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[redacted]

CORONA J FLIGHT DATA BOOK

SYSTEM NO. J-24

VEHICLE NO. 1619

MISSION NO. 1024-1

CAMERA NOS. 172/173

DATE 09-27-65

Declassified and Released by the N R O

In Accordance with E. O. 12958

on NOV 26 1997

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SYSTEM NO. 0-24
VEHICLE NO. 1619
MISSION NO. 1024-1
CAMERA NOS. 172/173

GENERAL FLIGHT DATA

MASTER CAMERA SERIAL NO. 172

SLAVE CAMERA SERIAL NO. 173

S/I -1 SERIAL NO. D69/72/84

S/I -2 SERIAL NO. D64/82/66

LAUNCH DATE 09-22-65

REACTIVATION DATE N/A

REACTIVATION ORBIT NO. N/A

ORBIAL PARAMETERS (REV. 41)

PERIOD 90.078 MIN.	ECCENTRICITY 0.01522
PERIGEE 95.934 NM	PERIGEE LAT. 18.438 DEG. N
APOGEE 205.320 NM	INCL. ANGLE 80.058 DEG.

RECOVERY ORBIT NO. 81

RECOVERY DATE 09-27-65

SYSTEM NO. J-24
VEHICLE NO. 1619
MISSION NO. 1024-1
CAMERA NOS. 172/173

FLIGHT LENS SETTINGS AND FILM TYPES

LENS SETTINGS

PANORAMIC CAMERA SETTINGS	CAMERA NO. 172		CAMERA NO. 17	
PANORAMIC OPTICS SLIT WIDTH	0.225	IN	0.150	
PANORAMIC OPTICS FILTER TYPE	WRATTEN 25		WRATTEN 21	
HORIZON OPTICS EXP. TIME	1/100	SEC.	1/100	SE
HORIZON OPTICS APERTURE	F6.8	SUPPLY	F8.0	SUPP
HORIZON OPTICS APERTURE	F8.0	TAKE-UP	F6.8	TAKE-
HORIZON OPTICS FILTER TYPE	WRATTEN 25		WRATTEN 25	

STELLAR INDEX CAMERA SETTINGS

	D69/72/84				D64/82/66			
	STELLAR		INDEX		STELLAR		INDEX	
EXPOSURE TIME	2.0	SEC	1/500	SEC	2.0	SEC	1/500	
APERTURE SETTING	F1.8		F4.5		F1.8		F4.5	
FILTER TYPE	NONE		WRATTEN 21		NONE		WRATT	

RATIO ONE STELLAR/INDEX FRAME PER 7 MASTER CAMERA FRAMES.

FILM

PANORAMIC CAMERAS	CAMERA NO. 172	CAMERA NO. 173
TYPE	7J-40	7J-40
LENGTH	16000 FT.	16000 FT.
SPLICES	5	5
EMUL. DATA	213-5-6-5	213-5-6-5

STELLAR/INDEX CAMERAS

	D69/72/84		D64/82/66	
	STELLAR	INDEX	STELLAR	INDEX
TYPE	3J-34	7J-33	3J-34	7J-33
EMUL. DATA	124-35-8-5	104-14-6-5	124-35-8-5	104-1

SYSTEM NO. J-24 [redacted]
VEHICLE NO. 1619
MISSION NO. 1024-1
CAMERA NOS. 172/173

LENS DATA SUMMARY MASTER CAMERA NO. 172

LENS SERIAL NO. 1602435
EQUIVALENT OPERATIONAL FOCAL LENGTH 609.602 MM

RESOLUTION

STATIC		LINES/MM	FILM TYPE	TARGET CONTRAS
	BENCH TEST	264	3404	HIGH
		141	3404	LOW
DYNAMIC	[redacted]	198	3404	HIGH
		131	3404	LOW
	AP	161	3404	HIGH
		113	3404	LOW

NOTE [redacted] RESOLUTION OF 198 LINES/MM REPORTED IN [redacted]

DISTORTION - POSITIVE (PINCUSHION)

ANGLE OFF AXIS-DEG.	3	2	1	0	359	358	357
MILLIMETERS	0.001	0.000	0.000	0.000	0.000	0.000	0.002

SECRET

SYSTEM NO. 0-24
VEHICLE NO. 1619
MISSION NO. 1024-1
CAMERA NOS. 172/173

LENS DATA SUMMARY (HORIZON CAMERAS FOR MASTER CAMERA NO. 172)

	TAKE-UP	SUPPLY
LENS SERIAL NO.	812276	812288
OPERATIONAL FOCAL LENGTH	54.19 MM	55.40 MM
RADIAL DISTORTION		
10 DEG. OFF AXIS	0.008 MM	0.003 MM
20 DEG. OFF AXIS	0.015 MM	0.005 MM
TANGENTIAL DISTORTION (MAXIMUM VECTOR)	0.008 MM	0.005 MM

RESOLUTION

ANGLE OFF AXIS-DEG.	0	10	15	20	25	30	0	10	15	20	25	2
RADIAL	184	162	141	122	125	-0	164	162	127	122	112	
TANGENTIAL	164	142	115	97	60	-0	164	142	108	91	64	

DYNAMIC (ZERO DEG) 148 LINES/MM 144 LINES/MM

NOTE

1. DISTORTION AND RESOLUTION ARE READ AT EQUIVALENT OPERATIONAL FOCAL LENGTH.

2. RESOLUTION IN LINES PER MM ON 3404 FILM AND HIGH CONTRAST TARGET.

SYSTEM NO. J-24
VEHICLE NO. 1619
MISSION NO. 1024-1
CAMERA NOS. 172/173

LENS DATA SUMMARY SLAVE CAMERA NO. 173

LENS SERIAL NO. 1522435
EQUIVALENT OPERATIONAL FOCAL LENGTH 609.628 MM

RESOLUTION

STATIC		LINES/MM	FILM TYPE	TARGET CONTRAS
	BENCH TEST	241	3404	HIGH
		138	3404	LOW
DYNAMIC	[redacted]	201	3404	HIGH
		129	3404	LOW
	AP	181	3404	HIGH
		111	3404	LOW

NOTE [redacted] RESOLUTION OF 201 LINES/MM REPORTED IN [redacted]

DISTORTION - POSITIVE (PINCUSHION)

ANGLE OFF AXIS-DEG.	3	2	1	0	359	358	357
MILLIMETERS	0.002	0.001	0.000	0.000	0.002	0.002	0.004

SYSTEM NO. J-24
VEHICLE NO. 1619
MISSION NO. 1024-1
CAMERA NOS. 172/173

LENS DATA SUMMARY (HORIZON CAMERAS FOR SLAVE CAMERA NO. 173)

	TAKE-UP	SUPPLY
LENS SERIAL NO.	814018	813555
OPERATIONAL FOCAL LENGTH	54.93 MM	54.70 MM
RADIAL DISTORTION		
10 DEG. OFF AXIS	0.003 MM	0.001 MM
20 DEG. OFF AXIS	0.012 MM	0.005 MM
TANGENTIAL DISTORTION (MAXIMUM VECTOR)	0.004 MM	0.007 MM

RESOLUTION

ANGLE OFF AXIS-DEG.	0	10	15	20	25	30	0	10	15	20	25 2
RADIAL	170	112	97	86	92	-0	170	111	96	75	77
TANGENTIAL	170	104	91	95	55	-0	170	104	89	66	55

DYNAMIC (ZERO DEG) 140 LINES/MM 139 LINES/MM

NOTE

1. DISTORTION AND RESOLUTION ARE READ AT EQUIVALENT OPERATIONAL FOCAL LENGTH.

2. RESOLUTION IN LINES PER MM ON 3404 FILM AND HIGH CONTRAST TARGET.

SYSTEM NO. J-24
VEHICLE NO. 1619
MISSION NO. 1024-1
CAMERA NOS. 172/173

FORMAT DIMENSIONS AND CALIBRATIONS

	CAMERA NO. 172	CAMERA NO. 173
A	76.039	75.963
B	354.865	354.780
C	709.636	709.500
D	56.469	56.525
E	56.533	56.482
XT	-0.063	-0.134
YT	-0.187	0.032
XS	-0.508	-0.094
YS	-0.045	0.072
XVO	-0.030	0.212
YVO	1.504	0.833
DTX	-0.074	-0.143
DTY	2.813	2.039
DSX	-0.473	-0.089
DSY	-2.045	-1.928
DMX	-0.023	0.362
DMY	21.504	20.525
HEIGHT	-0.000	-0.000
WIDTH	-0.000	-0.000
DIRECTION		
FLIGHT	-Y	+Y
SCAN	+X	+X

NOTE 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. DT, DM, DS, X, AND Y DIMENSIONS ARE TAKEN 10MM ABOVE POINT DEFINING TARGET CENTER.
4. NEGATIVE VIEWED WITH EMULSION SIDE DOWN.
5. FORMAT SIGN CONVENTION

```
          1
   -X+Y 1 +X+Y
--------1--------
   -X-Y 1 +X-Y
          1
```

SYSTEM NO. J-24
VEHICLE NO. 1619
MISSION NO. 1024-1
CAMERA NOS. 172/173

LENS DATA SUMMARY STELLAR INDEX D69/72/84 -1 MISSION

	STELLAR		INDEX	
LENS SERIAL NO.	10505		817710	
RESEAU SERIAL NO.	84		72	
FILTER TYPE	NONE	--	WRATTEN 21	
APERTURE	F1.8		F4.5	
EXPOSURE TIME	2.0	SEC.	1/500	SEC.
EQUIVALENT FOCAL LENGTH		MM	38.57	MM

RESOLUTION (INDEX)

ANGLE OFF AXIS	0	10	20	30	35
HIGH CONTRAST-R/T (3400 FILM)	84/84	84/74	99/71	99/55	86/5

AWAR 74 LINES/MM
READ FROM 3400 FILM.

DISTORTION

FULL DATA TO BE REPORTED AS PART OF PHOTOGONIOMETER DATA REDUCTION.

ALIGNMENT STELLAR INDEX

-0.0003 INCHES/.937 INCHES 0.0009 INCHES/2.25 IN

SYSTEM NO. J-24
VEHICLE NO. 1519
MISSION NO. 1024-1
CAMERA NOS. 172/173

LENS DATA SUMMARY STELLAR INDEX D64/82/66 -2 MISSION

	STELLAR	INDEX
LENS SERIAL NO.	10578	817462
RESEAU SERIAL NO.	66	82
FILTER TYPE	NONE	WRATTEN 21
APERTURE	F1.8	F4.5
EXPOSURE TIME	2.0 SEC.	1/500 SEC.
EQUIVALENT FOCAL LENGTH	MM	38.377 MM

RESOLUTION (INDEX)

ANGLE OFF AXIS	0	10	20	30	35
HIGH CONTRAST-R/T (3400 FILM)	83/83	86/86	107/88	96/42	84/1

AWAR 72 LINES/MM
READ FROM 3400 FILM.

DISTORTION

FULL DATA TO BE REPORTED AS PART OF PHOTOGONIOMETER DATA REDUCTION.

ALIGNMENT	STELLAR	INDEX
	-0.0007 INCHES/.937 INCHES	-0.0004 INCHES/2.25 IN

SYSTEM NO. J-24
VEHICLE NO. 1619
MISSION NO. 1824-1
CAMERA NOS. 172/173

CYCLE PERIOD DATA

V/H RAMP SETTING LEVEL	AMPLITUDE	TIME UP RAMP-SEC	---CALIBRATED--- CYCLE PERIOD-SEC MASTER	SLAVE	---IN-FLIGHT--- CYCLE PERIOD-SEC MASTER	SLAVE	ORBI NO.
6	4	10	4.222	4.197	4.270	4.175	9
6	4	1530	2.314	2.314	2.320	2.325	16
6	4	1575	2.280	2.280	2.300	2.302	32
6	4	1653	2.254	2.250	2.274	2.269	47
6	4	1686	2.252	2.248	2.267	2.260	63

A. 1024-1 LAUNCH AT 2131Z ON 09/22/65
B. DRY
C. FINAL PERFORMANCE ESTIMATE, PART 1

OPERATIONS SUMMARY
FWD PAN CAMERA NUMBER 172

OPN	NO	FRA		Q	LAT	LONG	HEIGHT	RANGE	DA	H	M	S	LTIM	S-TIM
PRE-FLT														
1	4	0	11 ON	2	62 41	154 24W	783532	812269	22	22	57	47	1240	82667
			OFF	2	60 59	153 5W	773191	801534	22	22	58	14	1245	82694
5	7	1	21 ON	2	75 56	91 12E	867776	899734	23	4	54	31	1059	17671
			OFF	2	72 31	101 31E	842304	873285	23	4	55	38	1141	17738
5	7	2	71 ON	2	60 51	116 12E	769554	797758	23	4	58	52	1243	17932
			OFF	2	48 28	122 19E	704224	729951	23	5	2	4	1311	18124
5	7	3	21 ON	2	46 0	123 6E	692715	718008	23	5	2	42	1315	18162
			OFF	2	42 32	124 5E	677350	702063	23	5	3	35	1319	18215
7	9	1	62 ON	2	52 17	75 30E	722433	748849	23	8	1	22	13 3	28882
			OFF	2	41 58	78 52E	675105	699732	23	8	3	59	1319	29039
7	9	2	69 ON	2	37 29	79 56E	657515	681481	23	8	5	7	1324	29107
			OFF	2	26 45	81 55E	624000	646706	23	8	7	48	1335	29268
7	9	3	19 ON	2	24 15	82 18E	618055	640538	23	8	8	25	1337	29305
			OFF	2	21 22	82 43E	612206	634470	23	8	9	8	1340	29348
7	9	4	28 ON	2	19 46	82 56E	609382	631540	23	8	9	32	1341	29372
			OFF	2	15 29	83 30E	603452	625388	23	8	10	36	1344	29436
9	4	0	11 ON	1	38 54	123 8W	1156793	1199990	23	10	39	48	227	38388
			OFF	1	41 53	122 25W	1145787	1188551	23	10	40	35	230	38435
9	4	1	99 ON	2	60 13	25 54E	758960	786762	23	10	59	35	1243	39575
			OFF	2	43 35	33 4E	676190	700859	23	11	3	51	1316	39831
16	4	0	10 ON	2	37 10	124 9W	637306	660512	23	21	36	20	1319	77780
			OFF	2	35 25	123 47W	631337	654319	23	21	36	46	1321	77806
18	4	1	30 ON	2	66 7	176 39E	775321	803745	24	0	29	6	1215	1746
			OFF	2	60 45	178 37W	744246	771489	24	0	30	32	1236	1832
20	6	1	48 ON	2	59 11	137 3E	733288	760116	24	3	31	11	1239	12671
			OFF	2	50 57	141 8E	691461	716706	24	3	33	19	1257	12799
21	6	1	140 ON	2	60 8	113 44E	737381	764363	24	5	1	3	1236	18063
			OFF	2	37 11	122 25E	634225	657316	24	5	6	54	1316	18414
21	6	2	34 ON	3	14 42	129 28E	626946	649763	24	5	19	43	1357	19183
			OFF	3	20 11	130 11E	646668	670225	24	5	21	4	14 1	19264
22	3	1	54 ON	2	58 23	92 11E	726766	753349	24	6	31	37	1240	23497
			OFF	2	49 10	96 26E	681279	706140	24	6	33	59	1259	23639
22	3	2	38 ON	2	43 36	98 10E	657372	681332	24	6	35	24	13 8	23724
			OFF	2	37 24	99 41E	634278	657370	24	6	36	57	1315	23817
22	3	3	18 ON	2	0 14	105 2E	592574	614102	24	6	46	9	1346	24369
			OFF	3	2 32	105 21E	596829	618517	24	6	46	50	1348	24410
23	5	1	91 ON	2	59 17	68 56E	730506	757228	24	8	1	29	1237	28889
			OFF	2	44 14	75 18E	659185	683213	24	8	5	20	13 6	29120
23	5	2	33 ON	2	34 40	77 34E	624822	647559	24	8	7	45	1318	29265
			OFF	2	29 36	78 30E	610646	632852	24	8	9	1	1323	29341
25	2	1	165 ON	2	58 19	24 10E	723138	749581	24	11	1	57	1238	39717
			OFF	2	41 12	30 45E	645808	669334	24	11	6	19	13 9	39979
29	7	1	51 ON	3	20 22	51 13W	652445	676219	24	17	21	57	1357	62517

					OFF	3	29	1	49	55W	691690	716943	24	17	24	6	14	4	62646
32	8	0	10	ON	2	37	19	127	5W	627743	650590	24	21	37	59	13	9	77879
					OFF	2	35	35	126	43W	622441	645089	24	21	38	25	1311	77905
34	9	1	42	ON	2	70	22	167	57E	780783	809416	25	0	29	33	1141	1773	
					OFF	2	63	3	176	43E	738310	765328	25	0	31	34	1218	1894	
35	9	1	54	ON	2	74	24	136	7E	806058	835654	25	1	58	25	11	2	7105	
					OFF	2	65	12	152	4E	749040	776465	25	2	1	5	12	9	7265
36	9	1	139	ON	2	64	30	130	4E	744000	771234	25	3	31	21	1211	12681	
					OFF	2	41	34	141	12E	639418	662704	25	3	37	15	13	2	13035
37	9	1	105	ON	2	36	50	119	38E	623334	646015	25	5	8	31	13	7	18511	
					OFF	2	20	58	122	20E	590412	611860	25	5	12	27	1321	18747	
38	7	1	125	ON	2	59	16	88	47E	714150	740253	25	6	32	54	1228	23574	
					OFF	2	39	15	96	25E	630313	653256	25	6	38	0	13	3	23800
39	9	1	16	ON	2	47	25	71	30E	659277	683309	25	8	6	2	1252	29162	
					OFF	2	44	45	72	19E	648878	672519	25	8	6	42	1256	29202	
39	9	2	91	ON	2	34	35	74	45E	615884	638286	25	8	9	15	13	8	29355	
					OFF	2	20	38	77	2E	589661	611082	25	8	12	43	1320	29563	
40	1	1	166	ON	2	66	14	37	35E	749099	776527	25	9	31	12	12	1	34272	
					OFF	2	39	23	51	2E	629521	652435	25	9	38	7	13	2	34687
41	2	1	70	ON	2	55	27	22	55E	692585	717873	25	11	4	8	1235	39848	
					OFF	2	44	16	27	7E	645662	669182	25	11	6	59	1255	40019	
46	7	1	20	ON	2	39	41	85	3W	626909	649725	25	18	38	29	1258	67109	
					OFF	2	36	31	84	21W	617616	640083	25	18	39	16	13	1	67156
47	7	1	20	ON	2	37	41	107	16W	620340	642909	25	20	9	3	1259	72543	
					OFF	2	34	33	106	37W	611929	634183	25	20	9	50	13	3	72590
50	4	1	48	ON	2	71	20	163	25E	766851	794953	26	0	30	27	1124	1827	
					OFF	2	63	6	173	54E	721087	747453	26	0	32	44	12	8	1964
52	4	1	62	ON	2	60	33	130	32E	706216	732019	26	3	33	31	1215	12811	
					OFF	2	50	19	135	45E	660724	684811	26	3	36	9	1239	12969	
52	4	2	33	ON	2	45	42	137	19E	643205	666633	26	3	37	20	1246	13040	
					OFF	2	40	30	138	43E	625965	648745	26	3	38	38	1253	13118	
53	4	1	43	ON	2	67	29	101	24E	741059	768182	26	5	1	43	1147	18103	
					OFF	2	60	16	108	3E	703877	729592	26	5	3	39	1215	18219	
53	4	2	92	ON	2	42	46	115	29E	632505	655531	26	5	8	7	1250	18487	
					OFF	2	28	43	118	25E	597298	619804	26	5	11	37	13	5	18697
54	7	1	117	ON	2	46	36	91	42E	645049	668546	26	6	37	12	1244	23832	
					OFF	2	28	41	95	45E	596933	618626	26	6	41	40	13	4	24100
56	1	1	101	ON	2	59	25	40	37E	696940	722393	26	9	34	1	1216	34441	
					OFF	2	43	24	47	18E	632752	655787	26	9	38	6	1247	34686	
57	1	1	20	ON	2	77	52	18	2W	803920	833434	26	10	58	38	946	39518	
					OFF	2	75	4	4	48W	782203	810809	26	10	59	40	1040	39580	
57	1	2	20	ON	2	52	37	21	30E	666077	690365	26	11	5	49	1231	39949	
					OFF	2	49	18	22	48E	652927	676720	26	11	6	40	1237	40000	
63	5	1	20	ON	2	38	34	110	7W	614727	637085	26	20	9	35	1249	72575	
					OFF	2	35	22	109	26W	606962	629030	26	20	10	23	1252	72623	
66	7	1	50	ON	2	66	12	168	17E	720155	746486	27	0	32	35	1145	1955	
					OFF	2	57	57	174	53E	681131	705987	27	0	34	46	1214	2086	
69	7	1	93	ON	2	64	22	102	10E	707960	733829	27	5	3	9	1151	18189	
					OFF	2	49	19	110	51E	644495	667972	27	5	7	3	1230	18423	
69	7	2	37	ON	2	42	40	112	54E	622990	645659	27	5	8	43	1240	18523	
					OFF	2	37	3	114	14E	608324	630443	27	5	10	7	1247	18607	

69	7	3	21	ON	2	24	2	116	33E	588015	609374	27	5	13	21	1259	18801
				OFF	2	20	48	117	0E	586153	607442	27	5	14	9	13 2	18849
70	5	1	104	ON	2	52	18	87	2E	654748	678610	27	6	36	19	1224	23779
				OFF	2	36	25	91	43E	606509	628560	27	6	40	19	1247	24019
72	3	1	102	ON	2	60	22	37	24E	686473	711531	27	9	34	16	12 3	34456
				OFF	2	44	25	44	26E	626529	649331	27	9	38	20	1236	34700
73	2	1	34	ON	2	54	17	18	11E	660170	684236	27	11	5	51	1218	39951
				OFF	2	48	56	20	21E	640485	663811	27	11	7	13	1228	40033

OPERATIONS SUMMARY

AFT PAN CAMERA NUMBER 173

OPN	NO	FRA		Q	LAT		LONG		HEIGHT	RANGE	DA	H	M	S	LTIM	S-TIM
PRE-FLT 113																
1	4	0	11	ON	2	63	45	155	23W	783532	812269	22	22	57	47	1236	82667
				OFF	2	62	2	153	57W	773191	801534	22	22	58	14	1242	82694
5	7	1	21	ON	2	76	48	87	12E	867776	899734	23	4	54	31	1043	17671
				OFF	2	73	31	99	0E	842304	873285	23	4	55	38	1131	17738
5	7	2	71	ON	2	61	55	115	21E	769554	797758	23	4	58	52	1240	17932
				OFF	2	49	28	121	54E	704224	729951	23	5	2	4	13 9	18124
5	7	3	21	ON	2	47	0	122	44E	692715	718008	23	5	2	42	1313	18162
				OFF	2	43	30	123	46E	677350	702063	23	5	3	35	1318	18215
7	9	1	62	ON	2	53	18	75	0E	722433	748849	23	8	1	22	13 1	28882
				OFF	2	42	56	78	33E	675105	699732	23	8	3	59	1318	29039
7	9	2	69	ON	2	38	26	79	40E	657515	681481	23	8	5	7	1323	29107
				OFF	2	27	39	81	43E	624000	646706	23	8	7	48	1334	29268
7	9	3	19	ON	2	25	8	82	7E	618055	640538	23	8	8	25	1336	29305
				OFF	2	22	15	82	32E	612206	634470	23	8	9	8	1339	29348
7	9	4	28	ON	2	20	39	82	46E	609382	631540	23	8	9	32	1340	29372
				OFF	2	16	21	83	20E	603452	625388	23	8	10	36	1343	29436
9	4	0	11	ON	1	37	15	123	36W	1156793	1199990	23	10	39	48	225	38388
				OFF	1	40	14	122	56W	1145787	1188551	23	10	40	35	228	38435
9	4	1	99	ON	2	61	16	25	6E	758960	786762	23	10	59	35	1240	39575
				OFF	2	44	33	32	44E	676190	700859	23	11	3	51	1314	39831
16	4	0	11	ON	2	38	5	124	25W	637306	660512	23	21	36	20	1318	77780
				OFF	2	36	20	124	2W	631337	654319	23	21	36	46	1320	77806
18	4	1	30	ON	2	67	9	175	23E	775321	803745	24	0	29	6	1210	1746
				OFF	2	61	46	179	26W	744246	771489	24	0	30	32	1232	1832
20	6	1	48	ON	2	60	11	136	19E	733288	760116	24	3	31	11	1236	12671
				OFF	2	51	55	140	41E	691461	716706	24	3	33	19	1256	12799
21	6	1	140	ON	2	61	9	112	58E	737381	764363	24	5	1	3	1232	18063
				OFF	2	38	6	122	9E	634225	657316	24	5	6	54	1315	18414
21	6	2	34	ON	3	13	48	129	18E	626946	649763	24	5	19	43	1356	19183
				OFF	3	19	15	130	0E	646668	670225	24	5	21	4	14 1	19264
22	3	1	54	ON	2	59	23	91	29E	726768	753349	24	6	31	37	1237	23497
				OFF	2	50	8	96	1E	681279	706140	24	6	33	59	1258	23639
22	3	2	39	ON	2	44	32	97	51E	657372	681332	24	6	35	24	13 6	23724
				OFF	2	38	18	99	25E	634278	657370	24	6	36	57	1314	23817
22	3	3	18	ON	2	1	6	104	53E	592574	614102	24	6	46	9	1345	24369
				OFF	3	1	40	105	12E	596829	618517	24	6	46	50	1347	24410
23	5	1	91	ON	2	60	18	68	12E	730506	757228	24	8	1	29	1234	28889
				OFF	2	45	11	74	58E	659185	683213	24	8	5	20	13 5	29120

23	5	2	33	ON	2	35	34	77	20E	624822	647559	24	8	7	45	1317	29265
				OFF	2	30	29	78	17E	610646	632852	24	8	9	1	1322	29341
25	2	1	105	ON	2	59	19	23	29E	723138	749581	24	11	1	57	1235	39717
				OFF	2	42	8	30	27E	645808	669334	24	11	6	19	13 8	39979
29	7	1	52	ON	3	19	26	51	24W	652445	676219	24	17	21	57	1356	62517
				OFF	3	28	1	50	8W	691690	716943	24	17	24	6	14 3	62646
32	8	0	11	ON	2	38	13	127	20W	627743	650590	24	21	37	59	13 8	77879
				OFF	2	36	29	126	57W	622441	645089	24	21	38	25	1310	77905
34	9	1	42	ON	2	71	21	166	6E	780783	809416	25	0	29	33	1133	1773
				OFF	2	64	3	175	46E	738310	765328	25	0	31	34	1214	1894
35	9	1	55	ON	2	75	17	133	7E	806058	835654	25	1	58	25	1050	7105
				OFF	2	66	12	150	56E	749040	776465	25	2	1	5	12 4	7265
36	9	1	140	ON	2	65	30	129	0E	744000	771234	25	3	31	21	12 7	12681
				OFF	2	42	29	140	55E	639418	662704	25	3	37	15	13 0	13035
37	9	1	106	ON	2	37	43	119	23E	623334	646015	25	5	8	31	13 6	18511
				OFF	2	21	49	122	10E	590412	611860	25	5	12	27	1321	18747
38	7	1	125	ON	2	60	15	88	4E	714150	740253	25	6	32	54	1225	23574
				OFF	2	40	10	96	9E	630313	653256	25	6	38	0	13 2	23880
39	9	1	16	ON	2	48	21	71	8E	659277	683309	25	8	6	2	1250	29162
				OFF	2	45	40	71	59E	648878	672519	25	8	6	42	1254	29202
39	9	2	93	ON	2	35	29	74	31E	615884	638286	25	8	9	15	13 7	29355
				OFF	2	21	29	76	52E	589661	611082	25	8	12	43	1320	29563
40	1	1	166	ON	2	67	14	36	21E	749099	776527	25	9	31	12	1156	34272
				OFF	2	40	17	50	46E	629521	652435	25	9	38	7	13 1	34687
41	2	1	70	ON	2	56	25	22	21E	692585	717873	25	11	4	8	1233	39848
				OFF	2	45	11	26	47E	645662	669182	25	11	6	59	1254	40019
46	7	1	20	ON	2	40	35	85	19W	626909	649725	25	18	38	29	1257	67109
				OFF	2	37	25	84	35W	617616	640083	25	18	39	16	13 0	67156
47	7	1	20	ON	2	38	34	107	31W	620340	642909	25	20	9	3	1258	72543
				OFF	2	35	26	106	51W	611929	634183	25	20	9	50	13 2	72590
50	4	1	49	ON	2	72	17	161	25E	766851	794953	26	0	30	27	1116	1827
				OFF	2	64	5	172	59E	721087	747453	26	0	32	44	12 4	1964
52	4	1	63	ON	2	61	31	129	46E	706216	732019	26	3	33	31	1212	12811
				OFF	2	51	15	135	20E	660724	684811	26	3	36	9	1237	12969
52	4	2	33	ON	2	46	37	136	58E	643205	666633	26	3	37	20	1245	13040
				OFF	2	41	24	138	27E	625965	648745	26	3	38	38	1252	13118
53	4	1	43	ON	2	68	27	100	4E	741059	768182	26	5	1	43	1142	18103
				OFF	2	61	14	107	18E	703877	729592	26	5	3	39	1212	18219
53	4	2	93	ON	2	43	40	115	11E	632505	655531	26	5	8	7	1248	18487
				OFF	2	29	35	118	13E	597298	619004	26	5	11	37	13 4	18697
54	7	1	118	ON	2	47	31	91	21E	645049	668546	26	6	37	12	1242	23832
				OFF	2	29	33	95	33E	596933	618626	26	6	41	40	13 3	24100
56	1	1	102	ON	2	60	23	39	54E	696940	722393	26	9	34	1	1213	34441
				OFF	2	44	18	47	0E	632752	655787	26	9	38	6	1246	34686
57	1	1	21	ON	2	78	30	22	55W	803920	833434	26	10	58	38	926	39518
				OFF	2	75	54	7	59W	782203	810889	26	10	59	40	1027	39580
57	1	2	21	ON	2	53	34	21	2E	666077	690365	26	11	5	49	1229	39949
				OFF	2	50	13	22	24E	652927	676720	26	11	6	40	1236	40000
63	5	1	21	ON	2	39	27	110	22W	614727	637085	26	20	9	35	1248	72575
				OFF	2	36	14	109	40W	606962	629030	26	20	10	23	1251	72623
66	7	1	50	ON	2	67	9	167	7E	720155	746486	27	0	32	35	1141	1955

				OFF	2	58	54	174	15E	681131	705987	27	0	34	46	1211	2086
69	7	1	94	ON	2	65	19	101	10E	707960	733829	27	5	3	9	1147	18189
				OFF	2	50	14	110	27E	644495	667972	27	5	7	3	1228	18423
69	7	2	37	ON	2	43	33	112	36E	622990	645659	27	5	8	43	1239	18523
				OFF	2	37	55	114	0E	608324	630443	27	5	10	7	1246	18607
69	7	3	21	ON	2	24	52	116	22E	588015	609374	27	5	13	21	1258	18801
				OFF	2	21	39	116	50E	586153	607442	27	5	14	9	13 1	18849
70	5	1	104	ON	2	53	13	86	35E	654748	678610	27	6	36	19	1222	23779
				OFF	2	37	17	91	28E	606509	628560	27	6	40	19	1246	24019
72	3	1	102	ON	2	61	19	36	40E	686473	711531	27	9	34	16	12 0	34456
				OFF	2	45	18	44	7E	626529	649331	27	9	38	20	1234	34700
73	2	1	35	ON	2	55	13	17	41E	660170	684236	27	11	5	51	1216	39951
				OFF	2	49	50	19	58E	640485	663811	27	11	7	13	1227	40033

PHOTOGRAPHIC SUMMARY
FWD PAN CAMERA NO 172 0.2250 SLIT W/25 FILTER 3404 FILM

OPN	NO	FRA	FEET		ET	S-EL	S-DIR	EV	FULL	INT	PRI
PRE-FLT		110	291.0								
1	4	0	11	29.1	ON	229	26.8	33.9	11.69	11.93	11.33	10.73
					OFF	233	28.4	34.4	11.72	11.95	11.35	10.75
5	7	1	21	55.5	ON	208	13.6	31.7	11.55	11.39	10.79	10.19
					OFF	214	17.4	31.6	11.60	11.63	11.03	10.43
5	7	2	71	187.8	ON	235	28.6	33.7	11.73	11.95	11.35	10.75
					OFF	262	39.1	38.6	11.88	12.06	11.46	10.86
5	7	3	21	55.5	ON	267	41.1	39.9	11.91	12.07	11.47	10.87
					OFF	273	43.8	42.0	11.95	12.09	11.49	10.89
7	9	1	62	164.0	ON	258	36.0	36.4	11.86	12.04	11.44	10.84
					OFF	277	44.3	42.0	11.97	12.09	11.49	10.89
7	9	2	69	182.5	ON	285	47.7	45.3	12.01	12.10	11.50	10.90
					OFF	299	54.7	55.8	12.08	12.10	11.50	10.90
7	9	3	19	50.3	ON	302	56.1	58.9	12.09	12.10	11.50	10.90
					OFF	304	57.5	62.8	12.10	12.10	11.50	10.90
7	9	4	28	74.1	ON	305	58.2	65.1	12.11	12.10	11.50	10.90
					OFF	307	59.8	71.9	12.12	12.10	11.50	10.90
9	4	0	11	29.1	ON	159	-38.5	37.4	11.17	0.00	0.00	0.00
					OFF	160	-36.0	36.1	11.17	0.00	0.00	0.00
9	4	1	99	261.9	ON	253	29.2	33.2	11.83	11.96	11.36	10.76
					OFF	284	43.2	40.6	12.00	12.09	11.49	10.89
16	4	0	10	26.5	ON	287	48.5	43.6	12.02	12.10	11.50	10.90
					OFF	289	49.8	45.1	12.03	12.10	11.50	10.90
18	4	1	30	79.3	ON	231	23.8	30.2	11.70	11.86	11.26	10.66
					OFF	241	28.8	31.4	11.77	11.96	11.36	10.76
20	6	1	48	127.2	ON	243	30.3	31.5	11.77	11.98	11.38	10.78
					OFF	259	37.6	34.5	11.87	12.05	11.45	10.85
21	6	1	140	370.3	ON	241	29.4	31.1	11.76	11.97	11.37	10.77
					OFF	283	48.8	42.5	12.00	12.10	11.50	10.90
21	6	2	34	89.9	ON	286	57.4	124.5	12.01	12.10	11.50	10.90
					OFF	278	54.0	130.9	11.97	12.10	11.50	10.90
22	3	1	54	142.8	ON	246	31.1	31.4	11.79	11.99	11.39	10.79
					OFF	264	39.2	35.0	11.90	12.06	11.46	10.86
22	3	2	38	100.5	ON	275	43.8	37.9	11.95	12.09	11.49	10.89

					OFF	234	48.7	42.2	12.00	12.10	11.50	10.90
22	3	3	18	47.6	ON	301	63.4	99.5	12.08	12.10	11.50	10.90
					OFF	299	62.8	104.9	12.08	12.10	11.50	10.90
23	5	1	91	240.7	ON	246	30.2	31.0	11.79	11.98	11.38	10.78
					OFF	275	43.3	37.4	11.95	12.09	11.49	10.89
23	5	2	33	87.3	ON	289	50.8	44.2	12.03	12.10	11.50	10.90
					OFF	295	54.4	49.1	12.06	12.10	11.50	10.90
25	2	1	105	277.7	ON	249	31.2	30.9	11.81	11.99	11.39	10.79
					OFF	280	45.9	38.8	11.98	12.10	11.50	10.90
29	7	1	51	134.9	ON	273	54.8	132.4	11.95	12.10	11.50	10.90
					OFF	258	48.4	140.1	11.86	12.10	11.50	10.90
32	8	0	10	26.5	ON	287	49.3	40.1	12.02	12.10	11.50	10.90
					OFF	289	50.7	41.4	12.03	12.10	11.50	10.90
34	9	1	42	111.1	ON	226	19.6	26.9	11.67	11.72	11.12	10.52
					OFF	241	26.9	28.1	11.76	11.93	11.33	10.73
35	9	1	54	142.8	ON	218	15.1	26.7	11.62	11.50	10.90	10.30
					OFF	236	24.8	27.5	11.74	11.88	11.28	10.68
36	9	1	139	367.7	ON	239	25.5	27.4	11.75	11.90	11.30	10.70
					OFF	283	46.1	36.2	12.00	12.10	11.50	10.90
37	9	1	105	277.7	ON	290	50.0	39.3	12.03	12.10	11.50	10.90
					OFF	304	61.0	57.0	12.10	12.10	11.50	10.90
38	7	1	125	330.6	ON	252	30.5	28.3	11.83	11.98	11.38	10.78
					OFF	287	48.1	37.3	12.02	12.10	11.50	10.90
39	9	1	16	42.3	ON	276	41.2	32.4	11.96	12.07	11.47	10.87
					OFF	280	43.5	33.8	11.98	12.09	11.49	10.89
39	9	2	91	240.7	ON	294	51.9	40.7	12.05	12.10	11.50	10.90
					OFF	304	61.4	57.0	12.10	12.10	11.50	10.90
40	1	1	166	439.1	ON	238	23.8	26.5	11.75	11.86	11.26	10.66
					OFF	288	48.1	36.8	12.02	12.10	11.50	10.90
41	2	1	70	185.1	ON	262	34.1	28.9	11.88	12.02	11.42	10.82
					OFF	281	44.0	33.6	11.99	12.09	11.49	10.89
46	7	1	20	52.9	ON	288	48.1	35.3	12.02	12.10	11.50	10.90
					OFF	292	50.7	37.5	12.04	12.10	11.50	10.90
47	7	1	20	52.9	ON	290	49.8	36.4	12.03	12.10	11.50	10.90
					OFF	293	52.4	38.8	12.05	12.10	11.50	10.90
50	4	1	48	127.0	ON	228	18.4	24.2	11.69	11.68	11.08	10.48
					OFF	246	26.9	25.3	11.80	11.93	11.33	10.73
52	4	1	62	164.0	ON	253	29.4	25.5	11.84	11.97	11.37	10.77
					OFF	272	39.0	28.6	11.94	12.06	11.46	10.86
52	4	2	33	87.3	ON	280	43.1	30.6	11.98	12.09	11.49	10.89
					OFF	287	47.7	33.4	12.02	12.10	11.50	10.90
53	4	1	43	113.7	ON	238	22.5	24.1	11.75	11.82	11.22	10.62
					OFF	253	29.6	25.4	11.84	11.97	11.37	10.77
53	4	2	92	243.3	ON	285	45.8	31.9	12.01	12.10	11.50	10.90
					OFF	300	57.3	42.9	12.08	12.10	11.50	10.90
54	7	1	117	309.5	ON	279	42.4	29.8	11.98	12.08	11.48	10.88
					OFF	300	57.4	42.6	12.08	12.10	11.50	10.90
56	1	1	101	267.1	ON	259	30.5	25.0	11.87	11.98	11.38	10.78
					OFF	286	45.3	30.9	12.01	12.09	11.49	10.89
57	1	1	20	52.9	ON	219	10.1	23.7	11.63	11.10	10.50	9.90
					OFF	225	14.0	23.2	11.67	11.43	10.83	10.23

57	1	2	20	52.9	ON	273	36.9	26.8	11.95	12.05	11.45	10.85
					OFF	279	40.0	28.0	11.98	12.07	11.47	10.87
63	5	1	20	52.9	ON	294	49.8	32.2	12.05	12.10	11.50	10.90
					OFF	297	52.5	34.4	12.07	12.10	11.50	10.90
66	7	1	50	132.3	ON	247	23.7	22.1	11.80	11.86	11.26	10.66
					OFF	264	32.0	23.6	11.90	12.00	11.40	10.80
69	7	1	93	246.0	ON	253	25.6	21.8	11.83	11.90	11.30	10.70
					OFF	281	40.2	25.6	11.99	12.07	11.47	10.87
69	7	2	37	97.9	ON	291	46.4	28.5	12.04	12.10	11.50	10.90
					OFF	297	51.4	31.7	12.07	12.10	11.50	10.90
69	7	3	21	55.5	ON	305	61.9	44.2	12.10	12.10	11.50	10.90
					OFF	305	64.2	48.9	12.11	12.10	11.50	10.90
70	5	1	104	275.1	ON	279	37.4	24.4	11.98	12.05	11.45	10.85
					OFF	299	52.0	31.9	12.08	12.10	11.50	10.90
72	3	1	102	269.8	ON	264	29.6	22.0	11.90	11.97	11.37	10.77
					OFF	290	44.9	27.0	12.03	12.09	11.49	10.89
73	2	1	34	89.9	ON	276	35.6	23.2	11.96	12.03	11.43	10.83
					OFF	284	40.7	24.9	12.00	12.07	11.47	10.87

PHOTOGRAPHIC SUMMARY

AFT PAN CAMERA NO 173 0.1500 SLIT W/21 FILTER 3404 FILM

OPN	NO		FRA	FEET		ET	S-EL	S-DIR	EV	FULL	INT	PRI
PRE-FLT			113	298.9								
1	4	0	11	29.1	ON	347	25.9	32.6	12.29	12.56	11.96	11.36
					OFF	353	27.4	33.2	12.31	12.59	11.99	11.39
5	7	1	21	55.5	ON	314	12.4	27.6	12.15	11.96	11.36	10.76
					OFF	324	16.3	28.9	12.19	12.22	11.62	11.02
5	7	2	71	187.8	ON	356	27.6	32.5	12.33	12.59	11.99	11.39
					OFF	395	38.3	37.7	12.48	12.71	12.11	11.51
5	7	3	21	55.5	ON	403	40.3	39.0	12.51	12.72	12.12	11.52
					OFF	412	43.1	41.1	12.54	12.73	12.13	11.53
7	9	1	62	164.0	ON	389	35.2	35.5	12.46	12.68	12.08	11.48
					OFF	418	43.6	41.1	12.56	12.74	12.14	11.54
7	9	2	69	182.5	ON	430	47.0	44.3	12.60	12.75	12.15	11.55
					OFF	451	54.2	54.6	12.67	12.75	12.15	11.55
7	9	3	19	50.3	ON	455	55.6	57.6	12.68	12.75	12.15	11.55
					OFF	458	57.1	61.4	12.69	12.75	12.15	11.55
7	9	4	28	74.1	ON	460	57.9	63.7	12.70	12.75	12.15	11.55
					OFF	463	59.6	70.3	12.71	12.75	12.15	11.55
9	4	0	11	29.1	ON	242	-39.9	37.9	11.77	0.00	0.00	0.00
					OFF	242	-37.4	36.4	11.77	0.00	0.00	0.00
9	4	1	99	261.9	ON	382	28.3	32.1	12.43	12.60	12.00	11.40
					OFF	429	42.4	39.7	12.60	12.73	12.13	11.53
16	4	0	11	29.1	ON	433	47.8	42.7	12.61	12.75	12.15	11.55
					OFF	436	49.1	44.1	12.62	12.75	12.15	11.55
18	4	1	30	79.3	ON	349	22.8	28.7	12.30	12.48	11.88	11.28
					OFF	365	27.9	30.4	12.36	12.59	11.99	11.39
20	6	1	48	127.0	ON	369	29.4	30.5	12.38	12.62	12.02	11.42
					OFF	395	36.7	33.7	12.48	12.69	12.09	11.49
21	6	1	140	370.3	ON	367	28.5	30.0	12.37	12.60	12.00	11.40
					OFF	431	48.1	41.6	12.60	12.75	12.15	11.55

21	6	2	34	89.9	ON	435	57.9	123.3	12.62	12.75	12.15	11.55
					OFF	423	54.6	130.0	12.58	12.75	12.15	11.55
22	3	1	54	142.8	ON	374	30.2	30.4	12.40	12.63	12.03	11.43
					OFF	402	38.4	34.1	12.50	12.71	12.11	11.51
22	3	2	39	103.2	ON	418	43.1	37.1	12.56	12.73	12.13	11.53
					OFF	432	48.0	41.2	12.61	12.75	12.15	11.55
22	3	3	18	47.6	ON	457	63.6	97.7	12.69	12.75	12.15	11.55
					OFF	454	63.0	103.2	12.68	12.75	12.15	11.55
23	5	1	91	240.7	ON	374	29.3	30.0	12.40	12.62	12.02	11.42
					OFF	418	42.6	36.5	12.56	12.73	12.13	11.53
23	5	2	33	87.3	ON	440	50.2	43.2	12.63	12.75	12.15	11.55
					OFF	448	53.8	48.0	12.66	12.75	12.15	11.55
25	2	1	105	277.7	ON	379	30.3	29.9	12.42	12.63	12.03	11.43
					OFF	426	45.2	37.9	12.59	12.74	12.14	11.54
29	7	1	52	137.5	ON	416	55.5	131.5	12.55	12.75	12.15	11.55
					OFF	392	49.3	139.5	12.47	12.75	12.15	11.55
32	8	0	11	29.1	ON	436	48.6	39.1	12.62	12.75	12.15	11.55
					OFF	439	50.0	40.5	12.63	12.75	12.15	11.55
34	9	1	42	111.1	ON	341	18.5	25.0	12.27	12.33	11.73	11.13
					OFF	363	25.9	26.9	12.36	12.56	11.96	11.36
35	9	1	55	145.5	ON	330	14.0	23.6	12.22	12.08	11.48	10.88
					OFF	357	23.8	26.2	12.33	12.51	11.91	11.31
36	9	1	140	370.3	ON	361	24.5	26.2	12.35	12.53	11.93	11.33
					OFF	427	45.4	35.4	12.59	12.74	12.14	11.54
37	9	1	100	260.4	ON	438	49.3	38.4	12.63	12.75	12.15	11.55
					OFF	458	60.5	55.5	12.69	12.75	12.15	11.55
38	7	1	125	330.5	ON	380	29.5	27.3	12.42	12.62	12.02	11.42
					OFF	433	47.4	36.5	12.61	12.75	12.15	11.55
39	9	1	16	42.3	ON	416	40.4	31.6	12.55	12.72	12.12	11.52
					OFF	422	42.8	33.0	12.57	12.73	12.13	11.53
39	9	2	93	246.0	ON	444	51.2	39.7	12.64	12.75	12.15	11.55
					OFF	458	60.9	55.6	12.69	12.75	12.15	11.55
40	1	1	166	439.1	ON	360	22.8	25.1	12.34	12.48	11.88	11.28
					OFF	435	47.4	35.9	12.62	12.75	12.15	11.55
41	2	1	70	185.1	ON	395	33.2	28.0	12.48	12.66	12.06	11.46
					OFF	425	43.2	32.8	12.58	12.74	12.14	11.54
46	7	1	20	52.9	ON	435	47.4	34.4	12.62	12.75	12.15	11.55
					OFF	441	50.0	36.6	12.64	12.75	12.15	11.55
47	7	1	20	52.9	ON	442	49.1	35.6	12.64	12.75	12.15	11.55
					OFF	447	51.7	37.9	12.66	12.75	12.15	11.55
50	4	1	49	129.5	ON	349	17.4	22.1	12.30	12.28	11.68	11.08
					OFF	376	25.9	24.2	12.41	12.56	11.96	11.36
52	4	1	63	166.6	ON	386	28.4	24.5	12.45	12.60	12.00	11.40
					OFF	416	38.1	27.8	12.55	12.70	12.10	11.50
52	4	2	33	87.3	ON	428	42.3	29.8	12.59	12.73	12.13	11.53
					OFF	438	46.9	32.6	12.63	12.75	12.15	11.55
53	4	1	43	113.7	ON	364	21.5	22.6	12.36	12.44	11.84	11.24
					OFF	387	28.7	24.4	12.45	12.61	12.01	11.41
53	4	2	93	246.0	ON	435	45.0	31.1	12.62	12.74	12.14	11.54
					OFF	457	56.6	41.8	12.69	12.75	12.15	11.55
54	7	1	113	312.1	ON	426	41.6	29.0	12.59	12.73	12.13	11.53

					OFF	457	56.7	41.6	12.69	12.75	12.15	11.55
56	1	1	102	269.8	ON	395	29.5	24.1	12.48	12.62	12.02	11.42
					OFF	436	44.5	30.2	12.62	12.74	12.14	11.54
57	1	1	21	55.5	ON	334	9.0	18.8	12.23	11.63	11.03	10.43
					OFF	343	12.9	19.9	12.27	12.00	11.40	10.80
57	1	2	21	55.5	ON	415	36.1	26.0	12.55	12.69	12.09	11.49
					OFF	423	39.2	27.3	12.58	12.71	12.11	11.51
63	5	1	21	55.5	ON	447	49.0	31.4	12.65	12.75	12.15	11.55
					OFF	451	51.8	33.5	12.67	12.75	12.15	11.55
66	7	1	50	132.3	ON	376	22.8	20.7	12.41	12.48	11.88	11.28
					OFF	402	31.0	22.7	12.50	12.64	12.04	11.44
69	7	1	94	248.6	ON	384	24.6	20.7	12.44	12.53	11.93	11.33
					OFF	427	39.4	24.9	12.59	12.71	12.11	11.51
69	7	2	37	97.9	ON	442	45.6	27.8	12.64	12.74	12.14	11.54
					OFF	451	50.6	30.9	12.67	12.75	12.15	11.55
69	7	3	21	55.5	ON	463	61.3	42.9	12.71	12.75	12.15	11.55
					OFF	463	63.7	47.4	12.71	12.75	12.15	11.55
70	5	1	104	275.1	ON	423	36.6	23.7	12.58	12.69	12.09	11.49
					OFF	454	51.2	31.1	12.68	12.75	12.15	11.55
72	3	1	102	269.8	ON	401	28.7	21.1	12.50	12.61	12.01	11.41
					OFF	440	44.0	26.3	12.63	12.74	12.14	11.54
73	2	1	35	92.6	ON	420	34.7	22.5	12.56	12.68	12.08	11.48
					OFF	432	39.8	24.2	12.61	12.72	12.12	11.52

STELLAR-INDEX SUMMARY

CAMERA DATA	ET	FILM	FILTER	GRID	ASSEMBLY NO 069
STELLAR	2.0	3401	NONE	72	
INDEX	1/500	3400	W/21	84	

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		15	1.48	2.97										
1	4	0	2	0.20	0.40	22	57	47	2	62	154W	2	60	153W	27
5	7	1	3	0.30	0.59	4	54	31	2	75	91E	2	72	101E	67
5	7	2	10	0.99	1.98	4	58	52	2	60	116E	2	48	122E	192
5	7	3	3	0.30	0.59	5	2	42	2	46	123E	2	42	124E	53
7	9	1	9	0.89	1.78	8	1	22	2	52	75E	2	41	78E	157
7	9	2	10	0.99	1.98	8	5	7	2	37	79E	2	26	81E	161
7	9	3	2	0.20	0.40	8	8	25	2	24	82E	2	21	82E	43
7	9	4	4	0.40	0.79	8	9	32	2	19	82E	2	15	83E	64
9	4	0	2	0.20	0.40	10	39	48	1	38	123W	1	41	122W	47
9	4	1	14	1.39	2.77	10	59	35	2	60	25E	2	43	33E	256
16	4	0	2	0.20	0.40	21	36	20	2	37	124W	2	35	123W	26
18	4	1	4	0.40	0.79	0	29	6	2	66	176E	2	60	178W	86
20	6	1	7	0.69	1.39	3	31	11	2	59	137E	2	50	141E	128
21	6	1	20	1.98	3.96	5	1	3	2	60	113E	2	37	122E	351
21	6	2	5	0.50	0.99	5	19	43	3	14	129E	3	20	130E	81
22	3	1	7	0.69	1.39	6	31	37	2	50	92E	2	49	96E	142
22	3	2	6	0.59	1.19	6	35	24	2	43	98E	2	37	99E	93
22	3	3	2	0.20	0.40	6	46	9	2	0	105E	3	2	105E	41

23	5	1	13	1.29	2.57	8	1	29	2	59	68E	2	44	75E	231
23	5	2	5	0.50	0.99	8	7	45	2	34	77E	2	29	78E	76
25	2	1	13	1.46	2.97	11	1	57	2	58	24E	2	41	30E	262
29	7	1	7	0.69	1.39	17	21	57	3	20	51W	3	29	49W	129
32	8	0	2	0.20	0.40	21	37	59	2	37	127W	2	35	126W	26
34	9	1	6	0.59	1.19	0	29	33	2	70	167E	2	63	176E	121
35	9	1	7	0.69	1.39	1	58	25	2	74	136E	2	65	152E	160
36	9	1	20	1.98	3.96	3	31	21	2	64	130E	2	41	141E	354
37	9	1	15	1.48	2.97	5	8	31	2	36	119E	2	22	122E	236
38	7	1	18	1.78	3.56	6	32	54	2	59	88E	2	39	96E	306
39	9	1	2	0.20	0.40	8	6	2	2	47	71E	2	44	72E	40
39	9	2	13	1.29	2.57	8	9	15	2	34	74E	2	20	77E	208
40	1	1	24	2.38	4.75	9	31	12	2	66	37E	2	39	51E	415
41	2	1	10	0.99	1.98	11	4	8	2	55	22E	2	44	27E	171
46	7	1	3	0.30	0.59	18	38	29	2	39	85W	2	36	84W	47
47	7	1	3	0.30	0.59	20	9	3	2	37	107W	2	34	106W	47
50	4	1	7	0.69	1.39	0	30	27	2	71	163E	2	63	173E	137
52	4	1	9	0.89	1.78	3	33	31	2	60	130E	2	50	135E	158
52	4	2	4	0.40	0.79	3	37	20	2	45	137E	2	40	138E	78
53	4	1	6	0.59	1.19	5	1	43	2	67	101E	2	60	108E	116
53	4	2	14	1.39	2.77	5	8	7	2	42	115E	2	28	118E	210
54	7	1	16	1.58	3.17	6	37	12	2	46	91E	2	28	95E	268
56	1	1	15	1.48	2.97	9	34	1	2	59	40E	2	43	47E	245
57	1	1	3	0.30	0.59	10	58	38	2	77	18W	2	75	4W	62
57	1	2	2	0.20	0.40	11	5	49	2	52	21E	2	49	22E	51
63	5	1	3	0.30	0.59	20	9	35	2	38	110W	2	35	109W	48
66	7	1	7	0.69	1.39	0	32	35	2	66	168E	2	57	174E	131
69	7	1	14	1.39	2.77	5	3	9	2	64	102E	2	49	110E	234
69	7	2	5	0.50	0.99	5	8	43	2	42	112E	2	37	114E	84
69	7	3	3	0.30	0.59	5	13	21	2	24	116E	2	20	117E	48
70	5	1	15	1.48	2.97	6	36	19	2	52	87E	2	36	91E	240
72	3	1	14	1.39	2.77	9	34	16	2	60	37E	2	44	44E	244
73	2	1	5	0.50	0.99	11	5	51	2	54	18E	2	48	20E	82

A. 1024-1 LAUNCH AT 2131Z ON 09/22/65
B. DRY
C. FINAL PERFORMANCE ESTIMATE, PART 2

RATE ESTIMATE
FWD PAN CAMERA NUMBER 172

OPN	NO	FR	R	A	TUR/ DUR	INST CPS	INST ANG	INST VEL	SCAN RATE R/SEC	RATE I/SEC	PCT CALIB	RATE REQD
1	4	0	11	8	3 ON	1207	0.3431	0.02895	2.155	51.73	-0.2	0.0
					OFF	27	0.3488	0.02943	2.192	52.60	-0.2	0.3
5	7	1	21	6	4 ON	846	0.3104	0.02619	1.951	46.81	-0.2	1.1
					OFF	67	0.3201	0.02701	2.011	48.27	-0.2	0.9
5	7	2	71	6	4 ON	1107	0.3519	0.02969	2.211	53.06	-0.2	0.7
					OFF	192	0.3912	0.03301	2.458	58.99	-0.2	1.8
5	7	3	21	6	4 ON	1337	0.3991	0.03367	2.508	60.18	-0.2	2.0
					OFF	53	0.4083	0.03445	2.566	61.57	-0.2	1.9
7	9	1	62	6	4 ON	1267	0.3854	0.03252	2.422	58.12	-0.2	3.0
					OFF	157	0.4145	0.03498	2.605	62.51	-0.2	3.0

SECRET

7	9	2	69	6	4	ON	1492	0.4262	0.03596	2.678	64.26	-0.2	3.0
						OFF	161	0.4468	0.03770	2.807	67.38	-0.2	2.2
7	9	3	19	6	4	ON	1698	0.4508	0.03803	2.832	67.97	-0.2	2.1
						OFF	43	0.4540	0.03831	2.853	68.47	-0.2	1.8
7	9	4	23	6	4	ON	1757	0.4559	0.03847	2.865	68.76	-0.2	1.7
						OFF	64	0.4592	0.03874	2.885	69.24	-0.2	1.4
9	4	0	11	6	4	ON	43	0.2383	0.02011	1.497	35.93	-0.2	6.1
						OFF	47	0.2390	0.02016	1.501	36.03	-0.2	5.4
9	4	1	99	6	4	ON	1230	0.3779	0.03189	2.374	56.98	-0.2	6.1
						OFF	256	0.4248	0.03585	2.669	64.06	-0.2	5.5
16	4	0	10	6	4	ON	1510	0.4289	0.03619	2.695	64.68	-0.2	0.4
						OFF	26	0.4323	0.03648	2.716	65.19	-0.2	0.2
18	4	1	32	6	4	ON	1066	0.3449	0.02910	2.167	52.00	-0.2	-0.6
						OFF	86	0.3610	0.03046	2.268	54.43	-0.2	-0.4
20	6	1	48	6	4	ON	1184	0.3626	0.03059	2.278	54.68	-1.7	-1.5
						OFF	128	0.3876	0.03270	2.435	58.45	-1.7	-1.1
21	6	1	140	6	4	ON	1171	0.3600	0.03038	2.262	54.29	-1.7	-1.6
						OFF	351	0.4237	0.03575	2.662	63.90	-1.7	-1.4
21	6	2	34	6	4	ON	2292	0.4277	0.03608	2.687	64.49	-1.7	-1.6
						OFF	81	0.4161	0.03511	2.614	62.74	-1.7	-1.1
22	3	1	54	6	4	ON	1207	0.3674	0.03100	2.308	55.40	-1.7	-1.2
						OFF	142	0.3948	0.03331	2.480	59.53	-1.7	-0.9
22	3	2	38	6	4	ON	1434	0.4103	0.03462	2.578	61.88	-1.7	-0.8
						OFF	93	0.4244	0.03581	2.667	64.00	-1.7	-1.2
22	3	3	18	6	4	ON	2079	0.4493	0.03791	2.823	67.75	-1.7	-2.7
						OFF	41	0.4466	0.03768	2.806	67.35	-1.7	-2.5
23	5	1	91	6	4	ON	1207	0.3675	0.03101	2.309	55.41	-1.7	-0.6
						OFF	231	0.4106	0.03465	2.580	61.92	-1.7	-0.4
23	5	2	33	6	4	ON	1583	0.4323	0.03648	2.717	65.20	-1.7	-0.9
						OFF	76	0.4406	0.03718	2.768	66.44	-1.7	-1.5
25	2	1	105	6	4	ON	1229	0.3718	0.03137	2.336	56.06	-1.7	-0.5
						OFF	262	0.4189	0.03535	2.632	63.18	-1.7	-0.6
29	7	1	51	6	4	ON	2416	0.4085	0.03447	2.566	61.60	-1.7	-2.0
						OFF	129	0.3855	0.03252	2.422	58.13	-1.7	-1.6
32	3	0	10	6	4	ON	1557	0.4290	0.03620	2.696	64.69	-1.7	-1.2
						OFF	26	0.4320	0.03645	2.714	65.14	-1.7	-1.4
34	9	1	42	6	4	ON	1046	0.3375	0.02848	2.121	50.90	-1.3	-2.0
						OFF	121	0.3597	0.03035	2.260	54.24	-1.3	-1.6
35	9	1	54	6	4	ON	976	0.3267	0.02757	2.053	49.26	-1.3	-1.8
						OFF	160	0.3532	0.02981	2.219	53.27	-1.3	-1.9
36	9	1	139	6	4	ON	1152	0.3572	0.03014	2.244	53.86	-1.3	-1.5
						OFF	354	0.4228	0.03567	2.656	63.75	-1.3	-0.7
37	9	1	105	6	4	ON	1581	0.4337	0.03659	2.725	65.40	-1.3	-0.9
						OFF	236	0.4537	0.03828	2.850	68.41	-1.3	-2.1
38	7	1	125	6	4	ON	1243	0.3760	0.03173	2.363	56.71	-1.3	-0.7
						OFF	306	0.4290	0.03620	2.695	64.69	-1.3	-0.8
39	9	1	16	6	4	ON	1437	0.4124	0.03479	2.591	62.18	-1.3	0.0
						OFF	40	0.4184	0.03531	2.629	63.10	-1.3	-0.2
39	9	2	91	6	4	ON	1630	0.4395	0.03708	2.761	66.27	-1.3	-0.8
						OFF	208	0.4544	0.03834	2.855	68.53	-1.3	-2.1
40	1	1	165	6	4	ON	1147	0.3561	0.03004	2.237	53.69	-1.3	-1.0

						OFF	415	0.4307	0.03634	2.706	64.95	-1.3	-0.5
41	2	1	70	6	4	ON	1321	0.3913	0.03302	2.459	59.01	-1.3	0.0
						OFF	171	0.4206	0.03549	2.643	63.42	-1.3	-0.2
46	7	1	20	6	4	ON	1562	0.4311	0.03638	2.709	65.01	-1.3	-0.9
						OFF	47	0.4367	0.03685	2.744	65.86	-1.3	-1.2
47	7	1	20	6	4	ON	1596	0.4334	0.03657	2.723	65.36	-1.8	-1.4
						OFF	47	0.4384	0.03699	2.755	66.11	-1.8	-1.8
50	4	1	48	6	4	ON	1078	0.3410	0.02877	2.142	51.42	-1.8	-2.9
						OFF	137	0.3678	0.03103	2.311	55.46	-1.8	-1.9
52	4	1	62	6	4	ON	1262	0.3781	0.03190	2.376	57.01	-1.8	-1.4
						OFF	158	0.4070	0.03434	2.557	61.38	-1.8	-1.1
52	4	2	33	6	4	ON	1490	0.4189	0.03535	2.632	63.17	-1.8	-1.0
						OFF	78	0.4296	0.03625	2.699	64.79	-1.8	-1.4
53	4	1	43	6	4	ON	1154	0.3559	0.03003	2.236	53.66	-1.8	-2.3
						OFF	116	0.3789	0.03197	2.381	57.14	-1.8	-1.5
53	4	2	92	6	4	ON	1538	0.4259	0.03593	2.676	64.22	-1.8	-1.2
						OFF	210	0.4477	0.03777	2.813	67.51	-1.8	-2.2
54	7	1	117	6	4	ON	1483	0.4177	0.03525	2.625	62.99	-1.8	-1.0
						OFF	268	0.4479	0.03779	2.814	67.54	-1.8	-2.2
56	1	1	101	6	4	ON	1305	0.3865	0.03261	2.429	58.28	-1.8	-0.5
						OFF	245	0.4272	0.03604	2.684	64.42	-1.8	-0.8
57	1	1	20	6	4	ON	982	0.3277	0.02765	2.059	49.42	-1.3	-1.8
						OFF	62	0.3370	0.02844	2.118	50.82	-1.3	-1.9
57	1	2	20	6	4	ON	1414	0.4086	0.03447	2.567	61.61	-1.3	0.2
						OFF	51	0.4165	0.03515	2.617	62.81	-1.3	0.0
63	5	1	20	6	4	ON	1628	0.4395	0.03708	2.761	66.27	-1.3	-1.0
						OFF	48	0.4441	0.03747	2.790	66.97	-1.3	-1.3
66	7	1	56	6	4	ON	1210	0.3696	0.03118	2.322	55.73	-1.3	-1.5
						OFF	131	0.3949	0.03332	2.481	59.55	-1.3	-0.8
69	7	1	93	6	4	ON	1251	0.3779	0.03189	2.374	56.99	-1.3	-1.1
						OFF	234	0.4199	0.03543	2.638	63.31	-1.3	-0.6
69	7	2	37	6	4	ON	1586	0.4345	0.03666	2.730	65.52	-1.3	-0.7
						OFF	84	0.4436	0.03743	2.787	66.89	-1.3	-1.2
69	7	3	21	6	4	ON	1864	0.4555	0.03844	2.862	68.69	-1.3	-2.1
						OFF	48	0.4561	0.03849	2.866	68.79	-1.3	-2.3
70	5	1	104	6	4	ON	1462	0.4166	0.03516	2.618	62.83	-1.3	0.3
						OFF	240	0.4465	0.03767	2.805	67.33	-1.3	-0.8
72	3	1	102	6	4	ON	1334	0.3942	0.03326	2.477	59.44	-1.3	-0.2
						OFF	244	0.4332	0.03656	2.722	65.33	-1.3	-0.4
73	2	1	34	6	4	ON	1438	0.4127	0.03482	2.593	62.24	-1.3	0.3
						OFF	82	0.4251	0.03587	2.671	64.10	-1.3	0.0

RATE ESTIMATE
AFT PAN CAMERA NUMBER 173

OPN	NO	FR	R	A		TUR/ DUR	INST CPS	INST ANG VEL	SCAN RATE R/SEC	RATE I/SEC	PCT CALIB	RATE REQD
1	4	0	11	8	3	ON	1207	0.3455	0.02916	2.171	52.11	0.3	0.8
						OFF	27	0.3513	0.02964	2.207	52.97	0.3	1.0
5	7	1	21	6	4	ON	846	0.3130	0.02641	1.966	47.20	0.3	1.9
						OFF	67	0.3226	0.02722	2.027	48.65	0.3	1.7
5	7	2	71	6	4	ON	1107	0.3543	0.02990	2.226	53.43	0.3	1.3

SECRET

						OFF	192	0.3935	0.03320	2.473	59.34	0.3	2.3
5	7	3	21	6	4	ON	1337	0.4014	0.03387	2.522	60.52	0.3	2.5
						OFF	53	0.4106	0.03464	2.580	61.91	0.3	2.4
7	9	1	62	6	4	ON	1267	0.3877	0.03272	2.436	58.47	0.3	3.5
						OFF	157	0.4168	0.03517	2.619	62.85	0.3	3.5
7	9	2	69	6	4	ON	1492	0.4284	0.03614	2.691	64.60	0.3	3.5
						OFF	161	0.4489	0.03788	2.821	67.70	0.3	2.7
7	9	3	19	6	4	ON	1690	0.4529	0.03821	2.846	68.30	0.3	2.5
						OFF	43	0.4562	0.03849	2.866	68.79	0.3	2.3
7	9	4	28	6	4	ON	1757	0.4581	0.03865	2.878	69.07	0.3	2.2
						OFF	64	0.4613	0.03892	2.898	69.56	0.3	1.9
9	4	0	11	6	4	ON	43	0.2410	0.02034	1.515	36.35	0.3	7.2
						OFF	47	0.2417	0.02039	1.519	36.45	0.3	6.4
9	4	1	99	6	4	ON	1230	0.3802	0.03208	2.389	57.34	0.3	6.7
						OFF	256	0.4270	0.03603	2.683	64.40	0.3	6.0
16	4	0	11	6	4	ON	1510	0.4311	0.03638	2.709	65.01	0.3	0.9
						OFF	26	0.4345	0.03666	2.730	65.52	0.3	0.7
18	4	1	30	6	4	ON	1066	0.3473	0.02930	2.182	52.37	0.3	0.1
						OFF	86	0.3634	0.03066	2.283	54.79	0.3	0.3
20	6	1	48	6	4	ON	1184	0.3679	0.03104	2.311	55.47	-0.4	-0.1
						OFF	128	0.3930	0.03316	2.469	59.26	-0.4	0.3
21	6	1	140	6	4	ON	1171	0.3653	0.03082	2.295	55.08	-0.4	-0.2
						OFF	351	0.4293	0.03623	2.698	64.74	-0.4	-0.0
21	6	2	34	6	4	ON	2292	0.4333	0.03656	2.722	65.34	-0.4	-0.3
						OFF	81	0.4216	0.03558	2.649	63.58	-0.4	0.3
22	3	1	54	6	4	ON	1207	0.3727	0.03145	2.342	56.20	-0.4	0.3
						OFF	142	0.4002	0.03377	2.515	60.35	-0.4	0.5
22	3	2	39	6	4	ON	1434	0.4159	0.03509	2.613	62.71	-0.4	0.6
						OFF	93	0.4300	0.03629	2.702	64.85	-0.4	0.1
22	3	3	18	6	4	ON	2079	0.4550	0.03839	2.859	68.61	-0.4	-1.4
						OFF	41	0.4523	0.03817	2.842	68.21	-0.4	-1.2
23	5	1	91	6	4	ON	1207	0.3728	0.03145	2.342	56.21	-0.4	0.8
						OFF	231	0.4162	0.03512	2.615	62.76	-0.4	0.9
23	5	2	33	6	4	ON	1583	0.4380	0.03696	2.752	66.05	-0.4	0.4
						OFF	76	0.4463	0.03766	2.804	67.30	-0.4	-0.2
25	2	1	105	6	4	ON	1229	0.3771	0.03182	2.369	56.86	-0.4	0.9
						OFF	262	0.4245	0.03582	2.667	64.02	-0.4	0.7
29	7	1	52	6	4	ON	2416	0.4140	0.03493	2.601	62.43	-0.4	-0.6
						OFF	129	0.3909	0.03298	2.456	58.94	-0.4	-0.2
32	8	0	11	6	4	ON	1557	0.4346	0.03667	2.731	65.54	-0.4	0.1
						OFF	26	0.4376	0.03692	2.750	65.99	-0.4	-0.1
34	9	1	42	6	4	ON	1046	0.3400	0.02869	2.136	51.27	-0.8	-1.2
						OFF	121	0.3620	0.03055	2.275	54.60	-0.8	-0.9
35	9	1	55	6	4	ON	976	0.3292	0.02777	2.068	49.64	-0.8	-1.0
						OFF	160	0.3556	0.03001	2.235	53.63	-0.8	-1.2
36	9	1	140	6	4	ON	1152	0.3596	0.03034	2.259	54.22	-0.8	-0.8
						OFF	354	0.4250	0.03586	2.670	64.08	-0.8	-0.2
37	9	1	106	6	4	ON	1581	0.4359	0.03678	2.739	65.73	-0.8	-0.4
						OFF	236	0.4558	0.03846	2.864	68.73	-0.8	-1.6
38	7	1	125	6	4	ON	1243	0.3784	0.03193	2.377	57.06	-0.8	-0.1
						OFF	306	0.4312	0.03638	2.709	65.02	-0.8	-0.3

39	9	1	16	6	4	ON	1437	0.4146	0.03490	2.605	62.52	-0.8	0.6
						OFF	40	0.4207	0.03550	2.643	63.44	-0.8	0.3
39	9	2	93	6	4	ON	1630	0.4417	0.03727	2.775	66.60	-0.8	-0.5
						OFF	208	0.4566	0.03852	2.869	68.85	-0.8	-1.6
40	1	1	166	6	4	ON	1147	0.3585	0.03025	2.252	54.06	-0.8	-0.4
						OFF	415	0.4329	0.03653	2.720	65.28	-0.8	-0.0
41	2	1	70	6	4	ON	1321	0.3936	0.03321	2.473	59.36	-0.8	0.6
						OFF	171	0.4228	0.03568	2.657	63.76	-0.8	0.3
46	7	1	20	6	4	ON	1562	0.4333	0.03656	2.723	65.34	-0.8	-0.3
						OFF	47	0.4389	0.03703	2.758	66.18	-0.8	-0.6
47	7	1	20	6	4	ON	1596	0.4404	0.03716	2.767	66.42	-0.2	0.2
						OFF	47	0.4455	0.03759	2.799	67.17	-0.2	-0.1
50	4	1	49	6	4	ON	1078	0.3472	0.02930	2.182	52.36	-0.2	-1.1
						OFF	137	0.3743	0.03158	2.352	56.44	-0.2	-0.1
52	4	1	63	6	4	ON	1262	0.3847	0.03246	2.417	58.00	-0.2	0.4
						OFF	158	0.4138	0.03492	2.600	62.40	-0.2	0.6
52	4	2	33	6	4	ON	1490	0.4258	0.03593	2.676	64.21	-0.2	0.6
						OFF	78	0.4366	0.03684	2.743	65.84	-0.2	0.3
53	4	1	43	6	4	ON	1154	0.3623	0.03057	2.276	54.63	-0.2	-0.5
						OFF	116	0.3855	0.03253	2.422	58.13	-0.2	0.2
53	4	2	93	6	4	ON	1538	0.4328	0.03652	2.720	65.27	-0.2	0.5
						OFF	210	0.4548	0.03838	2.858	68.59	-0.2	-0.6
54	7	1	118	6	4	ON	1483	0.4246	0.03583	2.668	64.03	-0.2	0.6
						OFF	268	0.4551	0.03840	2.859	68.62	-0.2	-0.6
56	1	1	102	6	4	ON	1305	0.3931	0.03317	2.470	59.28	-0.2	1.1
						OFF	245	0.4341	0.03663	2.728	65.47	-0.2	0.8
57	1	1	21	6	4	ON	982	0.3325	0.02805	2.089	50.13	-0.1	-0.3
						OFF	62	0.3418	0.02884	2.148	51.54	-0.1	-0.5
57	1	2	21	6	4	ON	1414	0.4136	0.03490	2.599	62.38	-0.1	1.4
						OFF	51	0.4217	0.03558	2.649	63.58	-0.1	1.2
63	5	1	21	6	4	ON	1628	0.4447	0.03752	2.794	67.06	-0.1	0.2
						OFF	48	0.4493	0.03791	2.823	67.76	-0.1	-0.1
66	7	1	50	6	4	ON	1210	0.3745	0.03160	2.353	56.47	-0.1	-0.2
						OFF	131	0.3999	0.03374	2.513	60.31	-0.1	0.4
69	7	1	94	6	4	ON	1251	0.3828	0.03230	2.405	57.73	-0.1	0.2
						OFF	234	0.4250	0.03586	2.670	64.08	-0.1	0.6
69	7	2	37	6	4	ON	1586	0.4397	0.03710	2.763	66.30	-0.1	0.4
						OFF	84	0.4488	0.03787	2.820	67.67	-0.1	-0.0
69	7	3	21	6	4	ON	1864	0.4608	0.03888	2.895	69.49	-0.1	-0.9
						OFF	48	0.4614	0.03893	2.899	69.58	-0.1	-1.1
70	5	1	104	6	4	ON	1462	0.4217	0.03559	2.650	63.60	-0.1	1.5
						OFF	240	0.4517	0.03811	2.838	68.11	-0.1	0.3
72	3	1	102	6	4	ON	1334	0.3992	0.03368	2.508	60.20	-0.1	1.1
						OFF	244	0.4384	0.03699	2.755	66.11	-0.1	0.8
73	2	1	35	6	4	ON	1438	0.4178	0.03525	2.625	63.00	-0.1	1.5
						OFF	82	0.4302	0.03630	2.703	64.88	-0.1	1.2

RAMP PROFILE
R= 9 A= 3 PERIOD= 3840
R= 0.3170 A= 0.1276
TOR PER CPS ANG V

-0	5.280	0.1894	0.01713
100	5.244	0.1907	0.01725
200	5.139	0.1946	0.01760
300	4.975	0.2010	0.01818
400	4.767	0.2096	0.01897
500	4.531	0.2207	0.01996
600	4.280	0.2337	0.02113
700	4.027	0.2483	0.02246
800	3.783	0.2643	0.02391
900	3.553	0.2815	0.02546
1000	3.341	0.2993	0.02707
1100	3.148	0.3177	0.02873
1200	2.925	0.3419	0.03092
1300	2.738	0.3652	0.03303
1400	2.586	0.3867	0.03498
1500	2.465	0.4057	0.03670
1600	2.372	0.4215	0.03812
1700	2.307	0.4335	0.03921
1800	2.266	0.4413	0.03991
1900	2.250	0.4445	0.04020
2000	2.257	0.4431	0.04008
2100	2.288	0.4371	0.03954
2200	2.343	0.4268	0.03860
2300	2.424	0.4125	0.03731
2400	2.534	0.3947	0.03570
2500	2.673	0.3741	0.03383
2600	2.846	0.3514	0.03178
2700	3.054	0.3274	0.02961
2800	3.262	0.3066	0.02773
2900	3.466	0.2885	0.02610
3000	3.689	0.2711	0.02452
3100	3.928	0.2546	0.02302
3200	4.178	0.2393	0.02165
3300	4.431	0.2257	0.02041
3400	4.675	0.2139	0.01935
3500	4.897	0.2042	0.01847
3600	5.080	0.1969	0.01780
3700	5.210	0.1920	0.01736
3800	5.274	0.1896	0.01715

RAMP PROFILE
R= 6 A= 4 PERIOD= 3840
R= 0.3503 A= 0.1118

TUR	PER	CPS	ANG V
-0	4.193	0.2385	0.02157
100	4.173	0.2396	0.02167
200	4.114	0.2431	0.02198
300	4.022	0.2487	0.02249
400	3.901	0.2563	0.02313
500	3.760	0.2659	0.02405
600	3.607	0.2773	0.02508

700	3.447	0.2901	0.02624
800	3.288	0.3042	0.02751
900	3.133	0.3192	0.02887
1000	2.987	0.3348	0.03028
1100	2.850	0.3509	0.03174
1200	2.687	0.3721	0.03366
1300	2.548	0.3925	0.03550
1400	2.431	0.4114	0.03721
1500	2.336	0.4281	0.03872
1600	2.263	0.4419	0.03997
1700	2.211	0.4524	0.04092
1800	2.178	0.4592	0.04153
1900	2.164	0.4620	0.04179
2000	2.170	0.4608	0.04168
2100	2.195	0.4556	0.04120
2200	2.240	0.4465	0.04038
2300	2.304	0.4340	0.03925
2400	2.390	0.4184	0.03784
2500	2.498	0.4003	0.03620
2600	2.629	0.3804	0.03441
2700	2.782	0.3594	0.03251
2800	2.931	0.3412	0.03086
2900	3.074	0.3254	0.02943
3000	3.225	0.3101	0.02804
3100	3.383	0.2956	0.02673
3200	3.543	0.2822	0.02553
3300	3.706	0.2703	0.02445
3400	3.847	0.2608	0.02351
3500	3.976	0.2515	0.02275
3600	4.081	0.2450	0.02216
3700	4.154	0.2407	0.02177
3800	4.190	0.2387	0.02159

CLOCK SUMMARY

ORDER FIT 1

SYS TIME I/P	CL TIME I/P	COMP SYS TM	DELTA ST	REV	STA
77909.957	103197.51990	77909.95810	-0.00013	0	1
38452.145	150139.70990	38452.14600	-0.00008	9	1
77824.792	189512.35290	77824.78730	0.00564	16	1
33158.697	231246.26390	33158.69650	0.00146	24	1
77923.647	276011.22490	77923.65550	-0.00759	32	1
33248.947	317736.51590	33248.94470	0.00324	40	1
38653.047	323140.61890	38653.04750	0.00047	41	1
72504.107	356991.68390	72504.11100	-0.00305	47	1
33217.050	404104.62690	33217.05190	-0.00099	56	1
72640.779	443528.35790	72640.78120	-0.00127	63	1
33342.682	490630.27090	33342.69220	-0.00921	72	1
72725.187	530012.75690	72725.17640	0.01151	79	1

A0=-0.25287557360 05 A1= 0.99999995631 4D 00
SIGMA=0.00505 NO. POINTS= 12
RATIO OF CLOCK TIME TO SYS TIME= 0.10000000436 9D 01

ORDER FIT 2

SYS TIME I/P	CL TIME I/P	COMP SYS TM	DELTA ST	REV	STA
77909.957	123197.51990	77909.96080	-0.00267	0	1
38452.145	152139.70990	38452.14710	-0.00115	9	1
77824.792	139512.35290	77824.78730	0.00566	16	1
33158.697	231246.26390	33158.69560	0.00231	24	1
77923.647	276011.22490	77923.65410	-0.00620	32	1
33248.947	317736.51590	33248.94320	0.00479	40	1
38653.047	323140.61890	38653.04590	0.00202	41	1
72504.107	356991.68390	72504.10960	-0.00164	47	1
33217.056	404104.62690	33217.05110	-0.00014	56	1
72640.779	443528.35790	72640.78110	-0.00119	63	1
33342.682	490630.27090	33342.69340	-0.01045	72	1
72725.187	530012.75690	72725.17910	0.00886	79	1

A0=-0.25287549520 05 A1= 0.99999989719 5D 00
A2= 0.93059520024 70D-13
SIGMA=0.00464 NO. POINTS= 12

CLOCK OPERATIONS

OPN	NO	FR		H	M	S	DEC	BINARY
1	4	0	11	ON	22	57	47	107954	00110011011110011111101010000
				OFF	22	58	14	107981	00110011011111010100011001000
5	7	1	21	ON	4	54	31	129358	00111101101011101100010111000
				OFF	4	55	38	129425	00111101101101101111001101000
5	7	2	71	ON	4	53	52	129619	00111101110011101101000111000
				OFF	5	2	4	129811	00111101111001100001000111000
5	7	3	21	ON	5	2	42	129849	00111101111010101011010101000
				OFF	5	3	35	129902	00111101111100010010110110000
7	9	1	62	ON	8	1	22	140570	01000011000011101110110010000
				OFF	8	3	59	140727	01000011000110101001011011000
7	9	2	69	ON	8	5	7	140794	01000011001000010110001001000
				OFF	8	7	48	140955	01000011001101100110101111000
7	9	3	19	ON	8	8	25	140993	01000011001110110000111101000
				OFF	8	9	8	141036	01000011010000000100111100000
7	9	4	28	ON	8	9	32	141059	01000011010000011000111011000
				OFF	8	10	36	141123	01000011010010101110110111000
9	4	0	11	ON	10	39	48	150075	01000111100011111011001111000
				OFF	10	40	35	150122	01000111100101010111000010000
9	4	1	99	ON	10	59	35	151262	01001000001000001001100110000
				OFF	11	3	51	151518	01001000001111111101100110000
16	4	0	10	ON	21	36	20	189468	01011010010110000110101100000
				OFF	21	36	46	189494	01011010010110111001011110000
18	4	1	30	ON	0	29	6	199834	01011111010010011100110010000
				OFF	0	30	32	199920	01011111010101000100110000000
20	6	1	46	ON	3	31	11	210759	01100100011111111011010110000
				OFF	3	33	19	210887	01100100100011110000101011000
21	6	1	140	ON	5	1	3	216150	01100111000100010111111110000
				OFF	5	6	54	216501	01100111001111000101100001000
21	6	2	34	ON	5	19	43	217271	01100111100110100101011011000
				OFF	5	21	4	217352	01100111101001000011101000000
22	3	1	54	ON	6	31	37	221585	01101001101010000111100110100

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				OFF	6	33	59	221727	0110100110111010010100011000
22	3	2	38	ON	6	35	24	221812	0110100111000100101010100000
				OFF	6	36	57	221905	0110100111010000000000111010
22	3	3	18	ON	6	46	9	222457	0110101000010011011001010100
				OFF	6	46	50	222498	0110101000011000011001110000
23	5	1	91	ON	8	1	29	226977	0110110000111011001001110100
				OFF	8	5	20	227208	0110110001010111010110100000
23	5	2	33	ON	8	7	45	227352	0110110001101000111011100000
				OFF	8	9	1	227428	0110110001110010001101010000
25	2	1	105	ON	11	1	57	237805	0111000101100100111011100100
				OFF	11	6	19	238067	0111000110000100111010011000
29	7	1	51	ON	17	21	57	260605	0111110001000100001000100100
				OFF	17	24	6	260734	0111110001010011111000011000
32	8	0	10	ON	21	37	59	275966	1000001110010111010000011000
				OFF	21	38	25	275992	1000001110011010011011100000
34	9	1	42	ON	0	29	33	286261	1000100001111111111110000100
				OFF	0	31	34	286382	1000100010001110101111011000
35	9	1	54	ON	1	58	25	291593	1000101100001010110110010100
				OFF	2	1	5	291753	1000101100011111001100010100
36	9	1	139	ON	3	31	21	297169	1000110110110011100000110100
				OFF	3	37	15	297523	1000110111101111010111001110
37	9	1	105	ON	5	8	31	302999	1001000001111011601011101100
				OFF	5	12	27	303235	1001000010010111111111011100
38	7	1	125	ON	6	32	54	308062	1001001011100101001110011000
				OFF	6	38	0	308368	1001001100001010100101000000
39	9	1	16	ON	8	6	2	313649	1001010110001111001110110100
				OFF	8	6	42	313689	1001010110010100000011110100
39	9	2	91	ON	8	9	15	313842	1001010110100110110010101000
				OFF	8	12	43	314050	1001010111000000000101110100
40	1	1	165	ON	9	31	12	318760	1001011111111111001000100000
				OFF	9	38	7	319175	1001100000110001110010101100
41	2	1	70	ON	11	4	8	324335	1001101010100111101011001100
				OFF	11	6	59	324506	1001101010111100100011001000
46	7	1	20	ON	18	38	29	351596	1010011110100111011011100000
				OFF	18	39	16	351643	1010011111010110100101011100
47	7	1	20	ON	20	9	3	357030	1010101000111110110000111000
				OFF	20	9	50	357077	1010101001000100100000000100
50	4	1	48	ON	0	30	27	372715	1011000110111001011011111000
				OFF	0	32	44	372852	1011000111001010001010010000
52	4	1	62	ON	3	33	31	383699	1011011011110110010000011000
				OFF	3	36	9	383857	1011011110000100110001011000
52	4	2	33	ON	3	37	20	383927	1011011110001001000010110110
				OFF	3	38	38	384005	1011011110001101110011110001
53	4	1	43	ON	5	1	43	388991	1011100101111100010000011000
				OFF	5	3	39	389107	1011100110001010011010011000
53	4	2	92	ON	5	8	7	389375	1011100110101011001000011000
				OFF	5	11	37	389585	1011100111000100110000110100
54	7	1	117	ON	6	37	12	394720	1011110000110111100110000000
				OFF	6	41	40	394988	1011110001011000010011110000
56	1	1	101	ON	9	34	1	405329	1100000101000110101000110100
				OFF	9	38	6	405574	1100000101100100100010111000

57	1	1	20	ON	10	58	38	410465	110000111011001001000010001000
				OFF	10	59	40	410467	110000111011100111010101111000
57	1	2	20	ON	11	5	49	410837	110000111110011110000000001000
				OFF	11	6	40	412888	110000111110110100111101000000
63	5	1	20	ON	20	9	35	443462	110100110111010110001011110000
				OFF	20	10	23	443510	110100110111011011001111110000
66	7	1	50	ON	0	32	35	459242	110110101111110111101000010000
				OFF	0	34	46	459373	110110110000101111001110001000
69	7	1	93	ON	5	3	9	475477	111000101011100110100000001000
				OFF	5	7	3	475711	111000101101011000110000110000
69	7	2	37	ON	5	8	43	475811	111000101110001001100010111000
				OFF	5	10	7	475895	111000101110110010100110110000
69	7	3	21	ON	5	13	21	476089	111000110000010001010101101000
				OFF	5	14	9	476137	111000110000101000110001001000
70	5	1	104	ON	6	36	19	481066	111001010110001111110000010000
				OFF	6	40	19	481306	111001011000000100121100010000
72	3	1	102	ON	9	34	16	491743	111010100111101100111000011000
				OFF	9	38	20	491987	111010101001100100000000111000
73	2	1	34	ON	11	5	51	497239	111011010001101000011111011000
				OFF	11	7	13	497321	111011010010010001200000101000

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DATA DESCRIBED IN DATA BOOK BY -0 OR * INDICATE NO DATA AVAILABLE.

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