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CONTROL NO. [REDACTED]

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Accordance with E. O. 12958

on NOV 26 1997

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GROUP 1  
Excluded from automatic  
downgrading and declassification

5 May 1965

Copy [REDACTED]

MEMORANDUM FOR: Talent Control Officer, Secretary of the  
Air Force, United States

ATTENTION: Major A. W. Johnson

SUBJECT: "J" System Stellar/Index History

REFERENCE: Your Cable [REDACTED]

The following data, pertinent to the Stellar and Index camera operation of each "J" mission to date, have been compiled (attachment 1). The history of operation includes only the most outstanding anomalies. Density streaks outside of the format, degradations associated with film exhaustion, normal flare patterns, or other minor discrepancies considered to be within the system manufacturing specification are not listed. The date as presented herein is the approximate GCT date of the first orbit of the mission. An "X" preceding mission number indicates the photography in reference is considered to be seriously degraded and in most instances unusable for attitude determination. A percentage figure expressing the reliability of the camera was considered; but, because of the variation of severity in the degradations listed, the programmed use of the photography would, in most cases, determine its usefulness. All degradations listed are in reference to the original negative. Every "J" mission to date has been degraded by the presence of smeared imagery (dumbbell configurations). The presence of smeared imagery is noted only on the missions most seriously affected.

[REDACTED]  
Chief, Technical Intelligence Division

Attachment: "J" System Stellar/Index History

FORM NO. 238 1 MAY 65		REPLACES FORM 23-1 WHICH IS OBSOLETE		DOCUMENT CONTROL	
SEC. CL. TS		ORIGIN: NPIC/C/TID		CONTROL NO. [REDACTED]	
DATE OF DOC 5/5/65	DATE REC'D 6/18/65	DATE OUT	SUSPENSE DATE	CROSS REFERENCE OR POINT OF FILING	
TO TCO/Sac. of the USAF/Johnson				ROUTING	
FROM [REDACTED]				DATE SENT	
SUBJ. "J" System Stellar/Index History. Attachment: "J" System Stellar /Index History. copy # [REDACTED] rec'd				SPS/DIRS	
[REDACTED] SPS 6/18/65					
COURIER NO.	ANSWERED	NO REPLY		4	

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"J" SYSTEM STELLAR/INDEX HISTORY

Attachment #1 to [REDACTED]

Mission	Date	S/I Number	Frames Exposed	System Number	Film Type	Image Quality	Degradations	Cause	Percent Affected	Static Induced Fog	Remarks
X 1001-1	25/9/63	8/14 D/16	401	J-01	4401 4400	Fair-Good Poor-Good	Fog Extreme Density	Light Leaks Shutter Malfunction	6% 54%	Minor Minor	Shutter operation erratic. 216 frames overexposed.
1001-2											
X1002-1	23/10/63	8/18	363	J-02	4401	Poor-Good	Double Exposure & No Exposure.	Stepper Switch	100%	Heavy Corona & Dendritic	Fog obliterated fiducials throughout. Not Recovered.
X		D/18	363		4400	Poor-Good	Misregistering As Above	As Above	50%	50% Affected	About 50% useable. Not Recovered.
1002-2											
1004-1	15/2/64	8/29	404	J-05	4401	Fair-Good	High Gross Fog. Underexposure. Fiducials.	Fiducials 70% Electrical.		Minor	No fiducials - last 2/3. Radiation fog intermittent.
		D/29	413		4400	Good	Underexposure. Fiducials.	Fiducials 70% Electrical.		Minor	No correlation fiducials - last 2/3.

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Attachment #1 to [REDACTED]

SUBJECT: "J" SYSTEM STELLAR/INDEX HISTORY

Mission	Date	S/I Number	Frames Exposed	System Number	Film Type	Image Quality	Degradations	Cause	Percent Affected	Static Induced Fog	Remarks
X1004-2	19/2/64	S/42	350	J-09	4401	Poor	Over & Underexposure. Light Leaks. One Double Exposure. Fog on 8 Frames.	Shutter Malfunction.	100%	Severe	Shutter operation very erratic. No fiducials. Heavy dendritic static.
X1006-1		S/45	412	J-09	4401	Poor-Good	Over & Underexposure and fog. One Double Exposure. Switch	Stepper Switch	25%	Edges Only	Shutter erratic/hung open. Stayed closed. Minor radiation fog and ghost images.
X1006-2		D/47	392		4400	Good	One Double Exposure. Switch	Stepper Switch	1%	Edges Only	One Double exposure. Eight frames contain light leak.
X1007-1	19/6/64	S/43	392	J-07	4401	Good	Fog and short footage. Fog on each Frame. Leak	Light Leak & Center of Format Switch. Light Leak	50%	Minor	Abbreviated footage. Center of format switch malfunctioned; also, fog each rest period - minor.
		D/43	392		4400	Good	High Gross Fog. None	Radiation	20%	Edges Only	Small fog patch - each frame. One double exposure. Also, abbreviated due to center of format switch malfunction.

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SUBJECT: "J" SYSTEM STELLAR/INDEX HISTORY

Mission	Date	S/I Number	Frames Exposed	System Number	Film Type	Image Quality	Degradations	Cause	Percent Affected	Static Induced Fog	Remarks
X1007-2	22/6/64	S/54	428		4401	Poor	Under & overexposure.	Shutter & stepper switch malfunction.	100%	Heavy	High gross fog; corona fog and dendritic static also erratic shutter. Thirteen multiple exposures and many partial exposures or no exposure.
X		D/54	428		4400	Poor-Good	13 Double exposures + soft side burr on platen.	Stepper switch & shutter malfunction.	4%	Minor	Thirteen multiple exposures and film not in film plane at one edge due to burr on platen.
1008-1	11/7/64	S/48	404	J-10	4401	Good	High Gross Fog.	Radia-tion.	5%	Minor	
		D/45			4400	Good				Very Minor	Some dendritic static last 3 frames.
X1008-2	14/7/64	S/33	421		4401	Poor-Good	Fog	Light Leaks & Static.	60%	Severe	Heavy dendritic static on last 50%. Fog due to light leak intermittently.
X		D/28	107		4400	Good-Poor	All Fog after 107.	Shutter Malfunction.	75%	None	Shutter remained open after frame 107.
1009-1	6/8/64	S/56	338	J-12	4401	Fair-Good	Image Streaks. One Double exposure.	Vehicle Instability. Stepper Switch.		Edges Only.	Many stars imaged in a dumbbell configuration. One double exposed frame.
		D/54	338		4400	Good					
1009-2	9/8/64	S/34	412		4401	Good	22 Frames with fog.	Light Leak.	2%	Minor	Small bar of fog on 22 frames.
X		D/38	436		4400	Poor	Fog	Vehicle Light Leak.	100%	Minor	Area of fog on every frame. Commensurate with duration of set period.

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Attachment #1 to [REDACTED]

SUBJECT: "J" SYSTEM STELLAR/INDEX HISTORY

Mission	Date	S/I Number	Frames Exposed	System Number	Film Type	Image Quality	Degradations	Cause	Percent Affected	Static Induced	Remarks
1010-1	14/9/64	S/41	422	J-11	4401	Fair-Good	Image Smear	Vehicle Instability	50%	Minor	Many stars in dumbbell configuration.
		D/41	423		4400	Fair	One Edge Soft	Burr on Platen	100%	Minor	Film out of film plane on one edge.
1010-2	19/9/64	S/44	432		4401	Fair	Image Smear & Fog	Vehicle Instability & Light Leak	50%	First	Dendritic static each 0.6" on first 75%. Light leak causes some fog on 23 frames. Many stars in dumbbell configuration
1011-1	5/10/64	S/30	415	J-03	4401	Good	None			Edge Only.	
		D/30	415		4400	Good	Image Smear.	Vehicle Instability	25%		Dumbbell configurations intermittently.
1011-2		S/57	0								
		D/57	0								
X1012-1	17/10/64	S/51	0	J-13	4401						Not Recovered.
		D/51	0		4400			Electrical Failure	100%		Only leader received; film did not transport.
1012-2	20/10/64	S/53	208		4401	Good		Electrical Failure	100%		Only leader received; film did not transport.
		D/52	207		4400	Good	Emulsion Scratch	Unknown	100%		Continuous scratch center of format.
											Abbreviated mission due to vehicle attitude problems.

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SUBJECT: "J" SYSTEM STELLAR/INDEX HISTORY

Mission	Date	S/I Number	Frames Exposed	System Number	Film Type	Image Quality	Degradations	Cause	Percent Affected	Static Induced	Remarks
X1016-2	20/1/65	8/59	433		4401	Poor	Too Dense.	Shutter Malfunction.	100%	Fog Edges Only.	Burr on shutter caused overexposure.
1017-1	25/2/65	D/50	433	J-14	4400	Good					
		8/21	420		4401	Fair-Good	Image Smear.	Vehicle Instability.	20%	One Frame	Some images in dumbbell configuration.
X1017-2	2/3/65	D/21	420		4400	Good	Mimis Density Streak.	Unknown	50%	None	Minus density streak on last 50% of mission.
X		8/60	45		4401	Poor	Double Exposures	Stepper Switch	98%	None	Most frames double exposed; only 45 frames recovered.
X1018-1	25/3/65	D/68	29		4400	Poor	Double Exposures	Stepper Switch	98%	None	Most frames double exposed; only 45 frames recovered.
X		8/20	55	J-19	4401	Fair-Good	No Exposure & smear.	Blown Fuse	80%	None	Vehicle instability caused some smear. Shutter failed on both cameras after frame 55.
X1018-2	28/3/65	D/20	55		4400	Good	No Exposure	Blown Fuse	80%	None	
X		8/22	0		4401		No Film Transported.	Blown Fuse	100%		
		D/22	0		4400		No Film Transported.	Blown Fuse	100%		

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Mission	Date	S/I Number	Frames Exposed	System Number	Film Type	Image Quality	Degradations Minus	Cause	Percent Affected	Static Induced Fog	Remarks
1013-1	3/11/64	S/52	421	J-15	4401	Good	Density Spots.	Pressure	25%	Edges Only.	Minus density spot each 4.75" along major axis.
		D/55	421		4400	Good	-	-	-	-	-
1013-2	7/11/64	S/54	102		4401	Good	-	-	-	Edges Only.	Mission abbreviated because main camera malfunctioned.
		D/47	102								
1014-1	18/11/64	S/49	419	J-16	4401	Good	-	-	-	Edges Only.	-
		D/53	419		4400	Good	2 Minus streaks.	Unknown	100%	-	Two continuous minus density streaks.
X1014-2	22/11/64	S/46	351		4401	Good-Poor	Many	Stepper Switch	75%	corners and den-dritic.	After frame 122 the film is degraded by erratic shutter operation, out-of-focus condition and corona fog.
		D/44	351		4400	Good-Poor	As Above.	As Above.	75%	As Above.	Same as stellar S/46.
X1015-1	19/12/64	S/61	384	J-17	4401	Fair-Poor	Fog	Flare	50%	Edges	Fog spot covers 1/2 of each frame, also smeared images (dumbbells).
		D/61	384		4400	Good	-	-	-	-	-
1015-2	24/12/64	S/58	379		4401	Good	One Double Exposure.	Stepper Switch	-	Edges Only.	-
		D/58	379		4400	Good	One Double Exposure.	Stepper Switch	-	-	-
1016-1	15/1/65	S/55	411	J-18	4401	Good	-	-	-	-	-
		D/55	411		4400	Good	-	-	-	-	-

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