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12 PAGES  
(NOT INCLUDING PEST)



CORONA J FLIGHT DATA BOOK

SYSTEM NO. J-26

VEHICLE NO. 1618

MISSION NO. 1028-1

CAMERA NOS. 176/177

DATE 12-29-65

1028-~~1~~

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Declassified and Released by the N R O

In Accordance with E. O. 12958

on NOV 26 1997

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SYSTEM NO. J-26  
VEHICLE NO. 1610  
MISSION NO. 1028-1  
CAMERA NOS. 176/177

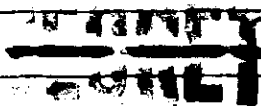
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SYSTEM NO. J-26  
VEHICLE NO. 1618  
MISSION NO. 1828-1  
CAMERA NOS. 176/177



GENERAL FLIGHT DATA

MASTER CAMERA SERIAL NO. 176

SLAVE CAMERA SERIAL NO. 177

S/I -1 SERIAL NO. D77/91/97

S/I -2 SERIAL NO. D74/76/95

LAUNCH DATE 12-24-65

REACTIVATION DATE N/A

REACTIVATION ORBIT NO. N/A

ORBITAL PARAMETERS (REV. 42)

PERIOD 98.775 MIN.

ECCENTRICITY 0.82828

PERIGEE 97.655 NM

PERIGEE LAT. 28.442 DEG. N

APOGEE 243.588 NM

INCL. ANGLE 88.816 DEG.

RECOVERY ORBIT NO. 81

RECOVERY DATE 12-29-65



SYSTEM NO. J-26  
VEHICLE NO. 1618  
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CAMERA NOS. 176/177

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FLIGHT LENS SETTINGS AND FILM TYPES

LENS SETTINGS

PANORAMIC CAMERA SETTINGS	CAMERA NO. 176		CAMERA NO. 177	
PANORAMIC OPTICS SLIT WIDTH	8.258	IN	8.175	IN
PANORAMIC OPTICS FILTER TYPE	WRATTEN 25		WRATTEN 21	
HORIZON OPTICS EXP. TIME	1/188	SEC.	1/188	SEC.
HORIZON OPTICS APERTURE	F/6.3	SUPPLY	F/8.8	SUPPLY
HORIZON OPTICS APERTURE	F/8.8	TAKE-UP	F/6.3	TAKE-UP
HORIZON OPTICS FILTER TYPE	WRATTEN 25		WRATTEN 25	

STELLAR INDEX CAMERA SETTINGS

	D77/91/97		D74/76/95	
	STELLAR	INDEX	STELLAR	INDEX
EXPOSURE TIME	2.8	SEC	2.8	SEC
APERTURE SETTING	F/1.8		F/1.8	
FILTER TYPE	NONE		NONE	

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

FILM

PANORAMIC CAMERAS	CAMERA NO. 176		CAMERA NO. 177	
TYPE	4484		4484	
LENGTH	16888	FT.	16888	FT.
SPLICES	7		6	
EMUL. DATA	233-3-4/1-12		233-1-12-5	

STELLAR/INDEX CAMERAS

	D77/91/97		D74/76/95	
	STELLAR	INDEX	STELLAR	INDEX
TYPE	4481	4488	4481	4488
EMUL. DATA	124-35-18-5	186-14-8-5	124-35-18-5	186-14-

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SYSTEM NO. J-26  
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MISSION NO. 1028-1  
CAMERA NOS. 176/177

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LENS DATA SUMMARY MASTER CAMERA NO. 176

LENS SERIAL NO. 1772435  
EQUIVALENT OPERATIONAL FOCAL LENGTH 689.628 MM

RESOLUTION

STATIC	BENCH TEST	LINES/MM	FILM TYPE	TARGET CONTRAST
		256	3484	HIGH
		149	3484	LOW
DYNAMIC		283	3484	HIGH
		131	3484	LOW
	AP	188	3484	HIGH
		189	3484	LOW

NOTE

RESOLUTION OF 283 LINES/MM REPORTED IN

DISTORTION - POSITIVE (PINCUSHION)

ANGLE OFF AXIS-DEG.	3	2	1	0	359	358	357
MILLIMETERS	0.005	0.002	0.000	0.000	0.000	0.002	0.004

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SYSTEM NO. J-26  
 VEHICLE NO. 1618  
 MISSION NO. 1828-1  
 CAMERA NOS. 176/177

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LENS DATA SUMMARY (HORIZON CAMERAS FOR MASTER CAMERA NO. 176)

	TAKE-UP	SUPPLY
LENS SERIAL NO.	816635	12838
OPERATIONAL FOCAL LENGTH	54.38 MM	55.88 MM
RADIAL DISTORTION		
18 DEG. OFF AXIS	0.828 MM	0.818 MM
28 DEG. OFF AXIS	0.848 MM	0.848 MM
TANGENTIAL DISTORTION (MAXIMUM VECTOR)	0.825 MM	0.838 MM

RESOLUTION

ANGLE OFF AXIS-DEG.	0	5	10	15	20	25	27.5	30
TAKE-UP (RADIAL)	187	186	163	143	125	126	-8	26
(TANGENTIAL)	166	164	144	109	88	61	-8	35
SUPPLY (RADIAL)	209	208	206	178	165	135	-8	46
(TANGENTIAL)	187	174	171	138	118	96	-8	62

DYNAMIC (ZERO DEG)

TAKE-UP -8 LINES/MM  
 SUPPLY -8 LINES/MM

NOTE

1. DISTORTION AND RESOLUTION ARE READ AT EQUIVALENT OPERATIONAL FOCAL LENGTH.
2. RESOLUTION IN LINES PER MM ON 3484 FILM AND HIGH CONTRAST TARGET.

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SYSTEM NO. J-26  
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MISSION NO. 1828-1  
CAMERA NOS. 176/177



LENS DATA SUMMARY SLAVE CAMERA NO. 177

LENS SERIAL NO. 1752435  
EQUIVALENT OPERATIONAL FOCAL LENGTH 689.682 MM

RESOLUTION

STATIC	BENCH TEST	LINES/MM	FILM TYPE	TARGET CONTRAST
		257	3484	HIGH
		146	3484	LOW

DYNAMIC

BOSTON	285	3484	HIGH
	134	3484	LOW
AP	186	3484	HIGH
	114	3484	LOW

NOTE BOSTON RESOLUTION OF 285 LINES/MM REPORTED IN 

DISTORTION - POSITIVE (PINCUSHION)

ANGLE OFF AXIS-DEG.	3	2	1	0	359	358	357
MILLIMETERS	0.004	0.003	0.001	0.000	0.001	0.002	0.005

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SYSTEM NO. J-26  
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MISSION NO. 1828-1  
CAMERA NOS. 176/177

LENS DATA SUMMARY (HORIZON CAMERAS FOR SLAVE CAMERA NO. 177)

	TAKE-UP	SUPPLY
LENS SERIAL NO.	816637	12865
OPERATIONAL FOCAL LENGTH	54.68 MM	54.83 MM
RADIAL DISTORTION		
18 DEG. OFF AXIS	0.818 MM	0.828 MM
28 DEG. OFF AXIS	0.838 MM	0.858 MM
TANGENTIAL DISTORTION (MAXIMUM VECTOR)	0.838 MM	0.818 MM

RESOLUTION

ANGLE OFF AXIS-DEG.	0	5	10	15	20	25	27.5	30
TAKE-UP (RADIAL)	289	186	154	135	132	126	-8	18
(TANGENTIAL)	187	164	145	116	88	66	-8	35
SUPPLY (RADIAL)	289	288	286	178	166	142	-8	35
(TANGENTIAL)	187	174	171	138	123	96	-8	62

DYNAMIC (ZERO DEG)

TAKE-UP -8 LINES/MM  
SUPPLY -8 LINES/MM

NOTE

1. DISTORTION AND RESOLUTION ARE READ AT EQUIVALENT OPERATIONAL FOCAL LENGTH.
2. RESOLUTION IN LINES PER MM ON 3484 FILM AND HIGH CONTRAST TARGET.



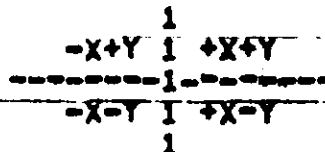
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 VEHICLE NO. 1618  
 MISSION NO. 1828-1  
 CAMERA NOS. 176/177

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FORMAT DIMENSIONS AND CALIBRATIONS

	F CAMERA NO. 176	A CAMERA NO. 177
A	76.148	76.138
B	354.928	355.898
C	789.968	718.138
D	56.476	56.422
E	56.436	56.454
XT	8.155	8.828
YT	-8.839	-8.258
X5	-8.488	-8.764
Y5	-8.866	8.829
XV0	8.179	-8.319
YV0	1.894	2.869
DTX	8.149	8.818
DTY	1.961	1.758
DSX	-8.478	-8.764
DSY	-2.866	-1.971
DMX	8.125	-8.265
DMY	21.894	22.869
HEIGHT	54.877	55.726
WIDTH	754.988	755.198
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



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SYSTEM NO. J-26  
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LENS DATA SUMMARY STELLAR INDEX D77/91/97 -1 MISSION

	STELLAR	INDEX
LENS SERIAL NO.	18655	817719
RESEAU SERIAL NO.	97	91
FILTER TYPE	NONE	WRATTEN 21
APERTURE	F/1.8	F/4.5
EXPOSURE TIME	2.8 SEC.	1/500 SEC.
EQUIVALENT FOCAL LENGTH	84 NOM.	MM 38.47 MM

RESOLUTION (INDEX)

ANGLE OFF AXIS	8	18	28	38	35
HIGH CONTRAST-R/T (3488 FILM)	83/83	96/93	187/85	85/35	88/25

AWAR 78 LINES/MM  
READ FROM 4488 FILM.

DISTORTION

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

ALIGNMENT	STELLAR	INDEX
	-0.0004 INCHES/0.937 INCHES	-0.0007 INCHES/2.25 INCH

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SYSTEM NO. J-26  
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CAMERA NOS. 176/177

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LENS DATA SUMMARY STELLAR INDEX D74/76/95 -2 MISSION

	STELLAR	INDEX
LENS SERIAL NO.	10589	819186
RESEAU SERIAL NO.	95	76
FILTER TYPE	NONE	WRATTEN 21
APERTURE	F/1.8	F/4.5
EXPOSURE TIME	2.8 SEC.	1/500 SEC.
EQUIVALENT FOCAL LENGTH	84 NOM.	MM 38.52 MM

RESOLUTION (INDEX)

ANGLE OFF AXIS	0	10	20	30	35
HIGH CONTRAST-R/T (3400 FILM)	84/84	84/84	104/83	98/38	88/28

AWAR 72 LINES/MM  
READ FROM 4400 FILM.

DISTORTION

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

ALIGNMENT	STELLAR	INDEX
	0.0010 INCHES/0.937 INCHES	-0.0006 INCHES/2.25 INCH

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SYSTEM NO. J-26  
VEHICLE NO. 1618  
MISSION NO. 1828-1  
CAMERA NOS. 176/177

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CYCLE PERIOD DATA

V/H RAMP SETTING LEVEL AMPLITUDE	TIME UP RAMP-SEC	---CALIBRATED---		---IN-FLIGHT---		ORBIT CYCLE PERIOD-SEC NO.
		MASTER	SLAVE	MASTER	SLAVE	
8 2	82	5.568	5.538	5.448	5.394	9
8 2	1688	2.232	2.236	2.278	2.258	16
8 2	1678	2.234	2.238	2.268	2.245	31
8 2	1775	2.228	2.231	2.247	2.237	47
8 2	1787	2.227	2.238	2.235	2.248	63

NOTE

A -8 OR \* INDICATE NO DATA AVAILABLE.

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- A. 1828-1
- J. DRY
- C. FINAL PERFORMANCE ESTIMATE, PART ONE

OPERATIONS SUMMARY

FWD PAN CAMERA NUMBER 176  
 OPN NO FRA Q LAT LONG HEIGHT RANGE DA H M S LTIM S-TIM  
 PRE-FLT 118

1	4	0	13	ON	2	64	36	156	27W	788333	888948	24	22	33	1	12	7	81181
				OFF	2	62	8	154	19W	763688	791587	24	22	33	41	1216		81221
5	3	1	65	ON	2	46	49	121	52E	669698	694114	25	4	48	57	1248		16857
				OFF	2	36	23	124	34E	628831	658889	25	4	43	34	13	1	17814
6	9	1	188	ON	2	51	43	97	15E	692285	717561	25	6	18	32	1239		22232
				OFF	2	34	19	182	8E	628349	642918	25	6	14	54	13	3	22494
6	9	2	89	ON	2	29	42	182	59E	688425	638548	25	6	16	3	13	8	22563
				OFF	2	16	28	184	57E	592775	614312	25	6	19	19	1319		22759
7	1	1	15	ON	1	26	38	81	17W	1345938	1396644	25	7	16	3	158		26163
				OFF	1	31	46	88	26W	1318298	1367986	25	7	17	25	155		26245
7	1	2	216	ON	2	63	46	67	8E	762293	798222	25	7	38	13	12	6	27493
				OFF	2	28	24	88	21E	684615	626595	25	7	47	12	13	8	28832
8	5	1	83	ON	2	49	45	52	17E	678624	783385	25	9	12	48	1241		33168
				OFF	2	36	28	55	59E	624348	647868	25	9	16	8	1259		33368
9	7	0	9	ON	1	39	17	124	37W	1269885	1317562	25	18	21	2	2	2	37262
				OFF	1	42	12	123	55W	1251738	1298686	25	18	21	49	2	6	37389
9	7	1	32	ON	2	31	38	34	6E	689278	631433	25	18	48	3	13	4	38883
				OFF	2	26	22	34	58E	599885	628775	25	18	49	19	13	9	38959
9	7	2	38	ON	2	15	35	36	29E	591125	612688	25	18	51	59	1317		39119
				OFF	2	18	57	37	4E	593618	615186	25	18	53	7	1321		39187
14	2	1	28	ON	2	29	47	79	52W	684764	626758	25	18	22	32	13	3	66152
				OFF	2	26	36	79	28W	599217	628995	25	18	23	19	13	5	66199
16	2	8	15	ON	2	33	17	126	13W	611848	634898	25	21	23	17	1258		76997
				OFF	2	38	49	125	46W	686246	628287	25	21	23	54	13	8	77834
17	1	1	17	ON	3	16	58	142	29W	698399	715682	25	23	6	27	1336		83187
				OFF	3	19	54	142	5W	787858	733721	25	23	7	13	1338		83233
19	1	1	77	ON	2	63	45	152	52E	746869	773382	26	1	47	57	1159		6477
				OFF	2	58	27	168	37E	672286	696725	26	1	51	24	1233		6684
28	1	1	115	ON	2	63	44	138	1E	744762	772825	26	3	18	45	1158		11925
				OFF	2	44	26	139	44E	645448	668951	26	3	23	43	1242		12223
21	6	1	19	ON	2	52	34	114	3E	688664	785582	26	4	52	28	1228		17548
				OFF	2	49	22	115	18E	665533	689888	26	4	53	17	1234		17597
21	6	2	64	ON	2	41	34	117	48E	634117	657283	26	4	55	15	1245		17715
				OFF	2	31	24	119	58E	685938	627968	26	4	57	47	1257		17867
22	1	1	86	ON	2	63	41	84	22E	741998	769156	26	6	28	22	1157		22822
				OFF	2	48	51	92	38E	662389	686538	26	6	24	13	1234		23853
22	1	2	152	ON	2	43	8	94	24E	639171	662447	26	6	25	39	1243		23139
				OFF	2	28	8	98	46E	593872	614619	26	6	31	24	13	6	23484
23	4	1	66	ON	2	63	39	61	33E	748531	767633	26	7	51	11	1157		28271
				OFF	2	52	21	68	26E	677889	782539	26	7	54	8	1227		28448
23	4	2	33	ON	2	48	48	72	11E	629926	652855	26	7	57	4	1245		28624

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	OFF	2	35	32	73	20E	614778	637139	26	7	58	21	1251	28781				
17	5	8	5	ON	1	21	36	179	8W	1339148	1389581	26	13	38	54	134	48654	
	OFF	1	23	12	178	55W	1338617	1388717	26	13	31	28	135	48688				
27	5	1	59	ON	2	17	49	15	11W	593674	615244	26	14	5	54	13	5	58754
	OFF	2	8	41	14	2W	683257	625186	26	14	8	9	1311	58889				
29	5	8	5	ON	1	21	37	135	8E	1335856	1386165	26	16	32	29	133	59549	
	OFF	1	23	11	135	22E	1327459	1377433	26	16	32	55	134	59575				
31	5	1	22	ON	2	33	45	189	6W	687555	629645	26	28	5	7	1248	72387	
	OFF	2	38	11	188	27W	681884	622932	26	28	6	8	1252	72368				
36	6	1	51	ON	2	58	31	132	6E	658191	682182	27	3	34	51	1223	12891	
	OFF	2	42	19	134	42E	627712	658558	27	3	36	55	1235	13815				
36	9	2	52	ON	3	29	4	145	6E	798866	819849	27	3	54	33	1334	14873	
	OFF	3	39	52	147	15E	874821	986216	27	3	57	16	1346	14236				
38	1	1	62	ON	2	68	46	81	4E	786228	732831	27	6	33	46	1158	23626	
	OFF	2	58	25	86	26E	656193	688189	27	6	36	26	1222	23786				
38	1	2	99	ON	2	42	39	88	55E	627633	658476	27	6	38	23	1234	23983	
	OFF	2	27	31	92	2E	596452	618127	27	6	42	9	1258	24129				
39	9	1	49	ON	2	59	39	58	59E	699117	724652	27	8	4	58	12	8	29898
	OFF	2	51	25	63	12E	659688	683653	27	8	6	57	1219	29217				
39	9	2	25	ON	2	47	36	64	35E	644288	667666	27	8	7	55	1226	29275	
	OFF	2	43	38	65	58E	629782	652785	27	8	8	57	1232	29337				
39	9	3	38	ON	2	48	37	66	35E	628999	643593	27	8	9	48	1236	29388	
	OFF	2	36	8	67	38E	689418	631578	27	8	18	49	1241	29449				
41	5	1	63	ON	2	54	46	16	2E	672843	697387	27	11	7	38	1211	48858	
	OFF	2	44	32	19	58E	631936	654943	27	11	18	14	1229	48214				
41	5	2	48	ON	2	9	54	25	54E	686872	628185	27	11	18	48	13	2	48728
	OFF	2	2	38	26	45E	624728	647461	27	11	28	35	13	7	48835			
45	5	1	42	ON	3	31	48	68	2W	821889	852887	27	17	32	11	1332	63131	
	OFF	3	48	45	58	9W	893845	926882	27	17	34	26	1341	63266				
46	5	1	28	ON	2	39	37	93	5W	614938	637385	27	18	45	18	1232	67518	
	OFF	2	36	28	92	23W	687792	629891	27	18	46	5	1236	67565				
46	5	2	48	ON	2	18	45	89	26W	595586	617228	27	18	58	28	1252	67828	
	OFF	2	12	34	88	38W	682987	624985	27	18	51	59	1257	67919				
47	7	8	16	ON	2	33	18	114	34W	681633	623581	27	28	17	48	1239	73868	
	OFF	2	38	48	114	6W	598384	628848	27	28	18	17	1241	73897				
50	6	1	38	ON	2	63	38	164	37E	788741	734639	28	8	42	14	1148	2534	
	OFF	2	58	27	168	26E	681828	786718	28	8	43	36	1157	2616				
52	6	1	26	ON	2	53	41	125	14E	658367	682365	28	3	46	28	12	7	13588
	OFF	2	49	28	126	57E	641888	665183	28	3	47	24	1215	13644				
52	6	2	63	ON	2	46	39	127	54E	632846	655855	28	3	48	7	1219	13687	
	OFF	2	37	2	138	25E	686818	628872	28	3	58	31	1232	13831				
53	4	1	74	ON	2	62	47	96	49E	788818	726488	28	5	14	44	1142	18884	
	OFF	2	58	37	183	41E	645345	668853	28	5	17	53	1212	19873				
53	4	2	27	ON	2	37	46	187	25E	687928	638823	28	5	21	6	1238	19266	
	OFF	2	33	41	188	15E	688914	622756	28	5	22	7	1235	19327				
53	4	3	41	ON	2	22	58	118	4E	594516	616118	28	5	24	47	1245	19487	
	OFF	2	16	43	118	55E	599837	628888	28	5	26	17	1249	19577				
54	8	2	75	ON	2	59	41	76	16E	683983	788864	28	6	46	18	1151	24378	
	OFF	2	47	33	81	55E	633766	656839	28	6	49	24	1217	24564				
54	8	3	54	ON	2	35	39	85	1E	683782	625648	28	6	52	23	1232	24743	
	OFF	2	27	36	86	29E	595836	616657	28	6	54	23	1248	24863				



14	2	1	28	ON	2	38	48	88	4W	684764	626758	25	18	22	32	13	2	66152
				OFF	2	27	27	79	32W	599217	628995	25	18	23	19	13	8	66199
16	2	8	15	ON	2	34	18	126	26W	611848	634898	25	21	23	17	1257		76997
				OFF	2	31	41	125	58W	686246	628287	25	21	23	54	1259		77834
17	1	1	18	ON	3	15	58	142	41W	698399	715682	25	23	6	27	1338		83187
				OFF	3	18	53	142	17W	787858	733721	25	23	7	13	1338		83233
19	1	1	78	ON	2	64	46	151	51E	746869	773382	26	1	47	57	1155		6477
				OFF	2	51	24	168	11E	672286	696723	26	1	51	24	1232		6684
28	1	1	116	ON	2	64	45	129	1E	744762	772825	26	3	18	45	1154		11925
				OFF	2	45	22	139	25E	645448	668951	26	3	23	43	1241		12223
21	6	1	19	ON	2	53	31	113	34E	688664	785582	26	4	52	26	1226		17548
				OFF	2	58	19	114	54E	665533	689888	26	4	53	17	1232		17597
21	6	2	66	ON	2	42	28	117	22E	634117	657283	26	4	55	15	1244		17715
				OFF	2	32	16	119	38E	685938	627968	26	4	57	47	1256		17867
22	1	1	87	ON	2	64	41	83	21E	741998	769156	26	6	28	22	1153		22822
				OFF	2	49	47	92	14E	662389	686538	26	6	24	13	1233		23853
22	1	2	154	ON	2	44	3	94	5E	639171	662447	26	6	25	39	1242		23139
				OFF	2	28	51	98	36E	593872	614619	26	6	31	24	13	5	23484
23	4	1	66	ON	2	64	39	68	33E	748531	767633	26	7	51	11	1153		28271
				OFF	2	53	18	67	58E	677889	782539	26	7	54	8	1226		28448
23	4	2	33	ON	2	41	34	71	54E	629926	652855	26	7	57	4	1244		28624
				OFF	2	36	25	73	6E	614778	637139	26	7	58	21	1258		28781
27	5	8	5	ON	1	19	39	179	32W	1339148	1389581	26	13	38	54	132		48654
				OFF	1	21	17	179	19W	1338617	1388717	26	13	31	28	134		48688
27	5	1	59	ON	2	18	48	15	21W	593674	615244	26	14	9	54	13	4	58754
				OFF	2	9	34	14	12W	683257	625186	26	14	8	9	1311		58889
29	5	8	5	ON	1	19	41	134	45E	1335856	1386165	26	16	32	29	131		59549
				OFF	1	21	16	134	58E	1327459	1377433	26	16	32	55	132		59575
31	5	1	23	ON	2	34	37	189	28W	687555	629645	26	28	5	7	1247		72387
				OFF	2	31	3	188	39W	681884	622932	26	28	6	8	1251		72368
36	6	1	52	ON	2	51	26	131	41E	658191	682182	27	3	34	51	1221		12891
				OFF	2	43	12	134	24E	627712	658558	27	3	36	55	1234		13815
36	9	2	53	ON	3	27	56	144	58E	798866	819849	27	3	54	33	1333		14873
				OFF	3	38	37	146	53E	874821	986216	27	3	57	16	1344		14236
38	1	1	62	ON	2	61	44	88	17E	786228	732831	27	6	33	46	1154		23626
				OFF	2	51	21	86	1E	656193	688189	27	6	36	26	1228		23786
38	1	2	121	ON	2	43	33	88	37E	627633	658476	27	6	38	23	1232		23983
				OFF	2	28	23	91	58E	596452	618127	27	6	42	9	1249		24129
39	9	1	58	ON	2	68	37	58	16E	699117	724652	27	8	4	58	1157		29898
				OFF	2	52	21	62	45E	659688	683653	27	8	6	57	1218		29217
39	9	2	26	ON	2	48	31	64	13E	644288	667666	27	8	7	55	1224		29275
				OFF	2	44	24	65	31E	629782	652785	27	8	8	57	1231		29337
39	9	3	38	ON	2	41	31	66	18E	628999	643593	27	8	9	48	1234		29388
				OFF	2	36	53	67	23E	689418	631578	27	8	18	49	1248		29449
41	5	1	64	ON	2	55	43	15	38E	672843	697387	27	11	7	38	12	9	48858
				OFF	2	45	26	19	31E	631938	654943	27	11	18	14	1228		48214
41	5	2	48	ON	2	18	46	25	44E	686872	628185	27	11	18	48	13	1	48728
				OFF	2	3	32	26	35E	624728	647461	27	11	28	35	13	6	48835
45	5	1	42	ON	3	38	37	68	19W	821889	852887	27	17	32	11	1338		63131
				OFF	3	39	28	58	32W	893845	926882	27	17	34	26	1348		63266
46	5	1	28	ON	2	48	38	93	21W	614938	637385	27	18	45	18	1231		67518



# PHOTO MULTI

	OFF	2	37	28	92	37W	687792	629891	27	18	46	5	1235	67565				
6	5	2	48	ON	2	19	36	89	36W	595586	617228	27	18	58	28	1252	67828	
	OFF	2	13	26	88	48W	682987	624985	27	18	51	59	1256	67919				
47	7	8	16	ON	2	34	2	114	47W	681633	623581	27	28	17	48	1238	73868	
	OFF	2	31	32	114	19W	598384	628848	27	28	18	17	1241	73897				
58	6	1	31	ON	2	64	36	163	48E	788741	734639	28	8	42	14	1136	2534	
	OFF	2	59	24	167	46E	681828	786718	28	8	43	36	1154	2616				
52	6	1	26	ON	2	54	36	124	48E	658367	682365	28	3	46	28	12	5	13588
	OFF	2	58	22	126	33E	641888	665183	28	3	47	24	1213	13644				
52	6	2	63	ON	2	47	33	127	33E	632846	655855	28	3	48	7	1218	13687	
	OFF	2	37	54	138	18E	686818	628872	28	3	58	31	1231	13831				
53	4	1	74	ON	2	63	44	95	56E	788818	726488	28	5	14	44	1138	18884	
	OFF	2	51	31	183	16E	643345	668853	28	5	17	53	1218	19873				
53	4	2	27	ON	2	38	38	187	18E	687928	638823	28	5	21	6	1229	19266	
	OFF	2	34	33	188	2E	688914	622756	28	5	22	7	1234	19327				
53	4	3	41	ON	2	23	41	189	53E	594516	616118	28	5	24	47	1244	19487	
	OFF	2	17	35	118	45E	599837	628888	28	5	26	17	1249	19577				
54	8	2	75	ON	2	68	38	75	34E	683983	788864	28	6	46	18	1148	24378	
	OFF	2	48	27	81	34E	633766	656839	28	6	49	24	1215	24564				
54	8	3	54	ON	2	36	31	84	47E	683782	625648	28	6	52	23	1231	24743	
	OFF	2	28	27	86	18E	595836	616657	28	6	54	23	1239	24863				
55	4	1	81	ON	2	68	13	53	1E	688888	785735	28	8	17	18	1149	29838	
	OFF	2	47	28	59	3E	629948	652878	28	8	28	24	1216	38824				
57	2	1	45	ON	2	53	41	18	8E	658748	682752	28	11	19	58	1159	48798	
	OFF	2	48	28	13	2E	631948	654953	28	11	21	39	1213	48899				
63	2	1	17	ON	2	36	37	128	48W	681598	623456	28	28	29	5	1225	73745	
	OFF	2	33	58	128	15W	598333	628878	28	28	29	44	1228	73784				
57	2	1	46	ON	2	55	37	141	38E	658823	674538	29	2	27	17	1153	8837	
	OFF	2	48	25	144	39E	626197	648986	29	2	29	6	12	7	8946			
68	8	1	93	ON	2	55	38	118	47E	658283	673894	29	3	58	1	1153	14281	
	OFF	2	48	25	124	7E	686736	628796	29	4	1	58	1218	14518				
66	8	2	31	ON	3	9	58	131	23E	788187	734862	29	4	14	19	1259	15259	
	OFF	3	15	25	132	3E	741748	768895	29	4	15	41	13	3	15341			
69	6	1	98	ON	2	64	38	89	39E	689231	714392	29	5	26	25	1125	19585	
	OFF	2	58	26	98	14E	631489	654394	29	5	38	4	12	3	19884			
69	6	2	53	ON	2	43	38	188	29E	612784	634987	29	5	31	48	1213	19988	
	OFF	2	35	23	182	25E	599383	621884	29	5	33	49	1223	28829				
69	6	3	46	ON	2	26	29	184	1E	595757	617485	29	5	36	1	1232	28161	
	OFF	2	19	27	185	2E	681584	623458	29	5	37	45	1237	28265				
78	6	1	15	ON	1	25	1	81	9W	1235479	1281787	29	6	35	15	118	23715	
	OFF	1	29	36	88	25W	1286896	1252871	29	6	36	27	114	23787				
71	2	1	36	ON	2	61	35	46	35E	672951	697499	29	8	28	41	1135	38521	
	OFF	2	55	22	58	24E	647273	678854	29	8	38	17	1151	38617				
71	2	2	28	ON	2	58	3	52	42E	629224	652127	29	8	31	38	12	2	38698
	OFF	2	46	55	53	47E	628384	642872	29	8	32	25	12	7	38745			

### PHOTOGRAPHIC SUMMARY

FWD PAN CAMERA NO 176 8.2588 SLIT W/25 FILTER 3484 FILM  
 OPN NO FKA FEET ET S-EL S-DIR EV FULL INT PRI  
 PRE-FLT 118 291.8

1 4 8	13	34.4	ON 286	2.8	26.1	11.54	9.95	9.35	8.75
			OFF 211	4.4	26.1	11.58	18.36	9.76	9.16
5 3 1	65	171.9	ON 242	18.9	26.7	11.77	11.78	11.18	18.58
			OFF 257	28.4	28.8	11.86	11.95	11.35	18.75
6 9 1	188	285.7	ON 227	14.4	25.9	11.68	11.45	18.85	18.25
			OFF 258	38.3	29.2	11.86	11.98	11.38	18.78
6 9 2	89	235.4	ON 263	34.4	38.6	11.89	12.82	11.42	18.82
			OFF 272	45.7	36.9	11.94	12.89	11.49	18.89
7 1 1	15	39.7	ON 186	-64.6	77.7	18.58	8.88	8.88	8.88
			OFF 186	-63.8	67.6	18.58	8.88	8.88	8.88
7 1 2	216	571.3	ON 199	2.8	25.2	11.49	18.18	9.58	8.98
			OFF 265	35.6	38.9	11.98	12.83	11.43	18.83
8 5 1	83	219.5	ON 232	16.3	25.8	11.71	11.57	18.97	18.37
			OFF 255	28.5	28.3	11.85	11.95	11.35	18.75
9 7 8	9	23.8	ON 186	-59.5	55.8	18.58	8.88	8.88	8.88
			OFF 186	-57.7	51.1	18.59	8.88	8.88	8.88
9 7 1	32	84.6	ON 262	33.8	29.5	11.89	12.81	11.41	18.81
			OFF 267	37.5	31.4	11.91	12.85	11.45	18.85
9 7 2	38	79.3	ON 272	46.6	36.9	11.94	12.18	11.58	18.98
			OFF 272	58.3	48.2	11.94	12.18	11.58	18.98
14 2 1	28	52.9	ON 265	34.7	29.2	11.98	12.83	11.43	18.83
			OFF 268	37.5	38.4	11.92	12.85	11.45	18.85
16 2 8	15	39.7	ON 262	31.6	27.8	11.88	12.88	11.48	18.88
			OFF 264	33.9	28.5	11.98	12.82	11.42	18.82
17 1 1	17	45.8	ON 248	66.5	88.3	11.76	12.18	11.58	18.98
			OFF 234	66.8	87.5	11.72	12.18	11.58	18.98
'9 1 1	77	283.7	ON 285	2.9	23.4	11.53	18.11	9.51	8.91
			OFF 235	15.8	24.8	11.73	11.54	18.94	18.34
28 1 1	115	384.2	ON 285	2.9	23.3	11.53	18.11	9.51	8.91
			OFF 246	21.5	24.7	11.88	11.79	11.19	18.59
21 6 1	19	58.3	ON 231	13.8	23.5	11.71	11.41	18.81	18.21
			OFF 237	16.8	23.8	11.74	11.68	11.88	18.48
21 6 2	64	169.3	ON 252	24.2	25.8	11.83	11.87	11.27	18.67
			OFF 264	33.5	27.5	11.98	12.82	11.42	18.82
22 1 1	86	227.5	ON 287	2.9	23.8	11.55	18.12	9.52	8.92
			OFF 248	17.4	23.7	11.76	11.63	11.83	18.43
22 1 2	152	482.8	ON 251	22.7	24.6	11.82	11.83	11.23	18.63
			OFF 273	43.7	31.9	11.95	12.89	11.49	18.89
23 4 1	66	174.6	ON 288	3.8	22.8	11.55	18.13	9.53	8.93
			OFF 233	14.8	23.2	11.72	11.43	18.83	18.23
23 4 2	33	87.3	ON 255	25.1	24.9	11.85	11.89	11.29	18.69
			OFF 262	29.8	26.8	11.88	11.97	11.37	18.77
27 5 8	5	13.2	ON 186	-68.2	88.5	18.59	8.88	8.88	8.88
			OFF 186	-68.1	84.4	18.59	8.88	8.88	8.88
27 5 1	59	156.1	ON 274	45.9	32.1	11.95	12.18	11.58	18.98
			OFF 271	53.5	38.4	11.94	12.18	11.58	18.98
29 5 8	5	13.2	ON 186	-68.5	88.4	18.59	8.88	8.88	8.88
			OFF 186	-68.4	84.3	18.59	8.88	8.88	8.88
31 5 1	22	58.2	ON 266	31.8	25.1	11.91	12.88	11.48	18.88
			OFF 269	35.8	26.1	11.92	12.83	11.43	18.83

36	6	1	51	134.9	ON 242	16.8	21.4	11.77	11.55	10.95	10.55
					OFF 256	23.8	22.5	11.85	11.86	11.26	10.66
36	9	2	52	137.5	ON 208	68.1	111.8	11.55	12.18	11.58	10.98
					OFF 184	62.3	131.6	11.38	12.18	11.58	10.98
38	1	1	62	164.8	ON 221	5.9	28.5	11.64	10.59	9.99	9.39
					OFF 243	16.1	21.1	11.78	11.56	10.96	10.36
38	1	2	99	261.9	ON 256	23.6	22.1	11.85	11.85	11.25	10.65
					OFF 271	37.8	25.8	11.94	12.85	11.45	10.85
39	9	1	49	129.6	ON 225	7.8	28.4	11.66	10.74	10.14	9.54
					OFF 242	15.1	28.9	11.77	11.58	10.98	10.38
39	9	2	25	66.1	ON 249	18.8	21.2	11.81	11.69	11.89	10.49
					OFF 255	22.8	21.8	11.85	11.83	11.23	10.63
39	9	3	38	79.3	ON 268	25.5	22.3	11.87	11.98	11.38	10.78
					OFF 265	29.9	23.2	11.98	11.97	11.37	10.77
41	5	1	63	166.6	ON 236	11.9	28.3	11.74	11.26	10.66	10.86
					OFF 254	21.8	21.3	11.84	11.88	11.28	10.68
41	5	2	48	127.8	ON 271	53.5	34.4	11.93	12.18	11.58	10.98
					OFF 264	59.4	41.2	11.98	12.18	11.58	10.98
45	5	1	42	111.1	ON 197	68.2	118.9	11.48	12.18	11.58	10.98
					OFF 188	62.6	134.9	11.34	12.18	11.58	10.98
46	5	1	28	52.9	ON 263	26.6	21.3	11.89	11.92	11.32	10.72
					OFF 266	29.6	21.9	11.91	11.97	11.37	10.77
46	5	2	43	185.8	ON 274	46.1	27.8	11.95	12.18	11.58	10.98
					OFF 272	51.6	31.3	11.94	12.18	11.58	10.98
47	7	8	16	42.3	ON 269	32.8	22.5	11.93	12.81	11.41	10.81
					OFF 271	35.1	23.2	11.93	12.83	11.43	10.83
50	6	1	38	79.3	ON 220	3.8	18.8	11.63	10.13	9.53	8.93
					OFF 231	8.2	18.8	11.71	10.89	10.29	9.69
52	6	1	26	68.8	ON 242	13.8	18.7	11.77	11.35	10.75	10.15
					OFF 258	17.2	19.8	11.82	11.62	11.82	10.42
52	6	2	63	166.6	ON 255	19.9	19.3	11.85	11.74	11.14	10.54
					OFF 267	29.2	28.8	11.91	11.96	11.36	10.76
53	4	1	74	195.7	ON 224	3.8	18.3	11.66	10.28	9.68	9.08
					OFF 248	16.8	18.8	11.81	11.55	10.95	10.35
53	4	2	27	71.4	ON 266	28.5	28.5	11.91	11.95	11.35	10.75
					OFF 278	32.4	21.3	11.93	12.88	11.48	10.88
53	4	3	41	188.4	ON 274	42.7	24.6	11.95	12.88	11.48	10.88
					OFF 273	48.3	27.4	11.95	12.18	11.58	10.98
54	8	2	75	198.4	ON 238	7.8	18.2	11.78	10.74	10.14	9.54
					OFF 252	19.1	18.9	11.83	11.78	11.18	10.58
54	8	3	54	142.8	ON 267	38.6	28.7	11.91	11.98	11.38	10.78
					OFF 272	38.2	22.8	11.94	12.86	11.46	10.86
55	4	1	88	211.6	ON 231	7.4	18.8	11.71	10.79	10.19	9.59
					OFF 254	28.8	18.8	11.84	11.74	11.14	10.54
57	2	1	45	119.8	ON 241	12.8	17.9	11.77	11.27	10.67	10.07
					OFF 253	19.1	18.4	11.84	11.78	11.18	10.58
63	2	1	17	45.8	ON 268	38.7	19.2	11.92	11.98	11.38	10.78
					OFF 278	33.2	19.7	11.93	12.81	11.41	10.81
67	2	1	46	121.7	ON 245	12.8	16.3	11.79	11.27	10.67	10.07
					OFF 256	19.2	16.9	11.85	11.71	11.11	10.51
68	8	1	97	256.6	ON 245	12.8	16.2	11.79	11.27	10.67	10.07

			OFF 266	27.1	17.7	11.91	11.93	11.33	10.73
58 8 2	31	82.8	ON 233	71.4	57.2	11.72	12.18	11.58	10.98
			OFF 221	73.7	73.4	11.64	12.18	11.58	10.98
69 6 1	98	238.8	ON 248	2.8	15.9	11.76	10.18	9.58	8.98
			OFF 262	17.2	16.4	11.89	11.62	11.82	10.42
69 6 2	53	148.2	ON 269	24.1	17.1	11.93	11.87	11.27	10.67
			OFF 274	32.8	18.4	11.95	12.88	11.48	10.88
69 6 3	46	121.7	ON 274	48.5	20.6	11.95	12.87	11.47	10.87
			OFF 271	47.2	23.1	11.93	12.18	11.58	10.98
78 6 1	15	39.7	ON 124	-73.6	78.2	10.81	0.88	0.88	0.88
			OFF 125	-71.8	57.8	10.83	0.88	0.88	0.88
71 2 1	38	188.5	ON 234	6.8	15.6	11.73	10.68	10.88	9.48
			OFF 246	12.3	13.7	11.88	11.29	10.69	10.89
71 2 2	28	52.9	ON 255	17.6	16.1	11.85	11.64	11.84	10.44
			OFF 259	28.7	16.4	11.87	11.77	11.17	10.57

## PHOTOGRAPHIC SUMMARY

AFT PAN CAMERA NO 177 0.1758 SLIT W/21			FILTER			3484 FILM			
OPN NO	FRA	FEET	ET	S-EL	S-DIR	EV	FULL	INT	PRI
PRE-FLT	68	158.7							
1 4 8	13	34.4	ON 297	8.9	25.8	12.87	10.48	9.88	9.28
			OFF 385	3.4	25.2	12.18	10.85	10.25	9.65
5 3 1	66	174.6	ON 349	18.8	26.2	12.38	12.31	11.71	11.11
			OFF 378	27.6	28.3	12.38	12.59	11.99	11.39
6 9 1	109	288.3	ON 338	13.5	25.3	12.22	12.84	11.44	10.84
			OFF 374	29.5	28.7	12.48	12.62	12.82	11.42
6 9 2	98	238.8	ON 382	33.7	38.2	12.43	12.67	12.87	11.47
			OFF 394	45.8	36.3	12.47	12.74	12.14	11.54
7 1 1	15	39.7	ON 154	-65.1	81.6	11.12	0.88	0.88	0.88
			OFF 154	-63.8	78.9	11.12	0.88	0.88	0.88
7 1 2	218	576.6	ON 289	1.8	24.2	12.83	10.57	9.97	9.37
			OFF 384	34.9	38.5	12.44	12.68	12.88	11.48
8 5 1	84	222.2	ON 337	15.4	25.3	12.25	12.16	11.56	10.96
			OFF 378	27.7	27.8	12.38	12.59	11.99	11.39
9 7 8	9	23.8	ON 154	-68.7	57.2	11.12	0.88	0.88	0.88
			OFF 155	-59.8	52.9	11.13	0.88	0.88	0.88
9 7 1	33	87.3	ON 388	32.2	29.1	12.42	12.65	12.85	11.45
			OFF 387	36.7	38.9	12.45	12.69	12.89	11.49
9 7 2	38	79.3	ON 395	45.9	36.3	12.48	12.75	12.15	11.55
			OFF 394	49.6	39.5	12.47	12.75	12.15	11.55
14 2 1	28	52.9	ON 384	33.9	28.8	12.44	12.67	12.87	11.47
			OFF 388	36.8	29.9	12.45	12.69	12.89	11.49
16 2 8	15	39.7	ON 388	38.9	27.4	12.42	12.64	12.84	11.44
			OFF 383	33.1	28.1	12.43	12.66	12.86	11.46
17 1 1	18	47.6	ON 348	66.3	78.8	12.29	12.75	12.15	11.55
			OFF 348	66.8	85.1	12.26	12.75	12.15	11.55
19 1 1	78	286.3	ON 297	1.8	22.4	12.87	10.58	9.98	9.38
			OFF 348	14.9	23.5	12.26	12.13	11.53	10.93
28 1 1	116	386.8	ON 298	1.9	22.3	12.87	10.58	9.98	9.38

			OFF 357	28.6	24.2	12.33	12.41	11.81	11.21		
21	6	1	19	58.3	ON 336	12.9	23.8	12.24	11.99	11.39	10.79
			OFF 344	16.8	23.4	12.28	12.28	11.68	11.88		
21	6	2	66	174.6	ON 365	23.4	24.6	12.36	12.58	11.98	11.38
			OFF 384	32.8	27.1	12.44	12.66	12.86	11.46		
22	1	1	87	238.1	ON 388	1.9	22.8	12.88	18.59	9.99	9.39
			OFF 348	16.5	23.3	12.29	12.23	11.63	11.83		
22	1	2	154	487.3	ON 363	21.9	24.1	12.36	12.46	11.86	11.26
			OFF 395	43.8	31.3	12.48	12.73	12.13	11.53		
23	4	1	66	174.6	ON 381	2.8	21.8	12.89	18.68	18.88	9.48
			OFF 338	13.1	22.7	12.25	12.81	11.41	10.81		
23	4	2	33	87.3	ON 369	24.2	24.4	12.38	12.52	11.92	11.32
			OFF 379	29.8	25.6	12.42	12.61	12.81	11.41		
27	5	8	5	13.2	ON 154	-68.3	93.3	11.12	8.88	8.88	8.88
			OFF 154	-68.3	89.1	11.12	8.88	8.88	8.88		
27	5	1	59	156.1	ON 396	45.2	31.5	12.48	12.74	12.14	11.54
			OFF 393	52.8	37.6	12.47	12.75	12.15	11.55		
29	5	8	5	13.2	ON 154	-68.6	93.3	11.12	8.88	8.88	8.88
			OFF 154	-68.6	89.1	11.12	8.88	8.88	8.88		
31	5	1	23	68.8	ON 385	38.9	24.7	12.44	12.64	12.84	11.44
			OFF 389	34.3	25.7	12.46	12.67	12.87	11.47		
36	6	1	52	137.5	ON 351	15.1	28.9	12.31	12.15	11.55	10.95
			OFF 378	23.8	22.1	12.38	12.49	11.89	11.29		
36	9	2	53	148.2	ON 388	68.6	188.5	12.88	12.75	12.15	11.55
			OFF 267	63.2	138.8	11.91	12.75	12.15	11.55		
38	1	1	62	164.8	ON 321	4.9	19.8	12.18	11.18	10.58	9.98
			OFF 352	15.2	28.6	12.31	12.15	11.55	10.95		
38	1	2	181	267.1	ON 371	22.7	21.7	12.39	12.48	11.88	11.28
			OFF 393	37.8	25.3	12.47	12.78	12.18	11.58		
39	9	1	58	132.3	ON 323	6.8	19.7	12.19	11.26	10.66	10.86
			OFF 347	14.2	28.4	12.29	12.89	11.49	10.89		
39	9	2	26	68.8	ON 358	17.9	28.8	12.33	12.38	11.78	11.18
			OFF 367	21.9	21.4	12.37	12.46	11.86	11.26		
39	9	3	38	79.3	ON 373	24.7	21.9	12.48	12.53	11.93	11.33
			OFF 381	29.1	22.8	12.42	12.61	12.81	11.41		
41	5	1	64	169.3	ON 339	18.9	19.7	12.26	11.83	11.23	10.63
			OFF 365	28.9	28.9	12.37	12.43	11.83	11.23		
41	5	2	48	127.8	ON 389	52.8	33.6	12.45	12.75	12.15	11.55
			OFF 388	58.7	48.1	12.42	12.75	12.15	11.55		
45	5	1	42	111.1	ON 284	68.8	116.4	12.88	12.75	12.15	11.55
			OFF 258	63.5	133.4	11.87	12.75	12.15	11.55		
46	5	1	28	52.9	ON 377	25.8	28.9	12.41	12.56	11.96	11.36
			OFF 382	28.8	21.5	12.43	12.61	12.81	11.41		
46	5	2	48	185.8	ON 393	45.3	27.3	12.47	12.74	12.14	11.54
			OFF 391	58.8	38.7	12.46	12.75	12.15	11.55		
47	7	8	16	42.3	ON 387	32.8	22.1	12.45	12.65	12.85	11.45
			OFF 389	34.3	22.8	12.46	12.67	12.87	11.47		
52	6	1	31	82.8	ON 316	2.8	17.8	12.16	18.68	18.88	9.48
			OFF 333	7.3	18.1	12.23	11.43	10.83	10.23		
52	6	1	26	68.8	ON 348	12.1	18.2	12.38	11.93	11.33	10.73
			OFF 359	16.3	18.6	12.34	12.22	11.62	11.82		

52	6	2	63	166.6	ON 366	19.8	18.9	12.37	12.35	11.75	11.15
					OFF 383	25.4	28.4	12.43	12.68	12.88	11.48
53	4	1	74	195.7	ON 321	2.8	17.4	12.18	18.76	18.16	9.56
					OFF 357	15.1	18.3	12.33	12.15	11.55	18.95
53	4	2	27	71.4	ON 383	27.7	28.1	12.43	12.59	11.99	11.39
					OFF 387	31.6	21.8	12.45	12.65	12.85	11.45
53	4	3	41	188.4	ON 394	41.9	24.2	12.47	12.73	12.13	11.53
					OFF 392	47.5	26.8	12.47	12.75	12.15	11.55
54	8	2	75	198.4	ON 338	6.8	17.3	12.22	11.26	18.66	18.86
					OFF 363	18.2	18.5	12.35	12.31	11.71	11.11
54	8	3	54	142.8	ON 384	29.8	28.4	12.44	12.62	12.82	11.42
					OFF 398	37.4	22.4	12.46	12.78	12.18	11.58
55	4	1	81	214.2	ON 332	6.5	17.3	12.23	11.32	18.72	18.12
					OFF 365	19.1	18.4	12.36	12.36	11.76	11.16
57	2	1	45	119.8	ON 346	11.8	17.3	12.29	11.83	11.23	18.63
					OFF 364	18.2	18.8	12.36	12.32	11.72	11.12
63	2	1	17	45.8	ON 385	29.8	18.8	12.44	12.62	12.82	11.42
					OFF 388	32.4	19.4	12.45	12.65	12.85	11.45
67	2	1	46	121.7	ON 351	11.1	15.8	12.31	11.84	11.24	18.64
					OFF 368	18.3	16.4	12.37	12.32	11.72	11.12
68	8	1	98	259.2	ON 352	11.1	15.7	12.31	11.84	11.24	18.64
					OFF 382	26.2	17.3	12.43	12.56	11.96	11.36
68	8	2	31	82.8	ON 334	78.8	54.6	12.24	12.75	12.15	11.55
					OFF 318	73.4	69.8	12.17	12.75	12.15	11.55
69	6	1	98	238.8	ON 345	1.8	15.8	12.28	18.57	9.97	9.37
					OFF 376	16.3	15.9	12.41	12.22	11.62	11.82
69	6	2	53	148.2	ON 387	23.2	16.7	12.45	12.49	11.89	11.29
					OFF 393	31.1	18.8	12.47	12.64	12.84	11.44
69	6	3	46	121.7	ON 393	39.7	28.2	12.47	12.72	12.12	11.52
					OFF 389	46.4	22.6	12.46	12.75	12.15	11.55
78	6	1	15	39.7	ON 179	-74.2	76.8	11.33	8.88	8.88	8.88
					OFF 181	-72.5	61.3	11.35	8.88	8.88	8.88
71	2	1	38	188.5	ON 337	5.8	14.9	12.25	11.11	18.51	9.91
					OFF 353	11.4	15.2	12.32	11.86	11.26	18.66
71	2	2	28	52.9	ON 366	16.7	15.7	12.37	12.24	11.64	11.84
					OFF 372	19.8	16.8	12.39	12.39	11.79	11.19

STELLAR-INDEX SUMMARY

CAMERA DATA	ET	FILM	FILTER	GRID	ASSEMBLY NO	D77
STELLAR	2.8	3481	NONE	91		
INDEX	1/588	3488	W/21	97		

PERFORMANCE SUMMARY

OPN NO	FR	STEL FEET	INDX FEET	H	M	S	0	ON LAT	ON LONG	OFF LAT	OFF LONG	SEC DUR	
PRE-FLT	15	1.48	2.97										
1	4	8.28	8.48	22	33	1	2	64	136W	2	62	134W	48
5	3	8.89	1.78	4	48	57	2	46	121E	2	36	124E	157
6	9	1.58	3.17	6	18	32	2	51	97E	2	34	182E	262

**SECRET**

6	9	2	13	1.29	2.57	6	16	3	2	29	102E	2	16	104E	196
7	1	1	2	0.20	0.40	7	16	3	1	26	81W	1	31	80W	82
7	1	2	31	3.07	6.14	7	30	13	2	63	67E	2	28	80E	539
8	5	1	11	1.09	2.18	9	12	40	2	49	52E	2	36	55E	200
9	7	0	2	0.20	0.40	10	21	2	1	39	124W	1	42	123W	47
9	7	1	4	0.40	0.79	10	40	3	2	31	34E	2	26	34E	76
9	7	2	5	0.50	0.99	10	51	59	2	15	36E	2	18	37E	60
14	2	1	2	0.20	0.40	10	22	32	2	29	79W	2	26	79W	47
16	2	0	3	0.30	0.59	21	23	17	2	33	126W	2	30	125W	37
17	1	1	2	0.20	0.40	23	6	27	3	16	142W	3	19	142W	46
19	1	1	11	1.09	2.18	1	47	57	2	63	132E	2	50	130E	207
20	1	1	16	1.50	3.17	3	10	45	2	63	130E	2	44	139E	290
21	6	1	3	0.30	0.59	4	52	20	2	52	114E	2	49	115E	49
21	6	2	9	0.09	1.70	4	55	15	2	41	117E	2	31	119E	152
22	1	1	13	1.29	2.57	6	20	22	2	63	04E	2	40	02E	231
22	1	2	21	2.00	4.16	6	25	39	2	43	94E	2	20	98E	345
23	4	1	10	0.99	1.98	7	51	11	2	63	61E	2	52	60E	177
23	4	2	4	0.40	0.79	7	57	4	2	40	72E	2	35	73E	77
27	5	0	1	0.10	0.20	13	30	54	1	21	179W	1	23	170W	26
27	5	1	9	0.09	1.70	14	5	54	2	17	15W	2	8	14W	135
31	5	1	3	0.30	0.59	20	5	7	2	33	109W	2	30	100W	53
36	6	1	0	0.79	1.58	3	34	51	2	50	132E	2	42	134E	124
36	9	2	7	0.69	1.39	3	54	33	3	29	145E	3	39	147E	163
36	1	1	9	0.09	1.70	6	33	46	2	60	01E	2	50	06E	160
38	1	2	14	1.39	2.77	6	30	23	2	42	00E	2	27	02E	226
39	9	1	7	0.69	1.39	0	4	50	2	59	50E	2	51	63E	127
39	9	2	4	0.40	0.79	0	7	55	2	47	64E	2	43	65E	62
39	9	3	4	0.40	0.79	0	9	40	2	40	66E	2	36	67E	69
41	5	1	9	0.09	1.70	11	7	30	2	54	16E	2	44	19E	156
41	5	2	7	0.69	1.39	11	10	40	2	9	25E	2	2	26E	107
45	5	1	6	0.59	1.19	17	32	11	3	31	60W	3	40	50W	135
46	5	1	3	0.30	0.59	10	45	10	2	39	93W	2	36	92W	47
46	5	2	5	0.50	0.99	10	50	20	2	10	09W	2	12	00W	91
47	7	0	3	0.30	0.59	20	17	40	2	33	114W	2	30	114W	37
50	6	1	4	0.40	0.79	0	42	14	2	63	164E	2	50	160E	02
52	6	1	4	0.40	0.79	3	46	20	2	53	125E	2	49	126E	64
52	6	2	9	0.09	1.70	3	40	7	2	46	127E	2	37	130E	144
53	4	1	12	0.99	1.98	5	14	44	2	62	96E	2	50	103E	109
53	4	2	4	0.40	0.79	5	21	6	2	37	107E	2	33	100E	61
53	4	3	6	0.59	1.19	5	24	47	2	22	110E	2	16	110E	90
54	0	2	11	1.09	2.18	0	46	10	2	59	76E	2	47	01E	100
54	0	3	7	0.69	1.39	6	52	23	2	35	05E	2	27	06E	120
55	4	1	12	1.19	2.30	0	17	10	2	59	53E	2	46	59E	194
57	2	1	6	0.59	1.19	11	19	50	2	54	10E	2	47	13E	109
63	2	1	3	0.30	0.59	20	29	5	2	35	120W	2	33	120W	39
67	2	1	0	0.59	1.19	2	27	17	2	54	142E	2	47	145E	109
68	0	1	14	1.39	2.77	3	50	1	2	54	119E	2	39	124E	229
68	0	2	5	0.50	0.99	4	14	19	3	10	131E	3	16	132E	02
69	6	1	12	1.19	2.30	5	25	25	2	63	90E	2	49	90E	219
69	6	2	0	0.79	1.58	5	31	40	2	42	100E	2	34	102E	121
69	6	3	7	0.69	1.39	5	36	1	2	25	104E	2	10	105E	104

70	6	1	2	0.28	0.48	6	35	15	1	26	88W	1	31	88W	72
71	2	1	5	0.50	0.99	8	28	41	2	68	47E	2	54	58E	96
71	2	2	3	0.38	0.59	8	31	38	2	49	53E	2	46	54E	47

NOTE -

- 1) TM DATA INDICATE NORMAL SYSTEM PERFORMANCE.
- 2) THE LAST 5 FRAMES OF OPN 71-2-2 WILL BE RETURNED IN THE SECOND CAPSULE.



A. 1828-1

DRY

C. FINAL PERFORMANCE ESTIMATE, PART TWO

RATE ESTIMATE

FWD PAN CAMERA NUMBER 176

OPN NO	FR	R	A	TUR/ DUR	INST CPS	INST ANG VEL	SCAN RATE R/SEC I/SEC	PCT CALIB	RATE RECD		
1 4 8	13	8	3	ON	1197	0.3422	0.02888	2.158	51.61	-1.2	-8.9
				OFF	48	0.3588	0.02968	2.284	52.98	-1.2	-8.7
5 3 1	65	8	3	ON	1488	0.4826	0.03397	2.529	68.78	-1.2	-1.8
				OFF	157	0.4262	0.03596	2.678	64.27	-1.2	-2.1
6 9 1	188	8	2	ON	1348	0.3776	0.03186	2.372	56.94	-2.5	-3.9
				OFF	262	0.4281	0.03612	2.698	64.55	-2.5	-3.8
6 9 2	89	8	2	ON	1679	0.4376	0.03693	2.758	65.99	-2.5	-2.8
				OFF	196	0.4513	0.03888	2.836	68.86	-2.5	-2.5
7 1 1	15	8	2	ON	8	0.1768	0.01485	1.186	26.55	-2.5	-7.5
				OFF	82	0.1768	0.01485	1.186	26.55	-2.5	-18.8
7 1 2	216	8	2	ON	1162	0.3318	0.02793	2.888	49.92	-2.5	-7.8
				OFF	539	0.4397	0.03718	2.763	66.38	-2.5	-3.8
8 5 1	63	8	2	ON	1383	0.3856	0.03254	2.423	58.15	-2.5	-3.9
				OFF	288	0.4239	0.03577	2.663	63.92	-2.5	-3.3
9 7 8	9	8	2	ON	39	0.1763	0.01487	1.188	26.58	-2.5	-14.7
				OFF	47	0.1778	0.01494	1.112	26.69	-2.5	-16.8
9 7 1	32	8	2	ON	1668	0.4353	0.03673	2.735	65.64	-2.5	-3.2
				OFF	76	0.4432	0.03748	2.785	66.84	-2.5	-3.2
9 7 2	38	8	2	ON	1895	0.4518	0.03812	2.839	68.12	-2.5	-2.7
				OFF	68	0.4515	0.03818	2.837	68.88	-2.5	-2.3
14 2 1	28	8	2	ON	1781	0.4421	0.03713	2.765	66.36	-2.5	-2.9
				OFF	47	0.4443	0.03749	2.792	67.88	-2.5	-2.9
16 2 8	15	8	2	ON	1654	0.4346	0.03667	2.731	65.54	-2.5	-2.9
				OFF	37	0.4386	0.03781	2.756	66.15	-2.5	-3.8
17 1 1	17	8	2	ON	2399	0.3982	0.03368	2.582	68.84	-2.5	1.2
				OFF	46	0.3898	0.03282	2.444	58.66	-2.5	1.6
19 1 1	77	8	2	ON	1197	0.3483	0.02871	2.138	51.32	-2.5	-6.5
				OFF	287	0.3898	0.03289	2.449	58.78	-2.5	-3.9
28 1 1	115	8	2	ON	1288	0.3418	0.02877	2.142	51.42	-2.5	-6.5
				OFF	298	0.4898	0.03451	2.578	61.68	-2.5	-3.4
21 6 1	19	8	2	ON	1377	0.3843	0.03243	2.415	57.95	-2.5	-4.8
				OFF	49	0.3944	0.03327	2.478	59.47	-2.5	-3.8
21 6 2	64	8	2	ON	1544	0.4179	0.03526	2.626	63.82	-2.5	-3.1
				OFF	152	0.4391	0.03785	2.759	66.22	-2.5	-2.9
22 1 1	80	8	2	ON	1285	0.3444	0.02986	2.164	51.94	-1.9	-5.8
				OFF	231	0.3989	0.03366	2.586	68.15	-1.9	-3.1
22 1 2	152	8	2	ON	1522	0.4166	0.03515	2.617	62.82	-1.9	-2.5
				OFF	345	0.4538	0.03829	2.851	68.43	-1.9	-1.8
23 4 1	66	8	2	ON	1288	0.3452	0.02913	2.169	52.86	-1.9	-5.8
				OFF	177	0.3877	0.03271	2.436	58.46	-1.9	-3.5
23 4 2	33	8	2	ON	1562	0.4235	0.03573	2.661	63.86	-1.9	-2.4

				OFF	77	8.4347	8.83668	2.731	65.58	-1.9	-2.4	
7	5	8	5	8	2 ON	8	8.1771	8.81494	1.113	26.71	-1.9	-7.4
				OFF	26	8.1771	8.81494	1.113	26.71	-1.9	-8.2	
27	5	1	59	8	2 ON	1914	8.4546	8.83836	2.856	68.55	-1.9	-1.5
				OFF	135	8.4586	8.83882	2.831	67.95	-1.9	-8.7	
29	5	8	5	8	2 ON	8	8.1771	8.81494	1.113	26.71	-1.9	-7.7
				OFF	26	8.1771	8.81494	1.113	26.71	-1.9	-8.5	
31	5	1	22	8	2 ON	1689	8.4413	8.83724	2.773	66.55	-1.9	-2.1
				OFF	53	8.4464	8.83767	2.885	67.32	-1.9	-2.1	
36	6	1	51	8	2 ON	1458	8.4824	8.83396	2.528	68.68	-1.9	-2.9
				OFF	124	8.4249	8.83585	2.678	64.87	-1.9	-2.5	
36	9	2	52	8	2 ON	2632	8.3449	8.82918	2.167	52.88	-1.9	1.3
				OFF	163	8.3861	8.82582	1.923	46.15	-1.9	8.3	
38	1	1	62	8	2 ON	1299	8.3688	8.83185	2.312	55.58	-1.9	-4.4
				OFF	168	8.4836	8.83485	2.536	68.86	-1.9	-2.9	
38	1	2	99	8	2 ON	1576	8.4258	8.83593	2.675	64.21	-1.9	-2.3
				OFF	226	8.4589	8.83885	2.833	68.88	-1.9	-1.9	
39	9	1	49	8	2 ON	1318	8.3733	8.83158	2.346	56.29	-1.8	-4.8
				OFF	127	8.4814	8.83387	2.522	68.53	-1.8	-2.9	
39	9	2	25	8	2 ON	1583	8.4136	8.83498	2.599	62.36	-1.8	-2.4
				OFF	62	8.4248	8.83578	2.664	63.94	-1.8	-2.3	
39	9	3	38	8	2 ON	1688	8.4314	8.83648	2.718	65.85	-1.8	-2.1
				OFF	69	8.4482	8.83714	2.766	66.38	-1.8	-2.8	
41	5	1	63	8	2 ON	1488	8.3922	8.83389	2.464	59.14	-1.8	-3.1
				OFF	156	8.4224	8.83564	2.654	63.69	-1.8	-2.4	
41	5	2	48	8	2 ON	2878	8.4495	8.83793	2.824	67.78	-1.8	-8.5
				OFF	187	8.4391	8.83785	2.759	66.21	-1.8	8.4	
5	5	1	42	8	2 ON	2698	8.3279	8.82767	2.868	49.45	-1.8	8.6
				OFF	135	8.2987	8.82521	1.877	43.85	-1.8	8.3	
46	5	1	28	8	2 ON	1642	8.4361	8.83688	2.748	65.77	-1.8	-2.8
				OFF	47	8.4416	8.83726	2.775	68.59	-1.8	-2.8	
46	5	2	48	8	2 ON	1952	8.4549	8.83838	2.858	68.59	-1.8	-1.1
				OFF	91	8.4515	8.83889	2.837	68.88	-1.8	-8.6	
47	7	8	16	8	2 ON	1741	8.4471	8.83773	2.889	67.43	-1.8	-1.8
				OFF	37	8.4499	8.83796	2.827	67.84	-1.8	-1.8	
50	6	1	38	8	2 ON	1287	8.3656	8.83885	2.297	55.13	-1.8	-4.7
				OFF	82	8.3845	8.83244	2.416	57.98	-1.8	-3.7	
52	6	1	20	8	2 ON	1449	8.4828	8.83399	2.531	68.74	-1.8	-2.8
				OFF	64	8.4148	8.83588	2.687	62.56	-1.8	-2.5	
52	6	2	63	8	2 ON	1556	8.4238	8.83569	2.658	63.78	-1.8	-2.2
				OFF	144	8.4428	8.83736	2.782	66.77	-1.8	-1.9	
53	4	1	74	8	2 ON	1311	8.3714	8.83134	2.334	56.81	-1.8	-4.3
				OFF	189	8.4122	8.83478	2.598	62.15	-1.8	-2.6	
53	4	2	27	8	2 ON	1692	8.4423	8.83732	2.779	66.78	-1.8	-1.8
				OFF	61	8.4479	8.83788	2.815	67.55	-1.8	-1.8	
53	4	3	41	8	2 ON	1914	8.4551	8.83848	2.868	68.63	-1.8	-1.3
				OFF	98	8.4535	8.83826	2.849	68.38	-1.8	-8.8	
54	8	2	75	8	2 ON	1363	8.3828	8.83223	2.488	57.68	-2.3	-4.1
				OFF	186	8.4193	8.83538	2.634	63.22	-2.3	-2.8	
54	8	3	54	8	2 ON	1727	8.4438	8.83745	2.788	66.92	-2.3	-2.2
				OFF	128	8.4516	8.83818	2.837	68.89	-2.3	-2.8	

55	4	1	88	8	2	ON	1372	0.3842	0.03242	2.414	57.93	-2.3	-4.8
						OFF	194	0.4223	0.03563	2.653	63.67	-2.3	-2.7
57	2	1	45	8	2	ON	1447	0.4884	0.03379	2.516	68.38	-2.3	-3.3
						OFF	189	0.4285	0.03548	2.642	63.41	-2.3	-2.8
63	2	1	17	8	2	ON	1758	0.4458	0.03762	2.881	67.23	-2.3	-2.1
						OFF	39	0.4486	0.03785	2.818	67.64	-2.3	-2.1
67	2	1	46	8	2	ON	1476	0.4864	0.03429	2.554	61.28	-2.3	-3.1
						OFF	189	0.4253	0.03589	2.672	64.14	-2.3	-2.6
68	8	1	97	8	2	ON	1479	0.4869	0.03433	2.557	61.36	-2.3	-3.1
						OFF	229	0.4415	0.03726	2.774	66.58	-2.3	-2.2
68	8	2	31	8	2	ON	2456	0.3865	0.03261	2.429	58.28	-2.3	1.8
						OFF	82	0.3688	0.03185	2.312	55.58	-2.3	1.1
69	6	1	98	7	3	ON	1482	0.3994	0.03378	2.589	68.23	-2.3	1.3
						OFF	219	0.4354	0.03674	2.736	65.66	-2.3	8.6
69	6	2	53	7	3	ON	1725	0.4471	0.03773	2.689	67.42	-2.3	8.1
						OFF	121	0.4543	0.03833	2.854	68.51	-2.3	-8.6
69	6	3	46	7	3	ON	1978	0.4549	0.03838	2.858	68.59	-2.3	-1.1
						OFF	184	0.4499	0.03796	2.827	67.84	-2.3	-1.2
70	6	1	15	7	3	ON	98	0.2865	0.01743	1.298	31.15	-2.3	-8.8
						OFF	72	0.2887	0.01761	1.312	31.48	-2.3	-2.4
71	2	1	38	8	2	ON	1396	0.3894	0.03286	2.447	58.72	-2.3	-3.9
						OFF	96	0.4888	0.03449	2.568	61.64	-2.3	-3.1
71	2	2	28	8	2	ON	1572	0.4237	0.03575	2.662	63.89	-2.3	-2.5
						OFF	47	0.4385	0.03632	2.785	64.92	-2.3	-2.4

**RATE ESTIMATE**

T PAN CAMERA NUMBER 177

OPN NO	FR	R	A	TUR/ DUR	INST CPS	INST ANG VEL	SCAN R/SEC	RATE I/SEC	PCT CALIB	RATE REQD			
1	4	8	13	8	3	ON	1197	0.3454	0.02914	2.178	52.88	-8.7	8.8
						OFF	48	0.3548	0.02987	2.224	53.39	-8.7	8.2
5	3	1	66	8	3	ON	1488	0.4861	0.03427	2.552	61.24	-8.7	-8.1
						OFF	157	0.4299	0.03628	2.781	64.83	-8.7	-1.2
6	9	1	189	8	2	ON	1348	0.3833	0.03234	2.488	57.88	-1.4	-2.4
						OFF	262	0.4343	0.03666	2.738	65.52	-1.4	-1.5
6	9	2	94	8	2	ON	1679	0.4441	0.03747	2.791	66.97	-1.4	-1.3
						OFF	196	0.4588	0.03865	2.878	69.87	-1.4	-1.8
7	1	1	15	8	2	ON	8	0.1791	0.01511	1.125	27.81	-1.4	-5.7
						OFF	82	0.1791	0.01511	1.125	27.81	-1.4	-8.2
7	1	2	218	8	2	ON	1162	0.3361	0.02836	2.112	58.69	-1.4	-5.3
						OFF	539	0.4462	0.03765	2.884	67.29	-1.4	-1.5
8	5	1	64	8	2	ON	1383	0.3914	0.03383	2.459	59.83	-1.4	-2.4
						OFF	288	0.4382	0.03638	2.783	64.88	-1.4	-1.8
9	7	8	9	8	2	ON	39	0.1793	0.01513	1.127	27.84	-1.4	-12.7
						OFF	47	0.1881	0.01528	1.132	27.18	-1.4	-14.1
9	7	1	33	8	2	ON	1668	0.4417	0.03727	2.776	66.61	-1.4	-1.7
						OFF	76	0.4498	0.03795	2.826	67.83	-1.4	-1.7
9	7	2	38	8	2	ON	1895	0.4585	0.03868	2.881	69.13	-1.4	-1.2
						OFF	68	0.4582	0.03866	2.879	69.89	-1.4	-8.8

14	2	1	28	8	2 ON	1781	8.4466	8.83768	2.886	67.34	-1.4	-1.4
					OFF	47	8.4589	8.83885	2.833	68.88	-1.4	-1.4
16	2	8	15	8	2 ON	1654	8.4411	8.83722	2.771	66.51	-1.4	-1.4
					OFF	37	8.4452	8.83756	2.797	67.13	-1.4	-1.5
17	1	1	18	8	2 ON	2399	8.4841	8.83418	2.539	68.94	-1.4	2.7
					OFF	46	8.3949	8.83332	2.481	59.53	-1.4	3.8
19	1	1	76	8	2 ON	1197	8.3455	8.82915	2.171	52.18	-1.4	-4.9
					OFF	287	8.3957	8.83339	2.486	59.66	-1.4	-2.3
20	1	1	116	8	2 ON	1288	8.3462	8.82921	2.175	52.28	-1.4	-4.8
					OFF	298	8.4151	8.83583	2.688	62.68	-1.4	-1.8
21	6	1	19	8	2 ON	1377	8.3981	8.83292	2.451	58.83	-1.4	-2.4
					OFF	49	8.4883	8.83378	2.515	68.36	-1.4	-2.2
21	6	2	66	8	2 ON	1544	8.4241	8.83579	2.665	63.96	-1.4	-1.6
					OFF	152	8.4457	8.83768	2.888	67.28	-1.4	-1.4
22	1	1	87	8	2 ON	1285	8.3489	8.82944	2.192	52.61	-1.8	-4.5
					OFF	231	8.4839	8.83488	2.538	68.91	-1.8	-1.8
22	1	2	154	8	2 ON	1522	8.4218	8.83559	2.658	63.68	-1.8	-1.3
					OFF	345	8.4594	8.83876	2.887	69.28	-1.8	-8.6
23	4	1	66	8	2 ON	1288	8.3496	8.82958	2.197	52.73	-1.8	-4.4
					OFF	177	8.3926	8.83312	2.467	59.28	-1.8	-2.2
23	4	2	33	8	2 ON	1562	8.4287	8.83617	2.694	64.65	-1.8	-1.2
					OFF	77	8.4481	8.83713	2.765	66.36	-1.8	-1.1
27	5	e	5	8	2 ON	8	8.1797	8.81517	1.129	27.18	-1.8	-5.9
					OFF	26	8.1797	8.81517	1.129	27.18	-1.8	-6.6
27	5	1	59	8	2 ON	1914	8.4682	8.83883	2.892	69.48	-1.8	-8.3
					OFF	135	8.4562	8.83849	2.866	68.79	-1.8	8.5
29	5	8	5	8	2 ON	8	8.1797	8.81517	1.129	27.18	-1.8	-6.2
					OFF	26	8.1797	8.81517	1.129	27.18	-1.8	-6.9
1	5	1	23	8	2 ON	1689	8.4468	8.83778	2.887	67.38	-1.8	-8.9
					OFF	53	8.4519	8.83813	2.848	68.15	-1.8	-8.8
36	6	1	52	8	2 ON	1458	8.4875	8.83438	2.568	61.44	-1.8	-1.6
					OFF	124	8.4382	8.83638	2.783	64.87	-1.8	-1.2
36	9	2	53	8	2 ON	2632	8.3493	8.82947	2.195	52.67	-1.8	2.6
					OFF	163	8.3181	8.82616	1.948	46.76	-1.8	1.6
38	1	1	62	8	2 ON	1299	8.3727	8.83145	2.342	56.28	-1.8	-3.1
					OFF	168	8.4886	8.83446	2.568	61.62	-1.8	-1.7
38	1	2	181	8	2 ON	1576	8.4311	8.83637	2.789	65.88	-1.8	-1.8
					OFF	226	8.4565	8.83852	2.868	68.83	-1.8	-8.6
39	9	1	58	8	2 ON	1318	8.3753	8.83167	2.358	56.68	-1.6	-3.3
					OFF	127	8.4835	8.83485	2.535	68.85	-1.6	-2.4
39	9	2	26	8	2 ON	1583	8.4157	8.83588	2.612	62.69	-1.6	-1.9
					OFF	62	8.4262	8.83597	2.678	64.28	-1.6	-1.8
39	9	3	38	8	2 ON	1688	8.4336	8.83639	2.724	65.39	-1.6	-1.6
					OFF	69	8.4425	8.83733	2.788	66.72	-1.6	-1.5
41	5	1	64	8	2 ON	1488	8.3943	8.83327	2.477	59.46	-1.6	-2.6
					OFF	156	8.4246	8.83583	2.668	64.82	-1.6	-1.8
41	5	2	46	8	2 ON	2878	8.4518	8.83812	2.839	68.13	-1.6	8.1
					OFF	187	8.4414	8.83724	2.773	66.55	-1.6	8.9
45	5	1	42	8	2 ON	2698	8.3298	8.82783	2.872	49.73	-1.6	1.1
					OFF	135	8.3885	8.82536	1.888	45.32	-1.6	8.9
46	5	1	28	8	2 ON	1642	8.4384	8.83699	2.754	66.11	-1.6	-1.5

				OFF	47	0.4439	0.03745	2.789	66.93	-1.6	-1.8	
5	2	48	8	2 ON	1952	0.4572	0.03858	2.873	68.94	-1.6	-2.6	
				OFF	91	0.4538	0.03829	2.851	68.43	-1.6	-2.8	
47	7	16	8	2 ON	1741	0.4494	0.03792	2.824	67.77	-1.6	-1.3	
				OFF	37	0.4522	0.03815	2.841	68.19	-1.6	-1.3	
58	6	1	31	8	2 ON	1287	0.3676	0.03182	2.318	55.44	-1.6	-4.1
				OFF	82	0.3865	0.03261	2.429	58.29	-1.6	-3.2	
52	6	1	26	8	2 ON	1449	0.4849	0.03417	2.544	61.86	-1.6	-2.2
				OFF	64	0.4178	0.03519	2.628	62.88	-1.6	-2.8	
52	6	2	63	8	2 ON	1556	0.4252	0.03588	2.672	64.12	-1.6	-1.7
				OFF	144	0.4451	0.03755	2.796	67.12	-1.6	-1.4	
53	4	1	74	8	2 ON	1311	0.3734	0.03151	2.346	56.31	-1.6	-3.7
				OFF	189	0.4143	0.03496	2.683	62.48	-1.6	-2.8	
53	4	2	27	8	2 ON	1692	0.4446	0.03751	2.793	67.84	-1.6	-1.3
				OFF	61	0.4582	0.03799	2.829	67.89	-1.6	-1.2	
53	4	3	41	8	2 ON	1914	0.4575	0.03868	2.874	68.98	-1.6	-2.8
				OFF	98	0.4558	0.03846	2.864	68.73	-1.6	-2.3	
54	8	2	75	8	2 ON	1363	0.3839	0.03239	2.412	57.89	-2.1	-3.6
				OFF	186	0.4213	0.03555	2.647	63.53	-2.1	-2.3	
54	8	3	54	8	2 ON	1727	0.4459	0.03762	2.882	67.24	-2.1	-1.7
				OFF	128	0.4537	0.03828	2.851	68.41	-2.1	-1.5	
55	4	1	61	8	2 ON	1372	0.3861	0.03258	2.426	58.22	-2.1	-3.5
				OFF	194	0.4243	0.03588	2.666	63.98	-2.1	-2.2	
57	2	1	45	8	2 ON	1447	0.4824	0.03395	2.528	68.68	-2.1	-2.8
				OFF	189	0.4225	0.03565	2.655	63.72	-2.1	-2.3	
63	2	1	17	8	2 ON	1758	0.4479	0.03788	2.814	67.55	-2.1	-1.6
				OFF	39	0.4587	0.03883	2.832	67.96	-2.1	-1.6	
7	2	1	46	8	2 ON	1476	0.4884	0.03446	2.566	61.58	-2.1	-2.6
				OFF	189	0.4274	0.03686	2.685	64.45	-2.1	-2.1	
68	8	1	98	8	2 ON	1479	0.4889	0.03458	2.569	61.66	-2.1	-2.6
				OFF	229	0.4436	0.03743	2.787	66.98	-2.1	-1.7	
68	8	2	31	8	2 ON	2456	0.3884	0.03277	2.441	58.57	-2.1	1.5
				OFF	82	0.3699	0.03121	2.324	55.78	-2.1	1.6	
69	6	1	98	7	3 ON	1482	0.4813	0.03386	2.522	68.52	-2.1	1.8
				OFF	219	0.4375	0.03692	2.749	65.97	-2.1	1.1	
69	6	2	53	7	3 ON	1725	0.4492	0.03798	2.823	67.74	-2.1	0.6
				OFF	121	0.4564	0.03851	2.868	68.83	-2.1	-2.2	
69	6	3	46	7	3 ON	1978	0.4578	0.03856	2.871	68.91	-2.1	-2.6
				OFF	184	0.4528	0.03814	2.848	68.16	-2.1	-2.7	
70	6	1	15	7	3 ON	98	0.2879	0.01754	1.386	31.38	-2.1	-2.2
				OFF	72	0.2181	0.01773	1.328	31.68	-2.1	-1.8	
71	2	1	35	8	2 ON	1396	0.3914	0.03382	2.459	59.81	-2.1	-3.3
				OFF	96	0.4188	0.03466	2.581	61.94	-2.1	-2.6	
71	2	2	22	8	2 ON	1572	0.4258	0.03592	2.675	64.28	-2.1	-2.8
				OFF	47	0.4325	0.03658	2.718	65.23	-2.1	-1.9	

RAMP PROFILES

R= 0.3221 A= 0.1415 PERIOD= 3840

TUR	PER	CPS	ANG V
-8	5.537	0.1886	0.01633
100	5.493	0.1820	0.01647
200	5.366	0.1864	0.01686
300	5.169	0.1935	0.01750
400	4.922	0.2032	0.01838
500	4.644	0.2153	0.01948
600	4.354	0.2297	0.02077
700	4.067	0.2459	0.02224
800	3.792	0.2637	0.02385
900	3.537	0.2827	0.02557
1000	3.306	0.3025	0.02736
1100	3.097	0.3229	0.02920
1200	2.860	0.3497	0.03163
1300	2.663	0.3755	0.03397
1400	2.504	0.3994	0.03613
1500	2.376	0.4285	0.03803
1600	2.283	0.4380	0.03962
1700	2.216	0.4513	0.04082
1800	2.174	0.4599	0.04168
1900	2.150	0.4635	0.04192
2000	2.165	0.4620	0.04178
2100	2.196	0.4553	0.04110
2200	2.253	0.4439	0.04015
2300	2.337	0.4288	0.03871
2400	2.450	0.4082	0.03692
2500	2.595	0.3854	0.03486
2600	2.776	0.3602	0.03258
2700	2.997	0.3337	0.03018
2800	3.220	0.3105	0.02809
2900	3.442	0.2905	0.02628
3000	3.680	0.2712	0.02453
3100	3.955	0.2529	0.02287
3200	4.230	0.2360	0.02134
3300	4.526	0.2208	0.01997
3400	4.813	0.2078	0.01879
3500	5.075	0.1970	0.01782
3600	5.295	0.1889	0.01708
3700	5.452	0.1834	0.01659
3800	5.537	0.1800	0.01636

R= 8 A= 3 PERIOD= 3840  
R= 0.3221 A= 0.1200  
TUR PER CPS ANG V

-8	5.152	0.1941	0.01756
100	5.117	0.1954	0.01767
200	5.017	0.1993	0.01883
300	4.861	0.2057	0.01961

400	4.662	0.2145	0.01940
400	4.434	0.2255	0.02040
600	4.193	0.2385	0.02157
700	3.950	0.2532	0.02290
800	3.714	0.2693	0.02435
900	3.491	0.2864	0.02591
1000	3.286	0.3044	0.02753
1100	3.098	0.3228	0.02920
1200	2.881	0.3471	0.03139
1300	2.700	0.3704	0.03350
1400	2.551	0.3920	0.03546
1500	2.432	0.4111	0.03718
1600	2.342	0.4270	0.03862
1700	2.278	0.4390	0.03970
1800	2.230	0.4468	0.04041
1900	2.222	0.4500	0.04070
2000	2.229	0.4486	0.04057
2100	2.259	0.4426	0.04003
2200	2.313	0.4322	0.03909
2300	2.393	0.4179	0.03779
2400	2.500	0.4000	0.03610
2500	2.630	0.3793	0.03431
2600	2.804	0.3566	0.03225
2700	3.007	0.3326	0.03000
2800	3.209	0.3116	0.02819
2900	3.407	0.2935	0.02655
3000	3.623	0.2760	0.02497
3000	3.854	0.2595	0.02347
3000	4.095	0.2442	0.02200
3300	4.339	0.2305	0.02065
3400	4.573	0.2187	0.01978
3500	4.785	0.2090	0.01890
3600	4.961	0.2016	0.01823
3700	5.085	0.1967	0.01779
3800	5.146	0.1943	0.01757

R= 7 A= 3 PERIOD= 3840  
R= 0.3303 A= 0.1200  
TUR PER CPS ANG V

-0	4.755	0.2103	0.01902
100	4.720	0.2116	0.01914
200	4.640	0.2155	0.01949
300	4.506	0.2219	0.02007
400	4.334	0.2307	0.02087
500	4.137	0.2417	0.02186
600	3.926	0.2547	0.02304
700	3.712	0.2694	0.02435
800	3.503	0.2855	0.02582
900	3.304	0.3026	0.02737

1000	3.120	0.3286	0.02899
100	2.950	0.3390	0.03066
1200	2.753	0.3633	0.03286
1300	2.586	0.3866	0.03497
1400	2.449	0.4082	0.03692
1500	2.340	0.4273	0.03865
1600	2.257	0.4432	0.04088
1700	2.197	0.4552	0.04117
1800	2.160	0.4638	0.04187
1900	2.145	0.4662	0.04217
2000	2.151	0.4648	0.04204
2100	2.180	0.4588	0.04150
2200	2.230	0.4484	0.04056
2300	2.304	0.4341	0.03926
2400	2.403	0.4162	0.03765
2500	2.520	0.3955	0.03577
2600	2.683	0.3728	0.03372
2700	2.867	0.3488	0.03154
2800	3.050	0.3278	0.02965
2900	3.228	0.3097	0.02801
3000	3.422	0.2922	0.02643
3100	3.628	0.2757	0.02493
3200	3.841	0.2604	0.02355
3300	4.054	0.2467	0.02231
3400	4.258	0.2349	0.02124
3500	4.441	0.2252	0.02037
3600	4.592	0.2178	0.01970
3700	4.696	0.2129	0.01925
3800	4.758	0.2105	0.01904

CLOCK SUMMARY

SYS TIME I/P	ORDER FIT 1 CL TIME I/P	COMP SYS TH	DELTA ST	REV	STA
0.37240363D 05	0.228031136D 06	0.372403852D 05	-0.0022	9	
0.77853477D 05	0.267844225D 06	0.778534756D 05	0.0014	16	
0.32594292D 05	0.309705834D 06	0.325942868D 05	0.0040	24	
0.72299770D 05	0.349490531D 06	0.722997844D 05	-0.0064	31	
0.33309700D 05	0.396980538D 06	0.333097931D 05	-0.0051	40	
0.73120393D 05	0.436691121D 06	0.731003775D 05	0.0055	47	
0.34100659D 05	0.484091391D 06	0.341006491D 05	0.0009	56	
0.73702358D 05	0.523693897D 06	0.737023565D 05	-0.0005	63	
0.29340407D 05	0.288602850D 05	0.293404580D 05	0.0090	71	
0.74546163D 05	0.740660170D 05	0.745461916D 05	-0.0006	79	

AB=-0.1907907580D 06 A1= 0.100000003495D 01  
 SIGMA=2.00600 NO. POINTS= 10  
 RATIO OF CLOCK TIME TO SYS TIME= 0.999999965853D 00

SYS TIME I/P	ORDER FIT 2 CL TIME I/P	COMP SYS TH	DELTA ST	REV	STA
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0.37240383D 05	0.228031136D 06	0.372403829D 05	0.0001	9
0.77053477D 05	0.267844225D 06	0.770534747D 05	0.0023	16
0.32594298D 05	0.309785034D 06	0.325942864D 05	0.0036	24
0.72299778D 05	0.349498531D 06	0.722997856D 05	-0.0076	31
0.33309788D 05	0.396908538D 06	0.333097947D 05	-0.0067	40
0.73100383D 05	0.436691121D 06	0.731003791D 05	0.0039	47
0.34100658D 05	0.484091391D 06	0.341006503D 05	0.0077	56
0.73702358D 05	0.523693097D 06	0.737023578D 05	-0.0070	63
0.29340467D 05	0.288602850D 05	0.293404573D 05	0.0097	71
0.74546183D 05	0.740660170D 05	0.745461892D 05	-0.0062	79

A0=-0.1907907763D 06 A1= 0.100000012638D 01

A2=-0.1092400142820D-12

SIGMA=0.00504 NO. POINTS= 10

CLOCK OPERATIONS

OPN	NO	FR	H	M	S	DEC	BINARY	
1	4	0	13	ON	22	33	1 185572	0101100001111001101010100000
				OFF	22	33	41 185612	010110001000000011011011100000
5	3	1	65	ON	4	48	57 207648	0110001100000011101010000000
				OFF	4	43	34 207805	011000110001011011010010010000
6	9	1	128	ON	6	10	32 213022	011001011001001110101001100000
				OFF	6	14	54 213204	011001011011001110100101000000
6	9	2	89	ON	6	16	3 213354	011001011011110000110000100000
				OFF	6	19	19 213550	011001011101010000011101100000
7	1	1	15	ON	7	16	3 216953	01100111011100111000011101010000
				OFF	7	17	25 217035	01100111011111011000001111100000
7	1	2	216	ON	7	30	13 218203	011010000001010111011111110000
				OFF	7	47	12 218022	011010000101011110101011100000
8	5	1	83	ON	9	12	40 223951	011010101100100111000100010000
				OFF	9	16	0 224151	01101010111000100010011101100000
9	7	0	9	ON	10	21	2 228053	011011001011111010000000010000
				OFF	10	21	49 228100	011011001100010000011110100000
9	7	1	32	ON	10	40	3 229674	011011011000010001100000100000
				OFF	10	49	19 229750	011011011000110110100011110000
9	7	2	38	ON	10	51	59 229909	011011011010000100010000010000
				OFF	10	53	7 229977	011011011010100010101110101000
14	2	1	20	ON	10	22	32 256943	011101010000101000011100110000
				OFF	10	23	19 256990	011101010000101011011001100000
16	2	0	15	ON	21	23	17 267700	011111111011000011111011100000
				OFF	21	23	54 267825	011111111011010101111010100000
17	1	1	17	ON	23	6	27 273970	100000101010101000110010000000
				OFF	23	7	13 274024	100000101010101000110010000000
19	1	1	77	ON	1	47	57 283667	100001110100001110101000111000
				OFF	1	51	24 283874	100001110101110010010110100000
20	1	1	115	ON	3	10	45 289116	100010011101110001111011000000
				OFF	3	23	43 289414	1000100000000001101011100000
21	6	1	19	ON	4	52	28 294739	100011001000101011100001110000
				OFF	4	53	17 294788	100011001001000011011101000000
21	6	2	64	ON	4	55	15 294905	100011001001111100101010100000

22	1	1	86	OFF	4	57	47	295857	1000110010110001101101101000
				ON	6	20	22	300013	10001111000011101010111001000
				OFF	6	24	13	300244	10001111001010101110000100000
22	1	2	152	ON	6	25	39	300330	10001111001010101110000010000
				OFF	6	31	24	300675	1000111010111110111110111000
23	4	1	66	ON	7	51	11	305462	10010001101001111101011110000
				OFF	7	54	8	305639	10010001101111010111001011000
23	4	2	33	ON	7	57	4	305815	10010001110100101110111011000
				OFF	7	58	21	305892	10010001110110001010101010000
27	5	0	5	ON	13	30	54	325044	1001101101011111110000100000
				OFF	13	31	20	325070	10011011011000110000110110000
27	5	1	59	ON	14	5	54	327945	10011100011000000101100101000
				OFF	14	8	9	328080	10011100011100001101010000000
29	5	0	5	ON	16	32	29	336740	10100000100100011111010100000
				OFF	16	32	55	336766	101000001001010101010000110000
31	5	1	22	ON	20	5	7	349490	10100110101001110101010010000
				OFF	20	6	8	349551	10100110101011011100110011000
36	6	1	51	ON	3	34	51	376481	10110011100001010010011101000
				OFF	3	36	55	376605	101100111001010001001010001000
36	9	2	52	ON	3	54	33	377664	10110100000101011001000000000
				OFF	3	57	16	377827	10110100001010010111010111000
38	1	1	62	ON	6	33	46	387216	10111000101000111001010000000
				OFF	6	36	26	387376	10111000101101110001110000000
38	1	2	99	ON	6	38	23	387493	10111000110001010110010001000
				OFF	6	42	9	387719	10111000111000001111101011000
39	9	1	49	ON	8	4	50	392681	10111011001111101011000101000
				OFF	8	6	57	392808	10111011010011100011001000000
39	9	2	25	ON	8	7	55	392865	10111011010101010010011101000
				OFF	8	8	57	392927	1011101101011001011100011000
39	9	3	38	ON	8	9	40	392971	10111011011000100001011111000
				OFF	8	18	49	393048	10111011011010101010001000000
41	5	1	63	ON	11	7	38	403649	1100000001110011000111101000
				OFF	11	10	14	403805	110000001000110010011010001000
41	5	2	46	ON	11	18	40	404319	11000000110010110101100011000
				OFF	11	20	35	404426	11000000110110001110100010000
45	5	1	42	ON	17	32	11	426722	1100101101110100001011010000
				OFF	17	34	26	426857	11001011100010101001000101000
45	5	1	20	ON	18	45	18	431109	11001101100100011001110001000
				OFF	18	46	5	431156	11001101100101110101100100000
46	5	2	40	ON	18	50	28	431419	11001101101101110111001111000
				OFF	18	51	59	431510	11001101110000101000111110000
47	7	0	16	ON	20	17	40	436651	11010000001101100001111111000
				OFF	20	18	17	436688	11010000001101101010100000000
50	6	1	34	ON	0	42	14	452524	11010111110001111011111100000
				OFF	0	43	36	452600	11010111110100011100000110000
52	6	1	26	ON	3	46	20	463571	11011101000011000100000111000
				OFF	3	47	24	463635	11011101000101000001000111000
52	6	2	63	ON	3	48	7	463678	11011101000110010101000110000
				OFF	3	50	31	463822	11011101001010101100101100000
53	4	1	74	ON	5	14	44	460875	11011111100100111011011111000
				OFF	5	17	53	469064	11011111101010101110010100000

53	4	2	27	ON	5	21	6	469256	11011111110000100011101000000
				OFF	5	22	7	469317	11011111110010011010110001000
53	4	3	41	ON	5	24	47	469478	11011111110111010101001110000
				OFF	5	26	17	469568	11011111111010000101000000000
54	8	2	75	ON	6	46	18	474369	11100010001100100101111101000
				OFF	6	49	24	474555	11100010010010010001001111000
54	8	3	54	ON	6	52	23	474733	11100010010111101100111001000
				OFF	6	54	23	474853	11100010011011010111010001000
55	4	1	88	ON	8	17	18	479821	11100100110010111110011001000
				OFF	8	20	24	480015	11100100111000111001010011000
57	2	1	45	ON	11	19	38	490781	1110101000000101110010101000
				OFF	11	21	39	490890	11101010000100110001100010000
63	2	1	17	ON	20	29	5	523736	11111001101111001001111000000
				OFF	20	29	44	523775	11111001110000010110000011000
67	2	1	46	ON	2	27	17	8357	000000111111100001010001000
				OFF	2	29	6	8466	0000010000010010111001010000
68	8	1	97	ON	3	58	1	13801	0000010100101001011000101000
				OFF	4	1	58	14830	0000011010110000101010110000
68	8	2	31	ON	4	14	19	14778	0000011100001011111010010000
				OFF	4	15	41	14860	00000111000101011111011100000
69	6	1	90	ON	5	26	25	19105	0000100100011100001011101000
				OFF	5	30	4	19324	00001001001101101110001100000
69	6	2	53	ON	5	31	48	19428	00001001010000111001010100000
				OFF	5	33	49	19549	00001001010100100101101001000
69	6	3	46	ON	5	36	1	19681	00001001011000100111011101000
				OFF	5	37	45	19785	00001001011011110010100101000
70	6	1	15	ON	6	35	15	23234	00001011000101000010111010000
				OFF	6	36	27	23306	0000101100011100111100010000
71	2	1	38	ON	8	28	41	30041	0000110010100110001110101000
				OFF	8	30	17	30137	000011001011101101010101000
71	2	2	28	ON	8	31	38	30217	0000110011010001001100101000
				OFF	8	32	25	30264	0000110011011100101011000000

NOTE -

1) RAMP CHANGE AFFECTING OPNS ON REVS 69 AND 70 WAS INITIATED TO ASSURE PROPER CYCLE RATES FOR REV 70 OPN.

OF

