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9 Pages
(Including Cover Sheet)

CORONA "J" FLIGHT DATA BOOK ADDENDUM "A"

SYSTEM NO. J-09
VEHICLE NO. 1176
MISSION NO. 1006
CAMERA NOS. 148 & 149

Prepared by

Checked by:

Approved by

Approved by

Manager

Declassified and Released by the N R O

In Accordance with E. O. 12958

on NOV 26 1997

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18 JUN 1964

LOGGED

SYSTEM NO. J-098
VEHICLE NO. 1176
MISSION NO. 1006
CAMERA NOS. 148-149

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SYSTEM NO. J-09B
VEHICLE NO. 1176
MISSION NO. 1006
CAMERA NOS. 148-149

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GENERAL FLIGHT DATA:

Master Camera Serial No. 148

Slave Camera Serial No. 149

Stellar Index "A" Serial No. D49/53/42

Stellar Index "B" Serial No. D45/47/45

Launch Date 4 JUNE 1964

Reactivation Date —

Reactivation Orbit No. —

Orbital Parameters: (Rev. 95)

Period 90.28 Min.

Eccentricity 0.0218

Perigee 86.74 NM

Perigee Latitude 78.22 Deg. N

Apogee 243.67 NM

Inclination Angel 79.96 Deg. N

Recovery Orbit No. 128

Recovery Date 12 JUNE 1964

REMARKS:

NO DEACTIVATION BETWEEN 1ST AND
2ND MISSIONS. "B" MISSION BEGAN
ON ORBIT 65 AFTER FIRST
RECOVERY.

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SYSTEM NO. J-09B
 VEHICLE NO. 1176
 MISSION NO. 1006
 CAMERA NOS. 148-149

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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	
11	1	3.240	3.237	1266
11	1	3.117	3.160	1330
11	1	3.003	3.004	1390
11	1	2.302	2.318	2975

IN-FLIGHT CYCLE PERIODS

V/H Ramp Level	V/H Ramp Amplitude	Cycle Period Seconds		Orbit No.	Time Up Ramp Sec
		Master	Slave		
11	1	3.230	3.290	72	1266
11	1	3.123	3.193	88	1330
11	1	3.010	3.070	103	1390
11	1	2.353	2.400	110	2975

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SYSTEM NO. J-09B
VEHICLE NO. 1176
MISSION NO. 1006
CAMERA NOS. 148-149

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PRELIMINARY CLOCK CORRELATION:

ORBIT	SYSTEM TIME	CLOCK TIME	DIFFERENCE
<u>72</u>	<u>40299.187</u>	<u>161954.676</u>	<u>-0.009</u>
<u>79</u>	<u>79898.082</u>	<u>201553.591</u>	<u>-0.030</u>
<u>88</u>	<u>40750.989</u>	<u>248806.447</u>	<u>-0.001</u>
<u>95</u>	<u>80306.435</u>	<u>288361.876</u>	<u>-0.017</u>
<u>103</u>	<u>35601.785</u>	<u>330057.212</u>	<u>-0.014</u>
<u>110</u>	<u>75127.910</u>	<u>379583.331</u>	<u>-0.006</u>
<u>119</u>	<u>35799.650</u>	<u>416655.079</u>	<u>+0.008</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

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SYSTEM NUMBER J-09
VEHICLE NUMBER 1176
MISSION NUMBER 1006
PANDRAMIC CAMERA NUMBERS 148 AND 149
STELLAR/INDEX CAMERA NUMBER 045/47/45

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PERFORMANCE ESTIMATE

SUB	PROG	CAM NO.	PAN FR.	SI FR.	LAT. ON	LAT. OFF	TIME ON 2D	TIME ON ST	TUR NO	DUR SEC.	SOLAR ON	SOLAR OFF	EXPOS. ON	EXPOS. OFF
*56	3 1	148	5	1							52 53		3.0	3.0
*56	3 1	149	5								52 52		3.0	3.0
CUT-WRAP		148	4	0										
CUT-WRAP		149	4											
65	3 0	148	17	03	222	219	09 4207	11 1	2936	46	56	55	3.7	3.8
65	3 0	149	17		223	220	09 4207	11 1	2936	46	56	55	3.7	3.8
68	3 1	148	106	15	253	237	0920028	11 1	2486	233	53	58	2.9	3.0
68	3 1	149	104		253	238	0920028	11 1	2486	233	53	58	3.0	3.1
69	3 1	148	40	05	259	253	0925360	11 1	2395	86	50	53	2.9	2.9
69	3 1	149	40		260	254	0925360	11 1	2395	86	50	53	2.9	3.0
69	3 2	148	71	11	244	233	0925587	11 1	2622	157	57	58	3.0	3.1
69	3 2	149	69		244	234	0925587	11 1	2622	157	57	58	3.0	3.1
70	8 1	148	192	27	257	229	0930806	11 1	2420	427	51	58	2.9	3.1
70	8 1	149	189		258	229	0930806	11 1	2420	427	50	58	2.9	3.2
71	2 1	148	64	09	261	252	0936168	11 1	2374	138	48	54	2.9	2.9
71	2 1	149	63		262	253	0936168	11 1	2374	138	48	53	2.9	3.0
71	2 2	148	36	05	250	245	0936343	11 1	2549	77	55	56	2.9	3.0
71	2 2	149	35		251	245	0936343	11 1	2549	77	54	56	3.0	3.0
72	3 0	148	14	02	138	141	0940443	11 1	1229	46-12-10			4.8	4.6
72	3 0	149	14		136	140	0940443	11 1	1229	46-14-11			4.9	4.7
72	3 1	148	66	10	256	247	0941670	11 1	2456	145	51	56	2.9	3.0
72	3 1	149	64		257	247	0941670	11 1	2456	145	51	56	3.0	3.1
73	2 1	148	45	06	255	249	0947109	11 1	2548	100	52	55	3.0	3.0
73	2 1	149	44		256	249	0947109	11 1	2548	100	52	55	3.1	3.1
78	3 1	148	37	05	235	229	0974535	11 1	2794	83	58	58	3.0	3.1
78	3 1	149	36		235	230	0974535	11 1	2794	83	58	58	3.1	3.2
81	5 0	148	18	03	222	219	10 4582	11 1	2993	45	56	55	3.5	3.6
81	5 0	149	18		223	220	10 4582	11 1	2993	45	56	55	3.5	3.6
84	5 1	148	61	09	256	247	1020346	11 1	2499	130	53	57	2.9	2.9
84	5 1	149	60		256	248	1020346	11 1	2499	130	52	57	2.9	3.0
84	5 2	148	64	09	243	233	1020542	11 1	2695	143	59	60	3.0	3.1
84	5 2	149	63		243	234	1020542	11 1	2695	143	58	60	3.0	3.1
85	5 1	148	55	08	262	254	1025674	11 1	2410	116	49	54	2.9	2.9
85	5 1	149	54		262	255	1025674	11 1	2410	116	48	53	2.9	2.9
85	5 2	148	129	18	247	227	1025901	11 1	2637	292	57	60	2.9	3.2
85	5 2	149	126		248	228	1025901	11 1	2637	292	57	60	3.0	3.2
86	7 1	148	105	15	251	235	1031262	11 1	2598	232	55	60	2.9	3.1
86	7 1	149	102		251	236	1031262	11 1	2598	232	55	60	3.0	3.1
87	7 1	148	179	26	266	241	1036442	11 1	2362	389	45	59	2.9	3.0
87	7 1	149	175		267	242	1036442	11 1	2362	389	45	59	2.9	3.1
88	7 0	148	14	02	138	141	1040793	11 1	1291	46-14-11			4.7	4.6
88	7 0	149	14		137	140	1040793	11 1	1291	46-15-12			4.7	4.6
96	4 1	148	34	05	312	320	1086376	11 1	3682	129	37	30	4.9	5.4
96	4 1	149	34		311	319	1086376	11 1	3682	129	38	31	5.0	5.5
99	4 1	148	93	13	254	240	1115248	11 1	2589	203	55	61	2.9	3.0

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99	4	1	149	90		254	241	1115248	11	1	2589	203	55	61	3.0	3.1
100	4	1	148	50	07	243	235	1120829	11	1	2758	112	60	62	3.0	3.1
100	4	1	149	49		243	236	1120829	11	1	2758	112	60	62	3.1	3.2
100	4	2	148	64	09	231	220	1121006	11	1	2935	157	62	60	3.2	3.4
100	4	2	149	63		232	221	1121006	11	1	2935	157	62	60	3.2	3.5
101	5	1	148	47	07	260	253	1125989	11	1	2504	100	51	55	2.9	2.9
101	5	1	149	46		260	254	1125989	11	1	2504	100	51	55	2.9	3.0
101	5	2	148	95	13	244	229	1126230	11	1	2745	217	60	62	3.0	3.2
101	5	2	149	92		244	230	1126230	11	1	2745	217	60	62	3.0	3.3
102	4	1	148	46	07	261	254	1131388	11	1	2507	101	50	55	3.0	3.0
102	4	1	149	45		261	255	1131388	11	1	2507	101	50	54	3.0	3.0
102	4	2	148	34	05	250	245	1131555	11	1	2673	76	57	60	3.0	3.1
102	4	2	149	33		250	245	1131555	11	1	2673	76	57	59	3.1	3.1
102	4	3	148	38	05	242	236	1131668	11	1	2786	89	61	62	3.1	3.2
102	4	3	149	38		243	237	1131668	11	1	2786	89	60	62	3.2	3.3
103	4	0	148	14	02	138	141	1135642	11	1	1349	46-15-13			4.7	4.6
103	4	0	149	14		136	139	1135642	11	1	1349	46-16-14			4.7	4.6
103	6	1	148	88	13	261	249	1136793	11	1	2500	192	50	58	2.9	3.0
103	6	1	149	86		262	249	1136793	11	1	2500	192	49	57	2.9	3.0
103	6	2	148	57	08	246	238	1137020	11	1	2728	128	59	62	3.0	3.1
103	6	2	149	56		247	238	1137020	11	1	2728	128	59	62	3.1	3.2
104	4	1	148	92	13	257	244	1142269	11	1	2686	205	53	60	2.9	3.1
104	4	1	149	90		258	244	1142269	11	1	2686	205	52	60	3.0	3.2
110	1	1	148	55	08	239	230	1175021	11	1	2853	130	61	62	3.1	3.3
110	1	1	149	54		240	231	1175021	11	1	2853	130	61	62	3.2	3.4
112	5	2	148	22	03	315	320	12 249	11	1	3784	85	36	32	5.3	5.6
112	5	2	149	21		313	319	12 249	11	1	3784	85	37	33	5.4	5.7
115	5	1	148	92	13	254	240	1215457	11	1	2648	205	56	63	2.9	3.1
115	5	1	149	90		255	241	1215457	11	1	2648	205	55	62	3.0	3.1
116	5	1	148	74	11	259	249	1220790	11	1	2575	161	52	59	2.9	3.0
116	5	1	149	73		260	249	1220790	11	1	2575	161	51	59	2.9	3.0
116	5	2	148	127	18	244	224	1221017	11	1	2801	304	61	63	3.0	3.5
116	5	2	149	124		245	225	1221017	11	1	2801	304	61	64	3.1	3.5
117	10	1	148	131	19	247	226	1226390	11	1	2768	306	60	64	3.0	3.3
117	10	1	149	129		247	227	1226390	11	1	2768	306	60	64	3.0	3.4
118	1	1	148	248	35	271	234	1231428	11	1	2408	558	42	64	2.9	3.3
118	1	1	149	246		271	235	1231428	11	1	2408	558	41	64	2.9	3.3
119	10	0	148	15	02	138	141	1235840	11	1	1415	46-17-14			4.4	4.2
119	10	0	149	15		136	139	1235840	11	1	1415	46-18-15			4.4	4.2
119	10	1	148	147	21	265	243	1236934	11	1	2509	328	47	62	2.9	3.1
119	10	1	149	145		266	244	1236934	11	1	2509	328	47	61	2.9	3.2
120	8	1	148	84	12	257	244	1242468	11	1	2763	190	54	61	2.9	3.1
120	8	1	149	82		258	245	1242468	11	1	2763	190	53	61	3.0	3.2
128	1	1	148	93	14	276	264	1285417	11	1	2397	203	36	48	2.9	3.0
128	1	1	149	92		277	265	1285417	11	1	2397	203	36	47	2.9	3.0

• LAST 5 FRAMES OF MISSION A

AAA BB C DDD EEE FF GHG GII JJKKKK LL M NNNN OOO PP QQ RRR SSS

A ORBITAL TIMER SUBCYCLE NUMBER

B PROGRAM NUMBER

C OPERATION NUMBER

D PAN. CAMERA SERIAL NUMBER (MASTER IS EVEN, SLAVE IS ODD)

E EST. NO OF PAN FRAMES, BASED ON COUNTER READINGS INFLITE

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- F EST. NUMBER OF STELLAR/INDEX FRAMES
- G QUADRANT
- H EST. LATITUDE OF FIRST FORMAT CENTER IN PASS
- I EST. LATITUDE OF LAST FORMAT CENTER IN PASS
- J ZULU DATE
- K SYSTEM TIME IN SECONDS (GMT)
- L FMC PROGRAMMER REFERENCE LEVEL
- M FMC PROGRAMMER AMPLITUDE LEVEL
- N EST. TIME UP RAMP IN SECONDS TO OPERATE COMMAND
- O EST. SECONDS DURATION OF OPERATION, BETWEEN ON AND OFF
- P SOLAR ELEVATION AT ITEM H
- Q SOLAR ELEVATION AT ITEM I
- R EST. MILLISECONDS EXPOSURE TIME AT ITEM H
- S EST. MILLISECONDS EXPOSURE TIME AT ITEM I

FRAMES TO FEET, PAN X 2.645 STELLAR X 0.099, INDEX X 0.198

- NOTES (1) DATA INDICATE NEGATIVE ENDLAP FOR NORTHERN OPERATIONS
 (2) S/I CAMERA APPEARED TO OPERATE INTERMITTANTLY AFTER 103-04-0 ENGINEERING OPERATION. THE CYCLE COUNTER ON MASTER CAMERA 148 ALSO WAS AFFECTED. ABOVE DATA REFLECT BEST ESTIMATE FOR MASTER CAMERA FRAMES, AND NOMINAL S/I CAMERA FRAMES.
 (3) BOTH MAIN CAMERAS PROBABLY EXHAUSTED FILM SUPPLY DURING LAST OPERATION.
 (4) OPERATION 128-01-1 IS DISPLACED 85 SECONDS TO ALLOW TIMER RESET FOR RECOVERY.

PRELIMINARY CLOCK CORRELATION B MISSION

REV	SYSTEM TIME - Z	CLOCK TIME	SYSTEM DELTA TIME	CLOCK DELTA TIME	ERROR
63	79595.975	114851.473			
> 72	40299.187	161954.676	47103.212	47103.203	0.009
79	79898.082	201553.541	39598.895	39598.865	0.030
> 88	40750.989	248806.447	47252.907	47252.906	0.001
95	80306.435	288361.876	39555.446	39555.429	0.017
-103	35601.785	330057.212	41695.350	41695.336	0.014
110	75127.910	379583.331	49526.125	49526.119	0.006
> 119	35799.650	416655.079	47071.740	47071.748	0.008

~~369583.331~~ ~~379526.125~~ ~~37526.119~~

J- 9 RAMP	R-11 A-1
R= 0.3289	A= 0.1614
TIME PERIOD	CPS GAV
0 5.970	0.1675 0.01515
100 5.933	0.1686 0.01525
200 5.824	0.1717 0.01553
300 5.652	0.1769 0.01600
400 5.431	0.1841 0.01665
500 5.175	0.1932 0.01748
600 4.899	0.2041 0.01846
700 4.616	0.2166 0.01959

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800	4.336	0.2306	0.02086
900	4.067	0.2459	0.02224
1000	3.813	0.2623	0.02372
1100	3.578	0.2795	0.02528
1200	3.363	0.2974	0.02690
1300	3.168	0.3157	0.02855
1400	2.977	0.3359	0.03038
1500	2.775	0.3603	0.03259
1600	2.604	0.3840	0.03473
1700	2.460	0.4065	0.03676
1800	2.342	0.4271	0.03863
1900	2.245	0.4454	0.04028
2000	2.179	0.4589	0.04151
2100	2.179	0.4589	0.04151
2200	2.179	0.4589	0.04151
2300	2.179	0.4589	0.04151
2400	2.179	0.4589	0.04151
2500	2.179	0.4589	0.04151
2600	2.179	0.4589	0.04151
2700	2.179	0.4589	0.04151
2800	2.179	0.4589	0.04151
2900	2.245	0.4454	0.04028
3000	2.342	0.4271	0.03863
3100	2.460	0.4065	0.03676
3200	2.604	0.3840	0.03473
3300	2.775	0.3603	0.03259
3400	2.977	0.3359	0.03038
3500	3.168	0.3157	0.02855
3600	3.363	0.2974	0.02690
3700	3.578	0.2795	0.02528
3800	3.813	0.2623	0.02372
3900	4.067	0.2459	0.02224
4000	4.336	0.2306	0.02086
4100	4.616	0.2166	0.01959
4200	4.899	0.2041	0.01846
4300	5.175	0.1932	0.01748
4400	5.431	0.1841	0.01665
4500	5.652	0.1769	0.01600
4600	5.824	0.1717	0.01553
4700	5.933	0.1686	0.01525
4800	5.970	0.1675	0.01515