

NO. [REDACTED]

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CORONA "J" FLIGHT DATA BOOK

SYSTEM NO. J-21

VEHICLE NO. 1615

MISSION NO. 1021-2

CAMERA NOS. 166 & 167

Prepared by: [REDACTED]

Checked by: [REDACTED]

Approved by: [REDACTED]

Approved by: [REDACTED]
Manager

Declassified and Released by the N R O

In Accordance with E. O. 12958

on NOV 26 1997

LOGGED [REDACTED]

3 JUN 1965

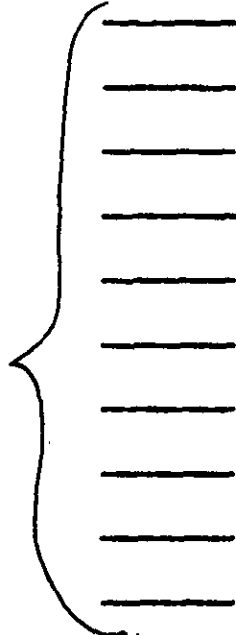
SYSTEM NO. NG 7-21
VEHICLE NO. 1615
MISSION NO. 1021-2
CAMERA NOS. 166/167

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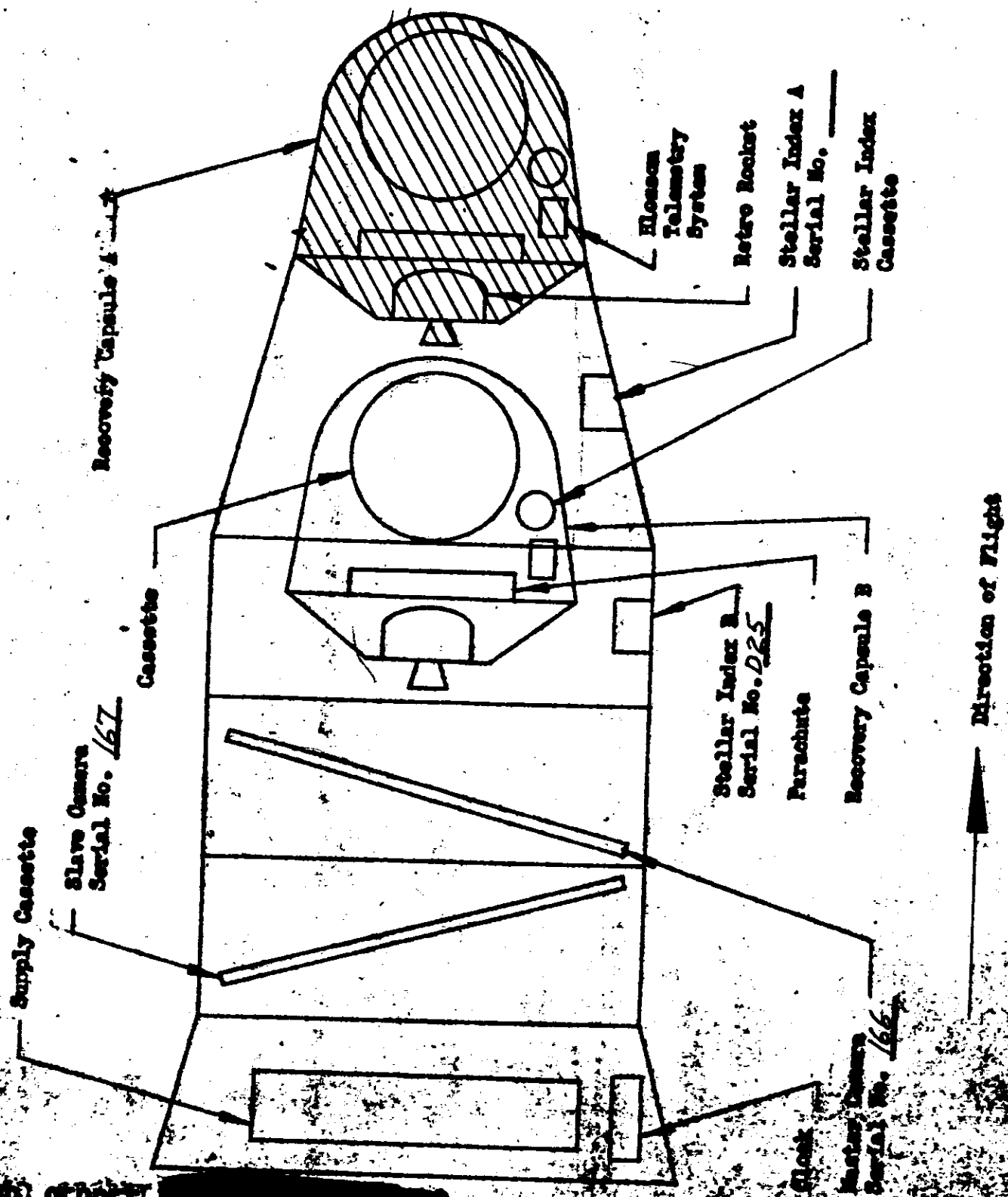


ITEM NO. J-21
VEHICLE NO. 1615
MISSION NO. 1021-2
CAMERA NOS. 166/167

TOP SECRET

VEHICLE LAYOUT:

NO. [REDACTED]



TOP SECRET

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SYSTEM NO. J-21
VEHICLE NO. 1615
MISSION NO. 1021-2
CAMERA NOS. 166/167

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GENERAL FLIGHT DATA:

Master Camera Serial No. 166
Slave Camera Serial No. 167
Stellar Index "A" Serial No. D63/69/69/
Stellar Index "B" Serial No. D25/27/25
Launch Date 18 MAY, 1965
Reactivation Date NONE
Reactivation Orbit No. NONE

Orbital Parameters: (Rev. 120)

Period <u>89.74</u> Min.	Eccentricity <u>0.00965</u>
Perigee <u>179.670</u> NM	Perigee Latitude <u>37.707</u> Deg. N
Apogee <u>110.52</u> NM	Inclination Angle <u>75.02</u> Deg. N

Recovery Orbit No. 161
Recovery Date 28 MAY, 1965

REMARKS: VEHICLE IS NOT YAWED AROUND ON THIS MISSION —
MASTER CAMERA IS LOOKING AFT ON FLIGHT PATH
& SLAVE CAMERA IS LOOKING FORWARD ON FLIGHT
PATH.

~~TOP SECRET~~

NO. [REDACTED]

SYSTEM NO. J-21

VEHICLE NO. 1615

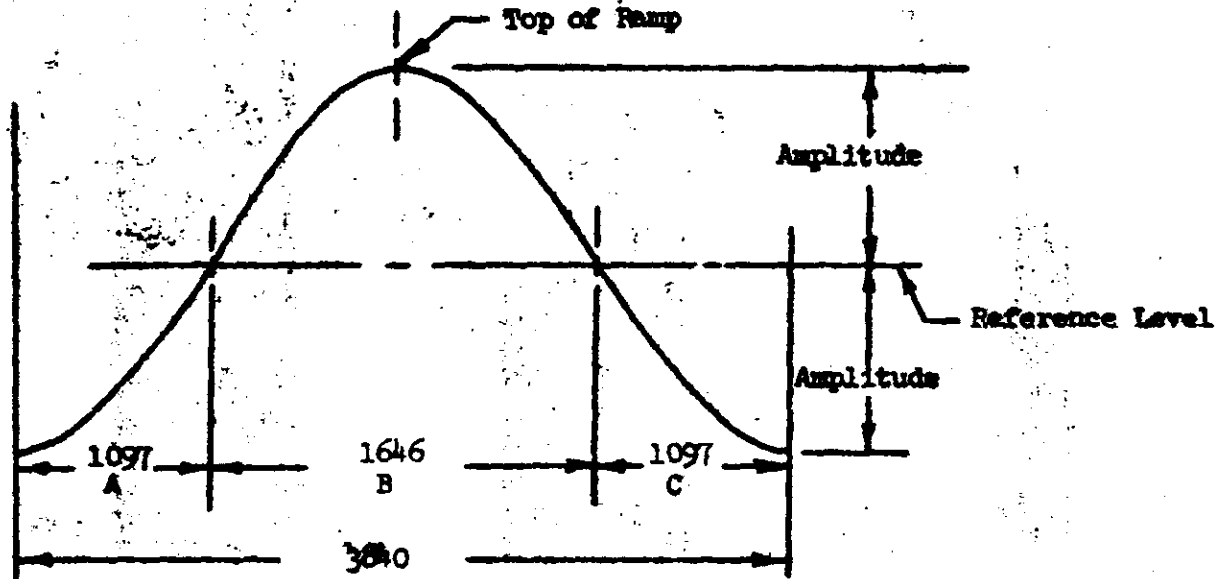
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MISSION NO. 1021-2

CAMERA NOS. 166/167

NO. [REDACTED]

V/E RAMP CONFIGURATION AND CONSTANTS:



Cycle Rate Computation:

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

FMC Rate Computation:

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

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

Scan Velocity Computation:

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

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

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

WHERE: $X = \frac{\text{Time Up Ramp (Seconds)}}{1097.6942}$

$$R = \frac{1}{2} (CPS_{\text{top}} + CPS_{\text{bottom}})$$

$$A = \frac{1}{2} (CPS_{\text{top}} - CPS_{\text{bottom}})$$

CP = Camera Cycle Period in Sec/Cycle

CPS = Camera Cycle Rate in Cycles/Sec

SLIT = Slit Width in Inches

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NO. [REDACTED]

SYSTEM NO. T-21
 VEHICLE NO. 1615
 MISSION NO. 1021-2
 CAMERA NOS. 166/167

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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	
6	6	3.617	3.626	247
6	6	2.313	2.311	1814
10	2	6.650	6.583	280
6	6	2.319	2.315	1785
6	6	3.585	3.595	300
6	6	2.312	2.307	1831
6	6	3.557	3.567	340
6	6	2.367	2.363	1626

IN-FLIGHT CYCLE PERIODS

V/H Ramp Level	V/H Ramp Amplitude	Cycle Period Seconds		Orbit No.	Time Up Ramp Sec
		Master	Slave		
* 6	6	3.678	3.725	89	247
* 6	6	2.340	2.400	95	1814
** 10	2	6.520	6.330	105	280
* * 6	6	2.392	2.414	111	1785
* * 6	6	3.700	3.690	120	300
* * 6	6	2.385	2.398	127	1831
* * 6	6	3.665	3.675	136	340
* * 6	6	2.385	2.384	143	1626

* INCORRECT FILM TRANSPORTING (OUT-OF-RAILS) ON MASTER CAMERA

** NO FILM TRANSPORT ON MASTER CAMERA

TOP SECRET

NO. [REDACTED]

A. 1021-2 LAUNCH 1802Z 05/18/85
B. DRY
C. PERFORMANCE ESTIMATE, PART 1

NO. [REDACTED] 10004

10005

10006

10007

10010

10011

10012

10013

OPERATIONS SUMMARY

FWD PAN CAMERA NUMBER		167											
OPN NO	FRA	Q	LAT	LONG	HEIGHT	RANGE	DA	H	M	S	LTIM	S-TIM	
CUT/WRAP 5													
85 6 1	27	ON	2 54 43	103 16E	712690	738738	24	01	14	12	0807	04452	11001
		OFF	2 50 22	106 21E	701507	727132	24	01	15	23	0820	04523	11002
85 6 2	34	ON	2 34 46	113 27E	672766	697305	24	01	19	28	0853	04768	11003
		OFF	2 29 22	115 09E	667327	691662	24	01	20	51	0901	04851	11004
85 6 3	17	ON	3 08 31	123 41E	705465	731238	24	01	30	29	0945	05429	11005
		OFF	3 11 30	124 19E	714155	740256	24	01	31	15	0948	05475	11006
85 6 4	31	ON	3 14 59	125 05E	725236	751756	24	01	32	08	0952	05528	11007
		OFF	3 20 30	126 22E	744771	772032	24	01	33	33	0959	05613	11008
86 3 1	19	ON	2 41 46	088 09E	683059	707986	24	02	47	26	0840	10046	11009
		OFF	2 38 41	089 24E	677930	702664	24	02	48	14	0845	10094	11010
86 3 2	36	ON	2 34 50	090 47E	672612	697145	24	02	49	14	0852	10154	11011
		OFF	2 29 10	092 34E	667010	691332	24	02	50	41	0900	10241	11012
86 3 3	54	ON	2 23 55	094 00E	664346	688568	24	02	52	02	0908	10322	11013
		OFF	2 15 16	096 04E	665530	689796	24	02	54	14	0918	10454	11014
87 5 1	106	ON	2 36 50	067 27E	674978	699600	24	04	18	29	0848	15509	11015
		OFF	2 20 15	072 16E	663936	688142	24	04	22	44	0911	15764	11016
88 6 1	60	ON	2 27 48	047 40E	665796	690072	24	05	50	35	0901	21035	11017
		OFF	2 18 22	050 05E	664242	688460	24	05	52	59	0913	21179	11018
89 4 0	13	ON	1 38 51	127 30W	947477	982502	24	06	52	59	2222	24779	11019
		OFF	1 41 50	126 17W	939032	973731	24	06	53	47	2228	24827	11020
89 4 1	86	ON	2 21 58	026 34E	663790	687991	24	07	21	50	0908	26510	11021
		OFF	2 08 22	029 38E	671906	696413	24	07	25	17	0923	26717	11022
90 6 1	72	ON	2 23 52	003 27E	664178	688394	24	08	51	07	0904	31867	11023
		OFF	2 12 25	006 08E	667879	692234	24	08	54	02	0918	32042	11024
93 2 1	56	ON	2 70 21	102 57W	761922	789837	24	13	07	32	0615	47252	11025
		OFF	2 62 17	085 43W	731795	758566	24	13	10	11	0727	47411	11026
93 9 1	67	ON	3 21 05	054 37W	750529	778009	24	13	31	48	0953	48708	11027
		OFF	3 33 37	051 06W	803393	832884	24	13	35	02	1010	48902	11028
95 9 1	28	ON	2 34 35	112 53W	671636	696133	24	16	17	09	0845	58629	11029
		OFF	2 30 06	111 28W	667570	691914	24	16	18	18	0852	58698	11030
96 9 1	25	ON	2 66 19	160 18W	744383	771632	24	17	38	11	0656	63491	11031
		OFF	2 60 09	150 57W	724154	750636	24	17	40	03	0736	63603	11032
98 6 1	47	ON	2 66 24	154 15E	743846	771074	24	20	37	41	0654	74261	11033
		OFF	2 59 14	164 46E	720834	747189	24	20	39	50	0738	74390	11034
101 6 1	25	ON	3 16 22	123 09E	737070	764039	25	01	28	38	0941	05318	11035
		OFF	3 20 53	124 12E	753749	781351	25	01	29	47	0946	05387	11036
102 5 1	67	ON	2 36 24	088 00E	673729	698304	25	02	44	57	0837	09897	11037
		OFF	2 25 51	091 15E	666154	690444	25	02	47	40	0852	10060	11038
102 5 2	28	ON	2 06 35	095 42E	678366	703116	25	02	52	33	0915	10353	11039
		OFF	2 01 56	096 39E	686550	711608	25	02	53	44	0920	10424	11040
103 4 1	29	ON	2 53 16	056 52E	703813	729524	25	04	10	15	0757	15015	11041
		OFF	2 48 45	059 48E	693738	719069	25	04	11	28	0810	15088	11042
103 4 2	22	ON	2 46 16	061 10E	688802	713946	25	04	12	07	0816	15127	11043
		OFF	2 42 47	062 50E	682652	707565	25	04	13	02	0824	15182	11044

											NO.							
103	4	3	81	ON	2	31	24	067	01E	669016	693414	25	04	15	59	0844	15359	11045
				OFF	2	18	48	070	23E	666795	691109	25	04	19	12	0900	15552	11046
104	7	1	80	ON	2	25	21	046	07E	666304	690599	25	05	47	16	0851	20836	11047
				OFF	2	12	46	049	07E	671167	695646	25	05	50	28	0906	21028	11048
105	3	0	8	ON	1	39	38	129	27W	931677	966092	25	06	49	11	2211	24551	11049
				OFF	1	42	33	128	14W	923396	957491	25	06	49	59	2217	24599	11050
105	3	1	108	ON	2	20	16	024	44E	666692	691002	25	07	18	18	0857	26298	11051
				OFF	2	02	47	028	32E	685976	711012	25	07	22	44	0916	26564	11052
106	6	1	79	ON	2	26	19	000	32E	666481	690784	25	08	46	33	0848	31593	11053
				OFF	2	13	56	003	32E	670326	694772	25	08	49	42	0903	31782	11054
109	5	1	99	ON	3	16	02	058	03W	739072	766117	25	13	26	41	0934	48401	11055
				OFF	3	34	40	053	01W	816394	846382	25	13	31	28	0959	48688	11056
111	5	2	22	ON	2	37	37	116	12W	673785	698363	25	16	12	31	0827	58351	11057
				OFF	2	34	04	114	57W	670206	694649	25	16	13	26	0833	58406	11058
114	5	1	28	ON	2	66	31	151	46E	736882	763846	25	20	33	47	0640	74027	11059
				OFF	2	62	18	158	49E	723558	750018	25	20	35	05	0710	74105	11060
117	5	1	48	ON	2	34	48	108	58E	670709	695171	26	01	11	43	0827	04303	11061
				OFF	2	27	12	111	17E	666653	690962	26	01	13	40	0838	04420	11062
117	5	2	3	ON	3	01	46	117	48E	699005	724533	26	01	21	02	0912	04862	11063
				OFF	3	02	15	117	54E	700205	725778	26	01	21	09	0912	04869	11064
117	5	3	17	ON	3	08	42	119	14E	718041	744289	26	01	22	47	0919	04967	11065
				OFF	3	11	38	119	51E	727318	753918	26	01	23	32	0923	05012	11066
117	5	4	20	ON	3	17	58	121	16E	749558	777000	26	01	25	09	0930	05109	11067
				OFF	3	21	36	122	08E	763556	791530	26	01	26	05	0934	05165	11068
119	9	1	61	ON	2	33	52	064	00E	669952	694385	26	04	11	27	0827	15087	11069
				OFF	2	24	20	066	47E	666645	690954	26	04	13	54	0841	15234	11070
120	8	0	13	ON	1	38	50	109	20W	922044	956087	26	05	15	24	2158	18924	11071
				OFF	1	41	43	108	10W	913860	947588	26	05	16	10	2203	18970	11072
120	8	1	86	ON	2	37	49	039	59E	673519	698087	26	05	40	10	0820	20410	11073
				OFF	2	24	24	044	08E	666755	691068	26	05	43	37	0840	20617	11074
120	8	2	40	ON	2	10	57	047	16E	675990	700650	26	05	47	02	0856	20822	11075
				OFF	2	04	25	048	38E	686524	711582	26	05	48	41	0903	20921	11076
121	4	1	73	ON	2	20	00	022	35E	668114	692478	26	07	14	29	0844	26069	11077
				OFF	2	08	25	025	10E	679906	704713	26	07	17	26	0858	26246	11078
127	9	1	19	ON	2	36	18	117	54W	671172	695652	26	16	08	43	0817	58123	11079
				OFF	2	33	20	116	54W	668982	693379	26	16	09	29	0821	58169	11080
128	2	1	28	ON	2	66	34	165	13W	730905	757642	26	17	30	08	0629	63008	11081
				OFF	2	62	25	158	13W	718482	744749	26	17	31	25	0658	63085	11082
129	7	1	21	ON	2	74	38	134	22E	768897	797077	26	18	56	13	0353	68173	11083
				OFF	2	73	11	148	32E	757480	785226	26	18	57	16	0451	68236	11084
129	7	2	21	ON	2	71	43	156	36E	749874	777332	26	18	57	59	0524	68279	11085
				OFF	2	69	14	165	36E	739641	766709	26	18	58	58	0601	68338	11086
132	3	1	29	ON	2	44	49	125	24E	680475	705305	26	23	35	10	0756	84910	11087
				OFF	2	40	15	127	25E	674650	699260	26	23	36	21	0806	84981	11088
132	3	2	42	ON	3	12	54	140	36E	737349	764329	26	23	49	55	0912	85795	11089
				OFF	3	20	33	142	21E	765926	793990	26	23	51	52	0921	85912	11090
133	3	1	42	ON	2	27	01	109	11E	666986	691308	27	01	09	30	0826	04170	11091
				OFF	2	20	19	110	54E	668860	693252	27	01	11	12	0834	04272	11092
133	3	2	24	ON	3	18	52	119	19E	759693	787520	27	01	21	10	0918	04870	11093
				OFF	3	23	29	120	27E	778289	806823	27	01	22	21	0924	04941	11094
134	7	1	67	ON	2	29	57	085	42E	667363	691699	27	02	38	29	0821	09509	11095
				OFF	2	19	25	088	29E	669492	693908	27	02	41	10	0835	09670	11096
135	7	1	18	ON	2	70	08	027	00E	740178	767267	27	03	57	01	0545	14221	11097
				OFF	2	67	48	033	34E	731844	758617	27	03	57	51	0612	14271	11098

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135	7	2	73	ON	2	35	32	061	17E	670003	694438	27	04	06	46	0811	14806	11099
				OFF	2	23	58	064	43E	667402	691739	27	04	09	44	0828	14984	11100
136	6	0	12	ON	1	38	39	111	33W	910275	943864	27	05	11	08	2144	18668	11101
				OFF	1	41	31	110	25W	902115	935390	27	05	11	54	2150	18714	11102
136	6	1	60	ON	2	31	59	039	49E	667949	692307	27	05	37	25	0816	20245	11103
				OFF	2	22	31	042	28E	667935	692292	27	05	39	50	0829	20390	11104
136	6	2	45	ON	2	10	33	045	12E	679344	704130	27	05	42	53	0843	20573	11105
				OFF	2	03	07	046	45E	692984	718285	27	05	44	46	0851	20686	11106
137	8	1	25	ON	2	52	24	007	49E	692115	717385	27	07	01	48	0733	25308	11107
				OFF	2	48	31	010	17E	685150	710157	27	07	02	51	0744	25371	11108
137	8	2	97	ON	3	04	47	025	44E	713206	739271	27	07	16	30	0859	26190	11109
				OFF	3	22	18	029	38E	775033	803444	27	07	20	58	0919	26458	11110
143	8	2	18	ON	2	41	15	121	56W	674581	699189	27	16	03	05	0755	57785	11111
				OFF	2	38	25	120	48W	671882	696388	27	16	03	49	0800	57829	11112
143	8	3	17	ON	2	36	05	119	57W	670118	694558	27	16	04	26	0804	57866	11113
				OFF	2	33	16	118	59W	668573	692954	27	16	05	10	0809	57910	11114
145	7	1	22	ON	2	74	38	132	06E	760378	788234	27	18	51	51	0340	67911	11115
				OFF	2	73	13	146	17E	749535	776979	27	18	52	54	0438	67974	11116
145	7	2	21	ON	2	71	45	154	23E	742303	769473	27	18	53	36	0511	68016	11117
				OFF	2	69	15	163	25E	732635	759438	27	18	54	35	0548	68075	11118
146	4	1	19	ON	2	72	30	127	56E	745382	772669	27	20	22	58	0454	73378	11119
				OFF	2	70	26	137	00E	736524	763475	27	20	23	51	0531	73431	11120
148	4	1	19	ON	2	39	58	125	26E	673036	697586	27	23	32	01	0753	84721	11121
				OFF	2	36	54	126	36E	670619	695078	27	23	32	49	0759	84769	11122
148	4	2	41	ON	3	12	52	138	30E	743497	770709	27	23	45	29	0859	85529	11123
				OFF	3	20	29	140	14E	772495	800809	27	23	47	26	0908	85646	11124
149	4	1	49	ON	2	35	59	104	17E	670045	694482	28	01	02	46	0759	03766	11125
				OFF	2	28	19	106	43E	667928	692285	28	01	04	44	0811	03884	11126
149	4	2	19	ON	3	18	53	117	13E	766555	794643	28	01	16	44	0905	04604	11127
				OFF	3	22	32	118	07E	781410	810063	28	01	17	40	0910	04660	11128
150	7	1	60	ON	2	28	52	083	55E	667998	692358	28	02	34	18	0810	09258	11129
				OFF	2	19	25	086	23E	671905	696411	28	02	36	43	0822	09403	11130
151	3	1	19	ON	2	70	02	025	11E	732998	759815	28	03	52	35	0533	13955	11131
				OFF	2	67	36	031	57E	724885	751394	28	03	53	27	0601	14007	11132
151	3	2	56	ON	2	65	38	036	04E	719068	745357	28	03	54	05	0618	14045	11133
				OFF	2	57	20	047	00E	698891	724417	28	03	56	31	0704	14191	11134
152	4	1	21	ON	2	60	42	020	48E	706098	731897	28	05	25	17	0648	19517	11135
				OFF	2	57	35	024	08E	699164	724701	28	05	26	10	0702	19570	11136
152	4	2	67	ON	2	55	29	026	00E	694919	720295	28	05	26	45	0710	19605	11137
				OFF	2	45	11	032	35E	678381	703133	28	05	29	31	0739	19771	11138
152	4	3	61	ON	2	31	51	037	46E	668457	692834	28	05	32	58	0804	19978	11139
				OFF	2	22	17	040	26E	670192	694634	28	05	35	25	0817	20125	11140
152	4	4	43	ON	2	09	57	043	14E	684274	709246	28	05	38	33	0831	20313	11141
				OFF	2	02	48	044	43E	698619	724133	28	05	40	22	0839	20422	11142
153	4	1	54	ON	2	20	58	018	07E	671214	695694	28	07	05	28	0817	25528	11143
				OFF	2	12	18	020	06E	680786	705627	28	07	07	40	0828	25660	11144
154	4	1	23	ON	2	32	29	007	40W	668709	693095	28	08	32	14	0801	30734	11145
				OFF	2	28	47	006	33W	668344	692716	28	08	33	11	0806	30791	11146
154	4	2	58	ON	2	26	29	005	55W	668691	693077	28	08	33	46	0810	30826	11147
				OFF	2	17	19	003	37W	674631	699240	28	08	36	06	0821	30966	11148
158	5	1	26	ON	2	19	05	094	33W	673635	698206	28	14	34	29	0816	52469	11149
				OFF	2	14	52	093	35W	678352	703101	28	14	35	33	0821	52533	11150
159	5	1	49	ON	2	60	50	137	44W	704344	730076	28	15	53	12	0642	57192	11151
				OFF	2	53	24	130	44W	689550	714723	28	15	55	17	0712	57317	11152

[REDACTED]

[REDACTED] NO. [REDACTED]

159	5	2	20	DN	2	36	27	122	09W	670300	694747	28	15	59	45	0751	57585	11153
			OFF	2	33	21	121	05W	669092	693493	28	16	00	33	0756	57633		11154
																		11155
																		11156

[REDACTED]

~~TOP SECRET~~ [REDACTED]

NO. [REDACTED]

NO. [REDACTED]

OPERATIONS SUMMARY

AFT	OPN NO	PAN	CAMERA	NUMBER	Q	LAT	LONG	HEIGHT	RANGE	DA	H	M	S	LTIM	S-TIM	
				166												10020
																10021
																10022
																10023
	85	6	1	28	ON	2 55 39	102 26E	712690	738738	24	01	14	12	0804	04452	12001
					OFF	2 51 18	105 41E	701507	727132	24	01	15	23	0818	04523	12002
	85	6	2	35	ON	2 35 43	113 04E	672766	697305	24	01	19	28	0851	04768	12003
					OFF	2 30 18	114 49E	667327	691662	24	01	20	51	0900	04851	12004
	85	6	3	17	ON	3 07 31	123 25E	705465	731238	24	01	30	29	0944	05429	12005
					OFF	3 10 29	124 02E	714155	740256	24	01	31	15	0947	05475	12006
	85	6	4	31	ON	3 13 57	124 47E	725236	751756	24	01	32	08	0951	05528	12007
					OFF	3 19 27	126 02E	744771	772032	24	01	33	33	0957	05613	12008
	86	3	1	19	ON	2 42 42	087 41E	683059	707986	24	02	47	26	0838	10046	12009
					OFF	2 39 37	088 59E	677930	702664	24	02	48	14	0844	10094	12010
	86	3	2	36	ON	2 35 47	090 24E	672612	697145	24	02	49	14	0850	10154	12011
					OFF	2 30 06	092 14E	667010	691332	24	02	50	41	0859	10241	12012
	86	3	3	55	ON	2 24 51	093 42E	664346	688568	24	02	52	02	0906	10322	12013
					OFF	2 16 13	095 48E	665530	689796	24	02	54	14	0917	10454	12014
	87	5	1	108	ON	2 37 47	067 02E	674978	699600	24	04	18	29	0846	15509	12015
					OFF	2 21 11	071 59E	663936	688142	24	04	22	44	0910	15764	12016
	88	6	1	62	ON	2 28 44	047 20E	665796	690072	24	05	50	35	0859	21035	12017
					OFF	2 19 18	049 48E	664242	688460	24	05	52	59	0912	21179	12018
	89	4	0	12	ON	1 37 32	128 05W	947477	982502	24	06	52	59	2220	24779	12019
					OFF	1 40 32	126 55W	939032	973731	24	06	53	47	2226	24827	12020
	89	4	1	88	ON	2 22 54	026 16E	663790	687991	24	07	21	50	0906	26510	12021
					OFF	2 09 19	029 23E	671906	696413	24	07	25	17	0922	26717	12022
	90	6	1	73	ON	2 24 48	003 09E	664178	688394	24	08	51	07	0903	31867	12023
					OFF	2 13 22	005 52E	667879	692234	24	08	54	02	0917	32042	12024
	93	2	1	57	ON	2 71 03	105 36W	761922	789837	24	13	07	32	0605	47252	12025
					OFF	2 63 11	087 02W	731795	758566	24	13	10	11	0722	47411	12026
	93	9	1	68	ON	3 20 01	054 57W	750529	778009	24	13	31	48	0952	48708	12027
					OFF	3 32 30	051 32W	803393	832884	24	13	35	02	1008	48902	12028
	95	9	1	28	ON	2 35 31	113 15W	671636	696133	24	16	17	09	0844	58629	12029
					OFF	2 31 02	111 48W	667570	691914	24	16	18	18	0851	58698	12030
	96	9	1	25	ON	2 67 09	162 07W	744383	771632	24	17	38	11	0649	63491	12031
					OFF	2 61 03	152 06W	724154	750636	24	17	40	03	0731	63603	12032
	98	6	1	47	ON	2 67 13	152 26E	743846	771074	24	20	37	41	0647	74261	12033
					OFF	2 60 09	163 41E	720834	747189	24	20	39	50	0734	74390	12034
	101	6	1	25	ON	3 15 19	122 50E	737070	764039	25	01	28	38	0940	05318	12035
					OFF	3 19 49	123 53E	753749	781351	25	01	29	47	0945	05387	12036
																12037
																12038



NO. [REDACTED]

PHOTOGRAPHIC SUMMARY											10030
FWD PAN CAMERA NO	167	0.2500	SLIT W/25	FILTER	4404	FILM					10031
OPN NO	FRA	FEET	ET	S-EL	S-DIR	EV	FULL	INT	PRI		10032
CUT/WRAP	5	13.2									10033
85 6 1	27	71.4	ON 230	35.5	-48.2	11.70	12.03	11.43	10.83		13001
			CFF 235	38.6	-51.1	11.73	12.06	11.46	10.86		13002
85 6 2	34	89.9	ON 247	47.5	-64.6	11.80	12.10	11.50	10.90		13003
			CFF 249	49.7	-70.6	11.82	12.10	11.50	10.90		13004
85 6 3	17	45.0	ON 233	46.5	-117.5	11.72	12.10	11.50	10.90		13005
			OFF 230	45.0	-120.3	11.70	12.09	11.49	10.89		13006
85 6 4	31	82.0	ON 225	43.1	-123.3	11.67	12.08	11.48	10.88		13007
			CFF 219	39.8	-127.4	11.63	12.07	11.47	10.87		13008
86 3 1	19	50.3	ON 243	43.8	-58.0	11.78	12.09	11.49	10.89		13009
			CFF 245	45.5	-60.8	11.79	12.09	11.49	10.89		13010
86 3 2	36	95.2	ON 247	47.3	-64.6	11.80	12.10	11.50	10.90		13011
			OFF 250	49.6	-70.9	11.82	12.10	11.50	10.90		13012
86 3 3	54	142.8	ON 251	51.1	-77.3	11.82	12.10	11.50	10.90		13013
			CFF 250	52.2	-88.6	11.82	12.10	11.50	10.90		13014
87 5 1	106	280.4	ON 246	46.2	-62.8	11.80	12.10	11.50	10.90		13015
			CFF 250	51.6	-82.1	11.82	12.10	11.50	10.90		13016
88 6 1	60	158.7	ON 250	49.7	-72.7	11.82	12.10	11.50	10.90		13017
			CFF 250	51.6	-84.6	11.82	12.10	11.50	10.90		13018
89 4 0	13	34.4	ON 158	-26.5	316.4	11.16	0.	0.	0.		13019
			CFF 159	-24.2	317.4	11.17	0.	0.	0.		13020
89 4 1	86	227.5	ON 251	50.9	-80.0	11.82	12.10	11.50	10.90		13021
			CFF 247	51.2	-97.7	11.80	12.10	11.50	10.90		13022
90 6 1	72	190.4	ON 248	50.4	-77.7	11.81	12.10	11.50	10.90		13023
			CFF 246	51.4	-92.4	11.80	12.10	11.50	10.90		13024
93 2 1	56	148.1	ON 205	21.1	-41.3	11.54	11.78	11.18	10.58		13025
			CFF 219	28.8	-45.5	11.63	11.96	11.36	10.76		13026
93 9 1	67	177.2	ON 215	38.4	-126.3	11.60	12.06	11.46	10.86		13027
			OFF 199	30.0	-133.3	11.49	11.98	11.38	10.78		13028
95 9 1	28	74.1	ON 246	46.0	-66.2	11.79	12.10	11.50	10.90		13029
			CFF 247	47.7	-71.0	11.80	12.10	11.50	10.90		13030
96 9 1	25	66.1	ON 155	25.1	-43.9	11.13	11.89	11.29	10.69		13031
			OFF 155	30.3	-47.2	11.13	11.98	11.38	10.78		13032
98 6 1	47	124.3	ON 213	24.8	-44.3	11.59	11.89	11.29	10.69		13033
			OFF 224	30.8	-48.1	11.66	11.99	11.39	10.79		13034
101 6 1	25	66.1	ON 220	40.1	-121.6	11.63	12.07	11.47	10.87		13035
			CFF 214	37.5	-124.8	11.60	12.05	11.45	10.85		13036
102 5 1	67	177.2	ON 245	44.1	-65.5	11.79	12.09	11.49	10.89		13037
			OFF 248	47.7	-76.4	11.81	12.10	11.50	10.90		13038
102 5 2	28	74.1	ON 242	48.5	-99.2	11.77	12.10	11.50	10.90		13039
			CFF 239	47.5	-104.4	11.75	12.10	11.50	10.90		13040
103 4 1	29	76.7	ON 232	34.6	-52.5	11.71	12.03	11.43	10.83		13041
			OFF 236	37.5	-55.6	11.74	12.05	11.45	10.85		13042
103 4 2	22	58.2	ON 239	39.0	-57.4	11.75	12.06	11.46	10.86		13043
			OFF 241	40.9	-60.1	11.77	12.07	11.47	10.87		13044
103 4 3	81	214.2	ON 247	45.9	-70.6	11.80	12.10	11.50	10.90		13045
			OFF 248	48.7	-84.7	11.81	12.10	11.50	10.90		13046
104 7 1	80	211.6	ON 252	47.5	-77.2	11.83	12.10	11.50	10.90		13047
			OFF 249	48.7	-91.8	11.82	12.10	11.50	10.90		13048



105	3	0	8	21.2	ON 90	-24.7	313.6	10.35	0.	0.	0.	13049
					CFF 92	-22.5	314.6	10.38	0.	0.	0.	13050
105	3	1	108	285.7	ON 252	48.2	-83.0	11.83	12.10	11.50	10.90	13051
					CFF 243	47.1	-103.2	11.78	12.10	11.50	10.90	13052
106	6	1	79	209.0	ON 252	46.9	-76.3	11.83	12.10	11.50	10.90	13053
					CFF 250	48.3	-90.5	11.82	12.10	11.50	10.90	13054
109	5	1	99	261.9	ON 222	39.1	-120.0	11.65	12.06	11.46	10.86	13055
					CFF 198	27.8	-130.8	11.49	11.94	11.34	10.74	13056
111	5	2	22	58.2	ON 249	42.2	-65.7	11.81	12.08	11.48	10.88	13057
					CFF 250	43.6	-69.0	11.82	12.09	11.49	10.89	13058
114	5	1	28	74.1	ON 219	23.6	-47.3	11.63	11.86	11.26	10.66	13059
					CFF 225	27.1	-49.5	11.67	11.93	11.33	10.73	13060
117	5	1	48	127.0	ON 251	42.4	-69.1	11.82	12.08	11.48	10.88	13061
					CFF 252	44.7	-76.4	11.83	12.09	11.49	10.89	13062
117	5	2	3	7.9	ON 237	43.8	-106.9	11.74	12.09	11.49	10.89	13063
					CFF 237	43.6	-107.3	11.74	12.09	11.49	10.89	13064
117	5	3	17	45.0	ON 229	41.3	-113.1	11.69	12.08	11.48	10.88	13065
					CFF 226	40.1	-115.5	11.67	12.07	11.47	10.87	13066
117	5	4	20	52.9	ON 218	37.0	-120.1	11.62	12.05	11.45	10.85	13067
					CFF 213	35.0	-122.5	11.59	12.03	11.43	10.83	13068
119	9	1	61	161.3	ON 251	42.4	-70.2	11.82	12.08	11.48	10.88	13069
					CFF 252	45.0	-79.5	11.83	12.09	11.49	10.89	13070
120	8	0	13	34.4	ON 160	-24.0	310.5	11.18	0.	0.	0.	13071
					CFF 161	-22.0	311.5	11.19	0.	0.	0.	13072
120	8	1	86	227.5	ON 249	40.7	-66.9	11.81	12.07	11.47	10.87	13073
					OFF 252	44.8	-79.5	11.83	12.09	11.49	10.89	13074
120	8	2	40	105.8	ON 247	45.6	-93.7	11.80	12.09	11.49	10.89	13075
					OFF 242	44.8	-100.5	11.77	12.09	11.49	10.89	13076
121	4	1	73	193.1	ON 251	45.3	-84.2	11.82	12.09	11.49	10.89	13077
					OFF 245	45.2	-96.4	11.79	12.09	11.49	10.89	13078
127	9	1	19	50.3	ON 250	40.2	-69.2	11.82	12.07	11.47	10.87	13079
					CFF 251	41.3	-71.7	11.82	12.08	11.48	10.88	13080
128	2	1	28	74.1	ON 221	22.6	-50.0	11.64	11.83	11.23	10.63	13081
					CFF 227	25.8	-52.1	11.68	11.91	11.31	10.71	13082
129	7	1	21	55.5	ON 203	12.8	-45.4	11.52	11.34	10.74	10.14	13083
					CFF 208	15.7	-46.5	11.55	11.53	10.93	10.33	13084
129	7	2	21	55.5	ON 212	17.6	-47.5	11.58	11.64	11.04	10.44	13085
					CFF 217	20.2	-48.8	11.61	11.75	11.15	10.55	13086
132	3	1	29	76.7	ON 246	35.9	-63.3	11.80	12.04	11.44	10.84	13087
					OFF 249	37.9	-66.7	11.81	12.05	11.45	10.85	13088
132	3	2	42	111.1	ON 221	37.2	-114.4	11.64	12.05	11.45	10.85	13089
					CFF 211	33.6	-119.5	11.58	12.02	11.42	10.82	13090
133	3	1	42	111.1	ON 252	42.0	-78.1	11.83	12.08	11.48	10.88	13091
					OFF 250	43.0	-84.5	11.82	12.08	11.48	10.88	13092
133	3	2	24	63.5	ON 213	34.3	-118.3	11.59	12.02	11.42	10.82	13093
					OFF 207	31.9	-121.0	11.55	12.00	11.40	10.80	13094
134	7	1	67	177.2	ON 252	41.1	-75.5	11.83	12.07	11.47	10.87	13095
					CFF 250	42.9	-85.4	11.82	12.08	11.48	10.88	13096
135	7	1	18	47.6	ON 216	18.9	-49.5	11.60	11.70	11.10	10.50	13097
					CFF 220	21.1	-50.7	11.63	11.78	11.18	10.58	13098
135	7	2	73	193.1	ON 250	39.2	-70.9	11.82	12.06	11.46	10.86	13099
					CFF 250	42.2	-81.1	11.82	12.08	11.48	10.88	13100
136	6	0	12	31.7	ON 161	-22.6	307.6	11.18	0.	0.	0.	13101
					CFF 162	-20.7	308.5	11.19	0.	0.	0.	13102

								NO.			
136	6 1	60	158.7	ON 251	40.2 -74.0	11.82	12.07	11.47	10.87		13103
				CFF 250	42.2 -82.5	11.82	12.08	11.48	10.88		13104
136	6 2	45	119.0	ON 244	42.6 -94.0	11.78	12.08	11.48	10.88		13105
				OFF 238	41.6-100.9	11.75	12.08	11.48	10.88		13106
137	8 1	25	66.1	ON 240	31.3 -59.2	11.76	11.99	11.39	10.79		13107
				CFF 243	33.4 -61.7	11.78	12.01	11.41	10.81		13108
137	8 2	97	256.6	ON 229	39.3-107.6	11.70	12.06	11.46	10.86		13109
				CFF 207	32.0-119.8	11.55	12.00	11.40	10.80		13110
143	8 2	18	47.6	ON 248	35.9 -67.6	11.81	12.04	11.44	10.84		13111
				CFF 249	37.0 -69.7	11.81	12.05	11.45	10.85		13112
143	8 3	17	45.0	ON 250	37.8 -71.5	11.82	12.05	11.45	10.85		13113
				CFF 250	38.7 -73.7	11.82	12.06	11.46	10.86		13114
145	7 1	22	58.2	ON 204	12.3 -48.5	11.53	11.29	10.69	10.09		13115
				CFF 210	15.0 -49.6	11.57	11.49	10.89	10.29		13116
145	7 2	21	55.5	ON 214	16.7 -50.5	11.59	11.59	10.99	10.39		13117
				CFF 218	19.2 -51.9	11.62	11.71	11.11	10.51		13118
146	4 1	19	50.3	ON 212	15.8 -50.2	11.58	11.54	10.94	10.34		13119
				CFF 217	18.0 -51.4	11.61	11.66	11.06	10.46		13120
148	4 1	19	50.3	ON 249	35.6 -69.2	11.81	12.04	11.44	10.84		13121
				CFF 250	36.7 -71.5	11.82	12.04	11.44	10.84		13122
148	4 2	41	108.4	ON 218	34.6-112.4	11.62	12.03	11.43	10.83		13123
				CFF 208	31.3-117.1	11.55	11.99	11.39	10.79		13124
149	4 1	49	129.6	ON 250	36.9 -72.3	11.82	12.05	11.45	10.85		13125
				CFF 251	38.9 -78.4	11.82	12.06	11.46	10.86		13126
149	4 2	19	50.3	ON 210	31.9-116.1	11.56	12.00	11.40	10.80		13127
				CFF 205	30.2-118.1	11.53	11.98	11.38	10.78		13128
150	7 1	60	158.7	ON 253	38.6 -78.1	11.83	12.06	11.46	10.86		13129
				CFF 250	39.9 -86.1	11.82	12.07	11.47	10.87		13130
151	3 1	19	50.3	ON 220	18.1 -52.6	11.63	11.66	11.06	10.46		13131
				CFF 224	20.1 -53.8	11.66	11.75	11.15	10.55		13132
151	3 2	56	148.1	ON 227	21.6 -54.8	11.68	11.80	11.20	10.60		13133
				OFF 238	27.0 -59.0	11.75	11.93	11.33	10.73		13134
152	4 1	21	55.5	ON 234	24.9 -57.4	11.73	11.89	11.29	10.69		13135
				CFF 238	26.7 -59.0	11.75	11.92	11.32	10.72		13136
152	4 2	67	177.2	ON 240	27.9 -60.1	11.76	11.94	11.34	10.74		13137
				CFF 248	33.0 -66.3	11.81	12.01	11.41	10.81		13138
152	4 3	61	161.3	ON 253	37.5 -75.9	11.83	12.05	11.45	10.85		13139
				CFF 251	39.3 -83.8	11.83	12.06	11.46	10.86		13140
152	4 4	43	113.7	ON 244	39.5 -94.4	11.78	12.06	11.46	10.86		13141
				OFF 238	38.5-100.4	11.75	12.06	11.46	10.86		13142
153	4 1	54	142.8	ON 251	39.3 -84.9	11.82	12.06	11.46	10.86		13143
				CFF 246	39.4 -92.4	11.79	12.06	11.46	10.86		13144
154	4 1	23	60.8	ON 253	37.1 -75.6	11.83	12.05	11.45	10.85		13145
				OFF 252	37.9 -78.5	11.83	12.05	11.45	10.85		13146
154	4 2	58	153.4	ON 252	38.3 -80.4	11.83	12.06	11.46	10.86		13147
				CFF 249	39.3 -88.1	11.81	12.06	11.46	10.86		13148
158	5 1	26	68.8	ON 249	38.5 -86.8	11.81	12.06	11.46	10.86		13149
				CFF 247	38.6 -90.3	11.80	12.06	11.46	10.86		13150
159	5 1	49	129.6	ON 235	24.1 -58.6	11.73	11.87	11.27	10.67		13151
				CFF 243	28.3 -62.5	11.78	11.95	11.35	10.75		13152
159	5 2	20	52.9	ON 252	35.1 -73.2	11.83	12.03	11.43	10.83		13153
				CFF 253	36.0 -75.5	11.83	12.04	11.44	10.84		13154
											13155
											13156

PHOTOGRAPHIC SUMMARY

AFT PAN CAMERA NO		166	0.1750	SLIT W/21	FILTER	4404	FILM	NO.	10040	
OPN NO	FRA	FEET	ET	S-EL	S-DIR	EV	FULL	INT	PRI	
CUT/WRAP	5	13.2								10043
85 6 1	28	74.1	ON 334	34.8	-48.4	12.23	12.68	12.08	11.48	14001
			CFF 341	37.9	-51.0	12.26	12.70	12.10	11.50	14002
85 6 2	35	92.6	ON 359	47.0	-63.9	12.34	12.75	12.15	11.55	14003
			OFF 362	49.3	-69.7	12.35	12.75	12.15	11.55	14004
85 6 3	17	45.0	ON 338	46.9-116.4		12.25	12.75	12.15	11.55	14005
			CFF 333	45.5-119.3		12.23	12.74	12.14	11.54	14006
85 6 4	31	82.0	ON 327	43.6-122.3		12.21	12.74	12.14	11.54	14007
			CFF 317	40.4-126.5		12.16	12.72	12.12	11.52	14008
86 3 1	19	50.3	ON 353	43.2	-57.6	12.31	12.74	12.14	11.54	14009
			OFF 356	44.9	-60.3	12.33	12.74	12.14	11.54	14010
86 3 2	36	95.2	ON 359	46.9	-63.9	12.34	12.75	12.15	11.55	14011
			CFF 362	49.2	-70.0	12.35	12.75	12.15	11.55	14012
86 3 3	55	145.5	ON 364	50.8	-76.3	12.36	12.75	12.15	11.55	14013
			CFF 362	52.1	-87.5	12.35	12.75	12.15	11.55	14014
87 5 1	108	285.7	ON 358	45.7	-62.1	12.33	12.75	12.15	11.55	14015
			OFF 363	51.4	-81.0	12.36	12.75	12.15	11.55	14016
88 6 1	62	164.0	ON 363	49.3	-71.8	12.36	12.75	12.15	11.55	14017
			CFF 363	51.4	-83.5	12.36	12.75	12.15	11.55	14018
89 4 0	12	31.7	ON 229	-27.5	315.4	11.69	0.	0.	0.	14019
			CFF 230	-25.2	316.5	11.70	0.	0.	0.	14020
89 4 1	88	232.8	ON 364	50.7	-79.0	12.36	12.75	12.15	11.55	14021
			CFF 358	51.3	-96.5	12.33	12.75	12.15	11.55	14022
90 6 1	73	193.1	ON 356	50.1	-76.7	12.33	12.75	12.15	11.55	14023
			OFF 353	51.4	-91.2	12.32	12.75	12.15	11.55	14024
93 2 1	57	150.8	ON 294	20.3	-43.6	12.05	12.40	11.80	11.20	14025
			CFF 314	28.0	-46.3	12.15	12.60	12.00	11.40	14026
93 9 1	68	179.9	ON 308	39.0-125.4		12.12	12.71	12.11	11.51	14027
			CFF 285	30.8-132.5		12.01	12.64	12.04	11.44	14028
95 9 1	28	74.1	ON 353	45.6	-65.6	12.31	12.74	12.14	11.54	14029
			OFF 355	47.3	-70.1	12.32	12.75	12.15	11.55	14030
96 9 1	25	66.1	ON 221	24.2	-45.3	11.64	12.52	11.92	11.32	14031
			OFF 221	29.5	-47.8	11.64	12.62	12.02	11.42	14032
98 6 1	47	124.3	ON 306	24.0	-45.7	12.11	12.52	11.92	11.32	14033
			CFF 321	30.1	-48.6	12.18	12.63	12.03	11.43	14034
101 6 1	25	66.1	ON 315	40.6-120.7		12.15	12.72	12.12	11.52	14035
			CFF 307	38.1-123.9		12.11	12.70	12.10	11.50	14036
										14037
										14038



STELLAR-INDEX SUMMARY														NO.
CAMERA DATA														10050
STELLAR INDEX														10051
PERFORMANCE SUMMARY														10052
STELLAR INDEX														10053
SUMMARY														10054
OPN NO	FR	FEET	INDX	H	M	S	Q	LAT	LONG	Q	LAT	LONG	SEC	
85 6 1	4	0.40	C.79	01	14	12	2	54	103E	2	50	106E	71	10055
85 6 2	5	0.50	C.99	01	19	28	2	34	113E	2	29	115E	83	10056
85 6 3	2	0.20	C.40	01	30	29	3	08	123E	3	11	124E	46	15001
85 6 4	5	0.50	C.99	01	32	08	3	14	125E	3	20	126E	85	15002
86 3 1	3	0.30	C.59	02	47	26	2	41	088E	2	38	089E	48	15003
86 3 2	5	0.50	C.99	02	49	14	2	34	090E	2	29	092E	87	15004
86 3 3	7	0.69	1.39	02	52	02	2	23	094E	2	15	096E	132	15005
87 5 1	16	1.58	3.17	04	18	29	2	36	067E	2	20	072E	255	15006
88 6 1	8	0.79	1.58	05	50	35	2	27	047E	2	18	050E	144	15007
89 4 0	2	0.20	0.40	06	52	59	1	38	127W	1	41	126W	48	15008
89 4 1	12	1.19	2.38	07	21	50	2	21	026E	2	08	029E	207	15009
90 6 1	11	1.09	2.18	08	51	07	2	23	003E	2	12	006E	175	15010
93 2 1	8	0.79	1.58	13	07	32	2	70	102W	2	62	085W	159	15011
93 9 1	9	0.89	1.78	13	31	48	3	21	054W	3	33	051W	194	15012
95 9 1	4	0.40	C.79	16	17	09	2	34	112W	2	30	111W	69	15013
96 9 1	4	0.40	C.79	17	38	11	2	66	160W	2	60	150W	112	15014
98 6 1	6	0.59	1.19	20	37	41	2	66	154E	2	59	164E	129	15015
101 6 1	4	0.40	C.79	01	28	38	3	16	123E	3	20	124E	69	15016
102 5 1	10	0.99	1.98	02	44	57	2	36	088E	2	25	091E	163	15017
102 5 2	4	0.40	C.79	02	52	33	2	06	095E	2	01	096E	71	15018
103 4 1	4	0.40	C.79	04	10	15	2	53	056E	2	48	059E	73	15019
103 4 2	3	0.30	0.59	04	12	07	2	46	061E	2	42	062E	55	15020
103 4 3	11	1.09	2.18	04	15	59	2	31	067E	2	18	070E	193	15021
104 7 1	12	1.19	2.38	05	47	16	2	25	046E	2	12	049E	192	15022
105 3 0	1	0.10	0.20	06	49	11	1	39	129W	1	42	128W	48	15023
105 3 1	15	1.48	2.97	07	18	18	2	20	024E	2	02	028E	266	15024
106 6 1	12	1.19	2.38	08	46	33	2	26	000E	2	13	003E	189	15025
109 5 1	14	1.39	2.77	13	26	41	3	16	058W	3	34	053W	287	15026
111 5 2	3	0.30	C.59	16	12	31	2	37	116W	2	34	114W	55	15027
114 5 1	4	0.40	0.79	20	33	47	2	66	151E	2	62	158E	78	15028
117 5 1	7	0.69	1.39	01	11	43	2	34	108E	2	27	111E	117	15029
117 5 3	3	0.30	C.59	01	22	47	3	08	119E	3	11	119E	45	15030
117 5 4	3	0.30	0.59	01	25	09	3	17	121E	3	21	122E	56	15031
119 9 1	8	0.79	1.58	04	11	27	2	33	064E	2	24	066E	147	15032
120 8 0	2	0.20	C.40	05	15	24	1	38	109W	1	41	108W	46	15033
120 8 1	12	1.19	2.38	05	40	10	2	37	039E	2	24	044E	207	15034
120 8 2	6	0.59	1.19	05	47	02	2	10	047E	2	04	048E	99	15035
121 4 1	11	1.09	2.18	07	14	29	2	20	022E	2	08	025E	177	15036
127 9 1	2	0.20	C.40	16	08	43	2	36	117W	2	33	116W	46	15037
128 2 1	4	0.40	C.79	17	30	08	2	66	165W	2	62	158W	77	15038
129 7 1	3	0.30	C.59	18	56	13	2	74	134E	2	73	148E	63	15039
129 7 2	3	0.30	0.59	18	57	59	2	71	156E	2	69	165E	59	15040
132 3 1	4	0.40	C.79	23	35	10	2	44	125E	2	40	127E	71	15041
132 3 2	6	0.59	1.19	23	49	55	3	12	140E	3	20	142E	117	15042
133 3 1	6	0.59	1.19	01	09	30	2	27	109E	2	20	110E	102	15043

										NO.						
133	3	2	4	0.40	0.79	01	21	10	3	18	119E	3	23	120E	71	15046
134	7	1	9	0.89	1.78	02	38	29	2	29	085E	2	19	088E	161	15047
135	7	1	3	0.30	0.59	03	57	01	2	70	027E	2	67	033E	50	15048
135	7	2	10	0.99	1.98	04	06	46	2	35	061E	2	23	064E	178	15049
136	6	0	2	0.20	0.40	05	11	08	1	38	111W	1	41	110W	46	15050
136	6	1	9	0.89	1.78	05	37	25	2	31	039E	2	22	042E	145	15051
136	6	2	6	0.59	1.19	05	42	53	2	10	045E	2	03	046E	113	15052
137	8	1	4	0.40	0.79	07	01	48	2	52	007E	2	48	010E	63	15053
137	8	2	14	1.39	2.77	07	16	30	3	04	025E	3	22	029E	268	15054
143	8	2	2	0.20	0.40	16	03	05	2	41	121W	2	38	120W	44	15055
143	8	3	3	0.30	0.59	16	04	26	2	36	119W	2	33	118W	44	15056
145	7	1	3	0.30	0.59	18	51	51	2	74	132E	2	73	146E	63	15057
145	7	2	3	0.30	0.59	18	53	36	2	71	154E	2	69	163E	59	15058
146	4	1	2	0.20	0.40	20	22	58	2	72	127E	2	70	137E	53	15059
148	4	1	3	0.30	0.59	23	32	01	2	39	125E	2	36	126E	48	15060
148	4	2	6	0.59	1.19	23	45	29	3	12	138E	3	20	140E	117	15061
149	4	1	7	0.69	1.39	01	02	46	2	35	104E	2	28	106E	118	15062
149	4	2	3	0.30	0.59	01	16	44	3	18	117E	3	22	118E	56	15063
150	7	1	8	0.79	1.58	02	34	18	2	28	083E	2	19	086E	145	15064
151	3	1	3	0.30	0.59	03	52	35	2	70	025E	2	67	031E	52	15065
151	3	2	8	0.79	1.58	03	54	05	2	65	036E	2	57	047E	146	15066
152	4	1	3	0.30	0.59	05	25	17	2	60	020E	2	57	024E	53	15067
152	4	2	10	0.99	1.98	05	26	45	2	55	026E	2	45	032E	166	15068
152	4	3	8	0.79	1.58	05	32	58	2	31	037E	2	22	040E	147	15069
152	4	4	6	0.59	1.19	05	38	33	2	09	043E	2	02	044E	109	15070
153	4	1	8	0.79	1.58	07	05	28	2	20	018E	2	12	020E	132	15071
154	4	1	3	0.30	0.59	08	32	14	2	32	007W	2	28	006W	57	15072
154	4	2	9	0.89	1.78	08	33	46	2	26	005W	2	17	003W	140	15073
158	5	1	3	0.30	0.59	14	34	29	2	19	094W	2	14	093W	64	15074
159	5	1	7	0.69	1.39	15	53	12	2	60	137W	2	53	130W	125	15075
159	5	2	3	0.30	0.59	15	59	45	2	36	122W	2	33	121W	48	15076

[REDACTED]

~~TOP SECRET~~
~~TOP SECRET~~

NO. [REDACTED]



- NOTE - THE CYCLE COUNTER FOR INSTRUMENT 166 APPEARED TO BE DROPPING CYCLES RANDOMLY IN THE EARLY PORTION OF MISSION 1021-1, BUT NOW APPEARS TO BE OPERATING CORRECTLY. ALL CONSUMPTION FIGURES ARE BASED ON CYCLE COUNTER READINGS IN-FLIGHT. 10062
- NOTE - THE CAMERAS WERE TURNED OFF PREMATURELY ON OPERATION 117-05-2 BY AN EXTRANEQUS BRUSH 28 (REDUNDANT OFF). 10063
- NOTE - THE FIRST FIVE FRAMES IN THE B MISSION RECOVERY BUCKET ARE THE LAST FIVE FRAMES OF OPERATION 079-09-1 WHICH WAS TAKEN DURING THE A MISSION. 10064
- NOTE - CUT/WRAP OCCURRED ON REV 081. 10065
- NOTE - THE FILM APPARENTLY PULLED OUT OF THE RAILS ON THE MASTER PAN CAMERA, INSTRUMENT 166, BETWEEN OPERATION 079-09-1 AND OPERATION 089-04-0. THIS CONDITION RESULTED IN THE FILM MOVING AWAY FROM THE PLATEN AND OUT OF THE FOCAL PLANE. QUALITY OF FILM IMAGERY IS QUESTIONABLE. ALSO, SOMEWHERE BETWEEN OPERATION 096-09-1 AND OPERATION 101-06-1 THE FILM ON THE MASTER PAN CAMERA STOPPED MOVING. FOR THIS REASON NO DATA IS PRESENTED FOR INSTRUMENT 166 AFTER OPERATION 101-06-1. 10066
- NOTE - T/M DATA INDICATE THAT THE SLAVE PAN CAMERA, INSTRUMENT 167, AND THE STELLAR INDEX CAMERA WERE OUT OF FILM PRIOR TO THE START OF OPERATION 159-05-2. 10067
- NOTE - MISSION 1021 IS BEING FLOWN WITH THE AGENA MOVING NOSE-FIRST THROUGH ORBIT INSTEAD OF THE USUAL TAIL-FIRST FLIGHT. AS A RESULT OF THIS CHANGE IN AGENA ORIENTATION THE FOLLOWING VARIATIONS IN NORMAL SYSTEM PARAMETERS SHOULD BE NOTED - 10068
- (1) AT THE DESCENDING NODE THE STELLAR CAMERA NOW LOOKS WESTWARD INSTEAD OF EASTWARD. 10069
- (2) THE MASTER PAN CAMERA, INSTRUMENT 166, IS THE AFT LOOKING CAMERA AND THE SLAVE PAN CAMERA, INSTRUMENT 167, IS THE FORWARD LOOKING CAMERA. 10070



~~TOP SECRET~~

NO. [REDACTED]

RATE ESTIMATE
FWD PAN CAMERA NUMBER 167

20010
20011

OPN NO	FR	R	A	TUR/ DUR	INST CPS	INST ANG VEL	SCAN R/SEC	RATE I/SEC	PCT CALIB	RATE REQD	
85 6 1	27	6	6 ON	1412	0.3823	0.03226	2.402	57.65	-4.2	1.4	20012
			OFF	71	0.3902	0.03293	2.452	58.85	-4.2	1.8	20013
85 6 2	34	6	6 ON	1728	0.4111	0.03468	2.583	61.98	-4.2	2.5	20014
			OFF	83	0.4145	0.03497	2.604	62.50	-4.2	2.5	20015
85 6 3	17	6	6 ON	2389	0.3868	0.03264	2.431	58.33	-4.2	1.6	20016
			OFF	46	0.3817	0.03221	2.399	57.57	-4.2	1.6	20017
85 6 4	31	6	6 ON	2488	0.3746	0.03160	2.353	56.48	-4.2	1.3	20018
			OFF	85	0.3634	0.03066	2.283	54.80	-4.2	1.1	20019
86 3 1	19	6	6 ON	1622	0.4039	0.03408	2.538	60.91	-4.2	2.4	20020
			OFF	48	0.4073	0.03437	2.559	61.42	-4.2	2.4	20021
86 3 2	36	6	6 ON	1730	0.4111	0.03469	2.583	62.00	-4.2	2.5	20022
			OFF	87	0.4146	0.03498	2.605	62.52	-4.2	2.5	20023
86 3 3	54	6	6 ON	1898	0.4161	0.03511	2.615	62.75	-4.2	2.4	20024
			OFF	132	0.4146	0.03498	2.605	62.52	-4.2	2.3	20025
87 5 1	106	6	6 ON	1700	0.4095	0.03455	2.573	61.74	-4.2	2.5	20026
			OFF	255	0.4161	0.03511	2.614	62.74	-4.2	2.3	20027
88 6 1	60	6	6 ON	1841	0.4153	0.03505	2.610	62.63	-4.2	2.5	20028
			OFF	144	0.4156	0.03507	2.612	62.68	-4.2	2.3	20029
89 4 0	13	6	6 ON	201	0.2630	0.02220	1.653	39.67	-4.2	-5.3	20030
			OFF	48	0.2646	0.02233	1.663	39.91	-4.2	-5.7	20031
89 4 1	86	6	6 ON	1933	0.4162	0.03512	2.615	62.76	-4.2	2.3	20032
			OFF	207	0.4095	0.03456	2.573	61.76	-4.2	2.1	20033
90 6 1	72	6	6 ON	1907	0.4125	0.03481	2.592	62.21	-5.0	1.5	20034
			OFF	175	0.4090	0.03451	2.570	61.68	-5.0	1.3	20035
93 2 1	56	6	6 ON	1139	0.3412	0.02879	2.144	51.46	-5.0	-2.9	20036
			OFF	159	0.3636	0.03068	2.284	54.82	-5.0	-0.8	20037
93 9 1	67	6	6 ON	2595	0.3566	0.03009	2.241	53.78	-5.0	0.1	20038
			OFF	194	0.3303	0.02787	2.075	49.81	-5.0	-0.3	20039
95 9 1	28	6	6 ON	1748	0.4085	0.03447	2.566	61.60	-5.0	1.7	20040
			OFF	69	0.4110	0.03468	2.582	61.98	-5.0	1.7	20041
96 9 1	25	11	11 ON	1226	0.2574	0.02172	1.617	38.81	-5.0	-39.8	20042
			OFF	112	0.2574	0.02172	1.617	38.81	-5.0	-44.0	20043
98 6 1	47	6	6 ON	1229	0.3545	0.02991	2.227	53.45	-5.0	-1.6	20044
			OFF	129	0.3718	0.03137	2.336	56.06	-5.0	-0.2	20045
101 6 1	25	6	6 ON	2535	0.3650	0.03080	2.293	55.04	-5.0	0.5	20046
			OFF	69	0.3558	0.03002	2.235	53.65	-5.0	0.3	20047
102 5 1	67	6	6 ON	1730	0.4075	0.03439	2.561	61.45	-5.0	1.8	20048
			OFF	163	0.4124	0.03480	2.591	62.19	-5.0	1.8	20049
102 5 2	28	6	6 ON	2186	0.4028	0.03398	2.531	60.73	-5.0	1.4	20050
			OFF	71	0.3973	0.03353	2.497	59.92	-5.0	1.4	20051
103 4 1	29	6	6 ON	1465	0.3851	0.03250	2.420	58.08	-5.0	0.8	20052
			OFF	73	0.3926	0.03312	2.467	59.20	-5.0	1.2	20053
103 4 2	22	6	6 ON	1577	0.3966	0.03346	2.492	59.81	-5.0	1.4	20054
			OFF	55	0.4009	0.03383	2.519	60.46	-5.0	1.6	20055
103 4 3	81	6	6 ON	1809	0.4108	0.03467	2.581	61.95	-5.0	1.9	20056
			OFF	193	0.4117	0.03474	2.587	62.08	-5.0	1.8	20057
104 7 1	80	6	6 ON	1904	0.4186	0.03532	2.630	63.12	-3.6	3.3	20058
			OFF	192	0.4143	0.03496	2.603	62.48	-3.6	3.1	20059

[REDACTED]

ID	Group	Sub-Group	Count	Status	Item	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8
105	3	0	8	10	2 ON	233	0.1505	0.01270	0.945	22.69	-3.6	-87.5	21049
					OFF	48	0.1536	0.01296	0.965	23.17	-3.6	-85.4	21050
105	3	1	108	6	6 ON	1981	0.4181	0.03527	2.627	63.04	-3.6	3.2	21051
					OFF	266	0.4040	0.03409	2.538	60.92	-3.6	2.9	21052
106	6	1	79	6	6 ON	1893	0.4185	0.03531	2.629	63.11	-3.6	3.3	21053
					OFF	189	0.4150	0.03502	2.607	62.58	-3.6	3.1	21054
109	5	1	99	6	6 ON	2549	0.3683	0.03107	2.314	55.53	-3.6	1.6	21055
					OFF	287	0.3297	0.02782	2.072	49.72	-3.6	1.3	21056
111	5	2	22	6	6 ON	1733	0.4137	0.03490	2.599	62.38	-3.6	3.3	21057
					OFF	55	0.4160	0.03510	2.614	62.73	-3.6	3.3	21058
114	5	1	28	6	6 ON	1261	0.3642	0.03073	2.288	54.92	-3.6	0.1	21059
					OFF	78	0.3746	0.03161	2.354	56.49	-3.6	1.0	21060
117	5	1	48	6	6 ON	1790	0.4162	0.03512	2.615	62.76	-3.6	3.4	21061
					OFF	117	0.4186	0.03532	2.630	63.12	-3.6	3.3	21062
117	5	2	3	6	6 ON	2349	0.3936	0.03321	2.473	59.36	-3.6	2.3	21063
					OFF	7	0.3932	0.03317	2.470	59.29	-3.6	2.4	21064
117	5	3	17	6	6 ON	2454	0.3810	0.03215	2.394	57.46	-3.6	2.0	21065
					OFF	45	0.3756	0.03169	2.360	56.63	-3.6	1.9	21066
117	5	4	20	6	6 ON	2596	0.3616	0.03051	2.272	54.53	-3.6	1.3	21067
					OFF	56	0.3540	0.02987	2.224	53.37	-3.6	1.2	21068
119	9	1	61	6	6 ON	1809	0.4164	0.03514	2.616	62.79	-3.7	3.3	21069
					OFF	147	0.4180	0.03527	2.626	63.03	-3.7	3.2	21070
120	8	0	13	6	6 ON	265	0.2666	0.02250	1.675	40.20	-3.7	-7.0	21071
					OFF	46	0.2686	0.02266	1.687	40.50	-3.7	-7.3	21072
120	8	1	86	6	6 ON	1751	0.4141	0.03494	2.602	62.44	-3.7	3.3	21073
					OFF	207	0.4180	0.03527	2.626	63.03	-3.7	3.2	21074
120	8	2	40	6	6 ON	2162	0.4098	0.03458	2.575	61.80	-3.7	2.8	21075
					OFF	99	0.4022	0.03394	2.527	60.66	-3.7	2.6	21076
121	4	1	73	6	6 ON	2026	0.4165	0.03514	2.617	62.81	-3.7	3.1	21077
					OFF	177	0.4072	0.03436	2.558	61.40	-3.7	2.7	21078
127	9	1	19	6	6 ON	1788	0.4157	0.03507	2.612	62.68	-3.7	3.4	21079
					OFF	46	0.4170	0.03519	2.620	62.88	-3.7	3.3	21080
128	2	1	28	6	6 ON	1289	0.3678	0.03103	2.311	55.46	-3.7	0.2	21081
					OFF	77	0.3778	0.03188	2.374	56.97	-3.7	1.1	21082
129	7	1	21	6	6 ON	1073	0.3369	0.02842	2.117	50.80	-3.7	-3.2	21083
					OFF	63	0.3449	0.02910	2.167	52.01	-3.7	-2.4	21084
129	7	2	21	6	6 ON	1178	0.3517	0.02968	2.210	53.04	-3.7	-1.5	21085
					OFF	59	0.3599	0.03036	2.261	54.27	-3.7	-0.7	21086
132	3	1	29	6	6 ON	1665	0.4091	0.03452	2.570	61.68	-3.7	3.2	21087
					OFF	71	0.4132	0.03487	2.596	62.31	-3.7	3.3	21088
132	3	2	42	6	6 ON	2550	0.3678	0.03104	2.311	55.47	-3.7	1.3	21089
					OFF	117	0.3513	0.02964	2.207	52.98	-3.7	0.8	21090
133	3	1	42	6	6 ON	1944	0.4181	0.03527	2.627	63.04	-3.7	3.3	21091
					OFF	102	0.4160	0.03510	2.614	62.73	-3.7	3.1	21092
133	3	2	24	6	6 ON	2644	0.3543	0.02990	2.226	53.43	-3.7	0.7	21093
					OFF	71	0.3442	0.02905	2.163	51.91	-3.7	0.5	21094
134	7	1	67	6	6 ON	1901	0.4181	0.03528	2.627	63.05	-3.7	3.3	21095
					OFF	161	0.4154	0.03505	2.610	62.64	-3.7	3.1	21096
135	7	1	18	6	6 ON	1231	0.3581	0.03022	2.250	54.00	-4.1	-1.1	21097
					OFF	50	0.3648	0.03078	2.292	55.00	-4.1	-0.5	21098
135	7	2	73	6	6 ON	1817	0.4150	0.03502	2.608	62.58	-4.1	3.0	21099
					OFF	178	0.4158	0.03508	2.612	62.69	-4.1	2.8	21100
136	6	0	12	6	6 ON	297	0.2670	0.02253	1.677	40.26	-4.1	-8.4	21101
					OFF	46	0.2691	0.02270	1.691	40.58	-4.1	-8.6	21102

										NO.				
136	6	1	60	6	6	ON	1875	0.4162	0.03512	2.615	62.76	-4.1	3.0	21103
						OFF	145	0.4152	0.03503	2.609	62.60	-4.1	2.8	21104
136	6	2	45	6	6	ON	2202	0.4054	0.03421	2.547	61.13	-4.1	2.2	21105
						OFF	113	0.3955	0.03337	2.485	59.65	-4.1	1.9	21106
137	8	1	25	6	6	ON	1555	0.3983	0.03361	2.503	60.06	-4.1	2.4	21107
						OFF	63	0.4036	0.03406	2.536	60.86	-4.1	2.6	21108
137	8	2	97	6	6	ON	2437	0.3813	0.03217	2.396	57.50	-4.1	1.3	21109
						OFF	268	0.3442	0.02905	2.163	51.91	-4.1	0.0	21110
143	8	2	18	6	6	ON	1741	0.4120	0.03476	2.589	62.13	-4.1	3.0	21111
						OFF	44	0.4138	0.03492	2.600	62.40	-4.1	3.0	21112
143	8	3	17	6	6	ON	1821	0.4151	0.03503	2.608	62.60	-4.1	3.1	21113
						OFF	44	0.4160	0.03510	2.614	62.73	-4.1	3.0	21114
145	7	1	22	6	6	ON	1105	0.3395	0.02864	2.133	51.19	-4.1	-3.6	21115
						OFF	63	0.3483	0.02939	2.189	52.53	-4.1	-2.6	21116
145	7	2	21	6	6	ON	1210	0.3551	0.02996	2.231	53.54	-4.1	-1.7	21117
						OFF	59	0.3631	0.03063	2.281	54.75	-4.1	-0.8	21118
146	4	1	19	6	6	ON	1194	0.3528	0.02976	2.216	53.19	-4.1	-1.9	21119
						OFF	53	0.3600	0.03038	2.262	54.29	-4.1	-1.1	21120
148	4	1	19	6	6	ON	1775	0.4135	0.03489	2.598	62.36	-4.1	3.1	21121
						OFF	48	0.4151	0.03502	2.608	62.59	-4.1	3.1	21122
148	4	2	41	6	6	ON	2583	0.3617	0.03052	2.273	54.55	-4.1	0.5	21123
						OFF	117	0.3451	0.02912	2.168	52.04	-4.1	-0.1	21124
149	4	1	49	6	6	ON	1837	0.4155	0.03506	2.611	62.66	-4.1	3.2	21125
						OFF	118	0.4163	0.03513	2.616	62.78	-4.1	3.0	21126
149	4	2	19	6	6	ON	2676	0.3482	0.02938	2.188	52.50	-4.1	-0.0	21127
						OFF	56	0.3403	0.02871	2.138	51.31	-4.1	-0.3	21128
150	7	1	60	6	6	ON	1948	0.4195	0.03539	2.636	63.25	-3.4	3.8	21129
						OFF	145	0.4154	0.03505	2.610	62.65	-3.4	3.5	21130
151	3	1	19	6	6	ON	1263	0.3654	0.03083	2.296	55.10	-3.4	-0.1	21131
						OFF	52	0.3722	0.03141	2.339	56.13	-3.4	0.5	21132
151	3	2	56	6	6	ON	1353	0.3778	0.03188	2.374	56.98	-3.4	1.2	21133
						OFF	146	0.3952	0.03335	2.483	59.60	-3.4	2.6	21134
152	4	1	21	6	6	ON	1444	0.3892	0.03284	2.446	58.69	-3.4	2.2	21135
						OFF	53	0.3949	0.03332	2.482	59.56	-3.4	2.6	21136
152	4	2	67	6	6	ON	1532	0.3989	0.03366	2.507	60.16	-3.4	2.9	21137
						OFF	166	0.4124	0.03480	2.591	62.19	-3.4	3.7	21138
152	4	3	61	6	6	ON	1905	0.4196	0.03540	2.636	63.27	-3.4	3.9	21139
						OFF	147	0.4172	0.03520	2.621	62.91	-3.4	3.6	21140
152	4	4	43	6	6	ON	2240	0.4053	0.03420	2.547	61.12	-3.4	3.0	21141
						OFF	109	0.3949	0.03332	2.481	59.55	-3.4	2.6	21142
153	4	1	54	6	6	ON	2074	0.4162	0.03512	2.615	62.76	-3.4	3.5	21143
						OFF	132	0.4083	0.03445	2.566	61.57	-3.4	3.2	21144
154	4	1	23	6	6	ON	1900	0.4195	0.03540	2.636	63.26	-3.4	3.9	21145
						OFF	57	0.4194	0.03539	2.635	63.25	-3.4	3.8	21146
154	4	2	58	6	6	ON	1992	0.4188	0.03534	2.632	63.16	-3.4	3.7	21147
						OFF	140	0.4134	0.03488	2.597	62.33	-3.4	3.4	21148
158	5	1	26	6	6	ON	2115	0.4142	0.03495	2.602	62.46	-3.4	3.4	21149
						OFF	64	0.4103	0.03462	2.578	61.88	-3.4	3.3	21150
159	5	1	49	6	6	ON	1457	0.3908	0.03298	2.456	58.94	-3.4	2.3	21151
						OFF	125	0.4035	0.03405	2.535	60.84	-3.4	3.2	21152
159	5	2	20	6	6	ON	1850	0.4189	0.03534	2.632	63.17	-3.4	4.0	21153
						OFF	48	0.4195	0.03540	2.636	63.26	-3.4	3.9	21154
														21155
														21156

[REDACTED]

RATE ESTIMATE
AFT PAN CAMERA NUMBER 166

NO. [REDACTED] 20020

OPN NO	FR	R	A	TUR/	INST	INST	SCAN	RATE	PCT	RATE		
				DUR	CPS	ANG VEL	R/SEC	I/SEC	CALIB	REQD		
85 6 1	28	6	6	ON	1412	0.3879	0.03273	2.437	58.49	-3.0	2.8	20021
				OFF	71	0.3960	0.03341	2.488	59.72	-3.0	3.2	20022
85 6 2	35	6	6	ON	1728	0.4172	0.03521	2.622	62.92	-3.0	4.0	20023
				OFF	83	0.4207	0.03550	2.643	63.44	-3.0	3.9	22001
85 6 3	17	6	6	ON	2389	0.3925	0.03312	2.466	59.19	-3.0	3.0	22002
				OFF	46	0.3873	0.03268	2.434	58.41	-3.0	3.0	22003
85 6 4	31	6	6	ON	2488	0.3800	0.03206	2.387	57.30	-3.0	2.7	22004
				OFF	85	0.3686	0.03110	2.316	55.58	-3.0	2.5	22005
86 3 1	19	6	6	ON	1622	0.4100	0.03459	2.576	61.82	-3.0	3.8	22006
				OFF	48	0.4134	0.03488	2.597	62.34	-3.0	3.8	22007
86 3 2	36	6	6	ON	1730	0.4173	0.03521	2.622	62.93	-3.0	3.9	22008
				OFF	87	0.4209	0.03551	2.645	63.47	-3.0	3.9	22009
86 3 3	55	6	6	ON	1898	0.4224	0.03564	2.654	63.70	-3.0	3.9	22010
				OFF	132	0.4209	0.03551	2.644	63.46	-3.0	3.7	22011
87 5 1	108	6	6	ON	1700	0.4156	0.03507	2.611	62.67	-3.0	3.9	22012
				OFF	255	0.4224	0.03564	2.654	63.69	-3.0	3.8	22013
88 6 1	62	6	6	ON	1841	0.4216	0.03558	2.649	63.58	-3.0	3.9	22014
				OFF	144	0.4219	0.03560	2.651	63.62	-3.0	3.8	22015
89 4 0	12	6	6	ON	201	0.2661	0.02246	1.672	40.13	-3.0	-4.1	22016
				OFF	48	0.2677	0.02259	1.682	40.38	-3.0	-4.5	22017
89 4 1	88	6	6	ON	1933	0.4225	0.03565	2.655	63.71	-3.0	3.8	22018
				OFF	207	0.4157	0.03508	2.612	62.69	-3.0	3.5	22019
90 6 1	73	6	6	ON	1907	0.4140	0.03493	2.601	62.42	-4.9	1.9	22020
				OFF	175	0.4104	0.03463	2.579	61.89	-4.9	1.6	22021
93 2 1	57	6	6	ON	1139	0.3420	0.02886	2.149	51.57	-4.9	-2.7	22022
				OFF	159	0.3645	0.03076	2.290	54.97	-4.9	-0.6	22023
93 9 1	68	6	6	ON	2595	0.3575	0.03017	2.246	53.91	-4.9	0.3	22024
				OFF	194	0.3310	0.02793	2.079	49.91	-4.9	-0.1	22025
95 9 1	28	6	6	ON	1748	0.4098	0.03458	2.575	61.80	-4.9	2.0	22026
				OFF	69	0.4124	0.03480	2.591	62.19	-4.9	2.0	22027
96 9 1	25	11	11	ON	1226	0.2573	0.02171	1.617	38.81	-4.9	-39.9	22028
				OFF	112	0.2574	0.02172	1.617	38.81	-4.9	-44.0	22029
98 6 1	47	6	6	ON	1229	0.3553	0.02998	2.233	53.58	-4.9	-1.4	22030
				OFF	129	0.3728	0.03146	2.342	56.22	-4.9	0.1	22031
101 6 1	25	6	6	ON	2535	0.3660	0.03088	2.300	55.19	-4.9	0.7	22032
				OFF	69	0.3567	0.03009	2.241	53.78	-4.9	0.6	22033
												22034
												22035
												22036
												22037
												22038

[REDACTED]

NO. [REDACTED]

RAMP PROFILE

R= 6 A= 6 PERIOD= 3840

R= 0.3527 A= C.0816

TUR	PER	CPS	ANG V	
-0	3.689	0.2711	0.02452	20030
100	3.677	0.2719	0.02460	20031
200	3.644	0.2744	0.02482	20032
300	3.591	0.2785	0.02519	20033
400	3.520	0.2841	0.02570	23001
500	3.435	0.2911	0.02633	23002
600	3.340	0.2994	0.02708	23003
700	3.239	0.3088	0.02793	23004
800	3.135	0.3190	0.02885	23005
900	3.031	0.3300	0.02984	23006
1000	2.929	0.3414	0.03088	23007
1100	2.832	0.3531	0.03194	23008
1200	2.713	0.3686	0.03334	23009
1300	2.607	0.3835	0.03469	23010
1400	2.517	0.3973	0.03593	23011
1500	2.442	0.4094	0.03703	23012
1600	2.384	0.4195	0.03795	23013
1700	2.341	0.4272	0.03864	23014
1800	2.314	0.4322	0.03909	23015
1900	2.303	0.4342	0.03927	23016
2000	2.308	0.4334	0.03919	23017
2100	2.328	0.4295	0.03885	23018
2200	2.365	0.4229	0.03825	23019
2300	2.417	0.4138	0.03742	23020
2400	2.485	0.4024	0.03639	23021
2500	2.569	0.3892	0.03520	23022
2600	2.669	0.3747	0.03389	23023
2700	2.783	0.3594	0.03250	23024
2800	2.890	0.3460	0.03130	23025
2900	2.990	0.3345	0.03025	23026
3000	3.093	0.3233	0.02924	23027
3100	3.197	0.3128	0.02829	23028
3200	3.300	0.3030	0.02741	23029
3300	3.398	0.2943	0.02662	23030
3400	3.487	0.2868	0.02594	23031
3500	3.564	0.2806	0.02538	23032
3600	3.625	0.2759	0.02495	23033
3700	3.667	0.2727	0.02467	23034
3800	3.687	0.2712	0.02453	23035
				23036
				23037
				23038
				23039
				23040

NO. [REDACTED]



NO. [REDACTED]

RAMP PROFILE

R- 11 A- 11 PERIOD= 3840

R= 0.2709 A= 0.0001

TUR	PER	CPS	ANG V	
-0	3.693	0.2708	C.02449	20035
100	3.693	0.2708	C.02449	20036
200	3.693	0.2708	C.02449	20037
300	3.693	0.2708	C.02449	20038
400	3.693	0.2708	C.02449	23501
500	3.692	0.2708	C.02449	23502
600	3.692	0.2708	C.02450	23503
700	3.692	0.2708	C.02450	23504
800	3.692	0.2709	C.02450	23505
900	3.692	0.2709	C.02450	23506
1000	3.692	0.2709	C.02450	23507
1100	3.691	0.2709	C.02450	23508
1200	3.691	0.2709	C.02450	23509
1300	3.691	0.2709	C.02450	23510
1400	3.691	0.2710	C.02451	23511
1500	3.690	0.2710	C.02451	23512
1600	3.690	0.2710	C.02451	23513
1700	3.690	0.2710	C.02451	23514
1800	3.690	0.2710	C.02451	23515
1900	3.690	0.2710	C.02451	23516
2000	3.690	0.2710	C.02451	23517
2100	3.690	0.2710	C.02451	23518
2200	3.690	0.2710	C.02451	23519
2300	3.690	0.2710	C.02451	23520
2400	3.691	0.2710	C.02451	23521
2500	3.691	0.2709	C.02451	23522
2600	3.691	0.2709	C.02450	23523
2700	3.691	0.2709	C.02450	23524
2800	3.692	0.2709	C.02450	23525
2900	3.692	0.2709	C.02450	23526
3000	3.692	0.2709	C.02450	23527
3100	3.692	0.2709	C.02450	23528
3200	3.692	0.2708	C.02450	23529
3300	3.692	0.2708	C.02450	23530
3400	3.693	0.2708	C.02449	23531
3500	3.693	0.2708	C.02449	23532
3600	3.693	0.2708	C.02449	23533
3700	3.693	0.2708	C.02449	23534
3800	3.693	0.2708	C.02449	23535
				23536
				23537
				23538
				23539
				23540



NO. [REDACTED]

RAMP PROFILE

R- 10 A- 2 PERIOD= 3840

R= 0.2909 A= 0.1427

TUR	PER	CPS	ANG V	
-0	6.748	0.1482	C.01340	235
100	6.682	0.1497	C.01354	235
200	6.493	0.1540	C.01393	235
300	6.205	0.1612	C.01458	235
400	5.849	0.1710	C.01546	235
500	5.458	0.1832	C.01657	235
600	5.058	0.1977	C.01788	235
700	4.672	0.2141	C.01936	235
800	4.310	0.2320	C.02098	235
900	3.982	0.2512	C.02272	235
1000	3.688	0.2711	C.02452	235
1100	3.428	0.2917	C.02638	235
1200	3.137	0.3187	C.02883	235
1300	2.900	0.3448	C.03118	235
1400	2.711	0.3689	C.03336	235
1500	2.563	0.3901	C.03529	235
1600	2.452	0.4078	C.03688	235
1700	2.374	0.4212	C.03810	235
1800	2.326	0.4299	C.03888	235
1900	2.307	0.4335	C.03921	235
2000	2.315	0.4319	C.03907	235
2100	2.352	0.4253	C.03846	235
2200	2.417	0.4137	C.03742	235
2300	2.515	0.3977	C.03597	235
2400	2.647	0.3778	C.03417	235
2500	2.819	0.3547	C.03208	235
2600	3.036	0.3293	C.02979	235
2700	3.305	0.3026	C.02737	235
2800	3.581	0.2792	C.02526	235
2900	3.860	0.2591	C.02343	235
3000	4.175	0.2395	C.02167	235
3100	4.523	0.2211	C.01999	235
3200	4.901	0.2040	C.01845	235
3300	5.298	0.1888	C.01707	235
3400	5.695	0.1756	C.01588	235
3500	6.069	0.1648	C.01490	235
3600	6.388	0.1565	C.01416	235
3700	6.620	0.1511	C.01366	235
3800	6.737	0.1484	C.01343	235

CLOCK SUMMARY
PRELIMINARY CLOCK CORRELATION

NO [REDACTED] 20040

20041
20042
20043
20044
24001
24002
24003
24004
24005
24006
24007
24008
24009
24010
24011
24400
24401
24402
24403
20C44
20045
24501
24502
24503
24504
24505
24506
24507
24508
24509
24510
24511
24900
24901
24902
24903
24904

ORDER FIT 1

SYS TIME I/P	CL TIME I/P	COMP SYS TM	DELTA ST	REV	STA
24764.012	231832.93290	24764.01660	-0.00367	89	1
58702.012	265770.93490	58702.01140	0.00151	95	1
24535.957	318004.89090	24535.95640	0.00155	105	1
58430.917	351899.86390	58430.92220	-0.00428	111	1
18908.517	398777.46190	18908.51030	0.00763	120	1
58181.184	438050.14790	58181.18800	-0.00307	127	1
18653.123	484922.08790	18653.11810	0.00584	136	1
57919.722	524188.70490	57919.72680	-0.00386	143	1
18267.027	34065.10290	18267.02690	0.00102	152	1
57643.215	73441.30290	57643.21860	-0.00265	159	1

A0=-0.20706886730 06 A1= 0.9999997885910 00
SIGMA=0.00383 NO. POINTS= 10
RATIO OF CLCCK TIME TO SYS TIME= 0.100000021141D 01

ORDER FIT 2

SYS TIME I/P	CL TIME I/P	COMP SYS TM	DELTA ST	REV	STA
24764.012	231832.93290	24764.01440	-0.00141	89	1
58702.012	265770.93490	58702.01050	0.00249	95	1
24535.957	318004.89090	24535.95690	0.00106	105	1
58430.917	351899.86390	58430.92340	-0.00540	111	1
18908.517	398777.46190	18908.51190	0.00604	120	1
58181.184	438050.14790	58181.18960	-0.00467	127	1
18653.123	484922.08790	18653.11930	0.00466	136	1
57919.722	524188.70490	57919.72730	-0.00431	143	1
18267.027	34065.10290	18267.02610	0.00187	152	1
57643.215	73441.30290	57643.21630	-0.00033	159	1

A0=-0.20706888500 06 A1= 0.9999998807020 00
A2=-0.10956490335570-12
SIGMA=0.00358 NO. POINTS= 10

CLOCK OPERATIONS

NO.

20050

OPN NO	FR		H	M	S	DEC	BINARY	
85 6 1	27	ON	01	14	12	211521	01100100110111000110111101000	20051
		OFF	C1	15	23	211592	01100100111001010001101000000	25001
85 6 2	34	ON	01	19	28	211837	011001010000000110000001001000	25002
		OFF	01	20	51	211920	01100101000011010010010000000	25003
85 6 3	17	ON	01	30	29	212498	01100101010100111011001010000	25004
		OFF	C1	31	15	212544	01100101010110010101000000000	25005
85 6 4	31	ON	01	32	08	212597	01100101010111111100100001000	25006
		OFF	01	33	33	212682	01100101011010100010100010000	25007
86 3 1	19	ON	C2	47	26	217115	01100111100001110100101111000	25008
		OFF	C2	48	14	217163	01100111100011010010011111000	25009
86 3 2	36	ON	02	49	14	217223	01100111100101000111101011000	25010
		OFF	02	50	41	217310	01100111100111110001100110000	25011
86 3 3	54	ON	C2	52	02	217391	0110011110101000111110011000	25012
		OFF	C2	54	14	217523	01100111101110010001100111000	25013
87 5 1	106	ON	04	18	29	222578	01101010001000100010101010000	25014
		OFF	04	22	44	222833	01101010010000010100101101000	25015
88 6 1	60	ON	C5	50	35	228104	01101100110001001011101000000	25016
		OFF	C5	52	59	228248	01101100110101100100111000000	25017
89 4 0	13	ON	06	52	59	231847	01101110100011011010001011000	25018
		OFF	06	53	47	231895	01101110100100110111111011000	25019
89 4 1	86	ON	C7	21	50	233579	01101111011000010000111111000	25020
		OFF	C7	25	17	233786	01101111011110100101010010000	25021
90 6 1	72	ON	08	51	07	238936	01110001111011101111110000000	25022
		OFF	08	54	02	239111	01110010000001000101101011000	25023
93 2 1	56	ON	13	07	32	254321	01111001010001010000101101000	25024
		OFF	13	10	11	254480	01111001010110000111010000000	25025
93 9 1	67	ON	13	31	48	255777	01111001111101101100011101000	25026
		OFF	13	35	02	255971	01111010000011100111010111000	25027
95 9 1	28	ON	16	17	09	265698	01111110101100011101011010000	25028
		OFF	16	18	18	265767	01111110101110100100001011000	25029
96 9 1	25	ON	17	38	11	270560	10000001000000110101100000000	25030
		OFF	17	40	03	270672	10000001000100010000010000000	25031
98 6 1	47	ON	20	37	41	281330	10000110001001100000101010000	25032
		OFF	20	39	50	281459	10000110001101011100100111000	25033
101 6 1	25	ON	01	28	38	298787	10001110011110010000010111000	25034
		OFF	01	29	47	298856	10001110100000010111001000000	25035
102 5 1	67	ON	C2	44	57	303365	10010000101001111101110001000	25036
		OFF	02	47	40	303528	10010000101110111100001000000	25037
102 5 2	28	ON	C2	52	33	303822	10010000110111111010010110000	25038
		OFF	C2	53	44	303893	10010000111010000101000001000	25039
103 4 1	29	ON	C4	10	15	308484	10010011000110001011110100000	25040
		OFF	04	11	28	308557	10010011001000011010011001000	25041
103 4 2	22	ON	04	12	07	308596	10010011001001100110100100000	25042
		OFF	C4	13	02	308651	10010011001011010001111111000	25043
103 4 3	81	ON	04	15	59	308828	10010011010000101011101100000	25044
		OFF	04	19	12	309021	10010011010110100100101001000	25045
104 7 1	80	ON	05	47	16	314305	10010101110111110100111101000	25046
		OFF	C5	50	28	314497	10010101111101101011111101000	25047
105 3 0	8	ON	06	49	11	318020	10010111101001001100110100000	25048
		OFF	06	49	59	318068	10010111101010101010100100000	25049
								25050

NO.

105	3	1	108	ON	C7	18	18	319767	10011000011110100000111011000	25051
				OFF	C7	22	44	320033	10011000100110101000011101000	25052
106	6	1	79	ON	C8	46	33	325062	100110110000000000110101110000	25053
				OFF	C8	49	42	325251	10011011000101110111110111000	25054
109	5	1	99	ON	C13	26	41	341870	10100011000001000010110110000	25055
				OFF	C13	31	28	342157	10100011001001110011011001000	25056
111	5	2	22	ON	C16	12	31	351820	10100111110000101100011100000	25057
				OFF	C16	13	26	351875	10100111110010010111110111000	25058
114	5	1	28	ON	C20	33	47	367496	10101111001111000101101000000	25059
				OFF	C20	35	05	367574	10101111010001011101111100000	25060
117	5	1	48	ON	C01	11	43	384172	10110111001011111111111100000	25061
				OFF	C01	13	40	384289	10110111001111100100011101000	25062
117	5	2	3	ON	C01	21	02	384731	10110111011101000011101111000	25063
				OFF	C01	21	09	384738	10110111011101010001011010000	25064
117	5	3	17	ON	C01	22	47	384836	10110111100000010000110100000	25065
				OFF	C01	23	32	384881	10110111100001010001011010000	25066
117	5	4	20	ON	C01	25	09	384978	10110111100100100110001010000	25067
				OFF	C01	26	05	385034	10110111100110010011100010000	25068
119	9	1	61	ON	C04	11	27	394956	10111000101010001100111000000	25069
				OFF	C04	13	54	395103	10111000110011001011000110000	25070
120	8	0	13	ON	C05	15	24	398793	10111100010100011001001010000	25071
				OFF	C05	16	10	398839	1011110001011001100110011010000	25072
120	8	1	86	ON	C05	40	10	400279	10111101101011100010110110000	25073
				OFF	C05	43	37	400486	1011110111011101110111001110000	25074
120	8	2	40	ON	C05	47	02	400691	10111110001000001111001110000	25075
				OFF	C05	48	41	400790	10111110001110010001111100000	25076
121	4	1	73	ON	C07	14	29	405938	11000001100100001111101010000	25077
				OFF	C07	17	26	406115	11000001101001101001010111000	25078
127	9	1	19	ON	C16	08	43	437592	11010000110110011101001000000	25079
				OFF	C16	09	29	438038	11010000110111110110111110000	25080
128	2	1	28	ON	C17	30	08	442877	11010011001011100010001001000	25081
				OFF	C17	31	25	442954	11010011001101111000100010000	25082
129	7	1	21	ON	C18	56	13	448042	11010101101001001010000010000	25083
				OFF	C18	57	16	448105	11010101101011000101000101000	25084
129	7	2	21	ON	C18	57	59	448148	11010101101100011001000100000	25085
				OFF	C18	58	58	448207	11010101101110001100010011000	25086
132	3	1	29	ON	C23	35	10	464779	11011101100111111011011111000	25087
				OFF	C23	36	21	464850	11011101101010000110001010000	25088
132	3	2	42	ON	C23	49	55	465664	11011110000010111100000000000	25089
				OFF	C23	51	52	465781	11011110000110100000100001000	25090
133	3	1	42	ON	C01	09	30	470439	11100000010100101010001011000	25091
				OFF	C01	11	12	470541	11100000010111110001011001000	25092
133	3	2	24	ON	C01	21	10	471139	11100000101010000001010111000	25093
				OFF	C01	22	21	471210	11100000101100001100000010000	25094
134	7	1	67	ON	C02	38	29	475778	11100010110111100101111010000	25095
				OFF	C02	41	10	475939	11100010111100100000010111000	25096
135	7	1	18	ON	C03	57	01	480490	11100101000111011001000010000	25097
				OFF	C03	57	51	480540	11100101001000111010101100000	25098
135	7	2	73	ON	C04	06	46	481075	11100101011001001111100111000	25099
				OFF	C04	09	44	481253	111001010111101010101010001000	25100
136	6	0	12	ON	C05	11	08	484937	11100111001111000110100101000	25101
				OFF	C05	11	54	484983	11100111010000100000011011000	25102
136	6	1	60	ON	C05	37	25	486514	11100111111111001110101010000	25103
				OFF	C05	39	50	486659	11101000000011101001110111000	25104