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LAUNCH REQUIREMENTS - VEHICLE 1179/J13

Attached is the Launch Requirements and limitations for Vehicle 1179/J13.

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Declassified and Released by the N R C

In Accordance with E. O. 12958

on NOV 26 1997

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LAUNCH REQUIREMENTS - VEHICLE 1179/J13

1.0 SCOPE

1.1 General

The following requirements govern the condition under which the vehicle will be launched with the A/P Payload System. Any deviation from the prescribed limits shall be cause for hold. Any status changes must be reported to System Integration immediately after occurrence for evaluation. All discrepancies and deviations must be corrected prior to resumption of vehicle launch count-down.

2.0 PAYLOAD INTERNAL TEMPERATURE

$65 \pm 10^{\circ}$ F from mating to T-4 hours.

$65 \pm 5^{\circ}$ F from T-4 hours thru launch.

Temperature on Payload System shall be monitored and recorded every one-half hour from mating to launch.

3.0 RELATIVE HUMIDITY

50% or less at all times.

4.0 PURGE

The N_2 must be connected and flowing when the system is on the launch pad. Maximum off time is one-half hour per day.

LAUNCH REQUIREMENTS - VEHICLE 1179/J13 (Cont'd)

5.0 SEV TRANSMISSION FREQUENCY

Recovery T/M 233.2 ± 0.1 MC

Recovery Beacon 235.0 ± 0.1 MC

6.0 POWER

Power must be applied to the payload interface whenever the payload is raised or lowered.

7.0 THERMAL BLANKET

The thermal blanket must remain on the payload from mating until launch.

8.0 PRIMARY TLM READOUTS

Payload checkout (must be verified thru vehicle TLM).

8.1 Lens Rotation, Horizon idler, and center of format Instrument No. 1 channel 09 Link I. No backup channel is available.

8.2 Lens Rotation, Horizon idler, and center of format Instrument No. 2 channel 10 Link I. No backup channel is available.

8.3 Ring A Commutator (.4 x 60) channel 11 Link and points listed below. The primary commutated points must be verified during payload confidence after mating and payload checkout task.

LAUNCH REQUIREMENTS - VEHICLE 1179/J13 (Cont'd)

MONITOR	VERIFICATION						
	Function	PRIMARY			ALTERNATE		
		CH-LK-IT	Volts	Tol.	CH-LK-IT	Volts	Tol.
Inst. 1 Cycle Count 1	11-1-22	.55 step	± .15	11-1-25	4.05 or greater	4.05 or less	
Inst. 1 Cycle Count 10	11-1-23	.55 step	± .15	11-1-25	"	"	
Inst. 1 Cycle Count 100	11-1-24	.55 step	± .15	11-1-25	"	"	
Film Footage Pot Inst. 1	11-1-25	4.05 or greater	4.05 or greater	8-2-56	"	"	
Inst. 2 Cycle Count 1	11-1-27	.55 step	± .15	11-1-31	.9 or less	.9 or less	
Inst. 2 Cycle Count 10	11-1-28	.55 step	± .15	11-1-31	"	"	
Inst. 2 Cycle Count 100	11-1-29	.55 step	± .15	11-1-31	"	"	
Orbital Function Generator	11-1-07	0.45	± 0.05	--	--	--	
Calibrate Plus	11-1-30	5	--	11-1-14	5	--	
Inst. 2 Film Footage Pot	11-1-31	.9 or less	.9 or less	8-2-47	.9 or less	.9 or less	
Inst. 1 Door Eject	11-1-35	1.3	± .2	None	--	--	
Inst. 2 Door Eject	11-1-45	1.3	± .2	"	--	--	
Film Door Closure	11-1-47	4.7	± .2	"	--	--	
Pairing Separation	11-1-49	1.3	± .2	"	--	--	
Continuity Loop SRV-1	11-1-51	5.38	± .2	"	--	--	
Separation Monitor-SRV's	11-1-52	0.5	+ .1 - .1	11-1-25	0.5	+ .1 - .1	
Recovery Battery SRV-1	11-1-53	0	± .2	None	--	--	
Continuity Loop SRV-2	11-1-54	5.38	± .2	"	--	--	
Recovery Battery SRV-2	11-1-55	0	± .2	"	--	--	
Calibrate Zero	11-1-57	0	--	11-1-04	0	--	
N ₂ Bottle Pressure	11-1-37	3.0 or greater	± .1	13-1-11	3.0 or greater	± .1	
Calibrate Zero	11-1-57	0	--	11-1-17	0	--	
Qmc.	11-1-58	5.5	± .2	11-1-59	5.5	± .2	
Qmc.	11-1-58	5.5	± .2	11-1-60	5.5	± .2	

All Command Selector points as listed per Launch requirements list in Appendix - I.

LAUNCH REQUIREMENTS - VEHICLE 1179/J13 (Cont'd)

9.0 HOING OF CAMERA STOVES

9.1 Both camera stoves must be properly hoed prior to terminal count.

10.0 LAUNCH REQUIREMENTS COMMAND SETTINGS

10.1 All stepping switches must be positioned in accordance with the Command Settings List prior to terminal count. (See Appendix - I)

11.0 FILM CONSUMPTION PRIOR TO LAUNCH

11.1 Minimum film consumption prior to launch shall be 100 cycles on both instruments.

11.2 Should the Payload System stay in a loaded condition for an extended period, the System shall be operated 10 cycles per applicable procedure every other day.

12.0 RESPONSIBILITY

12.1 It shall be the responsibility of the senior A/F Payload Engineer to ensure the implementation of the restrictions and requirements listed herein. In addition, he is charged with the responsibility of supplying the following system information immediately prior to launch to Flight Operations and Computer Services by telephone.

LAUNCH REQUIREMENTS - VEHICLE 1179/J13 (Continued)

12.1.1 Final System Weight, in Lbs. _____

12.1.2 Cycle counter film footage pot and leader length readings for both instruments, in accordance with J1210 Para. 18, Item 5.4.1.

	<u>MASTER</u>	<u>SLAVE</u>
a. Cycle Counter	_____	_____
b. Film Footage Pot in Volts	_____	_____
c. Leader Lengths in Feet	_____	_____

12.1.3 Cycle counter, film footage pot and leader length readings for both instruments, in accordance with J1210, Para. 18, Item 5.4.10.

	<u>MASTER</u>	<u>SLAVE</u>
a. Total length of leader from "A" bucket hub to flight payload splice.	_____ Ft.	_____ Ft.
b. Cycle Counter Readings	_____ Cts.	_____ Cts.
c. Take-up Pot Voltage	_____ V	_____ V

12.1.4 Cycle counter and film footage pot readings for both instruments, at launch, in units.

	<u>Cycle Counter</u>	<u>Film Footage Pot</u>
a. Master	_____	_____
b. Slave	_____	_____

12.1.5 Clock error, static run, in microseconds: _____

12.1.6 Length of off-spool of both instruments, including control strips, in feet:

a. Master	_____ Ft.
b. Slave	_____ Ft.

12.1.7 Length of off-spool of both S/I Instruments, in feet:

a. S/I A Stellar	_____ Ft.
Index	_____ Ft.
b. S/I B Stellar	_____ Ft.
Index	_____ Ft.

12.1.8 DOOR MONITOR CALIBRATIONS:

<u>CONDITION</u>	<u>INST. NO. 1</u>	<u>T/M VOLTAGE</u>	
		<u>INST. NO. 2</u>	<u>FIRM DOOR</u>
DOOR ON (CLOSED)	_____	_____	_____
DOOR OFF (OPEN)	_____	_____	_____

12.1.9 SEPARATION MONITOR CALIBRATIONS:

<u>CONDITION</u>	<u>SRV-A/B</u>	<u>SRV A (ONLY)</u>	<u>T/M VOLTAGE</u>	
			<u>SRV 1*</u>	<u>FAIRING</u>
MATED	_____	_____	_____	_____
SEPARATED	_____	_____	_____	_____

* = AFTER FIRST FAIRING

12.1.10 CONTINUITY LOOP MONITOR CALIBRATIONS:

<u>CONDITION</u>	<u>CONTINUITY LOOP</u>		<u>T/M VOLTAGE</u>		
	<u>S/T SEAL</u>	<u>MAIN SEAL</u>		<u>SRV A</u>	<u>SRV B</u>
CLOSED	OPEN	OPEN	1.84 ± 5%	_____	_____
CLOSED	OPEN	CLOSED	4.39 ± 5%	_____	_____
CLOSED	CLOSED	CLOSED	5.38 ± 5%	_____	_____
OPEN	CLOSED	CLOSED	4.57 ± 5%	_____	_____
OPEN	CLOSED	OPEN	2.16 ± 5%	_____	_____
OPEN	OPEN	OPEN	.75 ± 5%	_____	_____
OPEN	OPEN	CLOSED	3.42 ± 5%	_____	_____
CLOSED	CLOSED	OPEN	3.12 ± 5%	_____	_____

LAUNCH REQUIREMENTS: The following Command Settings are specified for the
1179/J-13 payload. Date of issue 10/7/64 (R-20) (R-7)

COMMAND SELECTOR			VERIFICATION					
			PRIMARY			SECONDARY		
NO.	FUNCTION	POSITION	CH-LK-Pt	Volts	Tol +	CH-LK-Pt	Volts	Tol ±
6	V/H Ramp Level	6	11-1-2	2.0	.10	8-2-24	2.0	.10
			11-1-3	2.0	.10	8-2-26	2.0	.10
8	V/H Ramp Amplitude	5	11-1-5	2.0	.10	8-2-28	2.0	.10
			11-1-6	1.0	.05	8-2-30	1.0	.05
9	Program	40	11-1-8	2.0	.10	8-2-32	2.0	.10
			11-1-9	3.0	.15	8-2-34	3.0	.15
10	V/H Ramp Delay	6	11-1-12	2.0	.10	8-2-44	2.0	.10
			11-1-13	2.0	.10	8-2-45	2.0	.10
11	Instrument Mode	1	11-1-15	1.0	.05	8-2-48	1.0	.05
			11-1-16	1.0	.05	8-2-50	1.0	.05
12	Intermix Position	11	11-1-18	4.0	.20	8-2-52	4.0	.20
			11-1-19	4.0	.20	8-2-53	4.0	.20
13	Intermix Mode	4	11-1-20	4.0	.20	8-2-55	4.0	.20
			-	-	-	-	-	-
14	Orbital Function Generator	1	11-1-11	1.0	.05	None	-	-
			-	-	-	-	-	

LAUNCH REQUIREMENTS: The following settings/requirements are specified for the
1179/J-13 payload. Date of issue 10/7/64 (R-20) (R-7).

ANAGRAMIC LENS SETTINGS:

	<u>Instrument No. 1 (Master)</u>	<u>Instrument No. 2 (Slave)</u>
Slit Dimensions	<u>0.20</u> <u>0.175 x 2.278</u>	<u>0.20</u> <u>0.175 x 2.278</u>
Filter Type	<u>Wratten 21</u>	<u>Wratten 21</u>

NOTE: SLIT LENGTH AND WIDTH MUST BE MEASURED AT TIME OF INSTALLATION

Measured by _____

Verified by _____

HORIZON OPTICS SETTINGS:

	<u>Instrument No. 1 (Master)</u>	<u>Instrument No. 2 (Slave)</u>
Supply Horizons:		
Aperture	<u>F 6.8</u>	<u>F 8.0</u>
Speed	<u>1/100 Sec.</u>	<u>1/100 Sec.</u>
Filter	<u>Wratten 25</u>	<u>Wratten 25</u>

Take-up Horizons:

Aperture	<u>F 8.0</u>	<u>F 6.8</u>
Speed	<u>1/100 Sec.</u>	<u>1/100 Sec.</u>
Filter	<u>Wratten 25</u>	<u>Wratten 25</u>

STELLAR INDEX OPTICS SETTINGS:

	<u>Stellar Index A</u>	<u>Stellar Index B</u>
Stellar Lens:		
Aperture	<u>F 1.8</u>	<u>F 1.8</u>
Speed	<u>2.0 Sec.</u>	<u>2.0 Sec.</u>
Filter	<u>None</u>	<u>None</u>

LAUNCH REQUIREMENTS
-CAMERA SYSTEM-

APPENDIX - I
PAYLOAD LAUNCH
REQUIREMENTS LETTER
SHEET 3 OF 4

LAUNCH REQUIREMENTS: CONTINUED
STELLAR INDEX OPTICS SETTINGS:

Date of Issue 10/7/64 (R-20) (R-7)

	<u>Stellar Index A</u>	<u>Stellar Index P</u>
Index Lens:		
Aperture	<u>F 4.5</u>	<u>F 4.5</u>
Speed	<u>1/500 Sec.</u>	<u>1/500 Sec.</u>
Filter	<u>Wratten 21</u>	<u>Wratten 21</u>

FILM NOMENCLATURE:

Panoramic Instruments:

	<u>Instrument No. 1 (Master)</u>	<u>Instrument No. 2 (Slave)</u>
Primary:		
Type	<u>7J - 40 - 16000</u>	<u>7J - 40 - 16000</u>
Emul. Date	<u>62 - 7 - 7 - 4</u>	<u>62 - 6 - 7 - 7</u>
Wt. & Spool No.	<u>89.0 - 79.7 - 4S - 97B</u>	<u>89.1 - 79.7 - 5S - 37T</u>
Box No.	<u>6</u>	<u>6</u>
Secondary:		
Type	<u>7J - 40 - 16000</u>	<u>7J - 40 - 16000</u>
Emul. Date	<u>68 - 6 - 7 - 4</u>	<u>68 - 6 - 7 - 4</u>
Wt. & Spool No.	<u>88.3 - 78.9 - 4S - 43</u>	<u>88.2 - 79.0 - 4S - 96</u>
Box No.	<u>8</u>	<u>8</u>

PANORAMIC OFFSPOOLING REQUIREMENTS:

	<u>Master</u>	<u>Slave</u>
Original Length - Ft.	<u>16000</u>	<u>16000</u>
Length to Offspool - Ft.	<u>0</u> + 10	<u>0</u> + 10
Length to Load - Ft.	<u>16000</u>	<u>16000</u>

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LAUNCH REQUIREMENTS: CONTINUED Date of Issue 10/7/64 (R-20) _____ (R-7)

FILM NOMENCLATURE: CONTINUED

Stellar Index:

	Stellar Index A		Stellar Index B	
	Stellar	Index	Stellar	Index
Primary:				
Type	<u>3J-34-75</u>	<u>7J-33-135</u>	<u>3J-34-35</u>	<u>7J-33-135</u>
Emul. Date	<u>44-30-7-4</u>	<u>29-3-6-4</u>	<u>44-30-7-4</u>	<u>29-3-6-4</u>
Secondary:				
Type	<u>35-34-75</u>	<u>7J-33-135</u>	<u>3J-34-35</u>	<u>7J-33-135</u>
Emul. Date	<u>44-30-7-4</u>	<u>29-3-6-4</u>	<u>44-30-7-4</u>	<u>29-3-6-4</u>

STELLAR INDEX FILM OFFSPOOLING REQUIREMENTS

	Stellar Index A		Stellar Index B	
	Stellar	Index	Stellar	Index
Original length - Ft.	<u>75</u>	<u>135</u>	<u>75</u>	<u>135</u>
Length to Offspool - Ft.	<u>30</u> ⁺⁰	<u>45</u> ⁺⁰	<u>30</u> ⁺⁰	<u>45</u> ⁺⁰
Length to Load - Ft.	<u>45</u>	<u>90</u>	<u>45</u>	<u>90</u>

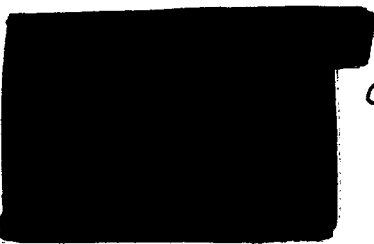
STELLAR INDEX TO PANORAMIC 1 to 7

STELLAR SAFFLE TYPE:

Stellar A	Stellar B
<u>11.500</u>	<u>11.500</u>
_____	_____
_____	_____
_____	_____

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CSE

Flight Operations Date 10-7-64
 CSE - System Integration Date 10-7-64
 System Engineer Date 10-7
 Special Staff Date 10-7
 Resident Officer Date 7 Oct 1964

