

	Lines/MM	Film Type	Target Contrast
bench Test	<u>245</u>	<u>3404</u>	<u>HIGH</u>
Other	<u>138</u>	<u>3404</u>	<u>Low</u>

Dynamic:

Itak Pre-Vibration	<u>201</u>	<u>3404</u>	<u>HIGH</u>
Itak Post-Vibration	<u>135</u>	<u>3404</u>	<u>Low</u>
AP	<u>206</u>	<u>3404</u>	<u>HIGH</u>
AP	<u>116</u>	<u>3404</u>	<u>Low</u>
Other			

Note: Itak Post Vibration Resolution of 201 lines/MM Reported In
 Message No. _____ dated _____

Distortion - Positive (Pincushion)

Angle Off Axis Deg.	<u>3</u>	<u>2</u>	<u>1</u>	<u>0</u>	<u>359</u>	<u>358</u>	<u>357</u>		
Distortion Millimeters	<u>.004</u>	<u>.002</u>	<u>.001</u>	<u>.000</u>	<u>.001</u>	<u>.002</u>	<u>.005</u>		

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SYSTEM NO. T-23
 VEHICLE NO. 1618
 MISSION NO. 1023
 CAMERA NOS. 170 & 171

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NO. [REDACTED]

LENS DATA SUMMARY: (Horizon Cameras for ~~MASPER~~ Camera No. 170)

	Take-Up	Supply
Lens Serial No.	<u>81639</u>	_____
Exposure Time	<u>1/100</u> Sec.	<u>1/100</u> Sec.
Filter Type	<u>Wentzen 25</u>	<u>Wentzen 25</u>
Aperture	<u>F8.0</u>	<u>F6.8</u>
Operational Focal Length	<u>56.64</u> MM	_____ MM
Radial Distortions:		
10° off Axis	<u>0.001</u> MM	_____ MM
20° off Axis	<u>0.004</u> MM	_____ MM
Tangential Distortion (Maximum Vector)	<u>0.002</u> MM	_____ MM
Resolution:		

Angle off Axis Deg.	0	10	15	20	25	28.5							
Radial Resolution	166	146	120	117	101	56							
Tangential Resolution	166	143	109	82	61	46							

_____ 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 3404 film and HIGH contrast target.

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SYSTEM NO. T-23
 VEHICLE NO. 1610
 MISSION NO. 1023
 CAMERA NOS. 170 & 171

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LENS DATA SUMMARY: Slave Camera No. 171

Lens Serial No. 1512435
 Slit Width 0.150 Inch
 Filter Type WRITTEN
 Equivalent Operational Focal Length 609.602 MM

Resolution:
 Static:

	Lines/MM	Film Type	Target Contrast
Bench Test	<u>255</u>	<u>3404</u>	<u>HIGH</u>
Other	<u>131</u>	<u>3404</u>	<u>Low</u>

Dynamic:

Itek Pre-Vibration	<u>185</u>	<u>3404</u>	<u>HIGH</u>
Itek Post-Vibration	<u>127</u>	<u>3404</u>	<u>Low</u>
AP	<u>179</u>	<u>3404</u>	<u>HIGH</u>
AP	<u>108</u>	<u>3404</u>	<u>Low</u>
Other			

NOTE: Itek Post Vibration Resolution of 185 lines/MM Reported In
 Message No. _____ dated _____

Distortion - Positive (Pincushion)

Angle Off Axis Deg.	<u>3</u>	<u>2</u>	<u>1</u>	<u>0</u>	<u>399</u>	<u>358</u>	<u>357</u>		
Distortion Millimeters	<u>.004</u>	<u>.003</u>	<u>.001</u>	<u>.000</u>	<u>.002</u>	<u>.004</u>	<u>.007</u>		

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SYSTEM NO. J-23
 VEHICLE NO. 1618
 MISSION NO. 1023
 CAMERA NOS. 170 & 171

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NO. [REDACTED]

LENS DATA SUMMARY: (Horizon Cameras for SLAVE Camera No. 171)

	<u>Take-Up</u>	<u>Supply</u>
Lens Serial No.	_____	<u>816638</u>
Exposure Time	<u>1/100</u> Sec.	<u>1/100</u> Sec.
Filter Type	<u>UNTESTED 25</u>	<u>UNTESTED 25</u>
Aperture	<u>F6.8</u>	<u>F8.0</u>
Operational Focal Length	_____ MM	<u>54.84</u> MM
Radial Distortion:		
10° off Axis	_____ MM	<u>+0.003</u> MM
20° off Axis	_____ MM	<u>+0.003</u> MM
Tangential Distortion (Maximum Vector)	_____ MM	<u>0.005</u> MM

Resolution:

Angle off Axis Deg.						
Radial Resolution						
Tangential Resolution						

0	10	15	20	25	27.5
166	146	107	92	101	83
166	143	98	87	61	46

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

NOTE:

- Distortion and resolution are read at equivalent operational focal length.
- Resolution in lines per MM on 3404 film and HIGH contrast target.

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DEFINITION OF PANORAMIC CAMERA FORMAT CALIBRATIONS:

- 2.0 Measurements are made with respect to collimator targets fixed with respect to the mechanical interface between the total payload assembly and the orbital vehicle.
- 2.0 Two sets of three targets each, are aligned to be coplanar within $\pm 5''$ of arc so positioned to form an angle of $\pm 15.00^\circ \pm 5''$ to the mechanical interface for master camera calibrations and an angle of $\pm 15.00^\circ \pm 5''$ to the mechanical interface for slave camera calibrations.
 - 2.1 One target, Target 1 of each set is imaged on the Terrain format.
 - 2.2 The second and third targets of each set are at angles of $75.00^\circ \pm 5''$ from target one and are imaged on the horizon formats.
- 3.0 The indicated center of format for the panoramic cameras is given by the intersection 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 parallel 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 intersection of lines joining opposite fiducials.
- 5.0 X_v and Y_v are the offsets of Target 1 from the indicated center of format of the panoramic cameras as defined in Paragraph 3.
- 6.0 X_s , Y_s and X_t , Y_t 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 orbit. The forward edge of format is the edge opposite the shrinkage markers for the master camera and is the edge containing the shrinkage markers for the slave camera.
- 8.0 Dimensions A, B and C are the spacings of the shrinkage markers and dimensions D and E are the spacings of the Y Axis fiducials. Techniques for exact measurement of these dimensions have not been developed. The figures quoted are measurements made on hand 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 panoramic cameras and the line of intersection of the plane defined in Paragraph 2 on the format is obtained from the offset dimensions D_{x1} and D_{y1} of Target 1 for each camera.
- 11.0 Measurement of the angle between the indicated axis of the horizon cameras and the line of intersection of the plane defined in Paragraph 2 on the format is made by measuring the scan direction offset of the targets defined in Paragraph 2.2 at a fixed distance from the target center in the Y direction. Dimensions D_{x1} , D_{y1} , D_{x2} and D_{y2} are the effects of these measurements.

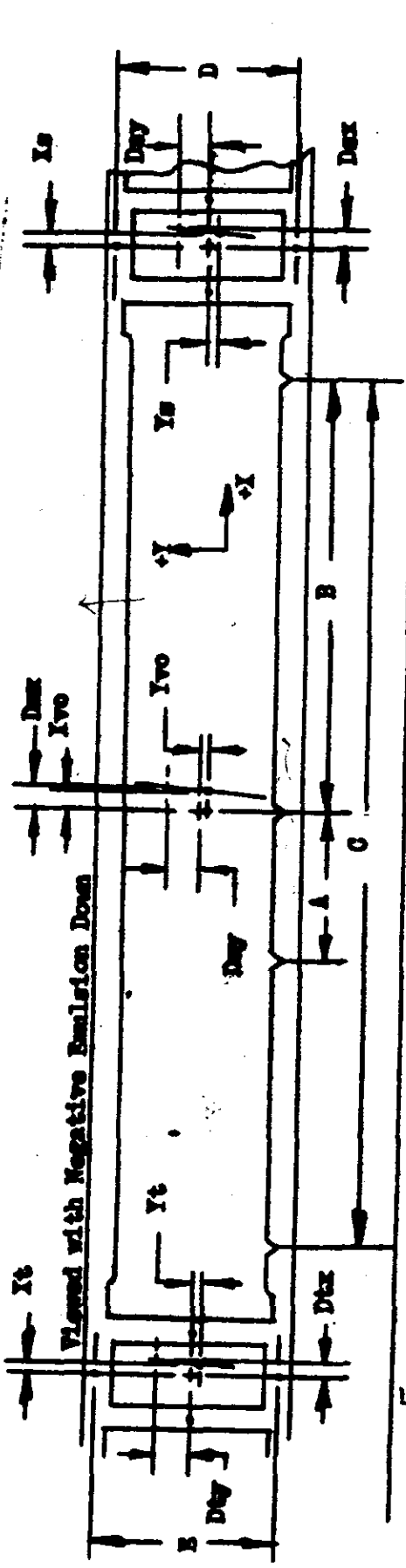
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SYSTEM NO. 1-23
 VEHICLE NO. 161B
 MISSION NO. 1023
 CAMERA NOS. 170-171

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FORMAT DIMENSIONS: (PANORAMIC CAMERAS)

NO. [Redacted]



Camera No.	Vehicle Motion	Scan Direction
A <u>15.921</u>	Xt <u>-0.217</u>	Dx <u>-1.229</u>
B <u>354.662</u>	Xt <u>+0.096</u>	Dv <u>+2.096</u>
C <u>109.197</u>	Xs <u>-0.279</u>	Dx <u>-0.274</u>
D <u>56.486</u>	Xs <u>-0.053</u>	Dv <u>-2.053</u>
E <u>56.427</u>	Xs <u>+0.364</u>	Dx <u>+0.358</u>
	Xs <u>+1.023</u>	Dv <u>+2.023</u>

Camera No.	Vehicle Motion	Scan Direction
A <u>75.972</u>	Xt <u>-0.339</u>	Dx <u>-0.349</u>
B <u>384.890</u>	Xt <u>+0.135</u>	Dv <u>+2.135</u>
C <u>109.628</u>	Xs <u>-0.527</u>	Dx <u>-0.529</u>
D <u>56.522</u>	Xs <u>+0.220</u>	Dv <u>-2.780</u>
E <u>56.492</u>	Xs <u>+0.175</u>	Dx <u>+0.216</u>
	Xs <u>+1.170</u>	Dv <u>+2.177</u>

Format Dimensions:

	Panoramic Take-Up	Supply
Height	_____	_____
Width	_____	_____

- Notes:
- All dimensions are in millimeters and are average dimensions of three formats.
 - Height of main format is taken at center of format.
 - Dt, Ds, Dv, X and Y dimensions are taken 10MM above point defining target center.
 - Format Sign Convention

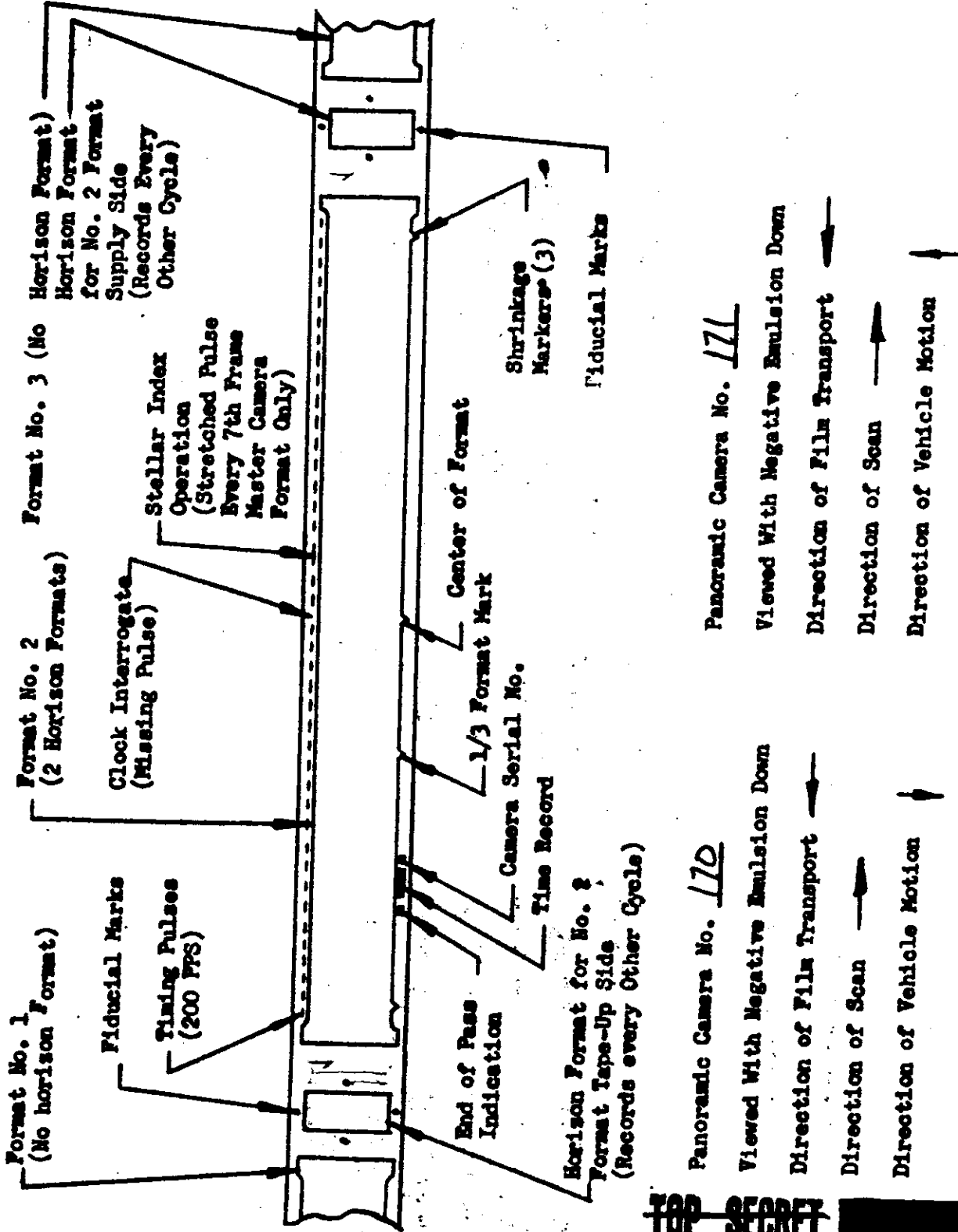


SYSTEM NO. J-23
 VEHICLE NO. 1618
 MISSION NO. 1023
 CAMERA NOS. 170 171

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FORMAT LAYOUT: (PANORAMIC CAMERAS)



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SYSTEM NO. J-23
VEHICLE NO. 1610
MISSION NO. 1023
CAMERA NOS. 170 & 171

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LENS DATA SUMMARY STELLAR INDEX D66/15/72: B MISSION

	<u>Stellar</u>		<u>Index</u>
Lens Serial No.	<u>10710</u>		<u>817457</u>
Reseau Serial No.	<u>72</u>		<u>75</u>
Filter Type	<u>NONE</u>		<u>WRITTEN 21</u>
Aperture	<u>F1.8</u>		<u>F4.5</u>
Exposure Time	<u>2</u>	Sec.	<u>1/500</u> Sec.
Equivalent Focal Length	<u>84</u>	MM	<u>38.49</u> MM

Resolution:

Angle Off Axis	0	10	20	30	35
Resolution L/MM High Contrast	<u>74/74</u>	<u>81/81</u>	<u>101/90</u>	<u>101/34</u>	<u>96/8</u>

NOTE: Index Resolution of 70.5 Lines/MM AWAR
Read From 3400 Film.

Distortion:

All distortions less than maximum allowable. Full Data to be reported as part of Photogrameter Data Reduction.

Alignment:

-.0004 "/.937 Inches -.0010 "/2.25 Inches

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SYSTEM NO. J-23
VEHICLE NO. 1617
MISSION NO. _____
CAMERA NOS. _____

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NO. [REDACTED]

LENS DATA SUMMARY STELLAR INDEX D17/19/82, A MISSION

	<u>Stellar</u>	<u>Index</u>
Lens Serial No.	<u>10789</u>	<u>811715</u>
Reseau Serial No.	<u>82</u>	<u>19</u>
Filter Type	<u>NONE</u>	<u>WRATTEN 21</u>
Aperture	<u>F/1.8</u>	<u>F/4.5</u>
Exposure Time	<u>2</u> Sec.	<u>1/500</u> Sec.
Equivalent Focal Length	<u>84 NOMINAL</u> MM	<u>38.27</u> MM

Resolution:

Angle Off Axis	0	10	20	30	35
Resolution L/MM	113	117	103	71	69
High Contrast	147	109	104	40	32

NOTE: Index Resolution of 70 Lines/MM AWAR
Read From 4400 Film.

Distortion:

All distortions less than maximum allowable. Full Data to be reported as part of Photogrammetric Data Reduction.

Alignment:

-0006 ± 1.951 Inches 900 ± 2.25 Inches

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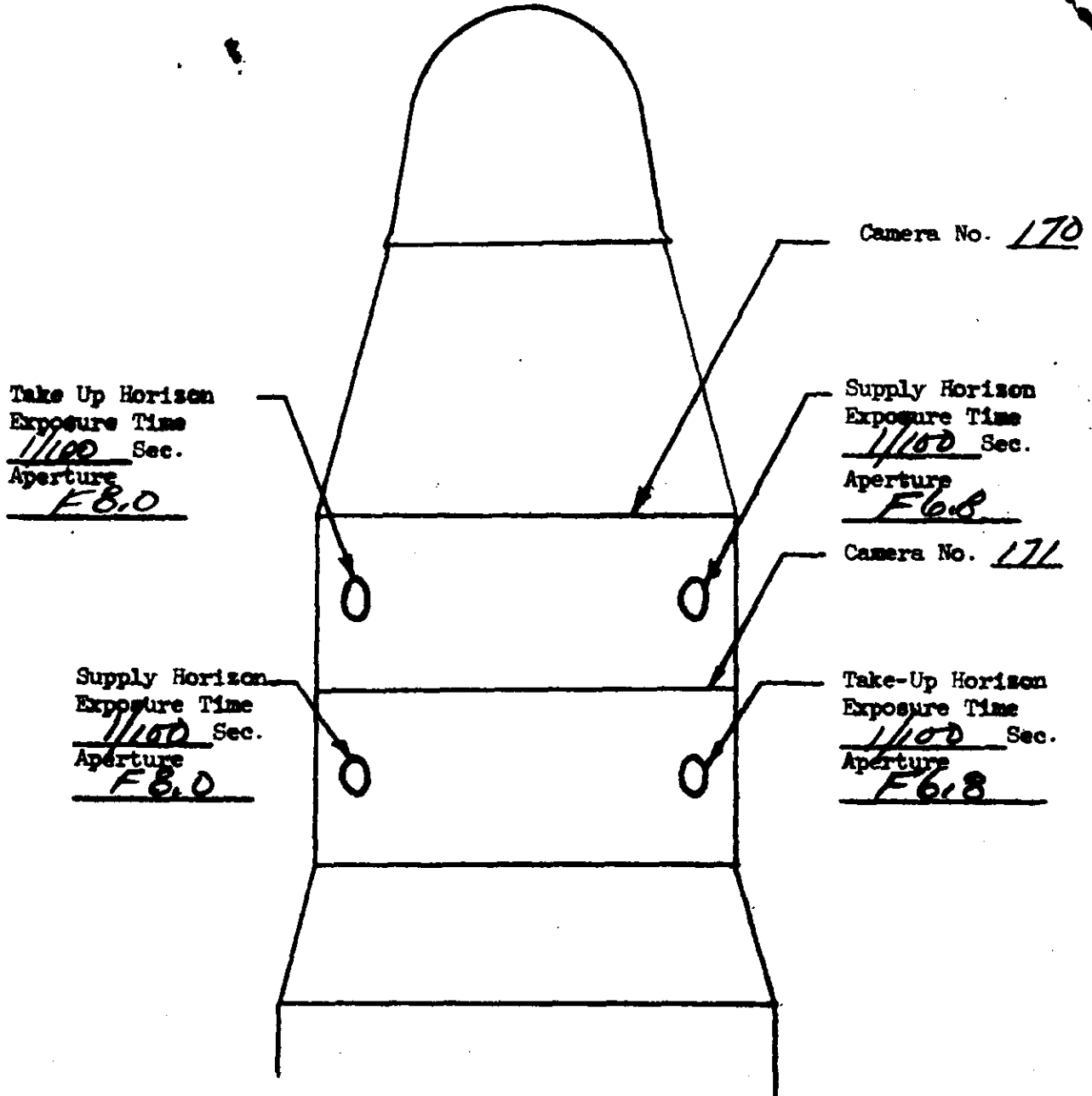
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SYSTEM NO. F-23
VEHICLE NO. 1618
MISSION NO. 1023
CAMERA NOS. 170 & 171

~~TOP SECRET~~

NO. [REDACTED]

HORIZON LINE SETTINGS (Viewed from top of vehicle in flight)



Flight Direction

~~TOP SECRET~~

NO. [REDACTED]

A. 1023-1 LAUNCH AT 2100Z CN 08/17/65
B. DRY
C. FINAL PERFORMANCE ESTIMATE PART 1

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NO. [REDACTED]

OPERATIONS SUMMARY

FWD PAN CAMERA NUMBER		170																			
OPN NO	FRA	Q	LAT	LONG	HEIGHT	RANGE	CA	H	M	S	LTIM	S-TIM									
PRE-FLT	100																				
1	8	1	32	ON	2 67 23	172 27E	796473	825703	17	22	23	37	0953	80617							
				OFF	2 63 42	174 34W	759370	787188	17	22	25	15	1046	80715							
1	8	0	17	ON	2 52 10	156 05W	683638	708588	17	22	29	02	1204	80942							
				OFF	2 49 40	153 43W	671143	695622	17	22	29	46	1214	80986							
2	4	1	36	ON	2 69 59	125 11E	851147	882466	17	23	51	46	0812	85906							
				OFF	2 68 04	145 56E	804880	834430	17	23	53	42	0937	86022							
5	2	1	43	ON	2 53 23	111 11E	686518	711576	18	04	30	28	1155	16228							
				OFF	2 47 03	117 01E	655992	679901	18	04	32	18	1220	16338							
6	2	1	49	ON	2 40 55	098 21E	631802	654802	18	06	04	27	1237	21867							
				OFF	2 33 33	102 16E	611426	633661	18	06	06	26	1255	21986							
7	6	1	22	ON	2 59 25	057 18E	720204	746536	18	07	29	28	1118	26968							
				OFF	2 56 15	062 01E	700440	726024	18	07	30	29	1138	27029							
7	6	2	99	ON	2 49 23	069 23E	664563	688794	18	07	32	31	1210	27151							
				OFF	2 35 06	078 40E	614432	636780	18	07	36	27	1251	27387							
8	8	1	113	ON	2 52 33	043 31E	678961	703734	18	09	02	02	1156	32522							
				OFF	2 36 26	055 08E	617174	639624	18	09	06	32	1247	32792							
9	8	0	11	ON	1 38 55	108 53W	1136203	1178589	18	10	12	20	0256	36740							
				OFF	1 41 45	107 13W	1118560	1160253	18	10	13	09	0304	36789							
9	4	1	56	ON	2 55 30	017 18E	693818	719152	18	10	31	34	1140	37894							
				OFF	2 47 24	025 20E	653925	677755	18	10	33	56	1215	38036							
16	4	0	17	ON	2 37 55	128 25W	616957	639400	18	21	09	28	1235	76168							
				OFF	2 35 27	127 08W	610898	633113	18	21	10	08	1241	76208							
21	4	1	64	ON	2 57 31	100 23E	696584	722023	19	04	35	55	1117	16555							
				OFF	2 48 26	110 19E	651418	675155	19	04	38	38	1159	16718							
21	4	2	43	ON	2 44 33	113 16E	636368	659539	19	04	39	43	1212	16783							
				OFF	2 38 26	117 03E	617309	639764	19	04	41	24	1229	16884							
23	8	1	64	ON	2 52 37	060 44E	669475	693892	19	07	38	14	1141	27494							
				OFF	2 43 32	068 16E	632230	655245	19	07	40	49	1213	27649							
23	8	2	70	ON	2 33 39	073 47E	606122	628158	19	07	43	30	1238	27810							
				OFF	2 23 37	077 59E	594774	616385	19	07	46	08	1258	27968							
24	7	1	114	ON	2 54 23	035 55E	677947	702683	19	09	08	06	1131	32886							
				OFF	2 38 20	048 34E	616481	638906	19	09	12	38	1226	33158							
25	4	0	11	ON	1 38 54	114 27W	1115722	1157302	19	10	18	58	0241	37138							
				OFF	1 41 49	112 44W	1097499	1138365	19	10	19	49	0248	37189							
25	4	1	57	ON	2 54 26	013 01E	677657	702382	19	10	38	30	1130	38310							
				OFF	2 46 22	020 34E	641769	665143	19	10	40	50	1203	38450							
25	4	2	28	ON	2 31 27	029 07E	602063	623948	19	10	44	53	1241	38693							
				OFF	2 27 24	030 49E	597100	618799	19	10	45	57	1249	38757							
26	4	1	22	ON	2 27 01	008 08E	596665	618347	19	12	16	27	1249	44187							
				OFF	2 23 53	009 21E	594780	616391	19	12	17	16	1254	44236							
26	4	2	53	ON	3 24 07	024 49E	751324	778834	19	12	29	44	1409	44984							
				OFF	3 33 39	028 48E	818269	848328	19	12	32	16	1427	45136							
31	4	0	26	ON	2 33 33	108 54W	604532	626509	19	19	46	43	1231	71203							
				OFF	2 29 42	107 11W	598846	620610	19	19	47	44	1239	71264							
36	6	1	80	ON	2 61 31	110 51E	713267	739337	20	03	10	34	1033	11434							
				OFF	2 50 31	125 50E	654175	678015	20	03	14	00	1137	11640							
37	6	1	50	ON	2 57 33	094 50E	688346	713474	20	04	42	16	1101	16936							

~~TOP SECRET~~ [REDACTED]

NO. [REDACTED]

		OFF	2	50	32	102	59E	653820	677647	20	04	44	23	1136	17063		
37	6	2	85	ON	2	39	35	110	54E	616396	638818	20	04	47	26	1211	17246
		OFF	2	27	37	116	37E	596168	617832	20	04	50	37	1237	17437		
37	6	3	17	ON	2	02	22	125	04E	625481	648242	20	04	57	11	1317	17831
		OFF	2	00	19	125	52E	634344	657438	20	04	57	53	1321	17873		
38	6	1	22	ON	2	69	35	030	46E	796881	826126	20	06	07	17	0810	22037
		OFF	2	68	12	042	39E	771861	800153	20	06	08	25	0859	22105		
38	6	2	21	ON	2	50	25	080	15E	652887	676678	20	06	14	48	1135	22488
		UFF	2	47	19	082	53E	640505	663832	20	06	15	41	1147	22541		
38	6	3	28	ON	2	30	24	092	37E	598808	620571	20	06	20	17	1230	22817
		UFF	2	26	18	094	18E	595197	616824	20	06	21	22	1238	22882		
39	8	1	29	ON	2	64	17	035	39E	731772	758543	20	07	40	41	1003	27641
		OFF	2	60	34	044	10E	705344	731114	20	07	42	02	1038	27722		
39	8	2	70	ON	2	30	24	069	46E	598700	620459	20	07	50	39	1229	28239
		OFF	2	20	22	073	40E	594534	616136	20	07	53	17	1247	28397		
40	1	1	143	ON	2	60	24	021	40E	703640	729346	20	09	12	29	1039	33149
		OFF	2	40	19	041	58E	617524	639988	20	09	18	23	1206	33503		
41	1	0	11	ON	1	38	52	119	57W	1099701	1140653	20	10	25	15	0225	37515
		OFF	1	41	47	118	14W	1081415	1121651	20	10	26	06	0233	37566		
42	7	1	43	ON	2	28	27	002	05E	596402	618074	20	12	22	19	1230	44539
		OFF	2	22	20	004	27E	594101	615688	20	12	23	55	1241	44635		
42	7	2	30	ON	3	20	15	017	56E	733678	760518	20	12	34	57	1346	45297
		OFF	3	25	39	019	55E	768665	796833	20	12	36	22	1356	45382		
47	2	1	18	ON	2	37	03	116	04W	608330	630449	20	19	51	53	1207	71513
		OFF	2	34	28	114	46W	603510	625448	20	19	52	34	1213	71554		
47	2	2	35	ON	2	27	38	111	45W	595528	617167	20	19	54	23	1227	71663
		UFF	2	22	33	109	48W	594198	615787	20	19	55	43	1236	71743		
50	9	1	54	ON	2	65	30	140	39E	735108	762005	21	00	14	17	0936	00857
		OFF	2	58	44	156	08E	688394	713524	21	00	16	45	1041	01005		
53	9	1	177	ON	2	42	41	103	38E	620820	643407	21	04	52	33	1147	17553
		UFF	2	17	39	114	53E	597267	618972	21	04	59	11	1238	17951		
53	9	2	31	ON	3	14	55	124	57E	707082	732915	21	05	07	37	1327	18457
		OFF	3	20	21	126	47E	739382	766439	21	05	09	02	1336	18542		
54	7	1	157	ON	2	51	21	073	58E	650631	674338	21	06	20	28	1116	22828
		OFF	2	29	22	087	40E	596508	618184	21	06	26	29	1217	23189		
55	8	1	72	ON	2	46	23	055	23E	631685	654680	21	07	52	15	1133	28335
		OFF	2	36	18	061	37E	605619	627637	21	07	55	00	1201	28500		
55	8	2	49	ON	2	30	23	064	24E	597344	619051	21	07	56	34	1214	28594
		UFF	2	23	22	067	12E	594369	615966	21	07	58	24	1227	28704		
56	1	1	102	ON	2	57	26	021	07E	678301	703050	21	09	19	21	1043	33561
		OFF	2	43	18	034	44E	621833	644459	21	09	23	28	1142	33808		
63	2	0	42	ON	2	39	16	122	37W	610324	632517	21	19	57	00	1146	71820
		OFF	2	33	16	119	32W	599998	621805	21	19	58	37	1200	71917		
68	8	1	89	ON	2	61	33	100	04E	696131	721553	22	03	22	09	1002	12129
		OFF	2	49	35	115	58E	639002	662272	22	03	25	52	1109	12352		
69	8	1	163	ON	2	44	36	097	03E	622521	645172	22	04	57	36	1125	17856
		UFF	2	21	35	108	13E	595794	617443	22	05	03	44	1216	18224		
70	6	1	38	ON	2	69	13	024	15E	765738	793798	22	06	19	11	0756	22751
		OFF	2	66	03	042	03E	727971	754597	22	06	21	03	0909	22863		
70	6	2	29	ON	2	48	34	071	10E	634837	657951	22	06	26	49	1111	23209
		OFF	2	44	31	074	16E	622067	644701	22	06	27	57	1125	23277		
70	6	3	43	ON	2	41	35	076	11E	614387	636734	22	06	28	46	1133	23326
		OFF	2	35	32	079	32E	602540	624442	22	06	30	24	1148	23424		
70	6	4	35	ON	2	33	35	080	29E	599862	621665	22	06	30	55	1152	23455
		OFF	2	28	32	082	43E	595567	617208	22	06	32	15	1203	23535		

NO. [REDACTED]

71 6 1	107 ON	2 61 31	031 37E	694506	719867	22 07 53	10 0959	28390
	OFF	2 47 02	049 35E	629447	652358	22 07 57	36 1115	28656
71 6 2	21 ON	2 21 35	062 34E	595961	617617	22 08 04	25 1214	29065
	OFF	2 18 32	063 38E	598438	620186	22 08 05	13 1219	29113
77 5 1	18 ON	2 40 36	082 59W	610658	632864	22 17 01	22 1129	61282
	OFF	2 38 01	081 31W	605568	627584	22 17 02	04 1135	61324
77 5 2	16 ON	2 21 41	074 25W	596172	617836	22 17 06	23 1208	61583
	OFF	2 19 20	073 36W	598097	619832	22 17 07	00 1212	61620

OPERATIONS SUMMARY

AFT PAN CAMERA		NUMBER		171															
OPN NO	FRA	Q	LAT	LONG	HEIGHT	RANGE	DA	H	M	S	LTIM	S-TIM							
PRE-FLT 100																			
1 8 1	32 ON	2 67 54	169 40E	796473	825703	17 22 23	37 0942	80617											
	OFF	2 64 24	176 34W	759370	787188	17 22 25	15 1038	80715											
1 8 0	17 ON	2 53 00	157 01W	683638	708588	17 22 29	02 1200	80942											
	OFF	2 50 30	154 32W	671143	695622	17 22 29	46 1211	80986											
2 4 1	36 ON	2 70 02	121 31E	851147	882466	17 23 51	46 0757	85906											
	OFF	2 68 31	142 58E	804880	834430	17 23 53	42 0925	86022											
5 2 1	43 ON	2 54 13	110 11E	686518	711576	18 04 30	28 1151	16228											
	OFF	2 47 53	116 18E	655992	679901	18 04 32	18 1217	16338											
6 2 1	49 ON	2 41 44	097 47E	631802	654802	18 06 04	27 1235	21867											
	OFF	2 34 22	101 49E	611426	633661	18 06 06	26 1253	21986											
7 6 1	22 ON	2 60 11	055 52E	720204	746536	18 07 29	28 1112	26968											
	OFF	2 57 04	060 51E	700440	726024	18 07 30	29 1133	27029											
7 6 2	99 ON	2 50 13	068 35E	664563	688794	18 07 32	31 1206	27151											
	OFF	2 35 55	078 12E	614432	636780	18 07 36	27 1249	27387											
8 8 1	113 ON	2 53 22	042 35E	678961	703734	18 09 02	02 1152	32522											
	OFF	2 37 15	054 39E	617174	639624	18 09 06	32 1245	32792											
9 8 0	10 ON	1 37 24	109 48W	1136203	1178589	18 10 12	20 0253	36740											
	OFF	1 40 17	108 12W	1118560	1160253	18 10 13	09 0300	36789											
9 4 1	56 ON	2 56 18	016 11E	693818	719152	18 10 31	34 1136	37894											
	OFF	2 48 14	024 36E	653925	677755	18 10 33	56 1212	38036											
16 4 0	17 ON	2 38 44	128 55W	616957	639400	18 21 09	28 1233	76168											
	OFF	2 36 16	127 36W	610898	633113	18 21 10	08 1239	76208											
21 4 1	64 ON	2 58 18	099 08E	696584	722023	19 04 35	55 1112	16555											
	OFF	2 49 16	109 33E	651418	675155	19 04 38	38 1156	16718											
21 4 2	43 ON	2 45 23	112 38E	636368	659539	19 04 39	43 1210	16783											
	OFF	2 39 15	116 32E	617309	639764	19 04 41	24 1227	16884											
23 8 1	64 ON	2 53 25	059 48E	669475	693892	19 07 38	14 1137	27494											
	OFF	2 44 21	067 39E	632230	655245	19 07 40	49 1211	27649											
23 8 2	70 ON	2 34 28	073 21E	606122	628158	19 07 43	30 1236	27810											
	OFF	2 24 26	077 37E	594774	616385	19 07 46	08 1256	27968											
24 7 1	114 ON	2 55 12	034 53E	677947	702683	19 09 08	06 1127	32886											
	OFF	2 39 09	048 03E	616481	638906	19 09 12	38 1224	33158											
25 4 0	11 ON	1 37 25	115 21W	1115722	1157302	19 10 18	58 0237	37138											
	OFF	1 40 23	113 42W	1097499	1138365	19 10 19	49 0244	37189											
25 4 1	56 ON	2 55 14	012 00E	677657	702382	19 10 38	30 1126	38310											
	OFF	2 47 11	019 53E	641769	665143	19 10 40	50 1200	38450											
25 4 2	28 ON	2 32 15	028 41E	602063	623948	19 10 44	53 1239	38693											
	OFF	2 28 13	030 26E	597100	618799	19 10 45	57 1247	38757											
26 4 1	22 ON	2 27 50	007 45E	596665	618347	19 12 16	27 1247	44187											
	OFF	2 24 42	008 59E	594780	616391	19 12 17	16 1253	44236											
26 4 2	53 ON	3 23 06	024 22E	751324	778834	19 12 29	44 1407	44984											
	OFF	3 32 33	028 13E	818269	848328	19 12 32	16 1425	45136											

NO. [REDACTED]

31	4	0	26	ON	2	34	22	109	20W	604532	626509	19	19	46	43	1229	71203
				OFF	2	30	31	107	35W	598846	620610	19	19	47	44	1237	71264
36	6	1	80	ON	2	62	14	109	14E	713267	739337	20	03	10	34	1027	11434
				OFF	2	51	20	125	00E	654175	678015	20	03	14	00	1134	11640
37	6	1	50	ON	2	58	20	093	36E	688346	713474	20	04	42	16	1056	16936
				OFF	2	51	20	102	09E	653820	677647	20	04	44	23	1133	17063
37	6	2	85	ON	2	40	24	110	22E	616396	638818	20	04	47	26	1208	17246
				OFF	2	28	26	116	14E	596168	617832	20	04	50	37	1235	17437
37	6	3	17	ON	2	03	14	124	45E	625481	648242	20	04	57	11	1316	17831
				OFF	2	00	33	125	33E	634344	657438	20	04	57	53	1320	17873
38	6	1	22	ON	2	69	47	027	26E	796881	826126	20	06	07	17	0757	22037
				OFF	2	68	37	039	46E	771861	800153	20	06	08	25	0847	22105
38	6	2	21	ON	2	51	13	079	25E	652887	676678	20	06	14	48	1132	22488
				OFF	2	48	07	082	11E	640505	663832	20	06	15	41	1144	22541
38	6	3	28	ON	2	31	12	092	13E	598808	620571	20	06	20	17	1229	22817
				OFF	2	27	06	093	56E	595197	616824	20	06	21	22	1237	22882
39	8	1	29	ON	2	64	56	033	39E	731772	758543	20	07	40	41	0955	27641
				OFF	2	61	19	042	40E	705344	731114	20	07	42	02	1032	27722
39	8	2	70	ON	2	31	13	069	22E	598700	620459	20	07	50	39	1228	28239
				OFF	2	21	11	073	20E	594534	616136	20	07	53	17	1246	28397
40	1	1	143	ON	2	61	08	020	10E	703640	729346	20	09	12	29	1033	33149
				OFF	2	41	08	041	25E	617524	639988	20	09	18	23	1204	33503
41	1	0	11	ON	1	37	24	120	51W	1099701	1140653	20	10	25	15	0221	37515
				OFF	1	40	22	119	12W	1081415	1121651	20	10	26	06	0229	37566
42	7	1	43	ON	2	29	16	001	42E	596402	618074	20	12	22	19	1229	44539
				OFF	2	23	09	004	06E	594101	615688	20	12	23	55	1240	44635
42	7	2	30	ON	3	19	15	017	32E	733678	760518	20	12	34	57	1345	45297
				OFF	3	24	36	019	27E	768665	796833	20	12	36	22	1354	45382
47	2	1	18	ON	2	37	51	116	33W	608330	630449	20	19	51	53	1205	71513
				OFF	2	35	17	115	13W	603510	625448	20	19	52	34	1211	71554
47	2	2	35	ON	2	28	26	112	08W	595528	617167	20	19	54	23	1225	71663
				OFF	2	23	22	110	09W	594198	615787	20	19	55	43	1235	71743
50	9	1	54	ON	2	66	06	138	27E	735108	762005	21	00	14	17	0928	00857
				OFF	2	59	30	154	50E	688394	713524	21	00	16	45	1036	01005
53	9	1	177	ON	2	43	29	103	03E	620820	643407	21	04	52	33	1144	17553
				OFF	2	18	28	114	33E	597267	618972	21	04	59	11	1237	17951
53	9	2	31	UN	3	13	57	124	34E	707082	732915	21	05	07	37	1325	18457
				OFF	3	19	20	126	22E	739382	766439	21	05	09	02	1334	18542
54	7	1	157	ON	2	52	09	073	07E	650631	674338	21	06	20	28	1112	22828
				OFF	2	30	10	087	16E	596508	618184	21	06	26	29	1215	23189
55	8	1	72	ON	2	47	11	054	42E	631685	654680	21	07	52	15	1131	28335
				OFF	2	37	07	061	09E	605619	627637	21	07	55	00	1159	28500
55	8	2	49	ON	2	31	11	064	00E	597344	619051	21	07	56	34	1212	28594
				OFF	2	24	11	066	51E	594369	615966	21	07	58	24	1225	28704
56	1	1	102	ON	2	58	12	019	55E	678301	703050	21	09	19	21	1039	33561
				OFF	2	44	06	034	08E	621833	644459	21	09	23	28	1140	33808
63	2	0	42	ON	2	39	20	122	43W	608767	630903	21	19	57	12	1146	71832
				OFF	2	33	19	119	37W	599079	620851	21	19	58	49	1200	71929
68	8	1	88	ON	2	62	15	098	29E	696131	721553	22	03	22	09	0956	12129
				OFF	2	50	22	115	11E	639002	662272	22	03	25	52	1106	12352
69	8	1	164	ON	2	45	24	096	25E	622521	645172	22	04	57	36	1123	17856
				OFF	2	22	24	107	52E	595794	617443	22	05	03	44	1215	18224
70	6	1	38	ON	2	69	29	021	09E	765738	793798	22	06	19	11	0743	22751
				OFF	2	66	37	039	47E	727971	754597	22	06	21	03	0900	22863
70	6	2	29	UN	2	49	22	070	26E	634837	657951	22	06	26	49	1108	23209

NO. [REDACTED]

	OFF	2	45	19	073	39E	622067	644701	22	06	27	57	1122	23277			
70	6	3	43	ON	2	42	23	075	38E	614387	636734	22	06	28	46	1131	23326
	OFF	2	36	21	079	05E	602540	624442	22	06	30	24	1146	23424			
70	6	4	35	ON	2	34	23	080	03E	599862	621665	22	06	30	55	1151	23455
	OFF	2	29	21	082	19E	595567	617208	22	06	32	15	1201	23535			
71	6	1	107	ON	2	62	13	030	03E	694506	719867	22	07	53	10	0953	28390
	OFF	2	47	50	048	54E	629447	652358	22	07	57	36	1113	28656			
71	6	2	21	ON	2	22	24	062	13E	595961	617617	22	08	04	25	1213	29065
	OFF	2	19	21	063	18E	598438	620186	22	08	05	13	1218	29113			
77	5	1	18	ON	2	41	24	083	32W	610658	632864	22	17	01	22	1127	61282
	OFF	2	38	49	082	01W	605568	627584	22	17	02	04	1133	61324			
77	5	2	16	UN	2	22	30	074	46W	596172	617836	22	17	06	23	1207	61583
	OFF	2	20	09	073	56W	598097	619832	22	17	07	00	1211	61620			

PHOTOGRAPHIC SUMMARY

FWD PAN	CAMERA	NO	170	0.2250	SLIT	W/25	FILTER	3404	FILM					
OPN NO	FRA	FEET	ET	S-EL	S-DIR	EV	FULL	INT	PRI					
PRE-FLT	100	264.5												
1	8	1	32	94.6	ON	217	31.8	25.9	11.62	12.00	11.40	10.80		
					OFF	230	37.8	27.5	11.70	12.05	11.45	10.85		
1	8	0	17	45.0	ON	259	51.1	34.6	11.87	12.10	11.50	10.90		
					OFF	264	53.5	36.8	11.90	12.10	11.50	10.90		
2	4	1	36	95.2	ON	203	23.1	24.2	11.52	11.84	11.24	10.64		
					OFF	214	30.3	25.3	11.60	11.98	11.38	10.78		
5	2	1	43	113.7	ON	255	49.8	32.2	11.85	12.10	11.50	10.90		
					OFF	267	55.9	37.7	11.91	12.10	11.50	10.90		
6	2	1	49	129.6	ON	277	61.3	44.6	11.97	12.10	11.50	10.90		
					OFF	285	66.4	57.5	12.01	12.10	11.50	10.90		
7	6	1	22	58.2	ON	242	43.0	27.8	11.77	12.08	11.48	10.88		
					OFF	251	46.6	29.6	11.82	12.10	11.50	10.90		
7	6	2	99	261.9	ON	269	53.7	34.6	11.92	12.10	11.50	10.90		
					OFF	294	65.6	53.8	12.05	12.10	11.50	10.90		
8	8	1	113	298.9	ON	265	50.5	31.7	11.90	12.10	11.50	10.90		
					OFF	294	64.7	50.8	12.05	12.10	11.50	10.90		
9	8	0	11	29.1	ON	139	-24.1	21.4	10.97	0.	0.	0.		
					OFF	141	-21.1	21.0	10.99	0.	0.	0.		
9	4	1	56	148.1	ON	259	47.4	29.4	11.87	12.10	11.50	10.90		
					OFF	277	55.6	35.6	11.97	12.10	11.50	10.90		
16	4	0	17	45.0	ON	294	64.0	44.0	12.05	12.10	11.50	10.90		
					OFF	296	65.9	48.2	12.06	12.10	11.50	10.90		
21	4	1	64	169.3	ON	256	44.5	24.3	11.85	12.09	11.49	10.89		
					OFF	277	54.4	29.8	11.97	12.10	11.50	10.90		
21	4	2	43	113.7	ON	284	58.2	33.2	12.00	12.10	11.50	10.90		
					OFF	293	63.8	40.6	12.05	12.10	11.50	10.90		
23	8	1	64	169.3	ON	269	49.9	26.2	11.92	12.10	11.50	10.90		
					OFF	286	59.2	33.4	12.01	12.10	11.50	10.90		
23	8	2	70	185.1	ON	299	67.7	47.5	12.08	12.10	11.50	10.90		
					OFF	304	73.1	74.5	12.10	12.10	11.50	10.90		
24	7	1	114	301.5	ON	265	47.9	24.8	11.90	12.10	11.50	10.90		
					OFF	294	63.9	39.1	12.05	12.10	11.50	10.90		
25	4	0	11	29.1	ON	140	-26.5	18.2	10.98	0.	0.	0.		
					OFF	142	-23.4	17.8	11.00	0.	0.	0.		
25	4	1	57	150.8	ON	264	47.8	24.5	11.90	12.10	11.50	10.90		
					OFF	281	56.4	29.8	11.99	12.10	11.50	10.90		
25	4	2	28	74.1	ON	301	69.4	50.9	12.08	12.10	11.50	10.90		

NO.

			CFF 303	71.9	61.3	12.10	12.10	11.50	10.90
26	4	1	CN 303	72.2	61.7	12.10	12.10	11.50	10.90
			CFF 304	73.5	71.8	12.10	12.10	11.50	10.90
26	4	2	CN 236	42.0	158.7	11.74	12.08	11.48	10.88
			CFF 214	32.3	161.3	11.60	12.00	11.40	10.80
31	4	0	CN 300	68.2	42.8	12.08	12.10	11.50	10.90
			CFF 302	71.0	51.0	12.09	12.10	11.50	10.90
36	6	1	CN 245	38.4	18.2	11.79	12.06	11.46	10.86
			CFF 273	51.7	22.6	11.95	12.10	11.50	10.90
37	6	1	CN 257	43.5	19.2	11.86	12.09	11.49	10.89
			CFF 274	51.6	22.3	11.95	12.10	11.50	10.90
37	6	2	CN 292	62.9	30.7	12.04	12.10	11.50	10.90
			CFF 301	72.9	52.2	12.09	12.10	11.50	10.90
37	6	3	CN 286	69.0	139.8	12.01	12.10	11.50	10.90
			CFF 283	66.7	144.2	12.00	12.10	11.50	10.90
38	6	1	CN 211	22.5	15.9	11.57	11.82	11.22	10.62
			CFF 218	26.9	16.2	11.62	11.93	11.33	10.73
38	6	2	CN 275	51.7	22.0	11.95	12.10	11.50	10.90
			CFF 280	55.0	23.8	11.98	12.10	11.50	10.90
38	6	3	CN 300	71.0	44.6	12.08	12.10	11.50	10.90
			CFF 302	73.9	55.3	12.09	12.10	11.50	10.90
39	8	1	CN 236	34.2	16.7	11.74	12.02	11.42	10.82
			CFF 248	39.5	17.6	11.81	12.06	11.46	10.86
39	8	2	CN 300	71.0	43.8	12.08	12.10	11.50	10.90
			CFF 302	76.7	76.8	12.09	12.10	11.50	10.90
40	1	1	CN 249	39.6	17.4	11.82	12.07	11.47	10.87
			CFF 291	62.1	28.4	12.04	12.10	11.50	10.90
41	1	0	CN 140	-28.9	14.8	10.98	0.	0.	0.
			CFF 142	-25.7	14.4	11.00	0.	0.	0.
42	7	1	CN 301	72.7	46.2	12.09	12.10	11.50	10.90
			CFF 302	76.5	66.2	12.09	12.10	11.50	10.90
42	7	2	CN 241	48.6	161.1	11.76	12.10	11.50	10.90
			CFF 228	43.0	162.9	11.68	12.08	11.48	10.88
47	2	1	CN 296	65.2	28.1	12.06	12.10	11.50	10.90
			CFF 298	67.7	31.3	12.07	12.10	11.50	10.90
47	2	2	CN 302	73.7	44.4	12.09	12.10	11.50	10.90
			CFF 302	77.0	61.0	12.09	12.10	11.50	10.90
50	9	1	CN 234	31.3	13.6	11.73	11.99	11.39	10.79
			CFF 256	41.1	14.9	11.85	12.07	11.47	10.87
53	9	1	CN 290	59.3	20.3	12.03	12.10	11.50	10.90
			CFF 300	79.8	80.0	12.08	12.10	11.50	10.90
53	9	2	CN 250	55.7	161.9	11.82	12.10	11.50	10.90
			CFF 238	50.2	164.1	11.75	12.10	11.50	10.90
54	7	1	CN 275	49.7	15.8	11.96	12.10	11.50	10.90
			CFF 301	72.5	34.8	12.09	12.10	11.50	10.90
55	8	1	CN 284	55.2	17.4	12.00	12.10	11.50	10.90
			CFF 297	65.8	24.4	12.07	12.10	11.50	10.90
55	8	2	CN 301	71.6	32.2	12.09	12.10	11.50	10.90
			CFF 302	77.4	50.2	12.09	12.10	11.50	10.90
56	1	1	CN 261	42.3	13.4	11.88	12.08	11.48	10.88
			CFF 289	58.5	18.6	12.03	12.10	11.50	10.90
63	2	0	CN 295	62.5	17.7	12.06	12.10	11.50	10.90
			CFF 300	68.7	22.7	12.08	12.10	11.50	10.90
68	8	1	CN 252	35.8	9.3	11.83	12.04	11.44	10.84
			CFF 281	50.7	11.4	11.99	12.10	11.50	10.90

NO. [REDACTED]

69	8	1	163	431.1	ON 289	56.3	12.5	12.03	12.10	11.50	10.90
					CFF 301	79.7	41.0	12.09	12.10	11.50	10.90
70	6	1	38	100.5	ON 219	20.9	8.5	11.63	11.77	11.17	10.57
					CFF 236	28.5	8.5	11.74	11.95	11.35	10.75
70	6	2	29	76.7	ON 283	51.8	10.9	12.00	12.10	11.50	10.90
					CFF 289	56.3	12.1	12.03	12.10	11.50	10.90
70	6	3	43	113.7	ON 293	59.6	13.2	12.05	12.10	11.50	10.90
					CFF 299	66.1	16.4	12.08	12.10	11.50	10.90
70	6	4	35	92.6	ON 300	68.1	17.9	12.08	12.10	11.50	10.90
					CFF 302	73.3	23.4	12.09	12.10	11.50	10.90
71	6	1	107	283.0	ON 253	35.5	8.5	11.84	12.03	11.43	10.83
					CFF 285	53.4	10.9	12.01	12.10	11.50	10.90
71	6	2	21	55.5	ON 301	79.8	38.5	12.09	12.10	11.50	10.90
					CFF 300	82.1	53.3	12.08	12.10	11.50	10.90
77	5	1	18	47.6	ON 295	60.2	10.4	12.06	12.10	11.50	10.90
					CFF 297	63.0	11.4	12.07	12.10	11.50	10.90
77	5	2	16	42.3	ON 301	79.9	30.1	12.09	12.10	11.50	10.90
					CFF 300	82.0	39.1	12.08	12.10	11.50	10.90

PHOTOGRAPHIC SUMMARY

AFT	PAN	CAMERA	NO	171	C.1500	SLIT	W/21	FILTER	3404	FILM	
OPN NO	FRA	FEET	ET	S-EL	S-DIR	EV	FULL	INT	PRI		
PRE-FLT	100	264.5									
1 8 1	32	84.6	ON 324	30.7	23.0	12.19	12.63	12.03	11.43		
			CFF 342	36.8	25.2	12.27	12.69	12.09	11.49		
1 8 0	17	45.0	ON 387	50.3	33.1	12.45	12.75	12.15	11.55		
			CFF 393	52.7	35.3	12.47	12.75	12.15	11.55		
2 4 1	36	95.2	ON 302	22.0	20.4	12.09	12.46	11.86	11.26		
			CFF 319	29.2	22.2	12.17	12.61	12.01	11.41		
5 2 1	43	113.7	ON 380	48.9	30.7	12.42	12.75	12.15	11.55		
			CFF 398	55.2	36.2	12.49	12.75	12.15	11.55		
6 2 1	49	129.6	ON 413	60.6	43.0	12.54	12.75	12.15	11.55		
			CFF 425	66.0	55.4	12.58	12.75	12.15	11.55		
7 6 1	22	58.2	ON 361	42.0	26.0	12.35	12.73	12.13	11.53		
			CFF 374	45.7	28.0	12.40	12.75	12.15	11.55		
7 6 2	99	261.9	ON 401	52.9	33.2	12.50	12.75	12.15	11.55		
			CFF 438	65.0	51.9	12.63	12.75	12.15	11.55		
8 8 1	113	298.9	ON 395	49.7	30.3	12.48	12.75	12.15	11.55		
			CFF 439	64.2	48.9	12.63	12.75	12.15	11.55		
9 8 0	10	26.5	ON 206	-25.7	21.0	11.54	0.	0.	0.		
			CFF 209	-22.7	20.5	11.56	0.	0.	0.		
9 4 1	56	148.1	ON 385	46.5	27.8	12.44	12.75	12.15	11.55		
			CFF 413	54.8	34.2	12.54	12.75	12.15	11.55		
16 4 0	17	45.0	ON 438	63.4	42.3	12.63	12.75	12.15	11.55		
			CFF 442	65.3	46.4	12.64	12.75	12.15	11.55		
21 4 1	64	169.3	ON 383	43.5	22.7	12.43	12.74	12.14	11.54		
			CFF 415	53.6	28.5	12.55	12.75	12.15	11.55		
21 4 2	43	113.7	ON 426	57.4	31.9	12.59	12.75	12.15	11.55		
			CFF 440	63.1	39.0	12.63	12.75	12.15	11.55		
23 8 1	64	169.3	ON 403	49.1	24.9	12.51	12.75	12.15	11.55		
			CFF 429	58.4	32.0	12.60	12.75	12.15	11.55		
23 8 2	70	185.1	ON 448	67.1	45.6	12.66	12.75	12.15	11.55		
			CFF 456	72.9	71.5	12.68	12.75	12.15	11.55		
24 7 1	114	301.5	ON 397	47.0	23.5	12.48	12.75	12.15	11.55		
			CFF 441	63.2	37.6	12.64	12.75	12.15	11.55		

NO. [REDACTED]

25	4	0	11	29.1	ON 208	-28.1	17.8	11.56	0.	0.	0.
					CFF 211	-25.0	17.2	11.58	0.	0.	0.
25	4	1	56	148.1	ON 396	46.9	23.1	12.48	12.75	12.15	11.55
					CFF 422	55.6	28.6	12.57	12.75	12.15	11.55
25	4	2	28	74.1	ON 451	68.8	48.8	12.67	12.75	12.15	11.55
					CFF 454	71.4	58.7	12.68	12.75	12.15	11.55
26	4	1	22	58.2	ON 455	71.8	59.1	12.68	12.75	12.15	11.55
					CFF 456	73.3	68.7	12.68	12.75	12.15	11.55
26	4	2	53	140.2	ON 353	43.1	158.5	12.32	12.73	12.13	11.53
					CFF 320	33.4	161.4	12.18	12.66	12.06	11.46
31	4	0	26	68.8	ON 449	67.5	41.0	12.66	12.75	12.15	11.55
					CFF 453	70.5	48.8	12.68	12.75	12.15	11.55
36	6	1	80	211.6	ON 368	37.4	16.5	12.38	12.70	12.10	11.50
					CFF 411	50.8	21.5	12.53	12.75	12.15	11.55
37	6	1	50	132.2	ON 386	42.5	17.8	12.45	12.73	12.13	11.53
					CFF 411	50.7	21.1	12.53	12.75	12.15	11.55
37	6	2	85	224.8	ON 439	62.1	29.4	12.63	12.75	12.15	11.55
					CFF 453	72.4	49.7	12.67	12.75	12.15	11.55
37	6	3	17	45.0	ON 430	69.7	138.3	12.60	12.75	12.15	11.55
					CFF 424	67.5	142.9	12.58	12.75	12.15	11.55
38	6	1	22	58.2	ON 316	21.3	12.6	12.15	12.44	11.84	11.24
					CFF 327	25.8	13.3	12.21	12.56	11.96	11.36
38	6	2	21	55.5	ON 412	50.8	20.8	12.54	12.75	12.15	11.55
					CFF 421	54.2	22.6	12.57	12.75	12.15	11.55
38	6	3	28	74.1	ON 451	70.4	42.5	12.67	12.75	12.15	11.55
					CFF 453	73.4	52.6	12.68	12.75	12.15	11.55
39	8	1	29	76.7	ON 354	33.1	14.6	12.32	12.66	12.06	11.46
					CFF 372	38.5	16.0	12.39	12.71	12.11	11.51
39	8	2	70	185.1	ON 451	70.4	41.8	12.67	12.75	12.15	11.55
					CFF 453	76.5	73.1	12.68	12.75	12.15	11.55
40	1	1	143	378.2	ON 374	38.6	15.8	12.40	12.71	12.11	11.51
					CFF 437	61.3	27.2	12.62	12.75	12.15	11.55
41	1	0	11	29.1	ON 209	-30.5	14.4	11.56	0.	0.	0.
					CFF 212	-27.3	13.9	11.58	0.	0.	0.
42	7	1	43	113.7	ON 452	72.1	43.9	12.67	12.75	12.15	11.55
					CFF 454	76.1	62.7	12.68	12.75	12.15	11.55
42	7	2	30	79.3	ON 361	49.6	160.9	12.35	12.75	12.15	11.55
					CFF 342	44.1	162.9	12.27	12.74	12.14	11.54
47	2	1	18	47.6	ON 444	64.5	26.7	12.65	12.75	12.15	11.55
					CFF 447	67.0	29.9	12.66	12.75	12.15	11.55
47	2	2	35	92.6	ON 453	73.0	42.0	12.68	12.75	12.15	11.55
					CFF 454	76.6	57.5	12.68	12.75	12.15	11.55
50	9	1	54	142.8	ON 351	30.2	11.4	12.31	12.63	12.03	11.43
					CFF 384	40.1	13.5	12.44	12.72	12.12	11.52
53	9	1	177	468.2	ON 435	58.5	19.3	12.62	12.75	12.15	11.55
					CFF 451	79.6	75.1	12.67	12.75	12.15	11.55
53	9	2	31	82.0	ON 375	56.8	161.6	12.40	12.75	12.15	11.55
					CFF 356	51.3	164.0	12.33	12.75	12.15	11.55
54	7	1	157	415.3	ON 413	48.8	14.7	12.54	12.75	12.15	11.55
					CFF 452	71.8	33.0	12.67	12.75	12.15	11.55
55	8	1	72	190.4	ON 427	54.3	16.4	12.59	12.75	12.15	11.55
					CFF 446	65.0	23.2	12.65	12.75	12.15	11.55
55	8	2	49	129.6	ON 452	70.8	30.5	12.67	12.75	12.15	11.55
					CFF 453	76.8	47.0	12.68	12.75	12.15	11.55
56	1	1	102	269.8	ON 391	41.3	12.1	12.46	12.73	12.13	11.53

NO.

			CFF 433	57.6	17.6	12.61	12.75	12.15	11.55	
63	2 0	42	111.1	ON 444	62.4	17.2	12.65	12.75	12.15	11.55
			LFF 451	68.7	22.2	12.67	12.75	12.15	11.55	
68	8 1	88	232.8	ON 379	34.7	7.8	12.42	12.68	12.08	11.48
			CFF 421	49.8	10.5	12.57	12.75	12.15	11.55	
69	8 1	164	433.8	ON 434	55.4	11.7	12.61	12.75	12.15	11.55
			CFF 453	79.1	37.7	12.67	12.75	12.15	11.55	
70	6 1	38	100.5	ON 328	19.8	5.5	12.21	12.38	11.78	11.18
			CFF 354	27.4	6.3	12.32	12.58	11.98	11.38	
70	6 2	29	76.7	ON 425	50.8	10.1	12.58	12.75	12.15	11.55
			CFF 434	55.4	11.3	12.61	12.75	12.15	11.55	
70	6 3	43	113.7	ON 440	58.7	12.4	12.63	12.75	12.15	11.55
			CFF 449	65.2	15.5	12.66	12.75	12.15	11.55	
70	6 4	35	92.6	ON 451	67.3	16.9	12.67	12.75	12.15	11.55
			CFF 453	72.5	21.9	12.68	12.75	12.15	11.55	
71	6 1	107	283.0	ON 380	34.5	7.0	12.42	12.67	12.07	11.47
			CFF 429	52.5	10.1	12.59	12.75	12.15	11.55	
71	6 2	21	55.5	ON 452	79.1	35.2	12.67	12.75	12.15	11.55
			CFF 450	81.6	48.1	12.67	12.75	12.15	11.55	
77	5 1	18	47.6	ON 443	59.3	9.7	12.64	12.75	12.15	11.55
			CFF 446	62.1	10.6	12.65	12.75	12.15	11.55	
77	5 2	16	42.3	ON 452	79.1	27.5	12.67	12.75	12.15	11.55
			CFF 451	81.3	35.1	12.67	12.75	12.15	11.55	

STELLAR-INDEX SUMMARY

CAMERA DATA	ET	FILM	FILTER	GRID	ASSEMBLY	NO	D17
STELLAR	2.0	3401	NCNE	19			
INDEX	1/500	3400	w/21	82			

PERFORMANCE SUMMARY

OPN NO	FR	STEL FEET	INDX FEET	H	M	S	Q	ON LAT	ON LONG	Q	OFF LAT	OFF LONG	SEC DUR
PRE-FLT	14	1.39	2.77										
1 8 1	4	0.40	C.79	22	23	37	2	67	172E	2	63	174W	98
1 8 0	3	0.30	C.59	22	29	02	2	52	156W	2	49	153W	44
2 4 1	5	0.50	C.99	23	51	46	2	69	125E	2	68	145E	116
5 2 1	6	0.59	1.19	04	30	28	2	53	111E	2	47	117E	110
6 2 1	7	0.69	1.39	06	04	27	2	40	098E	2	33	102E	119
7 6 1	3	0.30	0.59	07	29	28	2	59	057E	2	56	062E	61
7 6 2	14	1.39	2.77	07	32	31	2	49	069E	2	35	078E	236
8 8 1	17	1.68	3.37	09	02	02	2	52	043E	2	36	055E	270
9 8 0	1	0.10	C.20	10	12	20	1	38	108W	1	41	107W	49
9 4 1	8	0.79	1.58	10	31	34	2	55	017E	2	47	025E	142
16 4 0	3	0.30	C.59	21	09	28	2	37	128W	2	35	127W	40
21 4 1	9	0.89	1.78	04	35	55	2	57	100E	2	48	110E	163
21 4 2	6	0.59	1.19	04	39	43	2	44	113E	2	38	117E	101
23 8 1	9	0.89	1.78	07	38	14	2	52	060E	2	43	068E	155
23 8 2	10	0.99	1.98	07	43	30	2	33	073E	2	23	077E	158
24 7 1	16	1.58	3.17	09	08	06	2	54	035E	2	38	048E	272
25 4 0	2	0.20	C.40	10	18	58	1	38	114W	1	41	112W	51
25 4 1	8	0.79	1.58	10	38	30	2	54	013E	2	46	020E	140
25 4 2	4	0.40	0.79	10	44	53	2	31	029E	2	27	030E	64
26 4 1	3	0.30	C.59	12	16	27	2	27	008E	2	23	009E	49
26 4 2	8	0.79	1.58	12	29	44	3	24	024E	3	33	028E	152
31 4 0	3	0.30	C.59	19	46	43	2	33	108W	2	29	107W	61
36 6 1	12	1.19	2.38	03	10	34	2	61	110E	2	50	125E	206

NO. [REDACTED]

37	6	1	7	0.69	1.39	04	42	16	2	57	094E	2	50	102E	127
37	6	2	12	1.19	2.38	04	47	26	2	39	110E	2	27	116E	191
37	6	3	3	0.30	0.59	04	57	11	2	02	125E	2	00	125E	42
38	6	1	3	0.30	0.59	06	07	17	2	69	030E	2	68	042E	68
38	6	2	3	0.30	0.59	06	14	48	2	50	080E	2	47	082E	53
38	6	3	4	0.40	0.79	06	20	17	2	30	092E	2	26	094E	65
39	8	1	4	0.40	0.79	07	40	41	2	64	035E	2	60	044E	81
39	8	2	10	0.99	1.98	07	50	39	2	30	069E	2	20	073E	158
40	1	1	20	1.98	3.96	09	12	29	2	60	021E	2	40	041E	354
41	1	0	2	0.20	0.40	10	25	15	1	38	119W	1	41	118W	51
42	7	1	6	0.59	1.19	12	22	19	2	28	002E	2	22	004E	96
42	7	2	4	0.40	0.79	12	34	57	3	20	017E	3	25	019E	85
47	2	1	3	0.30	0.59	19	51	53	2	37	116W	2	34	114W	41
47	2	2	5	0.50	0.99	19	54	23	2	27	111W	2	22	109W	80
50	9	1	8	0.79	1.58	00	14	17	2	65	140E	2	58	156E	148
53	9	1	25	2.47	4.95	04	52	33	2	42	103E	2	17	114E	398
53	9	2	4	0.40	0.79	05	07	37	3	14	124E	3	20	126E	85
54	7	1	23	2.28	4.55	06	20	28	2	51	073E	2	29	087E	361
55	8	1	10	0.99	1.98	07	52	15	2	46	055E	2	36	061E	165
55	8	2	7	0.69	1.39	07	56	34	2	30	064E	2	23	067E	110
56	1	1	15	1.48	2.97	09	19	21	2	57	021E	2	43	034E	247
63	2	0	6	0.59	1.19	19	57	00	2	39	122W	2	33	119W	97
68	8	1	12	1.19	2.38	03	22	09	2	61	100E	2	49	115E	223
69	8	1	24	2.38	4.75	04	57	36	2	44	097E	2	21	108E	368
70	6	1	5	0.50	0.99	06	19	11	2	69	024E	2	66	042E	112
70	6	2	4	0.40	0.79	06	26	49	2	48	071E	2	44	074E	68
70	6	3	6	0.59	1.19	06	28	46	2	41	076E	2	35	079E	98
70	6	4	5	0.50	0.99	06	30	55	2	33	080E	2	28	082E	80
71	6	1	16	1.58	3.17	07	53	10	2	61	031E	2	47	049E	266
71	6	2	3	0.30	0.59	08	04	25	2	21	062E	2	18	063E	48
77	5	1	2	0.20	0.40	17	01	22	2	40	082W	2	38	081W	42
77	5	2	2	0.20	0.40	17	06	23	2	21	074W	2	19	073W	37

NOTE - T/M DATA INDICATES NORMAL SYSTEM OPERATION

NOTE - THE H-TIMER PERIOD WAS ADJUSTED TO A HIGHER PERIOD ON REV 002 AT [REDACTED]. SUBSEQUENT TRACKING DATA SHOWED THAT THE H-TIMER PERIOD SHOULD HAVE BEEN ADJUSTED TO A LOWER PERIOD TO MATCH THE ORBIT PERIOD. AS A RESULT OF THIS A SIX SECOND PER REV BIAS WAS INTRODUCED INTO THE SYSTEM BETWEEN REV 002 [REDACTED] AND REV 007 [REDACTED] AND, CONSEQUENTLY, STEREO COVERAGE WAS NOT ACHIEVED OVER THE DESIRED RANGE OF LATITUDES ON REVS 005 AND 006. ADDITIONALLY, DUE TO THE ORBITAL PERIOD BEING SOMEWHAT LESS THAN NOMINAL, STEREO COVERAGE WAS MISSED OVER A SMALL PORTION OF THE DESIRED LATITUDE RANGE ON REV 002.

NOTE - OPERATION C77-05-2 ACTUALLY CONSISTED OF 21 FRAMES - THE LAST FIVE FRAMES ARE CONTAINED IN THE SECOND RECOVERY BUCKET.

A. 1023-1 LAUNCH AT 2100Z ON 08/17/65
B. DRY
C. FINAL PERFORMANCE ESTIMATE PART 2

~~TOP SECRET~~

NO. _____

RATE ESTIMATE

FWD PAN CAMERA NUMBER 170

OPN NO	FR	R	A	TUR/ DUR	INST CPS	INST ANG VEL	SCAN RATE R/SEC	RATE I/SEC	PCT CALIB	RATE REQD
1 8 1	32	7	4 ON	1070	0.3250	0.02743	2.042	49.01	-2.9	-2.7
			OFF	96	0.3434	0.02898	2.158	51.79	-2.9	-2.3
1 8 0	17	7	4 ON	1395	0.3877	0.03272	2.436	58.47	-2.9	-1.4
			OFF	44	0.3946	0.03329	2.479	59.50	-2.9	-1.6
2 4 1	36	7	4 ON	927	0.3031	0.02557	1.904	45.70	-2.9	-2.5
			OFF	116	0.3204	0.02703	2.013	48.32	-2.9	-3.0
5 2 1	43	7	4 ON	1358	0.3811	0.03216	2.394	57.47	-2.9	-2.7
			OFF	110	0.3993	0.03369	2.509	60.21	-2.9	-2.9
6 2 1	49	7	4 ON	1565	0.4137	0.03491	2.599	62.39	-2.9	-3.3
			OFF	119	0.4265	0.03599	2.680	64.31	-2.9	-3.7
7 6 1	22	7	3 ON	1236	0.3622	0.03057	2.276	54.62	-2.9	-2.7
			OFF	61	0.3753	0.03167	2.358	56.60	-2.9	-2.1
7 6 2	99	7	3 ON	1419	0.4018	0.03390	2.524	60.58	-2.9	-0.8
			OFF	236	0.4387	0.03702	2.756	66.15	-2.9	-0.3
8 8 1	113	7	3 ON	1392	0.3964	0.03345	2.491	59.78	-2.9	0.1
			OFF	270	0.4395	0.03708	2.761	66.27	-2.9	0.3
9 8 0	11	7	3 ON	191	0.2081	0.01756	1.307	31.38	-2.9	-8.6
			OFF	49	0.2106	0.01777	1.323	31.75	-2.9	-9.2
9 4 1	56	7	3 ON	1344	0.3865	0.03261	2.428	58.28	-2.9	-0.1
			OFF	142	0.4138	0.03491	2.600	62.40	-2.9	0.4
16 4 0	17	7	3 ON	1654	0.4389	0.03703	2.758	66.19	-2.9	0.1
			OFF	40	0.4429	0.03737	2.783	66.78	-2.9	0.0
21 4 1	64	7	3 ON	1324	0.3822	0.03225	2.401	57.63	-2.9	-0.8
			OFF	163	0.4139	0.03492	2.600	62.41	-2.9	0.0
21 4 2	43	7	3 ON	1552	0.4252	0.03588	2.672	64.12	-2.9	0.3
			OFF	101	0.4385	0.03700	2.755	66.12	-2.9	0.1
23 8 1	64	7	3 ON	1419	0.4019	0.03391	2.525	60.60	-2.9	-0.0
			OFF	155	0.4281	0.03612	2.690	64.55	-2.9	0.2
23 8 2	70	7	3 ON	1735	0.4470	0.03771	2.808	67.40	-2.9	0.1
			OFF	158	0.4543	0.03834	2.855	68.51	-2.9	-0.2
24 7 1	114	7	3 ON	1389	0.3958	0.03339	2.487	59.68	-2.9	-0.2
			OFF	272	0.4394	0.03707	2.761	66.26	-2.9	0.2
25 4 0	11	7	3 ON	214	0.2093	0.01766	1.315	31.56	-2.9	-10.2
			OFF	51	0.2122	0.01790	1.333	32.00	-2.9	-10.7
25 4 1	57	7	3 ON	1386	0.3952	0.03335	2.483	59.60	-2.9	-0.4
			OFF	140	0.4206	0.03549	2.643	63.42	-2.9	0.1
25 4 2	28	7	3 ON	1769	0.4495	0.03793	2.824	67.79	-2.9	-0.0
			OFF	64	0.4528	0.03820	2.845	68.28	-2.9	-0.2
26 4 1	22	7	3 ON	1842	0.4532	0.03824	2.847	68.34	-2.9	-0.2
			OFF	49	0.4543	0.03833	2.854	68.51	-2.9	-0.2
26 4 2	53	7	3 ON	2638	0.3529	0.02978	2.217	53.21	-2.9	-0.6
			OFF	152	0.3202	0.02702	2.012	48.28	-2.9	-1.1
31 4 0	26	7	3 ON	1744	0.4477	0.03778	2.813	67.51	-2.9	-0.0
			OFF	61	0.4515	0.03810	2.837	68.08	-2.9	-0.2

~~TOP SECRET~~

NO. _____

NO. [REDACTED]

36	6	1	80	7	3	CN	1267	0.3670	0.03096	2.306	55.34	-3.5	-2.4
						OFF	206	0.4087	0.03448	2.568	61.63	-3.5	-0.8
37	6	1	50	7	3	CN	1348	0.3847	0.03246	2.417	58.01	-3.5	-1.4
						OFF	127	0.4090	0.03451	2.570	61.67	-3.5	-0.8
37	6	2	85	7	3	CN	1658	0.4365	0.03683	2.743	65.83	-3.5	-0.5
						OFF	191	0.4504	0.03800	2.830	67.91	-3.5	-0.9
37	6	3	17	7	3	CN	2243	0.4281	0.03612	2.690	64.56	-3.5	-0.8
						OFF	42	0.4225	0.03565	2.655	63.71	-3.5	-0.6
38	6	1	22	7	3	CN	1029	0.3149	0.02657	1.979	47.49	-3.5	-5.9
						OFF	68	0.3265	0.02755	2.051	49.24	-3.5	-5.7
38	6	2	21	7	3	CN	1479	0.4104	0.03463	2.578	61.88	-3.5	-0.6
						OFF	53	0.4188	0.03534	2.631	63.16	-3.5	-0.6
38	6	3	28	7	3	CN	1808	0.4488	0.03787	2.820	67.68	-3.5	-0.8
						OFF	65	0.4510	0.03805	2.834	68.01	-3.5	-0.9
39	8	1	29	7	3	CN	1206	0.3529	0.02978	2.217	53.22	-3.5	-3.6
						OFF	91	0.3708	0.03129	2.330	55.91	-3.5	-2.5
39	8	2	70	7	3	CN	1804	0.4486	0.03785	2.819	67.65	-3.5	-0.8
						OFF	158	0.4511	0.03806	2.834	68.02	-3.5	-1.0
40	1	1	143	7	3	CN	1293	0.3728	0.03146	2.343	56.22	-3.5	-2.2
						OFF	354	0.4349	0.03670	2.733	65.58	-3.5	-0.7
41	1	0	11	7	3	CN	237	0.2092	0.01766	1.315	31.55	-3.5	-12.0
						OFF	51	0.2123	0.01792	1.334	32.02	-3.5	-12.4
42	7	1	43	7	3	CN	1840	0.4501	0.03798	2.828	67.88	-3.5	-0.9
						OFF	76	0.4514	0.03809	2.836	68.08	-3.5	-1.0
42	7	2	30	7	3	CN	2598	0.3599	0.03037	2.261	54.27	-3.5	-1.2
						OFF	85	0.3407	0.02875	2.141	51.37	-3.5	-1.7
47	2	1	18	7	3	CN	1710	0.4418	0.03728	2.776	66.63	-3.5	-0.7
						OFF	41	0.4450	0.03755	2.796	67.11	-3.5	-0.8
47	2	2	35	7	3	CN	1860	0.4508	0.03803	2.832	67.97	-3.5	-0.9
						OFF	80	0.4514	0.03809	2.836	68.07	-3.5	-1.0
50	9	1	54	7	3	CN	1195	0.3506	0.02958	2.203	52.87	-3.5	-3.7
						OFF	148	0.3833	0.03234	2.408	57.79	-3.5	-1.8
53	9	1	177	7	3	CN	1631	0.4335	0.03658	2.724	65.37	-3.5	-0.4
						OFF	398	0.4489	0.03788	2.821	67.69	-3.5	-1.0
53	9	2	31	7	3	CN	2535	0.3742	0.03157	2.351	56.43	-3.5	-1.2
						OFF	85	0.3556	0.03000	2.234	53.62	-3.5	-1.5
54	7	1	157	7	3	CN	1486	0.4115	0.03473	2.586	62.06	-3.5	-0.7
						OFF	361	0.4504	0.03800	2.830	67.92	-3.5	-0.8
55	8	1	72	7	3	CN	1569	0.4250	0.03586	2.670	64.08	-3.5	-0.6
						OFF	165	0.4438	0.03745	2.788	66.92	-3.5	-0.7
55	8	2	49	7	3	CN	1828	0.4498	0.03796	2.826	67.83	-3.5	-0.8
						OFF	110	0.4515	0.03810	2.837	68.09	-3.5	-0.9
56	1	1	102	7	3	CN	1374	0.3902	0.03293	2.452	58.84	-3.5	-1.6
						OFF	247	0.4317	0.03643	2.713	65.10	-3.5	-0.7
63	2	0	42	7	3	CN	1701	0.4411	0.03722	2.772	66.52	-3.5	-0.5
						OFF	97	0.4482	0.03782	2.816	67.59	-3.5	-0.7
68	8	1	89	7	3	CN	1314	0.3774	0.03185	2.371	56.91	-3.5	-2.1
						OFF	223	0.4195	0.03540	2.636	63.26	-3.5	-0.7
69	8	1	163	7	3	CN	1622	0.4322	0.03647	2.715	65.17	-3.5	-0.4
						OFF	368	0.4504	0.03801	2.830	67.92	-3.5	-0.9
70	6	1	38	7	3	CN	1098	0.3275	0.02764	2.058	49.39	-3.5	-6.3
						OFF	112	0.3534	0.02982	2.221	53.29	-3.5	-4.0
70	6	2	29	7	3	CN	1557	0.4231	0.03570	2.659	63.81	-3.5	-0.5
						OFF	68	0.4322	0.03647	2.716	65.18	-3.5	-0.5
70	6	3	43	7	3	CN	1674	0.4383	0.03698	2.754	66.09	-3.5	-0.4

NO. [REDACTED]

70	6	4	35	7	3	CN	1803	0.4465	0.03768	2.806	67.34	-3.5	-0.6
						CFF	80	0.4486	0.03785	2.819	67.64	-3.5	-0.6
71	6	1	107	7	3	CN	1319	0.4512	0.03807	2.835	68.04	-3.5	-0.8
						CFF	266	0.3785	0.03193	2.378	57.07	-3.5	-2.1
71	6	2	21	7	3	CN	1943	0.4267	0.03600	2.681	64.34	-3.5	-0.5
						CFF	48	0.4502	0.03799	2.829	67.89	-3.5	-0.9
77	5	1	18	7	3	CN	1700	0.4482	0.03782	2.816	67.59	-3.5	-0.9
						CFF	42	0.4409	0.03721	2.771	66.49	-3.5	-0.5
77	5	2	16	7	3	CN	2001	0.4444	0.03749	2.792	67.01	-3.5	-0.6
						CFF	37	0.4499	0.03797	2.827	67.85	-3.5	-0.9
						CFF	37	0.4484	0.03784	2.817	67.62	-3.5	-0.9

RATE ESTIMATE

AFT PAN CAMERA NUMBER 171

CPN NO	FR	R	A	TUR/DUR	INST CPS	INST ANG VEL	SCAN R/SEC	RATE I/SEC	PCT CALIB	RATE REQD			
1	8	1	32	7	4	CN	1070	0.3224	0.02720	2.026	48.62	-3.9	-3.5
						CFF	98	0.3408	0.02876	2.141	51.39	-3.9	-3.1
1	8	0	17	7	4	CN	1395	0.3850	0.03249	2.419	58.06	-3.9	-2.1
						CFF	44	0.3919	0.03307	2.462	59.09	-3.9	-2.3
2	4	1	36	7	4	CN	927	0.3005	0.02535	1.888	45.31	-3.9	-3.4
						CFF	116	0.3178	0.02681	1.997	47.92	-3.9	-3.9
5	2	1	43	7	4	CN	1358	0.3784	0.03193	2.378	57.06	-3.9	-3.4
						CFF	110	0.3966	0.03346	2.492	59.81	-3.9	-3.6
6	2	1	49	7	4	CN	1565	0.4110	0.03468	2.582	61.98	-3.9	-4.0
						CFF	119	0.4237	0.03575	2.662	63.90	-3.9	-4.4
7	6	1	22	7	3	CN	1236	0.3596	0.03034	2.259	54.22	-3.9	-3.4
						CFF	61	0.3727	0.03145	2.342	56.20	-3.9	-2.8
7	6	2	99	7	3	CN	1419	0.3991	0.03367	2.507	60.18	-3.9	-1.5
						CFF	236	0.4360	0.03679	2.739	65.74	-3.9	-1.0
8	8	1	113	7	3	CN	1392	0.3937	0.03322	2.474	59.37	-3.9	-0.6
						CFF	270	0.4368	0.03685	2.744	65.86	-3.9	-0.3
9	8	0	10	7	3	CN	191	0.2055	0.01734	1.291	30.99	-3.9	-10.0
						CFF	49	0.2080	0.01755	1.307	31.37	-3.9	-10.6
9	4	1	56	7	3	CN	1344	0.3838	0.03238	2.411	57.87	-3.9	-0.8
						CFF	142	0.4111	0.03469	2.583	61.99	-3.9	-0.2
16	4	0	17	7	3	CN	1654	0.4362	0.03681	2.741	65.78	-3.9	-0.5
						CFF	40	0.4401	0.03714	2.766	66.37	-3.9	-0.6
21	4	1	64	7	3	CN	1324	0.3815	0.03219	2.397	57.53	-3.4	-1.0
						CFF	163	0.4133	0.03487	2.597	62.33	-3.4	-0.1
21	4	2	43	7	3	CN	1552	0.4247	0.03584	2.669	64.05	-3.4	0.1
						CFF	101	0.4380	0.03696	2.752	66.06	-3.4	0.0
23	8	1	64	7	3	CN	1419	0.4013	0.03386	2.521	60.51	-3.4	-0.2
						CFF	155	0.4276	0.03608	2.687	64.48	-3.4	0.1
23	8	2	70	7	3	CN	1735	0.4466	0.03768	2.806	67.34	-3.4	0.0
						CFF	158	0.4540	0.03830	2.852	68.46	-3.4	-0.3
24	7	1	114	7	3	CN	1389	0.3952	0.03334	2.483	59.59	-3.4	-0.4
						CFF	272	0.4390	0.03704	2.758	66.19	-3.4	0.1
25	4	0	11	7	3	CN	214	0.2079	0.01754	1.306	31.35	-3.4	-10.9
						CFF	51	0.2108	0.01778	1.324	31.78	-3.4	-11.5
25	4	1	56	7	3	CN	1386	0.3946	0.03329	2.479	59.50	-3.4	-0.6
						CFF	140	0.4201	0.03544	2.639	63.35	-3.4	-0.1
25	4	2	28	7	3	CN	1769	0.4491	0.03790	2.822	67.73	-3.4	-0.1
						CFF	64	0.4524	0.03817	2.843	68.22	-3.4	-0.3
26	4	1	22	7	3	CN	1842	0.4528	0.03821	2.845	68.28	-3.4	-0.2
						CFF	49	0.4539	0.03830	2.852	68.45	-3.4	-0.3

NO.

26	4	2	53	7	3	CN	2638	0.3521	0.02971	2.212	53.09	-3.4	-0.8
						OFF	152	0.3192	0.02694	2.006	48.14	-3.4	-1.4
31	4	0	26	7	3	CN	1744	0.4473	0.03775	2.811	67.46	-3.4	-0.1
						OFF	61	0.4511	0.03806	2.834	68.03	-3.4	-0.2
36	6	1	80	7	3	CN	1267	0.3669	0.03096	2.305	55.32	-3.9	-2.4
						OFF	206	0.4088	0.03450	2.569	61.65	-3.9	-0.8
37	6	1	50	7	3	CN	1348	0.3847	0.03246	2.417	58.01	-3.9	-1.4
						OFF	127	0.4091	0.03452	2.571	61.69	-3.9	-0.7
37	6	2	85	7	3	CN	1658	0.4368	0.03686	2.745	65.87	-3.9	-0.4
						OFF	191	0.4508	0.03803	2.832	67.97	-3.9	-0.8
37	6	3	17	7	3	CN	2243	0.4284	0.03615	2.692	64.60	-3.9	-0.7
						OFF	42	0.4227	0.03567	2.656	63.75	-3.9	-0.6
38	6	1	22	7	3	CN	1029	0.3145	0.02653	1.976	47.42	-3.9	-6.1
						OFF	68	0.3261	0.02752	2.049	49.18	-3.9	-5.8
38	6	2	21	7	3	CN	1479	0.4105	0.03464	2.579	61.91	-3.9	-0.5
						OFF	53	0.4190	0.03536	2.633	63.19	-3.9	-0.5
38	6	3	28	7	3	CN	1808	0.4492	0.03790	2.822	67.74	-3.9	-0.7
						OFF	65	0.4514	0.03809	2.836	68.07	-3.9	-0.8
39	8	1	29	7	3	CN	1206	0.3527	0.02976	2.216	53.19	-3.9	-3.6
						OFF	81	0.3707	0.03128	2.329	55.90	-3.9	-2.6
39	8	2	70	7	3	CN	1804	0.4490	0.03788	2.821	67.71	-3.9	-0.7
						OFF	158	0.4515	0.03810	2.837	68.09	-3.9	-0.9
40	1	1	143	7	3	CN	1293	0.3728	0.03145	2.342	56.21	-3.9	-2.3
						OFF	354	0.4352	0.03672	2.735	65.63	-3.9	-0.6
41	1	0	11	7	3	CN	237	0.2082	0.01756	1.308	31.39	-3.9	-12.6
						OFF	51	0.2113	0.01783	1.328	31.86	-3.9	-13.0
42	7	1	43	7	3	CN	1840	0.4505	0.03802	2.831	67.94	-3.9	-0.8
						OFF	96	0.4518	0.03813	2.839	68.14	-3.9	-0.9
42	7	2	30	7	3	CN	2598	0.3597	0.03035	2.260	54.25	-3.9	-1.2
						OFF	85	0.3404	0.02872	2.139	51.33	-3.9	-1.7
47	2	1	18	7	3	CN	1710	0.4422	0.03731	2.778	66.68	-3.9	-0.6
						OFF	41	0.4454	0.03758	2.799	67.17	-3.9	-0.7
47	2	2	35	7	3	CN	1860	0.4512	0.03807	2.835	68.03	-3.9	-0.8
						OFF	80	0.4518	0.03812	2.839	68.13	-3.9	-0.9
50	9	1	54	7	3	CN	1195	0.3500	0.02954	2.199	52.78	-3.9	-3.9
						OFF	148	0.3829	0.03231	2.406	57.74	-3.9	-1.9
53	9	1	177	7	3	CN	1631	0.4333	0.03656	2.723	65.34	-3.9	-0.5
						OFF	398	0.4489	0.03787	2.820	67.69	-3.9	-1.0
53	9	2	31	7	3	CN	2535	0.3738	0.03154	2.348	56.36	-3.9	-1.3
						OFF	85	0.3550	0.02996	2.231	53.54	-3.9	-1.7
54	7	1	157	7	3	CN	1486	0.4113	0.03470	2.584	62.02	-3.9	-0.7
						OFF	361	0.4503	0.03800	2.830	67.91	-3.9	-0.8
55	8	1	72	7	3	CN	1569	0.4248	0.03584	2.669	64.05	-3.9	-0.6
						OFF	165	0.4437	0.03744	2.788	66.91	-3.9	-0.7
55	8	2	49	7	3	CN	1828	0.4498	0.03795	2.826	67.83	-3.9	-0.8
						OFF	110	0.4515	0.03810	2.837	68.08	-3.9	-0.9
56	1	1	102	7	3	CN	1374	0.3899	0.03289	2.450	58.79	-3.9	-1.7
						OFF	247	0.4316	0.03642	2.712	65.08	-3.9	-0.7
63	2	0	42	7	3	CN	1713	0.4421	0.03731	2.778	66.67	-3.9	-0.5
						OFF	97	0.4488	0.03787	2.820	67.67	-3.9	-0.7
68	8	1	88	7	3	CN	1314	0.3772	0.03183	2.370	56.88	-3.9	-2.2
						OFF	223	0.4196	0.03540	2.636	63.27	-3.9	-0.6
69	8	1	164	7	3	CN	1622	0.4323	0.03648	2.716	65.19	-3.9	-0.4
						OFF	368	0.4507	0.03803	2.832	67.96	-3.9	-0.8
70	6	1	38	7	3	CN	1098	0.3271	0.02760	2.055	49.32	-3.9	-6.4

NO. [REDACTED]

						CFF	112	0.3531	0.02979	2.218	53.24	-3.9	-4.1
70	6	2	29	7	3	ON	1557	0.4232	0.03571	2.659	63.82	-3.9	-0.5
						CFF	68	0.4324	0.03648	2.717	65.20	-3.9	-0.5
70	6	3	43	7	3	ON	1674	0.4384	0.03699	2.755	66.11	-3.9	-0.4
						CFF	98	0.4467	0.03770	2.807	67.37	-3.9	-0.6
70	6	4	35	7	3	ON	1803	0.4488	0.03787	2.820	67.68	-3.9	-0.6
						CFF	80	0.4514	0.03809	2.837	68.08	-3.9	-0.7
71	6	1	107	7	3	ON	1319	0.3783	0.03192	2.377	57.04	-3.9	-2.2
						CFF	266	0.4268	0.03601	2.682	64.36	-3.9	-0.5
71	6	2	21	7	3	ON	1993	0.4504	0.03801	2.830	67.92	-3.9	-0.9
						CFF	48	0.4484	0.03784	2.818	67.62	-3.9	-0.9
77	5	1	18	7	3	ON	1700	0.4411	0.03722	2.772	66.52	-3.9	-0.4
						CFF	42	0.4445	0.03751	2.793	67.04	-3.9	-0.5
77	5	2	16	7	3	ON	2001	0.4502	0.03798	2.828	67.88	-3.9	-0.9
						CFF	37	0.4486	0.03785	2.819	67.65	-3.9	-0.9

RAMP PROFILE

R- 7 A- 4 PERIOD= 3835

R= 0.3388 A= 0.1117

TUR	PER	CPS	ANG V
-0	4.403	0.2271	C.02054
100	4.381	0.2282	C.02064
200	4.317	0.2317	C.02095
300	4.215	0.2373	C.02146
400	4.082	0.2450	C.02216
500	3.928	0.2546	C.02303
600	3.760	0.2659	C.02405
700	3.587	0.2788	C.02521
800	3.415	0.2929	C.02649
900	3.248	0.3079	C.02785
1000	3.091	0.3235	C.02926
1100	2.944	0.3397	C.03073
1200	2.771	0.3609	C.03264
1300	2.622	0.3813	C.03449
1400	2.499	0.4002	C.03619
1500	2.399	0.4168	C.03770
1600	2.323	0.4306	C.03894
1700	2.268	0.4410	C.03988
1800	2.234	0.4477	C.04049
1900	2.220	0.4504	C.04074
2000	2.227	0.4491	C.04062
2100	2.253	0.4438	C.04014
2200	2.301	0.4346	C.03931
2300	2.370	0.4220	C.03816
2400	2.461	0.4063	C.03674
2500	2.576	0.3881	C.03510
2600	2.716	0.3682	C.03330
2700	2.880	0.3472	C.03140
2800	3.039	0.3291	C.02976
2900	3.192	0.3133	C.02834
3000	3.356	0.2980	C.02695
3100	3.526	0.2836	C.02565
3200	3.700	0.2703	C.02444
3300	3.870	0.2584	C.02337
3400	4.030	0.2481	C.02244
3500	4.171	0.2397	C.02168

NO. [REDACTED]

3600 4.285 0.2334 C.02111
3700 4.363 0.2292 C.02073
3800 4.401 0.2272 C.02055

RAMP PROFILE

R- 7 A- 3 PERIOD= 3835
R= 0.3388 A= C.1293

TUR	PER	CPS	AVG V
-0	4.773	0.2095	C.01895
100	4.743	0.2108	C.01907
200	4.656	0.2148	C.01943
300	4.519	0.2213	C.02001
400	4.344	0.2302	C.02082
500	4.144	0.2413	C.02183
600	3.930	0.2545	C.02301
700	3.713	0.2693	C.02436
800	3.501	0.2856	C.02583
900	3.300	0.3030	C.02740
1000	3.114	0.3211	C.02904
1100	2.942	0.3399	C.03074
1200	2.744	0.3644	C.03296
1300	2.577	0.3880	C.03509
1400	2.440	0.4098	C.03707
1500	2.331	0.4291	C.03881
1600	2.247	0.4450	C.04025
1700	2.188	0.4571	C.04134
1800	2.151	0.4649	C.04204
1900	2.137	0.4680	C.04233
2000	2.144	0.4665	C.04219
2100	2.172	0.4603	C.04163
2200	2.224	0.4497	C.04067
2300	2.299	0.4351	C.03935
2400	2.399	0.4169	C.03771
2500	2.526	0.3959	C.03581
2600	2.682	0.3728	C.03372
2700	2.869	0.3485	C.03152
2800	3.053	0.3276	C.02963
2900	3.233	0.3093	C.02797
3000	3.429	0.2916	C.02637
3100	3.638	0.2749	C.02486
3200	3.854	0.2595	C.02347
3300	4.070	0.2457	C.02222
3400	4.276	0.2338	C.02115
3500	4.462	0.2241	C.02027
3600	4.613	0.2168	C.01961
3700	4.719	0.2119	C.01917
3800	4.770	0.2097	C.01896

CLOCK SUMMARY

SYS TIME I/P	ORDER FIT	CL TIME I/P	1	COMP SYS TM	DELTA ST	REV STA
76032.767	360218.48990	76032.76890	-0.00098	0	1	
36809.092	407394.83190	36809.09550	-0.00254	9	1	
76245.938	446831.69190	76245.94260	-0.00364	16	1	
37207.597	494193.36090	37207.59610	0.00185	25	1	
71305.082	528290.85590	71305.07990	0.00301	31	1	
37483.229	43998.10890	37483.22770	0.00221	41	1	