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(Including Cover Sheet)



CORONA "J" FLIGHT DATA BOOK

SYSTEM NO. J-04

VEHICLE NO. 1614

MISSION NO. 1019

CAMERA NOS. 118+119

Prepared by:

Checked by:

Approved by:

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[REDACTED]

Manager

Declassified and Released by the N R O

In Accordance with E. O. 12958

on NOV 26 1997

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7 MAY 1965

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SYSTEM NO. J-04
VEHICLE NO. 1614
MISSION NO. 1019
CAMERA NOS. 118+119

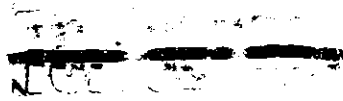
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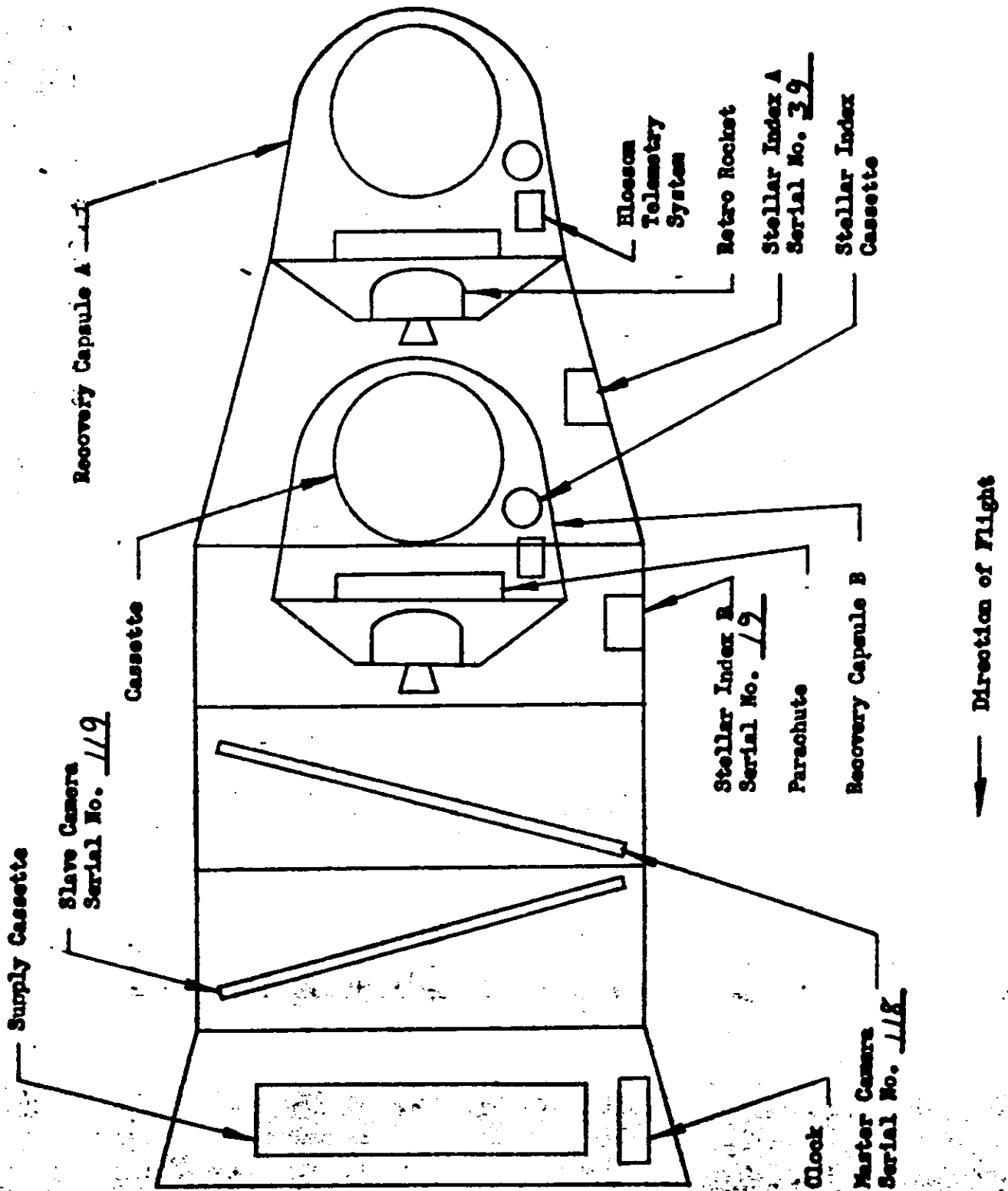


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SYSTEM NO. J-04
VEHICLE NO. 1614
MISSION NO. 1019
CAMERA NOS. 11R+119

VEHICLE LAYOUT:



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SYSTEM NO. J-04
VEHICLE NO. 1614
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CAMERA NOS. 118 & 119

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GENERAL FLIGHT DATA:

Master Camera Serial No. 118

Slave Camera Serial No. 119

Stellar Index "A" Serial No. D39/39/35

Stellar Index "B" Serial No. D19/18/19

Launch Date 4/29/65

Reactivation Date N/A

Reactivation Orbit No. N/A

Orbital Parameters: (Rev. 41)

Period 91.069 Min.

Eccentricity 0.02211

Perigee 99.772 NM

Perigee Latitude 37.00 Deg. N

Apogee 259.83 NM

Inclination Angle 85.03 Deg. N

Recovery Orbit No. 80

Recovery Date 5/4/65

REMARKS:

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SYSTEM NO. J-04
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MISSION NO. 1019
CAMERA NOS. 118 & 119

LENS SETTINGS AND FILM TYPES:

Panoramic Camera Settings:

	Camera No. <u>118</u>	Camera No. <u>119</u>
Panoramic Optics Slit Width	<u>0.250</u> in.	<u>0.175</u> in.
Panoramic Optics Filter Type	<u>WRATTEN 25</u>	<u>WRATTEN 21</u>
Horison Optics Exp. Time	<u>1/100</u> sec.	<u>1/100</u> sec.
Horison Optics Aperture	<u>F6.8 SUPPLY</u> <u>F8.0 TAKE-UP</u>	<u>F8.0 SUPPLY</u> <u>F6.8 TAKE-UP</u>
Horison Optics Filter Type	<u>WRATTEN 25</u>	<u>WRATTEN 25</u>

Stellar Index Camera Settings:

	Stellar Index A		Stellar Index B	
	Stellar	Index	Stellar	Index
Exposure Time	<u>2.0</u>	<u>1/500</u>	<u>2.0</u>	<u>1/500</u>
Aperture Setting	<u>F6.8</u>	<u>F4.5</u>	<u>F6.8</u>	<u>F4.5</u>
Filter Type	<u>NONE</u>	<u>WRATTEN 21</u>	<u>NONE</u>	<u>WRATTEN 21</u>
Ratio: One Stellar Index Frame Per	<u>7</u>		Master Camera Frames.	

Film:

Panoramic Cameras:

	Camera No. <u>118</u>	Camera No. <u>119</u>
Type	<u>7J-40</u>	<u>7J-40</u>
Length	<u>16000</u> ft.	<u>16000</u> ft.
Splices	<u>4</u>	<u>5</u>
Exul. Date	<u>81-6-1-5</u>	<u>81-6-1-5</u>

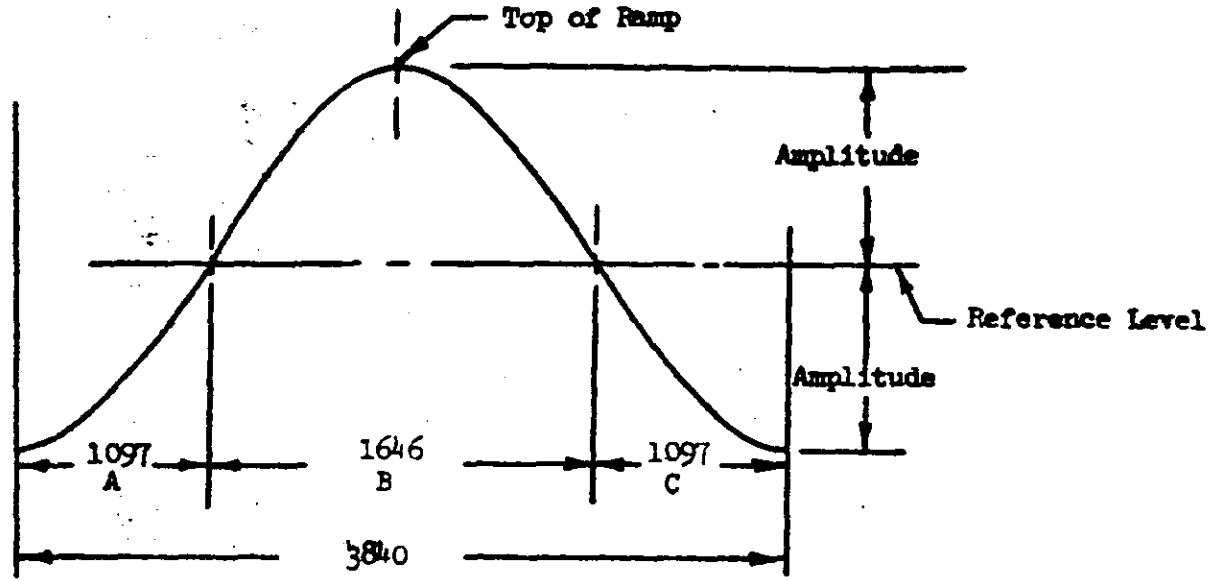
Stellar Index Cameras:

	Stellar Index A		Stellar Index B	
	Stellar	Index	Stellar	Index
Type	<u>3J-34</u>	<u>7J-33</u>	<u>3J-34</u>	<u>7J-33</u>
Exul. Date	<u>54-2-9-4</u>	<u>37-1-12-4</u>	<u>54-2-9-4</u>	<u>37-1-12-4</u>

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CAMERA NOS. 118 + 119

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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:

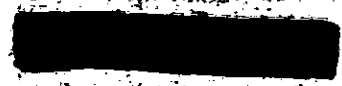
FMC Rate (In/Sec) = $2 \pi \left(\frac{0.3223}{CP} \right) = 2.02507 \times CPS$
 FMC Rate (Radians/Sec) = $2 \pi \left(\frac{0.3224}{24 CP} \right) = 0.84378 \times CPS$

Scan Velocity Computation:

Scan Velocity (In/Sec) = $\frac{48 \pi}{CF} = 150.796 \times CPS$
 Scan Velocity (Radians/Sec) = $\frac{48 \pi}{24 CP} = 6.28319 \times CPS$

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

WHERE: $X = \frac{\text{Time Up Ramp (Seconds)}}{1047.6942}$ $R = \frac{1}{2} (CPS_{top} + CPS_{bottom})$
 $A = \frac{1}{2} (CPS_{top} - CPS_{bottom})$ $CP = \text{Camera Cycle Period in Sec/Cycle}$
 CPS = Camera Cycle Rate in Cycles/Sec
 SLIT = Slit Width in Inches



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SYSTEM NO. J-04
 VEHICLE NO. 1674
 MISSION NO. 1019
 CAMERA NOS. 118 + 119

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CYCLE PERIOD DATA:

PRE-FLIGHT CYCLE PERIODS:

V/H Ramp Level	V/H Ramp Amplitude	Cycle Period Seconds		Time Up Ramp Sec
		Master	Slave	
8	3	4.873	4.879	256
8	3	2.238	2.230	1815
8	3	4.780	4.792	313
8	3	2.223	2.215	1960
8	3	2.222	2.214	1930
8	3	4.550	4.560	428
8	3	2.229	2.221	2006
8	3	4.445	4.451	481
8	3	2.231	2.224	2025

IN-FLIGHT CYCLE PERIODS

V/H Ramp Level	V/H Ramp Amplitude	Cycle Period Seconds		Orbit No.	Time Up Ramp Sec
		Master	Slave		
8	3	4.750	4.830	8	256
8	3	2.224	2.272	16	1815
8	3	4.710	4.760	24	313
8	3	2.215	2.251	31	1960
8	3	2.237	2.278	47	1930
8	3	4.495	4.573	56	428
8	3	2.230	2.260	63	2006
8	3	4.397	4.453	71	481
8	3	2.254	2.288	79	2025

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SYSTEM NO. J-04
VEHICLE NO. 1612
MISSION NO. 1019
CAMERA NOS. 118 & 119

LENS DATA SUMMARY: Master Camera No. 118

Lens Serial No. 0602435

Slit Width 0.250 Inch

Filter Type WRATTEN 25

Equivalent Operational Focal Length 609.574 MM

Resolution:

Static:

	Lines/MM	Film Type	Target Contrast
Snatch Test	<u>265</u>	<u>50-132</u>	<u>HIGH</u>
Other	<u>149</u>	<u>50-132</u>	<u>LOW</u>

Dynamic:

Itak <u> </u>	<u>174</u>	<u>50-132</u>	<u>HIGH</u>
Itak Post Vibration	<u>126</u>	<u>50-132</u>	<u>LOW</u>
AP	<u>179</u>	<u>50-132</u>	<u>HIGH</u>
AP	<u>112</u>	<u>50-132</u>	<u>LOW</u>
Other	<u> </u>	<u> </u>	<u> </u>

Note: Itak Post Vibration Resolution of 174 lines/MM Reported In
Message No. dated 4/29/65

Distortion - Positive (Pincushion)

Angle Off Axis Deg.	3°	2°	1°	0°	359°	358°	357°		
Distortion Millimeters	<u>.005</u>	<u>.003</u>	<u>.002</u>	<u>.000</u>	<u>.002</u>	<u>.003</u>	<u>.006</u>		

SYSTEM NO. J-04
 VEHICLE NO. 1614
 MISSION NO. 1019
 CAMERA NOS. 118 & 119

LENS DATA SUMMARY: (Horizon Cameras for MASTER Camera No. 118)

	Take-Up	Supply
Lens Serial No.	<u>81203</u>	<u>812313</u>
Exposure Time	<u>1/100</u> Sec.	<u>1/100</u> Sec.
Filter Type	<u>WRATTEN 25</u>	<u>WRATTEN 25</u>
Aperture	<u>F8.0</u>	<u>F6.8</u>
Operational Focal Length	<u>54.92</u> MM	<u>54.579</u> MM
Radial Distortion:		
10° off Axis	<u>.009</u> MM	<u>-.014</u> MM
20° off Axis	<u>.007</u> MM	<u>.004</u> MM
Tangential Distortion (Maximum Vector)	<u>.008</u> MM	<u>.004</u> MM

Resolution:

Angle off Axis Deg.	0	5	10	15	20	25	27.5	0	5	10	15	20	25	27.5
Radial Resolution	164	145	144	126	103	105	82	162	194	153	119	109	132	109
Tangential Resolution	164	145	134	114	91	60	46	73	172	151	115	91	64	49

116 Lines/MM Avg. 121 Lines/MM Avg.

Notes:

- Distortion and resolution are read at equivalent operational focal length.
- Resolution in lines per mm on 80-132 film and HIGH contrast target.

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SYSTEM NO. J-04
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MISSION NO. 1019
CAMERA NOS. 118 + 119

LENS DATA SUMMARY: Slave Camera No. 119

Lens Serial No. 0572435

Slit Width 0.175 Inch

Filter Type WRATTEN 21

Equivalent Operational Focal Length 609.117 MM

Resolution:

Static:

	<u>Lines/MM</u>	<u>Film Type</u>	<u>Target Contrast</u>
Bench Test	<u>258</u>	<u>S0-132</u>	<u>HIGH</u>
Other	<u>164</u>	<u>S0-132</u>	<u>LOW</u>

Dynamic:

Itek <u>[REDACTED]</u>	<u>172</u>	<u>S0-132</u>	<u>HIGH</u>
Itek Post Vibration	<u>119</u>	<u>S0-132</u>	<u>LOW</u>
AP	<u>186</u>	<u>S0-132</u>	<u>HIGH</u>
AP	<u>114</u>	<u>S0-132</u>	<u>LOW</u>
Other	<u> </u>	<u> </u>	<u> </u>

NOTE: Itek Post Vibration Resolution of 172 lines/MM Reported In

Message No. [REDACTED] dated 4/29/64

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>.009</u>	<u>.003</u>	<u>.001</u>	<u>.000</u>	<u>.000</u>	<u>.003</u>	<u>.005</u>		

SYSTEM NO. J-04
 VEHICLE NO. 1614
 MISSION NO. 1019
 CAMERA NOS. 118 + 119

LENS DATA SUMMARY: (Horizon Cameras for SLAVE Camera No. 119)

	<u>Take-Up</u>	<u>Supply</u>
Lens Serial No.	<u>813514</u>	<u>813520</u>
Exposure Time	<u>1/100</u> Sec.	<u>1/100</u> Sec.
Filter Type	<u>WRITTEN 25</u>	<u>WRITTEN 25</u>
Aperture	<u>F6.8</u>	<u>F8.0</u>
Operational Focal Length	<u>54.94</u> MM	<u>54.70</u> MM
Radial Distortion:		
10° off Axis	<u>.001</u> MM	<u>.001</u> MM
20° off Axis	<u>.009</u> MM	<u>.005</u> MM
Tangential Distortion (Maximum Vector)	<u>.006</u> MM	<u>.008</u> MM

Resolution:

Angle off Axis Deg.	0	5	10	15	20	25	27.5
Radial Resolution	116	116	91	64	65	83	55
Tangential Resolution	116	115	89	68	61	53	41

Angle off Axis Deg.	0	5	10	15	20	25	27.5
Radial Resolution	116	97	91	67	69	79	58
Tangential Resolution	116	102	89	77	64	57	41

81 Lines/MM Avg. 80 Lines/MM Avg.

NOTE:

1. Distortion and resolution are read at equivalent operational focal length.
2. Resolution in lines per MM on SO-132 film and HIGH contrast target.

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MISSION NO. 1019
MEDIA NOS. 118 & 119

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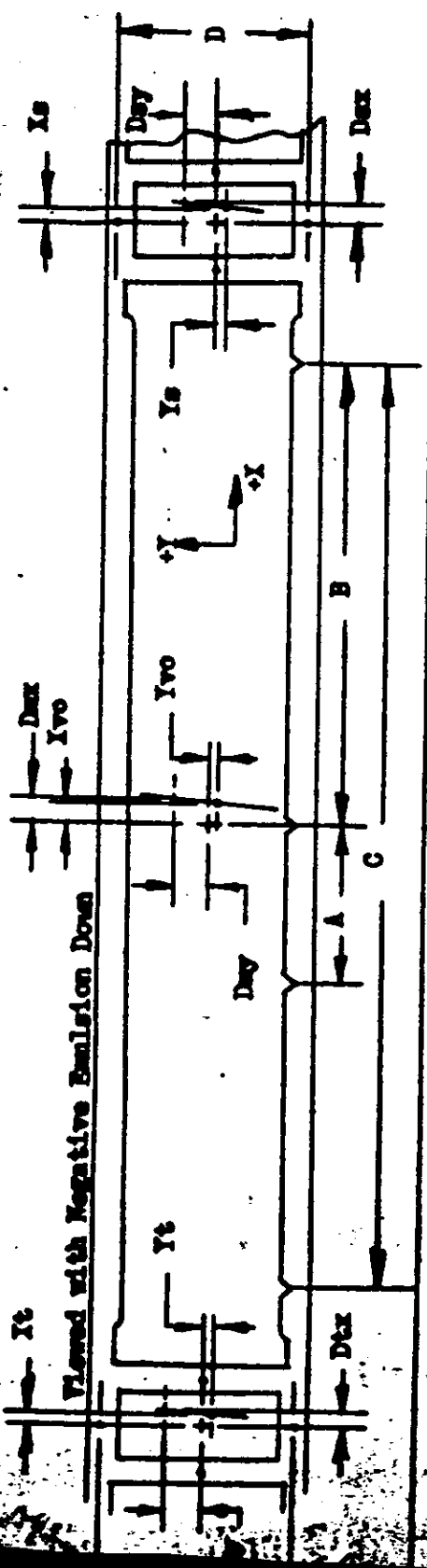
DEFINITION OF PANORAMIC CAMERA FORMAT CALIBRATIONS:

- 1.0 Measurements are made with respect to collimator targets fixed with respect to the mechanical interface between the total payload assembly and the orbital vehicle.
- 2.0 Two sets of three targets each, are aligned to be coplanar within $\pm 5^\circ$ of arc so positioned to form an angle of $-15.00^\circ \pm 5^\circ$ to the mechanical interface for master camera calibrations and an angle of $+15.00^\circ \pm 5^\circ$ 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 $75.00^\circ \pm 5^\circ$ 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_0 and Y_0 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_{ax} and D_{ay} 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_{ix} , D_{iy} , D_{sx} and D_{sy} are the effects of these measurements.

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 CAMERA NOS. 118 & 119

FORMAT DIMENSIONS: (PANORAMIC CAMERAS)



Camera No.	Vehicle Motion	Scan Direction	Vehicle Motion	Scan Direction
A <u>76.1</u>	$Ix = -0.299$	$Dtx = -0.310$	$Ix = -0.160$	$Dtx = -0.162$
B <u>354.7</u>	$Iy = -0.008$	$Ddy = +2.835$	$Iy = -0.031$	$Ddy = +2.462$
C <u>709.2</u>	$Iz = -0.024$	$Dtx = -0.026$	$Iz = -0.276$	$Dtx = -0.263$
D <u>56.424</u>	$Iy = -0.055$	$Ddy = +2.637$	$Iy = -0.037$	$Ddy = +2.103$
E <u>56.422</u>	$Ixo = +1.339$	$Dtx = +1.360$	$Ixo = -1.089$	$Dtx = -1.072$
	$Iyo = +0.727$	$Ddy = +3.727$	$Iyo = +0.730$	$Ddy = +3.730$

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Format Dimensions:

Panoramic	Take-Up	Supply
Height <u>55.801</u>	<u>N/A</u>	<u>N/A</u>
Width <u>752.1</u>	<u>N/A</u>	<u>N/A</u>

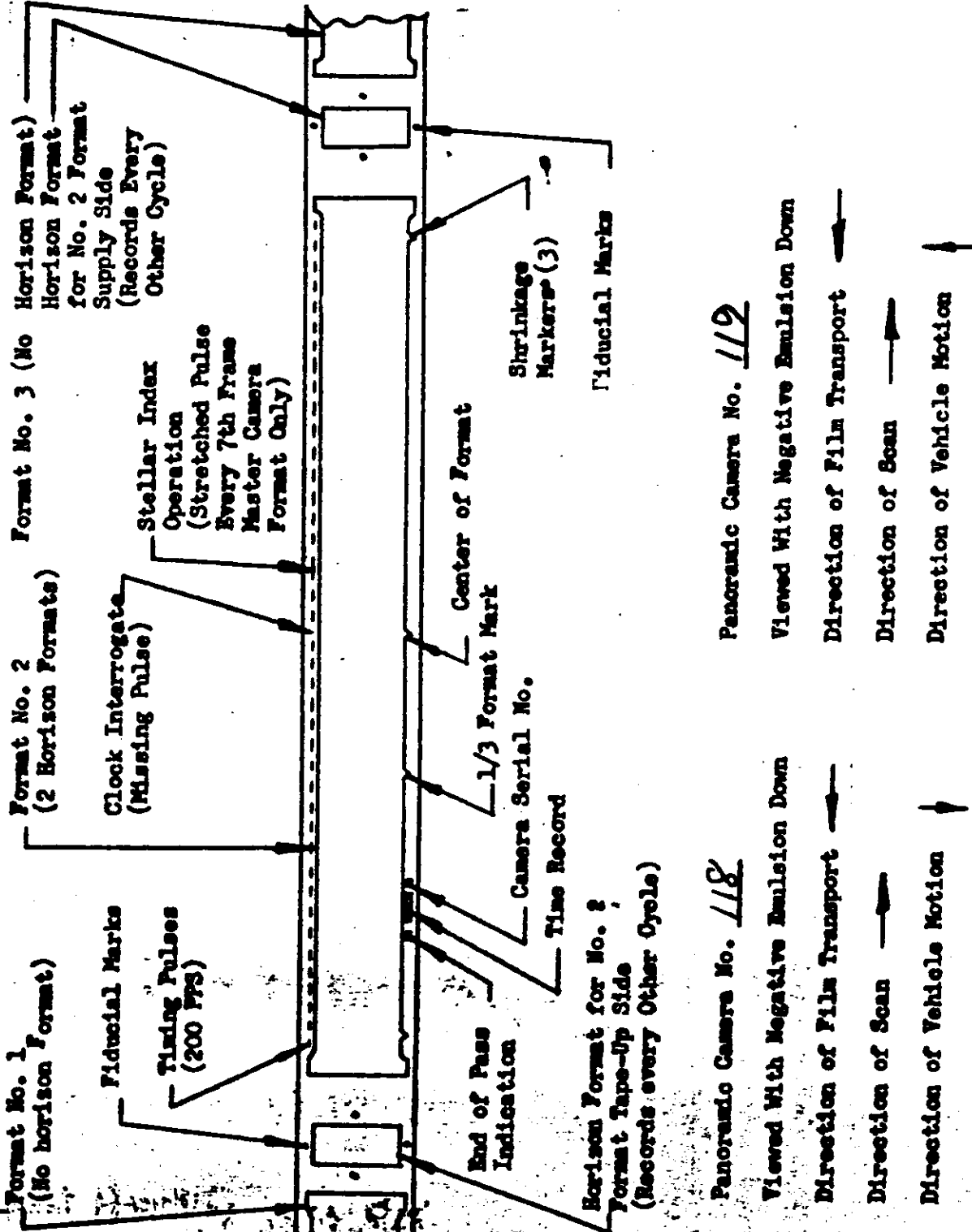
- Notes:
1. All dimensions are in millimeters and are average dimensions of three formats.
 2. Height of main format is taken at center of format.
 3. D_t, D_y, D_x and Y dimensions are taken 10MM above point defining target center.
 4. Format Sign Convention



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FORMAT LAYOUT: (PANORAMIC CAMERAS)



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CAMERA NOS. 118 & 119

LENS DATA SUMMARY STELLAR INDEX D39/39/35: A MISSION

	<u>Stellar</u>	<u>Index</u>
Lens Serial No.	<u>10487</u>	<u>813051</u>
Reseau Serial No.	<u>35</u>	<u>39</u>
Filter Type	<u>NONE</u>	<u>WRITTEN 21</u>
Aperture	<u>F1.8</u>	<u>F4.5</u>
Exposure Time	<u>2.0</u> Sec.	<u>1/500</u> Sec.
Equivalent Focal Length	<u>N/A</u> MM	<u>N/A</u> MM

Resolution:

Angle Off Axis	0	10	20	30	35
Resolution L/MM High Contrast	<u>92/82</u>	<u>104/92</u>	<u>117/82</u>	<u>93/54</u>	<u>87/28</u>

NOTE: Index Resolution of 74 Lines/MM AWAR
Read From 4400 Film.

Distortion:

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

Alignment:

0.0006 "1.937 Inches 0.0008 "1.225 Inches

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LENS DATA SUMMARY STELLAR INDEX D 19/18/19 : B MISSION

	<u>Stellar</u>	<u>Index</u>
Lens Serial No.	<u>10447</u>	<u>811905</u>
Reseau Serial No.	<u>19</u>	<u>18</u>
Filter Type	<u>NONE</u>	<u>WATTEN 21</u>
Aperture	<u>F 1.8</u>	<u>F 4.5</u>
Exposure Time	<u>2.0</u> Sec.	<u>1/500</u> Sec.
Equivalent Focal Length	<u>85</u> MM	<u>38.33</u> MM

Resolution:

Angle Off Axis	0	10	20	30	35
Resolution L/MM High Contrast	<u>91/101</u>	<u>102/109</u>	<u>120/106</u>	<u>80/42</u>	<u>70/33</u>

NOTE: Index Resolution of 73.5 Lines/MM AWAR

Read From 4400 Film.

Distortion:

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

Alignment:

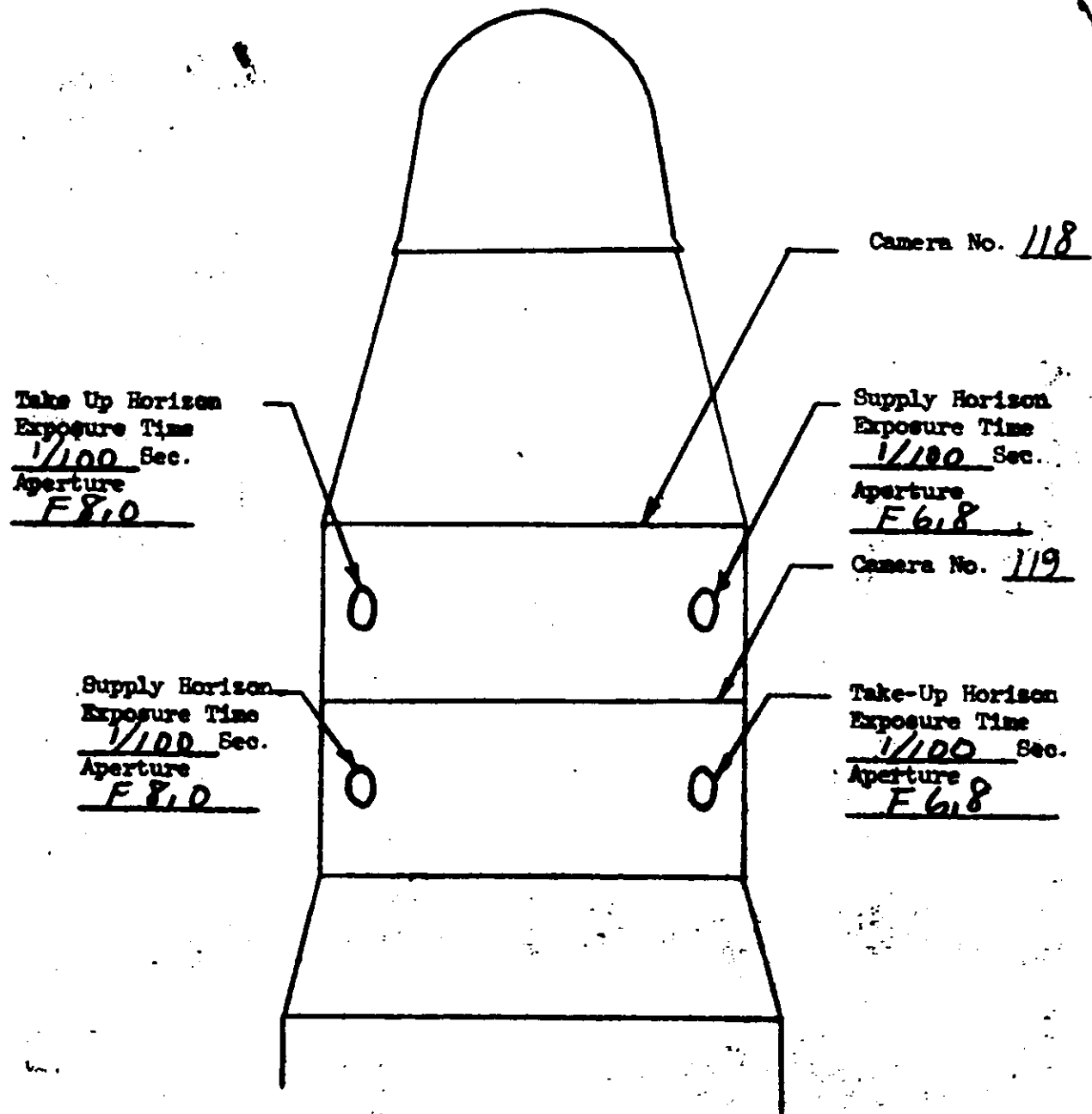
0.0005 " / 1.937 Inches 0.0007 " / 2.25 Inches

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SYSTEM NO. J-04
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HORIZON LINE SETTINGS (Viewed from top of vehicle in flight)



Flight Direction

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A. 1019-1 - LAUNCH 2144Z , 4/29/65
B. DRY
C. PERFORMANCE ESTIMATE, PART 1

10004
10005
10006

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OPERATIONS SUMMARY

FWD PAN CAMERA NUMBER		118															
OPN NO	FRA	Q	LAT	LONG	HEIGHT	RANGE	DA	H	M	S	LTIM	S-TIM					
PRE-FLT 136																	
1	5	0	13	ON	2 56 58	146 19W	700630	726222	29	23	14	07	1328	83647			10010
				OFF	2 54 19	145 46W	687314	712403	29	23	14	46	1331	83686			10011
2	5	1	25	ON	2 67 37	173 03W	760662	788529	30	00	42	34	1310	02554			10012
				OFF	2 62 57	170 57W	732256	759045	30	00	43	45	1319	02625			10013
3	6	1	47	ON	2 66 48	164 29E	753962	781574	30	02	13	53	1311	08033			11001
				OFF	2 58 11	167 35E	704404	730138	30	02	16	02	1326	08162			11002
3	6	2	21	ON	2 55 45	168 10E	691879	717140	30	02	16	39	1329	08199			11003
				OFF	2 52 06	168 51E	674532	699139	30	02	17	33	1333	08253			11004
4	6	1	48	ON	2 66 22	141 49E	749668	777117	30	03	45	07	1312	13507			11005
				OFF	2 57 43	144 49E	700636	726228	30	03	47	17	1326	13637			11006
4	6	2	19	ON	2 45 50	146 52E	647744	671343	30	03	50	12	1337	13812			11007
				OFF	2 42 38	147 13E	636695	659878	30	03	50	59	1339	13859			11008
5	1	1	62	ON	2 81 32	095 40E	855409	886893	30	05	12	12	1134	18732			11009
				OFF	2 69 59	116 48E	770991	799251	30	05	15	18	1302	18918			11010
5	1	1	47	ON	2 58 54	121 38E	705512	731289	30	05	18	06	1324	19086			11011
				OFF	2 50 52	123 17E	666891	691210	30	05	20	05	1333	19205			11012
5	1	1	18	ON	2 38 55	124 40E	625071	647818	30	05	23	01	1341	19381			11013
				OFF	2 35 58	124 53E	617928	640407	30	05	23	44	1343	19424			11014
5	1	2	18	ON	2 02 25	126 15E	636869	660057	30	05	31	53	1356	19913			11015
				OFF	3 00 43	126 20E	648423	672045	30	05	32	39	1357	19959			11016
5	1	3	15	ON	3 03 10	126 23E	658522	682524	30	05	33	15	1358	19995			11017
				OFF	3 05 47	126 27E	670287	694733	30	05	33	53	1359	20033			11018
6	7	1	103	ON	2 75 25	088 33E	806189	835790	30	06	45	01	1239	24301			11019
				OFF	2 57 37	099 04E	697580	723056	30	06	49	31	1325	24571			11020
6	7	2	23	ON	2 53 47	099 54E	678862	703632	30	06	50	28	1330	24628			11021
				OFF	2 50 05	100 31E	662510	686664	30	06	51	23	1333	24683			11022
6	7	3	24	ON	2 41 51	101 31E	632692	655725	30	06	53	24	1339	24804			11023
				OFF	2 38 09	101 50E	622457	645106	30	06	54	18	1341	24858			11024
6	7	4	50	ON	2 28 22	102 28E	605508	627521	30	06	56	41	1346	25001			11025
				OFF	2 20 44	102 48E	603067	624989	30	06	58	32	1349	25112			11026
7	9	1	17	ON	2 55 52	076 35E	687633	712734	30	08	21	04	1327	30064			11027
				OFF	2 53 16	077 07E	675325	699962	30	08	21	43	1330	30103			11028
7	9	2	21	ON	2 50 48	077 32E	664464	688692	30	08	22	19	1332	30139			11029
				OFF	2 47 41	077 58E	651955	675711	30	08	23	05	1335	30185			11030
7	9	3	15	ON	2 41 54	078 37E	632120	655131	30	08	24	30	1339	30270			11031
				OFF	2 39 41	078 50E	625788	648562	30	08	25	03	1340	30303			11032
7	9	4	48	ON	2 20 24	079 56E	603192	625118	30	08	29	44	1349	30584			11033
				OFF	2 13 44	080 09E	609716	631886	30	08	31	21	1352	30681			11034
8	4	0	9	ON	1 39 08	109 32W	1281927	1330084	30	09	30	55	0212	34255			11035
				OFF	1 42 04	109 17W	1260978	1308301	30	09	31	41	0214	34301			11036
8	4	1	71	ON	2 69 25	048 32E	762443	790378	30	09	48	47	1302	35327			11037
				OFF	2 55 42	053 44E	685617	710641	30	09	52	13	1327	35533			11038
9	2	1	21	ON	2 61 28	029 20E	713982	740078	30	11	21	53	1319	40913			11039
				OFF	2 57 50	030 22E	694877	720252	30	11	22	47	1324	40967			11040
9	2	2	32	ON	2 54 30	031 06E	678760	703526	30	11	23	36	1328	41016			11041
				OFF	2 49 19	031 59E	656398	680321	30	11	24	53	1332	41093			11042
12	2	1	18	ON	2 81 33	064 39W	842655	873650	30	15	49	55	1131	56995			11043
				OFF	2 78 11	053 34W	815933	845906	30	15	50	53	1216	57053			11044

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13	5	1	36	ON	3	29	11	055	45W	832011	862595	30	17	48	26	1405	64106	11049
				OFF	3	36	53	055	17W	896116	929160	30	17	50	20	1409	64220	11050
16	5	0	15	ON	2	37	45	126	56W	616788	639224	30	22	05	24	1337	79524	11051
				OFF	2	35	17	126	46W	612119	634380	30	22	06	00	1338	79560	11052
19	3	1	26	ON	2	71	49	155	01E	760906	788782	01	02	30	14	1250	09014	11053
				OFF	2	67	11	158	09E	732895	759708	01	02	31	25	1304	09085	11054
19	3	2	41	ON	2	60	47	160	44E	698249	723751	01	02	33	01	1315	09181	11055
				OFF	2	54	02	162	23E	666770	691084	01	02	34	41	1324	09281	11056
21	8	1	19	ON	2	80	27	094	02E	817271	847295	01	05	30	07	1146	19807	11057
				OFF	2	77	01	102	47E	792089	821151	01	05	31	04	1222	19864	11058
21	8	2	61	ON	2	52	23	116	55E	658047	682033	01	05	37	16	1324	20236	11059
				OFF	2	42	45	118	11E	626048	648832	01	05	39	38	1332	20378	11060
21	8	3	57	ON	2	30	27	119	07E	604860	626849	01	05	42	38	1339	20558	11061
				OFF	2	21	45	119	32E	604409	626381	01	05	44	45	1342	20685	11062
22	2	1	29	ON	2	57	24	093	01E	678526	703284	01	07	07	07	1319	25627	11063
				OFF	2	52	43	093	59E	658482	682484	01	07	08	16	1324	25696	11064
22	2	2	56	ON	2	23	33	096	34E	603578	625519	01	07	15	24	1341	26124	11065
				OFF	2	14	48	096	54E	613505	635818	01	07	17	32	1345	26252	11066
22	2	3	28	ON	2	05	38	097	10E	637722	660942	01	07	19	45	1348	26385	11067
				OFF	2	00	52	097	17E	655761	679660	01	07	20	54	1350	26454	11068
23	5	1	20	ON	2	81	26	044	11E	821643	851834	01	08	32	00	1128	30720	11069
				OFF	2	78	02	055	02E	795847	825054	01	08	32	58	1213	30778	11070
23	5	2	88	ON	2	48	20	071	47E	641546	664911	01	08	40	26	1327	31226	11071
				OFF	2	34	42	073	06E	608961	631104	01	08	43	46	1336	31426	11072
23	5	3	43	ON	2	18	34	073	53E	607949	630054	01	08	47	42	1343	31662	11073
				OFF	2	11	51	074	06E	620263	642828	01	08	49	20	1345	31760	11074
24	9	0	10	ON	1	39	13	115	38W	1245892	1292615	01	09	48	31	0205	35311	11075
				OFF	1	42	07	115	23W	1224794	1270679	01	09	49	17	0207	35357	11076
24	9	1	138	ON	2	59	17	046	46E	685092	710098	01	10	08	50	1315	36530	11077
				OFF	2	37	38	050	00E	613241	635544	01	10	14	09	1334	36849	11078
24	9	2	43	ON	2	20	26	050	56E	606089	628123	01	10	18	20	1342	37100	11079
				OFF	2	13	45	051	10E	616451	638874	01	10	19	57	1344	37197	11080
25	1	1	128	ON	2	60	26	023	34E	689433	714602	01	11	39	38	1313	41978	11081
				OFF	2	40	17	026	54E	618036	640519	01	11	44	35	1332	42275	11082
27	3	1	27	ON	2	72	33	028	40W	753338	780927	01	14	38	45	1244	52725	11083
				OFF	2	67	54	025	16W	726017	752569	01	14	39	56	1258	52796	11084
28	2	1	22	ON	2	62	38	045	47W	696792	722239	01	16	12	20	1309	58340	11085
				OFF	2	58	54	044	38W	679001	703776	01	16	13	16	1314	58396	11086
30	2	1	50	ON	2	41	54	087	37W	619286	641816	01	19	19	35	1329	69575	11087
				OFF	2	34	09	087	00W	606669	628726	01	19	21	28	1333	69688	11088
31	2	1	31	ON	2	34	01	109	52W	606389	628435	01	20	52	35	1333	75155	11089
				OFF	2	29	11	109	35W	603519	625458	01	20	53	46	1335	75226	11090
34	3	1	18	ON	2	70	58	172	32E	733918	760770	02	01	16	41	1246	04601	11091
				OFF	2	67	46	174	39E	716110	742288	02	01	17	30	1256	04650	11092
38	2	1	26	ON	2	56	58	087	04E	661320	685429	02	07	24	28	1312	26668	11093
				OFF	2	52	44	087	56E	645608	669126	02	07	25	31	1317	26731	11094
38	2	2	24	ON	2	41	55	089	21E	616456	638880	02	07	28	10	1325	26890	11095
				OFF	2	38	10	089	41E	610279	632471	02	07	29	05	1327	26945	11096
40	4	1	27	ON	2	70	28	035	40E	723341	749793	02	10	23	14	1245	37394	11097
				OFF	2	65	49	038	24E	698958	724487	02	10	24	25	1258	37465	11098
40	4	2	84	ON	2	59	25	040	42E	669586	694007	02	10	26	00	1308	37560	11099
				OFF	2	46	11	043	09E	625120	647868	02	10	29	15	1321	37755	11100
41	2	1	29	ON	2	56	21	018	36E	656529	680458	02	11	57	49	1312	43069	11101
				OFF	2	51	42	019	29E	640271	663588	02	11	58	58	1316	43138	11102

41	2	2	23	ON	2	49	16	019	52E	632875	655915	02	11	59	34	1319	43174	11103
				OFF	2	45	38	020	20E	623397	646081	02	12	00	27	1321	43227	11104
47	1	1	21	ON	2	37	54	116	08W	608947	631089	02	21	08	42	1324	76122	11105
				OFF	2	34	38	115	54W	606475	628524	02	21	09	30	1325	76170	11106
54	2	1	62	ON	2	56	28	081	14E	646994	670564	03	07	41	32	1306	27692	11107
				OFF	2	46	42	082	52E	620507	643083	03	07	43	56	1315	27836	11108
55	7	1	18	ON	2	74	26	048	50E	725617	752154	03	09	08	05	1223	32885	11109
				OFF	2	71	22	051	53E	709294	735213	03	09	08	52	1236	32932	11110
55	7	2	43	ON	2	30	26	061	22E	606916	628982	03	09	18	56	1324	33536	11111
				OFF	2	23	43	061	42E	613453	635763	03	09	20	34	1327	33634	11112
55	7	0	7	ON	4	20	18	129	39W	1534967	1593323	03	10	07	08	0128	36428	11113
				OFF	4	18	22	129	35W	1527715	1585776	03	10	07	39	0129	36459	11114
56	7	0	10	ON	1	39	10	127	40W	1173256	1217102	03	10	22	44	0152	37364	11115
				OFF	1	42	05	127	24W	1151400	1194384	03	10	23	30	0153	37410	11116
56	2	0	6	ON	4	20	28	152	32W	1534679	1593024	03	11	38	08	0128	41888	11117
				OFF	4	18	31	152	28W	1527289	1585333	03	11	38	40	0128	41920	11118
57	2	1	43	ON	2	54	34	013	01E	638761	662022	03	12	15	08	1307	44108	11119
				OFF	2	47	50	014	07E	621540	644155	03	12	16	47	1313	44207	11120
59	1	1	21	ON	2	81	39	060	16W	764107	792105	03	15	10	17	1109	54617	11121
				OFF	2	78	14	048	52W	741911	769066	03	15	11	15	1155	54675	11122
62	4	1	20	ON	2	32	23	098	49W	607274	629354	03	19	55	46	1320	71746	11123
				OFF	2	29	14	098	38W	609222	631375	03	19	56	32	1321	71792	11124
63	4	1	21	ON	2	36	27	121	57W	607076	629149	03	21	25	49	1318	77149	11125
				OFF	2	33	11	121	44W	607173	629248	03	21	26	37	1319	77197	11126
66	5	1	42	ON	2	66	42	163	20E	675440	700081	04	01	51	30	1244	06690	11127
				OFF	2	60	02	165	53E	650082	673769	04	01	53	09	1256	06789	11128
68	4	1	40	ON	2	75	43	109	50E	716066	742242	04	04	51	16	1210	17476	11129
				OFF	2	69	03	116	16E	683767	708723	04	04	52	58	1238	17578	11130
70	2	1	18	ON	2	56	08	075	25E	635825	658976	04	07	58	15	1259	28695	11131
				OFF	2	53	14	076	00E	628372	651243	04	07	58	58	1302	28738	11132
70	2	2	51	ON	2	50	50	076	24E	623042	645713	04	07	59	32	1305	28772	11133
				OFF	2	42	54	077	25E	611070	633292	04	08	01	28	1311	28888	11134
71	6	0	10	ON	1	39	04	110	42W	1140155	1182696	04	09	08	19	0145	32899	11135
				OFF	1	41	57	110	27W	1118428	1160115	04	09	09	04	0147	32944	11136
71	9	1	54	ON	2	25	30	055	44E	618072	640556	04	09	36	45	1319	34605	11137
				OFF	2	16	51	056	04E	639133	662407	04	09	38	51	1323	34731	11138
72	5	1	96	ON	2	61	20	028	18E	650612	674318	04	10	59	01	1252	39541	11139
				OFF	2	46	34	031	16E	615223	637601	04	11	02	38	1307	39758	11140
72	5	2	65	ON	2	20	25	033	05E	629721	652642	04	11	09	00	1321	40140	11141
				OFF	2	09	44	033	26E	666251	690544	04	11	11	36	1325	40296	11142
73	7	1	32	ON	3	12	31	011	09E	797991	827275	04	12	48	05	1332	46085	11143
				OFF	3	19	13	011	22E	849522	880776	04	12	49	44	1335	46184	11144
74	1	1	59	ON	2	22	54	012	44W	625144	647893	04	14	10	27	1319	51027	11145
				OFF	2	13	14	012	23W	654246	678088	04	14	12	48	1323	51168	11146
76	1	1	11	ON	2	75	32	072	48W	706119	731919	04	16	59	33	1208	61173	11147
				OFF	2	73	42	070	31W	697200	722662	04	17	00	02	1217	61202	11148
76	3	1	21	ON	3	21	03	057	08W	869415	901432	04	17	23	15	1334	62595	11149
				OFF	3	25	43	056	57W	908935	942472	04	17	24	25	1336	62665	11150
78	5	1	48	ON	2	24	53	104	16W	623492	646179	04	20	14	04	1316	72844	11151
				OFF	2	17	09	103	58W	644165	667628	04	20	15	57	1320	72957	11152
79	5	0	16	ON	2	34	15	127	38W	611216	633444	04	21	42	48	1312	78168	11153
				OFF	2	31	47	127	29W	613308	635614	04	21	43	24	1313	78204	11154

NOTE - DATA INDICATE AN UNDESIRE OPERATION SEGMENT LISTED ABOVE AS 076 - 1 - 1. THE CAMERA SYSTEM

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████████████████████
WAS INADVERTANTLY ENABLED FOR 29 SECONDS DURING
ISSUANCE OF COMMANDS BY THE ██████████ TRACKING STATION.
COMMANDING WAS NOT PERFORMED ACCORDING TO SPECIFIC
INSTRUCTIONS OF THE H. Q. RESIDENT OFFICER.
CAMERA TURNOFF WAS MADE BY THE REDUNDANT OFF H-TIMER
BRUSH COMMAND, WITH NO SUBSEQUENT ABNORMAL OPERATION
ANTICIPATED.

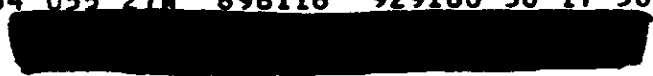
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OPERATIONS SUMMARY

AFT PAN CAMERA		NUMBER	119														
OPN NO	FRA	Q	LAT	LONG	HEIGHT	RANGE	DA	H	M	S	LTIM	S-TIM					
PRE-FLT 135																	
1	5	0	12	ON	2 57 59	146 38W	700630	726222	29	23	14	07	1327	83647			10020
				OFF	2 55 19	146 01W	687314	712403	29	23	14	46	1330	83686			10021
2	5	1	25	ON	2 68 42	173 45W	760662	788529	30	00	42	34	1307	02554			10022
				OFF	2 64 00	171 25W	732256	759045	30	00	43	45	1318	02625			10023
3	6	1	4	ON	2 60 04	167 01E	708926	734832	30	02	15	50	1323	08150			12001
				OFF	2 59 12	167 15E	704406	730141	30	02	16	03	1325	08163			12002
3	6	2	21	ON	2 56 45	167 52E	691879	717140	30	02	16	39	1328	08199			12003
				OFF	2 53 05	168 37E	674532	699139	30	02	17	33	1332	08253			12004
4	6	1	5	ON	2 59 40	144 15E	705493	731268	30	03	47	03	1324	13623			12005
				OFF	2 58 44	144 30E	700639	726231	30	03	47	17	1325	13637			12006
4	6	2	19	ON	2 46 47	146 41E	647744	671343	30	03	50	12	1336	13812			12007
				OFF	2 43 34	147 03E	636695	659878	30	03	50	59	1339	13859			12008
5	1	1	259	ON	2 82 31	089 57E	855415	886899	30	05	12	12	1112	18732			12009
				OFF	2 36 52	124 46E	617929	640408	30	05	23	44	1342	19424			12010
5	1	2	18	ON	2 03 21	126 10E	636869	660057	30	05	31	53	1356	19913			12011
				OFF	3 00 13	126 14E	648423	672045	30	05	32	39	1357	19959			12012
5	1	3	14	ON	3 02 13	126 18E	658522	682524	30	05	33	15	1358	19995			12013
				OFF	3 04 48	126 22E	670287	694733	30	05	33	53	1359	20033			12014
6	7	1	3	ON	2 76 32	086 47E	806194	835795	30	06	45	01	1232	24301			12015
				OFF	2 75 57	087 43E	802045	831488	30	06	45	10	1236	24310			12016
6	7	1	5	ON	2 59 36	098 30E	702532	728196	30	06	49	17	1323	24557			12017
				OFF	2 58 38	098 45E	697583	723059	30	06	49	31	1324	24571			12018
6	7	2	22	ON	2 54 46	099 39E	678862	703632	30	06	50	28	1329	24628			12019
				OFF	2 51 03	100 19E	662510	686664	30	06	51	23	1332	24683			12020
6	7	3	23	ON	2 42 46	101 22E	632692	655725	30	06	53	24	1338	24804			12021
				OFF	2 39 03	101 42E	622457	645106	30	06	54	18	1341	24858			12022
6	7	4	49	ON	2 29 15	102 22E	605508	627521	30	06	56	41	1346	25001			12023
				OFF	2 21 37	102 43E	603067	624989	30	06	58	32	1349	25112			12024
7	9	1	17	ON	2 56 52	076 18E	687633	712734	30	08	21	04	1326	30064			12025
				OFF	2 54 15	076 52E	675325	699962	30	08	21	43	1329	30103			12026
7	9	2	20	ON	2 51 46	077 19E	664464	688692	30	08	22	19	1331	30139			12027
				OFF	2 48 39	077 47E	651955	675711	30	08	23	05	1334	30185			12028
7	9	3	49	ON	2 42 50	078 29E	632122	655133	30	08	24	30	1338	30270			12029
				OFF	2 35 35	079 05E	614243	636583	30	08	26	16	1342	30376			12030
7	9	4	46	ON	2 21 16	079 51E	603192	625118	30	08	29	44	1349	30584			12031
				OFF	2 14 37	080 04E	609716	631886	30	08	31	21	1351	30681			12032
8	4	0	9	ON	1 37 16	109 48W	1281927	1330084	30	09	30	55	0211	34255			12033
				OFF	1 40 14	109 34W	1260978	1308301	30	09	31	41	0213	34301			12034
8	4	1	70	ON	2 70 30	047 42E	762443	790378	30	09	48	47	1259	35327			12035
				OFF	2 56 42	053 28E	685617	710641	30	09	52	13	1326	35533			12036
9	2	1	21	ON	2 62 30	028 55E	713982	740078	30	11	21	53	1317	40913			12037
				OFF	2 58 51	030 03E	694877	720252	30	11	22	47	1323	40967			12038
9	2	2	31	ON	2 55 30	030 50E	678760	703526	30	11	23	36	1327	41016			12039
				OFF	2 50 17	031 47E	656398	680321	30	11	24	53	1332	41093			12040
12	2	1	17	ON	2 82 31	070 18W	842655	873650	30	15	49	55	1108	56995			12041
				OFF	2 79 16	056 18W	815933	845906	30	15	50	53	1205	57053			12042
13	5	1	35	ON	3 27 58	055 54W	832011	862595	30	17	48	26	1404	64106			12043
				OFF	3 35 34	055 27W	896116	929160	30	17	50	20	1408	64220			12044



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16	5	0	15	ON	2	38	39	127	04W	616788	639224	30	22	05	24	1337	79524	12049
			OFF	2	36	11	126	53W	612119	634380	30	22	06	00	1338	79560	12050	
19	3	1	26	ON	2	72	53	153	58E	760906	788782	01	02	30	14	1246	09014	12051
			OFF	2	68	14	157	30E	732895	759708	01	02	31	25	1301	09085	12052	
19	3	2	40	ON	2	61	48	160	21E	698249	723751	01	02	33	01	1314	09181	12053
			OFF	2	55	01	162	07E	666770	691084	01	02	34	41	1323	09281	12054	
21	8	1	19	ON	2	81	27	089	47E	817271	847295	01	05	30	07	1129	19807	12055
			OFF	2	78	05	100	36E	792089	821151	01	05	31	04	1213	19864	12056	
21	8	2	60	ON	2	53	20	116	41E	658047	682033	01	05	37	16	1324	20236	12057
			OFF	2	43	40	118	03E	626048	648832	01	05	39	38	1331	20378	12058	
21	8	3	56	ON	2	31	20	119	01E	604860	626849	01	05	42	38	1338	20558	12059
			OFF	2	22	38	119	26E	604409	626381	01	05	44	45	1342	20685	12060	
22	2	1	28	ON	2	58	23	092	42E	678526	703284	01	07	07	07	1317	25627	12061
			OFF	2	53	41	093	45E	658482	682484	01	07	08	16	1323	25696	12062	
22	2	2	55	ON	2	24	26	096	29E	603578	625519	01	07	15	24	1341	26124	12063
			OFF	2	15	42	096	49E	613505	635818	01	07	17	32	1344	26252	12064	
22	2	3	28	ON	2	06	34	097	05E	637722	660942	01	07	19	45	1348	26385	12065
			OFF	2	01	50	097	12E	655761	679660	01	07	20	54	1349	26454	12066	
23	5	1	19	ON	2	82	24	038	51E	821643	851834	01	08	32	00	1107	30720	12067
			OFF	2	79	05	052	26E	795847	825054	01	08	32	58	1202	30778	12068	
23	5	2	86	ON	2	49	16	071	35E	641546	664911	01	08	40	26	1326	31226	12069
			OFF	2	35	36	072	59E	608961	631104	01	08	43	46	1335	31426	12070	
23	5	3	42	ON	2	19	27	073	48E	607949	630054	01	08	47	42	1342	31662	12071
			OFF	2	12	46	074	01E	620263	642828	01	08	49	20	1345	31760	12072	
24	9	0	10	ON	1	37	24	115	54W	1245892	1292615	01	09	48	31	0204	35311	12073
			OFF	1	40	19	115	40W	1224794	1270679	01	09	49	17	0206	35357	12074	
24	9	1	137	ON	2	60	17	046	25E	685092	710098	01	10	08	50	1314	36530	12075
			OFF	2	38	31	049	53E	613241	635544	01	10	14	09	1333	36849	12076	
24	9	2	42	ON	2	21	19	050	51E	606089	628123	01	10	18	20	1341	37100	12077
			OFF	2	14	39	051	05E	616451	638874	01	10	19	57	1344	37197	12078	
25	1	1	126	ON	2	61	26	023	11E	689433	714602	01	11	39	38	1312	41978	12079
			OFF	2	41	11	026	46E	618036	640519	01	11	44	35	1331	42275	12080	
27	3	1	26	ON	2	73	36	029	48W	753338	780927	01	14	38	45	1239	52725	12081
			OFF	2	68	56	025	57W	726017	752569	01	14	39	56	1256	52796	12082	
28	2	1	22	ON	2	63	39	046	13W	696792	722239	01	16	12	20	1307	58340	12083
			OFF	2	59	54	044	58W	679001	703776	01	16	13	16	1313	58396	12084	
30	2	1	50	ON	2	42	48	087	46W	619286	641816	01	19	19	35	1328	69575	12085
			OFF	2	35	02	087	07W	606669	628726	01	19	21	28	1333	69688	12086	
31	2	1	31	ON	2	34	55	109	59W	606389	628435	01	20	52	35	1332	75155	12087
			OFF	2	30	04	109	41W	603519	625458	01	20	53	46	1335	75226	12088	
34	3	1	18	ON	2	72	01	171	36E	733918	760770	02	01	16	41	1243	04601	12089
			OFF	2	68	48	173	59E	716110	742288	02	01	17	30	1253	04650	12090	
38	2	1	25	ON	2	57	56	086	47E	661320	685429	02	07	24	28	1311	26668	12091
			OFF	2	53	40	087	42E	645608	669126	02	07	25	31	1316	26731	12092	
38	2	2	23	ON	2	42	49	089	13E	616456	638880	02	07	28	10	1325	26890	12093
			OFF	2	39	03	089	33E	610279	632471	02	07	29	05	1327	26945	12094	
40	4	1	27	ON	2	71	30	034	47E	723341	749793	02	10	23	14	1242	37394	12095
			OFF	2	66	49	037	51E	698958	724487	02	10	24	25	1255	37465	12096	
40	4	2	83	ON	2	60	23	040	22E	669586	694007	02	10	26	00	1307	37560	12097
			OFF	2	47	06	042	59E	625120	647868	02	10	29	15	1321	37755	12098	
41	2	1	28	ON	2	57	19	018	19E	656529	680458	02	11	57	49	1311	43069	12099
			OFF	2	52	38	019	16E	640271	663588	02	11	58	58	1316	43138	12100	
41	2	2	22	ON	2	50	11	019	41E	632875	655915	02	11	59	34	1318	43174	12101
			OFF	2	46	33	020	10E	623397	646081	02	12	00	27	1321	43227	12102	



47	1	1	21	ON	2	38	47	116	16W	608947	631089	02	21	08	42	1323	76122	12103
				OFF	2	35	31	116	01W	606475	628524	02	21	09	30	1325	76170	12104
54	2	1	62	ON	2	57	24	080	57E	646994	670564	03	07	41	32	1305	27692	12105
				OFF	2	47	36	082	42E	620507	643083	03	07	43	56	1314	27836	12106
55	7	1	18	ON	2	75	27	047	27E	725617	752154	03	09	08	05	1217	32885	12107
				OFF	2	72	22	050	57E	709294	735213	03	09	08	52	1232	32932	12108
55	7	2	42	ON	2	31	19	061	16E	606916	628982	03	09	18	56	1324	33536	12109
				OFF	2	24	37	061	36E	613453	635763	03	09	20	34	1327	33634	12110
55	7	0	6	ON	4	22	33	129	52W	1534967	1593323	03	10	07	08	0127	36428	12111
				OFF	4	20	36	129	48W	1527715	1585776	03	10	07	39	0128	36459	12112
56	7	0	10	ON	1	37	27	127	54W	1173256	1217102	03	10	22	44	0151	37364	12113
				OFF	1	40	24	127	40W	1151400	1194384	03	10	23	30	0152	37410	12114
56	2	0	6	ON	4	22	43	152	45W	1534679	1593024	03	11	38	08	0127	41888	12115
				OFF	4	20	45	152	41W	1527289	1585333	03	11	38	40	0127	41920	12116
57	2	1	42	ON	2	55	30	012	46E	638761	662022	03	12	15	08	1306	44108	12117
				OFF	2	48	45	013	56E	621540	644155	03	12	16	47	1312	44207	12118
59	1	1	21	ON	2	82	31	065	27W	764107	792105	03	15	10	17	1048	54617	12119
				OFF	2	79	13	051	21W	741911	769066	03	15	11	15	1145	54675	12120
62	4	1	19	ON	2	33	17	098	55W	607274	629354	03	19	55	46	1320	71746	12121
				OFF	2	30	08	098	44W	609222	631375	03	19	56	32	1321	71792	12122
63	4	1	20	ON	2	37	20	122	04W	607076	629149	03	21	25	49	1317	77149	12123
				OFF	2	34	04	121	50W	607173	629248	03	21	26	37	1319	77197	12124
66	5	1	41	ON	2	67	40	162	46E	675440	700081	04	01	51	30	1242	06690	12125
				OFF	2	60	58	165	33E	650082	673769	04	01	53	09	1255	06789	12126
68	4	1	97	ON	2	76	42	108	14E	716070	742246	04	04	51	16	1204	17476	12127
				OFF	2	60	54	119	50E	648588	672218	04	04	55	14	1254	17714	12128
70	2	1	18	ON	2	57	03	075	09E	635825	658976	04	07	58	15	1258	28695	12129
				OFF	2	54	09	075	46E	628372	651243	04	07	58	58	1302	28738	12130
70	2	2	51	ON	2	51	45	076	12E	623042	645713	04	07	59	32	1304	28772	12131
				OFF	2	43	47	077	16E	611070	633292	04	08	01	28	1310	28888	12132
71	6	0	10	ON	1	37	24	110	56W	1140155	1182696	04	09	08	19	0144	32899	12133
				OFF	1	40	19	110	42W	1118428	1160115	04	09	09	04	0146	32944	12134
71	9	1	53	ON	2	26	24	055	38E	618072	640556	04	09	36	45	1319	34605	12135
				OFF	2	17	47	055	59E	639133	662407	04	09	38	51	1322	34731	12136
72	5	1	94	ON	2	62	16	027	55E	650612	674318	04	10	59	01	1250	39541	12137
				OFF	2	47	28	031	06E	615223	637601	04	11	02	38	1307	39758	12138
72	5	2	64	ON	2	21	21	032	59E	629721	652642	04	11	09	00	1321	40140	12139
				OFF	2	10	43	033	20E	666251	690544	04	11	11	36	1325	40296	12140
73	7	1	31	ON	3	11	21	011	03E	797991	827275	04	12	48	05	1332	46085	12141
				OFF	3	17	59	011	15E	849522	880776	04	12	49	44	1334	46184	12142
74	1	1	59	ON	2	23	49	012	49W	625144	647893	04	14	10	27	1319	51027	12143
				OFF	2	14	12	012	29W	654246	678088	04	14	12	48	1322	51168	12144
76	1	1	11	ON	2	76	30	074	20W	706119	731919	04	16	59	33	1202	61173	12145
				OFF	2	74	40	071	43W	697200	722662	04	17	00	02	1213	61202	12146
76	3	1	20	ON	3	19	46	057	16W	869415	901432	04	17	23	15	1334	62595	12147
				OFF	3	24	23	057	05W	908935	942472	04	17	24	25	1336	62665	12148
78	5	1	47	ON	2	25	48	104	22W	623492	646179	04	20	14	04	1316	72844	12149
				OFF	2	18	06	104	03W	644165	667628	04	20	15	57	1319	72957	12150
79	5	0	15	ON	2	35	08	127	45W	611216	633444	04	21	42	48	1311	78168	12151
				OFF	2	32	41	127	36W	613308	635614	04	21	43	24	1313	78204	12152

NOTE - DATA INDICATE AN UNDESIRED OPERATION SEGMENT LISTED ABOVE AS 076 - 1 - 1. THE CAMERA SYSTEM WAS INADVERTANTLY ENABLED FOR 29 SECONDS DURING ISSUANCE OF COMMANDS BY THE TRACKING STATION.

ABOVE

[REDACTED]

COMMANDING WAS NOT PERFORMED ACCORDING TO SPECIFIC INSTRUCTIONS OF THE H. Q. RESIDENT OFFICER. CAMERA TURNOFF WAS MADE BY THE REDUNDANT OFF H-TIMER BRUSH COMMAND, WITH NO SUBSEQUENT ABNORMAL OPERATION ANTICIPATED.

12157
12158
12159
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12161

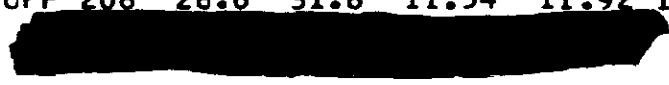
[REDACTED]

ARMY
[REDACTED]

~~SECRET~~

PHOTOGRAPHIC SUMMARY

FWD PAN	CAMERA NO	118	0.2500	SLIT	W/25	FILTER	4404	FILM				
OPN NO	FRA	FEET	ET	S-EL	S-DIR	EV	FULL	INT	PRI			
PRE-FLT	136	359.7										
1 5 0	13	34.4	ON 228	44.2	41.0	11.69	12.09	11.49	10.89			10030
			OFF 233	46.2	42.8	11.71	12.10	11.50	10.90			10031
2 5 1	25	66.1	ON 206	35.7	35.5	11.54	12.04	11.44	10.84			10032
			OFF 215	39.5	37.6	11.60	12.06	11.46	10.86			10033
3 6 1	47	124.3	ON 208	36.4	35.7	11.56	12.04	11.44	10.84			10034
			OFF 225	43.4	40.0	11.67	12.09	11.49	10.89			10035
3 6 2	21	55.5	ON 230	45.2	41.6	11.70	12.09	11.49	10.89			10036
			OFF 236	48.0	44.2	11.74	12.10	11.50	10.90			10037
4 6 1	48	127.0	ON 210	36.8	35.8	11.57	12.04	11.44	10.84			10038
			OFF 227	43.8	40.2	11.68	12.09	11.49	10.89			10039
4 6 2	19	50.3	ON 247	52.4	49.6	11.80	12.10	11.50	10.90			10040
			OFF 251	54.4	52.9	11.82	12.10	11.50	10.90			10041
5 1 1	62	164.0	ON 190	23.1	32.9	11.42	11.84	11.24	10.64			10042
			OFF 215	33.8	34.3	11.60	12.02	11.42	10.82			10043
5 1 1	47	124.3	ON 237	42.9	39.3	11.74	12.08	11.48	10.88			10044
			OFF 249	49.0	44.9	11.81	12.10	11.50	10.90			10045
5 1 1	18	47.6	ON 262	56.6	57.2	11.89	12.10	11.50	10.90			10046
			OFF 264	58.1	61.2	11.90	12.10	11.50	10.90			10047
5 1 2	18	47.6	ON 251	58.0	119.3	11.83	12.10	11.50	10.90			10048
			OFF 247	56.3	123.5	11.80	12.10	11.50	10.90			10049
5 1 3	15	39.7	ON 244	54.9	126.4	11.78	12.10	11.50	10.90			10050
			OFF 240	53.3	129.3	11.76	12.10	11.50	10.90			10051
6 7 1	103	272.4	ON 210	29.0	32.7	11.57	11.96	11.36	10.76			10052
			OFF 246	44.0	40.0	11.79	12.09	11.49	10.89			10053
6 7 2	23	60.8	ON 252	46.9	42.5	11.83	12.10	11.50	10.90			10054
			OFF 257	49.6	45.4	11.86	12.10	11.50	10.90			10055
6 7 3	24	63.5	ON 267	55.0	53.6	11.91	12.10	11.50	10.90			10056
			OFF 269	57.1	58.1	11.93	12.10	11.50	10.90			10057
6 7 4	50	132.2	ON 274	61.2	73.2	11.95	12.10	11.50	10.90			10058
			OFF 273	62.5	87.3	11.94	12.10	11.50	10.90			10059
7 9 1	17	45.0	ON 249	45.4	41.0	11.81	12.09	11.49	10.89			10060
			OFF 252	47.3	42.8	11.83	12.10	11.50	10.90			10061
7 9 2	21	55.5	ON 256	49.1	44.7	11.85	12.10	11.50	10.90			10062
			OFF 260	51.3	47.4	11.87	12.10	11.50	10.90			10063
7 9 3	15	39.7	ON 266	55.0	53.4	11.91	12.10	11.50	10.90			10064
			OFF 268	56.3	56.0	11.92	12.10	11.50	10.90			10065
7 9 4	48	127.0	ON 273	62.6	88.0	11.94	12.10	11.50	10.90			10066
			OFF 269	62.1	100.8	11.93	12.10	11.50	10.90			10067
8 4 0	9	23.8	ON 124	-27.4	31.2	10.80	0.	0.	0.			10068
			OFF 125	-24.9	30.5	10.82	0.	0.	0.			10069
8 4 1	71	187.8	ON 224	34.4	34.1	11.66	12.02	11.42	10.82			10070
			OFF 249	45.5	40.9	11.81	12.09	11.49	10.89			10071
9 2 1	21	55.5	ON 240	41.0	37.4	11.76	12.07	11.47	10.87			10072
			OFF 246	43.9	39.5	11.79	12.09	11.49	10.89			10073
9 2 2	32	84.6	ON 251	46.5	41.6	11.83	12.10	11.50	10.90			10074
			OFF 258	50.3	45.7	11.87	12.10	11.50	10.90			10075
12 2 1	18	47.6	ON 198	23.2	32.1	11.48	11.85	11.25	10.65			10076
			OFF 206	26.6	31.6	11.54	11.92	11.32	10.72			10077



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13	5	1	36	95.2	ON	196	36.1	146.1	11.47	12.04	11.44	10.84	13049
					OFF	184	29.6	148.8	11.37	11.97	11.37	10.77	13050
16	5	0	15	39.7	ON	271	58.1	57.4	11.94	12.10	11.50	10.90	13051
					OFF	272	59.4	60.9	11.94	12.10	11.50	10.90	13052
19	3	1	26	68.8	ON	224	22.2	29.2	11.66	11.82	11.22	10.62	13053
					OFF	233	26.4	30.0	11.72	11.92	11.32	10.72	13054
19	3	2	41	108.4	ON	245	32.0	31.8	11.79	12.00	11.40	10.80	13055
					OFF	256	37.7	34.3	11.85	12.05	11.45	10.85	13056
21	8	1	19	50.3	ON	204	14.0	29.0	11.53	11.42	10.82	10.22	13057
					OFF	212	17.4	28.6	11.58	11.63	11.03	10.43	13058
21	8	2	61	161.3	ON	257	39.2	34.8	11.86	12.06	11.46	10.86	13059
					OFF	267	47.0	40.3	11.91	12.10	11.50	10.90	13060
21	8	3	57	150.8	ON	272	55.6	51.4	11.94	12.10	11.50	10.90	13061
					OFF	271	60.4	63.1	11.93	12.10	11.50	10.90	13062
22	2	1	29	76.7	ON	250	35.0	32.6	11.82	12.03	11.43	10.83	13063
					OFF	257	39.0	34.5	11.86	12.06	11.46	10.86	13064
22	2	2	56	148.1	ON	271	59.6	60.3	11.94	12.10	11.50	10.90	13065
					OFF	266	63.0	75.2	11.91	12.10	11.50	10.90	13066
22	2	3	28	74.1	ON	256	63.9	93.7	11.85	12.10	11.50	10.90	13067
					OFF	249	63.2	103.2	11.82	12.10	11.50	10.90	13068
23	5	1	20	52.9	ON	202	13.0	29.2	11.51	11.35	10.75	10.15	13069
					OFF	210	16.5	28.4	11.57	11.58	10.98	10.38	13070
23	5	2	88	232.8	ON	262	42.7	36.6	11.89	12.08	11.48	10.88	13071
					OFF	272	53.0	46.6	11.94	12.10	11.50	10.90	13072
23	5	3	43	113.7	ON	269	61.9	68.3	11.92	12.10	11.50	10.90	13073
					OFF	263	63.7	81.0	11.89	12.10	11.50	10.90	13074
24	9	0	10	26.5	ON	125	-37.9	33.7	10.82	0.	0.	0.	13075
					OFF	127	-35.5	32.5	10.84	0.	0.	0.	13076
24	9	1	138	365.0	ON	248	33.5	31.7	11.81	12.02	11.42	10.82	13077
					OFF	270	51.0	43.8	11.93	12.10	11.50	10.90	13078
24	9	2	43	113.7	ON	270	61.3	65.0	11.93	12.10	11.50	10.90	13079
					OFF	265	63.5	77.2	11.90	12.10	11.50	10.90	13080
25	1	1	128	338.6	ON	244	32.6	31.2	11.79	12.01	11.41	10.81	13081
					OFF	267	49.1	41.6	11.91	12.10	11.50	10.90	13082
27	3	1	27	71.4	ON	223	21.8	28.2	11.65	11.80	11.20	10.60	13083
					OFF	232	26.0	29.0	11.71	11.91	11.31	10.71	13084
28	2	1	22	58.2	ON	242	30.7	30.2	11.77	11.98	11.38	10.78	13085
					OFF	248	34.0	31.3	11.81	12.02	11.42	10.82	13086
30	2	1	50	132.2	ON	267	48.2	39.7	11.91	12.10	11.50	10.90	13087
					OFF	270	53.9	46.3	11.93	12.10	11.50	10.90	13088
31	2	1	31	82.0	ON	270	54.1	46.3	11.93	12.10	11.50	10.90	13089
					OFF	270	57.3	51.7	11.93	12.10	11.50	10.90	13090
34	3	1	18	47.6	ON	230	23.4	27.6	11.70	11.85	11.25	10.65	13091
					OFF	236	26.4	28.2	11.73	11.92	11.32	10.72	13092
38	2	1	26	68.8	ON	254	36.1	30.8	11.84	12.04	11.44	10.84	13093
					OFF	259	39.8	32.6	11.87	12.07	11.47	10.87	13094
38	2	2	24	63.5	ON	268	48.7	38.7	11.92	12.10	11.50	10.90	13095
					OFF	269	51.6	41.6	11.92	12.10	11.50	10.90	13096
40	4	1	27	71.4	ON	233	24.1	27.0	11.71	11.87	11.27	10.67	13097
					OFF	241	28.4	28.0	11.76	11.95	11.35	10.75	13098
40	4	2	84	222.2	ON	251	34.1	29.8	11.82	12.02	11.42	10.82	13099
					OFF	265	45.4	35.7	11.90	12.09	11.49	10.89	13100
41	2	1	29	76.7	ON	255	36.8	30.7	11.85	12.04	11.44	10.84	13101
					OFF	260	40.8	32.7	11.88	12.07	11.47	10.87	13102



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41	2	2	23	60.8	ON 263	42.9	33.9	11.89	12.08	11.48	10.88	13103
					OFF 266	45.9	35.9	11.91	12.10	11.50	10.90	13104
47	1	1	21	55.5	ON 270	52.4	40.6	11.93	12.10	11.50	10.90	13105
					OFF 270	54.8	43.6	11.93	12.10	11.50	10.90	13106
54	2	1	62	164.0	ON 259	37.3	29.1	11.87	12.05	11.45	10.85	13107
					OFF 267	45.7	33.6	11.91	12.10	11.50	10.90	13108
55	7	1	18	47.6	ON 230	20.8	24.9	11.70	11.77	11.17	10.57	13109
					OFF 235	23.7	25.2	11.73	11.86	11.26	10.66	13110
55	7	2	43	113.7	ON 267	58.4	47.1	11.91	12.10	11.50	10.90	13111
					OFF 263	62.6	56.5	11.89	12.10	11.50	10.90	13112
55	7	0	7	18.5	ON 117	-64.4	117.6	10.73	0.	0.	0.	13113
					OFF 117	-65.2	113.9	10.73	0.	0.	0.	13114
56	7	0	10	26.5	ON 129	-38.9	29.6	10.86	0.	0.	0.	13115
					OFF 131	-36.3	28.5	10.89	0.	0.	0.	13116
56	2	0	6	15.9	ON 117	-64.4	118.0	10.73	0.	0.	0.	13117
					OFF 117	-65.3	114.2	10.73	0.	0.	0.	13118
57	2	1	43	113.7	ON 260	39.1	29.5	11.87	12.06	11.46	10.86	13119
					OFF 265	44.9	32.6	11.90	12.09	11.49	10.89	13120
59	1	1	21	55.5	ON 216	13.5	25.3	11.61	11.39	10.79	10.19	13121
					OFF 223	17.1	24.4	11.66	11.61	11.01	10.41	13122
62	4	1	20	52.9	ON 266	57.6	43.9	11.91	12.10	11.50	10.90	13123
					OFF 265	59.8	47.6	11.90	12.10	11.50	10.90	13124
63	4	1	21	55.5	ON 268	54.6	39.7	11.92	12.10	11.50	10.90	13125
					OFF 267	57.1	42.9	11.91	12.10	11.50	10.90	13126
66	5	1	42	111.1	ON 248	28.4	24.8	11.80	11.95	11.35	10.75	13127
					OFF 256	34.6	26.5	11.85	12.03	11.43	10.83	13128
68	4	1	40	105.8	ON 233	19.9	23.4	11.72	11.74	11.14	10.54	13129
					OFF 244	26.3	24.1	11.78	11.92	11.32	10.72	13130
70	2	1	18	47.6	ON 261	38.3	27.3	11.88	12.06	11.46	10.86	13131
					OFF 263	40.9	28.4	11.89	12.07	11.47	10.87	13132
70	2	2	51	134.9	ON 265	43.0	29.4	11.90	12.08	11.48	10.88	13133
					OFF 268	49.8	33.8	11.92	12.10	11.50	10.90	13134
71	6	0	10	26.5	ON 132	-39.3	27.6	10.90	0.	0.	0.	13135
					OFF 135	-36.7	26.6	10.93	0.	0.	0.	13136
71	9	1	54	142.8	ON 261	63.0	51.6	11.88	12.10	11.50	10.90	13137
					OFF 252	67.4	67.9	11.83	12.10	11.50	10.90	13138
72	5	1	96	253.9	ON 256	33.6	25.4	11.85	12.02	11.42	10.82	13139
					OFF 267	46.8	31.3	11.91	12.10	11.50	10.90	13140
72	5	2	65	171.9	ON 256	65.9	60.3	11.85	12.10	11.50	10.90	13141
					OFF 241	69.2	85.4	11.77	12.10	11.50	10.90	13142
73	7	1	32	84.6	ON 198	61.1	133.0	11.48	12.10	11.50	10.90	13143
					OFF 186	56.2	140.6	11.39	12.10	11.50	10.90	13144
74	1	1	59	156.1	ON 258	64.8	55.5	11.86	12.10	11.50	10.90	13145
					OFF 246	68.8	76.3	11.80	12.10	11.50	10.90	13146
76	1	1	11	29.1	ON 237	20.3	22.5	11.74	11.75	11.15	10.55	13147
					OFF 240	22.1	22.6	11.76	11.81	11.21	10.61	13148
76	3	1	21	55.5	ON 181	54.9	142.7	11.36	12.10	11.50	10.90	13149
					OFF 174	51.1	146.3	11.30	12.10	11.50	10.90	13150
78	5	1	48	127.0	ON 259	63.9	51.6	11.87	12.10	11.50	10.90	13151
					OFF 250	68.0	66.6	11.82	12.10	11.50	10.90	13152
79	5	0	16	42.3	ON 266	57.4	39.5	11.91	12.10	11.50	10.90	13153
					OFF 264	59.3	42.1	11.90	12.10	11.50	10.90	13154



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PHOTOGRAPHIC SUMMARY

AFT PAN	CAMERA	NO	119	0.1750	SLIT	W/21	FILTER	4404	FILM				
OPN NO	FRA	FEET	ET	S-EL	S-DIR	EV	FULL	INT	PRI				
PRE-FLT	135	357.1											
1 5 0	12	31.7	ON 320	43.4	40.1	12.17	12.74	12.14	11.54				10040
			OFF 326	45.5	41.8	12.20	12.74	12.14	11.54				10041
2 5 1	25	66.1	ON 288	34.8	34.3	12.02	12.68	12.08	11.48				10042
			OFF 301	38.7	36.5	12.09	12.71	12.11	11.51				10043
3 6 1	4	10.6	ON 314	41.9	38.5	12.15	12.73	12.13	11.53				14001
			OFF 316	42.6	39.1	12.15	12.73	12.13	11.53				14002
3 6 2	21	55.5	ON 323	44.5	40.6	12.19	12.74	12.14	11.54				14003
			OFF 331	47.3	43.2	12.22	12.75	12.15	11.55				14004
4 6 1	5	13.2	ON 316	42.3	38.7	12.16	12.73	12.13	11.53				14005
			OFF 318	43.0	39.2	12.17	12.73	12.13	11.53				14006
4 6 2	19	50.3	ON 346	51.8	48.4	12.29	12.75	12.15	11.55				14007
			OFF 352	53.8	51.7	12.31	12.75	12.15	11.55				14008
5 1 1	259	685.1	ON 266	22.0	26.9	11.91	12.46	11.86	11.26				14009
			OFF 370	57.7	59.8	12.38	12.75	12.15	11.55				14010
5 1 2	18	47.6	ON 352	58.5	118.0	12.31	12.75	12.15	11.55				14011
			OFF 347	56.9	122.3	12.29	12.75	12.15	11.55				14012
5 1 3	14	37.0	ON 341	55.5	125.3	12.27	12.75	12.15	11.55				14013
			OFF 336	54.0	128.3	12.25	12.75	12.15	11.55				14014
6 7 1	3	7.9	ON 293	28.0	30.6	12.05	12.60	12.00	11.40				14015
			OFF 294	28.5	30.8	12.05	12.60	12.00	11.40				14016
6 7 1	5	13.2	ON 340	42.4	38.4	12.26	12.73	12.13	11.53				14017
			OFF 342	43.2	39.0	12.27	12.74	12.14	11.54				14018
6 7 2	22	58.2	ON 351	46.2	41.6	12.31	12.75	12.15	11.55				14019
			OFF 358	48.9	44.4	12.34	12.75	12.15	11.55				14020
6 7 3	23	60.8	ON 371	54.5	52.3	12.39	12.75	12.15	11.55				14021
			OFF 375	56.6	56.8	12.40	12.75	12.15	11.55				14022
6 7 4	49	129.6	ON 381	61.0	71.5	12.43	12.75	12.15	11.55				14023
			OFF 380	62.5	85.6	12.42	12.75	12.15	11.55				14024
7 9 1	17	45.0	ON 346	44.6	40.0	12.29	12.74	12.14	11.54				14025
			OFF 351	46.6	41.8	12.31	12.75	12.15	11.55				14026
7 9 2	20	52.9	ON 357	48.4	43.7	12.33	12.75	12.15	11.55				14027
			OFF 362	50.7	46.3	12.35	12.75	12.15	11.55				14028
7 9 3	49	129.6	ON 371	54.5	52.1	12.39	12.75	12.15	11.55				14029
			OFF 378	58.5	61.4	12.41	12.75	12.15	11.55				14030
7 9 4	46	121.7	ON 380	62.6	86.2	12.42	12.75	12.15	11.55				14031
			OFF 375	62.3	99.1	12.40	12.75	12.15	11.55				14032
8 4 0	9	23.8	ON 172	-29.1	31.5	11.28	0.	0.	0.				14033
			OFF 174	-26.6	30.7	11.30	0.	0.	0.				14034
8 4 1	70	185.1	ON 312	33.4	32.8	12.14	12.66	12.06	11.46				14035
			OFF 347	44.8	40.0	12.29	12.74	12.14	11.54				14036
9 2 1	21	55.5	ON 334	40.2	36.4	12.24	12.72	12.12	11.52				14037
			OFF 342	43.1	38.5	12.27	12.74	12.14	11.54				14038
9 2 2	31	82.0	ON 350	45.8	40.7	12.30	12.75	12.15	11.55				14039
			OFF 360	49.6	44.6	12.34	12.75	12.15	11.55				14040
12 2 1	17	45.0	ON 276	22.1	26.2	11.96	12.46	11.86	11.26				14041
			OFF 287	25.6	28.6	12.02	12.55	11.95	11.35				14042
13 5 1	35	92.6	ON 273	37.2	145.8	11.94	12.70	12.10	11.50				14043
			OFF 256	30.7	148.6	11.85	12.63	12.03	11.43				14044

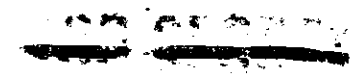


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16	5	0	15	39.7	ON 378	57.6	56.0	12.41	12.75	12.15	11.55	14049
					OFF 379	59.0	59.5	12.42	12.75	12.15	11.55	14050
19	3	1	26	68.8	ON 312	21.2	27.9	12.14	12.43	11.83	11.23	14051
					OFF 325	25.4	29.1	12.20	12.55	11.95	11.35	14052
19	3	2	40	105.8	ON 342	31.1	31.0	12.27	12.64	12.04	11.44	14053
					OFF 356	36.9	33.6	12.33	12.70	12.10	11.50	14054
21	8	1	19	50.3	ON 287	12.9	24.6	12.02	11.99	11.39	10.79	14055
					OFF 298	16.4	26.2	12.07	12.22	11.62	11.02	14056
21	8	2	60	158.7	ON 362	38.4	34.1	12.35	12.71	12.11	11.51	14057
					OFF 376	46.3	39.5	12.41	12.75	12.15	11.55	14058
21	8	3	56	148.1	ON 384	55.1	50.2	12.44	12.75	12.15	11.55	14059
					OFF 381	60.0	61.7	12.43	12.75	12.15	11.55	14060
22	2	1	28	74.1	ON 353	34.2	31.9	12.31	12.67	12.07	11.47	14061
					OFF 362	38.2	33.8	12.35	12.71	12.11	11.51	14062
22	2	2	55	145.5	ON 382	59.2	58.9	12.43	12.75	12.15	11.55	14063
					OFF 375	62.8	73.5	12.40	12.75	12.15	11.55	14064
22	2	3	28	74.1	ON 361	64.0	91.8	12.35	12.75	12.15	11.55	14065
					OFF 351	63.5	101.4	12.31	12.75	12.15	11.55	14066
23	5	1	19	50.3	ON 285	11.9	23.7	12.01	11.91	11.31	10.71	14067
					OFF 296	15.4	25.6	12.06	12.17	11.57	10.97	14068
23	5	2	86	227.5	ON 370	41.9	35.9	12.38	12.73	12.13	11.53	14069
					OFF 383	52.4	45.6	12.43	12.75	12.15	11.55	14070
23	5	3	42	111.1	ON 378	61.6	66.7	12.42	12.75	12.15	11.55	14071
					OFF 371	63.6	79.1	12.39	12.75	12.15	11.55	14072
24	9	0	10	26.5	ON 176	-39.5	34.3	11.32	0.	0.	0.	14073
					OFF 179	-37.1	33.0	11.34	0.	0.	0.	14074
24	9	1	137	362.4	ON 349	32.7	31.0	12.30	12.66	12.06	11.46	14075
					OFF 381	50.4	42.9	12.43	12.75	12.15	11.55	14076
24	9	2	42	111.1	ON 380	60.9	63.5	12.42	12.75	12.15	11.55	14077
					OFF 373	63.3	75.4	12.40	12.75	12.15	11.55	14078
25	1	1	126	333.3	ON 343	31.7	30.5	12.27	12.65	12.05	11.45	14079
					OFF 374	48.4	40.7	12.40	12.75	12.15	11.55	14080
27	3	1	26	68.8	ON 312	20.8	26.8	12.14	12.42	11.82	11.22	14081
					OFF 325	25.1	28.0	12.20	12.54	11.94	11.34	14082
28	2	1	22	58.2	ON 340	29.9	29.4	12.26	12.62	12.02	11.42	14083
					OFF 347	33.2	30.6	12.29	12.66	12.06	11.46	14084
30	2	1	50	132.2	ON 374	47.5	38.9	12.40	12.75	12.15	11.55	14085
					OFF 378	53.3	45.3	12.41	12.75	12.15	11.55	14086
31	2	1	31	82.0	ON 378	53.5	45.3	12.42	12.75	12.15	11.55	14087
					OFF 378	56.7	50.5	12.41	12.75	12.15	11.55	14088
34	3	1	18	47.6	ON 323	22.5	26.5	12.19	12.47	11.87	11.27	14089
					OFF 331	25.4	27.3	12.22	12.55	11.95	11.35	14090
38	2	1	25	66.1	ON 356	35.3	30.2	12.33	12.68	12.08	11.48	14091
					OFF 363	39.0	31.9	12.36	12.71	12.11	11.51	14092
38	2	2	23	60.8	ON 375	48.0	37.9	12.40	12.75	12.15	11.55	14093
					OFF 377	50.9	40.7	12.41	12.75	12.15	11.55	14094
40	4	1	27	71.4	ON 326	23.1	25.9	12.20	12.49	11.89	11.29	14095
					OFF 337	27.4	27.1	12.25	12.59	11.99	11.39	14096
40	4	2	83	219.5	ON 352	33.2	29.1	12.31	12.66	12.06	11.46	14097
					OFF 372	44.6	35.0	12.39	12.74	12.14	11.54	14098
41	2	1	28	74.1	ON 358	36.0	30.1	12.34	12.69	12.09	11.49	14099
					OFF 365	40.0	32.0	12.36	12.72	12.12	11.52	14100
41	2	2	22	58.2	ON 369	42.1	33.2	12.38	12.73	12.13	11.53	14101
					OFF 373	45.1	35.1	12.39	12.74	12.14	11.54	14102

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47	1	1	21	55.5	ON 378	51.7	39.8	12.42	12.75	12.15	11.55	14103
					OFF 378	54.2	42.6	12.42	12.75	12.15	11.55	14104
54	2	1	62	164.0	ON 363	36.5	28.5	12.36	12.69	12.09	11.49	14105
					OFF 374	45.0	32.9	12.40	12.74	12.14	11.54	14106
55	7	1	18	47.6	ON 323	19.8	23.3	12.19	12.38	11.78	11.18	14107
					OFF 331	22.8	24.1	12.22	12.48	11.88	11.28	14108
55	7	2	42	111.1	ON 375	57.8	45.9	12.40	12.75	12.15	11.55	14109
					OFF 370	62.1	54.9	12.38	12.75	12.15	11.55	14110
55	7	0	6	15.9	ON 165	-63.3	121.8	11.22	0.	0.	0.	14111
					OFF 165	-64.3	118.4	11.22	0.	0.	0.	14112
56	7	0	10	26.5	ON 181	-40.4	30.0	11.35	0.	0.	0.	14113
					OFF 185	-37.8	28.8	11.38	0.	0.	0.	14114
56	2	0	6	15.9	ON 165	-63.3	122.2	11.22	0.	0.	0.	14115
					OFF 165	-64.3	118.7	11.22	0.	0.	0.	14116
57	2	1	42	111.1	ON 366	38.3	28.8	12.37	12.71	12.11	11.51	14117
					OFF 373	44.2	31.9	12.39	12.74	12.14	11.54	14118
59	1	1	21	55.5	ON 304	12.5	20.0	12.10	11.96	11.36	10.76	14119
					OFF 315	16.1	21.8	12.15	12.21	11.61	11.01	14120
62	4	1	19	50.3	ON 375	56.9	42.8	12.40	12.75	12.15	11.55	14121
					OFF 373	59.2	46.4	12.40	12.75	12.15	11.55	14122
63	4	1	20	52.9	ON 377	53.9	38.8	12.41	12.75	12.15	11.55	14123
					OFF 376	56.4	41.8	12.41	12.75	12.15	11.55	14124
66	5	1	41	108.4	ON 349	27.5	24.0	12.30	12.59	11.99	11.39	14125
					OFF 360	33.7	25.8	12.35	12.67	12.07	11.47	14126
68	4	1	97	256.6	ON 328	18.9	21.6	12.21	12.35	11.75	11.15	14127
					OFF 361	33.9	25.6	12.35	12.67	12.07	11.47	14128
70	2	1	18	47.6	ON 368	37.4	26.6	12.37	12.70	12.10	11.50	14129
					OFF 371	40.0	27.7	12.39	12.72	12.12	11.52	14130
70	2	2	51	134.9	ON 373	42.2	28.8	12.39	12.73	12.13	11.53	14131
					OFF 377	49.1	33.0	12.41	12.75	12.15	11.55	14132
71	6	0	10	26.5	ON 186	-40.9	28.0	11.39	0.	0.	0.	14133
					OFF 190	-38.2	26.9	11.42	0.	0.	0.	14134
71	9	1	53	140.2	ON 367	62.4	50.1	12.37	12.75	12.15	11.55	14135
					OFF 354	67.1	65.8	12.32	12.75	12.15	11.55	14136
72	5	1	94	248.6	ON 361	32.7	24.7	12.35	12.66	12.06	11.46	14137
					OFF 376	46.0	30.6	12.41	12.75	12.15	11.55	14138
72	5	2	64	169.3	ON 360	65.5	58.5	12.34	12.75	12.15	11.55	14139
					OFF 339	69.1	82.8	12.26	12.75	12.15	11.55	14140
73	7	1	31	82.0	ON 279	62.0	131.5	11.97	12.75	12.15	11.55	14141
					OFF 262	57.2	139.5	11.89	12.75	12.15	11.55	14142
74	1	1	59	156.1	ON 363	64.3	53.8	12.36	12.75	12.15	11.55	14143
					OFF 346	68.6	73.8	12.29	12.75	12.15	11.55	14144
76	1	1	11	29.1	ON 334	19.3	20.8	12.23	12.36	11.76	11.16	14145
					OFF 338	21.1	21.3	12.25	12.43	11.83	11.23	14146
76	3	1	20	52.9	ON 255	56.0	141.7	11.85	12.75	12.15	11.55	14147
					OFF 245	52.2	145.6	11.79	12.75	12.15	11.55	14148
78	5	1	47	124.3	ON 364	63.4	50.1	12.36	12.75	12.15	11.55	14149
					OFF 352	67.6	64.4	12.31	12.75	12.15	11.55	14150
79	5	0	15	39.7	ON 374	56.7	38.5	12.40	12.75	12.15	11.55	14151
					OFF 372	58.6	41.0	12.39	12.75	12.15	11.55	14152



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STELLAR-INDEX SUMMARY

CAMERA DATA ET FILM FILTER GRID ASSEMBLY NO D39
STELLAR 2.0 4401 NONE 39
INDEX 1/500 4400 W/21 35

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	19	1.88	3.76											
1	5 0	2	0.20	0.40	23	14	07	2	56	146W	2	54	145W	39
2	5 1	3	0.30	0.59	00	42	34	2	67	173W	2	62	170W	71
3	6 1	7	0.69	1.39	02	13	53	2	66	164E	2	58	167E	129
3	6 2	3	0.30	0.59	02	16	39	2	55	168E	2	52	168E	54
4	6 1	7	0.69	1.39	03	45	07	2	66	141E	2	57	144E	130
4	6 2	3	0.30	0.59	03	50	12	2	45	146E	2	42	147E	47
5	1 1	9	0.89	1.78	05	12	12	2	81	095E	2	69	116E	186
5	1 1	6	0.59	1.19	05	18	06	2	58	121E	2	50	123E	119
5	1 1	3	0.30	0.59	05	23	01	2	38	124E	2	35	124E	43
5	1 2	2	0.20	0.40	05	31	53	2	02	126E	3	00	126E	46
5	1 3	3	0.30	0.59	05	33	15	3	03	126E	3	05	126E	38
6	7 1	14	1.39	2.77	06	45	01	2	75	088E	2	57	099E	270
6	7 2	4	0.40	0.79	06	50	28	2	53	099E	2	50	100E	55
6	7 3	3	0.30	0.59	06	53	24	2	41	101E	2	38	101E	54
6	7 4	7	0.69	1.39	06	56	41	2	28	102E	2	20	102E	111
7	9 1	3	0.30	0.59	08	21	04	2	55	076E	2	53	077E	39
7	9 2	3	0.30	0.59	08	22	19	2	50	077E	2	47	077E	46
7	9 3	2	0.20	0.40	08	24	30	2	41	078E	2	39	078E	33
7	9 4	7	0.69	1.39	08	29	44	2	20	079E	2	13	080E	97
8	4 0	1	0.10	0.20	09	30	55	1	39	109W	1	42	109W	46
8	4 1	10	0.99	1.98	09	48	47	2	69	048E	2	55	053E	206
9	2 1	3	0.30	0.59	11	21	53	2	61	029E	2	57	030E	54
9	2 2	5	0.50	0.99	11	23	36	2	54	031E	2	49	031E	77
12	2 1	2	0.20	0.40	15	49	55	2	81	064W	2	78	053W	58
13	5 1	5	0.50	0.99	17	48	26	3	29	055W	3	36	055W	114
16	5 0	2	0.20	0.40	22	05	24	2	37	126W	2	35	126W	36
19	3 1	4	0.40	0.79	02	30	14	2	71	155E	2	67	158E	71
19	3 2	6	0.59	1.19	02	33	01	2	60	160E	2	54	162E	100
21	8 1	3	0.30	0.59	05	30	07	2	80	094E	2	77	102E	57
21	8 2	8	0.79	1.58	05	37	16	2	52	116E	2	42	118E	142
21	8 3	9	0.89	1.78	05	42	38	2	30	119E	2	21	119E	127
22	2 1	4	0.40	0.79	07	07	07	2	57	093E	2	52	093E	69
22	2 2	8	0.79	1.58	07	15	24	2	23	096E	2	14	096E	128
22	2 3	4	0.40	0.79	07	19	45	2	05	097E	2	00	097E	69
23	5 1	3	0.30	0.59	08	32	00	2	81	044E	2	78	055E	58
23	5 2	12	1.19	2.38	08	40	26	2	48	071E	2	34	073E	200
23	5 3	6	0.59	1.19	08	47	42	2	18	073E	2	11	074E	98
24	9 0	2	0.20	0.40	09	48	31	1	39	115W	1	42	115W	46
24	9 1	19	1.88	3.76	10	08	50	2	59	046E	2	37	050E	319
24	9 2	7	0.69	1.39	10	18	20	2	20	050E	2	13	051E	97
25	1 1	18	1.78	3.56	11	39	38	2	60	023E	2	40	026E	297
27	3 1	4	0.40	0.79	14	38	45	2	72	028W	2	67	025W	71
28	2 1	3	0.30	0.59	16	12	20	2	62	045W	2	58	044W	56
30	2 1	7	0.69	1.39	19	19	35	2	41	087W	2	34	087W	113

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TOP SECRET

31	2	1	4	0.40	0.79	20	52	35	2	34	109W	2	29	109W	71	15045
34	3	1	3	0.30	0.59	01	16	41	2	70	172E	2	67	174E	49	15046
38	2	1	4	0.40	0.79	07	24	28	2	56	087E	2	52	087E	63	15047
38	2	2	3	0.30	0.59	07	28	10	2	41	089E	2	38	089E	55	15048
40	4	1	4	0.40	0.79	10	23	14	2	70	035E	2	65	038E	71	15049
40	4	2	12	1.19	2.38	10	26	00	2	59	040E	2	46	043E	195	15050
41	2	1	4	0.40	0.79	11	57	49	2	56	018E	2	51	019E	69	15051
41	2	2	3	0.30	0.59	11	59	34	2	49	019E	2	45	020E	53	15052
47	1	1	3	0.30	0.59	21	08	42	2	37	116W	2	34	115W	48	15053
54	2	1	9	0.89	1.78	07	41	32	2	56	081E	2	46	082E	144	15054
55	7	1	3	0.30	0.59	09	08	05	2	74	048E	2	71	051E	47	15055
55	7	2	6	0.59	1.19	09	18	56	2	30	061E	2	23	061E	98	15056
55	7	0	1	0.10	0.20	10	07	08	4	20	129W	4	18	129W	31	15057
56	7	0	1	0.10	0.20	10	22	44	1	39	127W	1	42	127W	46	15058
56	2	0	1	0.10	0.20	11	38	08	4	20	152W	4	18	152W	32	15059
57	2	1	6	0.59	1.19	12	15	08	2	54	013E	2	47	014E	99	15060
59	1	1	3	0.30	0.59	15	10	17	2	81	060W	2	78	048W	58	15061
62	4	1	3	0.30	0.59	19	55	46	2	32	098W	2	29	098W	46	15062
63	4	1	3	0.30	0.59	21	25	49	2	36	121W	2	33	121W	48	15063
66	5	1	6	0.59	1.19	01	51	30	2	66	163E	2	60	165E	99	15064
68	4	1	6	0.59	1.19	04	51	16	2	75	109E	2	69	116E	102	15065
70	2	1	3	0.30	0.59	07	58	15	2	56	075E	2	53	076E	43	15066
70	2	2	7	0.69	1.39	07	59	32	2	50	076E	2	42	077E	116	15067
71	6	0	1	0.10	0.20	09	08	19	1	39	110W	1	41	110W	45	15068
71	9	1	8	0.79	1.58	09	36	45	2	25	055E	2	16	056E	126	15069
72	5	1	14	1.39	2.77	10	59	01	2	61	028E	2	46	031E	217	15070
72	5	2	9	0.89	1.78	11	09	00	2	20	033E	2	09	033E	156	15071
73	7	1	5	0.50	0.99	12	48	05	3	12	011E	3	19	011E	99	15072
74	1	1	8	0.79	1.58	14	10	27	2	22	012W	2	13	012W	141	15073
76	1	1	2	0.20	0.40	16	59	33	2	75	072W	2	73	070W	29	15074
76	3	1	3	0.30	0.59	17	23	15	3	21	057W	3	25	056W	70	15075
78	5	1	6	0.59	1.19	20	14	04	2	24	104W	2	17	103W	113	15076
79	5	0	3	0.30	0.59	21	42	48	2	34	127W	2	31	127W	36	15077



~~TOP SECRET~~

[REDACTED]

- A. 1019-1 LAUNCH 2144Z 4/29/65
- B. DRY
- C. PERFORMANCE ESTIMATE, PART 2

2004
2005
2006

[REDACTED]

~~TOP SECRET~~

RATE ESTIMATE
FWD PAN CAMERA NUMBER 118

OPN NO	FR	R	A	TUR/ DUR	INST CPS	INST ANG VEL	SCAN R/SEC	RATE I/SEC	PCT CALIB	RATE REQD		
1	5	0	13	8	3 ON 1361	0.3790	0.03198	2.382	57.16	-1.3	-2.9	20010
					OFF 39	0.3864	0.03260	2.428	58.27	-1.3	-3.0	20011
2	5	1	25	8	3 ON 1194	0.3418	0.02884	2.148	51.54	-1.3	-4.5	20012
					OFF 71	0.3573	0.03015	2.245	53.88	-1.3	-4.1	20013
3	6	1	47	8	3 ON 1212	0.3460	0.02920	2.174	52.18	-1.3	-4.2	21001
					OFF 129	0.3742	0.03157	2.351	56.43	-1.3	-3.6	21002
3	6	2	21	8	3 ON 1378	0.3824	0.03227	2.403	57.66	-1.3	-3.4	21003
					OFF 54	0.3925	0.03311	2.466	59.18	-1.3	-3.5	21004
4	6	1	48	8	3 ON 1225	0.3490	0.02945	2.193	52.63	-1.3	-4.0	21005
					OFF 130	0.3769	0.03181	2.368	56.84	-1.3	-3.5	21006
4	6	2	19	8	3 ON 1530	0.4104	0.03463	2.579	61.88	-1.3	-3.3	21007
					OFF 47	0.4171	0.03519	2.621	62.90	-1.3	-3.5	21008
5	1	1	62	8	3 ON 1080	0.3160	0.02666	1.985	47.65	-1.3	0.4	21009
					OFF 186	0.3578	0.03019	2.248	53.96	-1.3	1.6	21010
5	1	1	47	8	3 ON 1434	0.3934	0.03320	2.472	59.33	-1.3	1.6	21011
					OFF 119	0.4134	0.03488	2.598	62.34	-1.3	0.6	21012
5	1	1	18	8	3 ON 1729	0.4350	0.03670	2.733	65.59	-1.3	-1.2	21013
					OFF 43	0.4380	0.03696	2.752	66.05	-1.3	-1.7	21014
5	1	2	18	8	3 ON 2261	0.4176	0.03524	2.624	62.98	-1.3	-3.2	21015
					OFF 46	0.4111	0.03469	2.583	61.99	-1.3	-2.9	21016
5	1	3	15	8	3 ON 2343	0.4047	0.03415	2.543	61.02	-1.3	-2.8	21017
					OFF 38	0.3985	0.03363	2.504	60.09	-1.3	-2.5	21018
6	7	1	103	8	3 ON 1189	0.3496	0.02950	2.196	52.71	1.3	4.0	21019
					OFF 270	0.4080	0.03442	2.563	61.52	1.3	4.0	21020
6	7	2	23	8	3 ON 1517	0.4187	0.03533	2.631	63.14	1.3	3.7	21021
					OFF 55	0.4270	0.03603	2.683	64.38	1.3	3.1	21022
6	7	3	24	8	3 ON 1693	0.4428	0.03736	2.782	66.77	1.3	1.9	21023
					OFF 54	0.4474	0.03775	2.811	67.47	1.3	1.2	21024
6	7	4	50	8	3 ON 1890	0.4543	0.03833	2.855	68.51	1.3	-0.2	21025
					OFF 111	0.4531	0.03823	2.847	68.32	1.3	-0.9	21026
7	9	1	17	8	3 ON 1483	0.4129	0.03484	2.594	62.26	1.3	3.6	21027
					OFF 39	0.4191	0.03536	2.633	63.19	1.3	3.2	21028
7	9	2	21	8	3 ON 1559	0.4255	0.03590	2.673	64.16	1.3	3.0	21029
					OFF 46	0.4317	0.03643	2.713	65.10	1.3	2.5	21030
7	9	3	15	8	3 ON 1690	0.4424	0.03733	2.780	66.72	1.3	1.7	21031
					OFF 33	0.4453	0.03757	2.798	67.15	1.3	1.3	21032
7	9	4	48	8	3 ON 2004	0.4529	0.03821	2.845	68.29	1.3	-0.9	21033
					OFF 97	0.4472	0.03773	2.810	67.44	1.3	-1.0	21034
8	4	0	9	8	3 ON 213	0.2056	0.01735	1.292	31.00	1.3	2.1	21035
					OFF 46	0.2082	0.01757	1.308	31.40	1.3	1.5	21036
8	4	1	71	8	3 ON 1284	0.3717	0.03137	2.336	56.06	1.3	4.2	21037
					OFF 206	0.4135	0.03489	2.598	62.35	1.3	3.5	21038
9	2	1	21	8	3 ON 1407	0.3983	0.03361	2.503	60.07	1.3	4.1	21039
					OFF 54	0.4083	0.03445	2.565	61.57	1.3	3.6	21040
9	2	2	32	8	3 ON 1511	0.4177	0.03525	2.625	62.99	1.3	3.4	21041
					OFF 77	0.4293	0.03623	2.698	64.74	1.3	2.7	21042
12	2	1	18	8	3 ON 1104	0.3290	0.02776	2.067	49.61	1.3	2.8	21043
					OFF 58	0.3424	0.02889	2.151	51.63	1.3	3.3	21044

13	5	1	36	8	3	ON	2753	0.3253	0.02745	2.044	49.05	1.3	0.4	21049
						OFF	114	0.3051	0.02574	1.917	46.01	1.3	2.0	21050
16	5	0	15	8	3	ON	1785	0.4503	0.03800	2.829	67.91	1.3	0.9	21051
						OFF	36	0.4521	0.03815	2.841	68.18	1.3	0.5	21052
19	3	1	26	8	3	ON	1289	0.3728	0.03145	2.342	56.21	1.3	4.2	21053
						OFF	71	0.3877	0.03271	2.436	58.46	1.3	4.1	21054
19	3	2	41	8	3	ON	1455	0.4077	0.03440	2.561	61.47	1.3	4.0	21055
						OFF	100	0.4245	0.03582	2.667	64.01	1.3	3.2	21056
21	8	1	19	8	3	ON	1152	0.3389	0.02860	2.130	51.11	0.8	2.5	21057
						OFF	57	0.3518	0.02969	2.211	53.06	0.8	2.8	21058
21	8	2	61	8	3	ON	1582	0.4269	0.03602	2.682	64.37	0.8	2.3	21059
						OFF	142	0.4433	0.03740	2.785	66.84	0.8	0.9	21060
21	8	3	57	8	3	ON	1904	0.4522	0.03816	2.841	68.19	0.8	-0.7	21061
						OFF	127	0.4496	0.03794	2.825	67.80	0.8	-1.4	21062
22	2	1	29	8	3	ON	1511	0.4157	0.03508	2.612	62.69	0.8	2.9	21063
						OFF	69	0.4262	0.03597	2.678	64.28	0.8	2.3	21064
22	2	2	56	8	3	ON	2008	0.4505	0.03801	2.830	67.93	0.8	-1.3	21065
						OFF	128	0.4420	0.03729	2.777	66.65	0.8	-1.5	21066
22	2	3	28	8	3	ON	2269	0.4250	0.03586	2.671	64.09	0.8	-1.3	21067
						OFF	69	0.4143	0.03496	2.603	62.48	0.8	-0.9	21068
23	5	1	20	8	3	ON	1142	0.3364	0.02839	2.114	50.73	0.8	2.3	21069
						OFF	58	0.3497	0.02951	2.197	52.73	0.8	2.7	21070
23	5	2	88	8	3	ON	1649	0.4357	0.03677	2.738	65.71	0.8	1.7	21071
						OFF	200	0.4510	0.03806	2.834	68.01	0.8	-0.3	21072
23	5	3	43	8	3	ON	2084	0.4461	0.03764	2.803	67.27	0.8	-1.6	21073
						OFF	98	0.4371	0.03688	2.746	65.91	0.8	-1.5	21074
24	9	0	10	8	3	ON	270	0.2081	0.01756	1.308	31.39	0.8	0.2	21075
						OFF	46	0.2113	0.01783	1.327	31.86	0.8	-0.3	21076
24	9	1	138	8	3	ON	1489	0.4119	0.03475	2.588	62.11	0.8	3.0	21077
						OFF	319	0.4493	0.03791	2.823	67.75	0.8	0.0	21078
24	9	2	43	8	3	ON	2059	0.4478	0.03778	2.814	67.53	0.8	-1.5	21079
						OFF	97	0.4399	0.03711	2.764	66.33	0.8	-1.5	21080
25	1	1	128	8	3	ON	1476	0.4059	0.03425	2.550	61.21	-0.1	2.3	21081
						OFF	297	0.4432	0.03740	2.785	66.83	-0.1	-0.5	21082
27	3	1	27	8	3	ON	1300	0.3701	0.03123	2.325	55.81	-0.1	2.5	21083
						OFF	71	0.3847	0.03246	2.417	58.01	-0.1	2.4	21084
28	2	1	22	8	3	ON	1456	0.4023	0.03394	2.528	60.66	-0.1	2.5	21085
						OFF	56	0.4116	0.03473	2.586	62.07	-0.1	2.0	21086
30	2	1	50	8	3	ON	1773	0.4434	0.03741	2.786	66.86	-0.1	-0.3	21087
						OFF	113	0.4480	0.03780	2.815	67.55	-0.1	-1.4	21088
31	2	1	31	8	3	ON	1892	0.4481	0.03781	2.815	67.57	-0.1	-1.4	21089
						OFF	71	0.4479	0.03779	2.814	67.54	-0.1	-2.0	21090
34	3	1	18	8	3	ON	1356	0.3822	0.03225	2.401	57.64	-0.1	2.9	21091
						OFF	49	0.3916	0.03304	2.460	59.05	-0.1	2.7	21092
38	2	1	26	8	3	ON	1572	0.4216	0.03558	2.649	63.58	-0.1	1.6	21093
						OFF	63	0.4297	0.03626	2.700	64.80	-0.1	1.0	21094
38	2	2	24	8	3	ON	1794	0.4446	0.03752	2.794	67.05	-0.1	-0.4	21095
						OFF	55	0.4470	0.03772	2.809	67.41	-0.1	-1.0	21096
40	4	1	27	8	3	ON	1376	0.3865	0.03261	2.428	58.28	-0.1	2.5	21097
						OFF	71	0.3998	0.03374	2.512	60.29	-0.1	2.2	21098
40	4	2	84	8	3	ON	1542	0.4170	0.03519	2.620	62.88	-0.1	1.9	21099
						OFF	195	0.4405	0.03717	2.768	66.42	-0.1	0.1	21100
41	2	1	29	8	3	ON	1590	0.4242	0.03579	2.665	63.96	-0.1	1.5	21101
						OFF	69	0.4326	0.03650	2.718	65.23	-0.1	0.8	21102



41	2	2	23	8	3	ON	1894	0.4388	0.03688	2.743	65.87	-0.1	0.5	21103
						OFF	53	0.4413	0.03724	2.773	66.55	-0.1	-0.0	21104
47	1	1	21	8	3	ON	1888	0.4480	0.03780	2.815	67.56	-0.1	-1.0	21105
						OFF	48	0.4482	0.03782	2.816	67.59	-0.1	-1.4	21106
54	2	1	62	8	3	ON	1633	0.4299	0.03627	2.701	64.83	-0.1	1.3	21107
						OFF	144	0.4434	0.03741	2.786	66.86	-0.1	-0.0	21108
55	7	1	18	8	3	ON	1366	0.3815	0.03219	2.397	57.52	-0.9	1.5	21109
						OFF	47	0.3904	0.03294	2.453	58.87	-0.9	1.4	21110
55	7	2	43	8	3	ON	2018	0.4427	0.03735	2.781	66.75	-0.9	-2.5	21111
						OFF	98	0.4365	0.03683	2.743	65.82	-0.9	-2.8	21112
55	7	0	7	8	3	ON	0	0.1955	0.01649	1.228	29.48	-0.9	16.1	21113
						OFF	31	0.1955	0.01649	1.228	29.48	-0.9	15.6	21114
56	7	0	10	8	3	ON	386	0.2140	0.01806	1.345	32.27	-0.9	-3.8	21115
						OFF	46	0.2182	0.01841	1.371	32.90	-0.9	-4.0	21116
56	2	0	6	8	3	ON	0	0.1955	0.01649	1.228	29.48	-0.9	16.1	21117
						OFF	32	0.1955	0.01649	1.228	29.48	-0.9	15.6	21118
57	2	1	43	8	3	ON	1672	0.4312	0.03638	2.709	65.03	-0.9	0.2	21119
						OFF	99	0.4397	0.03710	2.763	66.30	-0.9	-0.7	21120
59	1	1	21	8	3	ON	1263	0.3590	0.03029	2.256	54.14	-0.9	1.0	21121
						OFF	58	0.3713	0.03133	2.333	55.99	-0.9	1.2	21122
62	4	1	20	8	3	ON	2020	0.4426	0.03734	2.781	66.74	-0.9	-2.5	21123
						OFF	46	0.4402	0.03714	2.766	66.38	-0.9	-2.7	21124
63	4	1	21	8	3	ON	1964	0.4444	0.03750	2.792	67.01	-0.9	-2.1	21125
						OFF	48	0.4430	0.03738	2.784	66.81	-0.9	-2.4	21126
66	5	1	42	8	3	ON	1525	0.4112	0.03470	2.584	62.01	-0.9	1.4	21127
						OFF	99	0.4252	0.03588	2.672	64.12	-0.9	0.7	21128
68	4	1	40	8	3	ON	1393	0.3871	0.03266	2.432	58.37	-0.9	1.6	21129
						OFF	102	0.4057	0.03423	2.549	61.18	-0.9	1.3	21130
70	2	1	18	8	3	ON	1694	0.4335	0.03658	2.724	65.37	-0.9	0.3	21131
						OFF	43	0.4371	0.03688	2.746	65.91	-0.9	-0.2	21132
70	2	2	51	8	3	ON	1772	0.4399	0.03712	2.764	66.34	-0.9	-0.4	21133
						OFF	116	0.4446	0.03751	2.793	67.04	-0.9	-1.4	21134
71	6	0	10	8	3	ON	440	0.2195	0.01852	1.379	33.10	-0.9	-4.5	21135
						OFF	45	0.2241	0.01891	1.408	33.79	-0.9	-4.6	21136
71	9	1	54	8	3	ON	2146	0.4334	0.03657	2.723	65.35	-0.9	-2.7	21137
						OFF	126	0.4181	0.03528	2.627	63.05	-0.9	-2.7	21138
72	5	1	96	8	3	ON	1624	0.4255	0.03590	2.674	64.17	-0.9	0.8	21139
						OFF	217	0.4434	0.03741	2.786	66.86	-0.9	-1.0	21140
72	5	2	65	8	3	ON	2223	0.4245	0.03582	2.667	64.01	-0.9	-2.8	21141
						OFF	156	0.4004	0.03379	2.516	60.38	-0.9	-2.6	21142
73	7	1	32	8	3	ON	2706	0.3288	0.02775	2.066	49.59	-0.9	-3.0	21143
						OFF	99	0.3095	0.02612	1.945	46.68	-0.9	-2.3	21144
74	1	1	59	8	3	ON	2191	0.4285	0.03616	2.692	64.62	-0.9	-2.6	21145
						OFF	141	0.4087	0.03449	2.568	61.63	-0.9	-2.5	21146
76	1	1	11	8	3	ON	1426	0.3935	0.03320	2.472	59.33	-0.9	1.7	21147
						OFF	29	0.3983	0.03360	2.502	60.06	-0.9	1.6	21148
76	3	1	21	8	3	ON	2849	0.3013	0.02542	1.893	45.43	-0.9	-2.5	21149
						OFF	70	0.2896	0.02444	1.820	43.67	-0.9	-1.6	21150
78	5	1	48	8	3	ON	2181	0.4296	0.03625	2.699	64.79	-0.9	-2.7	21151
						OFF	113	0.4148	0.03500	2.606	62.55	-0.9	-2.7	21152
79	5	0	16	8	3	ON	2049	0.4411	0.03722	2.771	66.51	-0.9	-2.1	21153
						OFF	36	0.4389	0.03704	2.758	66.19	-0.9	-2.3	21154



RATE ESTIMATE
AFT PAN CAMERA NUMBER 119

OPN NO	FR	R	A	TUR/ DUR	INST CPS	INST ANG VEL	SCAN R/SEC	RATE I/SEC	PCT CALIB	RATE REQD		
1 5 0	12	8	3	ON	1361	0.3717	0.03136	2.335	56.05	-3.5	-4.9	20020
				OFF	39	0.3789	0.03197	2.381	57.14	-3.5	-5.0	20021
2 5 1	25	8	3	ON	1194	0.3351	0.02828	2.106	50.54	-3.5	-6.6	20022
				OFF	71	0.3503	0.02956	2.201	52.83	-3.5	-6.2	20023
3 6 1	4	8	3	ON	1329	0.3649	0.03079	2.293	55.03	-3.5	-5.5	22001
				OFF	13	0.3669	0.03096	2.305	55.33	-3.5	-5.7	22002
3 6 2	21	8	3	ON	1378	0.3750	0.03164	2.356	56.54	-3.5	-5.4	22003
				OFF	54	0.3848	0.03247	2.418	58.03	-3.5	-5.5	22004
4 6 1	5	8	3	ON	1341	0.3674	0.03100	2.309	55.40	-3.5	-5.4	22005
				OFF	14	0.3696	0.03119	2.322	55.74	-3.5	-5.5	22006
4 6 2	19	8	3	ON	1530	0.4024	0.03396	2.529	60.69	-3.5	-5.3	22007
				OFF	47	0.4090	0.03451	2.570	61.68	-3.5	-5.5	22008
5 1 1	259	8	3	ON	1080	0.3098	0.02614	1.947	46.72	-3.5	-1.6	22009
				OFF	692	0.4296	0.03624	2.699	64.77	-3.5	-3.7	22010
5 1 2	18	8	3	ON	2261	0.4095	0.03456	2.573	61.76	-3.5	-5.3	22011
				OFF	46	0.4032	0.03402	2.533	60.79	-3.5	-4.9	22012
5 1 3	14	8	3	ON	2343	0.3968	0.03348	2.493	59.84	-3.5	-4.9	22013
				OFF	38	0.3908	0.03297	2.455	58.93	-3.5	-4.5	22014
6 7 1	3	8	3	ON	1189	0.3405	0.02873	2.139	51.35	-1.7	1.5	22015
				OFF	9	0.3420	0.02885	2.149	51.57	-1.7	1.3	22016
6 7 1	5	8	3	ON	1446	0.3954	0.03336	2.484	59.62	-1.7	1.7	22017
				OFF	14	0.3974	0.03354	2.497	59.93	-1.7	1.4	22018
6 7 2	22	8	3	ON	1517	0.4079	0.03442	2.563	61.51	-1.7	1.1	22019
				OFF	55	0.4160	0.03510	2.614	62.73	-1.7	0.5	22020
6 7 3	23	8	3	ON	1693	0.4314	0.03640	2.710	65.05	-1.7	-0.7	22021
				OFF	54	0.4359	0.03678	2.739	65.73	-1.7	-1.4	22022
6 7 4	49	8	3	ON	1890	0.4426	0.03735	2.781	66.75	-1.7	-2.8	22023
				OFF	111	0.4414	0.03725	2.774	66.57	-1.7	-3.5	22024
7 9 1	17	8	3	ON	1483	0.4022	0.03394	2.527	60.65	-1.7	1.1	22025
				OFF	39	0.4083	0.03445	2.565	61.56	-1.7	0.7	22026
7 9 2	20	8	3	ON	1559	0.4145	0.03497	2.604	62.51	-1.7	0.5	22027
				OFF	46	0.4206	0.03549	2.643	63.42	-1.7	-0.1	22028
7 9 3	49	8	3	ON	1690	0.4310	0.03637	2.708	65.00	-1.7	-0.9	22029
				OFF	106	0.4392	0.03706	2.759	66.23	-1.7	-2.1	22030
7 9 4	46	8	3	ON	2004	0.4412	0.03723	2.772	66.53	-1.7	-3.5	22031
				OFF	97	0.4357	0.03676	2.738	65.70	-1.7	-3.7	22032
8 4 0	9	8	3	ON	213	0.2002	0.01689	1.258	30.18	-1.7	-0.6	22033
				OFF	46	0.2027	0.01710	1.274	30.57	-1.7	-1.2	22034
8 4 1	70	8	3	ON	1284	0.3621	0.03055	2.275	54.61	-1.7	1.6	22035
				OFF	206	0.4028	0.03399	2.531	60.74	-1.7	0.9	22036
9 2 1	21	8	3	ON	1407	0.3881	0.03274	2.438	58.52	-1.7	1.5	22037
				OFF	54	0.3978	0.03356	2.499	59.98	-1.7	1.1	22038
9 2 2	31	8	3	ON	1511	0.4069	0.03434	2.557	61.37	-1.7	0.9	22039
				OFF	77	0.4183	0.03529	2.628	63.08	-1.7	0.1	22040
12 2 1	17	8	3	ON	1104	0.3205	0.02704	2.014	48.32	-1.7	0.2	22041
				OFF	58	0.3335	0.02814	2.095	50.29	-1.7	0.7	22042
13 5 1	35	8	3	ON	2753	0.3168	0.02673	1.991	47.78	-1.7	-2.2	22043
				OFF	114	0.2972	0.02507	1.867	44.81	-1.7	-0.6	22044

16	5	0	15	8	3	ON	1785	0.4387	0.03702	2.757	66.16	-1.7	-1.7	22049
						OFF	36	0.4405	0.03717	2.768	66.42	-1.7	-2.1	22050
19	3	1	26	8	3	ON	1289	0.3631	0.03064	2.282	54.76	-1.7	1.7	22051
						OFF	71	0.3777	0.03187	2.373	56.95	-1.7	1.6	22052
19	3	2	40	8	3	ON	1455	0.3971	0.03351	2.495	59.89	-1.7	1.4	22053
						OFF	100	0.4135	0.03489	2.598	62.36	-1.7	0.6	22054
21	8	1	19	8	3	ON	1152	0.3340	0.02819	2.099	50.37	-1.0	1.0	22055
						OFF	57	0.3468	0.02926	2.179	52.29	-1.0	1.4	22056
21	8	2	60	8	3	ON	1582	0.4208	0.03551	2.644	63.46	-1.0	0.9	22057
						OFF	142	0.4370	0.03687	2.746	65.89	-1.0	-0.6	22058
21	8	3	56	8	3	ON	1904	0.4458	0.03762	2.801	67.23	-1.0	-2.2	22059
						OFF	127	0.4432	0.03740	2.785	66.84	-1.0	-2.9	22060
22	2	1	28	8	3	ON	1511	0.4098	0.03458	2.575	61.80	-1.0	1.5	22061
						OFF	69	0.4202	0.03545	2.640	63.36	-1.0	0.9	22062
22	2	2	55	8	3	ON	2008	0.4441	0.03747	2.790	66.97	-1.0	-2.8	22063
						OFF	128	0.4357	0.03676	2.737	65.70	-1.0	-3.0	22064
22	2	3	28	8	3	ON	2269	0.4190	0.03535	2.633	63.18	-1.0	-2.8	22065
						OFF	69	0.4084	0.03446	2.566	61.59	-1.0	-2.3	22066
23	5	1	19	8	3	ON	1142	0.3316	0.02798	2.084	50.00	-1.0	0.9	22067
						OFF	58	0.3447	0.02908	2.166	51.97	-1.0	1.3	22068
23	5	2	86	8	3	ON	1649	0.4295	0.03624	2.699	64.77	-1.0	0.3	22069
						OFF	200	0.4446	0.03752	2.794	67.05	-1.0	-1.7	22070
23	5	3	42	8	3	ON	2084	0.4397	0.03710	2.763	66.31	-1.0	-3.0	22071
						OFF	98	0.4309	0.03635	2.707	64.97	-1.0	-2.9	22072
24	9	0	10	8	3	ON	270	0.2050	0.01730	1.288	30.92	-1.0	-1.4	22073
						OFF	46	0.2081	0.01756	1.308	31.38	-1.0	-1.8	22074
24	9	1	137	8	3	ON	1489	0.4060	0.03426	2.551	61.22	-1.0	1.6	22075
						OFF	319	0.4429	0.03737	2.783	66.79	-1.0	-1.4	22076
24	9	2	42	8	3	ON	2059	0.4414	0.03725	2.774	66.57	-1.0	-3.0	22077
						OFF	97	0.4336	0.03659	2.724	65.39	-1.0	-2.9	22078
25	1	1	126	8	3	ON	1476	0.3982	0.03360	2.502	60.04	-2.3	0.4	22079
						OFF	297	0.4348	0.03669	2.732	65.57	-2.3	-2.4	22080
27	3	1	26	8	3	ON	1300	0.3631	0.03063	2.281	54.75	-2.3	0.6	22081
						OFF	71	0.3774	0.03184	2.371	56.91	-2.3	0.5	22082
28	2	1	22	8	3	ON	1456	0.3946	0.03330	2.480	59.51	-2.3	0.6	22083
						OFF	56	0.4038	0.03407	2.537	60.89	-2.3	0.1	22084
30	2	1	50	8	3	ON	1773	0.4350	0.03670	2.733	65.59	-2.3	-2.2	22085
						OFF	113	0.4395	0.03708	2.761	66.27	-2.3	-3.3	22086
31	2	1	31	8	3	ON	1892	0.4396	0.03709	2.762	66.29	-2.3	-3.4	22087
						OFF	71	0.4394	0.03708	2.761	66.26	-2.3	-3.9	22088
34	3	1	18	8	3	ON	1356	0.3749	0.03164	2.356	56.54	-2.3	1.0	22089
						OFF	49	0.3841	0.03241	2.414	57.93	-2.3	0.8	22090
38	2	1	25	8	3	ON	1572	0.4136	0.03490	2.599	62.37	-2.3	-0.3	22091
						OFF	63	0.4216	0.03557	2.649	63.58	-2.3	-0.9	22092
38	2	2	23	8	3	ON	1794	0.4362	0.03681	2.741	65.78	-2.3	-2.4	22093
						OFF	55	0.4386	0.03700	2.756	66.13	-2.3	-2.9	22094
40	4	1	27	8	3	ON	1376	0.3791	0.03199	2.382	57.17	-2.3	0.6	22095
						OFF	71	0.3922	0.03310	2.464	59.15	-2.3	0.3	22096
40	4	2	83	8	3	ON	1542	0.4091	0.03452	2.571	61.69	-2.3	-0.0	22097
						OFF	195	0.4321	0.03646	2.715	65.16	-2.3	-1.8	22098
41	2	1	28	8	3	ON	1590	0.4161	0.03511	2.615	62.75	-2.3	-0.4	22099
						OFF	69	0.4244	0.03581	2.667	64.00	-2.3	-1.1	22100
41	2	2	22	8	3	ON	1694	0.4286	0.03616	2.693	64.62	-2.3	-1.4	22101
						OFF	53	0.4330	0.03653	2.720	65.29	-2.3	-2.0	22102

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47	1	1	21	8	3 ON	1888	0.4396	0.03709	2.762	66.28	-2.3	-2.9	22103
					OFF	48	0.4398	0.03711	2.763	66.31	-2.3	-3.3	22104
54	2	1	62	8	3 ON	1633	0.4218	0.03559	2.650	63.60	-2.3	-0.6	22105
					OFF	144	0.4350	0.03671	2.733	65.60	-2.3	-2.0	22106
55	7	1	18	8	3 ON	1366	0.3758	0.03171	2.361	56.67	-2.7	0.0	22107
					OFF	47	0.3846	0.03245	2.416	57.99	-2.7	-0.1	22108
55	7	2	42	8	3 ON	2018	0.4361	0.03680	2.740	65.77	-2.7	-4.1	22109
					OFF	98	0.4300	0.03629	2.702	64.85	-2.7	-4.3	22110
55	7	0	6	8	3 ON	0	0.1924	0.01624	1.209	29.02	-2.7	14.8	22111
					OFF	31	0.1924	0.01624	1.209	29.02	-2.7	14.3	22112
56	7	0	10	8	3 ON	386	0.2107	0.01778	1.324	31.78	-2.7	-5.5	22113
					OFF	46	0.2148	0.01813	1.350	32.40	-2.7	-5.6	22114
56	2	0	6	8	3 ON	0	0.1924	0.01624	1.209	29.02	-2.7	14.7	22115
					OFF	32	0.1924	0.01624	1.209	29.02	-2.7	14.3	22116
57	2	1	42	8	3 ON	1672	0.4248	0.03585	2.669	64.06	-2.7	-1.3	22117
					OFF	99	0.4332	0.03655	2.722	65.32	-2.7	-2.2	22118
59	1	1	21	8	3 ON	1263	0.3537	0.02984	2.222	53.33	-2.7	-0.5	22119
					OFF	58	0.3658	0.03086	2.298	55.16	-2.7	-0.3	22120
62	4	1	19	8	3 ON	2020	0.4360	0.03679	2.740	65.75	-2.7	-4.0	22121
					OFF	46	0.4337	0.03659	2.725	65.40	-2.7	-4.2	22122
63	4	1	20	8	3 ON	1964	0.4378	0.03694	2.751	66.02	-2.7	-3.7	22123
					OFF	48	0.4365	0.03683	2.743	65.82	-2.7	-3.9	22124
66	5	1	41	8	3 ON	1525	0.4051	0.03418	2.545	61.09	-2.7	-0.1	22125
					OFF	99	0.4189	0.03535	2.632	63.17	-2.7	-0.8	22126
68	4	1	97	8	3 ON	1393	0.3813	0.03217	2.396	57.50	-2.7	0.1	22127
					OFF	238	0.4198	0.03542	2.637	63.30	-2.7	-0.9	22128
70	2	1	18	8	3 ON	1694	0.4271	0.03603	2.683	64.40	-2.7	-1.2	22129
					OFF	43	0.4306	0.03633	2.706	64.93	-2.7	-1.7	22130
70	2	2	51	8	3 ON	1772	0.4334	0.03657	2.723	65.36	-2.7	-1.9	22131
					OFF	116	0.4380	0.03696	2.752	66.05	-2.7	-2.9	22132
71	6	0	10	8	3 ON	440	0.2161	0.01823	1.358	32.59	-2.7	-6.2	22133
					OFF	45	0.2206	0.01862	1.386	33.27	-2.7	-6.2	22134
71	9	1	53	8	3 ON	2146	0.4270	0.03603	2.683	64.39	-2.7	-4.3	22135
					OFF	126	0.4119	0.03476	2.588	62.11	-2.7	-4.3	22136
72	5	1	94	8	3 ON	1624	0.4192	0.03537	2.634	63.22	-2.7	-0.6	22137
					OFF	217	0.4368	0.03686	2.744	65.87	-2.7	-2.5	22138
72	5	2	64	8	3 ON	2223	0.4182	0.03529	2.628	63.06	-2.7	-4.3	22139
					OFF	156	0.3945	0.03329	2.479	59.49	-2.7	-4.2	22140
73	7	1	31	8	3 ON	2706	0.3239	0.02733	2.035	48.84	-2.7	-4.5	22141
					OFF	99	0.3049	0.02572	1.916	45.97	-2.7	-3.8	22142
74	1	1	59	8	3 ON	2191	0.4222	0.03562	2.653	63.66	-2.7	-4.2	22143
					OFF	141	0.4027	0.03398	2.530	60.72	-2.7	-4.0	22144
76	1	1	11	8	3 ON	1426	0.3876	0.03271	2.436	58.45	-2.7	0.2	22145
					OFF	29	0.3924	0.03311	2.465	59.16	-2.7	0.1	22146
76	3	1	20	8	3 ON	2849	0.2967	0.02504	1.864	44.75	-2.7	-4.0	22147
					OFF	70	0.2853	0.02407	1.792	43.01	-2.7	-3.1	22148
78	5	1	47	8	3 ON	2181	0.4233	0.03571	2.659	63.83	-2.7	-4.2	22149
					OFF	113	0.4087	0.03448	2.568	61.63	-2.7	-4.2	22150
79	5	0	15	8	3 ON	2049	0.4346	0.03667	2.730	65.53	-2.7	-3.7	22151
					OFF	36	0.4324	0.03649	2.717	65.21	-2.7	-3.8	22152

RAMP PROFILE

R- 8 A- 3 PERIOD= 3840

R= 0.3230 A= 0.1258

TUR	PER	CPS	ANG V
-0	5.071	0.1972	C.01784
100	5.038	0.1985	C.01795
200	4.943	0.2023	C.01830
300	4.793	0.2086	C.01887
400	4.603	0.2173	C.01965
500	4.384	0.2281	C.02063
600	4.152	0.2408	C.02178
700	3.918	0.2553	C.02309
800	3.689	0.2711	C.02452
900	3.473	0.2880	C.02604
1000	3.273	0.3056	C.02764
1100	3.089	0.3237	C.02928
1200	2.877	0.3475	C.03143
1300	2.699	0.3705	C.03351
1400	2.553	0.3917	C.03543
1500	2.436	0.4105	C.03713
1600	2.347	0.4260	C.03853
1700	2.284	0.4379	C.03960
1800	2.245	0.4455	C.04029
1900	2.229	0.4487	C.04058
2000	2.235	0.4473	C.04046
2100	2.265	0.4414	C.03993
2200	2.319	0.4313	C.03900
2300	2.397	0.4171	C.03773
2400	2.503	0.3996	C.03614
2500	2.637	0.3793	C.03430
2600	2.802	0.3569	C.03228
2700	3.000	0.3333	C.03014
2800	3.198	0.3127	C.02828
2900	3.391	0.2949	C.02668
3000	3.601	0.2777	C.02512
3100	3.825	0.2614	C.02365
3200	4.058	0.2464	C.02229
3300	4.293	0.2330	C.02107
3400	4.518	0.2213	C.02002
3500	4.721	0.2118	C.01916
3600	4.889	0.2046	C.01850
3700	5.007	0.1997	C.01806
3800	5.066	0.1974	C.01785

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CLOCK SUMMARY

PRELIMINARY CLOCK CORRELATION

ORDER FIT 1

S TIME I/P	CL TIME I/P	COMP SYS TM	DELTA ST	REV	STA
78731.585	27453.49390	78731.59010	-0.00412	0	1
34318.270	69440.18990	34318.27440	-0.00343	8	1
79578.585	114700.51390	79578.58580	0.00018	16	1
35372.662	156894.60290	35372.66300	-0.00007	24	1
75241.997	196763.93990	75241.98890	0.00903	31	1
36408.989	244330.94990	36408.98570	0.00427	40	1
76179.469	284101.44390	76179.46860	0.00135	47	1
37425.328	331747.32090	37425.33230	-0.00338	56	1
77270.850	371592.84790	77270.84820	0.00271	63	1
32959.922	413681.93990	32959.92850	-0.00557	71	1
78225.517	458947.54290	78225.51890	-0.00096	79	1

A0= 0.51278103760 05 A1= 0.9999997215360 00

SIGMA=0.00388 NO. POINTS= 11

RATIO OF CLOCK TIME TO SYS TIME= 0.1000000278460 01

ORDER FIT 2

S TIME I/P	CL TIME I/P	COMP SYS TM	DELTA ST	REV	STA
78731.585	27453.49390	78731.58580	0.00020	0	1
34318.270	69440.18990	34318.27260	-0.00165	8	1
79578.585	114700.51390	79578.58610	-0.00016	16	1
35372.662	156894.60290	35372.66480	-0.00182	24	1
75241.997	196763.93990	75241.99150	0.00647	31	1
36408.989	244330.94990	36408.98860	0.00139	40	1
76179.469	284101.44390	76179.47120	-0.00128	47	1
37425.328	331747.32090	37425.33400	-0.00504	56	1
77270.850	371592.84790	77270.84850	0.00240	63	1
32959.922	413681.93990	32959.92690	-0.00392	71	1
78225.517	458947.54290	78225.51450	0.00341	79	1

A0= 0.51278097490 05 A1= 0.9999997969990 00

A2=-0.15541619852690-12

SIGMA=0.00302 NO. POINTS= 11

20040
20041
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24001
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24400
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24502
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24504
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24511
24900
24901
24902



CLOCK OPERATIONS

OPN NO	FR	H	M	S	DEC	BINARY		
1 5 0	13	ON	23	14	07	32369	00001111011011110100101101000	20050
		OFF	23	14	46	32408	00001111011101000000111000000	20051
2 5 1	25	ON	00	42	34	37676	00010001111101110001111100000	25001
		OFF	00	43	45	37747	000100011111111111100100111000	25002
3 6 1	47	ON	02	13	53	43155	00010100100100111111000111000	25003
		OFF	02	16	02	43284	00010100101000111011000100000	25004
3 6 2	21	ON	02	16	39	43321	0001010010101010000011010101000	25005
		OFF	02	17	33	43375	00010100101011101100110011000	25006
4 6 1	48	ON	03	45	07	48629	00010111001100000010100001000	25007
		OFF	03	47	17	48759	00010111010000000000011011000	25008
4 6 2	19	ON	03	50	12	48934	00010111010101010110001110000	25009
		OFF	03	50	59	48981	00010111010110110010000001000	25010
5 1 1	62	ON	05	12	12	53854	00011001101011011111100110000	25011
		OFF	05	15	18	54040	00011001110001001010111000000	25012
5 1 1	47	ON	05	18	06	54208	00011001110110010011000000000	25013
		OFF	05	20	05	54327	00011001111001111011011011000	25014
5 1 1	18	ON	05	23	01	54502	00011001111111010001001110000	25015
		OFF	05	23	44	54545	00011010000000100101001101000	25016
5 1 2	18	ON	05	31	53	55035	00011010001111100010001111000	25017
		OFF	05	32	39	55081	00011010010000111100000101000	25018
5 1 3	15	ON	05	33	15	55117	00011010010010000010011001000	25019
		OFF	05	33	53	55155	00011010010011001100100111000	25020
6 7 1	103	ON	06	45	01	59423	00011100010101011100100011000	25021
		OFF	06	49	31	59693	00011100011101101011111001000	25022
6 7 2	23	ON	06	50	28	59750	00011100011111011011001110000	25023
		OFF	06	51	23	59805	00011100100001000110101001000	25024
6 7 3	24	ON	06	53	24	59926	00011100100100110010111110000	25025
		OFF	06	54	18	59980	00011100100110011100011100000	25026
6 7 4	50	ON	06	56	41	60123	00011100101010110011101111000	25027
		OFF	06	58	32	60234	00011100101110001100100010000	25028
7 9 1	17	ON	08	21	04	65185	00011111000101010010011101000	25029
		OFF	08	21	43	65224	00011111000110011110101000000	25030
7 9 2	21	ON	08	22	19	65261	00011111000111100110111001000	25031
		OFF	08	23	05	65307	00011111001001000000101111000	25032
7 9 3	15	ON	08	24	30	65392	00011111001011100110110000000	25033
		OFF	08	25	03	65425	00011111001100100111001101000	25034
7 9 4	48	ON	08	29	44	65706	00011111010101001100000010000	25035
		OFF	08	31	21	65803	00011111011000001001011111000	25036
8 4 0	9	ON	09	30	55	69377	00100001000101001101111101000	25037
		OFF	09	31	41	69423	00100001000110100111110011000	25038
8 4 1	71	ON	09	48	47	70448	00100001100101111001110000000	25039
		OFF	09	52	13	70654	00100001101100001100000110000	25040
9 2 1	21	ON	11	21	53	76035	00100100010000011001110111000	25041
		OFF	11	22	47	76089	00100100010010000011010101000	25042
9 2 2	32	ON	11	23	36	76138	00100100010011100011000010000	25043
		OFF	11	24	53	76215	00100100010101111001011011000	25044
12 2 1	18	ON	15	49	55	92117	00101011111011001100000001000	25045
		OFF	15	50	53	92175	00101011111100111101010011000	25046
13 5 1	36	ON	17	48	26	99228	00101111010100001100101100000	25047
		OFF	17	50	20	99342	00101111010111101011010110000	25048
								25049
								25050

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16	5	0	15	ON	22	05	24	114648	001101101010101011111110000	25051
				OFF	22	06	00	114682	0011011010101011110100010010000	25052
19	3	1	26	ON	02	30	14	130536	00111110001111101001001000000	25053
				OFF	02	31	25	130607	00111110010001110011110011000	25054
19	3	2	41	ON	02	33	01	130703	00111110010100101111010011000	25055
				OFF	02	34	41	130803	00111110010111110010100111000	25056
21	8	1	19	ON	05	30	07	141328	01000011011000111111010000000	25057
				OFF	05	31	04	141385	01000011011010101110100101000	25058
21	8	2	61	ON	05	37	16	141758	01000011100110000111000110000	25059
				OFF	05	39	38	141900	01000011101010011100011100000	25060
21	8	3	57	ON	05	42	38	142080	01000011101111111100000000000	25061
				OFF	05	44	45	142207	01000011110011110100000011000	25062
22	2	1	29	ON	07	07	07	147149	01000110001010101000011001000	25063
				OFF	07	08	16	147218	01000110001100101111001010000	25064
22	2	2	56	ON	07	15	24	147646	01000110011001110011000110000	25065
				OFF	07	17	32	147774	01000110011101101101000110000	25066
22	2	3	28	ON	07	19	45	147907	01000110100001110000110111000	25067
				OFF	07	20	54	147976	01000110100011110111101000000	25068
23	5	1	20	ON	08	32	00	152242	01001000100110000011101010000	25069
				OFF	08	32	58	152300	01001000100111110100111100000	25070
23	5	2	88	ON	08	40	26	152748	01001000110101011111111000000	25071
				OFF	08	43	46	152948	01001000111011100110100100000	25072
23	5	3	43	ON	08	47	42	153184	01001001000010110011100000000	25073
				OFF	08	49	20	153282	01001001000101110010111010000	25074
24	9	0	10	ON	09	48	31	156833	01001010110010001010011101000	25075
				OFF	09	49	17	156879	01001010110011100100010011000	25076
24	9	1	138	ON	10	08	50	158052	01001011010111010111010100000	25077
				OFF	10	14	09	158371	01001011100001000110010111000	25078
24	9	2	43	ON	10	18	20	158622	01001011101000110000100110000	25079
				OFF	10	19	57	158719	01001011101011101110000011000	25080
25	1	1	128	ON	11	39	38	163500	01001101111101100111111100000	25081
				OFF	11	44	35	163797	01001110000110101100000001000	25082
27	3	1	27	ON	14	38	45	174247	01010011000101100110001011000	25083
				OFF	14	39	56	174318	01010011000111110000110110000	25084
28	2	1	22	ON	16	12	20	179862	01010101110000111100111110000	25085
				OFF	16	13	16	179918	01010101110010101010010110000	25086
30	2	1	50	ON	19	19	35	191097	01011011000111110100010101000	25087
				OFF	19	21	28	191210	01011011001011010001000010000	25088
31	2	1	31	ON	20	52	35	196677	01011101110010000110110001000	25089
				OFF	20	53	46	196748	01011101110100010001011100000	25090
34	3	1	18	ON	01	16	41	212523	011001010101010110101111111000	25091
				OFF	01	17	30	212572	01100101010111001011101100000	25092
38	2	1	26	ON	07	24	28	234590	01101111101110001111001100000	25093
				OFF	07	25	31	234653	01101111110010000101010010000	25094
38	2	2	24	ON	07	28	10	234812	01101111111011110010011000000	25095
				OFF	07	29	05	234867	01101111111111001001001110000	25096
40	4	1	27	ON	10	23	14	245316	01110100111110011100110100000	25097
				OFF	10	24	25	245387	01110101000000100111011111000	25098
40	4	2	84	ON	10	26	00	245482	01110101000011100001000010000	25099
				OFF	10	29	15	245677	01110101001001011101111001000	25100
41	2	1	29	ON	11	57	49	250991	01110111101011101000110011000	25101
				OFF	11	58	58	251060	01110111101101101111100100000	25102
41	2	2	23	ON	11	59	34	251096	01110111101110110101111000000	25103
				OFF	12	00	27	251149	01110111110000011101011001000	25104



47	1	1	21	ON	21	08	42	284044	10000111011100010101011100000	25109
				OFF	21	09	30	284092	10000111011101110011001100000	25109
54	2	1	62	ON	07	41	32	322014	10011001100011000101100110000	25109
				OFF	07	43	56	322158	10011001100111011110110110000	25109
55	7	1	18	ON	09	08	05	327207	10011100000001100100001011000	25109
				OFF	09	08	52	327254	10011100000010111111111100000	25110
55	7	2	43	ON	09	18	56	327858	10011100010101011011101010000	25111
				OFF	09	20	34	327956	10011100011000011011000100000	25112
55	7	0	7	ON	10	07	08	330750	10011101101101101101100000110000	25113
				OFF	10	07	39	330781	10011101101110101000101001000	25114
56	7	0	10	ON	10	22	44	331685	10011110001010001110010001000	25115
				OFF	10	23	30	331731	10011110001011101000000111000	25116
56	2	0	6	ON	11	38	08	336210	10100000010100010100001010000	25117
				OFF	11	38	40	336242	10100000010101010010101010000	25118
57	2	1	43	ON	12	15	08	338430	10100001011000000100000110000	25119
				OFF	12	16	47	338529	10100001011011000101011101000	25120
59	1	1	21	ON	15	10	17	348939	10100110011000110001011111000	25121
				OFF	15	11	15	348997	10100110011010100010110001000	25122
62	4	1	20	ON	19	55	46	366068	10101110100011100000100100000	25123
				OFF	19	56	32	366114	10101110100100111010011010000	25124
63	4	1	21	ON	21	25	49	371471	10110001001000011001010011000	25125
				OFF	21	26	37	371519	10110001001001110111000011000	25126
66	5	1	42	ON	01	51	30	387412	10111000101110111000000100000	25127
				OFF	01	53	09	387511	10111000110001111001011011000	25128
68	4	1	40	ON	04	51	16	398198	10111101111000000010011110000	25129
				OFF	04	52	58	398300	10111101111011001001101100000	25130
70	2	1	18	ON	07	58	15	409417	11000011001110011010100101000	25131
				OFF	07	58	58	409460	11000011001111101110100100000	25132
70	2	2	51	ON	07	59	32	409494	11000011010000110000111110000	25133
				OFF	08	01	28	409610	11000011010100010011100010000	25134
71	6	0	10	ON	09	08	19	413621	11000101001110101101100001000	25135
				OFF	09	09	04	413666	11000101010000000101011010000	25136
71	9	1	54	ON	09	36	45	415327	11000110000010110001100011000	25137
				OFF	09	38	51	415453	11000110000110100111101001000	25138
72	5	1	96	ON	10	59	01	420263	11001000011001011010001011000	25139
				OFF	11	02	38	420480	11001000100000000010000000000	25140
72	5	2	65	ON	11	09	00	420862	11001000101011101100000110000	25141
				OFF	11	11	36	421018	11001000110000011100110010000	25142
73	7	1	32	ON	12	48	05	426807	11001011100001000111011011000	25143
				OFF	12	49	44	426906	11001011100100001000110010000	25144
74	1	1	59	ON	14	10	27	431750	11001101110111111101101110000	25145
				OFF	14	12	48	431891	11001101111100010001000111000	25146
76	1	1	11	ON	16	59	33	441895	11010010101101100100001011000	25147
				OFF	17	00	02	441924	11010010101110011100110100000	25148
76	3	1	21	ON	17	23	15	443317	11010011011000111101100001000	25149
				OFF	17	24	25	443387	11010011011011000110001111000	25150
78	5	1	48	ON	20	14	04	453566	11011000010001101111000110000	25151
				OFF	20	15	57	453679	11011000010101001011110011000	25152
79	5	0	16	ON	21	42	48	458890	11011010110100001101100010000	25153
				OFF	21	43	24	458926	11011010110101010011110110000	25154