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CORONA J

PERFORMANCE EVALUATION REPORT

MISSION 1025-1 and 1025-2

FTV 1616; JX-28

May 20, 1966

Approved [redacted]
Mgr.
Advanced Projects

Approved [redacted]
Mgr.
Program [redacted]

~~TOP SECRET~~ [redacted]
No. [redacted]

FOREWORD

This report details the performance of the payload system during the operational phase of the Program [redacted] Flight Test Vehicle 1616.

Lockheed Missiles and Space Company has the responsibility for evaluating payload performance under the Systems Integration and "J" System contracts.

This document is the final payload test and performance evaluation report for Missions 1025-1 and 1025-2 which was launched on 5 October 1965.

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INTRODUCTION

This report presents the final performance evaluation of Missions 1025-1 and 1025-2 of the Corona Program. The purpose of this report is to define the performance characteristics of the JX-28 payload system and to identify the source of in-flight anomalies.

The performance evaluation was jointly conducted by representatives of Lockheed Missiles and Space Company (LMSC) and ITEK at the facilities of NPIC and AFSPPF. The off-line evaluation using Corona engineering photography acquired over the United States was performed at the individual contractors plants.

The quantitative data used for this report is obtained from government organizations. The diffuse density data, and MTF/AIM resolution are produced by AFSPPF. The vehicle attitude error values, frame correlation times are made at NPIC who also supply the Processing Summary and MTF/AIM resolution reports published by [redacted]

Computer programs developed by A/P are utilized to calculate and plot the frequency distribution of the various contributors to image smear to permit analysis and correlation of the conditions of photography to the information content and quality of the acquired pictures. Computer analysis of the exposure, processing and illumination data provides the necessary data to analyze the exposure criteria selected for the mission.

SECTION 1

SYSTEM PERFORMANCE

A. MISSION OBJECTIVES

The payload section of Mission 1025, placed into orbit by Flight Test Vehicle #1616 and LV-2A booster #433, consisted of two panoramic cameras, two Stellar-Index cameras, two Mark 5A recovery capsules and a space structure to enclose the cameras and provide mounting surfaces for all equipments. Figure 1-1 presents an inboard profile of the JX-28 payload system. This Corona "J" system is designed to acquire search, reconnaissance and mapping photography of selected areas of the earth from orbital altitudes. The planned mission was two, 5 day photographic periods with no inactive period. This mission was flown in a nose forward attitude.

B. MISSION DESCRIPTION

The payload was launched from Vandenberg Air Force Base (VAFB) at 1745:58 Z (1045:58 PDT) on 5 October 1965. Ascent and injection were normal and the achieved orbit was within nominal tolerances. Tracking and command support was effected by the Air Force Satellite Control Facility [redacted] under central control of the Satellite Test Center at Sunnyvale, California. Mission 1025-1 consisted of a 5 day operation and was completed by air recovery on 10 October 1965. Mission 1025-2 completed a five day operation and was air recovered on 15 October 1965.

SCHEMATIC INBOARD PROFILE - CORONA J SYSTEM

MISSION 1025

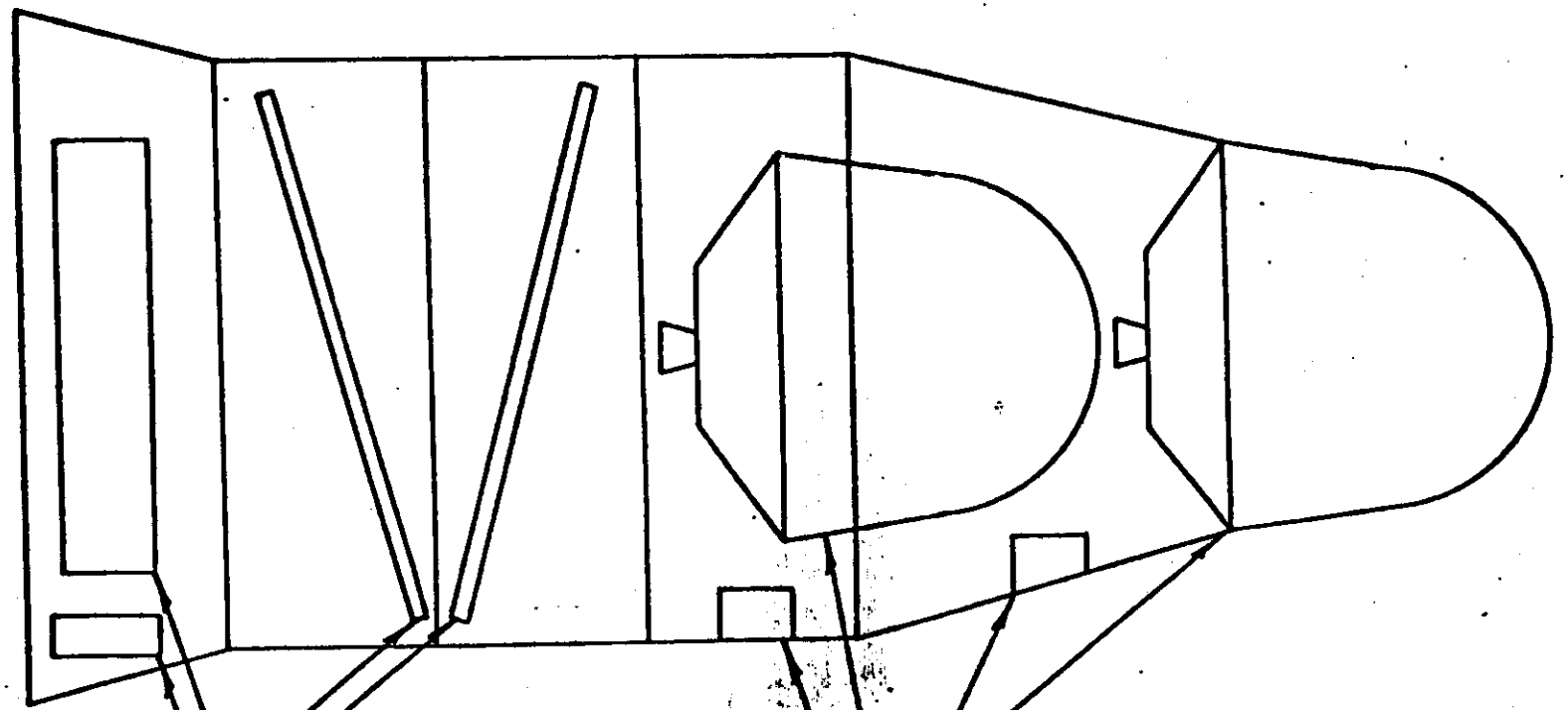


FIGURE 1-1

ORBITAL PARAMETERS

Parameter	Predicted	Orbit 1 Actuals
Period (Min.)	89.87	89.78
Perigee (N.M.)	109.4	112.4
Apogee (N.M.)	184.2	180.8
Inclination (Deg.)	75.01	75.03
Perigee Latitude (Deg. N.)	26	41
Eccentricity	0.0105	0.0095

C. PANORAMIC CAMERAS

The Master and Slave panoramic cameras operated throughout both missions with no significant problems and produced excellent photographic coverage. The cloud cover observed in the photography averaged 30% for the entire flight.

D. STELLAR-INDEX CAMERAS

The cameras operated normally throughout both missions. The Index photography quality ranks with the best to date. The Stellar film ran out before the Index film on both missions.

E. OTHER SUBSYSTEMS

The clock, instrumentation, command and thermal control subsystems performed satisfactorily on both missions.

F. CONCLUSIONS

The panoramic and S/I photography acquired in orbit during Mission 1025-1 and 1025-2 was of high quality and adequate to meet the search, surveillance and mapping objective of the "J" Program.

SECTION 2

PRE-FLIGHT SYSTEMS TESTS

A. ENVIRONMENTAL TESTING

1. Test Objective

As a standard procedure, the J payload systems are subjected to thermal/altitude environmental testing which simulates orbital environment. One of the purposes of this test is to demonstrate the system susceptibility to corona discharge. Such discharge fogs the film thus degrading the operational photography.

2. Test Summary

The JX-28 payload system was subjected to an environmental test in the Hivos chamber at Sunnyvale from 7-7-65 to 7-13-65. The test encompassed 3 days of operation in the "A" mode and 2 days of operation in the "B" mode. The payload operation was limited to daytime operation only.

Both panoramic cameras operated satisfactorily throughout the test.

Both the A and B phase stellar/index cameras operated satisfactorily.

The clock system functioned normally throughout the test. Due to power failures and IRIG "C" time resets, the clock accuracy check was limited to the A phase. A clock system error of approximately 33 milliseconds was observed in 3 days of operation in the "A" phase.

Both A and B recovery sequences were satisfactory including proper transfer to the B phase.

A deactivate sequence was conducted in the B phase with all functions occurring properly.

Numerous current transients occurred during both phases of the test while initiating RTC commands and at instrument "on-off" times.

Both Phillips gages indicated good correlation with the alphatron gage.

The pressure make-up system operated satisfactorily throughout the test.

3. Panoramic Camera Performance

Both panoramic cameras operated satisfactorily throughout the test.

The cycle periods for instrument No. 1 were approximately 1.33% slow to 2.00% fast in the A phase and 0.96% slow to 0.91% fast in the B phase. Instrument No. 2 ran 2.12% slow to 0.15% fast in the A phase and 1.98% slow to 0.34% slow in the B phase.

The 99/101 percent clutch ratios averaged 6/6 for instrument No. 1 and 7/6 for instrument No. 2.

The cut and wrap operation was normal with both instruments operating 5 cycles and the lens stopping in the stowed position. However, instrument No. 1 shutdown faster than instrument No. 2. The timer length had an 8.0 second delay with 26 seconds of instrument operate time, as compared to the acceptance test timer length of 8.0 seconds delay with 25 seconds of instrument operate time.

A deactivate sequence was performed in the B phase with both instruments operating 6 cycles and the lens stopping in the stowed position. However, instrument No. 1 shutdown faster than instrument No. 2.

4. Stellar/Index Performance

The stellar/index camera operated satisfactorily throughout the A phase with normal camera slewing during the cut and wrap operation.

The B phase stellar/index camera operated satisfactorily with normal camera slewing during the B recovery sequence.

5. Clock System Performance

The clock system operated satisfactorily throughout the A and B phase. However, due to power failures and reset of the IRIG "C" time generator during the B phase, the clock accuracy check was limited to the A phase only. The clock system error was approximately 33 milliseconds in 3 days of operation in the A phase.

6. Temperature Summary

A tabulation of the temperature environment encountered during the test follows:

Average Temperature Environment

A Phase	Orbit 1	Orbit 6	Orbit 15
Instr. No. 1	79	92	99
Instr. No. 2	77	85	92

B Phase	Orbit 1	Orbit 6	Orbit 10
Instr. No. 1	81	70	82
Instr. No. 2	80	70	82

NOTE: The temperatures have not been corrected for self-heating.

7. Pressure Make-up System Performance

The pressure make-up system operated satisfactorily throughout the test. The average gas consumption was approximately 6.2 lbs./minute of instrument operate time. The maximum pressure attained with the PMU was approximately 40 to 55 microns during instrument operation.

The minimum pressure attained during the test was approximately 1.3 microns during a static condition.

Approximate System Pressures

Orbit	Alphatron Gage "A" Phase	Alphatron Gage "B" Phase
1	13 microns	1.8 microns
2	12	1.6
3	10	1.3
4	8	1.4
5	8	2.2
6	5	1.8
7	7	1.6
8	7	2.7
9	6	2.3
10	8	2.8

No corona discharge marks were observed that would disqualify either camera for flight.

B. RESOLUTION TEST

The dynamic resolution test of the JX-28 payload system was performed at the A/P facility on 20 July 1965. Each panoramic camera photographed high and low contrast resolution targets. The resulting through focus resolution data is shown in Figure 2-1 for the Master camera and in Figure 2-2 for the Slave camera.

C. LIGHT LEAK TEST

The examination of the 3401 film threaded in the JX-28 system, during the 30 minute soak light leak test, determined that no film fogging was present. The light tight integrity of the system was considered acceptable for flight.

D. FLIGHT LOADING AND CERTIFICATION

Film from JX-28 pad run and flight readiness was examined at VAFB on 28 September 1965. No significant difference could be detected between this film and film from previous operations at A/P.

Camera 127 binary "1" bit, (least significant bit) was partially obscured in the readiness run but not in the pad run. This was assumed to be foreign matter picked up from the film and was blown out prior to final system assembly. This same camera has always had an occasional extra timing PIP. It has always appeared between 2 regular PIPS and clearly identified as extra.

"A" index reseau exhibited a large piece of foreign matter on the pad run film. The reseau was removed and a chip was found which matched the shadow on the film.

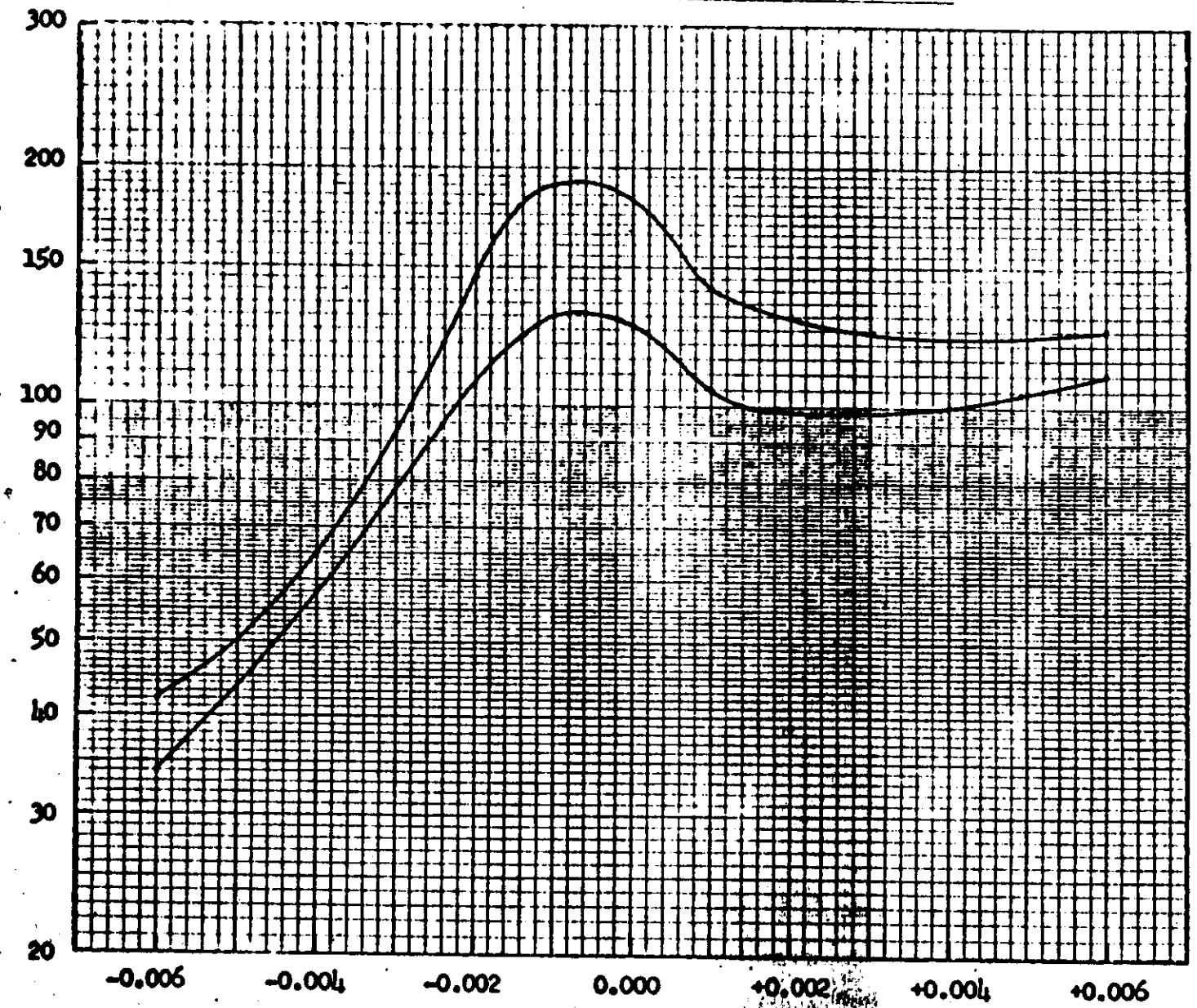
These two cases of foreign material were taken care of during the normal cleaning prior to flight loading. Nothing was done to compromise the integrity of the system and, therefore, an additional flight readiness operation was considered unnecessary.

All other data was present and acceptable.

Flight loading occurred 30 September. Confidence run and audit was held 1 October 1965.

In summary, system JX-28 meets all established criteria for flight readiness.

PRE-FLIGHT DYNAMIC RESOLUTION



Camera No: 142

Payload No: JX-28

Resolution (1/mm)

High Contrast: 190

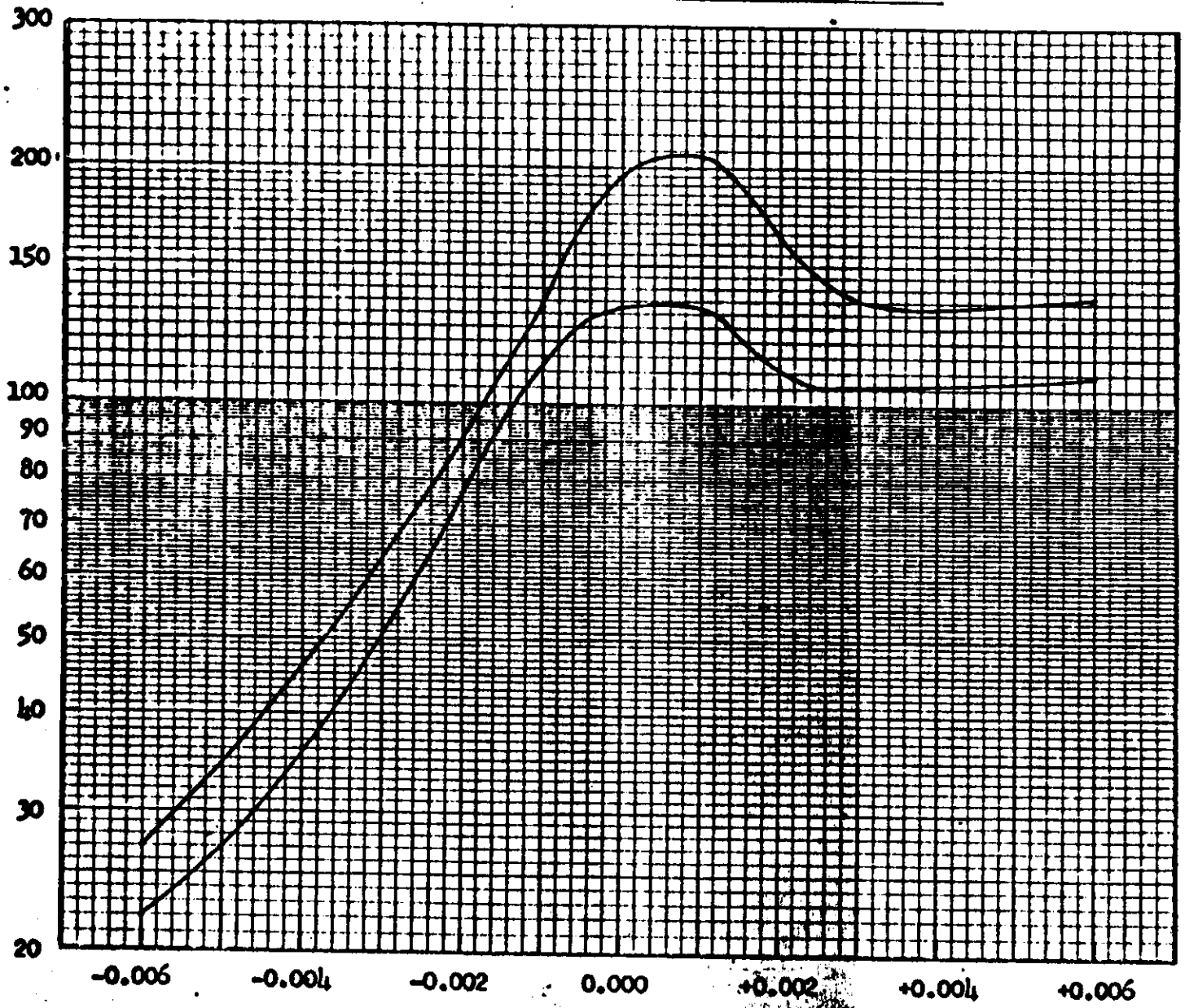
Low Contrast: 130

Film Type: 3404

Test Date: 7/17/65

FIGURE 2-1

PRE-FLIGHT DYNAMIC RESOLUTION



Camera No: 127

Payload No: JX-28

Resolution (l/mm)

High Contrast: 205

Low Contrast: 132

Film Type: 3404

Test Date: 7/17/65

FIGURE 2-2

SECTION 3

FLIGHT OPERATIONS

A. INSTRUMENTATION AND COMMAND PERFORMANCE

The No. 1 temperature sensor on the supply spool was inoperative at launch. The rotation monitor in the - 2 cassette for the master camera was intermittent during the cut and wrap operation. No other instrumentation anomalies were noted in the engineering pass data.

On Rev. 1 at [redacted] the camera system was programmed on for 14 cycles. The system completed 16 cycles on this operation. Review on the data indicated the actual operation was 6.84 seconds longer than the tape verification times. A 7 second reset was given prior to the operation causing the tape to advance to a point 5.85 seconds prior to the programmed On time for the operation. It appears from the sequence of events that the camera system was turned on at the reset time not at the programmed On time.

Tracking station hardware and software (Auggie) malfunctions occurred several times during the flight resulting in prelort/analog commanding problems. These problems did not impair the operation of the camera system but necessitated additional commanding to obtain the desired command setups.

No other anomalies were noted in either the real time or stored commands.

Due to initial orbit dispersions a V/h programmer start delay step change was necessary on Rev. 7. This change was made, and for the balance of the first mission as well as during the entire second mission there was less than 3 percent V/h ramp-to-orbit mismatch.

B. PANORAMIC CAMERA PERFORMANCE

Both panoramic cameras operated normally throughout the flight. The cycle periods for the engineering passes monitored are tabulated in Table 3-1. Camera system dynamic operation, 99/101% clutch operation, start-up, shut-down and transport functions were normal for all passes monitored. Cut and wrap and transfer to the -2 Mission occurred as programmed with no evidence of any dynamic problems in the data.

JX28/1616 MISSION: 1025 CYCLE RATE DATA-ENGINEERING OPERATIONS.

REV/MODE	RAMP	T.U.R.	INST 142 ACT.	INST 142 CAL.	INST 142 DEV.	INST 127 ACT.	INST 127 CAL.	INST 127 DEV.	142/127 DIFF.
9 A	7 7	.360	3.540	3.524	0.46S	3.540	3.538	0.06S	-0.00
16 A	7 7	1850	2.520	2.477	1.72S	2.535	2.490	1.82S	0.60
32 A	7 7	1890	2.520	2.474	1.85S	2.530	2.486	1.76S	0.40
63 A	7 7	2020	2.519	2.480	1.57S	2.530	2.492	1.52S	0.44
79 A	7 7	2068	2.509	2.488	0.82S	2.546	2.501	1.81S	1.47
89 B	7 7	473	3.467	3.456	0.32S	3.519	3.470	1.40S	1.50
95 B	7 7	2042	2.520	2.483	1.47S	2.555	2.496	2.38S	1.39
111 B	7 7	2000	2.510	2.477	1.31S	2.530	2.490	1.62S	0.80
127 B	7 7	2050	2.510	2.485	1.01S	2.545	2.497	1.92S	1.39
136 B	7 7	598	3.355	3.367	0.36F	3.432	3.382	1.49S	2.30
143 B	7 7	2100	2.520	2.496	0.96S	2.560	2.508	2.06S	1.59
159 B	7 7	2140	2.530	2.508	0.89S	2.560	2.520	1.59S	1.19

DEV. AND DIFF. ARE IN PERCENT
THE (-) SIGN INDICATES THAT INST 1 IS SLOWER THAN INST 2
F=FAST AND S=SLOW

TABLE 3-1

Panoramic Film Consumption - Frames

These data are based on cycle counters and nominal supply length.

	Nominal	Actual	
		Master	Slave
Pre-Flight Samples	18	19	17
Pre-Launch	100	100	100
-1 Mission	2982	2939	2904
-2 Mission	2940	2982	3019
Total	6040	6040	6040

C. STELLAR INDEX PERFORMANCE

Both the -1 and 12 stellar index cameras operated properly during the entire mission. Stellar index events were observed on all engineering passes. Shutter pulses were observed on all daytime engineering passes. Telemetry data indicated index film was depleted during slew on both missions.

D. CLOCK PERFORMANCE

Good correlation was obtained between the clock and [redacted] tracking station system time. Table 3-2 contains the clock/system time correlation.

E. PRESSURE MAKE-UP SYSTEM PERFORMANCE

The overall average PMU system consumption rate was 7.9 PSIA per minute of operate time. This compares favorably with previous systems. The pressure of the PMU supply at launch was 2675 PSIA and was down to 550 PSIA at the end of the -2 mission.

A Phillips gauge was used to monitor the internal pressure of the system. Figure 3-1 is a plot of the pressure profile for the flight. Included on the plot is a typical pressure profile from Pirani gauges flown on J-3, J-11, J-12 and J-13 systems and Phillips gauge data for J-24. These data follow the same basic envelope, however, the Phillips gauge pressure data for this mission is higher by approximately 3 microns than the data for J-24.

CLOCK SUMMARY Jx-28/1616 Mission 1025

ORDER FIT 1

SYS TIME I/P	CL TIME I/P	COMP SYS TM	DFLTA ST	REV	STA
0.643928700 05	0.3803931790 06	0.6439287370 05	-0.0037	0	
0.246958680 05	0.4270962120 06	0.2469589760 05	-0.0096	9	
0.639899130 05	0.4663902330 06	0.6398991090 05	-0.0021	16	
0.244783030 05	0.5132786150 06	0.2447828370 05	0.0193	25	
0.637709480 05	0.1570038100 05	0.6377095410 05	-0.0061	32	
0.242526760 05	0.6258211800 05	0.2425268190 05	-0.0059	41	
0.581503230 05	0.9647977100 05	0.5815032830 05	-0.0053	47	
0.240129780 05	0.1487424270 06	0.2401297400 05	0.0040	57	
0.579433780 05	0.1826728330 06	0.5794337340 05	-0.0046	63	
0.183748830 05	0.2295043450 06	0.1837487620 05	0.0068	72	
0.576886130 05	0.2688179830 06	0.5768850650 05	0.0065	79	
0.234936300 05	0.3210231260 06	0.2349363930 05	-0.0093	89	
0.574142680 05	0.3549437570 06	0.5741426370 05	0.0043	95	
0.178350730 05	0.4017645770 06	0.1783507450 05	-0.0015	104	
0.570932430 05	0.4410227620 06	0.5709325190 05	-0.0069	111	
0.175455730 05	0.4878750980 06	0.1754557870 05	-0.0057	120	
0.567945330 05	0.5271240550 06	0.5679452800 05	0.0050	127	
0.172427280 05	0.3710134400 05	0.1724271990 05	-0.0081	136	
0.565231630 05	0.7638179600 05	0.5652316420 05	-0.0012	143	
0.169245530 05	0.1231831890 06	0.1692454800 05	0.0050	152	
0.562272780 05	0.1624859350 06	0.5622728630 05	-0.0083	159	

A0=-0.31600023090 06 A1= 0.99999980441900 00
SIGMA=0.00710 NO. POINTS= 21
RATIO OF CLOCK TIME TO SYS TIME= 0.10000001955800 01

ORDER FIT 2

SYS TIME I/P	CL TIME I/P	COMP SYS TM	DFLTA ST	REV	STA
0.643928700 05	0.3803931790 06	0.6439287180 05	-0.0018	0	
0.246958680 05	0.4270962120 06	0.2469589630 05	-0.0063	9	
0.639899130 05	0.4663902330 06	0.6398991010 05	0.0029	16	
0.244783030 05	0.5132786150 06	0.2447828340 05	-0.0196	25	
0.637709480 05	0.1570038100 05	0.6377095410 05	-0.0061	32	
0.242526760 05	0.6258211800 05	0.2425268230 05	-0.0063	41	
0.581503230 05	0.9647977100 05	0.5815032890 05	-0.0059	47	
0.240129780 05	0.1487424270 06	0.2401297490 05	0.0031	57	
0.579433780 05	0.1826728330 06	0.5794337440 05	0.0036	63	
0.183748830 05	0.2295043450 06	0.1837487730 05	-0.0057	72	
0.576886130 05	0.2688179830 06	0.5768850770 05	0.0053	79	
0.234936300 05	0.3210231260 06	0.2349364040 05	-0.0104	89	
0.574142680 05	0.3549437570 06	0.5741426470 05	-0.0033	95	
0.178350730 05	0.4017645770 06	0.1783507540 05	-0.0024	104	
0.570932430 05	0.4410227620 06	0.5709325250 05	-0.0095	111	
0.175455730 05	0.4878750980 06	0.1754557910 05	-0.0061	120	
0.567945330 05	0.5271240550 06	0.5679452810 05	0.0049	127	
0.172427280 05	0.3710134400 05	0.1724271950 05	0.0085	136	
0.565231630 05	0.7638179600 05	0.5652316340 05	-0.0004	143	
0.169245530 05	0.1231831890 06	0.1692454670 05	0.0063	152	
0.562272780 05	0.1624859350 06	0.5622728440 05	-0.0064	159	

A0=-0.31600024070 06 A1= 0.99999983137700 00
A2=-0.16643315695500-13
SIGMA=0.00704 NO. POINTS= 21

TABLE 3-2

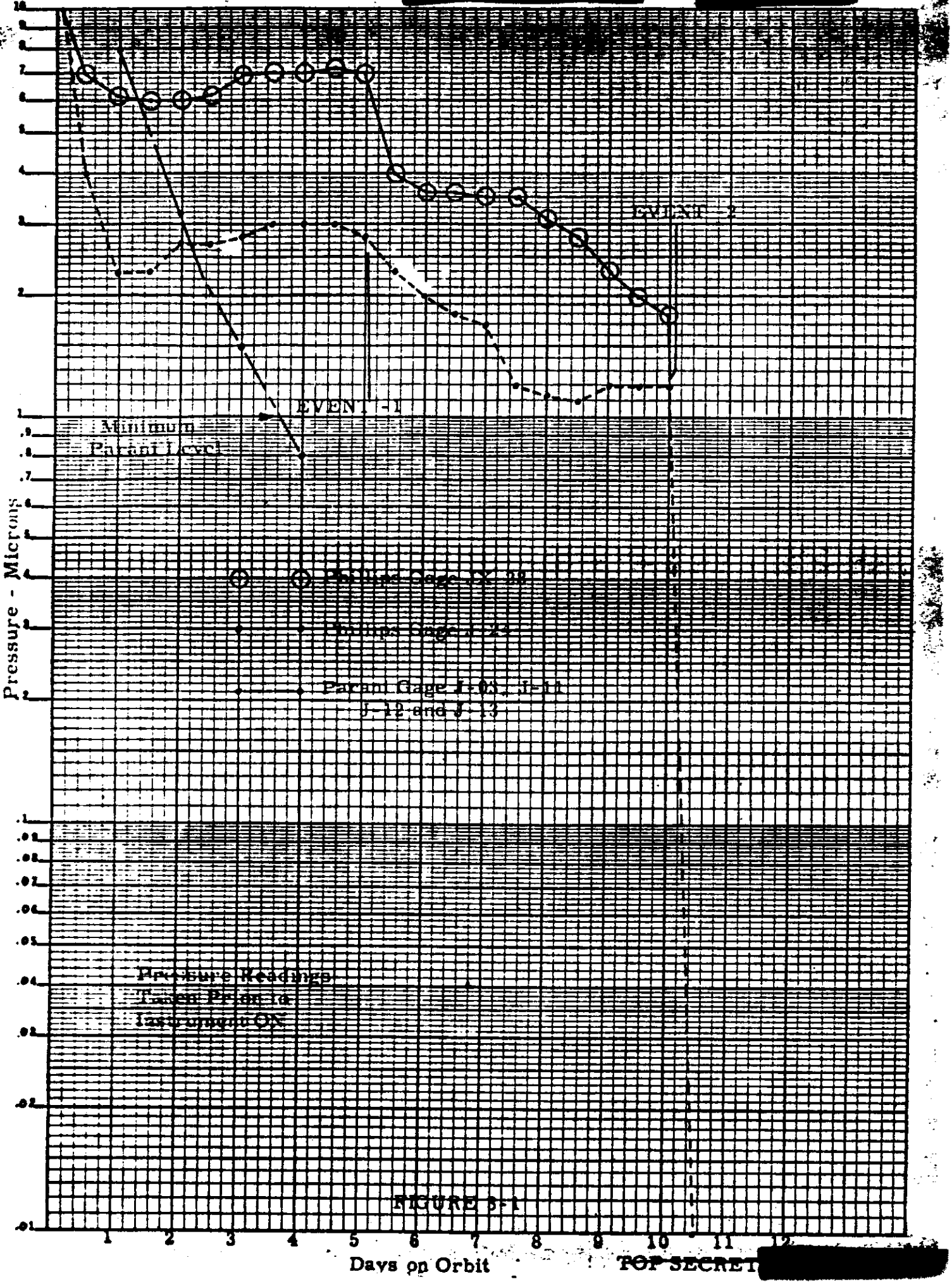


FIGURE 3-1

F. THERMAL ENVIRONMENT

Temperature data for the [redacted] acquisitions are included in Table 3-3. These data have been corrected for self-heating per data obtained in pre-flight environmental testing. Actual versus predicted temperatures for major components are plotted and included as Figures 3-2 to 3-4.

TABLE 3-3

Jx-28 TEMPERATURE SUMMARY

SENSOR	ORBITS ACQUIRED																				
Master Camera	0	9	16	25	32	41	47	57	63	72	79	89	95	104	111	120	127	136	143	152	15
3	69	74	70	74	72	74	71	76	74	77	75	71	70	70	70	71	71	71	72	70	7
4	75	79	76	80	78	80	77	82	80	84	82	77	77	78	77	79	77	78	81	80	8
5	73	83	79	84	81	84	80	88	85	87	86	83	81	83	81	84	84	85	85	87	8
6	67	81	79	84	81	84	82	87	86	87	87	83	83	83	84	85	86	87	89	88	9
7	65	74	73	78	78	76	77	79	79	83	80	75	76	77	77	75	77	77	80	77	8
8	72	83	79	86	81	84	82	88	85	89	86	83	81	84	81	85	84	87	83	87	8
9	71	84	80	86	84	87	83	89	86	91	89	87	86	89	84	90	87	92	89	91	8
10	68	73	73	76	76	75	76	77	77	80	79	72	72	75	74	74	75	75	87	75	8
11	98	74	70	77	75	78	76	80	76	82	75	77	71	78	75	78	75	70	75	78	7
12	76	79	74	80	76	79	75	82	78	81	79	77	74	77	73	77	76	78	87	77	7
13	74	74	72	76	76	75	77	79	78	80	87	73	73	73	75	74	75	76	77	76	7
AVG.		78	75	80	78	80	73	83	80	84	82	78	77	79	78	79	79	80	82	81	8
Slave Camera																					
3	67	73	69	77	73	77	73	81	77	82	77	80	76	80	81	84	80	86	82	86	8
4	70	73	69	76	72	77	72	80	66	82	81	78	74	79	75	81	77	84	80	84	8
5	69	76	73	80	76	78	76	81	79	85	77	78	76	79	79	79	79	82	81	81	8
6	64	72	70	74	73	73	72	77	76	77	81	71	72	71	70	72	73	74	74	73	7
7	64	75	74	79	76	78	76	80	80	82	80	77	75	77	75	78	77	79	79	79	8
8	69	73	71	78	74	76	74	78	76	81	79	75	73	77	75	77	75	77	79	77	8
9	67	72	70	74	72	73	72	77	74	77	76	72	70	72	70	73	73	74	73	73	7
10	69	70	68	73	72	71	73	75	73	79	74	70	69	73	70	72	71	73	73	75	7
11	95	65	65	70	67	70	70	74	72	76	76	69	70	71	68	71	70	73	73	75	7
12	71	74	69	77	72	78	73	81	76	83	79	80	75	81	76	84	79	86	80	86	8
13	69	66	64	67	67	67	68	70	71	72	72	66	68	65	66	67	68	69	70	69	7
AVG.		71	69	75	72	74	73	77	75	80	78	75	73	75	74	76	75	78	77	78	7
Supply Spool																					
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	68	59	63	68	66	70	68	72	71	75	73	71	69	72	69	72	71	75	73	75	7

NOTE: All data corrected for self-heating, except injection.

TABLE 3-3

Jx-28 TEMPERATURE SUMMARY

SENSOR	ORBITS ACQUIRED																			
Fair ("A") Barrel #1 ("B")	0	9	16	25	32	41	47	57	63	72	79	89	95	104	111	120	127	136	143	152	15
1	-	30	61	30	61	33	58	36	61	36	61	24	20	24	17	20	20	24	20	20	2
2	-	10	10	10	7	13	3	13	7	13	0	61	45	61	42	61	45	58	45	55	4
3	211	3	3	03	3	3	3	6	6	6	3	84	84	24	75	87	78	89	78	82	7
4	217	58	58	55	58	55	58	58	65	62	65	68	95	75	95	81	98	84	104	87	10
5		48	83	58	89	55	86	58	99	64	102	61	85	70	88	73	99	73	102	77	10
6	-	-	95	143	97	230+	103	OBH	108	OBH	140	-	-	-	-	-	-	-	-	-	-
Barrel #2																					
1	145	30	57	54	63	60	67	63	73	63	76	54	79	60	85	63	93	66	66	67	10
2	162	10	68	56	71	59	74	62	84	62	86	62	83	71	83	74	89	78	92	77	9
3	218	3	85	73	82	76	82	79	85	76	85	73	76	76	70	79	70	76	70	76	7
4	185	55	56	68	56	68	52	68	56	65	56	59	46	59	43	59	46	56	46	49	4
5	195	48	55	58	58	62	54	62	58	58	58	36	33	39	33	39	33	39	33	33	2
Conic Adapter																					
1	166	50	61	56	72	60	75	63	84	63	87	56	90	63	93	66	99	72	99	72	10
Clock																					
1	99	27	75	75	77	79	77	81	81	81	81	73	70	75	70	77	73	75	75	77	7
2	103	80	73	78	78	80	78	82	80	82	82	71	71	71	69	76	73	75	73	76	7
Thrust Cone "A" to "B" SRV																					
1	-	48	38	41	40	42	37	44	39	44	40	67	65	70	65	68	69	69	68	68	6
2	60	65	55	58	58	59	55	61	59	63	61	77	76	82	76	80	80	82	80	81	8
Stellar/Index "A" to "B"																					
1	85	57	51	54	54	57	54	57	57	61	57	69	66	69	66	72	69	72	72	69	7
2	74	59	49	52	53	56	53	59	59	59	59	66	66	70	63	70	66	70	70	66	7
Recovery Battery "B" SRV																					
1	75	73	71	71	72	74	74	76	76	78	80	81	82	82	81	81	85	81	82	80	8
Master Cassette "A" SRV																					
2	90	73	70	70	69	70	69	71	70	70	73	-	-	-	-	-	-	-	-	-	-

NOTE: Only Thrust Cone Data corrected for Self-heating.

JX-28 FLIGHT vs PREDICTED TEMPERATURE DATA

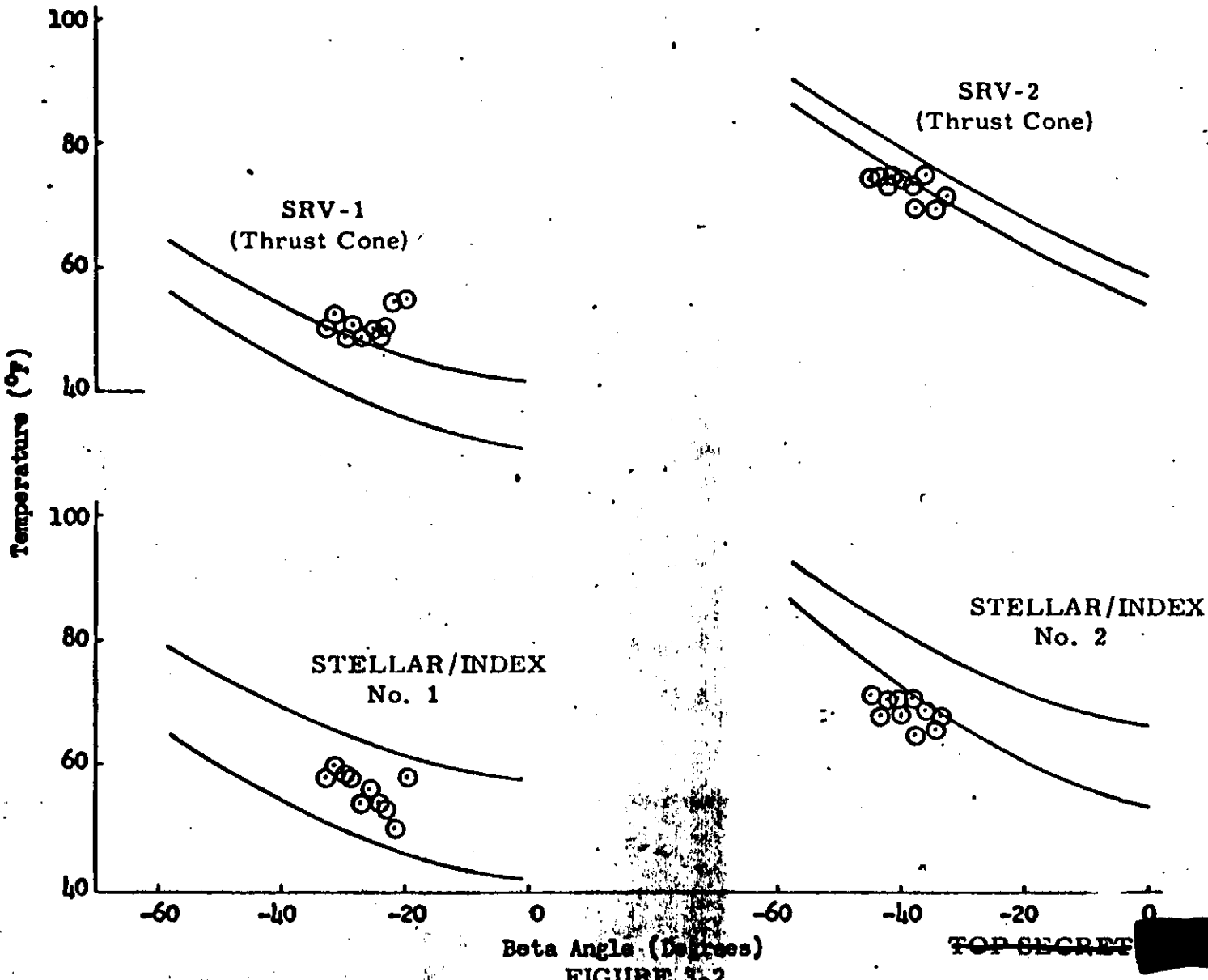


FIGURE 3.2

JX-28 FLIGHT vs PREDICTED TEMPERATURE DATA

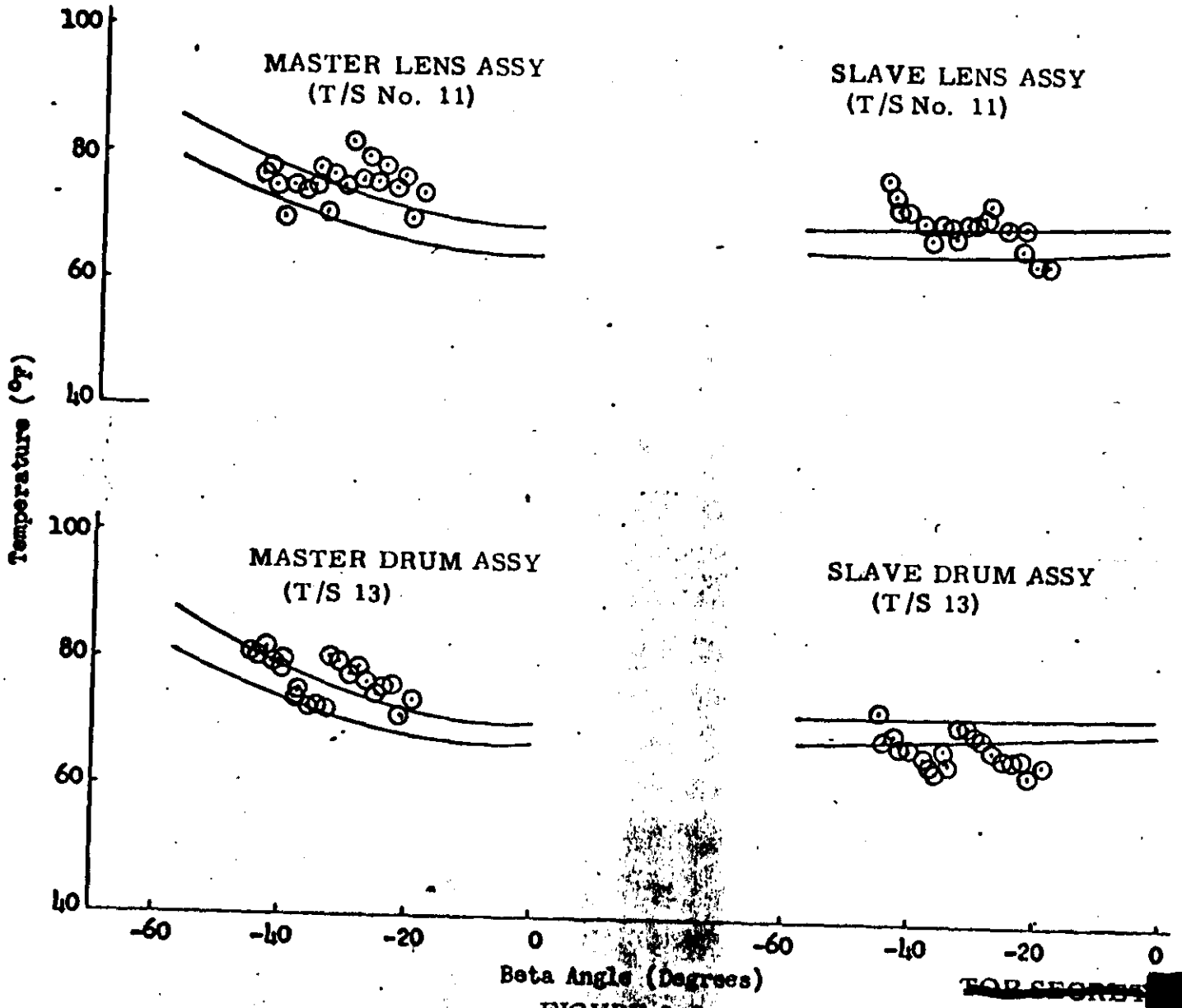


FIGURE 3-8

JX-28 FLIGHT vs PREDICTED TEMPERATURE DATA

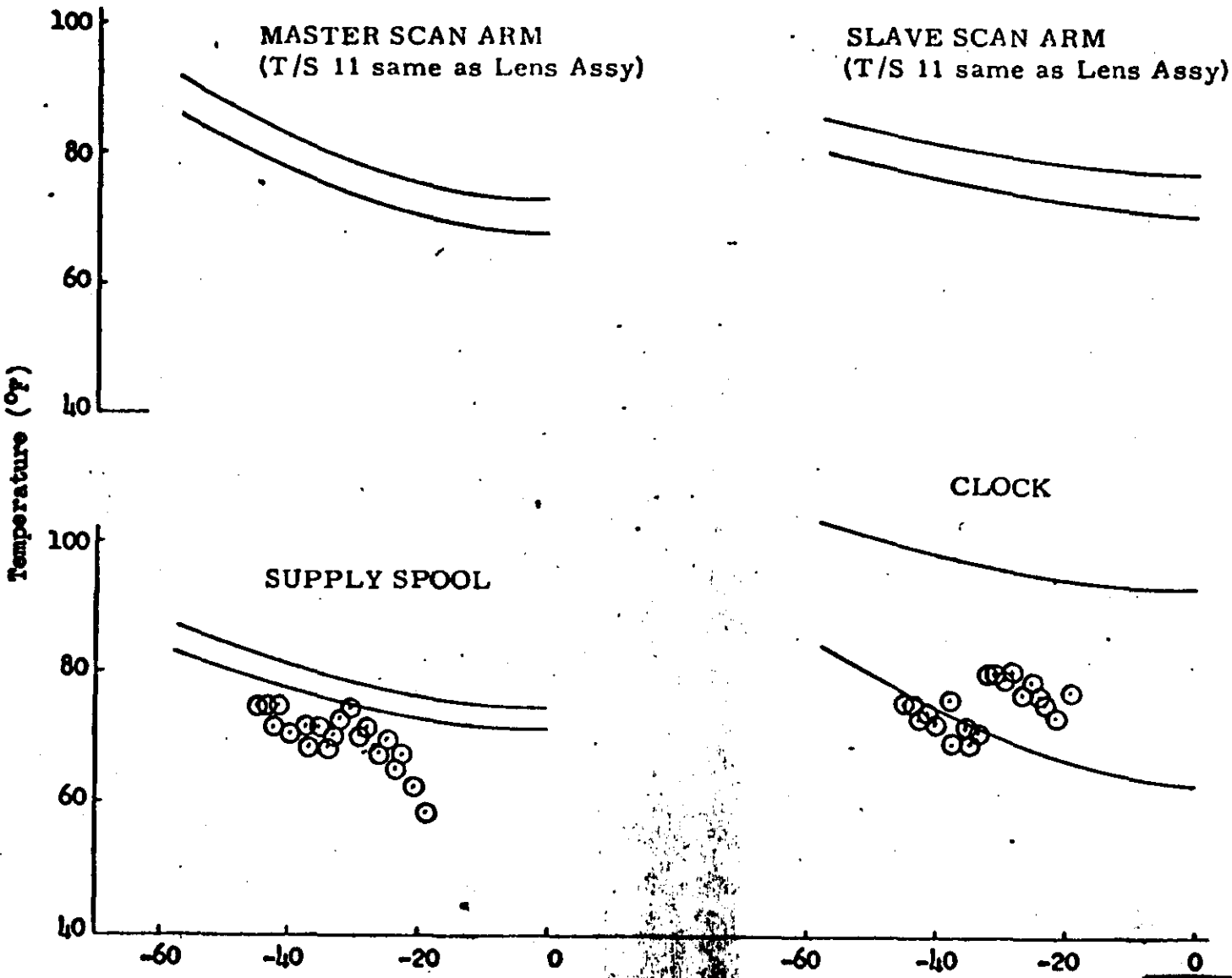


FIGURE 3-4

SECTION 4

MISSION 1025-1 RECOVERY SYSTEM

SRV #650 was received at A/P on 1 November 1963. The receiving weight was 151.6 pounds. After modifications and incorporation of outstanding E.O.'s the SRV was delivered to systems test for incorporation into the JX-28 system.

The capsule was shipped to VAFB on 16 September 1965.

The -1 recovery system was successfully recovered by air catch on Rev. 81. All re-entry sequence events monitored were normal and occurred within tolerance. The re-entry sequence of events is contained in Table 4-1.

Predicted impact 22° 09'N, 151° 09.8'W

Actual impact 21° 56'N, 151° 09'W

Date: 10 October 1965

Time: 1931Z

The condition of the recovered capsule was satisfactory with no damage other than normal paint blistering due to the re-entry environment.

MISSION 1025-1

RECOVERY SEQUENCE OF EVENTS

Event	Delta Time (Seconds) Actual	Nominal Events $+\Delta T$
*Arm	77.81	77.0 ± 1.0
*Transfer	1.97	$2.0 \pm .25$
Electrical Disconnect	0.77	$0.900^{+0.430}_{-0.400}$
Separation	---	---------
**Spin	3.47	3.4 ± 0.30
Retro	7.54	7.55 ± 0.45
Despin	10.69	10.75 ± 0.59
T/C Separation	2.17	1.5 Nom.
***"G" Switch Open	559.88	560.9 -586.3
Parachute Cover Off	33.84	34.0 ± 1.5
Drogue Chute Deployed	0.65	0.63 ± 0.08
Main Chute Bag Separate	10.89	10.25 ± 1.5
Main Chute Deployed	0.52	0.52 ± 0.13
Main Chute Disreef	4.63	4.50 ± 0.80

* From Separation
** From Electrical Disconnect
*** From Retro

TABLE 4-1

SECTION 5

MISSION 1025-2 RECOVERY SYSTEM

SRV # 636 was received at A/P on 9 August 1963. The receiving weight was 152 pounds. After modification and the incorporation of outstanding E.O.'s the capsule was delivered to systems test for mating to the JX-28 system.

The capsule was shipped to VAFB on 16 September 1965.

The recovery system was successfully recovered by air catch on Rev. 161. All recovery events with the exception of the main parachute deployment were normal and occurred in tolerance.

Blossoming of the main parachute was delayed by 39.18 seconds apparently caused by a failure of the deceleration parachute to pull the main parachute bag free. This condition has been corrected for future flights. Table 5-1 gives a tabulation of the re-entry sequence of events.

Predicted impact 16° 52'N, 159° 47.2'W

Actual impact 17° 06'N, 159° 42'W

Date: 15 October 1965

Time: 1901Z

The condition of the recovered capsule was satisfactory with damage limited to normal paint blistering due to the re-entry environment.

MISSION 1025-2

RECOVERY SEQUENCE OF EVENTS

Event	Delta Time (Seconds) Actual	Nominal Events + Δ T
Arm	N/A	77.0 ± 1
Transfer	2.01	2.0 ± 0.25
Electrical Disconnect	0.98	0.900 $^{+0.430}_{-0.400}$
Separation	---	-----
Spin	3.38	3.4 ± 0.30
Retro	7.56	7.55 ± 0.45
Despin	10.80	10.75 ± 0.59
T/C Separation	2.10	1.5 Nom.
"G" Switch Open	N.A	
Parachute Cover Off	33.78	34.0 ± 1.5
Drogue Chute Deployed	0.69	0.63 ± 0.08
Main Chute Bag Separate	10.69	10.25 ± 1.5
Main Chute Deployed	39.70	0.52 ± 0.13
Main Chute Disreef	4.45	4.5 ± 0.80

* From Separation
** From Electrical Disconnect
*** From Retro

TABLE 5-1

SECTION 6

MASTER PANORAMIC CAMERA

A. COMPONENT ASSIGNMENT

Component	Serial Number
Main Camera	142
Main Camera Lens	1222435
Supply Horizon Camera	131B
Supply Horizon Camera Lens	812289
Take-up Horizon Camera	131A
Take-up Horizon Camera Lens	812269
Supply Cassette	SC-30

B. CAMERA DATA AND FLIGHT SETTINGS

Main Camera:

Lens	24" f/3.5
Slit Width	0.175
Filter Type	Wratten 21
Film Type	Eastman Type 3404

Supply (Port) Horizon Camera:

Lens	55 mm f/6.8
Aperture Setting	f/6.8
Exposure Time	1/100 second
Filter Type	Wratten 25

Take-up (Starboard) Horizon Camera:

Lens	55 mm f/6.8
Aperture Setting	f/8.0
Exposure Time	1/100 second
Filter Type	Wratten 25

C. POST FLIGHT PERFORMANCE EVALUATION

The Master camera produced 2937 frames of panoramic photography during Mission 1025-1 and 3018 frames during Mission 1025-2. The supply spool was depleted during frame 11 of pass D161. A total of 312 feet was used prior to launch; the supply spool sample was 48 feet and 264 feet were metered through the camera during final testing. The supply spool contained approximately 16,020 feet of film.

As previously mentioned Mission 1025 was a cartographic mission for photographic coverage between 40° North Latitude and 20° South Latitude. In order to reduce the quantity of cloud cover the mission was launched in the morning at 1746Z. The cameras were modified for nose forward operation hence the Master camera was the Aft looking camera.

The photographic quality and information content of the Master camera film was equal to or better than previous Corona missions and somewhat better than the Slave camera. Certain examples were among the best ever seen.

The cloud coverage was estimated at 35% during Mission 1025-1 and 25% during Mission 1025-2 however the general presence of atmosphere haze was very low. The absence of this haze is considered one of the major factors in producing the exceptional quality of the film. The MIP frames were pass D63, frame 16 for Mission 1025-1 and pass D95, frame 15 for Mission 1025-2.

The usual light leak fog patterns were present near the beginning and end of some camera operations. The fogging was extremely minor and could only be detected in areas where the background terrain density was dark on the duplicate positions.

Minor banding was occasionally observed near the take-up end of the camera frames. Some scratching was also noted at this same end both under the camera serial number and near the bonus area.

The horizon cameras, time track and binary data block operated properly throughout both missions however the time word did not record on three frames; pass D106 frames 9 and 37 and pass D149 frame 89. The data block index lamps were slightly bloomed but not to an extent that hampered automatic readout. A small static discharge pattern was noted in most horizon camera formats originating from fiducial lamp. The pattern was very small and did not extend into the horizon imagery.

The Master camera supply spool contained five manufacturers splices. Static discharge patterns were noted in frames ahead of and behind these splices. This pattern is attributed to the adhesive bleed from the splicing tape which causes the adjacent film layers to adhere to the tape and separate at a greater tension that normal.

Five additional heat splices were required to repair incorrect between operation cuts made at the processing facility. These splices are all between frames and did not affect any photography.

SECTION 7

SLAVE PANORAMIC CAMERA

A. COMPONENT ASSIGNMENT

Component	Serial Number
Main Camera	127
Main Camera Lens	1032435
Supply Horizon Camera	140 B
Supply Horizon Camera Lens	813549
Take-up Horizon Camera	141 A
Take-up Horizon Camera Lens	812280
Supply Cassette	SC-30

B. CAMERA DATA AND FLIGHT SETTINGS

Main Camera:

Lens	24" f/3.5
Slit Width	0.175
Filter Type	Wratten 21
Film Type	Eastman Type 4404

Supply (Starboard) Horizon Camera:

Lens	55 mm f/6.8
Aperture Setting	f/8.0
Exposure Time	1/100 second
Filter Type	Wratten 25

Take-up (Port) Horizon Camera:

Lens	55 mm f/6.8
Aperture Setting	f/6.8
Exposure Time	1/100 second
Filter Type	Wratten 25

C. POST FLIGHT PERFORMANCE EVALUATION

The Slave camera produced 2896 photographic frames during Mission 1025-1 and 3038 during Mission 1025-2. Approximately eight feet of film remained within the payload after the second recovery. The pre-flight supply spool sample was 55 feet long and 264 feet of film was metered through the camera during final ground testing.

The photographic quality and information content of the forward looking Slave camera was comparable to but somewhat inferior to the Master camera. Both panoramic cameras used a Wratten 21 filter due to the illumination conditions within the prime latitude band of operations. It was considered probable that the Slave camera photography would have improved if a Wratten 25 filter had been used.

At frame 13 of pass D 09 the take-up horizon camera produced double imagery with an offset of approximately 0.003 inches. The majority of the subsequent take-up horizon images appeared slightly out of focus. Concurrently with this anomaly the three horizon fiducials adjacent to the corresponding panoramic frame became slightly bloomed and a soft focus area appeared along the data block side of all following panoramic frames. The soft imagery was extremely slight as it was only apparent at magnifications greater than .20X. It was concluded that the take-up horizon camera platen was not fully seating. The cause of this failure is not known.

The frequency and magnitude of the light leak patterns, dendritic static in the horizon camera formats and bands of fine scratches was essentially the same as observed in the Master camera. Some edge static patterns were observed intermittently during passes D 51, D 52, D 53, D 141, D 143 and D 148. Static patterns were also present in association with the five manufacturers splices on the supply spool.

The data block index lamps were bloomed throughout both missions however the magnitude of the blooming did not preclude automatic readout of the time word.

SECTION 8

PANORAMIC CAMERA EXPOSURE

The exposure condition for both the panoramic cameras were a 0.175 inch wide slit and Wratten 21 filter. These conditions place the nominal exposure between the intermediate and full level processing curves as published by [redacted] for 3404 emulsion.

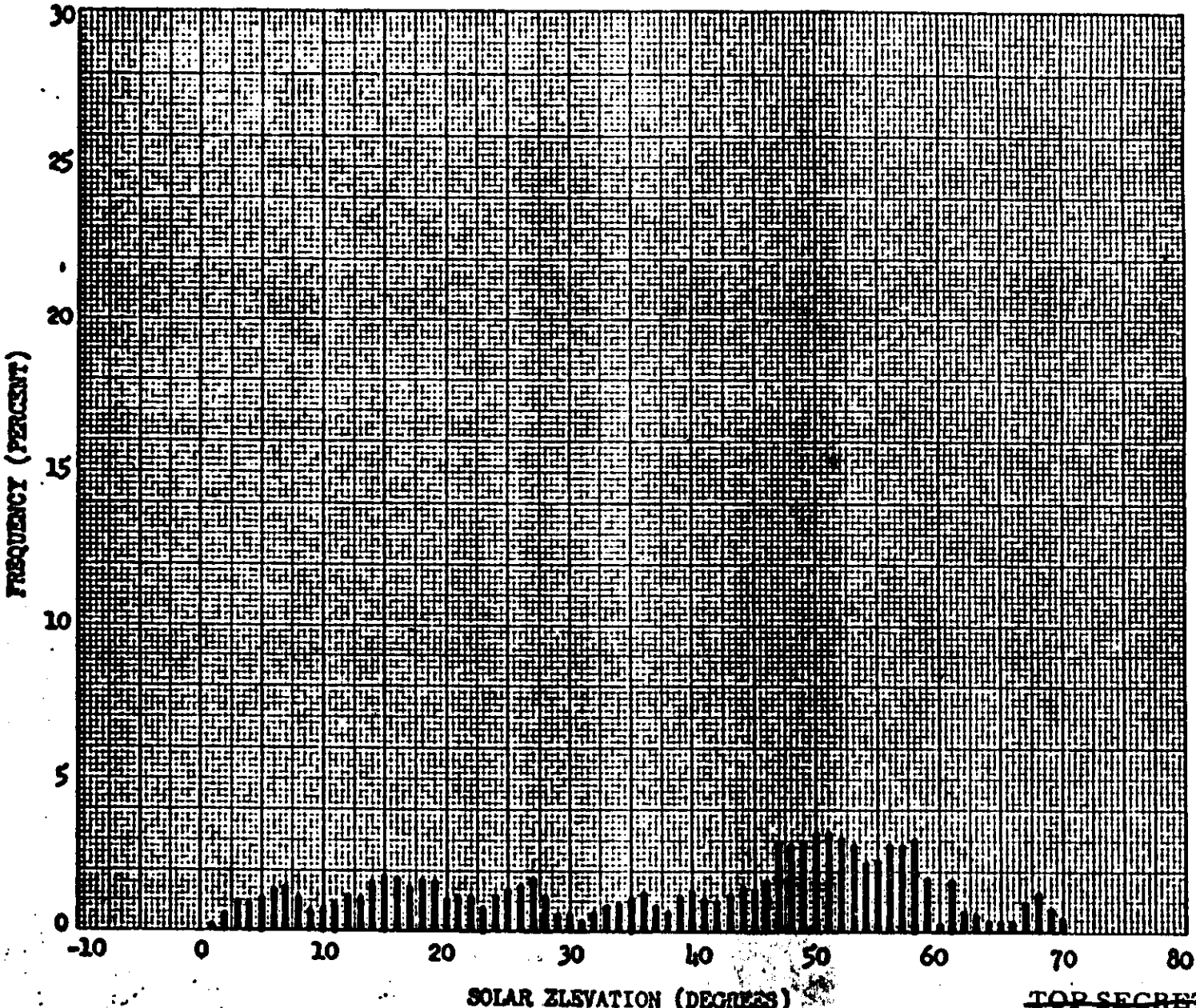
The illumination conditions during the mission were relatively constant. The frequency distributions of the solar elevations and solar azimuths encountered during the photographic operations are shown in Figures 8-1 and 8-2. Data for "B" mission not available.

The nominal exposure times are shown as a function of latitude for passes D 8, D 56, D 104 and D 152 in Figures 8-3 to 8-6. The predicted level of processing for the original negative is based on the in-flight performance estimate and is tabulated below with the processing levels reported by [redacted]

Mission	Camera		Primary	Intermediate	Full
1025-1	FWD	Predicted	0	68	32
		Reported	10	41	49
1025-1	AFT	Predicted	0	72	28
		Reported	8	49	43
1025-2	FWD	Predicted	0	71	29
		Reported	2	42	56
1025-2	AFT	Predicted	0	73	27
		Reported	3	45	52

The variation in the predicted and reported processing levels is generally consistent with the data observed from recent missions. The use of greater percentages of full processing has been experienced during earlier Corona missions however recent reported processing has usually had a greater percentage of intermediate processing. The basis for this shift is not presently understood and is under study.

SOLAR ELEVATION FREQUENCY DISTRIBUTION



Mission No: 1025-1

Payload No: JX-28

Camera No: 127

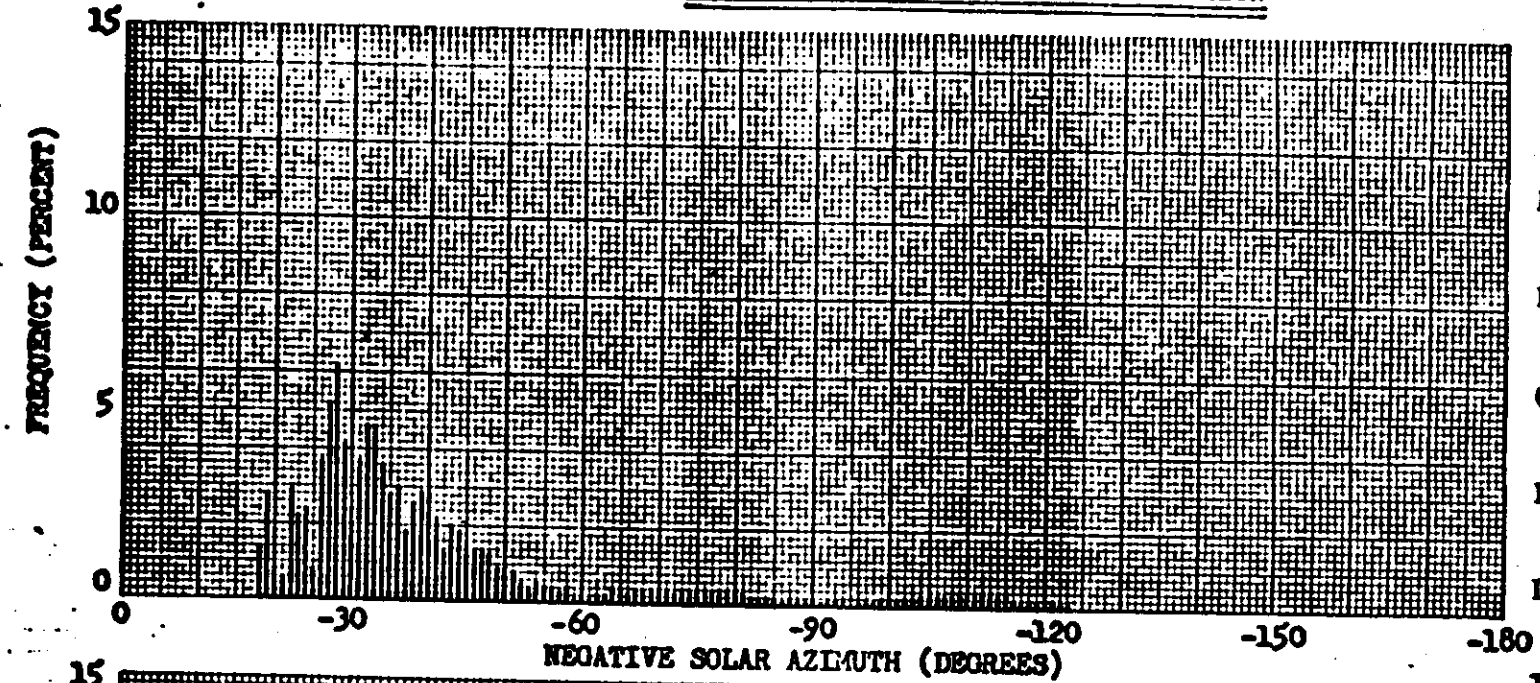
Launch Date: 10/5/65

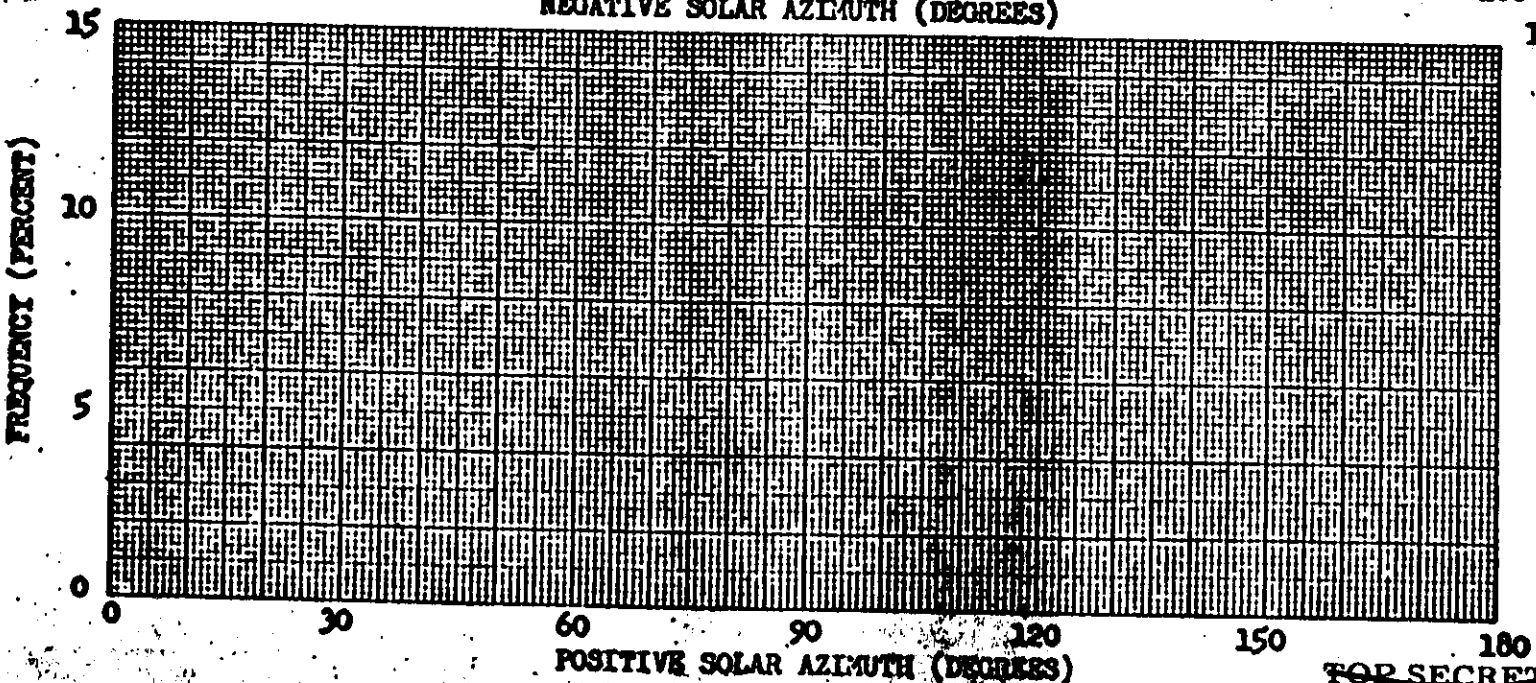
Launch Time: 1746 Z

Inclination: 75°

FIGURE 8-1

SOLAR AZIMUTH FREQUENCY DISTRIBUTION





Mission No: 1025-1

Payload No: JX-28

Camera No: 127

Launch Date: 10/5/65

Launch Time: 1746 Z

Inclination: 75°

SIGN NOTATION

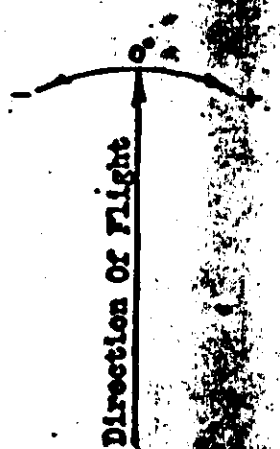
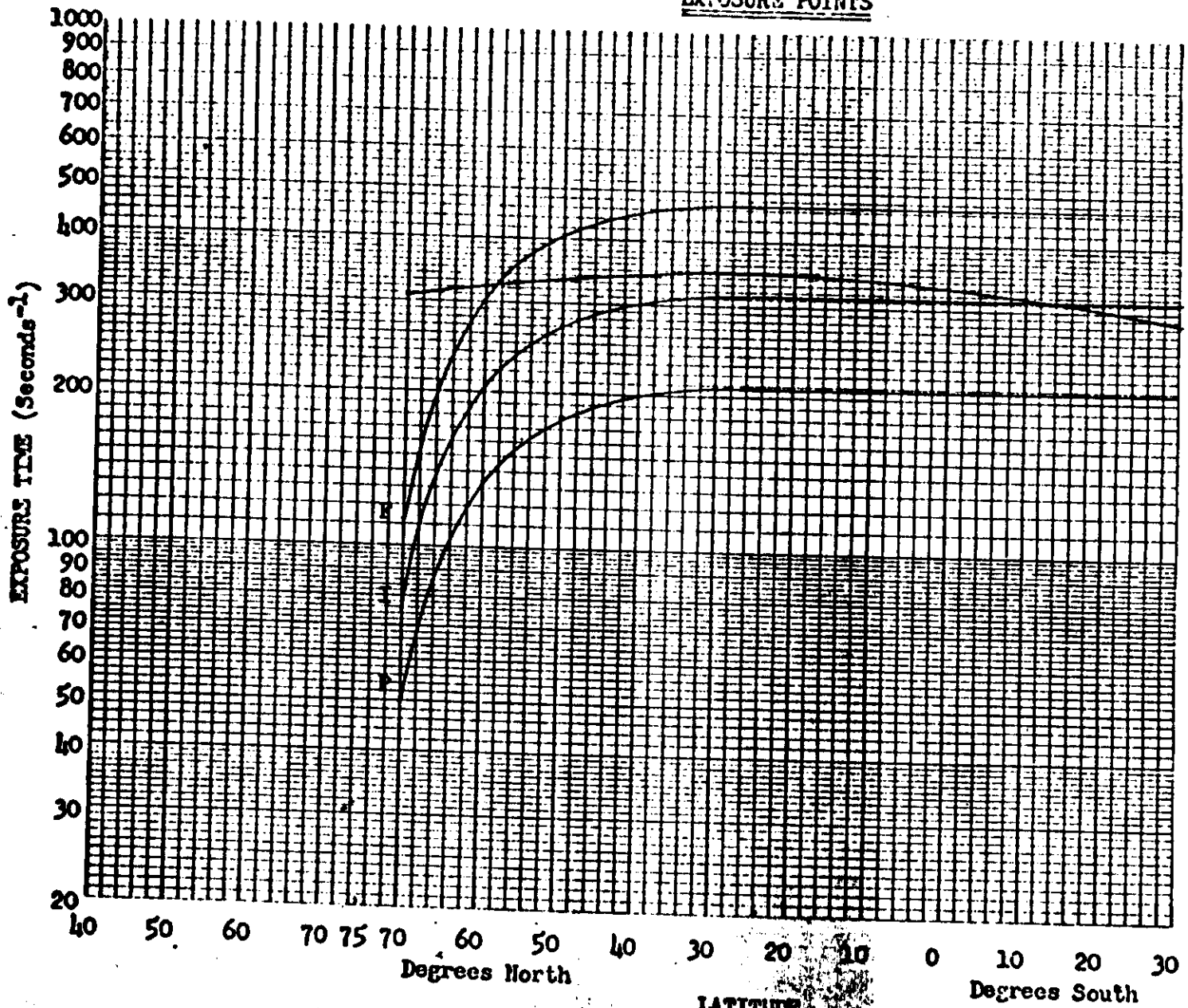


FIGURE B-2

EXPOSURE POINTS



Mission No: 1025

Payload No: JI-28

Camera No: 127 - 142

Pass No: 8

Launch Date: 10/5/65

Launch Time: 1746 Z

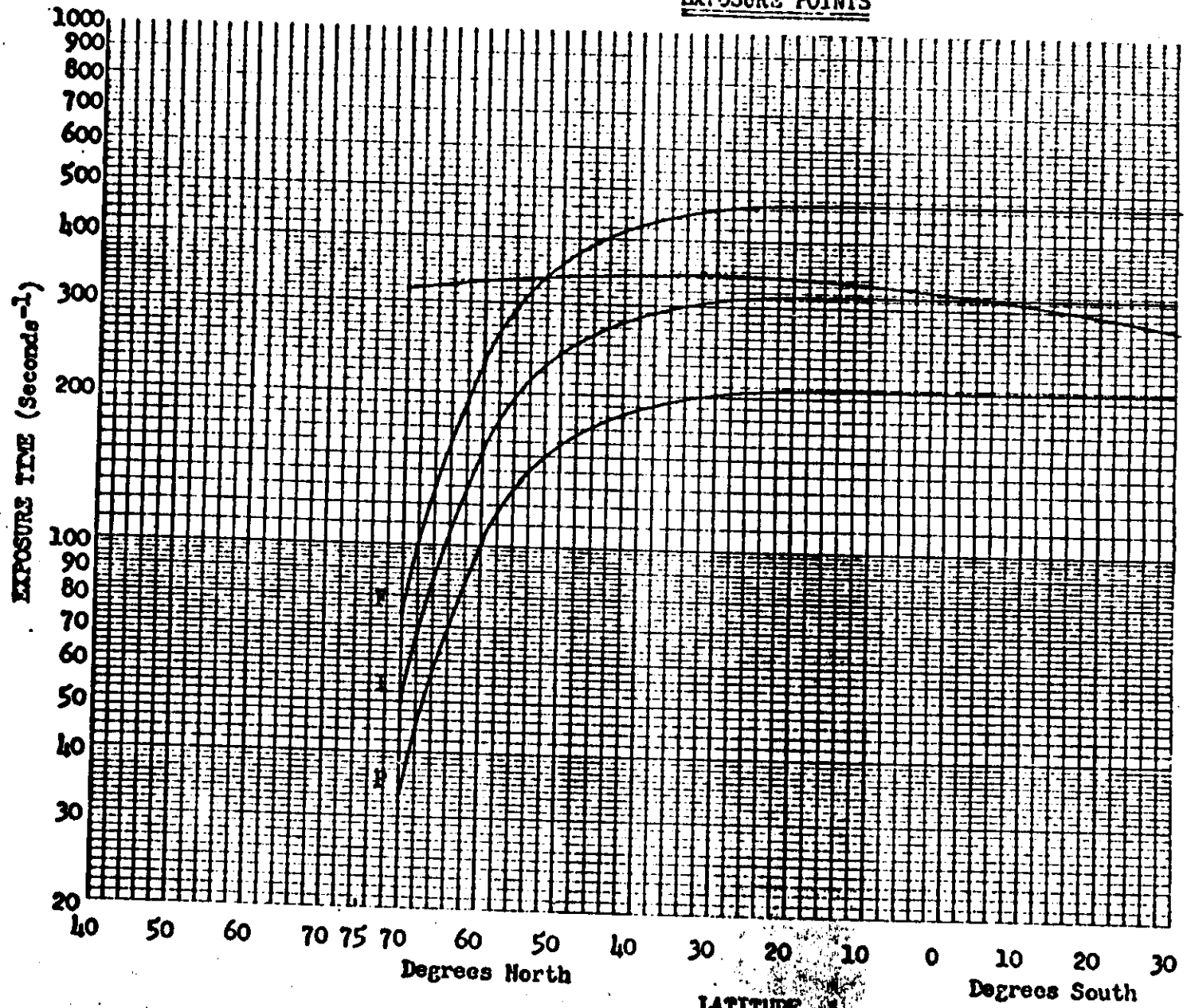
Slit Width: .175

Filter Type: Wratten 21

Film Type: 3404

FIGURE 8-3

EXPOSURE POINTS



Mission No: 1025

Payload No: JX-28

Camera No: 127 - 142

Pass No: 56

Launch Date: 10/5/65

Launch Time: 1746 Z

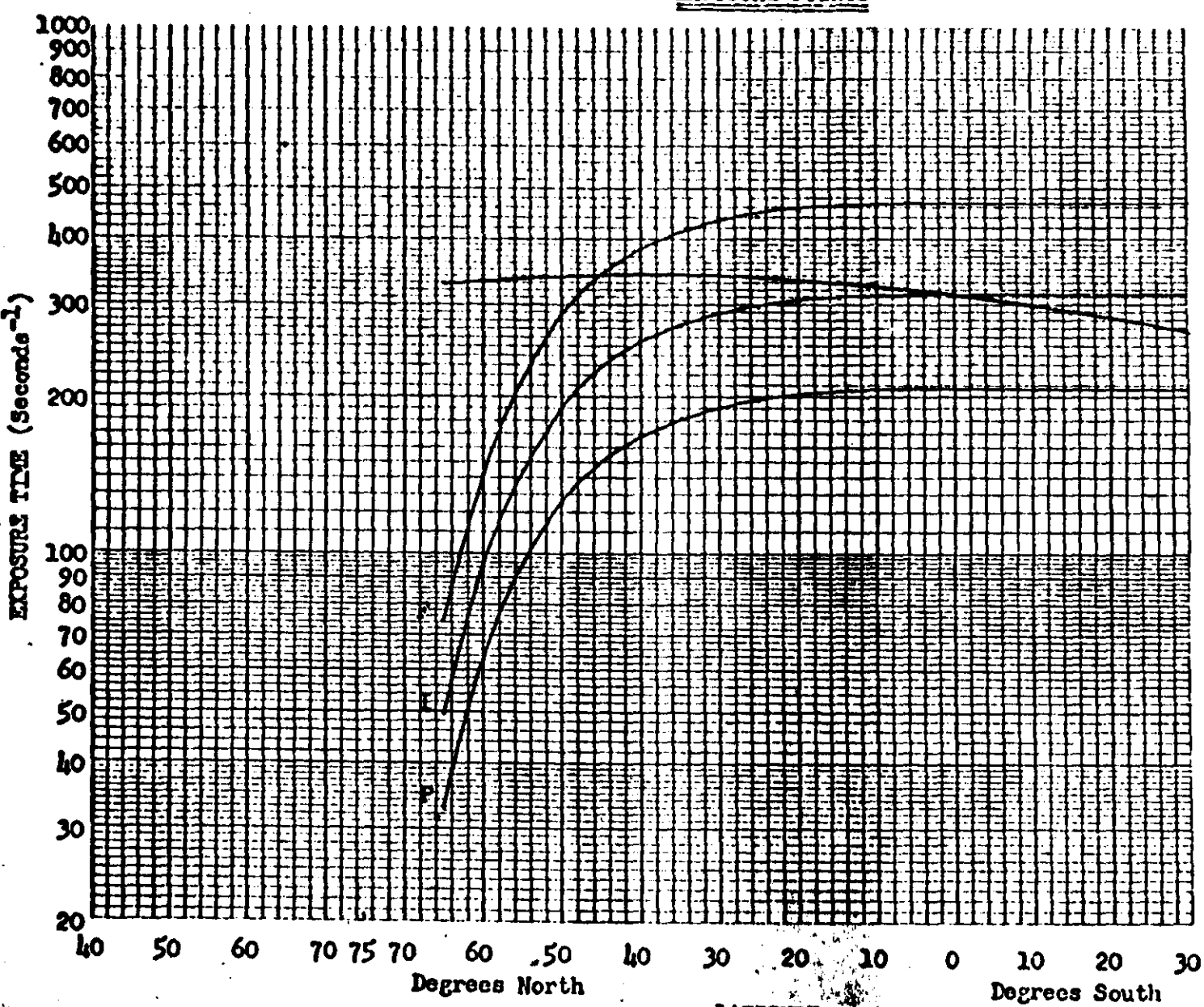
Slit Width: .175

Filter Type: Wratten 21

Film Type: 3404

FIGURE 8-4

EXPOSURE POINTS



Mission No: 1025

Payload No: JX-28

Camera No: 127 - 142

Pass No: 104

Launch Date: 10/5/65

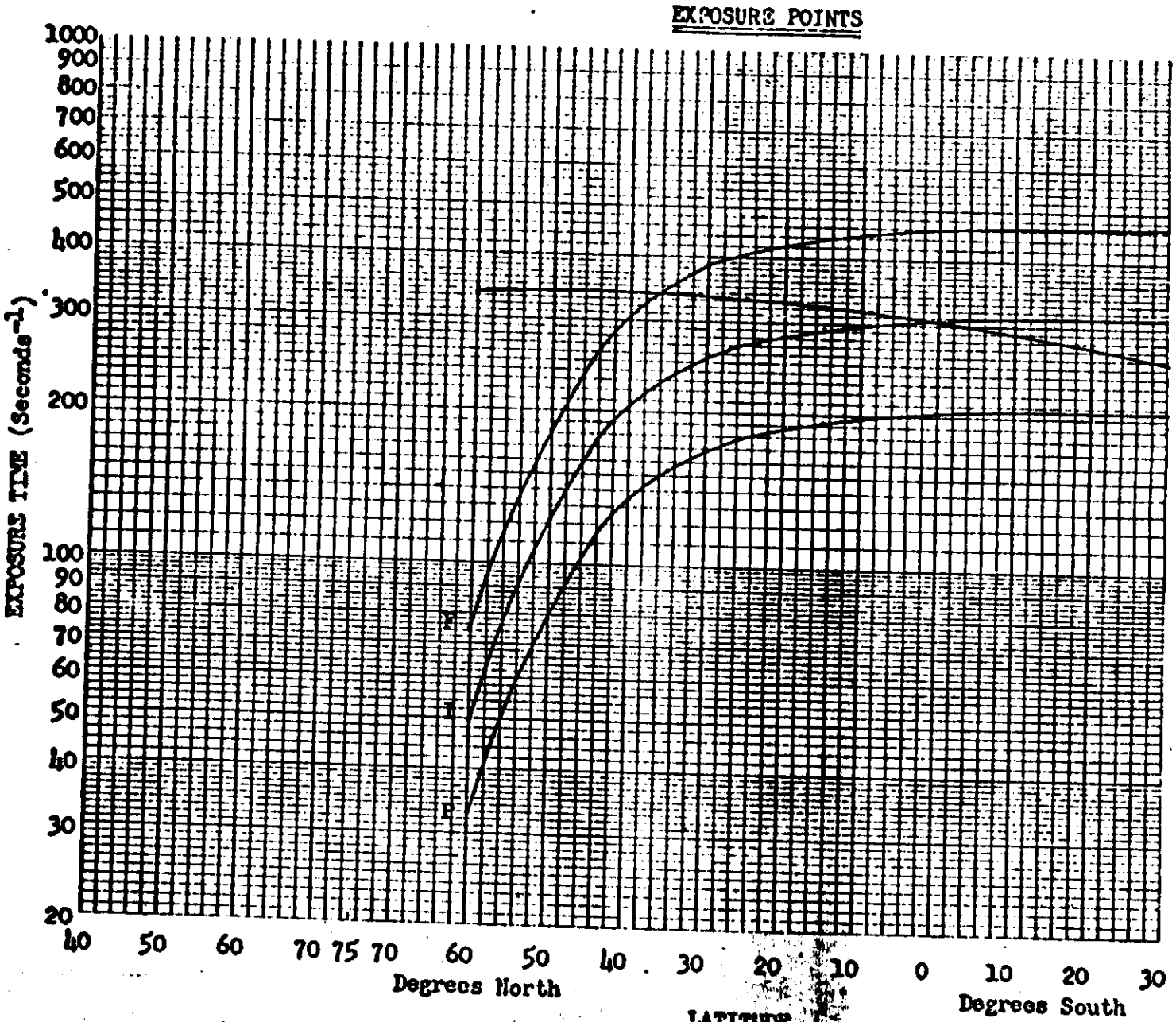
Launch Time: 1746 Z

Slit Width: .175

Filter Type: Wratten 21

Film Type: 3404

FIGURE 8-5



Mission No: 1025

Payload No: JX-28

Camera No: 127 - 1[redacted]

Pass No: 152

Launch Date: 10/5/65

Launch Time: 1746 Z

Slit Width: .175

Filter Type: Wratten [redacted]

Film Type: 3404

FIGURE 8-6

SECTION 9

DIFFUSE DENSITY MEASUREMENTS

The diffuse density measurements made by AFSPPF were computer sorted at A/P to permit analysis of the density ranges encountered at the three processing levels. A study of sorting techniques showed that no absolute method was available to separate the density values as the accuracy of the Processing History published by [redacted] appears rather low and processing transition phases are not accounted for. The sorting technique selected uses the base plus fog density values where measurements up to 0.09 density are considered as having received Primary processing, 0.10 to 0.17 as Intermediate and above 0.17 density as Full. The percentage of original negative that was processed at each level, based on the computer sort, is tabulated below with the predicted and reported processing percentages.

Mission	Camera		Primary	Intermediate	Full
1025-1	FWD	Predicted	0	68	32
		Reported	10	41	49
		Computed	0	56	44
1025-1	AFT	Predicted	0	72	28
		Reported	8	49	43
		Computed	0	61	39
1025-2	FWD	Predicted	0	71	29
		Reported	2	42	56
		Computed	0	56	44
1025-2	AFT	Predicted	0	73	27
		Reported	3	45	52
		Computed	0	51	49

The tabulations of density frequency distributions for Missions 1025-1 and 1025-2 are included in Appendix A, Table A-1 through A-4. The graphical presentation of the density distribution are computer plotted in Appendix A, Figures A-1 through A-36.

A summary of the processing and exposure analysis is shown in Table 9-1. The terrain D_{Min} criteria (range) for proper exposure and processing is 0.40 to 0.90 density units.

TABLE 9-1

~~TOP SECRET~~ [redacted] CONTROL NO. [redacted]

MISSION 1025-1 INSTR - FRWD 12/30/65 PROCESSING AND EXPOSURE ANALYSIS

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	0	0 PC	0 PC	0 PC	0 PC	0 PC
INTERMEDIATE	141	3 PC	44 PC	47 PC	5 PC	1 PC
FULL	110	71 PC	0 PC	27 PC	2 PC	0 PC
ALL LEVELS	251	33 PC	25 PC	38 PC	4 PC	1 PC

MISSION 1025-1 INSTR - AFT 12/30/65 PROCESSING AND EXPOSURE ANALYSIS

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	0	0 PC	0 PC	0 PC	0 PC	0 PC
INTERMEDIATE	157	1 PC	33 PC	54 PC	10 PC	1 PC
FULL	100	62 PC	0 PC	37 PC	1 PC	0 PC
ALL LEVELS	257	25 PC	20 PC	47 PC	7 PC	1 PC

MISSION 1025-2 INSTR - FRWD 12/30/65 PROCESSING AND EXPOSURE ANALYSIS

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	0	0 PC	0 PC	0 PC	0 PC	0 PC
INTERMEDIATE	145	3 PC	38 PC	52 PC	7 PC	0 PC
FULL	115	62 PC	0 PC	37 PC	1 PC	0 PC
ALL LEVELS	260	29 PC	21 PC	45 PC	4 PC	0 PC

MISSION 1025-2 INSTR - AFT 12/30/65 PROCESSING AND EXPOSURE ANALYSIS

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	0	0 PC	0 PC	0 PC	0 PC	0 PC
INTERMEDIATE	135	0 PC	24 PC	67 PC	10 PC	0 PC
FULL	132	39 PC	0 PC	55 PC	6 PC	0 PC
ALL LEVELS	267	19 PC	12 PC	61 PC	8 PC	0 PC

PROCESS LEVEL	BASE + FOG	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	0.01-0.09	0.01-0.13	0.14-0.39	0.40-0.90	----------	0.91 AND UP
INTERMED	0.10-0.17	0.01-0.20	0.21-0.39	0.40-0.90	0.91-1.34	1.35 AND UP
FULL	0.18 AND UP	0.01-0.39	----------	0.40-0.90	0.91-1.69	1.70 AND UP

~~TOP SECRET~~ [redacted] CONTROL NO. [redacted]

SECTION 10

PERFORMANCE MEASUREMENTS

The photography acquired by both panoramic cameras during Missions 1025-1 and 1025-2 received an MIP rating of 85. A summary is tabulated below of the MTF/AIM resolution values measured by AFSPPF and [redacted]. The microdensitometer slit used by AFSPPF and [redacted] was 1 micron by 80 microns.

Mission	Camera	AFSPPF	[redacted]
1025-1	FWD	87	79
1025-1	AFT	97	100
1025-2	FWD	85	95
1025-2	AFT	91	88

The details of the measurement and computing techniques, targets measured and target locations are fully reported in the evaluation report published by AFSPPF and are not normally included in this report.

SECTION 11

OBSERVED DATA

Mission 1025 flight film contained photography from 14 daylight engineering operations. Approximately 50% of this coverage consisted of water, clouds or snow, and pass 94 was too dense to be usable on our Dupe Positive.

Ground resolution targets were photographed on 5 passes and the results are tabulated below:

Pass	Location	Type	Contrast	FWD Frame	Resolution	AFT Frame	Resolution
31	Lowry AFB	Mobile T	Med	5	12'	11	12'
63	Holloman	Fixed B5	Med	8	8' AT, 0 CT	14	9' AT, 11' CT
63	Holloman	Fixed B1	Med	7	11' AT, 0 CT	13	9' AT, 8' CT
95	Phoenix	Mobile T	Med	1	Start-up	7	12'
95	Ft. Huachuca	Fixed 3 Bar	Hi	13	14'	No photography	
95	Ft. Huachuca	Fixed 3 Bar	Hi	14	0	No photography	
111	Indian Springs	Fixed Std	Med	2	0	10	0
111	Dry Lake, Nev.	Mobile	Med	Only partially set up			
143	Edwards AFB	Mobile T	Med	8	16'	14	16'
143	Edwards AFB	Fixed "C"	Med	8	14'	14	12'
143	Edwards AFB	Fixed "B_2"	Hi	8	10'	14	10'

NOTE: CT = Cross Track; AT = Along Track

Most of the variable ground resolution can be accounted for in terms of atmospheric conditions. Several of the target areas which had no detectable haze no doubt did have some. For example, the targets at Edwards AFB, pass 143, did not appear to contain any haze, though a considerable difference in ground resolution is shown at different targets in the same frame. In the following frame haze was detectable and less than 20 miles from the targets, cloud cover was 100%.

In pass 95, the Fort Huachuca target was at the timing track edge of frame 13 forward, and the resolution was 14 feet. However, frame 14 contained the same target at the data block edge and the largest group (20 feet) could not be resolved. In this case, soft imagery was the cause. Throughout the mission the forward camera exhibited this out-of-focus condition along

the data block edge. This condition was visually confined to the outer 1/4 inch but occasionally moved half way across the format. It was not apparent with 7X magnification but could be seen with 10X.

Except for the soft areas, the performance of the panoramic cameras was about equal with the forward containing slightly more edge spread because of "facing illumination."

The detection of objects of relatively small dimensions in some places was as good or slightly better than the previous 3 missions. Cat walks on clarifier tanks (3' typical) of sewage treatment plants at Denver and Colorado Springs were quite distinguishable. These were located not many miles from Lowery AFB where the mobile target array could only be resolved down to 12 feet. Many places individual cars in parking lots could be isolated and cars distinguished from trucks on highways. Near Davis-Monthan AFB at Tucson, Arizona many obsolete military aircraft of all sizes are stored. Most of these are parked facing either North or South and the sun is south-east. Engine nacelles of fighter-size aircraft and the pods of B47s could be distinguished where viewed against the aircraft's own shadow on the ground. This same effect was seen at Litchfield Park NAS near Phoenix where some carrier-size planes were parked facing West.

Perhaps the most unusual photograph ever taken is frame 3 aft of pass 81. Here, during the pitch-down operation, the curve of the horizon sweeps across the longitudinal axis of the format and in the bonus area is the full moon, slightly out of focus and slightly smeared due to the pitch rate. It is a spectacular photograph.

SECTION 12

MISSION 1025-1 STELLAR-INDEX CAMERA

A. COMPONENT ASSIGNMENT

Component	Serial Number
Camera	D-73
Index Reseau	78
Index Camera Lens	817717
Stellar Reseau	88
Stellar Camera Lens	11984

B. CAMERA DATA AND FLIGHT SETTINGS

Stellar Camera:	
Lens	85 mm f/1.8
Exposure Time	2 seconds
Filter Type	None
Film Type	Eastman Type 4401
Index Camera:	
Lens	38 mm f/4.5
Exposure Time	1/500 second
Filter Type	Wratten 21
Film Type	Eastman Type 4400

C. POST FLIGHT EVALUATION

The Stellar-Index camera operated properly throughout the mission. There was no observed fogging on the film from either light leaks or static discharge except the degradation normally associated with film depletion. The Stellar camera produced 408 frames of film depletion and the Index camera imaged 438 frames.

The degree of flare was unusually high. It affected 60% of the format, however over 30 star images per frame were detectable. The images were elongated but not of an odd shape.

An abrasion was noted on the base side of the stellar film from the start to one foot from the end. This mark was not on preflight material removed at A/P.

There were no images of foreign material (fuel particles) in the stellar photography.

The index photo quality was good. Edge skinning was evident throughout the roll.

SECTION 13

MISSION 1025-2 STELLAR-INDEX CAMERA

A. COMPONENT ASSIGNMENT

Component	Serial Number
Camera	D-70
Index Reseau	88
Index Camera Lens	817711
Stellar Reseau	81
Stellar Camera Lens	11231

B. CAMERA DATA AND FLIGHT SETTINGS

Stellar Camera:	
Lens	85 mm f/1.8
Exposure Time	2 seconds
Filter Type	None
Film Type	Eastman Type 4401
Index Camera:	
Lens	38 mm f/4.5
Exposure Time	1/500 second
Filter Type	Wratten 21
Film Type	Eastman Type 4400

C. POST FLIGHT EVALUATION

The cameras operated satisfactorily throughout the mission. The Stellar camera produced 403 frames and the Index camera 420 frames. There were no light leaks.

The stellar images were elongated and dumbbell shaped. The flare level was lower than on the A mission. Emulsion cracking was evident on all but the first 2 feet.

The Index camera quality was equal to the best observed. There was intermittent static on both film edges. There was intermittent creasing in the middle third of the roll from processing.

SECTION 14

VEHICLE ATTITUDE

The vehicle attitude errors for both Mission 1025-1 and 1025-2 were derived from the reduction of the Stellar camera photography. This attitude data is supplied to A/P by NPIC.

The attitude errors for each frame and the attitude control rates are calculated at the A/P computer facility. The computer also plots the frequency distribution of the rates and errors. Figures 14-1 through 14-6 show these distributions for Mission 1025-1.

The summary table below lists the maximum attitude errors and rates that were experienced during 90% of the FWD photographic operations, excluding the first six frames of each operation, and the total range of the errors and rates. Data for 1025-2 was not available at the time of this report.

Value	Mission 1025-1 90%	Range
Pitch Error (^{o})	0.51	-0.40 to +0.85
Roll Error (^{o})	0.42	-0.60 to +0.65
Yaw Error (^{o})	0.85	-1.30 to +1.25
Pitch Rate (^{o}/hr)	28.63	-56 to +56
Roll Rate (^{o}/hr)	29.72	-85 to +70
Yaw Rate (^{o}/hr)	25.70	-38 to +48

The performance of the attitude control system is comparable to the best control systems used on recent missions. The panoramic photography was not degraded by the attitude control system.

X-28A-BUCKET TWO INSTRUMENT FRAMES 1-6 OF EACH OP OMITTED . 90 PERCENT = 0.5[illegible]

Y PITCH ANGLE ERROR - DEGREES (X) VERSUS FREQUENCY - PERCENT (Y)

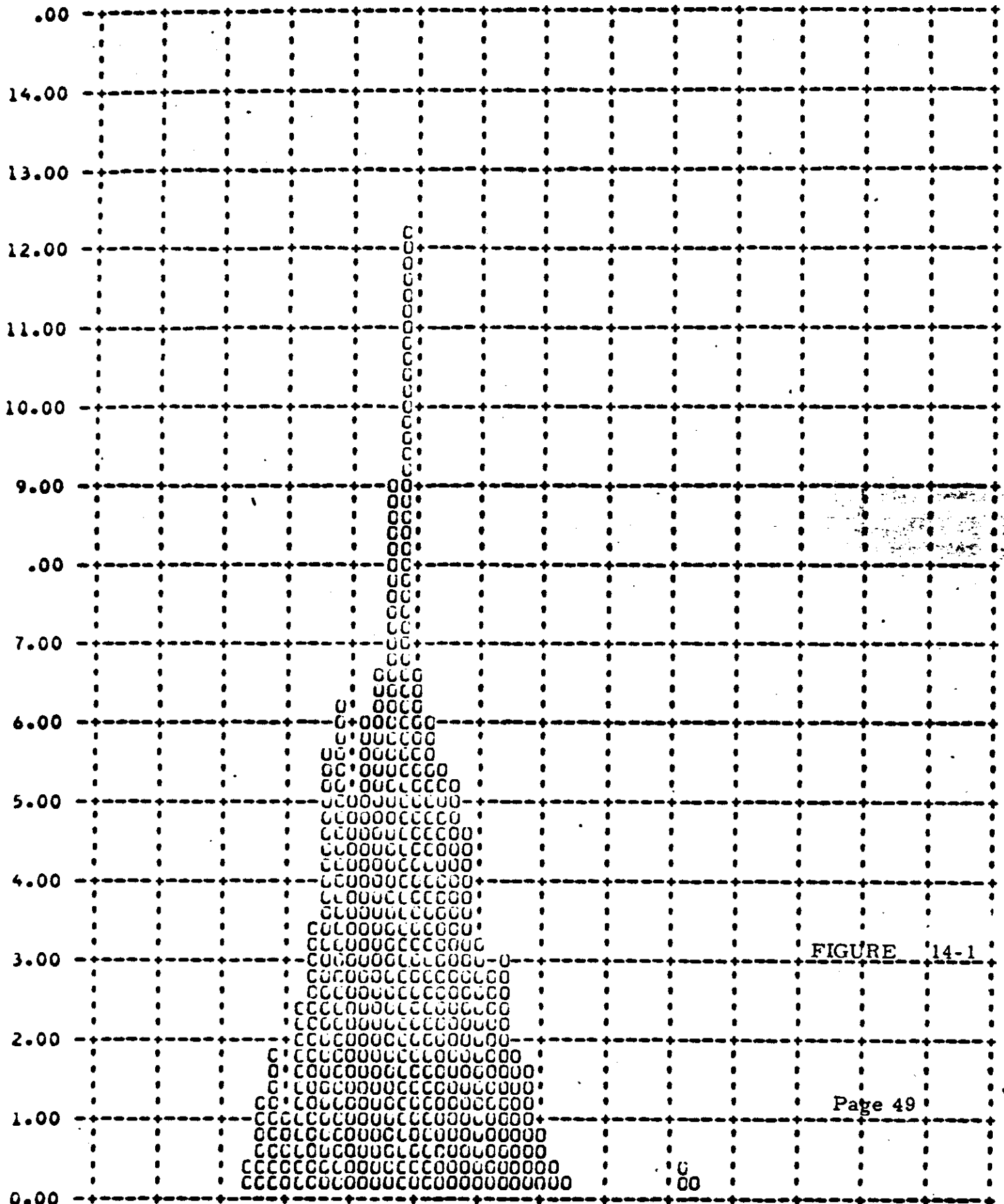


FIGURE 14-1

IX-28A-BUCKET FWD INSTRUMENT FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 0.42

Y ROLL ANGLE ERROR - DEGREES (X) VERSUS FREQUENCY - PERCENT (Y)

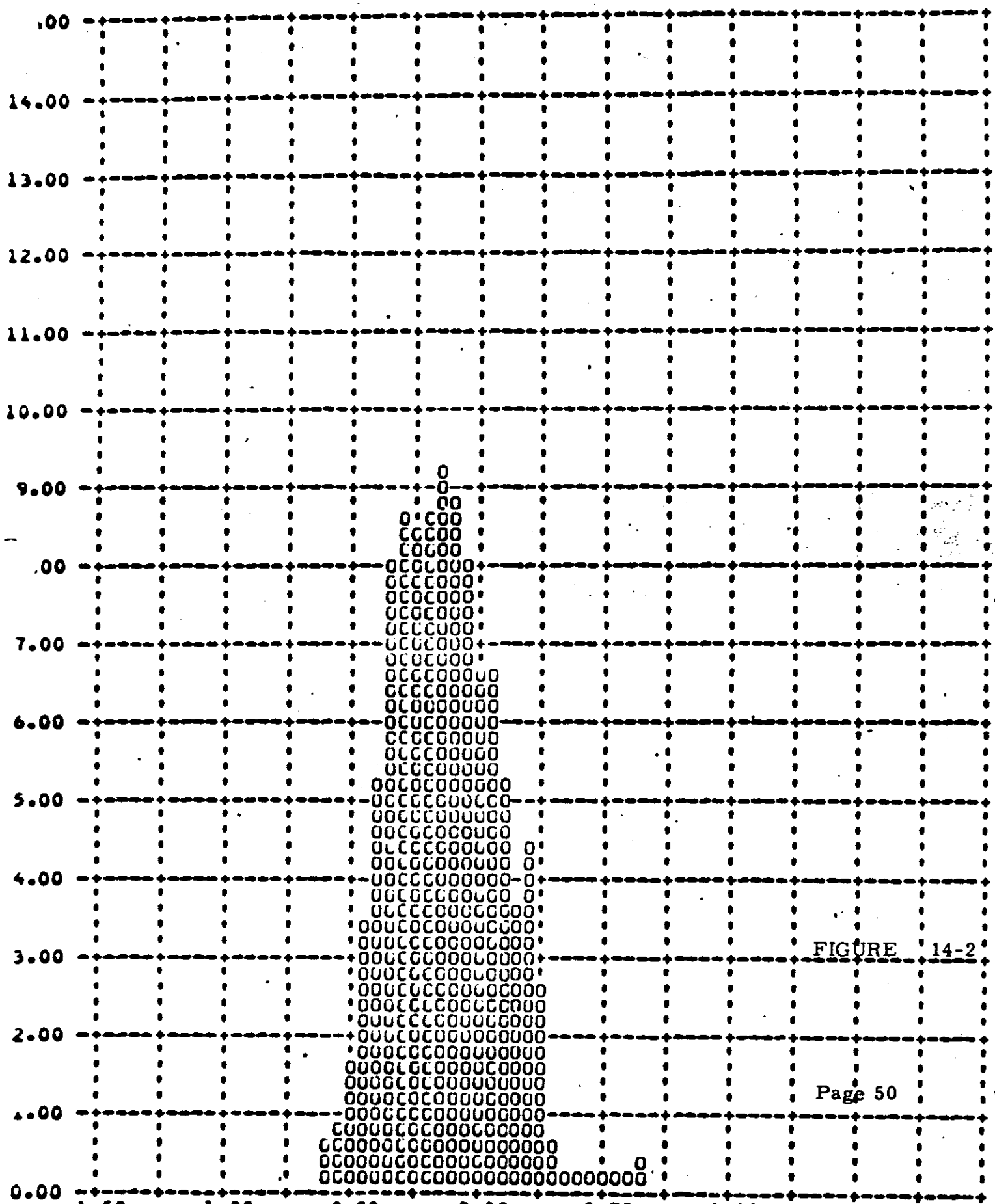


FIGURE 14-2

X-28A-BUCKET FWD INSTRUMENT FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 0.85

Y YAW ANGLE ERROR - DEGREES (X) VERSUS FREQUENCY - PERCENT (Y)

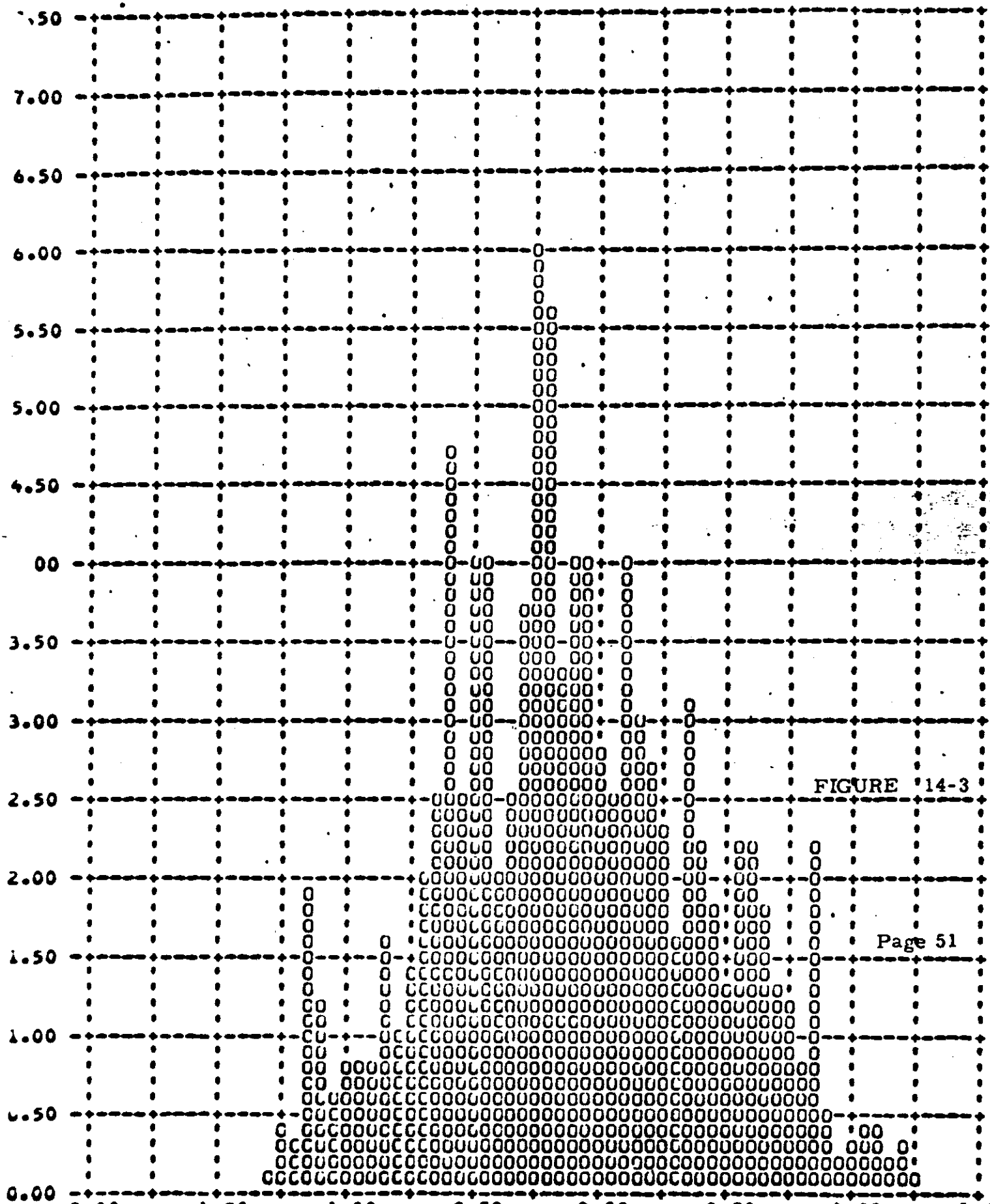


FIGURE 14-3

X-28A-BUCKET FWD INSTRUMENT FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 28.63

Y PITCH RATE ERROR - DEG/HOUR (X) VERSUS FREQUENCY - PERCENT (Y)

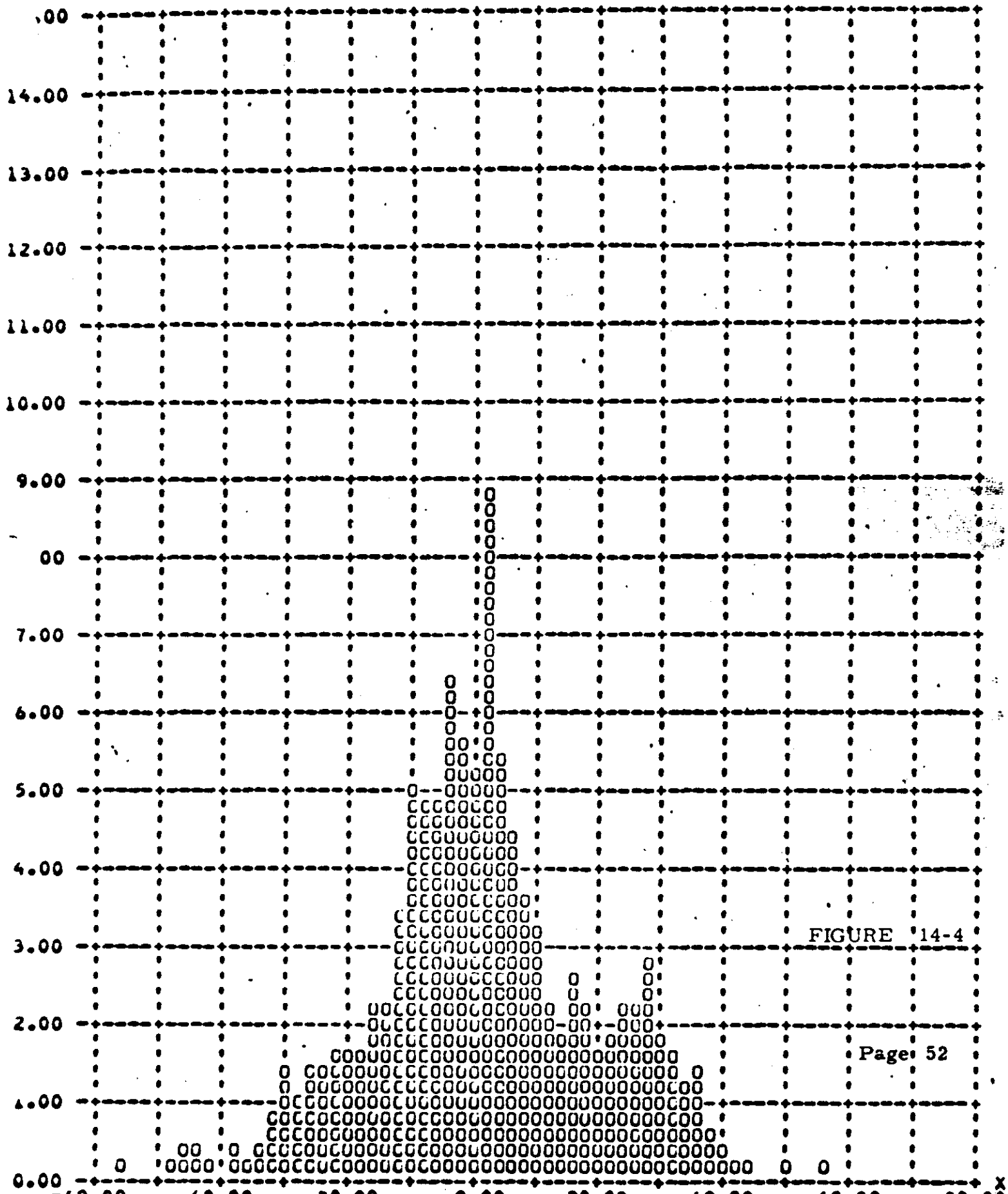


FIGURE 14-4

X-28A-BUCKET IND INSTRUMENT - FRAMES 1-6 OF EACH OF OMITTED - 90 PERCENT = 29.72

Y ROLL RATE ERROR - DEG/HOUR (X) VERSUS FREQUENCY - PERCENT (Y)

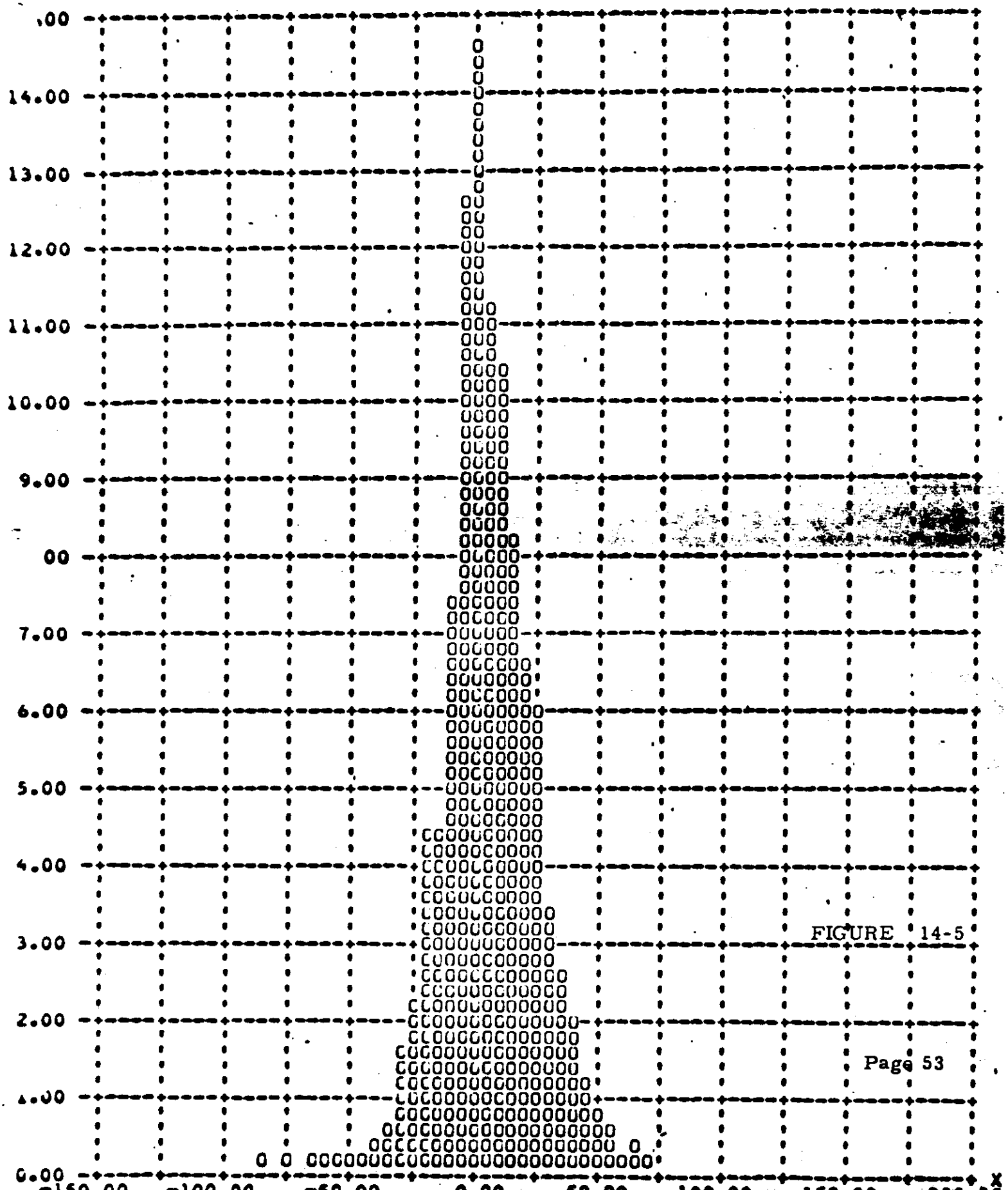


FIGURE 14-5

K-28A-BUCKET IND. INSTRUMENT FRAMES 1-6 OF EACH OF OMITTED 90 PERCENT = 25.70

Y YAW RATE ERROR - DEG/HOUR (X) VERSUS FREQUENCY - PERCENT (Y)

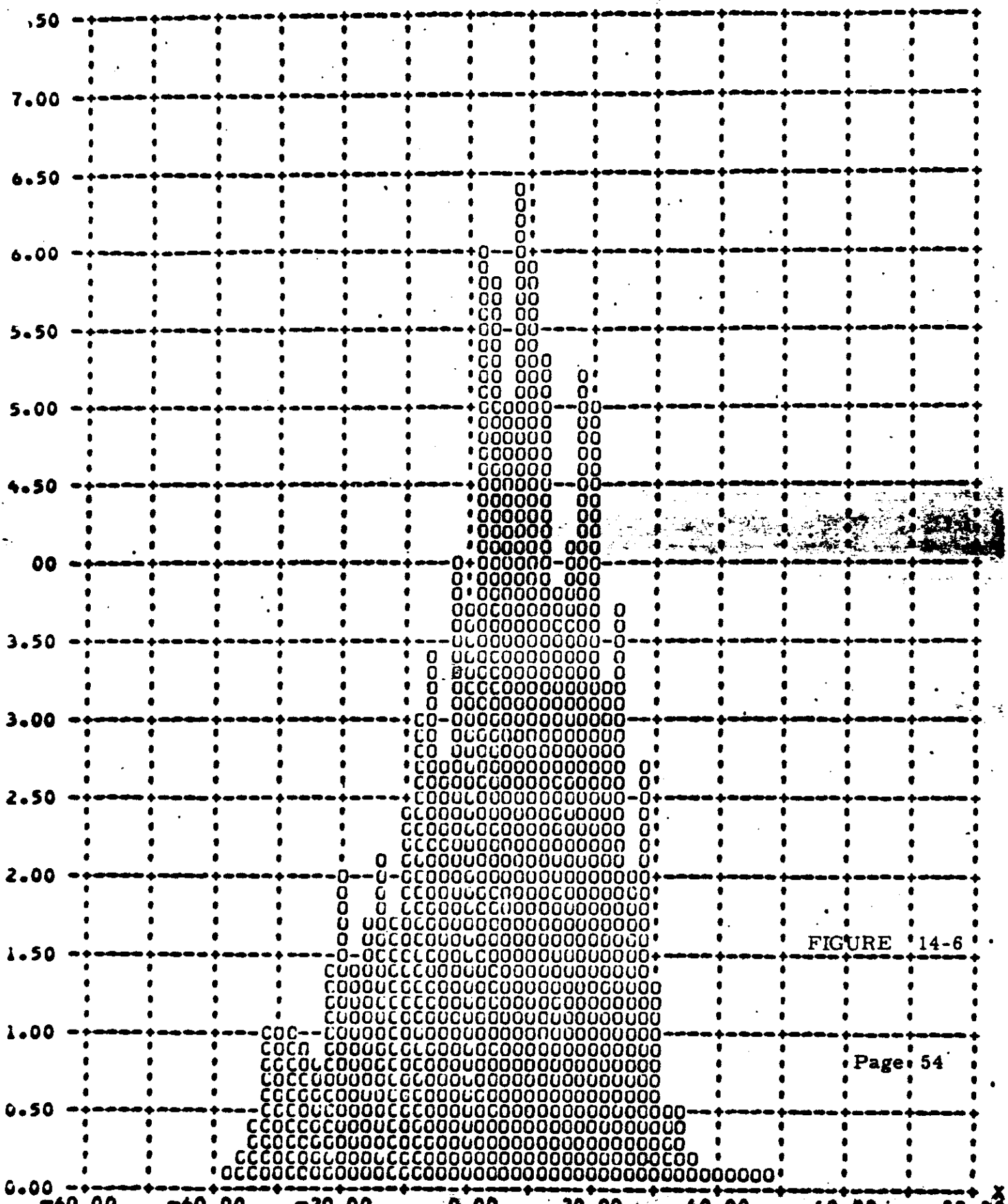


FIGURE 14-6

SECTION 15

IMAGE SMEAR ANALYSIS

The frame correlation tape supplied to A/P by NPIC contains the binary time word of each frame of photography. A computer program has been assembled at A/P which calculates the exposure time of each frame and compares the camera cycle rate with the ephemeris to calculate the V/h mismatch. This data is combined with the vehicle attitude error and rate values of each frame and the crab error caused by earth rotation at the latitude of each frame. The program outputs the total along track and cross track IMC error and the limit of ground resolution that can be acquired by a camera regardless of focal length and system capabilities.

The computer rejects the first six frames of all operations as the large V/h error induced by camera start-up is not representative of the overall system operations. The frequency distribution of the V/h errors and resolution limits are computer plotted and are shown in Figures 15-1 through 15-6.

The summary table, 15-1, below presents the maximum V/h ratio errors and resolution limits that existed during 90% of the photographic operations and the total range of values during all operations that were computed. Data for 1025-2 was not available at the time of this report.

Value	Units	Camera	Mission 1025-1 90%	Range
V/h Ratio Error	%	FWD	3.19	-9.2 to +2.0
		AFT	2.03	-8.0 to +3.2
Along Track Resolution Limit	Feet	FWD	2.77	0.2 to 6.8
		AFT	3.94	0.2 to 8.0
Cross Track Resolution Limit	Feet	FWD	6.75	0.4 to 7.8
		AFT	6.68	0.4 to 7.6

TABLE 15-1

JX-28-BUCKET PKG INSTRUMENT, 1 FRAMES 1-6 OF EACH OMITTED - 90 PERCENT = 7.19

Y V/H RATIO ERROR - PERCENT (X) VERSUS FREQUENCY - PERCENT (Y)

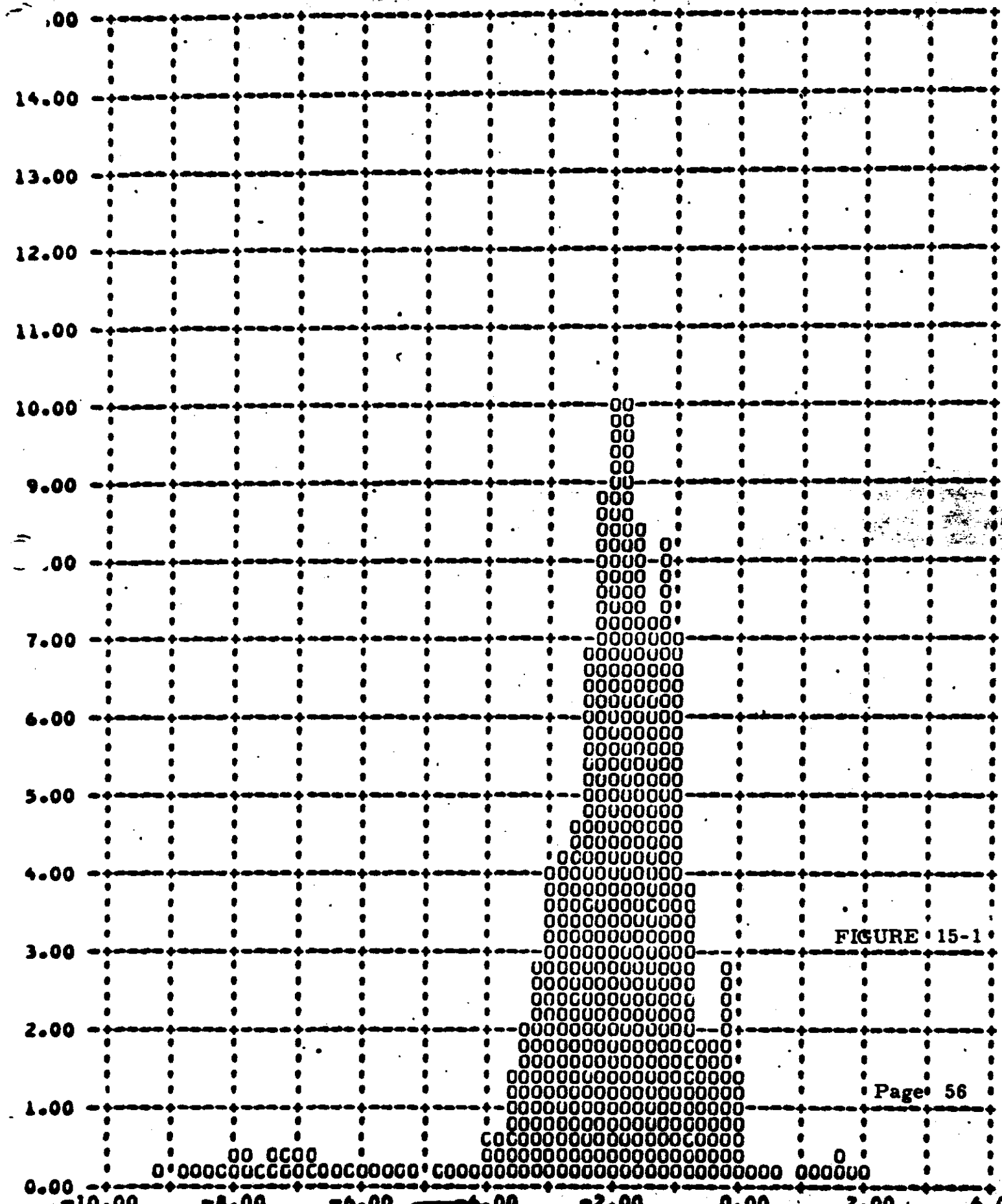


FIGURE 15-1

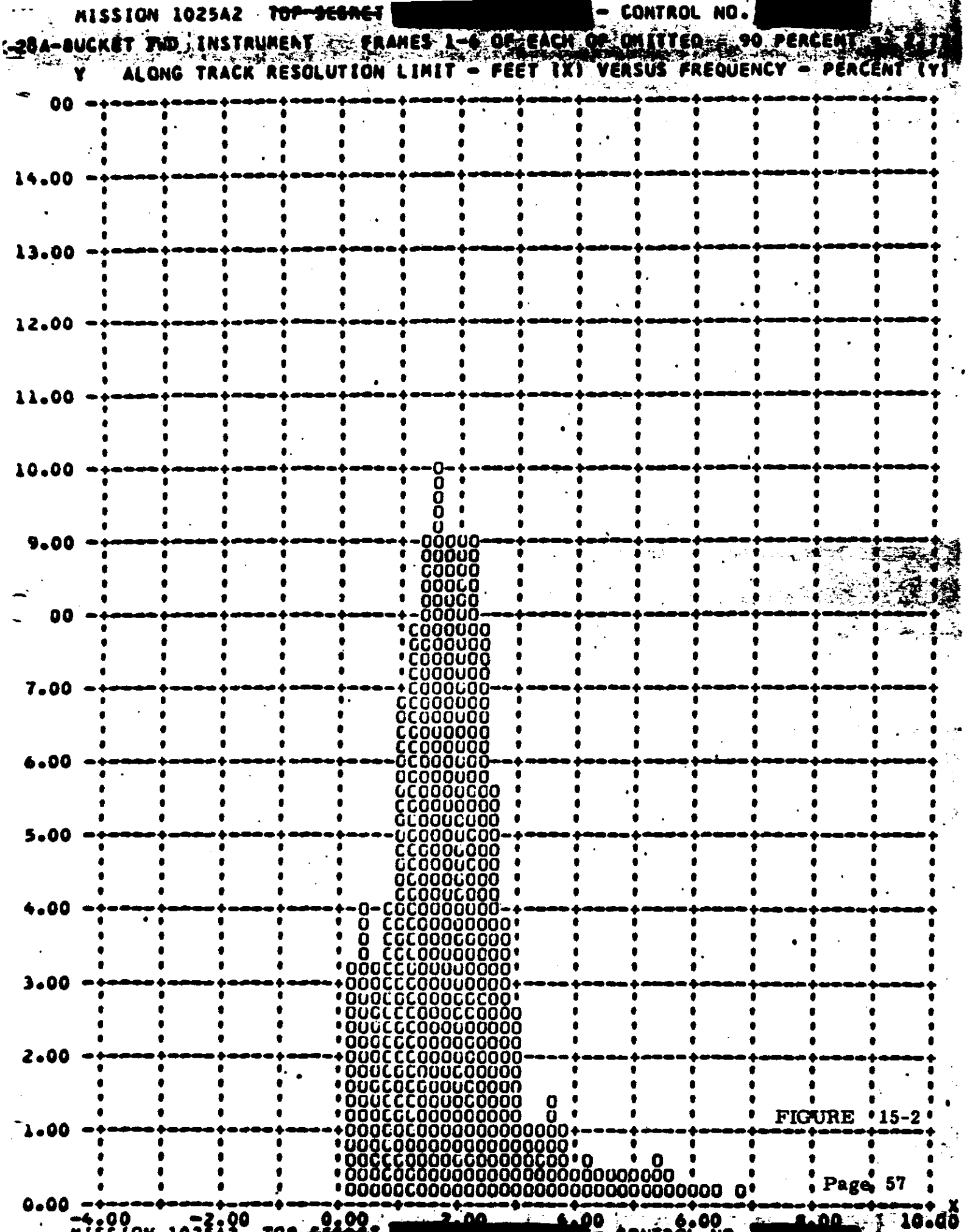

28A-BUCKET FMC INSTRUMENT - FRAMES 1-6 OF EACH OF OMITTED - 90 PERCENT
Y ALONG TRACK RESOLUTION LIMIT - FEET (X) VERSUS FREQUENCY - PERCENT (Y)
00
14.00
13.00
12.00
11.00
10.00
9.00
00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
-4.00
-2.00
0.00
2.00
4.00
6.00
8.00
10.00
X

FIGURE 15-2

C-28A-BUCKET 2ND INSTRUMENT - 7 FRAMES 1-6 OF EACH OF UNITED - 90 PERCENT = 6.75

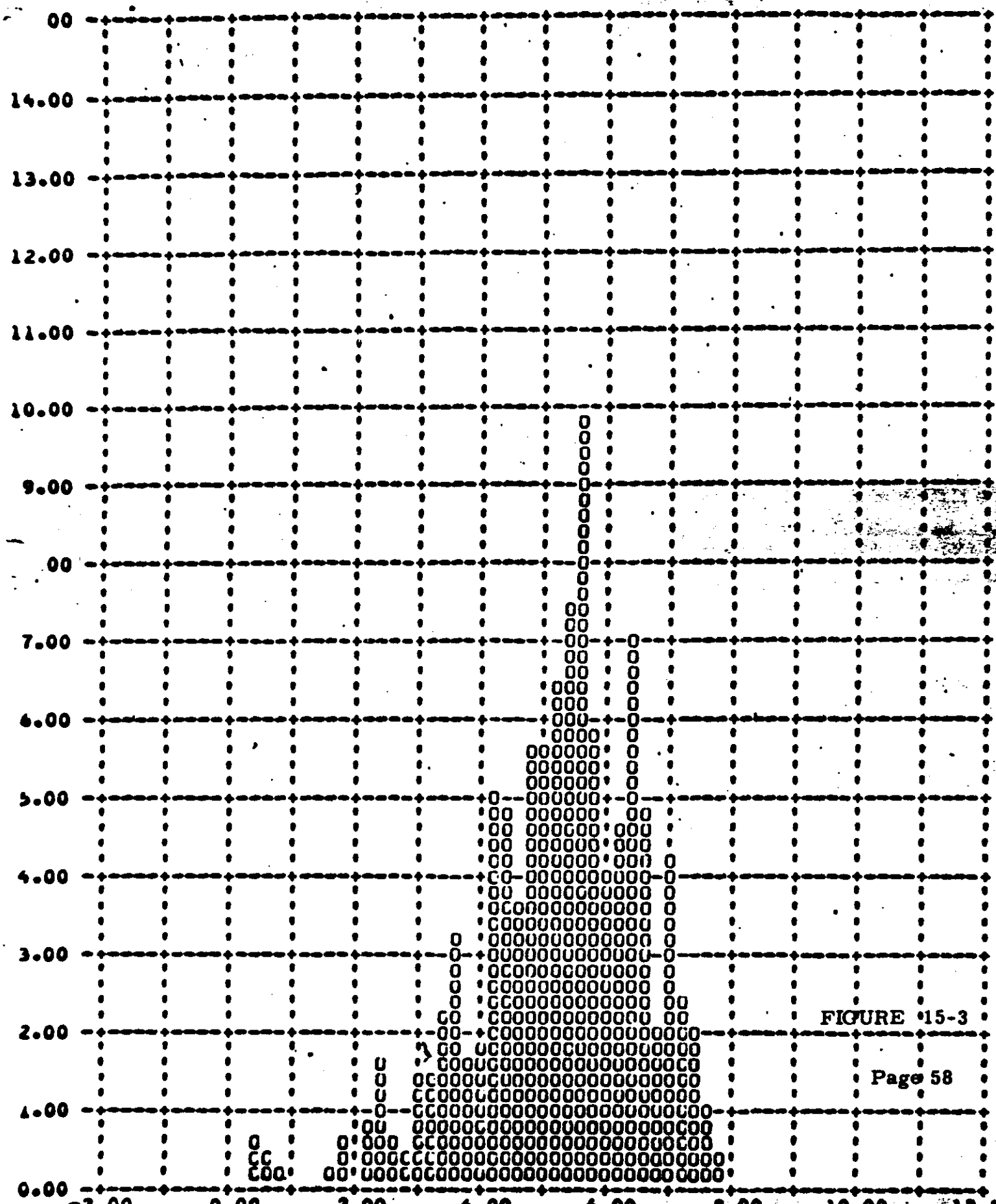


FIGURE 15-3

I-28 A-BUCKET AFT) INSTRUME FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 2.0

Y V/H RATIO ERROR - PERCENT (X) VERSUS FREQUENCY - PERCENT (Y)

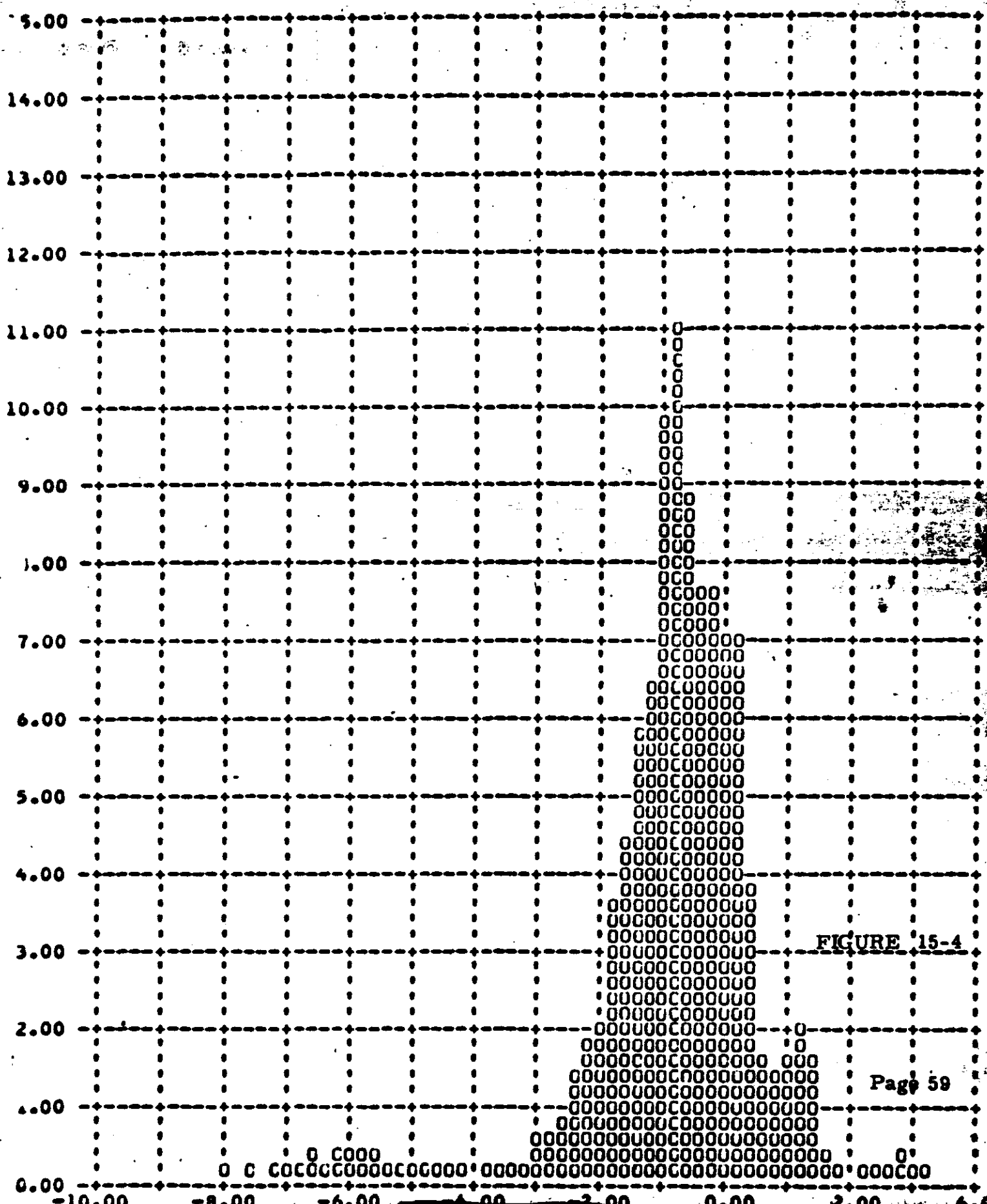


FIGURE 15-4

X-28 A-BUCKET AFT INSTRUME FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 3.94

Y ALONG TRACK RESOLUTION LIMIT - FEET (X) VERSUS FREQUENCY - PERCENT (Y)

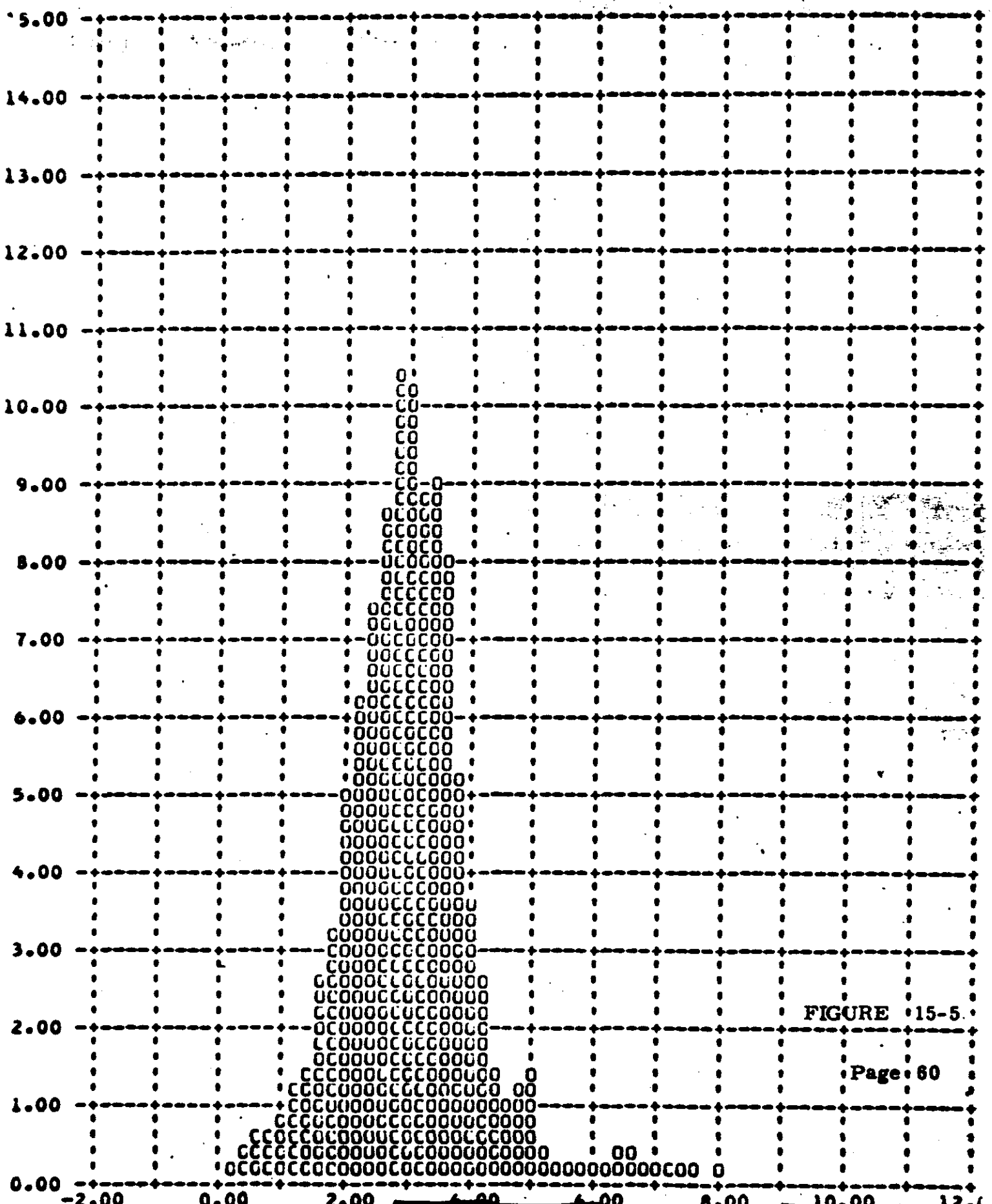


FIGURE 15-5.

JX-28 A-BUCKET AFT INSTRUME FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 6.6

Y CROSS TRACK RESOLUTION LIMIT - FEET (X) VERSUS FREQUENCY - PERCENT (Y)

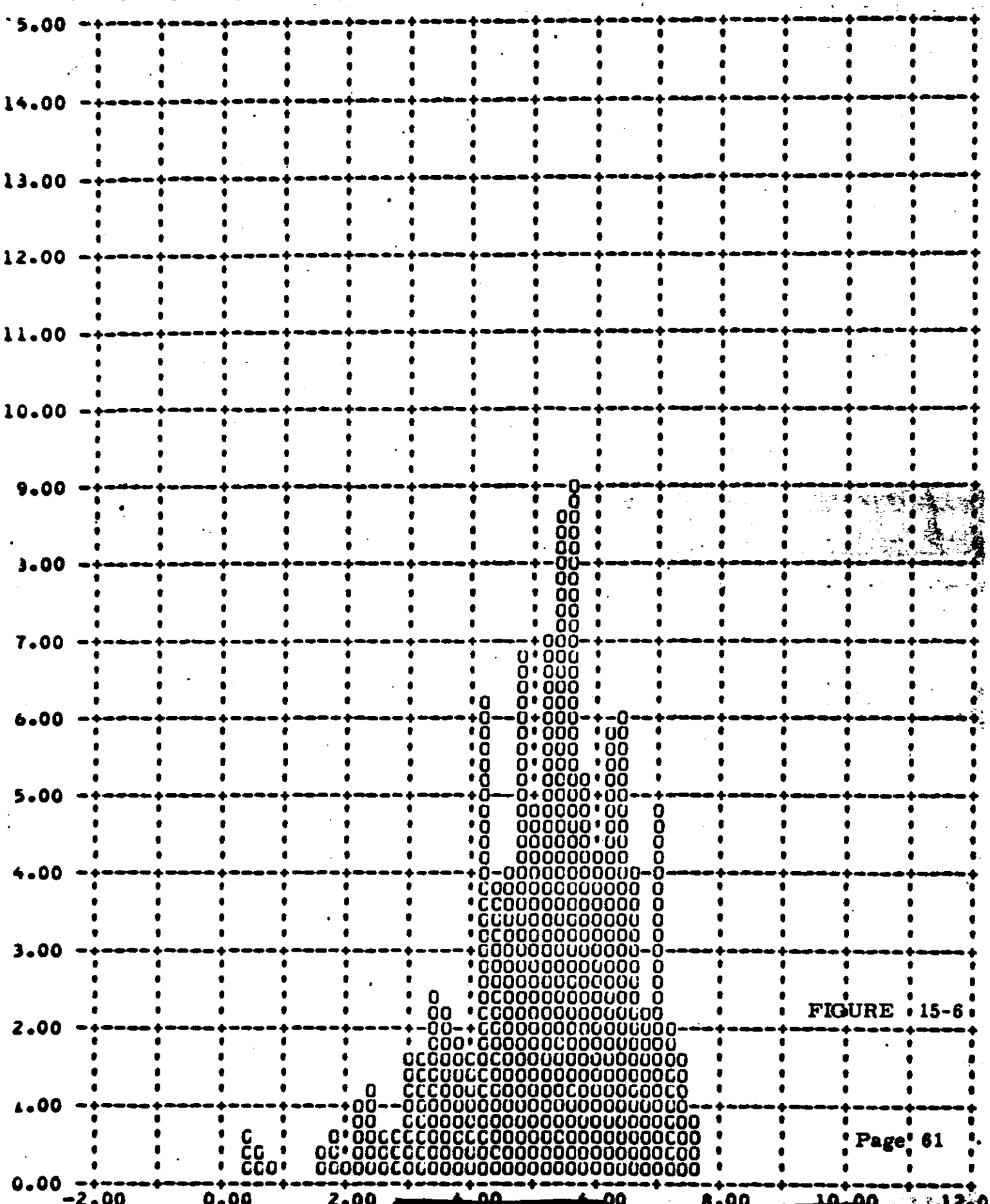


FIGURE 15-6

SECTION 16

RADIATION DOSAGE

Each recovery system flown on a Corona mission contains a sealed packet of Eastman Type 3401 and Royal X Pan emulsions to determine the total radiation received at the take-up cassette. Both film types have been irradiated by LMSC at various levels and the base plus fog densities recorded after controlled processing.

Following recovery the film dosimeter packets are removed at A/P and processed with a pre-flight sample of the same film type and sensitometric control film. The resulting base plus fog density measurement of the dosimeter strips is used to ascertain the total radiation level. The table below presents the base plus fog readings for the dosimeter strips and the radiation level equivalents.

	Mission 1025-1		Mission 1025-2	
Emulsion	B + F Density	Radiation	B + F Density	Radiation
Type 4401	0.13	0.25 R	0.14	0.25 R
Royal X Pan	0.16	0.15 R	0.20	0.25 R

The mean total radiation seen by the take-up cassettes during both missions was approximately 0.25 roentgens. This level is somewhat less than received during recent missions and is below the level that will degrade the panoramic photography.

SECTION 17

SYSTEM RELIABILITY

Reliability calculations for the payload are based on a sample beginning with M-7. Hence both the major part of the Mural Program and the "J" Program are covered in the calculation. For certain auxiliaries, i.e., the stellar-index camera and the horizon cameras, the sample size is changed to recognize incorporation of modified equipment or new designs where reliability was one of the principal reasons for the modification. However, for primary mission function, the sample size is consistent with reliability reporting for the vehicle.

The reliability estimates of this section deal exclusively with the payload. Failures to achieve orbit or vehicle induced failures are thereby excluded. Recoveries before a complete mission has been completed are considered as full missions providing that early termination was caused by reasons not connected with payload operation. Film quality is not considered in the reliability estimate calculation. Hence, only electrical and mechanical functioning are considered.

The reliability estimate is also divided into primary and secondary functions. The primary functions are operation of the panoramic cameras, main camera door operation, operation of the payload clock, and recovery operations. The secondary mission functions are horizon camera operation excluding catastrophic open shutter failure mode, auxiliary data recording, and stellar-index camera operation. A summary of estimated reliability is shown in Table 17-1.

Panoramic Camera Reliability

Sample Size - 122 opportunities to operate
One failure - capping shutter on slave instrument on system M-7
Assume - 3000 cycles per camera per mission
Estimated Reliability = 98.6% at 50% confidence level

Main Camera Door Reliability

Sample Size - 43 vehicles x 2 doors = 86 opportunities to operate
Estimated Reliability = 99.2% at 50% confidence level

Payload Command and Control

Sample Size - 6480 hours operation in sample
Two failures
Estimated Reliability = 96.1% at 50% confidence level

Payload Clock Reliability

Sample Size - 6480 hours operation in sample
No failures
Estimated Reliability = 99.0% at 50% confidence level

Estimated Reliability of Payload Functioning on orbit = 96.4% at 50% confidence level

Recovery System Reliability

51 opportunities to recover
1 failure - improper separation due to water seal - cutter failure
Estimated Reliability = 96.7% at 50% confidence level

Stellar-Index Camera Reliability

Sample begins with J5
Sample size = 13,890 cycles
Two failures
Estimated Reliability = 92.1% at 50% confidence level

Horizon Camera Reliability

Sample begins with J5 - 40 samples
Estimated Reliability of Single Camera = 98.3% at 50% confidence level
Estimated Reliability of Four Horizon Cameras at a Parallel Redundant System = 99.970% at 50% confidence level

ESTIMATED RELIABILITY SUMMARY

(AT 50% CONFIDENCE LEVEL)

MISSION NUMBER	PRIMARY FUNCTIONS						SECONDARY FUNCTIONS	
	PANORAMIC CAMERA	PANORAMIC CAMERA DOORS	COMMAND & CONTROL SYSTEM	PAYLOAD CLOCK	ON-ORBIT FUNCTIONS	RECOVERY SYSTEM	STELLAR-INDEX CAMERAS	HORIZON CAMERAS
	SAMPLE SPECIFIED / FAILURES / RELIABILITY	SAMPLE SPECIFIED / FAILURES / RELIABILITY	SAMPLE SPECIFIED / FAILURES / RELIABILITY	SAMPLE SPECIFIED / FAILURES / RELIABILITY	RELIABILITY	SAMPLE SPECIFIED / FAILURES / RELIABILITY	SAMPLE SPECIFIED / FAILURES / RELIABILITY	SAMPLE SPECIFIED / FAILURES / RELIABILITY
9038 TO 1008	60 / 1 / 97.3	52 / 0 / 98.6	3424 / 0 / 98.0	3124 / 0 / 98.0	96.1	16 / 1 / 90.7	3400 / 3 / 83.1	12,000 / 0 / 91.7
1009	64 / 1 / 97.4	54 / 0 / 98.7	3216 / 0 / 98.0	3216 / 0 / 98.0	96.2	20 / 1 / 91.5	4250 / 3 / 89.3	16,000 / 0 / 93.4
1010	66 / 1 / 97.6	56 / 0 / 98.8	3432 / 0 / 98.1	3432 / 0 / 98.1	96.4	22 / 1 / 92.5	5100 / 3 / 73.7	18,000 / 0 / 94.4
1011	72 / 1 / 97.7	58 / 0 / 98.9	3600 / 0 / 98.1	3600 / 0 / 98.1	96.8	24 / 1 / 93.0	5525 / 0[a] / 94.7	21,000 / 0 / 95.2
1012	78 / 1 / 97.8	60 / 0 / 98.9	3720 / 0 / 98.2	3720 / 0 / 98.2	96.9	26 / 1 / 93.5	5525 / 0 / 94.7	24,000 / 0 / 95.8
1013	78 / 1 / 97.8	62 / 0 / 99.0	3840 / 1 / 96.9	3840 / 0 / 98.3	96.0	28 / 1 / 94.0	6900 / 0 / 96.1	25,500 / 0 / 96.0
1014	82 / 1 / 97.9	64 / 0 / 99.0	4056 / 1 / 96.1	4056 / 0 / 98.3	96.1	30 / 1 / 94.4	6375 / 1 / 89.6	28,500 / 0 / 96.4
1015	86 / 1 / 98.0	66 / 0 / 99.0	4320 / 1 / 96.3	4320 / 0 / 98.4	96.1	32 / 1 / 94.8	7225 / 1 / 90.4	31,500 / 0 / 96.7
1016	90 / 1 / 98.1	68 / 0 / 99.0	4560 / 1 / 96.5	4560 / 0 / 98.5	96.4	34 / 1 / 95.2	7650 / 1 / 91.0	34,500 / 0 / 97.0
1017	94 / 10[a] / 99.3	70 / 0 / 99.0	4760 / 1 / 96.7	4760 / 0 / 98.6	97.6	36 / 1 / 95.4	8925 / 1 / 92.3	37,500 / 0 / 97.3
1018	96 / 1 / 98.3	72 / 0 / 99.1	4920 / 1 / 96.8	4920 / 0 / 98.7	96.7	38 / 1 / 95.6	8900 / 1 / 92.3	40,500 / 0 / 97.6
1019	102 / 1 / 98.4	74 / 0 / 99.1	5136 / 1 / 96.9	5136 / 0 / 98.7	96.8	39 / 1 / 95.8	8075[aa] / 1 / 91.8	43,500 / 0 / 97.8

[a] DESIGN FOR NEGATED PREVIOUS FAILURE CONSIDERATIONS

[aa] ONE SAMPLE OUT OF SEQUENCE

ESTIMATED RELIABILITY SUMMARY

(AT 50% CONFIDENCE LEVEL)

MISSION NUMBER	PRIMARY FUNCTIONS						SECONDARY FUNCTIONS	
	PANORAMIC CAMERA	PANORAMIC CAMERA DOORS	COMMAND & CONTROL SYSTEM	PAYLOAD CLOCK	ON-ORBIT FUNCTIONS	RECOVERY SYSTEM	STELLAR-INDEX CAMERAS	HORIZON CAMERAS
	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY	RELIABILITY	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY
1020	108 / 1 / 98.8	78 / 0 / 99.1	5844 / 1 / 97.1	5844 / 0 / 98.8	96.9	43 / 1 / 96.1	10,680 / 2 / 89.9	48,000 / 0 / 97.9
1021	104 / 1 / 98.8	76 / 0 / 99.1	5376 / 1 / 97.0	5376 / 0 / 98.8	96.9	41 / 1 / 96.0	9630 / 2 / 89.1	44,800 / 0 / 97.8
1022	112 / 1 / 98.5	80 / 0 / 99.2	5784 / 1 / 97.3	5784 / 0 / 98.9	96.9	45 / 1 / 96.3	11,550 / 2 / 90.7	51,000 / 0 / 98.0
1023	114 / 1 / 98.6	82 / 0 / 99.2	6000 / 2 / 96.8	6000 / 0 / 98.9	96.2	47 / 1 / 96.8	12,190 / 2 / 91.1	54,000 / 0 / 98.1
1024	118 / 1 / 98.6	84 / 0 / 99.2	6240 / 2 / 96.0	6240 / 0 / 98.9	96.3	49 / 1 / 96.6	13,040 / 2 / 91.6	57,000 / 0 / 98.2
1025	122 / 1 / 98.6	86 / 0 / 99.2	6480 / 2 / 96.1	6480 / 0 / 99.0	96.4	51 / 1 / 96.7	13,890 / 2 / 92.1	60,000 / 0 / 98.3

TABLE 17-1

SECTION 18

SUMMARY DATA

The comparison of the operating parameters and the performance achieved by previous missions has been difficult due to the large volume of data that results from each mission. Some of the pertinent characteristics from prior missions have been summarized in Tables 18-1 through 18-3.

The summary data was started with Mission 1005 as the J-05 camera system was the first to incorporate the major modifications of the titanium drum and scan arm, four roller scan head and Corona J· capabilities. Only those missions that culminated in the recovery of some photography have been listed, therefore Missions 1003 and 1005 are deleted.

MISSION SUMMARY

MISSION NUMBER	PAYLOAD NUMBER	VEHICLE NUMBER	LAUNCH DATE	LAUNCH TIME	ORBIT INCLINATION (°)	PERIGEE ALTITUDE (NM)	PERIGEE LOCATION (°N)	RECOVERY PASS	MASTER CAMERA CAMERA NUMBER	MASTER CAMERA SLIT (")	MASTER CAMERA FILTER TYPE	SLAVE CAMERA CAMERA NUMBER	SLAVE CAMERA SLIT (")	SLAVE CAMERA FILTER TYPE	STELLAR-INDEX CAMERA NUMBER
1004	J-06	1174	2/15/64	2138 Z	74.9	99.9	29.0	49 / 112	124	0.250	W-21	125	0.250	W-21	029/29/29 / 042/42/37
1006	J-09	1176	6/4/64	2259 Z	79.9	84.0	63.2	65 / 128	148	0.200	W-21	149	0.200	W-21	045/47/45 / 048/65/42
1007	J-07	1609	6/19/64	2318 Z	85.0	99.2	41.5	65 / 128	144	0.250	W-25	145	0.200	W-21	043/43/43 / 054/56/51
1008	J-10	1177	7/10/64	2314 Z	85.0	99.4	40.8	49 / 112	150	0.200	W-21	151	0.200	W-21	048/45/48 / 033/28/33
1009	J-12	1605	8/5/64	2318 Z	80.1	99.6	39.5	49 / 128	154	0.200	W-21	155	0.200	W-21	056/54/56 / 036/38/34
1010	J-11	1178	9/14/64	2254 Z	84.9	97.4	42.5	65 / 144	152	0.175	W-21	153	0.175	W-21	041/41/41 / 044/46/44
1011	J-3X	1170	10/5/64	2150 Z	79.9	99.3	20.9	65 / —	160	0.175	W-21	161	0.175	W-21	030/30/30 / 037/37/37
1012	J-13	1179	10/17/64	2202 Z	75.0	96.2	32.4	49 / 81	156	0.200	W-21	157	0.200	W-21	051/51/47 / 044/52/53
1013	J-15	1173	11/2/64	2130 Z	80.0	100.0	25.0	65 / 81	158	0.225	W-21	159	0.225	W-21	052/49/55 / 047/48/54
1014	J-16	1180	11/18/64	2036 Z	70.0	103.2	63.6	81 / 145	162	0.250	W-25	139	0.175	W-21	053/59/49 / 050/64/46
1015	J-17	1607	12/15/64	2110 Z	74.9	96.7	21.8	81 / 175	138	0.250	W-25	141	0.175	W-21	061/61/61 / 058/66/60
1016	J-18	1608	1/15/65	2101 Z	74.9	99.4	30.2	81 / 159	132	0.250	W-25	133	0.175	W-21	055/55/50 / 058/65/59
1017	J-14	1611	2/25/65	2144 Z	75.0	97.2	26.9	81 / 145	140	0.250	W-25	165	0.175	W-21	021/21/21 / 060/61/1
1018	J-19	1612	3/25/65	2111 Z	96.0	100.2	40.3	65 / 99	122	0.250	W-25	123	0.175	W-21	020/20/20 / 022/22/22
1019	J-04	1614	4/23/65	2144 Z	85.0	99.1	27.1	00 / —	118	0.250	W-25	119	0.175	W-21	039/39/35 / 015/15/19
1020	J-20	1615	6/9/65	2158 Z	75.1	97.1	40.6	97 / 113	136	0.250	W-25	137	0.175	W-21	067/65/60 / 062/60/63
1021	J-21	1615	8/18/65	1803 Z	75.0	109.2	24.3	81 / 161	166	0.175	W-21	167	0.250	W-25	065/69/69 / 025/27/25
1022	J-22	1617	7/19/65	2201 Z	85.0	99.7	30.3	65 / 144	168	0.250	W-25	169	0.175	W-21	065/77/70 / 024/24/24
1023	J-23	1618	8/17/65	2100 Z	70.0	97.8	29.0	81 / 144	170	0.225	W-25	171	0.150	W-21	017/19/62 / 068/75/72
1024	J-24	1619	9/22/65	2131 Z	80.0	95.9	18.4	81 / 161	172	0.225	W-25	173	0.150	W-21	069/72/64 / 064/62/66
1025	J-25	1616	10/5/65	1746 Z	75.0	112.9	44.3	81 / 161	142	0.175	W-21	127	0.175	W-21	073/76/68 / 070/68/61

TABLE 18-1

PERFORMANCE SUMMARY

MISSION NUMBER	CAMERA	SERIAL NUMBER	M I P VALUE	VISUAL RES.	AFSPPL MTF/AIM [redacted]					90% ATTITUDE ERROR (°)			90% ATTITUDE RATES (°/HR)			90% V/H ERROR (%)	90% RESOLUTION LIMIT (FEET)	
					SLIT (μ)	AVERAGE	SLIT (μ)	AVERAGE	(μ)	ALL	HIGH	PITCH	ROLL	YAW	PITCH	ROLL	YAW		ALONG TRACK	CROSS TRACK
1004-1	FWD	124	85	78	350	97	43	109	320	113	127	0.48	0.42	1.08	30.0	25.0	21.0	5.1	7.7	6.1
	AFT			86		80		96		117	124									
1004-2	FWD	125	85	78		88		113		82	90	0.74	0.80	0.91	44.0	30.0	29.0	4.9	6.8	6.8
	AFT			75		83		106		89	95									
1006-1	FWD	148	90	78	350	69	43	88	320	84	97	0.41	0.42	1.14	26.8	28.5	27.6	15.4	13.8	8.7
	AFT			74		71		90		87	92									
1006-2	FWD	149	90	85		64		81		84	90	0.49	0.40	1.08	31.1	27.9	30.0	11.6	10.1	7.8
	AFT			85		72		90		87	94									
1007-1	FWD	144	85	80	350	60	43	87	320	82	91	0.58	0.46	1.43	37.6	23.9	29.9	3.6	3.1	5.4
	AFT			86		63		83		97	110							4.8	8.1	5.8
1007-2	FWD	146	85	79		72		81		68	74	0.64	0.47	—	43.0	25.8	—	3.2	2.4	—
	AFT			81		77		92		74	81							4.2	1.8	—
1008-1	FWD	150	85	80	350	80	43	95	320	81	89	0.59	0.38	0.94	43.8	23.9	29.6	2.9	4.9	5.9
	AFT			78		73		89		86	95									
1008-2	FWD	151	85	82		84		96		83	92	0.63	0.36	0.71	42.9	24.0	32.5	2.8	4.2	5.4
	AFT			79		91		83		85	91									
1009-1	FWD	154	85	92	350	80	—	—	80	75	88	0.68	0.65	0.71	29.2	22.7	27.6	3.3	8.3	6.0
	AFT			89		85				75	83									
1009-2	FWD	155	85	94		85				76	84	0.48	0.65	0.59	33.6	23.9	27.2	2.6	4.9	5.8
	AFT			87		87				72	79									
1010-1	FWD	152	85	90	350	90	80	88	80	87	96	0.93	0.30	0.87	39.1	23.8	30.8	4.8	2.9	4.4
	AFT			88		86		80		92	103									
1010-2	FWD	153	85	92		81		82		82	93	0.89	0.70	1.21	46.4	23.6	30.7	4.6	7.8	5.8
	AFT			90		82		85		87	96									
1011-1	FWD	160	90	84	350	78	80	96	80	78	87	0.77	0.39	0.97	43.1	28.9	31.1	2.3	8.3	8.8
	AFT	161		84		77		86		83	93									
1012-1	FWD	156	85	92	—	—	80	91	80	84	98	0.65	0.51	—	47.1	33.2	—	1.8	4.0	—
	AFT			91				87		89	100									
1012-2	FWD	157	85	91				89		84	91	0.97	0.77	0.81	45.2	30.7	20.4	5.9	3.5	5.3
	AFT			89				96		85	98									
1013-1	FWD	158	85	89	—	—	80	84	80	85	93	0.64	0.32	1.34	36.9	29.0	32.3	3.7	7.8	8.2
	AFT	159		77				97		81	103	0.64	0.32	1.34	36.9	29.0	32.3	3.6	5.6	6.1
1014-1	FWD	142	80	87	—	—	80	78	80	74	86	0.68	0.41	1.48	35.0	36.1	38.8	2.2	6.8	6.8
	AFT			83				80		95	107	0.68	0.41	1.44	34.8	36.0	38.3	3.3	2.8	6.5
1014-2	FWD	139	80	83				78		70	77	1.06	0.55	—	38.4	36.4	—	1.4	6.4	—
	AFT			86				84		80	88	1.06	0.59	—	38.1	36.0	—	3.2	5.2	—
1015-1	FWD	138	85	87	—	—	80	76	80	90	—	0.63	0.38	0.83	47.0	29.4	38.2	5.0	5.8	7.8
	AFT			87				73		97		0.64	0.39	0.93	46.9	29.2	38.2	6.3	3.4	5.8
1015-2	FWD	141	85	83				72		89		*								*
	AFT			82				72		90										
1016-1	FWD	132	85	85	—	—	80	86	80	81	—	0.72	0.83	2.01	48.9	30.2	40.4	2.0	5.8	10.5
	AFT			83				81		94		0.72	0.83	2.01	48.4	30.1	40.4	2.8	3.4	7.4
1016-2	FWD	133	85	90				85		92		0.83	0.93	2.19	42.2	27.2	39.9	1.5	4.9	6.9
	AFT			91				86		91		0.83	0.93	2.19	42.2	27.3	39.9	2.3	3.3	7.1
1017-1	FWD	140	85	72	—	—	80	87	80	78	88	0.49	0.76	2.50	35.5	32.2	38.4	3.3	9.8	11.0
	AFT			75				70		94	107	0.49	0.76	2.49	35.3	32.0	38.3	4.3	8.3	8.3
1017-2	FWD	165	85	85				68		80	94	0.69	0.45	—	36.6	34.0	—	1.8	6.8	—
	AFT			85				69		86	101	0.69	0.45	—	36.3	33.8	—	2.3	8.3	—
1018-1	FWD	122	85	79	—	—	80	70	80	82	98	0.81	0.48	—	47.4	36.7	—	3.4	8.8	—
	AFT			77				74		96	109	0.90	0.47	—	48.2	36.2	—	3.2	3.7	—
1018-2	FWD	123	85	84				76		77	89	0.84	0.63	—	34.7	30.7	—	3.1	8.8	—
	AFT			88				71		91	103	0.81	0.63	—	34.8	30.7	—	2.8	4.1	—

* DATA NOT PRESENTLY AVAILABLE

~~TOP SECRET~~ [redacted] No. [redacted]

PERFORMANCE SUMMARY

[redacted]

MISSION NUMBER	CAMERA	SERIAL NUMBER	M I P VALUE	VISUAL RES	AFSPPL MTF/AIM SLIT (μ)	AFSPPL MTF/AIM AVERAGE	MTF/AIM SLIT (μ)	MTF/AIM AVERAGE	SLIT (μ)	AVERAGE ALL	AVERAGE HIGH	90% ATTITUDE ERROR (°) PITCH	90% ATTITUDE ERROR (°) ROLL	90% ATTITUDE ERROR (°) YAW	90% ATTITUDE RATES (°/HR) PITCH	90% ATTITUDE RATES (°/HR) ROLL	90% ATTITUDE RATES (°/HR) YAW	90% V/H ERROR (%)	90% RESOLUTION LIMIT (FEET) ALONG TRACK	90% RESOLUTION LIMIT (FEET) CROSS TRACK
1019-1	FWD	118	85	81	—	—	80	78	80	88	104	0.43	0.36	0.97	31.6	34.7	33.0	3.3	9.3	9.1
	AFT	119		99				83		87	101	0.44	0.37	0.96	31.6	34.9	33.1	3.8	5.0	8.8
1020-1	FWD	136	80	88	—	—	80	69	80	78	90	0.46	0.35	0.78	37.4	31.8	26.7	5.4	8.8	8.4
	AFT			89				82		94	108	0.46	0.35	0.78	37.4	31.8	26.7	8.3	4.2	8.9
1020-2	FWD	137	—	—				—		—	—	0.41	0.17	1.06	42.6	23.8	42.5	3.3	8.4	7.8
	AFT			—				—		—	—	0.41	0.17	1.06	42.6	23.8	42.5	3.4	4.8	8.8
1021-1	FWD	166	85	88	—	—	80	77	80	86	99	0.85	0.37	0.81	34.9	32.6	26.2	2.7	8.8	8.0
	AFT			90				90		98	109	0.55	0.38	0.81	34.8	33.0	26.3	8.4	8.8	8.8
1021-2	FWD	167	85	85				74		88	112	0.89	0.85	——	44.7	30.6	——	3.1	9.2	——
	AFT			74				82		—	—	——	——	——	——	——	——	——	——	——
1022-1	FWD	168	85	86	—	—	80	86	80	78	91	0.47	0.51	0.69	28.3	27.1	23.8	3.5	9.8	8.8
	AFT			91				83		101	111	0.47	0.51	0.90	27.9	26.6	23.8	3.0	8.2	8.1
1022-2	FWD	169	85	90				68		74	84	0.40	0.51	0.90	29.4	27.3	31.0	2.6	8.0	8.4
	AFT			92				92		99	110	0.40	0.51	0.90	29.4	27.3	31.1	1.8	4.9	8.9
1023-1	FWD	170	85		—	—	80	94	80	97	110	0.49	0.33	0.50	33.0	28.7	23.5	3.4	4.0	8.4
	AFT							87		83	101	0.49	0.33	0.50	32.9	28.7	23.5	3.5	2.7	8.3
1023-2	FWD	171	85					71		76	87	0.42	0.36	0.83	29.7	21.0	28.6	2.4	3.9	8.3
	AFT							89		68	76	0.43	0.37	0.83	29.6	21.3	28.6	2.5	2.7	4.2
1024-1	FWD	172	85		—	—	80	79	80	90	102	0.42	0.25	0.62	32.2	24.9	30.5	2.6	5.8	8.8
	AFT							95		94	105	0.42	0.25	0.62	32.2	24.9	30.4	2.1	3.8	4.8
1024-2	FWD	173	85					86		89	101	0.36	0.31	0.93	30.4	24.5	36.4	3.5	4.7	8.4
	AFT							95		100	114	0.36	0.31	0.93	30.6	23.8	36.4	5.1	3.3	8.6
1025-1	FWD	142	85		—	—	80	87	80	80	97	0.50	0.41	0.85	28.1	28.7	25.9	2.0	3.9	8.7
	AFT							97		101	114	0.51	0.42	0.85	28.6	29.7	25.7	3.2	2.8	8.8
1025-2	FWD	127	85					85		96	107									
	AFT							91		89	103									

* DATA NOT PRESENTLY AVAILABLE

TOP SECRET [redacted] No. [redacted]

EXPOSURE - PROCESSING SUMMARY

MISSION NUMBER	CAMERA	SOLAR ELEVATION RANGE (°) LOW	SOLAR ELEVATION RANGE (°) HIGH	SOLAR AZIMUTH RANGE (°) LOW	SOLAR AZIMUTH RANGE (°) HIGH	PREDICTED PROCESSING (%) P	PREDICTED PROCESSING (%) I	PREDICTED PROCESSING (%) F	REPORTED PROCESSING (%) P	REPORTED PROCESSING (%) I	REPORTED PROCESSING (%) F	COMPUTED PROCESSING (%) P	COMPUTED PROCESSING (%) I	COMPUTED PROCESSING (%) F	TERRAIN D-MIN RANGE LOW	TERRAIN D-MIN RANGE HIGH	TERRAIN D-MIN MEAN	TERRAIN D-MIN MEDIAN	TERRAIN D-MAX RANGE LOW	TERRAIN D-MAX RANGE HIGH	TERRAIN D-MAX MEAN	TERRAIN D-MAX MEDIAN	CLOUD D-MAX RANGE LOW	CLOUD D-MAX RANGE HIGH	CLOUD D-MAX MEAN	CLOUD D-MAX MEDIAN	UNDER EXPOSED (%)	UNDER PROCESSED (%)	NOMINAL EXP & PRO (%)	OVER PROCESSED (%)	OVER EXPOSED (%)	CLOUD COVER (%)
1004-1	FWD	-3	61	25	124	5	76	19	4	79	17	0	79	21	0 26	1 89	0 83	0.78	0 43	2 43	1 97	2 02	1 00	2.43	2 04	2 08	0	4	80	31	5	35
	AFT	-3	61	25	124	5	74	21	4	79	17	0	80	20	0 22	1.56	0 76	0.70	0 93	2 45	1 92	1 94	1 08	2.43	1 98	2 03	1	4	67	28	3	35
1004-2	FWD	-4	68	10	131	7	76	17	37	50	13	4	83	13	0 29	1 80	0 83	0.78	0.36	2 30	1 84	1 90	0 41	2 37	1 87	1 93	0	4	89	27	9	36
	AFT	-4	68	10	131	7	76	17	37	50	13	4	77	19	0 29	1 91	0 81	0.73	0 38	2 39	1 89	1 99	0 43	2.46	1 89	1 98	0	4	67	20	9	36
1005-1	FWD	38	86	82	140	1	99	0	1	51	48	0	51	49	0 23	1 81	0 71	0.68	0 80	2 31	1.58	1 52	1 31	2.40	2 20	2 24	0	5	72	21	1	60
	AFT	38	86	82	140	1	99	0	0	23	77	0	24	76	0 36	1 66	0 87	0.84	0 96	2 35	1.72	1 72	1 14	2.40	2 24	2 28	0	2	58	40	1	60
1006-2	FWD	32	84	36	147	2	98	0	30	41	29	11	59	30	0 21	1 14	0 53	0.50	0 56	2 28	1 49	1 50	1 30	2 33	2 11	2 16	2	21	72	4	0	46
	AFT	32	84	36	147	2	98	0	35	40	25	21	54	25	0 26	1 34	0 62	0.58	0 65	2 19	1 48	1 47	1 56	2.50	2 12	2.16	0	11	77	9	3	40
1007-1	FWD	12	49	80	103	0	5	95	1	20	79	0	25	75	0 28	1.22	0.52	0.47	0 62	2.20	1.44	1.40	1 22	1 36	2 17	2 21	20	8	67	5	0	60
	AFT	11	49	48	102	0	100	0	10	42	48	6	77	17	0 26	1.76	0 58	0.55	0 78	2 31	1.88	1 52	1 54	2 39	2 20	2 24	1	13	80	5	1	60
1007-2	FWD	32	87	43	112	0	25	75	3	28	69	0	26	74	0 26	1 23	0 51	0.48	0 70	2 32	1.44	1 40	0 90	2 37	2 15	2.20	18	9	71	2	0	60
	AFT	31	87	38	111	0	100	0	19	41	40	3	88	9	0 24	1 56	0.60	0.56	0 44	2 27	1 50	1 52	0 84	2.41	2 17	2 25	1	16	74	9	1	60
1008-1	FWD	30	81	80	102	0	100	0	4	32	64	1	35	64	0 32	1 48	0.66	0.62	0 78	2.24	1 55	1 54	1 46	2.35	2 21	2 24	2	2	86	8	1	45
	AFT	30	81	80	102	0	100	0	4	27	69	0	34	66	0 32	1 57	0.71	0.69	0 81	2.21	1.87	1 58	1 08	2.37	2 21	2 24	1	1	84	13	0	40
1008-2	FWD	29	56	42	105	0	100	0	3	31	66	0	27	73	0 14	1 81	0.76	0.72	0 57	2.10	1.54	1 55	1 09	2.40	2 20	2.25	2	1	73	23	1	60
	AFT	29	56	42	105	0	100	0	3	30	67	0	29	71	0 32	1 64	0 77	0.76	0 73	2 10	1 55	1 55	1 10	2.35	2 18	2.22	1	3	69	27	0	60
1009-1	FWD	12	49	42	132	0	100	0	1	26	73	0	34	66	0 32	1.40	0 65	0.62	0 85	2.41	1.83	1 52	0 83	2.51	2 30	2.36	5	4	77	14	0	50
	AFT	12	49	42	132	0	100	0	0	40	60	0	45	55	0 28	1.42	0 70	0.64	0 92	2.28	1.58	1 55	0 63	2.51	2 32	2.36	1	5	73	20	0	50
1009-2	FWD	23	58	35	138	2	98	0	3	21	76	0	40	60	0 29	1 55	0 69	0.64	0 73	2.37	1.83	1 53	1 06	2.45	2 25	2 30	4	4	74	17	0	55
	AFT	23	56	35	138	2	98	0	4	47	49	0	56	44	0 26	1 47	0 69	0.64	0 44	2.42	1 61	1 60	1 61	2.50	2 31	2.34	1	4	77	18	0	55
1010-1	FWD	18	47	45	83	0	21	79	0	13	87	0	9	91	0 28	1 14	0 52	0.47	0 43	2.32	1.38	1 32	1 11	2.42	2 16	2 20	18	3	75	4	0	45
	AFT	18	47	45	83	0	21	79	0	19	81	0	16	84	0 27	1 25	0 57	0.52	0 78	2.42	1.45	1 41	0 96	2 46	2 20	2 26	9	4	81	6	0	40
1010-2	FWD	18	52	38	76	0	50	50	0	16	84	0	13	87	0 26	1 51	0 55	0 50	0 52	2.36	1 41	1 38	1 00	2 44	2 14	2 20	22	4	67	6	0	40
	AFT	18	52	38	76	0	50	50	0	23	77	0	25	75	0 20	1 48	0 59	0.56	0 30	2.40	1 47	1 45	1 29	2 48	2 18	2 22	13	3	76	8	0	40
1011-1	FWD	2	55	33	66	0	64	36	2	23	75	2	23	75	0 18	0.99	0 50	0.48	0.56	2 36	1.48	1 43	0 78	2 40	2 07	2.16	17	11	70	2	0	100
	AFT	2	55	33	66	0	67	33	3	47	50	0	37	63	0 24	1 48	0 60	0.56	0 50	2.35	1 57	1 55	0 74	2 37	2 11	2 18	3	7	81	8	0	100
1012-1	FWD	0	45	38	71	0	64	36	7	56	37	0	65	35	0 25	1 30	0 59	0.53	0 54	2 39	1.40	1 42	0 90	2 39	1 93	2 00	6	17	68	10	0	80
	AFT	0	45	38	71	0	64	36	0	33	67	0	49	51	0 26	1 40	0 61	0.58	0 47	2 27	1 44	1 40	0 72	2 32	1 89	1 96	5	10	74	11	0	80
1012-2	FWD	0	57	34	106	0	77	23	6	44	50	0	49	51	0 30	1 20	0 58	0.55	0 73	2 32	1 48	1 42	0 67	2 34	1 91	2.00	4	9	80	7	0	40
	AFT	0	57	34	106	0	77	23	3	15	82	0	10	90	0 30	1 27	0 68	0.62	0 48	2 33	1 88	1 58	0 70	2 38	1 96	2.02	4	0	72	23	0	40
1013-1	FWD	0	56	28	83	0	64	36	0	42	58	0	55	45	0 20	1 66	0 58	0.56	0.82	2 29	1.88	1 59	1 21	2 41	2 03	2.10	7	13	78	4	0	40
	AFT	0	56	26	82	0	64	36	2	7	91	0	33	67	0 28	1 56	0 66	0.48	0 64	2 28	1 59	1 63	1 10	2 36	1 97	2.03	5	5	74	16	0	40
1014-1	FWD	0	59	15	71	0	21	79	1	38	61	0	63	37	0 17	0 99	0 40	0.36	0.86	2 36	1.40	1 42	1 01	2 38	1 94	2.05	27	33	39	1	0	60
	AFT	0	59	14	69	0	31	69	0	13	87	0	36	64	0 18	1 26	0 51	0.48	0 25	2 38	1 42	1 49	0 42	2 43	1 91	2 00	19	12	64	5	0	60
1014-2	FWD	0	77	0	36	0	21	79	0	26	74	0	61	39	0 17	1 06	0 36	0.31	0 23	2 32	1 80	1 36	0 42	2 36	1 72	1 80	31	40	27	2	0	40
	AFT	0	76	0	34	0	29	71	0	5	95	0	68	32	0 18	1 49	0 44	0.40	0 27	2 28	1 34	1 45	0 26	2 44	1 71	1 84	19	29	50	2	0	40
1015-1	FWD	5	68	19	68	0	8	92	2	2	96	0	2	98	0 25	1 70	0 54	0.47	0 54	2 28	1 44	1 46	0 46	2 41	1 86	1 90	28	0	65	7	0	55
	AFT	4	68	18	67	0	30	70	0	5	95	0	4	96	0 29	1 20	0 60	0.56	0 48	2 28	1 49	1 50	0 80	2 36	1 86	1 95	14	0	77	8	0	40
1015-2	FWD	0	80	-2	71	0	10	90	0	10	90	0	11	89	0 22	1 10	0 50	0.48	0 34	2 07	1 29	1 30	0 28	2 34	1 89	1 78	28	4	65	3	0	40
	AFT	0	79	-2	71	0	21	79	0	9	91	0	9	91	0 26	1 21	0 59	0.52	0 36	2 22	1 37	1 38	0 38	2 40	1 74	1 80	17	1	70	12	0	40
1016-1	FWD	5	69	13	76	0	7	93	1	41	58	0	59	41	0 13	1 55	0 51	0.45	0 70	2 43	1 67	1 68	0 85	2 44	1 91	1 90	19	17	56	8	1	40
	AFT	4	69	12	76	0	27	73	0	26	74	0	42	58	0 22	1 65	0 64	0.58	0 62	2 34	1 69	1 72	0 98	2 46	1 90	1 92	11	9	82	17	1	40
1016-2	FWD	1	84	-4	76	0	8	92	0	31	69	0	48	52	0 18	1 56	0 48	0.44	0 29	2 35	1 48	1 44	0 34	2 50	1 76	1 82	22	18	56	3	0	40
	AFT	0	84	-4	76	0	19	81	1	27	72	0	40	60	0 20	1 88	0 55	0.49	0 86	2 38	1 82	1 60	0 30	2 49	1 79	1 82	23	8	65	6	1	40
1017-1	FWD	-11	50	21	99	0	0	100	13	63	24	0	82	18	0 20	1 65	0 66	0 61	0 46	2 23	1 74	1 78	0 60	2 32	1 93	2 00	1	8	77	13	1	25
	AFT	-1	57	19	98	0	17	83	24	58	18	4	90	6	0 20	1 62	0 64	0 60	0 60	2 29	1 75	1 75	1 18	2 36	1 89	1 90	1	13	74	11	2	25
1017-2	FWD	1	78	9	139	0	0	100	5	62	33	7	77	16	0 22	1 22	0 58	0 55	0 37	2 30	1 70	1 80	0 86	2 37	1 93	1 94	3	14	74	9	0	25
	AFT	1	79	7	135	0	7	93	18	62	20	0	89	11	0 20	1 54	0 64	0 62	0 38	2 30	1 62	1 68	0 38	2 34	1 85	1 92	2	13	74	10	1	30
1018-1	FWD	6	77	13	134	0	0	100	9	63	28	1	83	16	0 19	1 46	0 56	0 52	0 64	2 22	1 66	1 73	1 00	2 32	1 96	1 99	2	19	71	7	0	35
	AFT	6	78	10	125	0	22	78	9	53	38	9	72	23	0 18	1 36	0 62	0 58	0 66	2 20	1 66	1 80	1 03	2 28	1 95	2 00	1	12	77	9	2	35
1018-2	FWD	8	77	14	134	0	0	100	18	74	8	17	79	4	0 16	1 78	0 57	0 49	0 80	2 24	1 66	1 54	0 90	2 26	1 85	1 91	1	31	56	9	4	100
	AFT	8	77	10	132	0	18	85	1	50	49	0	74	26	0 22	1 90	0 81	0 79	0 94	2 29	1 70	1 74	1 09	2 35	1 98	2 04	0	8	58	33	8	50

TABLE 18-1

TOP SECRET [redacted]

TOP SECRET [redacted] No. [redacted]

EXPOSURE - PROCESSING SUMMARY

MISSION NUMBER	CAMERA	SOLAR ELEVATION RANGE (°)		SOLAR AZIMUTH RANGE (°)		PREDICTED PROCESSING (%)			REPORTED PROCESSING (%)			COMPUTED PROCESSING (%)			TERRAIN D-MIN RANGE				TERRAIN D-MAX RANGE				CLOUD D-MAX RANGE				UNDER EXPOSED (%)	UNDER PROCESSED (%)	NOMINAL EXP & PRO (%)	OVER PROCESSED (%)	OVER EXPOSED (%)	TOTAL COVER (%)
		LOW	HIGH	LOW	HIGH	P	I	F	P	I	F	P	I	F	LOW	HIGH	MEAN	MEDIAN	LOW	HIGH	MEAN	MEDIAN	LOW	HIGH	MEAN	MEDIAN						
1019-1	FWD	24	70	24	152	0	21	79	22	32	46	4	56	40	0.26	1.92	0.71	0.61	0.60	2.15	1.45	1.50	0.84	2.26	1.94	2.00	4	7	64	17	7	[redacted]
	AFT	23	70	21	152	0	92	8	26	55	19	3	87	10	0.13	1.70	0.66	0.60	0.39	2.26	1.48	1.45	0.80	2.30	1.96	2.02	1	13	70	14	3	[redacted]
1020-1	FWD	30	78	19	156	0	19	81	13	48	39	1	58	41	0.23	1.30	0.55	0.52	0.60	2.28	1.57	1.54	1.40	2.38	2.10	2.16	1	18	78	4	0	[redacted]
	AFT	29	78	17	156	0	64	36	15	56	29	0	74	26	0.23	1.20	0.55	0.54	0.70	2.20	1.47	1.46	1.22	2.29	2.04	2.10	0	18	76	5	0	[redacted]
1020-2	FWD	47	69	18	38	INSUFFICIENT DATA																										
	AFT	46	68	17	33																											
1021-1	FWD	18	66	-148	-23	0	68	32	14	39	47	1	52	47	0.25	1.90	0.64	0.58	0.74	2.18	1.80	1.80	0.97	2.36	1.92	2.00	5	9	72	11	3	[redacted]
	AFT	14	66	-147	-25	0	99	1	15	38	47	0	57	43	0.17	1.70	0.65	0.57	0.54	2.24	1.48	1.42	0.85	2.30	1.90	2.00	5	5	75	12	3	[redacted]
1021-2	FWD	13	52	-133	-41	0	29	71	13	41	46	0	57	43	0.18	1.52	0.54	0.50	0.60	2.36	1.36	1.34	1.05	2.23	1.82	1.85	14	13	68	6	0	[redacted]
	AFT	13	52	-133	-41	0	100	0	53	25	22	0	50	50	0.35	1.38	0.76	0.76	0.70	2.30	1.62	1.50	1.30	2.36	1.94	1.94	6	0	71	21	1	[redacted]
1022-1	FWD	28	67	30	150	0	36	64	8	36	56	0	42	58	0.18	1.49	0.45	0.40	0.54	2.42	1.57	1.60	1.32	2.55	2.24	2.29	30	19	47	3	0	[redacted]
	AFT	27	67	28	150	0	89	11	7	42	51	0	53	47	0.24	1.48	0.57	0.50	0.52	2.30	1.63	1.68	1.30	2.47	2.21	2.25	4	15	71	9	1	[redacted]
1022-2	FWD	29	74	21	152	0	8	92	1	37	62	0	43	57	0.20	0.99	0.39	0.35	0.62	2.65	1.48	1.45	1.16	2.45	2.23	2.28	35	28	35	1	0	[redacted]
	AFT	28	74	19	152	0	100	0	10	44	46	0	63	47	0.21	1.40	0.48	0.44	0.50	2.32	1.51	1.52	1.45	2.49	2.25	2.28	10	25	61	4	0	[redacted]
1023-1	FWD	22	82	8	164	0	5	95	19	54	27	0	72	28	0.15	1.26	0.39	0.35	0.43	2.41	1.22	1.22	0.87	2.41	2.06	2.11	20	44	34	2	0	[redacted]
	AFT	20	81	8	163	0	11	89	0	39	61	0	42	58	0.20	1.40	0.53	0.48	0.41	2.21	1.31	1.37	0.94	2.45	2.15	2.20	13	14	68	7	0	[redacted]
1023-2	FWD	28	81	-13	177	0	7	93	0	19	81	0	18	82	0.22	1.38	0.48	0.42	0.41	2.03	1.18	1.22	0.90	2.41	2.03	2.11	35	2	60	2	1	[redacted]
	AFT	28	80	-13	178	0	3	97	0	34	66	0	28	72	0.22	1.60	0.52	0.48	0.44	2.31	1.24	1.24	1.08	2.46	2.10	2.17	13	10	73	4	0	[redacted]
1024-1	FWD	10	61	24	137	0	0	100	0	57	43	0	72	28	0.17	1.74	0.35	0.32	0.40	2.25	1.22	1.15	0.98	2.34	1.97	2.03	27	49	23	0	0	[redacted]
	AFT	9	61	21	136	0	0	100	0	28	72	0	82	18	0.20	1.22	0.40	0.37	0.48	2.32	1.30	1.24	0.94	2.40	1.97	2.06	13	46	39	2	0	[redacted]
1024-2	FWD	8	79	11	151	0	0	100	12	19	69	0	25	75	0.26	1.17	0.46	0.42	0.39	2.40	1.30	1.27	1.01	2.45	1.91	1.99	36	3	58	2	0	[redacted]
	AFT	8	79	9	151	0	0	100	1	22	77	0	66	34	0.20	1.39	0.47	0.40	0.29	2.26	1.31	1.32	0.90	2.40	1.89	1.95	20	28	50	6	0	[redacted]
1025-1	FWD	1	70	-123	-18	0	68	32	10	41	49	0	56	44	0.18	1.42	0.43	0.37	0.29	2.36	1.37	1.39	0.42	2.35	1.81	1.92	33	25	38	4	1	[redacted]
	AFT	0	70	-121	-19	0	72	28	8	49	43	0	61	39	0.18	1.69	0.49	0.42	0.26	2.26	1.33	1.38	0.23	2.32	1.75	1.90	25	20	47	7	1	[redacted]
1025-2	FWD	N	N	N	N	0	71	29	3	42	55	0	56	44	0.18	1.22	0.45	0.39	0.28	2.24	1.32	1.33	0.63	2.29	1.78	1.89	29	21	48	4	0	[redacted]
	AFT					0	73	27	3	45	52	0	51	49	0.21	1.32	0.53	0.48	0.39	2.16	1.31	1.35	0.48	2.23	1.71	1.79	19	12	61	8	0	[redacted]

* DATA NOT PRESENTLY AVAILABLE

SECTION A

APPENDIX

MISSION • 1025-1 • INSTRUMENT • FRWD 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.01	0	0	0	0	0	0	0	0	0	0	0	0
0.02	0	0	0	0	0	0	0	0	0	0	0	0
0.03	0	0	0	0	0	0	0	0	0	0	0	0
0.04	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0
0.06	0	0	0	0	0	0	0	0	0	0	0	0
0.07	0	0	0	0	0	0	0	0	0	0	0	0
0.08	0	0	0	0	0	0	0	0	0	0	0	0
0.09	0	0	0	0	0	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0	0	0	0	0	0
0.11	0	0	0	0	0	0	0	0	0	0	0	0
0.12	0	0	0	0	0	0	0	0	0	0	0	0
0.13	0	0	0	0	0	0	0	0	0	0	0	0
0.14	0	0	0	0	0	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0	0	0	0	0	0
0.16	0	0	0	0	0	0	0	0	0	0	0	0
0.17	0	0	0	0	0	0	0	0	0	0	0	0
0.18	0	0	0	1	0	0	0	0	0	1	0	0
0.19	0	0	0	0	0	0	0	0	0	0	0	0
0.20	0	0	0	3	0	0	1	0	0	4	0	0
0.21	0	0	0	0	0	0	1	0	0	1	0	0
0.22	0	0	0	3	0	0	8	0	0	11	0	0
0.23	0	0	0	2	0	0	1	0	0	3	0	0
0.24	0	0	0	3	0	0	2	0	0	5	0	0
0.25	0	0	0	3	0	0	2	0	0	5	0	0
0.26	0	0	0	5	0	0	5	0	0	10	0	0
0.27	0	0	0	2	0	0	3	0	0	5	0	0
0.28	0	0	0	2	0	0	6	0	0	8	0	0
0.29	0	0	0	2	0	0	2	1	0	4	1	0
0.30	0	0	0	3	1	0	12	1	1	15	2	1
0.31	0	0	0	4	0	0	9	1	0	13	1	0
0.32	0	0	0	6	0	0	9	0	0	15	1	0
0.33	0	0	0	5	0	0	2	0	0	7	0	0
0.34	0	0	0	5	0	0	8	1	0	13	1	0
0.35	0	0	0	2	0	0	4	1	0	6	1	0
0.36	0	0	0	3	0	0	4	0	0	7	0	0
0.37	0	0	0	2	0	0	1	0	0	3	0	0
0.38	0	0	0	6	0	0	4	0	0	10	0	0
0.39	0	0	0	4	0	0	2	0	0	6	0	0
0.40	0	0	0	4	0	0	6	0	0	10	0	0
0.41	0	0	0	1	0	0	2	0	0	3	0	0
0.42	0	0	0	3	0	0	3	1	0	6	1	0
0.43	0	0	0	0	0	0	2	0	0	2	0	0
0.44	0	0	0	3	0	0	3	0	0	6	0	0
0.45	0	0	0	4	0	0	1	0	0	5	0	0
0.46	0	0	0	1	0	0	0	1	0	1	1	0
0.47	0	0	0	5	0	0	2	1	0	7	1	0
0.48	0	0	0	0	0	0	2	1	0	3	1	0
0.49	0	0	0	2	0	0	2	1	0	4	1	0
0.50	0	0	0	2	0	0	2	1	0	4	1	0
SUBTOTAL	0	0	0	90	1	0	100	10	2	190	11	2

TOP SECRET [redacted] - CONTROL NO. [redacted]

TABLE A-1

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.51	0	0	0	0	0	0	0	0	0	0	0	0
0.52	0	0	0	4	0	0	1	2	0	5	2	0
0.53	0	0	0	1	0	0	0	0	0	1	0	0
0.54	0	0	0	2	1	0	0	0	0	2	1	0
0.55	0	0	0	3	1	0	0	0	0	3	1	0
0.56	0	0	0	6	0	0	0	0	0	6	0	0
0.57	0	0	0	2	0	0	0	0	0	2	0	0
0.58	0	0	0	5	1	0	0	1	0	5	1	0
0.59	0	0	0	4	0	1	0	1	0	5	1	1
0.60	0	0	0	0	1	0	1	2	0	1	3	0
0.61	0	0	0	1	0	0	0	0	0	1	0	0
0.62	0	0	0	1	0	0	0	0	0	1	0	0
0.63	0	0	0	0	0	0	0	0	0	0	0	0
0.64	0	0	0	1	0	0	0	0	0	2	0	0
0.65	0	0	0	1	0	0	0	0	0	2	0	0
0.66	0	0	0	1	0	0	0	0	0	1	0	0
0.67	0	0	0	1	0	0	0	0	0	1	0	0
0.68	0	0	0	2	0	0	0	0	0	3	0	0
0.69	0	0	0	2	0	0	0	0	0	2	0	0
0.70	0	0	0	1	0	0	1	0	0	2	0	0
0.71	0	0	0	0	1	0	0	1	0	0	2	0
0.72	0	0	0	2	1	0	0	1	0	2	2	0
0.73	0	0	0	1	0	0	0	1	0	2	2	0
0.74	0	0	0	1	0	0	0	2	0	2	2	0
0.75	0	0	0	1	0	0	0	1	0	1	2	0
0.76	0	0	0	1	0	0	0	1	0	1	1	0
0.77	0	0	0	0	0	0	0	1	0	0	1	0
0.78	0	0	0	1	0	0	0	0	0	1	0	0
0.79	0	0	0	0	2	0	0	0	0	0	2	0
0.80	0	0	0	0	1	0	0	3	0	0	5	0
0.81	0	0	0	0	0	0	0	0	0	0	0	0
0.82	0	0	0	0	0	0	0	2	0	1	0	0
0.83	0	0	0	0	0	0	0	0	0	0	0	0
0.84	0	0	0	0	0	0	0	0	0	0	0	0
0.85	0	0	0	2	0	0	0	0	0	2	0	0
0.86	0	0	0	0	0	0	0	0	0	0	0	0
0.87	0	0	0	0	0	0	0	1	0	0	0	0
0.88	0	0	0	0	1	0	0	0	0	0	1	0
0.89	0	0	0	0	0	0	0	1	0	0	1	0
0.90	0	0	0	2	0	0	0	0	0	2	0	0
0.91	0	0	0	2	0	1	0	1	0	2	0	1
0.92	0	0	0	1	1	2	0	2	0	1	3	2
0.93	0	0	0	1	0	2	0	1	0	1	0	2
0.94	0	0	0	1	0	2	0	1	0	1	0	2
0.95	0	0	0	1	0	0	0	0	0	1	0	0
0.96	0	0	0	0	0	1	0	0	0	0	0	1
0.97	0	0	0	0	0	1	0	0	0	0	0	1
0.98	0	0	0	2	1	1	0	0	2	2	1	2
0.99	0	0	0	2	1	1	0	0	0	2	1	2
1.00	0	0	0	0	1	0	0	1	0	0	2	0
SUBTOTAL	0	0	0	46	18	3	8	24	10	54	42	13

~~TOP SECRET~~ [redacted] CONTROL NO. [redacted]

TABLE A-1

MISSION • 1025-1 • INSTRUMENT • FRHD 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.01	0	0	0	0	0	0	0	0	1	0	0	1
1.02	0	0	0	0	0	0	0	2	0	0	2	0
1.03	0	0	0	0	0	0	0	0	0	0	0	0
1.04	0	0	0	1	0	1	0	0	0	1	0	1
1.05	0	0	0	0	1	0	0	0	1	0	1	0
1.06	0	0	0	0	1	3	2	0	0	2	1	4
1.07	0	0	0	0	0	0	0	1	0	0	1	0
1.08	0	0	0	0	0	1	0	0	1	0	0	1
1.09	0	0	0	0	0	1	0	0	0	0	1	0
1.10	0	0	0	1	0	1	3	0	0	1	0	2
1.11	0	0	0	0	0	0	0	1	0	0	1	0
1.12	0	0	0	0	0	0	3	0	0	3	0	0
1.13	0	0	0	0	0	0	0	0	0	0	0	0
1.14	0	0	0	0	0	1	0	0	0	0	0	1
1.15	0	0	0	1	0	0	2	0	0	2	0	0
1.16	0	0	0	0	0	0	0	0	0	0	0	0
1.17	0	0	0	0	0	0	3	0	0	3	0	0
1.18	0	0	0	0	0	0	0	0	0	0	0	0
1.19	0	0	0	0	0	0	4	0	0	4	0	0
1.20	0	0	0	0	0	0	0	0	0	0	0	0
1.21	0	0	0	0	0	0	0	0	0	0	0	0
1.22	0	0	0	0	0	1	2	0	0	2	0	1
1.23	0	0	0	0	0	0	0	0	0	0	0	0
1.24	0	0	0	0	0	0	0	0	0	0	0	0
1.25	0	0	0	0	0	0	3	0	0	3	0	0
1.26	0	0	0	0	0	0	0	0	0	0	0	0
1.27	0	0	0	0	0	0	0	1	0	0	1	0
1.28	0	0	0	0	0	0	5	1	0	5	1	0
1.29	0	0	0	0	0	0	1	0	0	1	0	0
1.30	0	0	0	0	0	0	0	0	0	0	0	0
1.31	0	0	0	0	0	0	0	0	0	0	0	0
1.32	0	0	0	0	0	0	0	0	0	0	0	0
1.33	0	0	0	0	0	0	0	0	0	0	0	0
1.34	0	0	0	0	0	0	0	0	0	0	0	0
1.35	0	0	0	0	0	0	0	0	0	0	0	0
1.36	0	0	0	0	0	0	0	0	0	0	0	0
1.37	0	0	0	0	0	0	0	0	0	0	0	0
1.38	0	0	0	0	0	0	0	0	0	0	0	0
1.39	0	0	0	0	0	0	0	0	0	0	0	0
1.40	0	0	0	0	0	0	0	0	0	0	0	0
1.41	0	0	0	0	0	0	0	0	0	0	0	0
1.42	0	0	0	0	0	0	0	0	0	0	0	0
1.43	0	0	0	0	0	0	0	0	0	0	0	0
1.44	0	0	0	0	0	0	0	0	0	0	0	0
1.45	0	0	0	0	0	0	0	0	0	0	0	0
1.46	0	0	0	0	0	0	0	0	0	0	0	0
1.47	0	0	0	0	0	0	0	0	0	0	0	0
1.48	0	0	0	0	0	0	0	0	0	0	0	0
1.49	0	0	0	0	0	0	0	0	0	0	0	0
1.50	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	5	74	12	2	29	23	7	103	35

TOP SECRET [redacted] - CONTROL NO. [redacted]

TABLE A-1

DENSITY VALUE	PRIMARY MIN-MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.51	0	0	0	0	1	0	0	0	0	1	0
1.52	0	0	0	0	2	0	0	1	0	3	0
1.53	0	0	0	0	0	1	0	0	0	2	1
1.54	0	0	0	0	0	0	0	2	0	1	1
1.55	0	0	0	0	1	0	0	1	0	0	1
1.56	0	0	0	0	1	0	0	0	0	0	1
1.57	0	0	0	0	0	1	0	2	0	0	1
1.58	0	0	0	0	1	0	0	1	0	0	1
1.59	0	0	0	0	2	0	0	0	0	0	1
1.60	0	0	0	0	2	0	0	2	0	0	1
1.61	0	0	0	0	0	1	0	1	0	0	1
1.62	0	0	0	0	2	0	0	0	0	0	1
1.63	0	0	0	0	3	0	0	1	0	0	1
1.64	0	0	0	0	2	0	0	0	0	0	1
1.65	0	0	0	0	1	1	0	1	0	0	1
1.66	0	0	0	0	4	0	0	0	0	0	1
1.67	0	0	0	0	0	1	0	1	0	0	1
1.68	0	0	0	0	1	0	0	0	0	0	1
1.69	0	0	0	0	1	0	0	1	0	0	1
1.70	0	0	0	0	1	0	0	0	0	0	1
1.71	0	0	0	0	0	1	0	1	0	0	1
1.72	0	0	0	0	2	0	0	0	0	0	1
1.73	0	0	0	0	1	1	0	1	0	0	1
1.74	0	0	0	0	1	0	0	0	0	0	1
1.75	0	0	0	0	2	0	0	1	0	0	1
1.76	0	0	0	0	1	1	0	0	0	0	1
1.77	0	0	0	0	2	0	0	1	0	0	1
1.78	0	0	0	0	0	1	0	0	0	0	1
1.79	0	0	0	0	3	0	0	1	0	0	1
1.80	0	0	0	0	1	1	0	0	0	0	1
1.81	0	0	0	0	1	0	0	1	0	0	1
1.82	0	0	0	0	0	1	0	0	0	0	1
1.83	0	0	0	0	2	0	0	1	0	0	1
1.84	0	0	0	0	0	1	0	0	0	0	1
1.85	0	0	0	0	1	0	0	1	0	0	1
1.86	0	0	0	0	0	1	0	0	0	0	1
1.87	0	0	0	0	1	0	0	1	0	0	1
1.88	0	0	0	0	0	1	0	0	0	0	1
1.89	0	0	0	0	1	0	0	1	0	0	1
1.90	0	0	0	0	0	1	0	0	0	0	1
1.91	0	0	0	0	1	0	0	1	0	0	1
1.92	0	0	0	0	0	1	0	0	0	0	1
1.93	0	0	0	0	1	0	0	1	0	0	1
1.94	0	0	0	0	0	1	0	0	0	0	1
1.95	0	0	0	0	1	0	0	1	0	0	1
1.96	0	0	0	0	0	1	0	0	0	0	1
1.97	0	0	0	0	1	0	0	1	0	0	1
1.98	0	0	0	0	0	1	0	0	0	0	1
1.99	0	0	0	0	1	0	0	1	0	0	1
2.00	0	0	0	0	0	1	0	0	0	0	1
SUBTOTAL	0	0	0	0	45	33	0	31	34	0	76	67

TABLE A-1

[redacted] CONTROL NO. [redacted]

MISSION • 1025-1 • INSTRUMENT • FRWD 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.01	0	0	0	0	0	0	0	0	0	0	0	0
2.02	0	0	0	0	0	2	0	1	2	0	1	4
2.03	0	0	0	0	0	5	0	1	3	0	1	8
2.04	0	0	0	0	0	5	0	0	3	0	0	8
2.05	0	0	0	0	0	2	0	0	2	0	0	3
2.06	0	0	0	0	0	2	0	0	2	0	0	2
2.07	0	0	0	0	0	0	0	0	0	0	0	0
2.08	0	0	0	0	0	2	0	0	2	0	0	4
2.09	0	0	0	0	0	1	0	1	2	0	1	4
2.10	0	0	0	0	0	2	0	2	2	0	2	4
2.11	0	0	0	0	0	1	0	2	2	0	2	4
2.12	0	0	0	0	0	1	0	0	3	0	0	4
2.13	0	0	0	0	0	1	0	0	3	0	0	4
2.14	0	0	0	0	0	2	0	1	2	0	1	4
2.15	0	0	0	0	0	1	0	0	2	0	0	4
2.16	0	0	0	0	0	2	0	0	2	0	0	4
2.17	0	0	0	0	0	1	0	0	1	0	0	2
2.18	0	0	0	0	0	3	0	0	1	0	0	4
2.19	0	0	0	0	0	0	0	0	0	0	0	0
2.20	0	0	0	0	0	8	0	3	2	0	3	10
2.21	0	0	0	0	0	0	0	3	2	0	3	10
2.22	0	0	0	0	0	0	0	2	0	0	2	2
2.23	0	0	0	0	0	2	0	0	1	0	0	3
2.24	0	0	0	0	0	8	0	0	0	0	0	8
2.25	0	0	0	0	0	0	0	0	0	0	0	0
2.26	0	0	0	0	0	4	0	0	3	0	0	7
2.27	0	0	0	0	0	0	0	0	1	0	0	1
2.28	0	0	0	0	0	6	0	0	4	0	0	10
2.29	0	0	0	0	0	0	0	0	2	0	0	2
2.30	0	0	0	0	0	1	0	1	1	0	1	2
2.31	0	0	0	0	0	0	0	1	1	0	1	2
2.32	0	0	0	0	0	3	0	1	0	0	1	4
2.33	0	0	0	0	0	0	0	0	0	0	0	0
2.34	0	0	0	0	0	0	0	1	0	0	1	0
2.35	0	0	0	0	0	0	0	1	0	0	1	0
2.36	0	0	0	0	0	0	0	1	0	0	1	0
2.37	0	0	0	0	0	0	0	0	0	0	0	0
2.38	0	0	0	0	0	0	0	0	0	0	0	0
2.39	0	0	0	0	0	0	0	0	0	0	0	0
2.40	0	0	0	0	0	0	0	0	0	0	0	0
2.41	0	0	0	0	0	0	0	0	0	0	0	0
2.42	0	0	0	0	0	0	0	0	0	0	0	0
2.43	0	0	0	0	0	0	0	0	0	0	0	0
2.44	0	0	0	0	0	0	0	0	0	0	0	0
2.45	0	0	0	0	0	0	0	0	0	0	0	0
2.46	0	0	0	0	0	0	0	0	0	0	0	0
2.47	0	0	0	0	0	0	0	0	0	0	0	0
2.48	0	0	0	0	0	0	0	0	0	0	0	0
2.49	0	0	0	0	0	0	0	0	0	0	0	0
2.50	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	3	60	0	16	36	0	19	96

TOP SECRET [redacted] CONTROL NO. [redacted]

TABLE A-1

TOP SECRET [redacted]

MISSION • 1025-1 • INSTRUMENT • FRWD 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.51	0	0	0	0	0	0	0	0	0	0	0	0
2.52	0	0	0	0	0	0	0	0	0	0	0	0
2.53	0	0	0	0	0	0	0	0	0	0	0	0
2.54	0	0	0	0	0	0	0	0	0	0	0	0
2.55	0	0	0	0	0	0	0	0	0	0	0	0
2.56	0	0	0	0	0	0	0	0	0	0	0	0
2.57	0	0	0	0	0	0	0	0	0	0	0	0
2.58	0	0	0	0	0	0	0	0	0	0	0	0
2.59	0	0	0	0	0	0	0	0	0	0	0	0
2.60	0	0	0	0	0	0	0	0	0	0	0	0
2.61	0	0	0	0	0	0	0	0	0	0	0	0
2.62	0	0	0	0	0	0	0	0	0	0	0	0
2.63	0	0	0	0	0	0	0	0	0	0	0	0
2.64	0	0	0	0	0	0	0	0	0	0	0	0
2.65	0	0	0	0	0	0	0	0	0	0	0	0
2.66	0	0	0	0	0	0	0	0	0	0	0	0
2.67	0	0	0	0	0	0	0	0	0	0	0	0
2.68	0	0	0	0	0	0	0	0	0	0	0	0
2.69	0	0	0	0	0	0	0	0	0	0	0	0
2.70	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	141	141	108	110	110	105	251	251	213

MISSION 1025-1 INSTR - FRWD 12/30/65 PROCESSING AND EXPOSURE ANALY

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	0	0 PC	0 PC	0 PC	0 PC	0 PC
INTERMEDIATE	141	3 PC	44 PC	47 PC	5 PC	1 PC
FULL	110	71 PC	0 PC	27 PC	2 PC	0 PC
ALL LEVELS	251	33 PC	25 PC	38 PC	4 PC	1 PC

PROCESS LEVEL	BASE + FOG	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	0.01-0.09	0.01-0.13	0.14-0.39	0.40-0.90	----------	0.91 AND
INTERMED	0.10-0.17	0.01-0.20	0.21-0.39	0.40-0.90	0.91-1.34	1.35 AND
FULL	0.18 AND UP	0.01-0.39	----------	0.40-0.90	0.91-1.69	1.70 AND

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

TABLE A-1

MISSION • 1025-1 • INSTR • FRWD • 12/30/65 PLOT OF D MIN • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 0.48 • MEDIAN • 0.41 • STD DEV • 0.23 • RANGE • 0.18 TO 1.42 WITH 141 SAMPLES

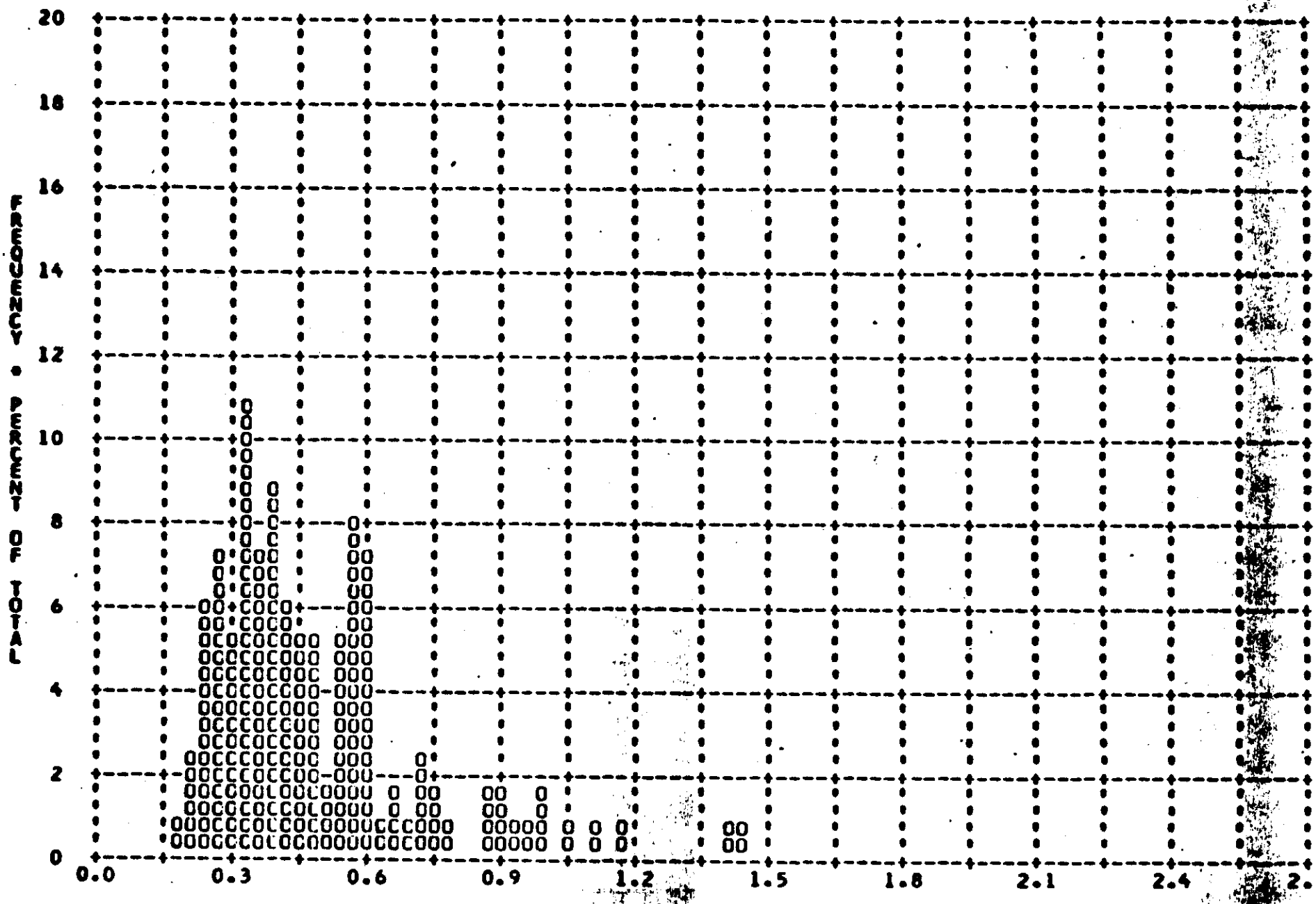


FIGURE A-1

MISSION • 1025-1 • INSTR • FRWD • 12/30/65 PLOT OF D MAX • TERRAIN • PROCESSING • INTERMEDIAT

ARITH MEAN • 1.38 • MEDIAN • 1.39 • STD DEV • 0.34 • RANGE • 0.30 TO 2.16 WITH 141 SAMPLES

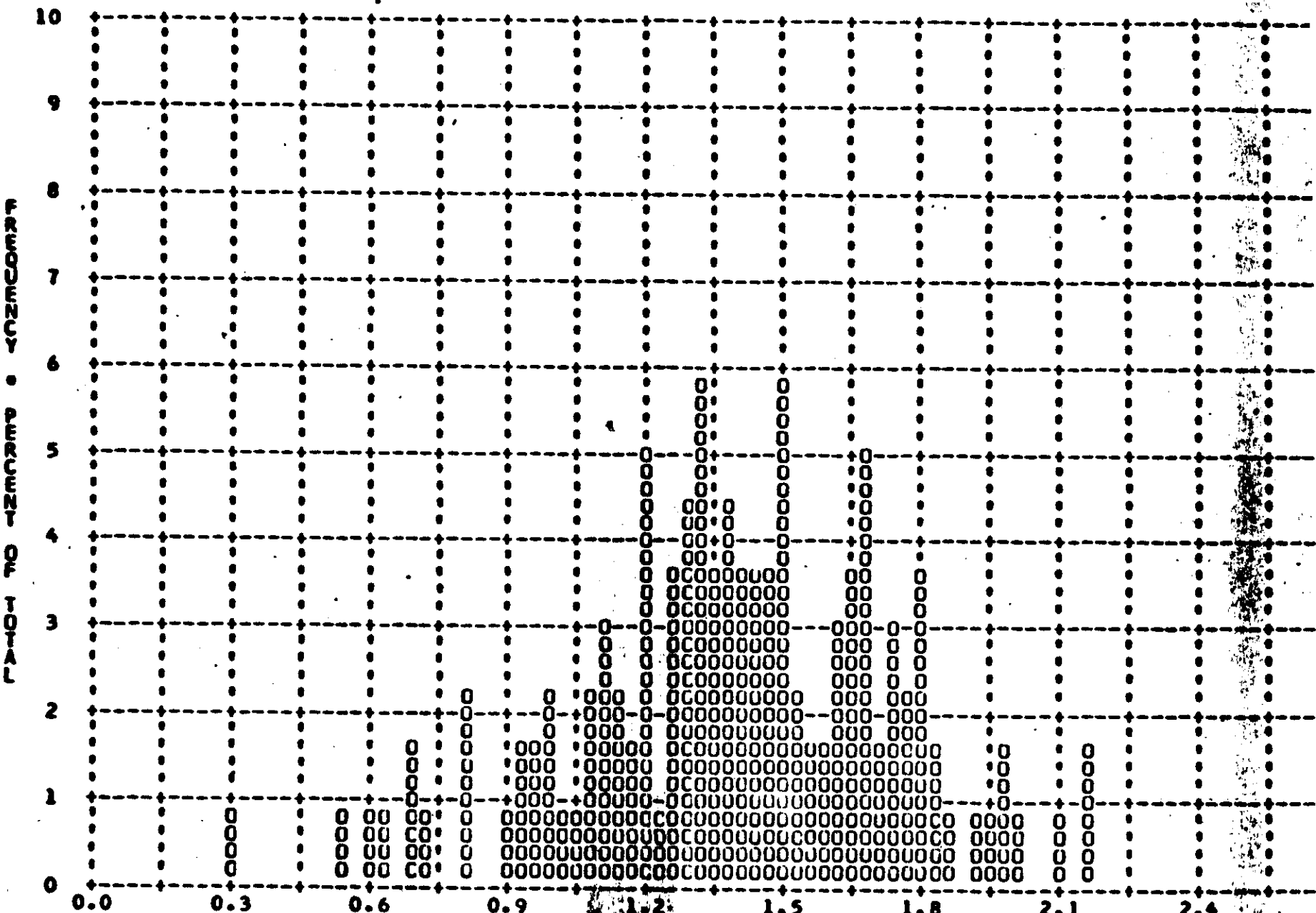


FIGURE A-2

MISSION • 1025-1 • INSTR • FRWD • 12/30/65 PLOT OF D MAX • CLOUD • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.92 • MEDIAN • 2.04 • STD DEV • 0.36 • RANGE • 0.60 TO 2.32 WITH 108 SAMPLES

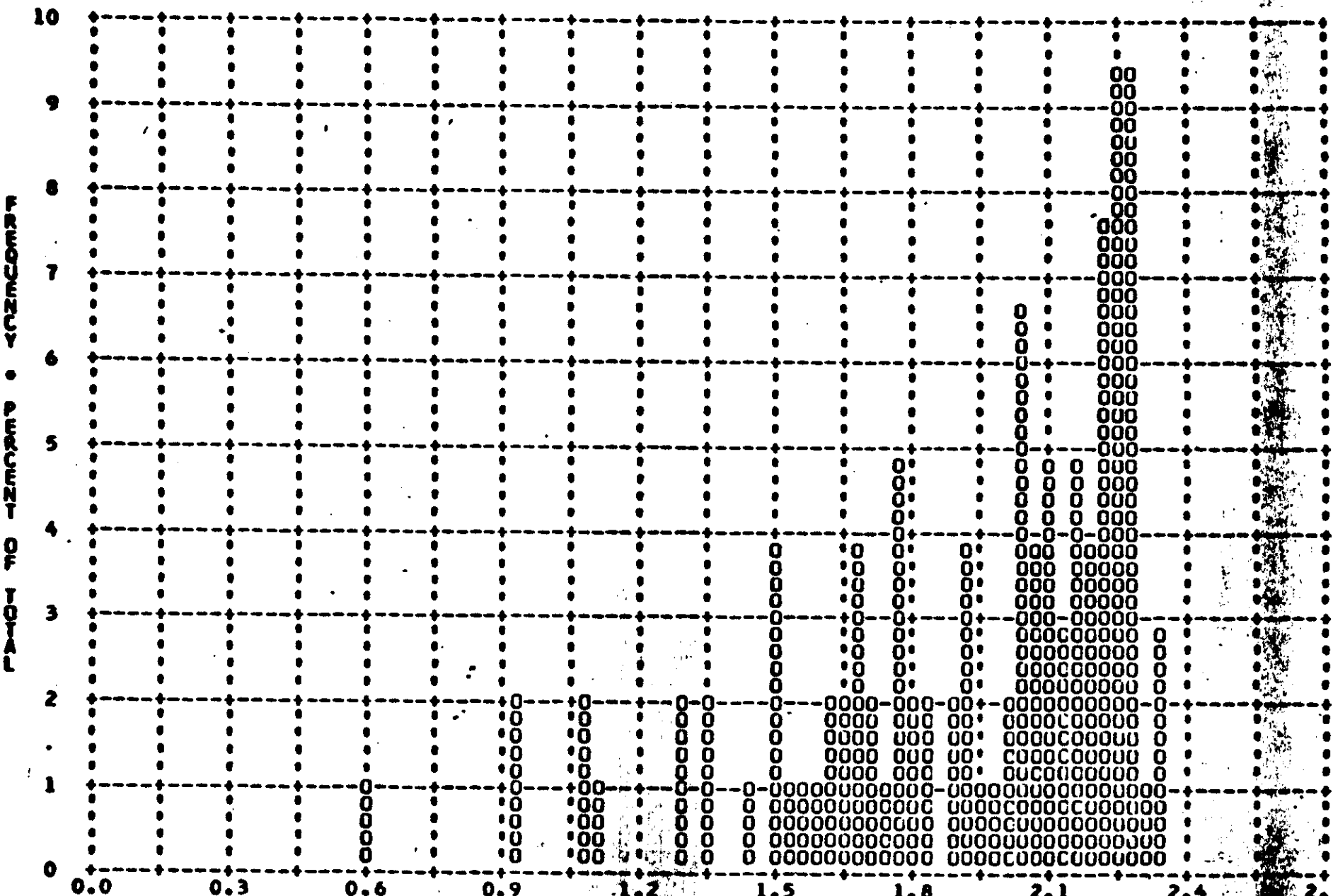


FIGURE A-3

MISSION • 1025-1 • INSTR • FRWD • 12/30/65 PLOT OF D MIN • TERRAIN • PROCESSING • FULL

ARITH MEAN • 0.37 • MEDIAN • 0.34 • STD DEV • 0.17 • RANGE • 0.20 TO 1.32 WITH 110 SAMPLES

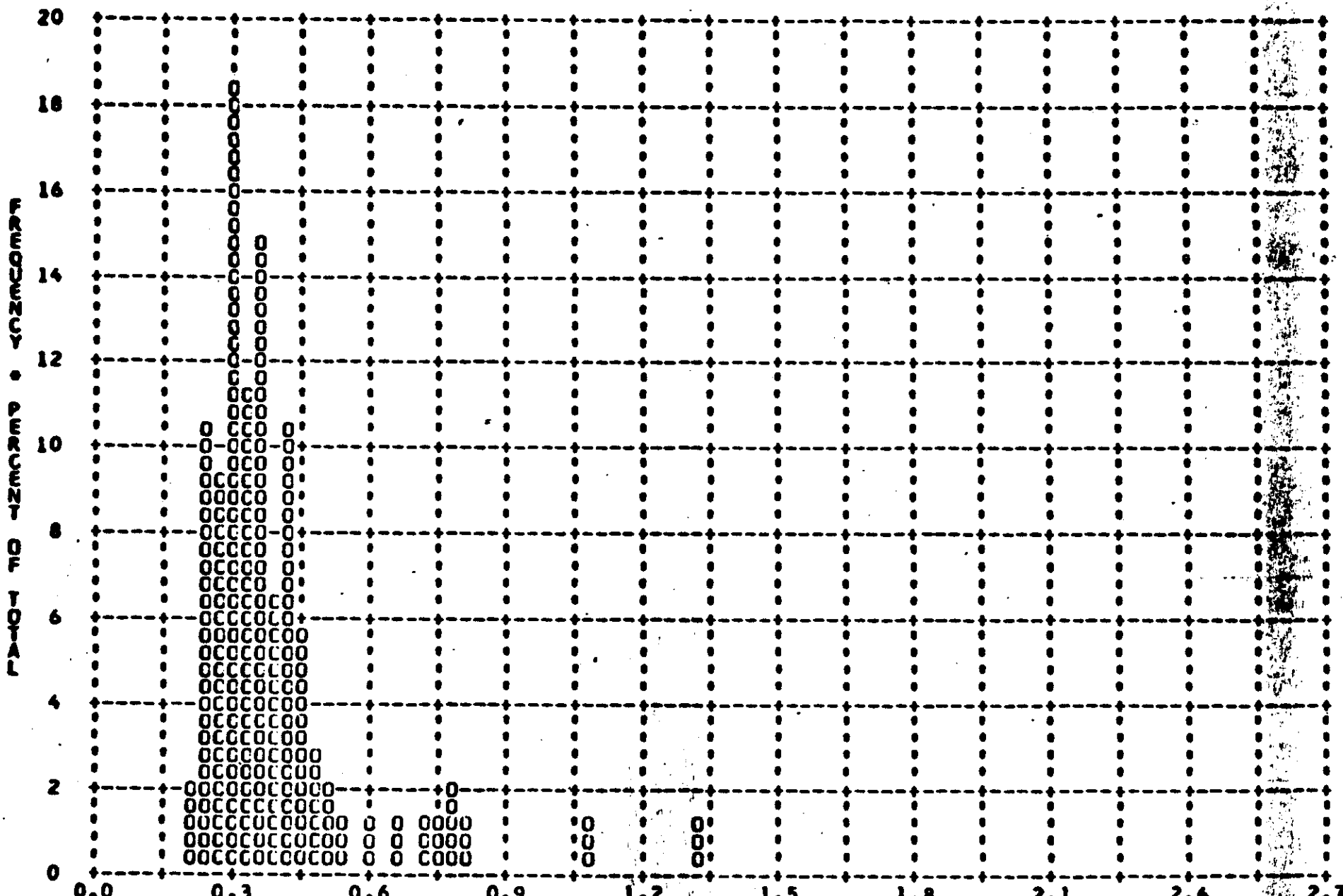
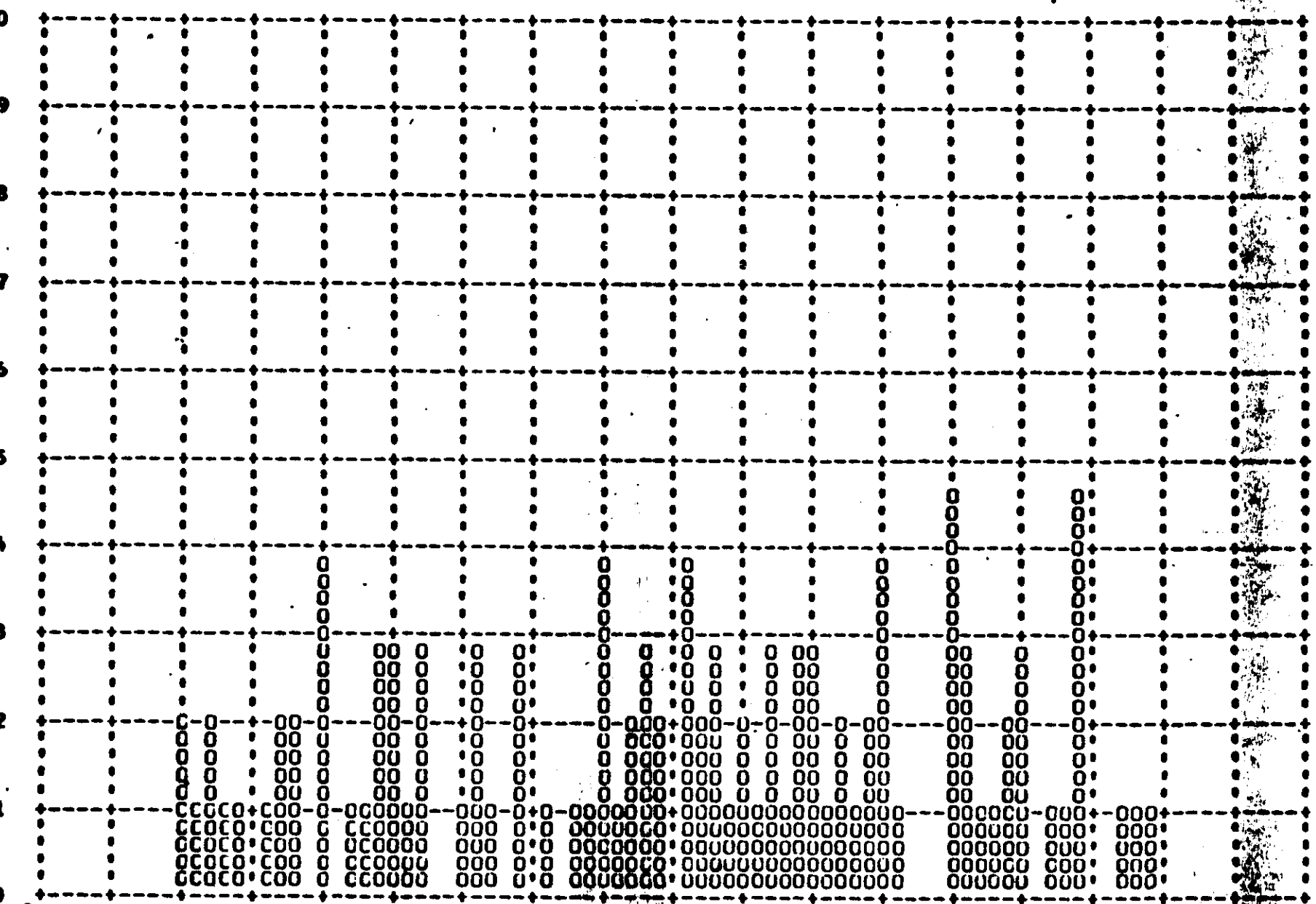


FIGURE A-4

MISSION • 1025-1 • INSTR • FRWD • 12/30/65 PLOT OF D MAX • TERRAIN • PROCESSING • FULL

ARITH MEAN • 1.35 • MEDIAN • 1.40 • STD DEV • 0.58 • RANGE • 0.29 TO 2.36 WITH 110 SAMPLES



MISSION • 1025-1 • INSTR • FRWD • 12/30/65 PLOT OF D MAX • CLOUD • PROCESSING • FULL

ARITH MEAN • 1.70 • MEDIAN • 1.82 • STD DEV • 0.50 • RANGE • 0.42 TO 2.35 WITH 105 SAMPLES

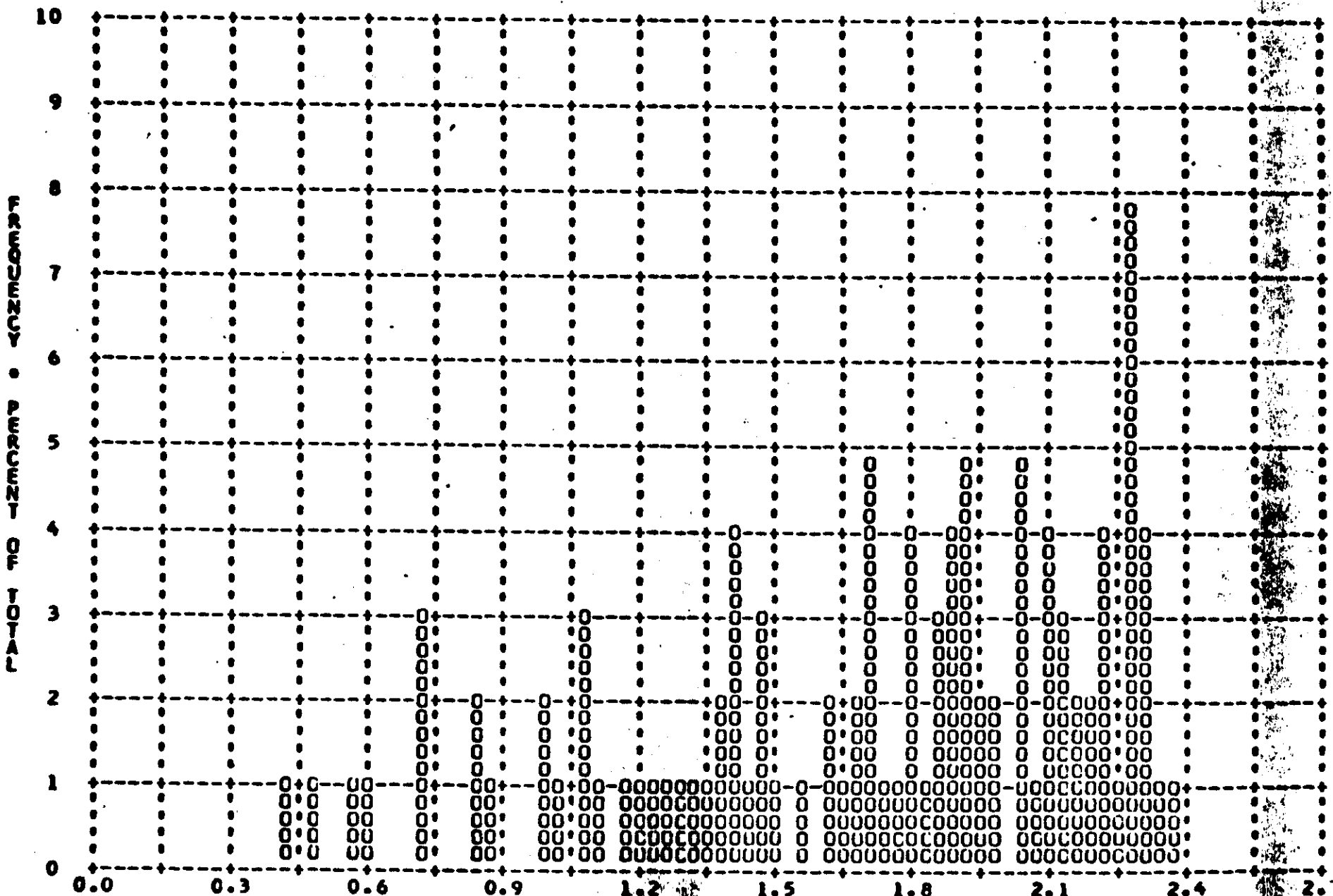


FIGURE A-6

MISSION • 1025-1 • INSTR • FRWD • 12/30/65 PLOT OF D MIN • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 0.43 • MEDIAN • 0.37 • STD DEV • 0.21 • RANGE • 0.18 TO 1.42 WITH 251 SAMPLES

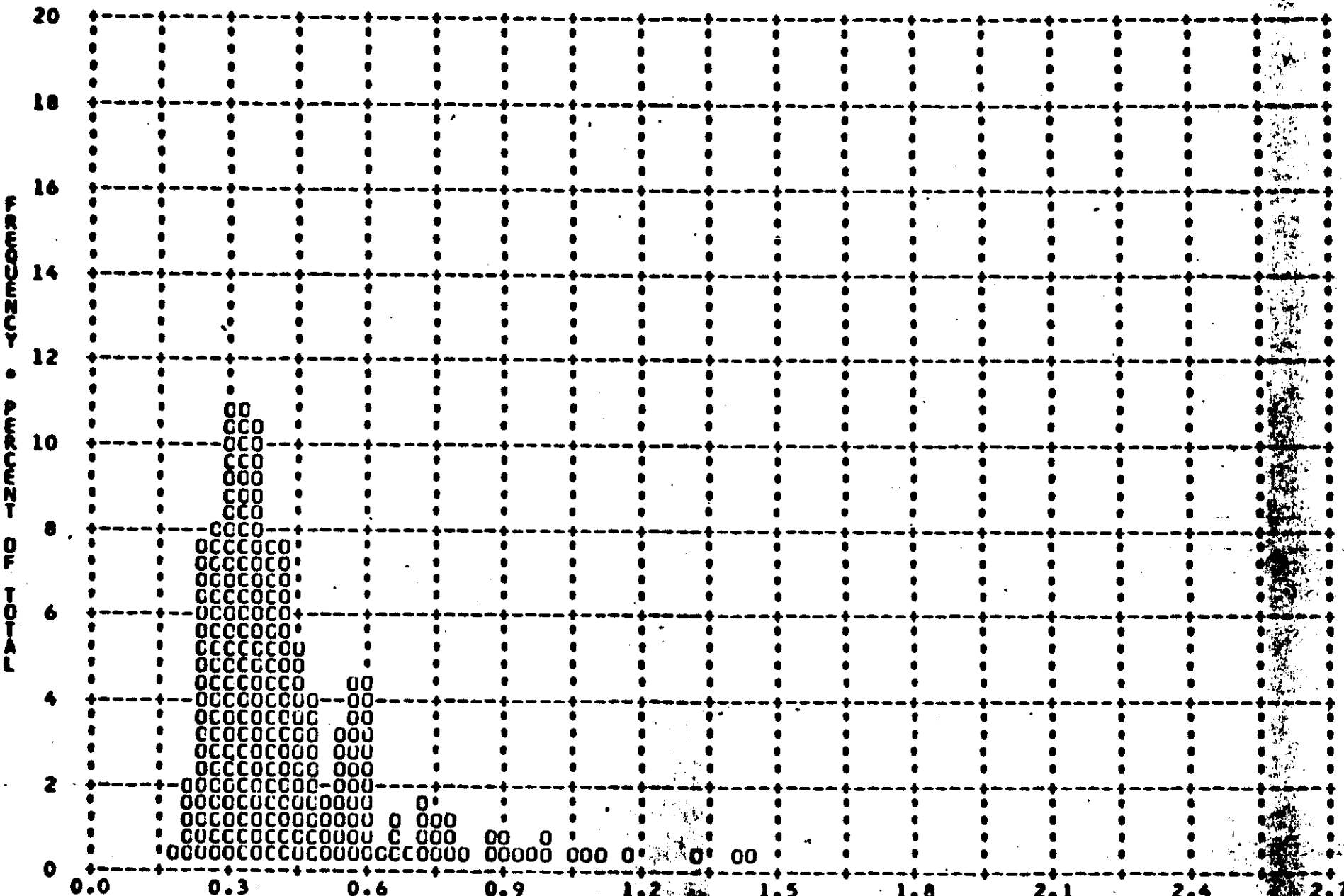
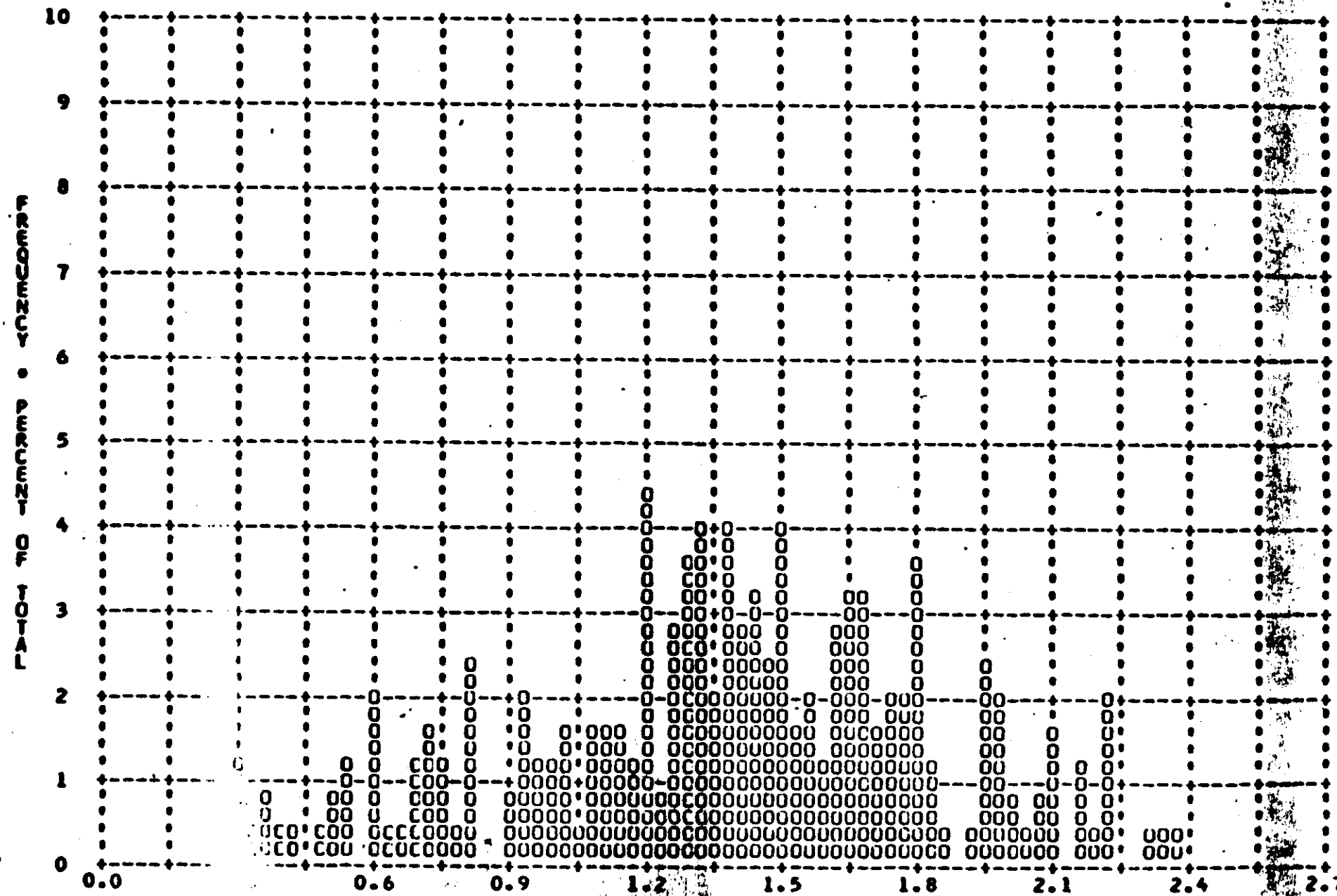


FIGURE A-7

MISSION • 1025-1 • INSTR • FRWD • 12/30/65 PLOT OF D MAX • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 1.37 • MEDIAN • 1.39 • STD DEV • 0.46 • RANGE • 0.29 TO 2.36 WITH 251 SAMPLES

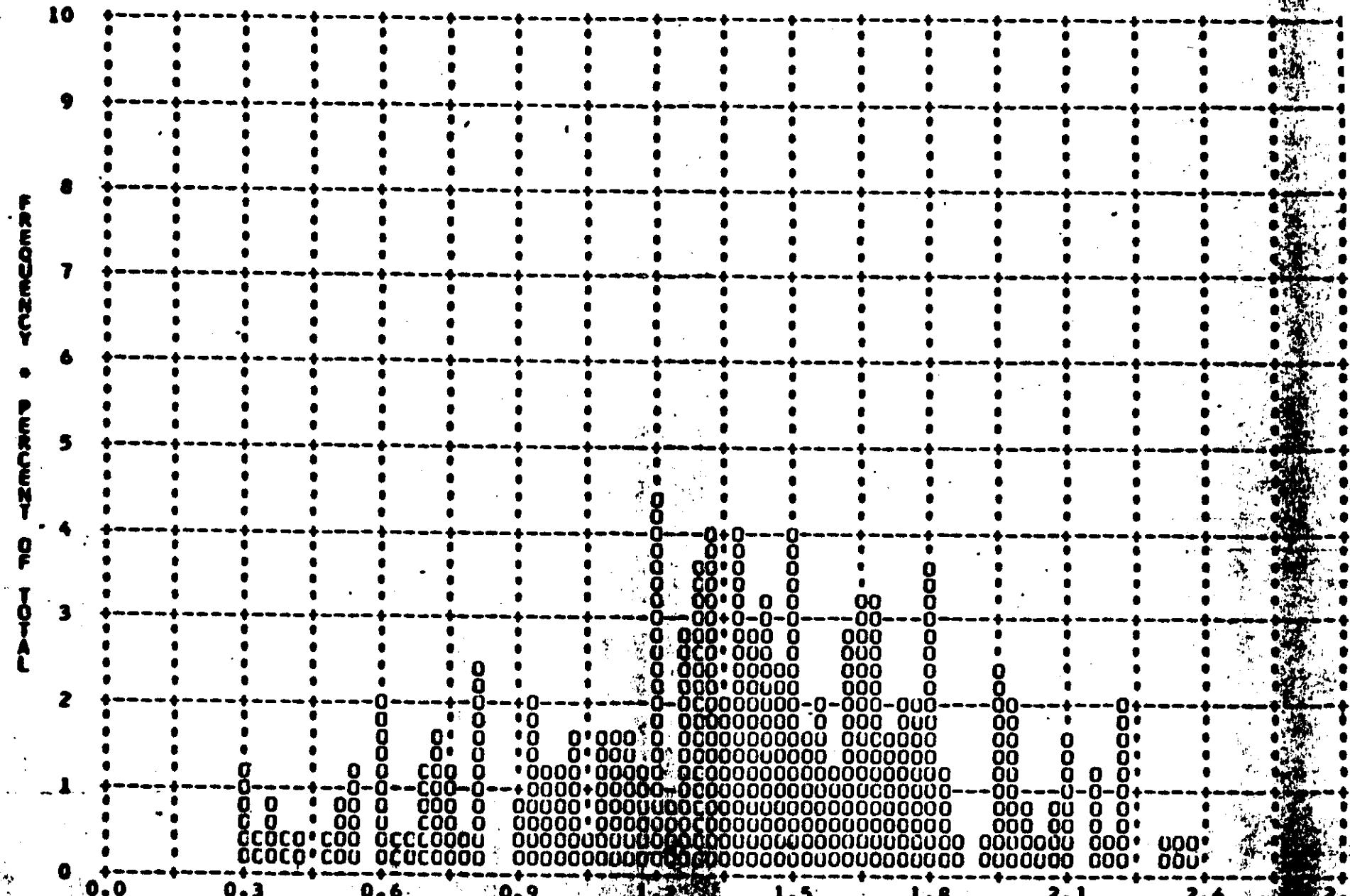


[redacted] [redacted]

FIGURE A-8

MISSION • 1025-1 • INSTR • FRWD • 12/30/65 PLOT OF D MAX • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 1.37 • MEDIAN • 1.39 • STD DEV • 0.46 • RANGE • 0.29 TO 2.36 WITH 251 SAMPLES



MISSION • 1025-1 • INSTR • FRWD • 12/30/65 PLOT OF D MAX • CLOUD • PROCESSING • ALL LEVELS

ARITH MEAN • 1.81 • MEDIAN • 1.92 • STD DEV • 0.45 • RANGE • 0.42 TO 2.35 WITH 213 SAMPLES

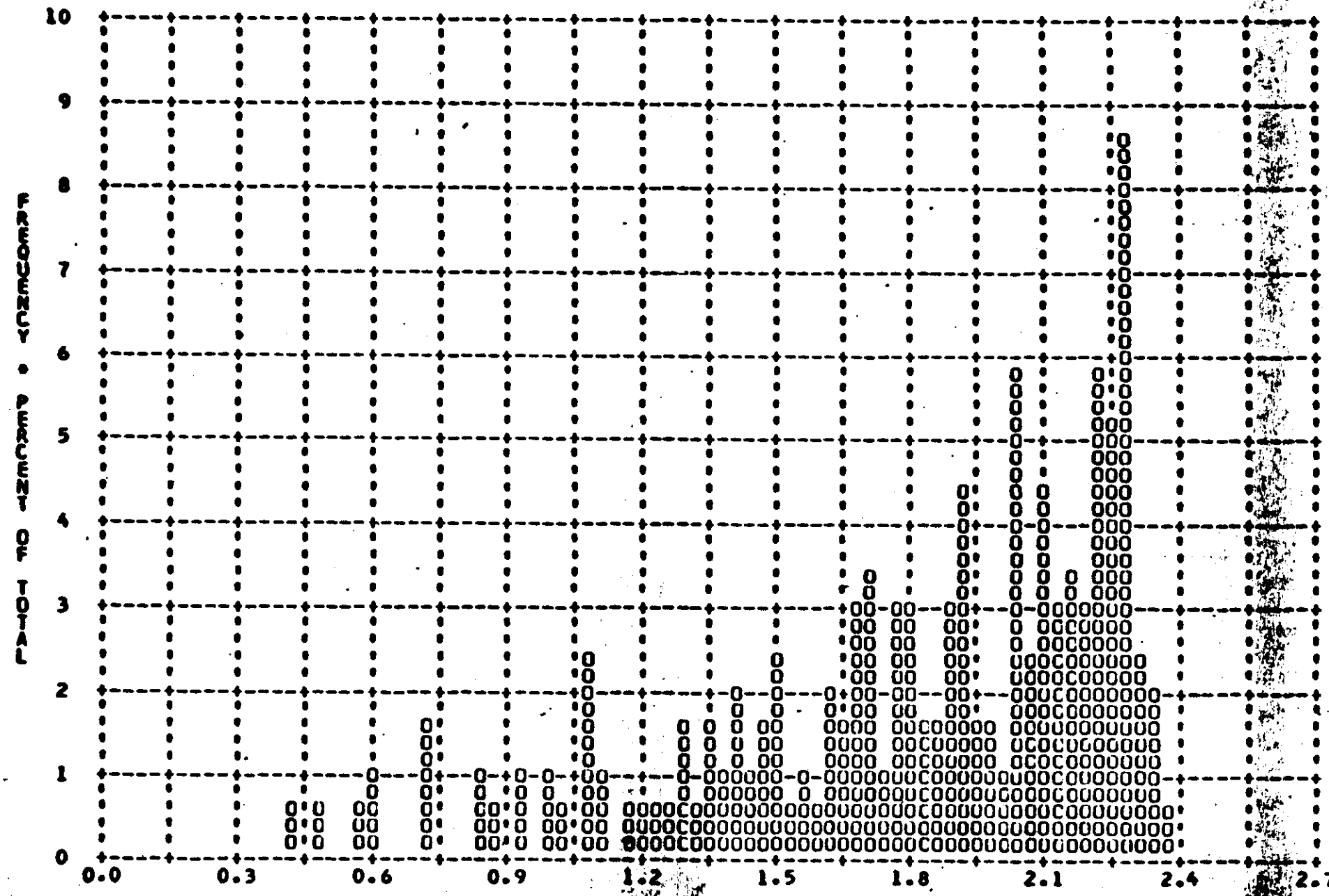


FIGURE A-10

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

MISSION • 1025-1 • INSTRUMENT • AFT 12/30/65 DENSITY FREQ D1878

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.01	0	0	0	0	0	0	0	0	0	0	0	0
0.02	0	0	0	0	0	0	0	0	0	0	0	0
0.03	0	0	0	0	0	0	0	0	0	0	0	0
0.04	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0
0.06	0	0	0	0	0	0	0	0	0	0	0	0
0.07	0	0	0	0	0	0	0	0	0	0	0	0
0.08	0	0	0	0	0	0	0	0	0	0	0	0
0.09	0	0	0	0	0	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0	0	0	0	0	0
0.11	0	0	0	0	0	0	0	0	0	0	0	0
0.12	0	0	0	0	0	0	0	0	0	0	0	0
0.13	0	0	0	0	0	0	0	0	0	0	0	0
0.14	0	0	0	0	0	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0	0	0	0	0	0
0.16	0	0	0	0	0	0	0	0	0	0	0	0
0.17	0	0	0	0	0	0	0	0	0	0	0	0
0.18	0	0	0	0	0	0	0	0	0	0	0	0
0.19	0	0	0	0	0	0	0	0	0	0	0	0
0.20	0	0	0	0	0	0	0	0	0	0	0	0
0.21	0	0	0	0	0	0	0	0	0	0	0	0
0.22	0	0	0	0	0	0	0	0	0	0	0	0
0.23	0	0	0	0	0	0	0	0	0	0	0	0
0.24	0	0	0	0	0	0	0	0	0	0	0	0
0.25	0	0	0	0	0	0	0	0	0	0	0	0
0.26	0	0	0	0	0	0	0	0	0	0	0	0
0.27	0	0	0	0	0	0	0	0	0	0	0	0
0.28	0	0	0	0	0	0	0	0	0	0	0	0
0.29	0	0	0	0	0	0	0	0	0	0	0	0
0.30	0	0	0	0	0	0	0	0	0	0	0	0
0.31	0	0	0	0	0	0	0	0	0	0	0	0
0.32	0	0	0	0	0	0	0	0	0	0	0	0
0.33	0	0	0	0	0	0	0	0	0	0	0	0
0.34	0	0	0	0	0	0	0	0	0	0	0	0
0.35	0	0	0	0	0	0	0	0	0	0	0	0
0.36	0	0	0	0	0	0	0	0	0	0	0	0
0.37	0	0	0	0	0	0	0	0	0	0	0	0
0.38	0	0	0	0	0	0	0	0	0	0	0	0
0.39	0	0	0	0	0	0	0	0	0	0	0	0
0.40	0	0	0	0	0	0	0	0	0	0	0	0
0.41	0	0	0	0	0	0	0	0	0	0	0	0
0.42	0	0	0	0	0	0	0	0	0	0	0	0
0.43	0	0	0	0	0	0	0	0	0	0	0	0
0.44	0	0	0	0	0	0	0	0	0	0	0	0
0.45	0	0	0	0	0	0	0	0	0	0	0	0
0.46	0	0	0	0	0	0	0	0	0	0	0	0
0.47	0	0	0	0	0	0	0	0	0	0	0	0
0.48	0	0	0	0	0	0	0	0	0	0	0	0
0.49	0	0	0	0	0	0	0	0	0	0	0	0
0.50	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	88	1	0	84	13	5	172	14	5

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

TABLE A-2

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

MISSION • 1025-1 • INSTRUMENT • AFT 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.51	0	0	0	0	0	0	0	0	0	0	0	0
0.52	0	0	0	0	0	0	0	0	0	0	0	0
0.53	0	0	0	0	0	0	0	0	0	0	0	0
0.54	0	0	0	0	0	0	0	0	0	0	0	0
0.55	0	0	0	0	0	0	0	0	0	0	0	0
0.56	0	0	0	0	0	0	0	0	0	0	0	0
0.57	0	0	0	0	0	0	0	0	0	0	0	0
0.58	0	0	0	0	0	0	0	0	0	0	0	0
0.59	0	0	0	0	0	0	0	0	0	0	0	0
0.60	0	0	0	0	0	0	0	0	0	0	0	0
0.61	0	0	0	0	0	0	0	0	0	0	0	0
0.62	0	0	0	0	0	0	0	0	0	0	0	0
0.63	0	0	0	0	0	0	0	0	0	0	0	0
0.64	0	0	0	0	0	0	0	0	0	0	0	0
0.65	0	0	0	0	0	0	0	0	0	0	0	0
0.66	0	0	0	0	0	0	0	0	0	0	0	0
0.67	0	0	0	0	0	0	0	0	0	0	0	0
0.68	0	0	0	0	0	0	0	0	0	0	0	0
0.69	0	0	0	0	0	0	0	0	0	0	0	0
0.70	0	0	0	0	0	0	0	0	0	0	0	0
0.71	0	0	0	0	0	0	0	0	0	0	0	0
0.72	0	0	0	0	0	0	0	0	0	0	0	0
0.73	0	0	0	0	0	0	0	0	0	0	0	0
0.74	0	0	0	0	0	0	0	0	0	0	0	0
0.75	0	0	0	0	0	0	0	0	0	0	0	0
0.76	0	0	0	0	0	0	0	0	0	0	0	0
0.77	0	0	0	0	0	0	0	0	0	0	0	0
0.78	0	0	0	0	0	0	0	0	0	0	0	0
0.79	0	0	0	0	0	0	0	0	0	0	0	0
0.80	0	0	0	0	0	0	0	0	0	0	0	0
0.81	0	0	0	0	0	0	0	0	0	0	0	0
0.82	0	0	0	0	0	0	0	0	0	0	0	0
0.83	0	0	0	0	0	0	0	0	0	0	0	0
0.84	0	0	0	0	0	0	0	0	0	0	0	0
0.85	0	0	0	0	0	0	0	0	0	0	0	0
0.86	0	0	0	0	0	0	0	0	0	0	0	0
0.87	0	0	0	0	0	0	0	0	0	0	0	0
0.88	0	0	0	0	0	0	0	0	0	0	0	0
0.89	0	0	0	0	0	0	0	0	0	0	0	0
0.90	0	0	0	0	0	0	0	0	0	0	0	0
0.91	0	0	0	0	0	0	0	0	0	0	0	0
0.92	0	0	0	0	0	0	0	0	0	0	0	0
0.93	0	0	0	0	0	0	0	0	0	0	0	0
0.94	0	0	0	0	0	0	0	0	0	0	0	0
0.95	0	0	0	0	0	0	0	0	0	0	0	0
0.96	0	0	0	0	0	0	0	0	0	0	0	0
0.97	0	0	0	0	0	0	0	0	0	0	0	0
0.98	0	0	0	0	0	0	0	0	0	0	0	0
0.99	0	0	0	0	0	0	0	0	0	0	0	0
1.00	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	59	25	1	16	18	14	75	43	15

~~TOP SECRET~~ [redacted] CONTROL NO. [redacted]

TABLE A-2

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

MISSION • 1025-1 • INSTRUMENT • AFT 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.01	0	0	0	0	0	0	0	0	0	0	0	0
1.02	0	0	0	1	3	0	0	0	0	1	3	0
1.03	0	0	0	0	1	0	0	0	0	0	1	0
1.04	0	0	0	0	1	0	0	0	1	0	1	1
1.05	0	0	0	1	2	1	0	1	0	1	3	1
1.06	0	0	0	0	2	0	0	0	0	0	2	0
1.07	0	0	0	0	2	0	0	1	0	0	2	0
1.08	0	0	0	1	2	0	0	0	0	1	2	0
1.09	0	0	0	0	3	0	0	0	0	0	3	0
1.10	0	0	0	0	3	0	0	0	0	0	6	0
1.11	0	0	0	0	3	0	0	0	0	0	6	0
1.12	0	0	0	1	0	0	0	2	0	1	2	0
1.13	0	0	0	0	0	0	0	0	0	0	2	0
1.14	0	0	0	0	2	0	0	0	0	0	2	0
1.15	0	0	0	1	2	0	0	1	0	1	2	0
1.16	0	0	0	1	2	0	0	1	0	1	3	0
1.17	0	0	0	1	1	0	0	1	0	1	3	0
1.18	0	0	0	2	5	0	0	1	0	2	6	0
1.19	0	0	0	2	0	0	0	0	0	2	6	0
1.20	0	0	0	0	4	0	0	2	0	0	6	0
1.21	0	0	0	0	0	0	0	0	0	0	6	0
1.22	0	0	0	0	4	1	0	0	0	0	4	1
1.23	0	0	0	0	1	1	0	0	2	0	4	2
1.24	0	0	0	0	1	1	0	0	1	0	2	2
1.25	0	0	0	0	1	1	0	0	0	0	2	1
1.26	0	0	0	0	1	0	0	0	1	0	1	0
1.27	0	0	0	0	0	1	0	0	0	0	1	0
1.28	0	0	0	0	1	0	0	0	1	0	1	0
1.29	0	0	0	0	0	3	0	0	0	0	1	0
1.30	0	0	0	0	3	1	0	0	0	0	3	1
1.31	0	0	0	0	1	1	0	0	1	0	1	1
1.32	0	0	0	0	1	1	0	0	2	0	1	2
1.33	0	0	0	0	1	2	0	2	1	0	3	1
1.34	0	0	0	0	2	2	0	1	1	0	3	1
1.35	0	0	0	0	2	1	0	1	0	0	3	1
1.36	0	0	0	0	1	0	0	0	0	0	1	0
1.37	0	0	0	0	1	2	0	0	0	0	2	0
1.38	0	0	0	0	2	5	0	0	3	0	6	3
1.39	0	0	0	0	0	0	0	1	0	0	6	3
1.40	0	0	0	1	2	0	0	3	1	0	5	1
1.41	0	0	0	1	0	2	0	3	0	1	5	0
1.42	0	0	0	0	3	1	0	0	1	0	3	2
1.43	0	0	0	0	1	0	0	1	1	0	3	2
1.44	0	0	0	0	2	1	0	2	1	0	4	2
1.45	0	0	0	0	4	0	0	2	1	0	4	1
1.46	0	0	0	0	4	1	0	1	0	0	5	2
1.47	0	0	0	0	1	2	0	1	0	0	5	2
1.48	0	0	0	0	2	0	0	0	0	0	2	2
1.49	0	0	0	0	1	0	0	0	0	0	1	2
1.50	0	0	0	0	6	1	0	2	1	0	8	2
SUBTOTAL	0	0	0	9	82	16	0	29	17	9	111	33

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

TABLE A-2

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

MISSION • 1025-1 • INSTRUMENT • AFT 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.51	0	0	0	0	0	1	0	0	0	0	0	1
1.52	0	0	0	0	4	3	0	1	0	0	5	3
1.53	0	0	0	0	0	3	0	0	1	0	0	4
1.54	0	0	0	0	1	3	0	0	1	0	1	4
1.55	0	0	0	0	1	2	0	0	1	0	1	3
1.56	0	0	0	0	2	2	0	0	1	0	2	3
1.57	0	0	0	0	0	2	0	1	1	0	1	3
1.58	0	0	0	0	2	0	0	1	1	0	2	2
1.59	0	0	0	0	1	2	0	1	1	0	2	2
1.60	0	0	0	0	2	1	0	1	2	0	2	4
1.61	0	0	0	0	1	1	0	2	0	0	1	3
1.62	0	0	0	0	1	1	0	2	0	0	1	3
1.63	0	0	0	0	1	0	0	0	1	0	1	1
1.64	0	0	0	0	0	1	0	0	1	0	0	2
1.65	0	0	0	0	1	0	0	1	2	0	2	4
1.66	0	0	0	0	2	1	0	1	2	0	2	4
1.67	0	0	0	0	0	1	0	2	0	0	1	3
1.68	0	0	0	0	1	0	0	0	2	0	1	2
1.69	0	0	0	0	0	1	0	1	1	0	1	2
1.70	0	0	0	0	1	0	0	2	1	0	2	2
1.71	0	0	0	0	0	1	0	0	2	0	0	3
1.72	0	0	0	0	5	0	0	1	3	0	5	3
1.73	0	0	0	0	0	2	0	0	3	0	0	5
1.74	0	0	0	0	2	1	0	0	2	0	2	4
1.75	0	0	0	0	1	0	0	0	2	0	1	3
1.76	0	0	0	0	0	1	0	0	2	0	0	3
1.77	0	0	0	0	1	0	0	0	2	0	1	3
1.78	0	0	0	0	0	1	0	0	2	0	0	3
1.79	0	0	0	0	4	1	0	0	3	0	4	4
1.80	0	0	0	0	1	2	0	0	3	0	1	5
1.81	0	0	0	0	2	1	0	0	3	0	2	5
1.82	0	0	0	0	0	2	0	0	3	0	0	5
1.83	0	0	0	0	2	2	0	0	4	0	2	6
1.84	0	0	0	0	2	1	0	0	4	0	2	6
1.85	0	0	0	0	1	3	0	0	4	0	1	7
1.86	0	0	0	0	3	0	0	0	4	0	3	6
1.87	0	0	0	0	0	3	0	0	4	0	0	7
1.88	0	0	0	0	1	2	0	0	5	0	1	7
1.89	0	0	0	0	0	2	0	0	5	0	0	7
1.90	0	0	0	0	0	1	0	0	5	0	0	6
1.91	0	0	0	0	1	1	0	0	5	0	1	6
1.92	0	0	0	0	1	0	0	0	6	0	1	6
1.93	0	0	0	0	0	2	0	0	6	0	0	8
1.94	0	0	0	0	0	1	0	0	6	0	0	7
1.95	0	0	0	0	0	0	0	0	6	0	0	6
1.96	0	0	0	0	1	0	0	0	7	0	1	7
1.97	0	0	0	0	0	2	0	0	7	0	0	9
1.98	0	0	0	0	0	1	0	0	7	0	0	8
1.99	0	0	0	0	0	0	0	0	7	0	0	7
2.00	0	0	0	0	1	4	0	2	1	0	3	5
SUBTOTAL	0	0	0	1	47	44	0	31	27	1	78	71

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

TABLE A-2

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

MISSION • 1025-1 • INSTRUMENT • AFT 12/30/65 . DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.01	0	0	0	0	0	1	0	0	0	0	0	1
2.02	0	0	0	0	0	5	0	0	3	0	0	8
2.03	0	0	0	0	0	0	0	0	0	0	0	0
2.04	0	0	0	0	0	1	0	0	0	0	0	1
2.05	0	0	0	0	0	3	0	0	0	0	0	3
2.06	0	0	0	0	0	3	0	0	0	0	0	3
2.07	0	0	0	0	0	0	0	0	0	0	0	0
2.08	0	0	0	0	0	8	0	0	2	0	0	9
2.09	0	0	0	0	0	1	0	0	0	0	0	1
2.10	0	0	0	0	0	8	0	0	3	0	1	11
2.11	0	0	0	0	0	1	0	0	0	0	0	1
2.12	0	0	0	0	0	2	0	0	4	0	0	6
2.13	0	0	0	0	0	1	0	0	0	0	0	1
2.14	0	0	0	0	0	4	0	0	0	0	0	4
2.15	0	0	0	0	0	1	0	0	1	0	0	2
2.16	0	0	0	0	1	5	0	0	0	0	0	5
2.17	0	0	0	0	0	1	0	0	0	0	0	1
2.18	0	0	0	0	0	1	0	0	3	0	0	4
2.19	0	0	0	0	0	0	0	0	0	0	0	0
2.20	0	0	0	0	0	3	0	0	2	0	0	5
2.21	0	0	0	0	0	3	0	0	2	0	0	5
2.22	0	0	0	0	0	3	0	0	2	0	0	5
2.23	0	0	0	0	0	0	0	0	0	0	0	0
2.24	0	0	0	0	0	2	0	0	0	0	0	2
2.25	0	0	0	0	0	1	0	0	2	0	0	3
2.26	0	0	0	0	1	0	0	0	2	0	0	3
2.27	0	0	0	0	0	2	0	0	2	0	0	4
2.28	0	0	0	0	0	0	0	0	0	0	0	0
2.29	0	0	0	0	0	0	0	0	2	0	0	2
2.30	0	0	0	0	0	0	0	0	1	0	0	1
2.31	0	0	0	0	0	0	0	0	0	0	0	0
2.32	0	0	0	0	0	0	0	0	2	0	0	2
2.33	0	0	0	0	0	0	0	0	0	0	0	0
2.34	0	0	0	0	0	0	0	0	0	0	0	0
2.35	0	0	0	0	0	0	0	0	0	0	0	0
2.36	0	0	0	0	0	0	0	0	0	0	0	0
2.37	0	0	0	0	0	0	0	0	0	0	0	0
2.38	0	0	0	0	0	0	0	0	0	0	0	0
2.39	0	0	0	0	0	0	0	0	0	0	0	0
2.40	0	0	0	0	0	0	0	0	0	0	0	0
2.41	0	0	0	0	0	0	0	0	0	0	0	0
2.42	0	0	0	0	0	0	0	0	0	0	0	0
2.43	0	0	0	0	0	0	0	0	0	0	0	0
2.44	0	0	0	0	0	0	0	0	0	0	0	0
2.45	0	0	0	0	0	0	0	0	0	0	0	0
2.46	0	0	0	0	0	0	0	0	0	0	0	0
2.47	0	0	0	0	0	0	0	0	0	0	0	0
2.48	0	0	0	0	0	0	0	0	0	0	0	0
2.49	0	0	0	0	0	0	0	0	0	0	0	0
2.50	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	2	59	0	9	28	0	11	87

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

TABLE A-2

~~TOP SECRET~~ [redacted] CONTROL NO. [redacted]

MISSION • 1025-1 • INSTRUMENT • AFT 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.51	0	0	0	0	0	0	0	0	0	0	0	0
2.52	0	0	0	0	0	0	0	0	0	0	0	0
2.53	0	0	0	0	0	0	0	0	0	0	0	0
2.54	0	0	0	0	0	0	0	0	0	0	0	0
2.55	0	0	0	0	0	0	0	0	0	0	0	0
2.56	0	0	0	0	0	0	0	0	0	0	0	0
2.57	0	0	0	0	0	0	0	0	0	0	0	0
2.58	0	0	0	0	0	0	0	0	0	0	0	0
2.59	0	0	0	0	0	0	0	0	0	0	0	0
2.60	0	0	0	0	0	0	0	0	0	0	0	0
2.61	0	0	0	0	0	0	0	0	0	0	0	0
2.62	0	0	0	0	0	0	0	0	0	0	0	0
2.63	0	0	0	0	0	0	0	0	0	0	0	0
2.64	0	0	0	0	0	0	0	0	0	0	0	0
2.65	0	0	0	0	0	0	0	0	0	0	0	0
2.66	0	0	0	0	0	0	0	0	0	0	0	0
2.67	0	0	0	0	0	0	0	0	0	0	0	0
2.68	0	0	0	0	0	0	0	0	0	0	0	0
2.69	0	0	0	0	0	0	0	0	0	0	0	0
2.70	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	157	157	120	100	100	91	257	257	211

MISSION 1025-1 INSTR - AFT 12/30/65 PROCESSING AND EXPOSURE AI

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	EXP(
PRIMARY	0	0 PC	0 PC	0 PC	0 PC	
INTERMEDIATE	157	1 PC	33 PC	54 PC	10 PC	
FULL	100	62 PC	0 PC	37 PC	1 PC	
ALL LEVELS	257	25 PC	20 PC	47 PC	7 PC	

PROCESS LEVEL	BASE + FOG	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	EXP
PRIMARY	0.01-0.09	0.01-0.13	0.14-0.39	0.40-0.90	---------	0.91
INTERMED	0.10-0.17	0.01-0.20	0.21-0.39	0.40-0.90	0.91-1.34	1.35
FULL	0.18 AND UP	0.01-0.39	---------	0.40-0.90	0.91-1.69	1.70

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

TABLE A-2

MISSION • 1025-1 • INSTR • AFT • 12/30/65 PLOT OF D MIN • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 0.55 • MEDIAN • 0.46 • STD DEV • 0.26 • RANGE • 0.18 TO 1.69 WITH 157 SAMPLES

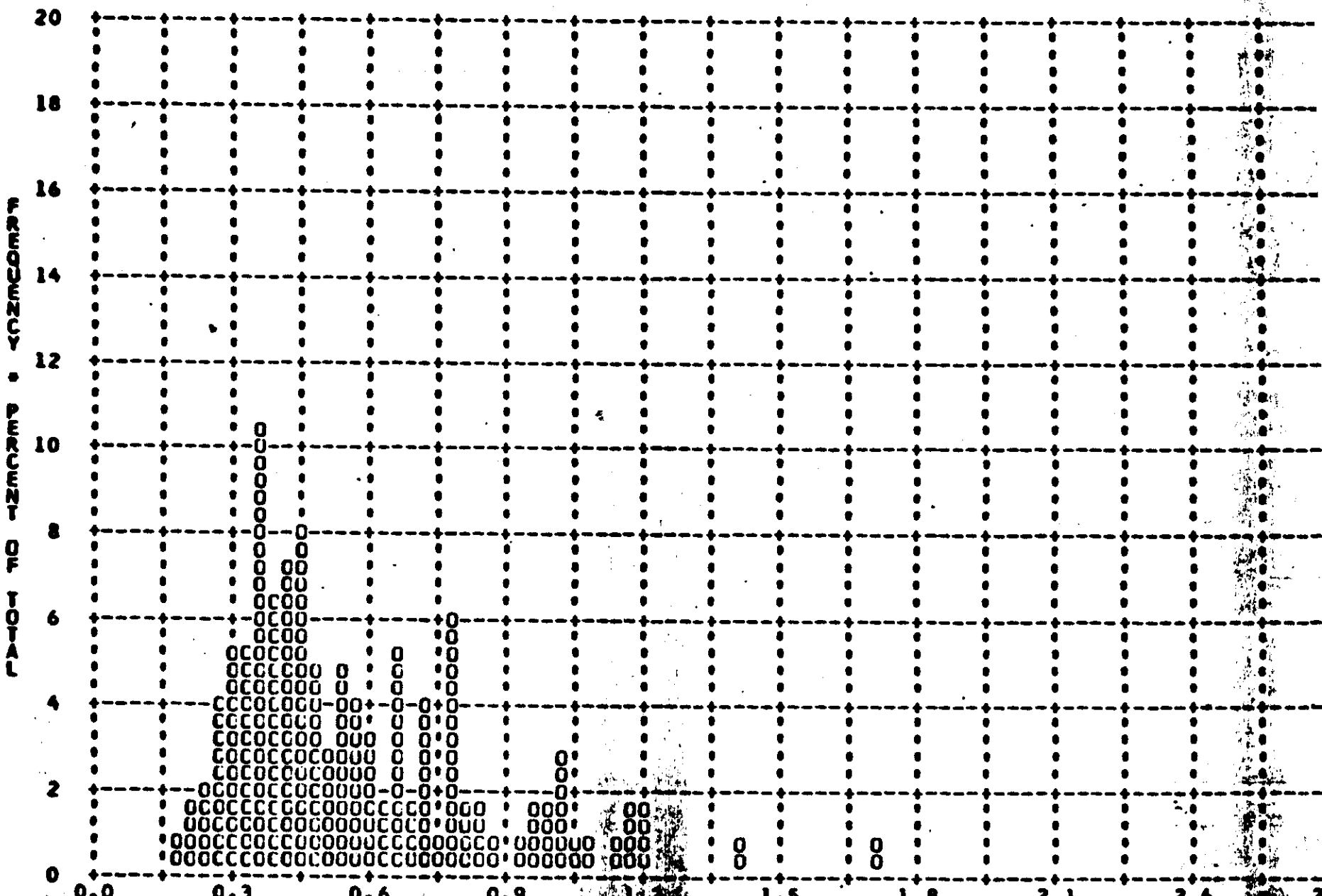


FIGURE A-11

MISSION • 1025-1 • INSTR • AFT • 12/30/65 PLOT OF D MAX • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.35 • MEDIAN • 1.38 • STD DEV • 0.34 • RANGE • 0.45 TO 2.26 WITH 157 SAMPLES

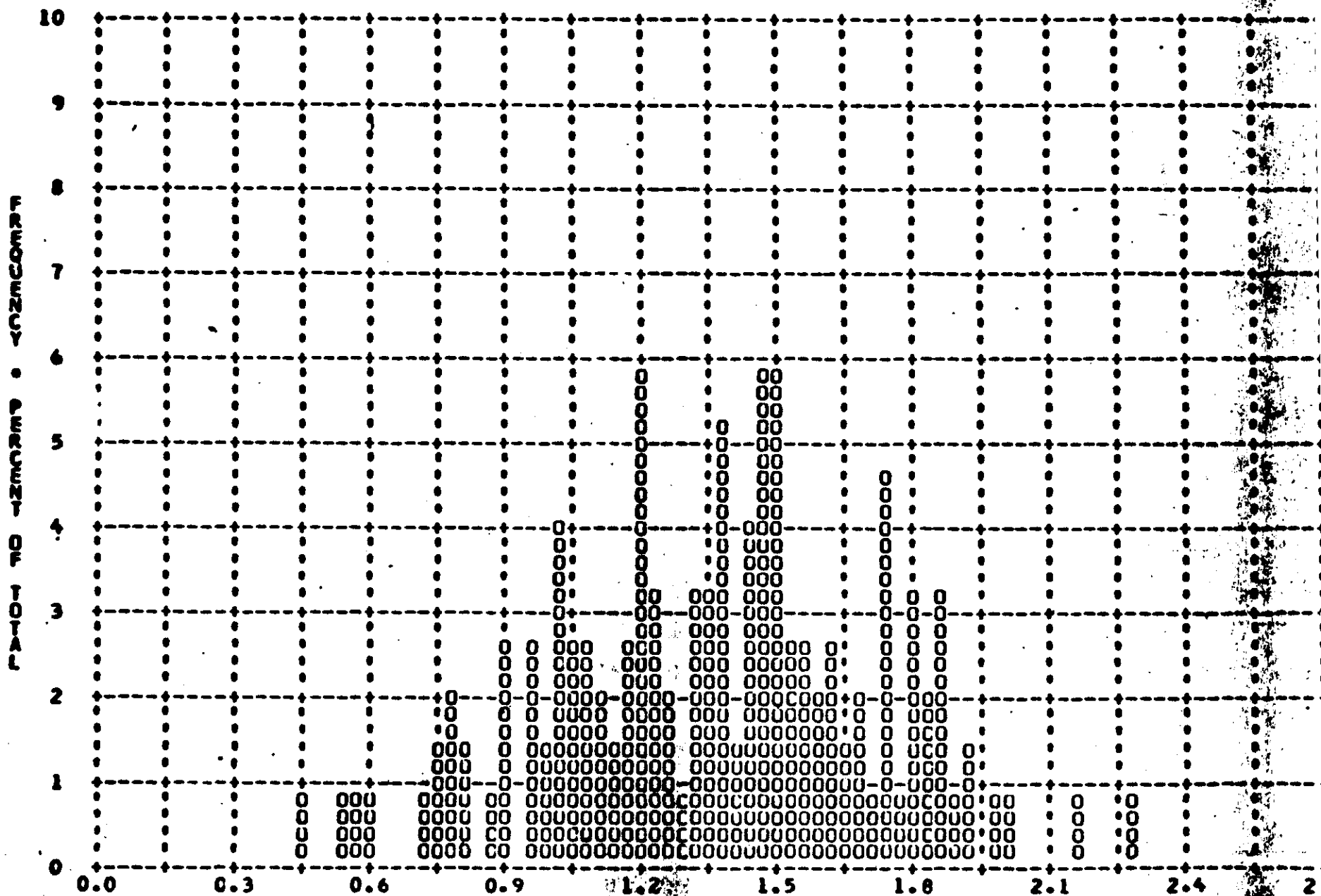


FIGURE A-12

MISSION • 1025-1 • INSTR • AFT • 12/30/65 PLOT OF D MAX • CLOUD • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.88 • MEDIAN • 2.00 • STD DEV • 0.32 • RANGE • 0.86 TO 2.28 WITH 120 SAMPLES

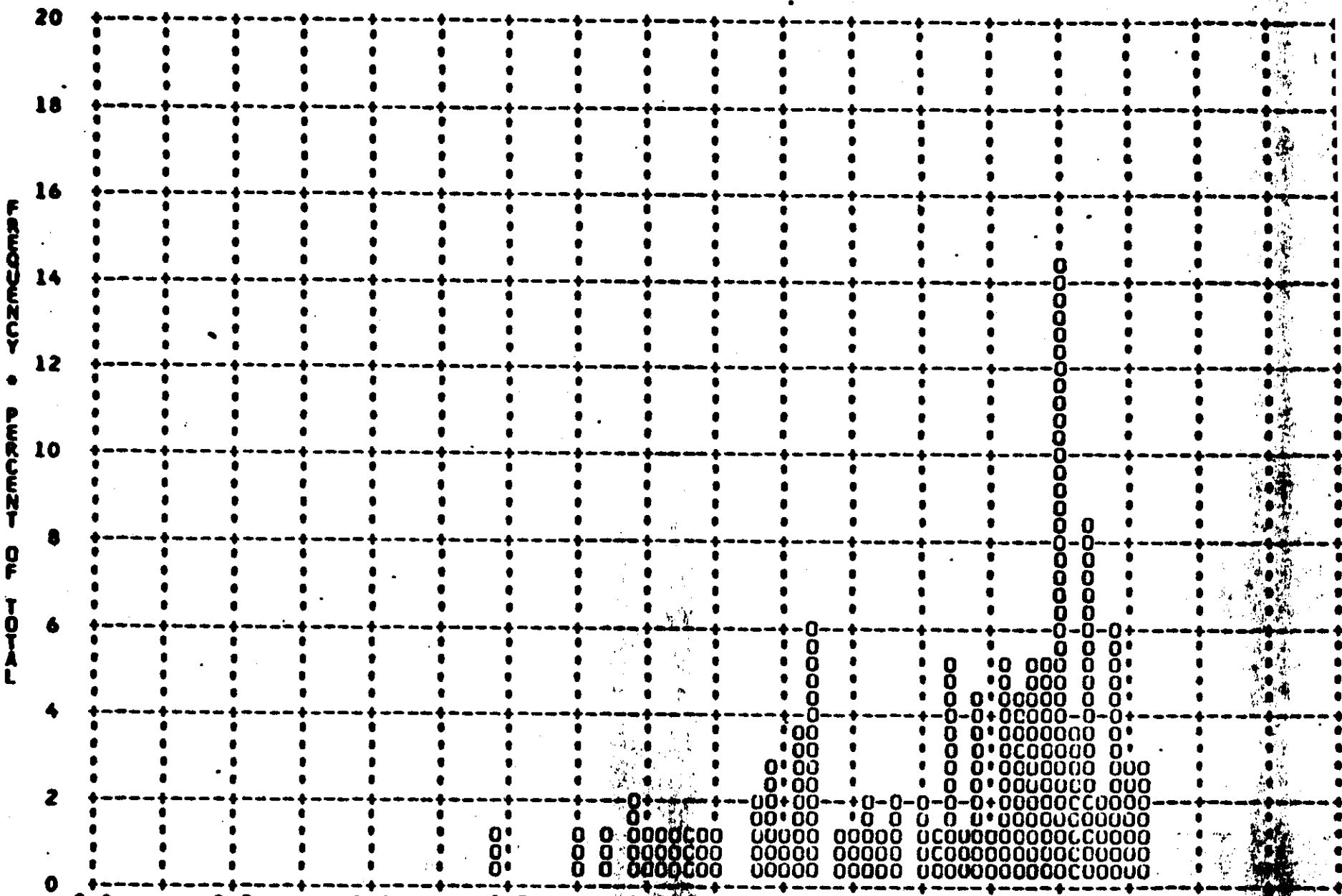


FIGURE A-13

MISSION • 1025-1 • INSTR • AFT • 12/30/65 PLOT OF D MIN • TERRAIN • PROCESSING • FULL

ARITH MEAN • 0.39 • MEDIAN • 0.37 • STD DEV • 0.12 • RANGE • 0.20 TO 0.94 WITH 100 SAMPLES

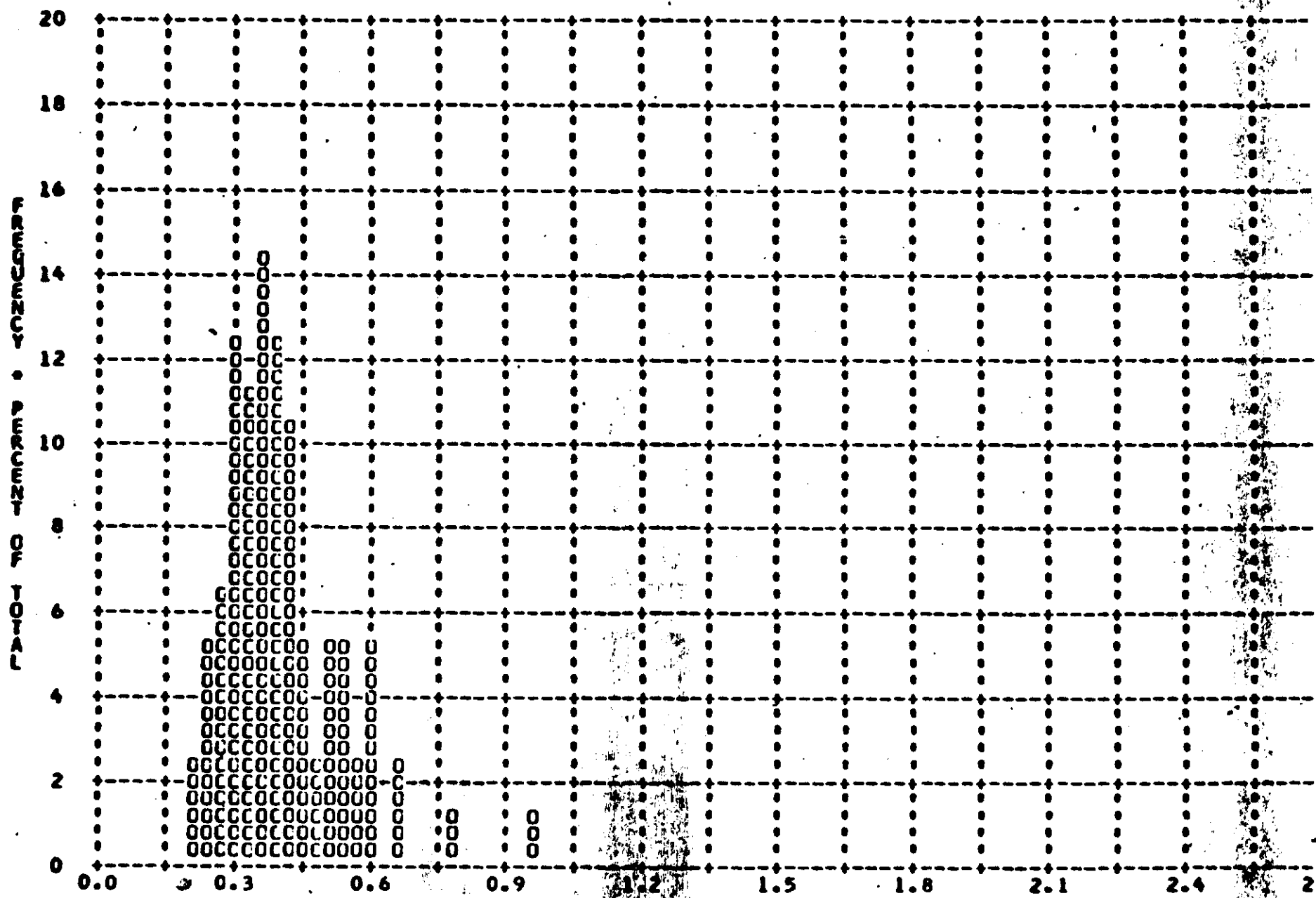


FIGURE A-14

MISSION • 1025-1 • INSTR • AFT • 12/30/65 PLOT OF D MAX • TERRAIN • PROCESSING • FULL

ARITH MEAN • 1.30 • MEDIAN • 1.40 • STD DEV • 0.56 • RANGE • 0.26 TO 2.25 WITH 100 SAMPLES

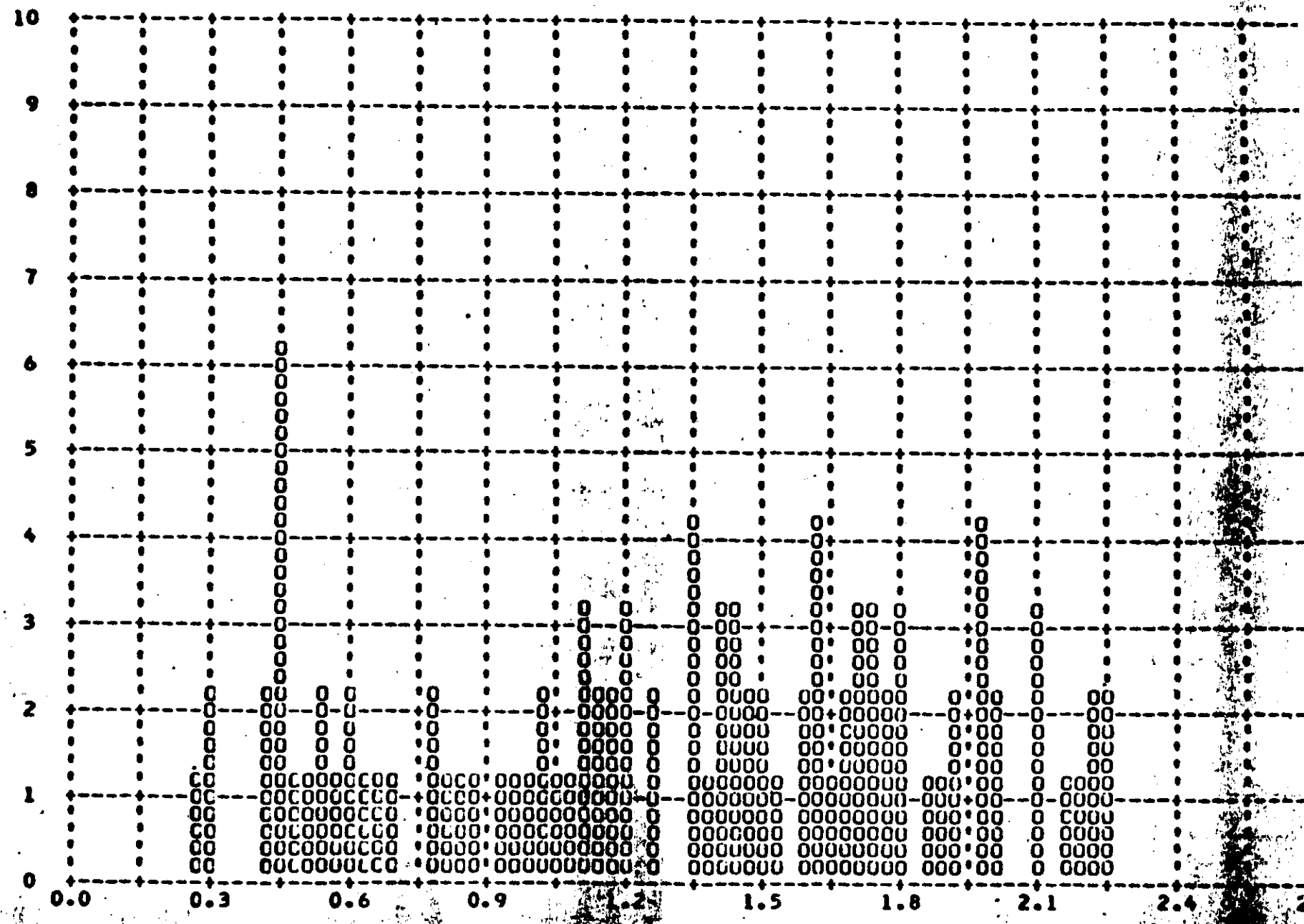


FIGURE A-15

MISSION • 1025-1 • INSTR • AFT • 12/30/65 PLOT OF D MAX • CLOUD • PROCESSING • FULL

ARITH MEAN • 1.58 • MEDIAN • 1.66 • STD DEV • 0.56 • RANGE • 0.23 TO 2.32 WITH 91 SAMPLES

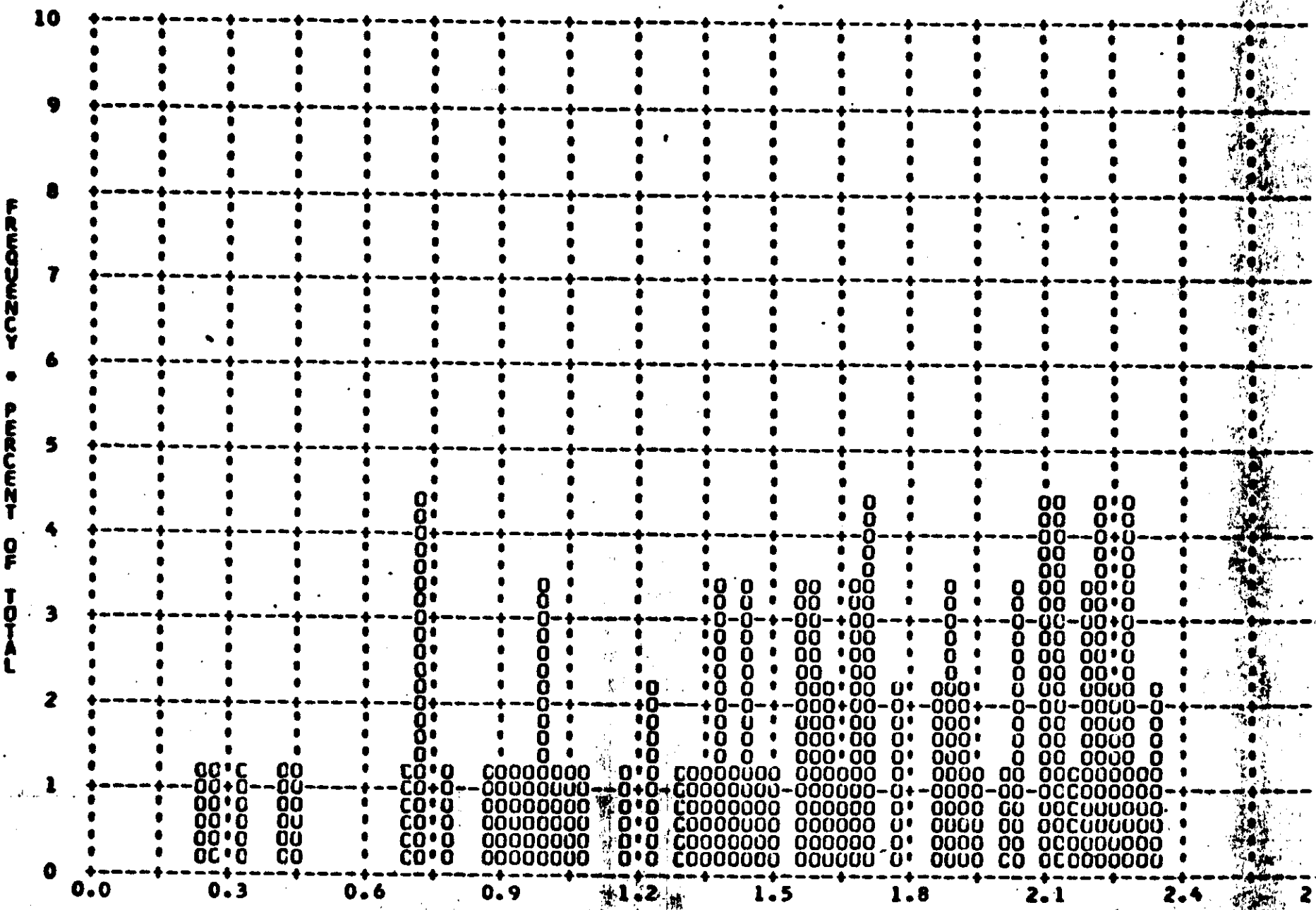


FIGURE A-16

MISSION • 1025-1 • INSTR • AFT • 12/30/65 PLOT OF D MIN • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 0.49 • MEDIAN • 0.42 • STD DEV • 0.23 • RANGE • 0.18 TO 1.69 WITH 257 SAMPLES

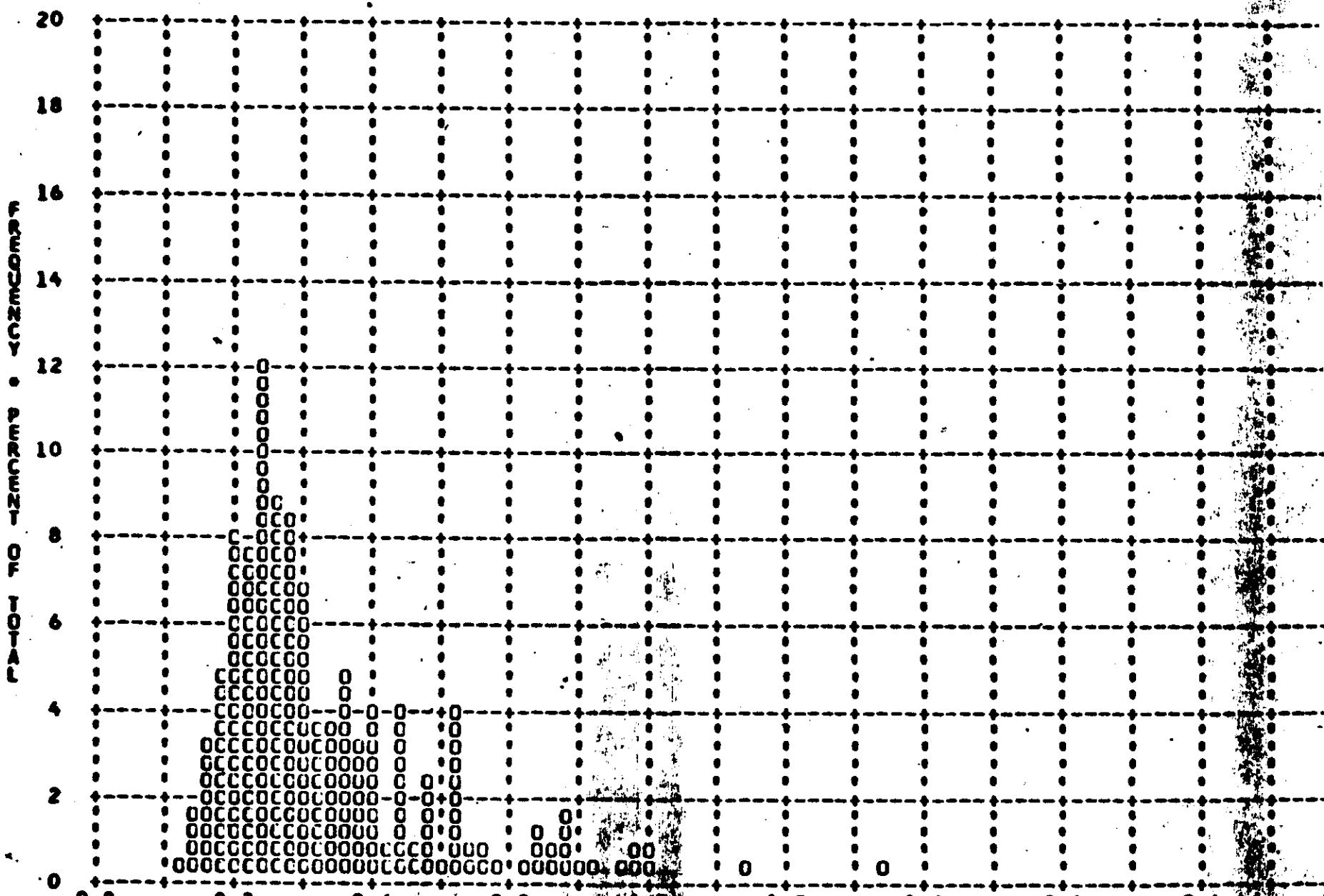


FIGURE A-17

MISSION • 1025-1 • INSTR • AFT • 12/30/65 PLOT OF D MAX • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 1.33 • MEDIAN • 1.38 • STD DEV • 0.44 • RANGE • 0.26 TO 2.26 WITH 257 SAMPLES

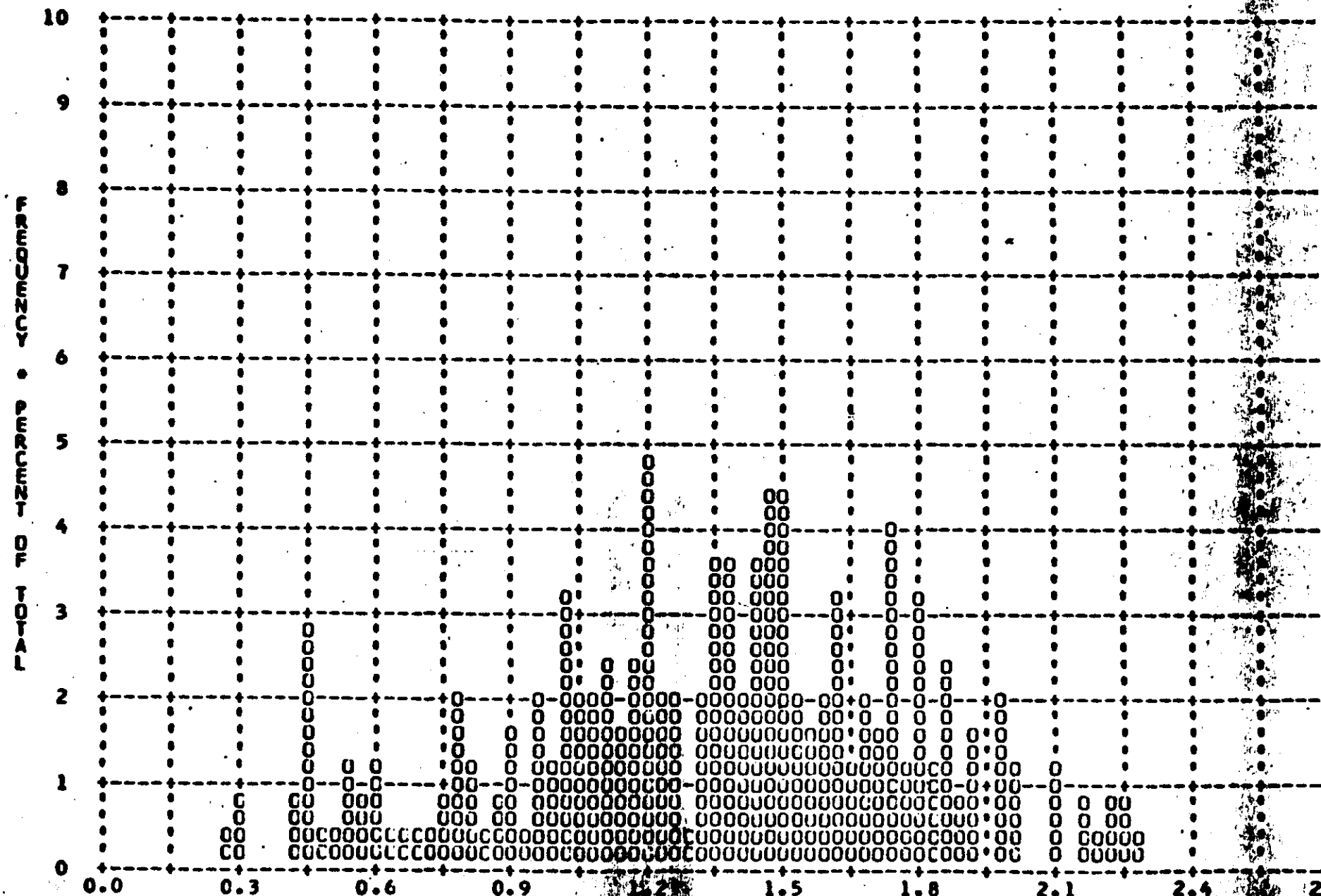


FIGURE A-18

MISSION • 1025-1 • INSTR • AFT • 12/30/65 PLOT OF D MAX • CLOUD • PROCESSING • ALL LEVELS

ARITH MEAN • 1.75 • MEDIAN • 1.90 • STD DEV • 0.46 • RANGE • 0.23 TO 2.32 WITH 211 SAMPLES

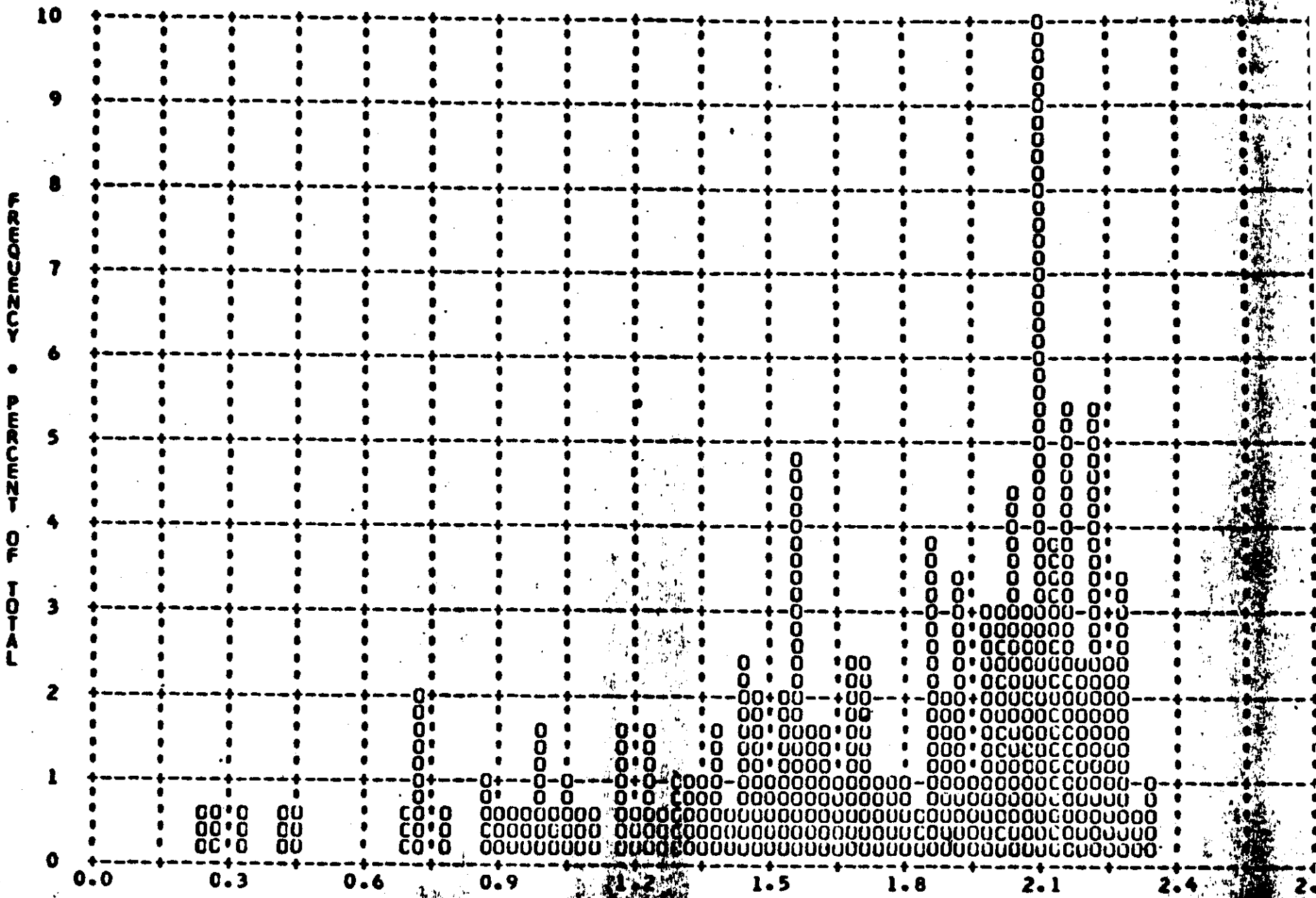


FIGURE A-19

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

MISSION • 1025-2 • INSTRUMENT • FRWD 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.01	0	0	0	0	0	0	0	0	0	0	0	0
0.02	0	0	0	0	0	0	0	0	0	0	0	0
0.03	0	0	0	0	0	0	0	0	0	0	0	0
0.04	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0
0.06	0	0	0	0	0	0	0	0	0	0	0	0
0.07	0	0	0	0	0	0	0	0	0	0	0	0
0.08	0	0	0	0	0	0	0	0	0	0	0	0
0.09	0	0	0	0	0	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0	0	0	0	0	0
0.11	0	0	0	0	0	0	0	0	0	0	0	0
0.12	0	0	0	0	0	0	0	0	0	0	0	0
0.13	0	0	0	0	0	0	0	0	0	0	0	0
0.14	0	0	0	0	0	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0	0	0	0	0	0
0.16	0	0	0	0	0	0	0	0	0	0	0	0
0.17	0	0	0	0	0	0	0	0	0	0	0	0
0.18	0	0	0	1	0	0	0	0	0	1	0	0
0.19	0	0	0	0	0	0	0	0	0	0	0	0
0.20	0	0	0	4	0	0	0	0	0	4	0	0
0.21	0	0	0	1	0	0	1	0	0	2	0	0
0.22	0	0	0	5	0	0	0	0	0	5	0	0
0.23	0	0	0	2	0	0	0	0	0	2	0	0
0.24	0	0	0	1	0	0	5	0	0	6	0	0
0.25	0	0	0	1	0	0	7	0	0	8	0	0
0.26	0	0	0	2	0	0	4	1	0	6	1	0
0.27	0	0	0	3	0	0	8	0	0	11	0	0
0.28	0	0	0	6	0	0	11	0	0	17	0	0
0.29	0	0	0	1	0	0	3	0	0	4	0	0
0.30	0	0	0	3	0	0	3	0	0	6	0	0
0.31	0	0	0	0	0	0	3	0	0	3	0	0
0.32	0	0	0	5	0	0	2	0	0	7	0	0
0.33	0	0	0	5	0	0	2	0	0	7	0	0
0.34	0	0	0	4	0	0	6	0	0	10	0	0
0.35	0	0	0	4	0	0	2	0	0	6	0	0
0.36	0	0	0	3	0	0	4	0	0	7	0	0
0.37	0	0	0	1	0	0	3	0	0	4	0	0
0.38	0	0	0	5	0	0	5	0	0	10	0	0
0.39	0	0	0	3	0	0	2	0	0	5	0	0
0.40	0	0	0	5	0	0	10	0	0	15	0	0
0.41	0	0	0	2	0	0	1	0	0	3	0	0
0.42	0	0	0	3	0	0	4	1	0	7	1	0
0.43	0	0	0	1	0	0	1	2	0	2	2	0
0.44	0	0	0	3	0	0	0	2	0	3	2	0
0.45	0	0	0	4	0	0	2	0	0	6	0	0
0.46	0	0	0	1	0	0	2	0	0	3	0	0
0.47	0	0	0	3	0	0	1	0	0	4	0	0
0.48	0	0	0	4	0	0	0	1	0	4	1	0
0.49	0	0	0	0	0	0	1	0	2	1	0	2
0.50	0	0	0	2	0	0	1	2	0	3	2	0
SUBTOTAL	0	0	0	88	0	0	94	7	0	182	7	0

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

TABLE A-3

MISSION • 1025-2 • INSTRUMENT • FRWD 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.51	0	0	0	2	0	0	1	0	0	3	0	0
0.52	0	0	0	0	0	0	4	1	0	4	1	0
0.53	0	0	0	4	0	0	2	0	0	6	0	0
0.54	0	0	0	1	0	0	2	0	0	3	0	0
0.55	0	0	0	0	0	0	0	0	0	0	0	0
0.56	0	0	0	2	0	0	2	1	0	4	1	0
0.57	0	0	0	2	0	0	1	1	0	3	1	0
0.58	0	0	0	2	0	0	1	0	0	3	0	0
0.59	0	0	0	0	0	0	0	0	0	0	0	0
0.60	0	0	0	4	0	0	0	3	0	4	3	0
0.61	0	0	0	0	0	0	0	0	0	0	0	0
0.62	0	0	0	2	1	0	1	0	0	3	1	0
0.63	0	0	0	2	0	0	0	1	0	2	1	0
0.64	0	0	0	3	1	0	1	1	0	3	1	0
0.65	0	0	0	0	0	0	0	0	0	0	0	0
0.66	0	0	0	2	1	0	0	1	0	2	1	0
0.67	0	0	0	0	0	0	0	0	0	0	0	0
0.68	0	0	0	3	0	0	0	1	0	3	1	0
0.69	0	0	0	0	0	0	0	0	0	0	0	0
0.70	0	0	0	2	1	0	0	0	0	4	1	0
0.71	0	0	0	0	0	0	0	0	0	0	0	0
0.72	0	0	0	1	0	0	0	0	0	1	0	0
0.73	0	0	0	3	0	0	0	0	0	3	0	0
0.74	0	0	0	0	0	0	0	0	0	0	0	0
0.75	0	0	0	4	0	0	0	1	0	4	1	0
0.76	0	0	0	0	0	0	0	0	0	0	0	0
0.77	0	0	0	1	0	0	0	1	0	1	1	0
0.78	0	0	0	2	0	0	1	0	0	3	0	0
0.79	0	0	0	0	0	0	0	0	0	0	0	0
0.80	0	0	0	2	1	0	0	1	0	3	1	0
0.81	0	0	0	0	0	0	0	0	0	0	0	0
0.82	0	0	0	1	0	0	0	0	0	1	0	0
0.83	0	0	0	0	0	0	0	0	0	0	0	0
0.84	0	0	0	1	1	0	0	1	0	1	1	0
0.85	0	0	0	0	0	0	0	0	0	0	0	0
0.86	0	0	0	1	1	0	0	0	0	1	1	0
0.87	0	0	0	0	0	0	0	2	0	2	2	0
0.88	0	0	0	1	0	0	0	1	0	1	1	0
0.89	0	0	0	2	1	0	0	2	0	3	2	0
0.90	0	0	0	0	0	0	0	0	0	0	0	0
0.91	0	0	0	1	0	0	0	0	0	1	0	0
0.92	0	0	0	0	0	0	0	0	0	0	0	0
0.93	0	0	0	1	0	0	0	1	0	1	1	0
0.94	0	0	0	0	0	0	0	0	0	0	0	0
0.95	0	0	0	1	0	0	0	1	0	1	1	0
0.96	0	0	0	0	0	0	0	0	0	0	0	0
0.97	0	0	0	1	0	0	0	0	0	1	0	0
0.98	0	0	0	1	1	0	0	1	0	1	1	0
0.99	0	0	0	1	1	0	0	2	0	1	2	0
1.00	0	0	0	1	3	0	0	2	0	1	5	0
SUBTOTAL	0	0	0	52	22	0	20	30	6	72	52	6

TABLE A-3

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

MISSION • 1025-2 • INSTRUMENT • FRWD 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.01	0	0	0	1	1	0	0	0	1	1	1	1
1.02	0	0	0	0	3	0	0	0	1	0	3	0
1.03	0	0	0	1	0	0	0	1	0	0	1	0
1.04	0	0	0	0	1	0	0	1	2	0	1	2
1.05	0	0	0	1	0	1	0	2	1	0	2	1
1.06	0	0	0	0	1	0	0	1	0	0	1	0
1.07	0	0	0	0	0	0	0	0	2	0	0	2
1.08	0	0	0	0	0	0	0	2	0	0	2	0
1.09	0	0	0	0	0	0	0	0	2	0	0	2
1.10	0	0	0	0	6	0	0	2	0	0	8	0
1.11	0	0	0	0	0	1	0	0	2	0	0	3
1.12	0	0	0	0	0	1	0	2	0	0	3	0
1.13	0	0	0	0	0	0	0	0	3	0	0	3
1.14	0	0	0	0	4	1	0	3	0	0	5	1
1.15	0	0	0	0	1	2	0	0	1	0	1	3
1.16	0	0	0	0	2	1	0	1	2	0	3	3
1.17	0	0	0	1	2	0	0	2	0	1	3	2
1.18	0	0	0	0	2	1	0	0	3	0	2	4
1.19	0	0	0	0	1	0	0	1	1	0	2	1
1.20	0	0	0	0	2	1	0	0	0	0	2	1
1.21	0	0	0	0	1	0	0	1	0	0	1	0
1.22	0	0	0	0	0	0	0	0	3	0	0	3
1.23	0	0	0	0	1	0	0	1	0	0	1	0
1.24	0	0	0	0	4	2	0	0	2	0	4	2
1.25	0	0	0	0	2	0	0	0	2	0	2	2
1.26	0	0	0	0	1	0	0	1	1	0	2	1
1.27	0	0	0	0	1	0	0	0	2	0	1	2
1.28	0	0	0	0	1	1	0	0	2	0	1	3
1.29	0	0	0	0	2	1	0	0	2	0	2	3
1.30	0	0	0	0	1	1	0	0	2	0	1	3
1.31	0	0	0	0	2	1	0	0	1	0	2	2
1.32	0	0	0	0	1	0	0	1	1	0	2	1
1.33	0	0	0	0	0	0	0	1	1	0	1	1
1.34	0	0	0	0	1	0	0	0	1	0	1	1
1.35	0	0	0	0	0	0	0	0	1	0	0	1
1.36	0	0	0	0	3	0	0	0	2	0	3	2
1.37	0	0	0	0	0	0	0	0	1	0	0	1
1.38	0	0	0	0	7	1	0	0	0	0	7	1
1.39	0	0	0	0	0	0	0	0	1	0	0	1
1.40	0	0	0	0	4	0	0	0	2	0	4	2
1.41	0	0	0	0	0	0	0	0	1	0	0	1
1.42	0	0	0	0	3	2	0	0	1	0	3	2
1.43	0	0	0	0	0	0	0	0	1	0	0	1
1.44	0	0	0	0	2	0	0	0	1	0	2	1
1.45	0	0	0	0	2	1	0	0	2	0	2	2
1.46	0	0	0	0	3	1	0	0	2	0	3	2
1.47	0	0	0	0	2	0	0	0	1	0	2	1
1.48	0	0	0	0	3	0	0	0	2	0	3	2
1.49	0	0	0	0	1	0	0	0	1	0	1	1
1.50	0	0	0	0	2	0	0	1	3	0	2	3
SUBTOTAL	0	0	0	5	76	8	1	44	27	6	120	35

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

TABLE A-3

~~TOP SECRET~~ [redacted] CONTROL NO. [redacted]

MISSION • 1025-2 • INSTRUMENT • FRWD 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.51	0	0	0	0	0	0	0	1	1	0	1	1
1.52	0	0	0	0	2	0	0	2	0	0	4	0
1.53	0	0	0	0	1	0	0	1	0	0	1	0
1.54	0	0	0	0	3	0	0	1	0	0	4	0
1.55	0	0	0	0	2	1	0	1	0	0	2	1
1.56	0	0	0	0	2	1	0	0	0	0	2	1
1.57	0	0	0	0	2	0	0	0	0	0	2	0
1.58	0	0	0	0	1	0	0	0	0	0	2	0
1.59	0	0	0	0	1	0	0	1	0	0	2	0
1.60	0	0	0	0	3	1	0	2	0	0	5	1
1.61	0	0	0	0	1	0	0	1	0	0	1	0
1.62	0	0	0	0	0	1	0	1	0	0	1	1
1.63	0	0	0	0	1	0	0	0	0	0	1	0
1.64	0	0	0	0	0	1	0	0	0	0	1	0
1.65	0	0	0	0	1	0	0	0	0	0	1	0
1.66	0	0	0	0	1	0	0	0	0	0	1	0
1.67	0	0	0	0	1	0	0	0	0	0	1	0
1.68	0	0	0	0	0	0	0	1	0	0	1	0
1.69	0	0	0	0	0	3	0	0	1	0	0	4
1.70	0	0	0	0	0	2	0	0	1	0	0	3
1.71	0	0	0	0	0	1	0	0	1	0	0	2
1.72	0	0	0	0	0	1	0	0	0	0	0	1
1.73	0	0	0	0	0	2	0	0	1	0	0	3
1.74	0	0	0	0	0	1	0	0	0	0	0	1
1.75	0	0	0	0	0	0	0	0	1	0	0	1
1.76	0	0	0	0	0	1	0	0	1	0	0	2
1.77	0	0	0	0	0	2	0	0	2	0	0	4
1.78	0	0	0	0	0	0	0	0	1	0	0	1
1.79	0	0	0	0	0	2	0	0	2	0	0	4
1.80	0	0	0	0	0	2	0	0	1	0	0	3
1.81	0	0	0	0	0	1	0	0	1	0	0	2
1.82	0	0	0	0	0	2	0	0	1	0	0	3
1.83	0	0	0	0	0	1	0	0	2	0	0	3
1.84	0	0	0	0	0	1	0	0	1	0	0	2
1.85	0	0	0	0	0	1	0	0	1	0	0	2
1.86	0	0	0	0	0	1	0	0	1	0	0	2
1.87	0	0	0	0	0	1	0	0	1	0	0	2
1.88	0	0	0	0	0	0	0	0	1	0	0	1
1.89	0	0	0	0	0	1	0	0	1	0	0	2
1.90	0	0	0	0	0	1	0	0	1	0	0	2
1.91	0	0	0	0	0	1	0	0	2	0	0	3
1.92	0	0	0	0	0	1	0	0	2	0	0	3
1.93	0	0	0	0	0	1	0	0	1	0	0	2
1.94	0	0	0	0	0	3	0	0	1	0	0	4
1.95	0	0	0	0	0	2	0	0	1	0	0	3
1.96	0	0	0	0	0	1	0	0	1	0	0	2
1.97	0	0	0	0	0	2	0	0	1	0	0	3
1.98	0	0	0	0	0	1	0	0	0	0	0	1
1.99	0	0	0	0	0	1	0	0	0	0	0	1
2.00	0	0	0	0	0	0	0	0	1	0	0	1
SUBTOTAL	0	0	0	0	41	43	0	27	38	0	68	81

~~TOP SECRET~~ [redacted] CONTROL NO. [redacted]

TABLE A-3

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

MISSION • 1025-2 • INSTRUMENT • FRWD 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.01	0	0	0	0	0	0	0	1	0	0	1	0
2.02	0	0	0	0	0	0	0	0	3	0	0	3
2.03	0	0	0	0	0	0	0	1	3	0	1	3
2.04	0	0	0	0	0	1	0	1	2	0	1	2
2.05	0	0	0	0	0	1	0	1	1	0	2	2
2.06	0	0	0	0	0	0	0	0	1	0	2	1
2.07	0	0	0	0	0	0	0	0	1	0	0	1
2.08	0	0	0	0	0	0	0	1	3	0	1	7
2.09	0	0	0	0	0	0	0	1	3	0	1	7
2.10	0	0	0	0	0	0	0	1	3	0	1	5
2.11	0	0	0	0	0	0	0	1	1	0	1	1
2.12	0	0	0	0	0	1	0	0	1	0	1	2
2.13	0	0	0	0	0	0	0	0	1	0	0	5
2.14	0	0	0	0	0	0	0	0	1	0	0	2
2.15	0	0	0	0	0	0	0	0	1	0	0	0
2.16	0	0	0	0	0	0	0	0	1	0	0	0
2.17	0	0	0	0	0	0	0	0	1	0	0	0
2.18	0	0	0	0	0	1	0	1	0	0	2	0
2.19	0	0	0	0	0	0	0	1	0	0	2	0
2.20	0	0	0	0	0	0	0	1	0	0	2	0
2.21	0	0	0	0	0	0	0	0	1	0	0	2
2.22	0	0	0	0	0	0	0	0	1	0	0	2
2.23	0	0	0	0	0	0	0	0	1	0	0	2
2.24	0	0	0	0	0	0	0	0	0	0	0	0
2.25	0	0	0	0	0	0	0	0	0	0	0	0
2.26	0	0	0	0	0	0	0	0	0	0	0	0
2.27	0	0	0	0	0	0	0	0	0	0	0	0
2.28	0	0	0	0	0	0	0	0	0	0	0	0
2.29	0	0	0	0	0	0	0	0	0	0	0	0
2.30	0	0	0	0	0	0	0	0	0	0	0	0
2.31	0	0	0	0	0	0	0	0	0	0	0	0
2.32	0	0	0	0	0	0	0	0	0	0	0	0
2.33	0	0	0	0	0	0	0	0	0	0	0	0
2.34	0	0	0	0	0	0	0	0	0	0	0	0
2.35	0	0	0	0	0	0	0	0	0	0	0	0
2.36	0	0	0	0	0	0	0	0	0	0	0	0
2.37	0	0	0	0	0	0	0	0	0	0	0	0
2.38	0	0	0	0	0	0	0	0	0	0	0	0
2.39	0	0	0	0	0	0	0	0	0	0	0	0
2.40	0	0	0	0	0	0	0	0	0	0	0	0
2.41	0	0	0	0	0	0	0	0	0	0	0	0
2.42	0	0	0	0	0	0	0	0	0	0	0	0
2.43	0	0	0	0	0	0	0	0	0	0	0	0
2.44	0	0	0	0	0	0	0	0	0	0	0	0
2.45	0	0	0	0	0	0	0	0	0	0	0	0
2.46	0	0	0	0	0	0	0	0	0	0	0	0
2.47	0	0	0	0	0	0	0	0	0	0	0	0
2.48	0	0	0	0	0	0	0	0	0	0	0	0
2.49	0	0	0	0	0	0	0	0	0	0	0	0
2.50	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	6	31	0	7	24	0	13	55

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

TABLE A-3

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

MISSION • 1025-2 • INSTRUMENT • FRWD 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.51	0	0	0	0	0	0	0	0	0	0	0	0
2.52	0	0	0	0	0	0	0	0	0	0	0	0
2.53	0	0	0	0	0	0	0	0	0	0	0	0
2.54	0	0	0	0	0	0	0	0	0	0	0	0
2.55	0	0	0	0	0	0	0	0	0	0	0	0
2.56	0	0	0	0	0	0	0	0	0	0	0	0
2.57	0	0	0	0	0	0	0	0	0	0	0	0
2.58	0	0	0	0	0	0	0	0	0	0	0	0
2.59	0	0	0	0	0	0	0	0	0	0	0	0
2.60	0	0	0	0	0	0	0	0	0	0	0	0
2.61	0	0	0	0	0	0	0	0	0	0	0	0
2.62	0	0	0	0	0	0	0	0	0	0	0	0
2.63	0	0	0	0	0	0	0	0	0	0	0	0
2.64	0	0	0	0	0	0	0	0	0	0	0	0
2.65	0	0	0	0	0	0	0	0	0	0	0	0
2.66	0	0	0	0	0	0	0	0	0	0	0	0
2.67	0	0	0	0	0	0	0	0	0	0	0	0
2.68	0	0	0	0	0	0	0	0	0	0	0	0
2.69	0	0	0	0	0	0	0	0	0	0	0	0
2.70	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	145	145	82	115	115	95	260	260	177

MISSION 1025-2 INSTR - FRWD 12/30/65 PROCESSING AND EXPOSURE ANALYS

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	0	0 PC	0 PC	0 PC	0 PC	0 PC
INTERMEDIATE	145	3 PC	38 PC	52 PC	7 PC	0 PC
FULL	115	62 PC	0 PC	37 PC	1 PC	0 PC
ALL LEVELS	260	29 PC	21 PC	45 PC	4 PC	0 PC

PROCESS LEVEL	BASE + FOG	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	0.01-0.09	0.01-0.13	0.14-0.39	0.40-0.90	----------	0.91 AND
INTERMED	0.10-0.17	0.01-0.20	0.21-0.39	0.40-0.90	0.91-1.34	1.35 AND
FULL	0.18 AND UP	0.01-0.39	----------	0.40-0.90	0.91-1.69	1.70 AND

~~TOP SECRET~~ [redacted] CONTROL NO. [redacted]

TABLE A-3

MISSION • 1025-2 • INSTR • FRWD • 12/30/65 PLOT OF D MIN • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 0.50 • MEDIAN • 0.44 • STD DEV • 0.23 • RANGE • 0.18 TO 1.22 WITH 145 SAMPLES

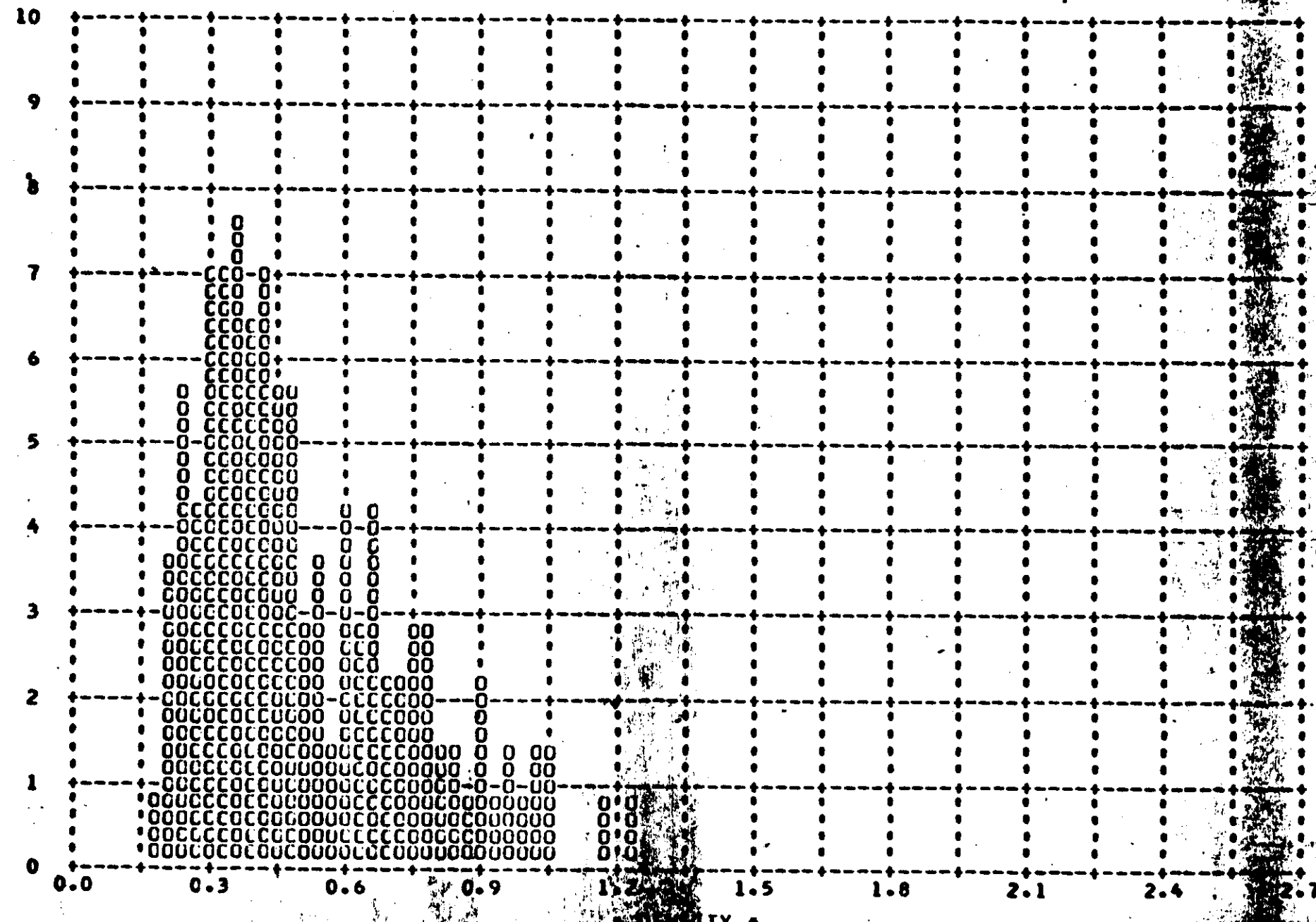


FIGURE A-20

MISSION • 1025-2 • INSTR • FRWD • 12/30/65 PLOT OF D MAX • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.38 • MEDIAN • 1.38 • STD DEV • 0.35 • RANGE • 0.62 TO 2.24 WITH 145 SAMPLES

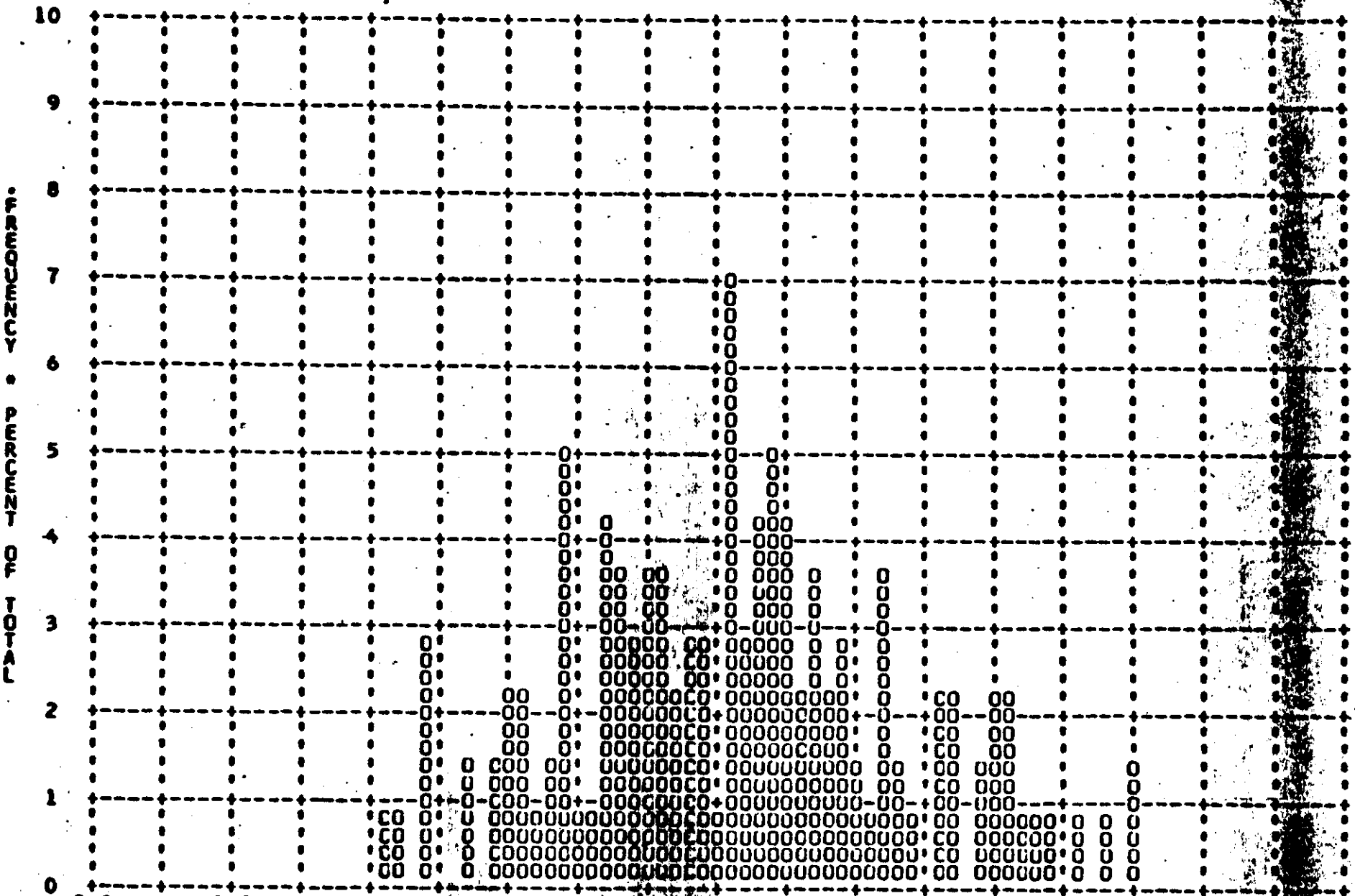


FIGURE A-21

MISSION • 1025-2 • INSTR • FRWD • 12/30/65 PLOT OF D MAX • CLOUD • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.91 • MEDIAN • 1.94 • STD DEV • 0.26 • RANGE • 1.29 TO 2.29 WITH 82 SAMPLES

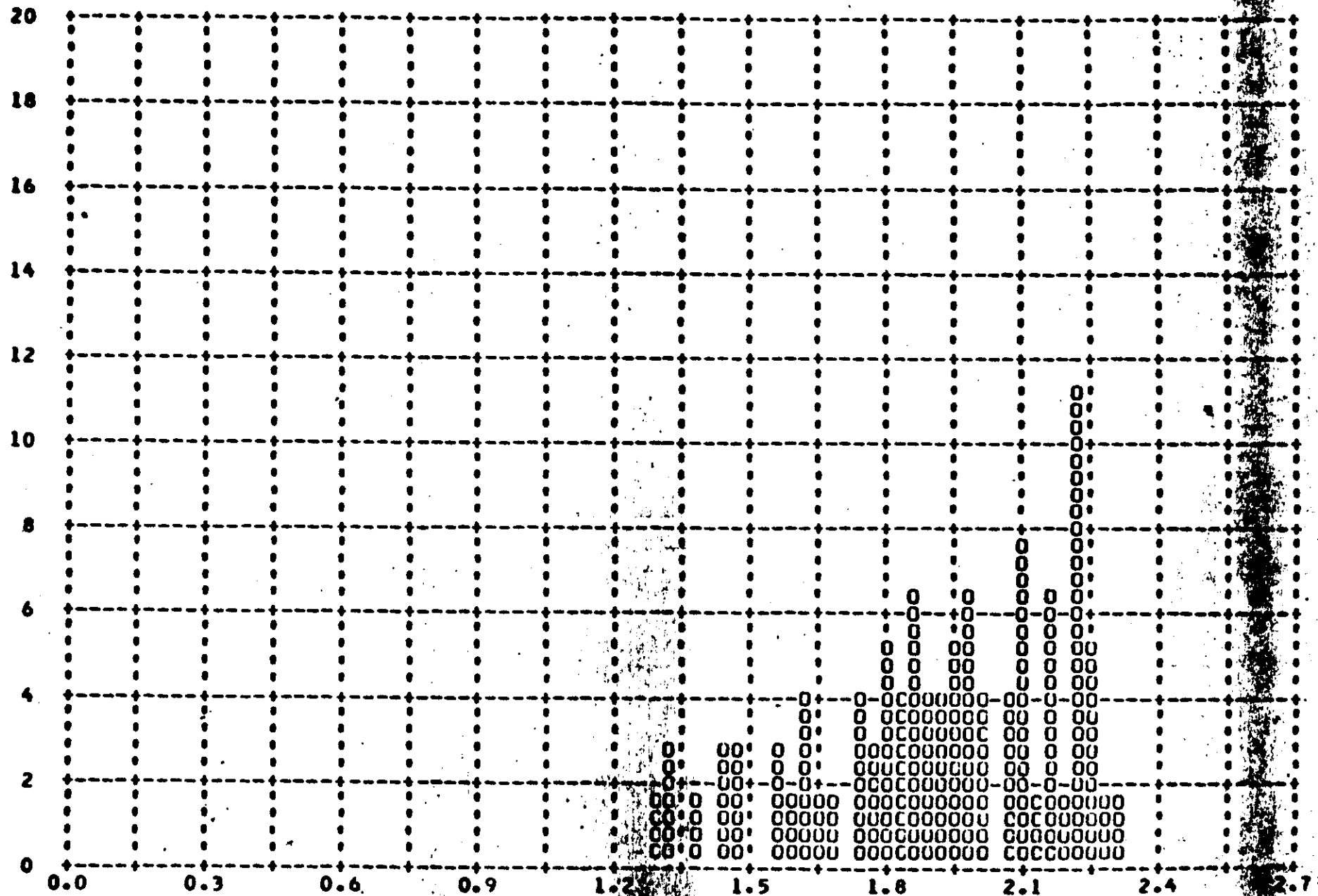


FIGURE A-22

MISSION • 1025-2 • INSTR • FRWD • 12/30/65 PLOT OF D MIN • TERRAIN • PROCESSING • FULL

ARITH MEAN • 0.38 • MEDIAN • 0.36 • STD DEV • 0.14 • RANGE • 0.21 TO 1.19 WITH 115 SAMPLES

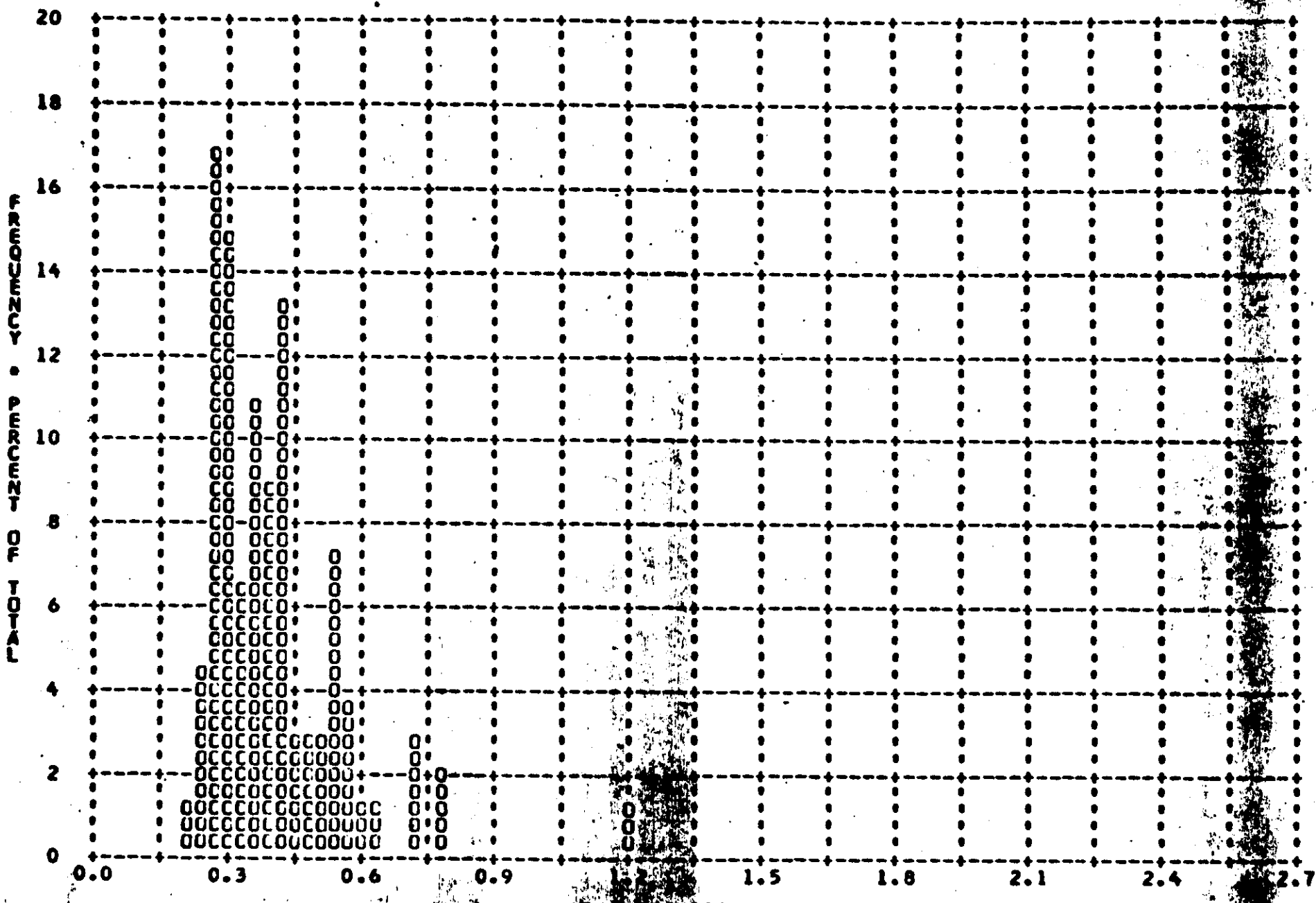


FIGURE A-23

MISSION • 1025-2 • INSTR • FRWD • 12/30/65 PLOT OF D MAX • TERRAIN • PROCESSING • FULL

ARITH MEAN • 1.25 • MEDIAN • 1.25 • STD DEV • 0.47 • RANGE • 0.26 TO 2.18 WITH 115 SAMPLES

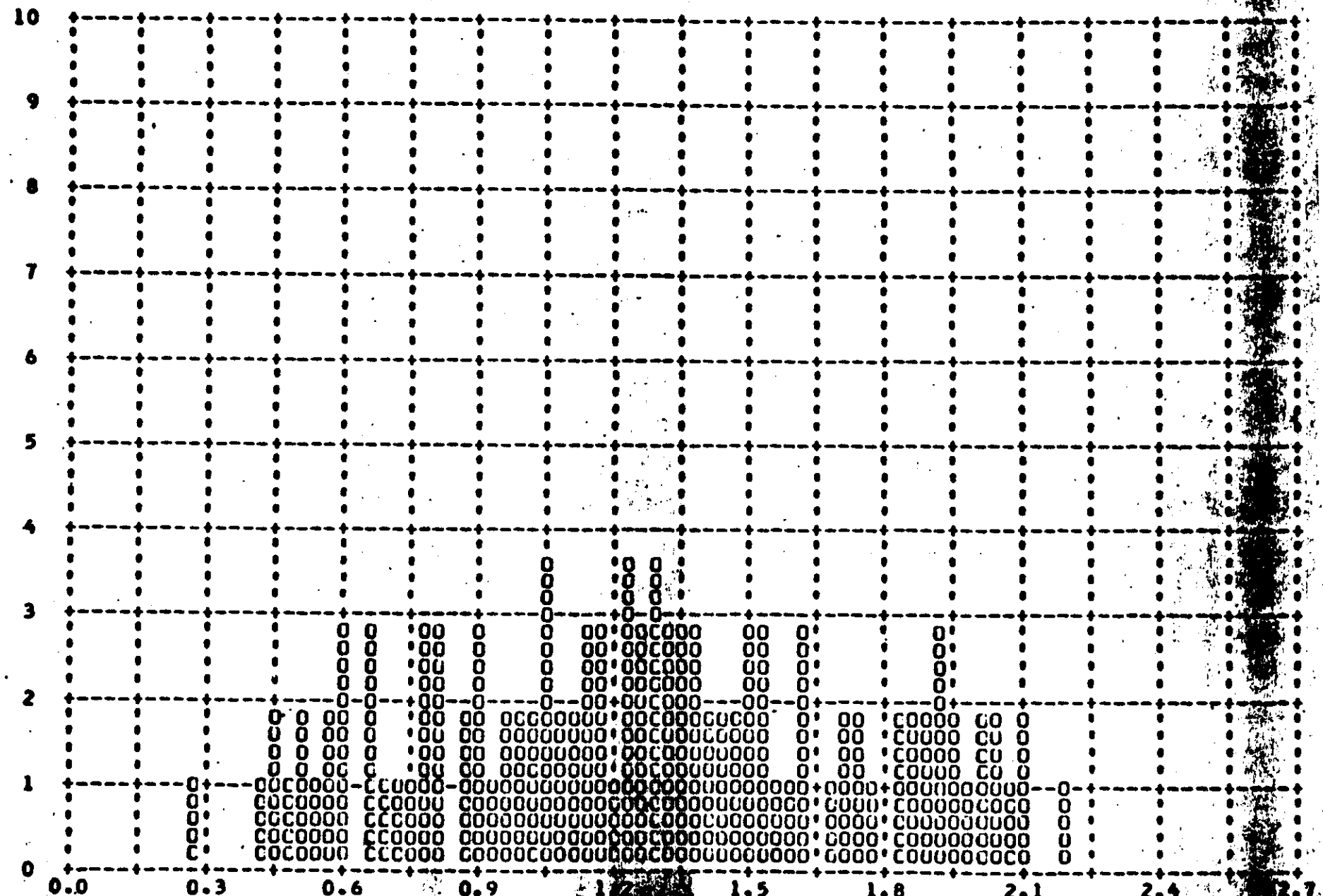


FIGURE A-24

MISSION • 1025-2 • INSTR • FRWD • 12/30/65 PLOT OF D MAX • CLOUD • PROCESSING • FULL

ARITH MEAN • 1.68 • MEDIAN • 1.76 • STD DEV • 0.41 • RANGE • 0.63 TO 2.28 WITH 95 SAMPLES

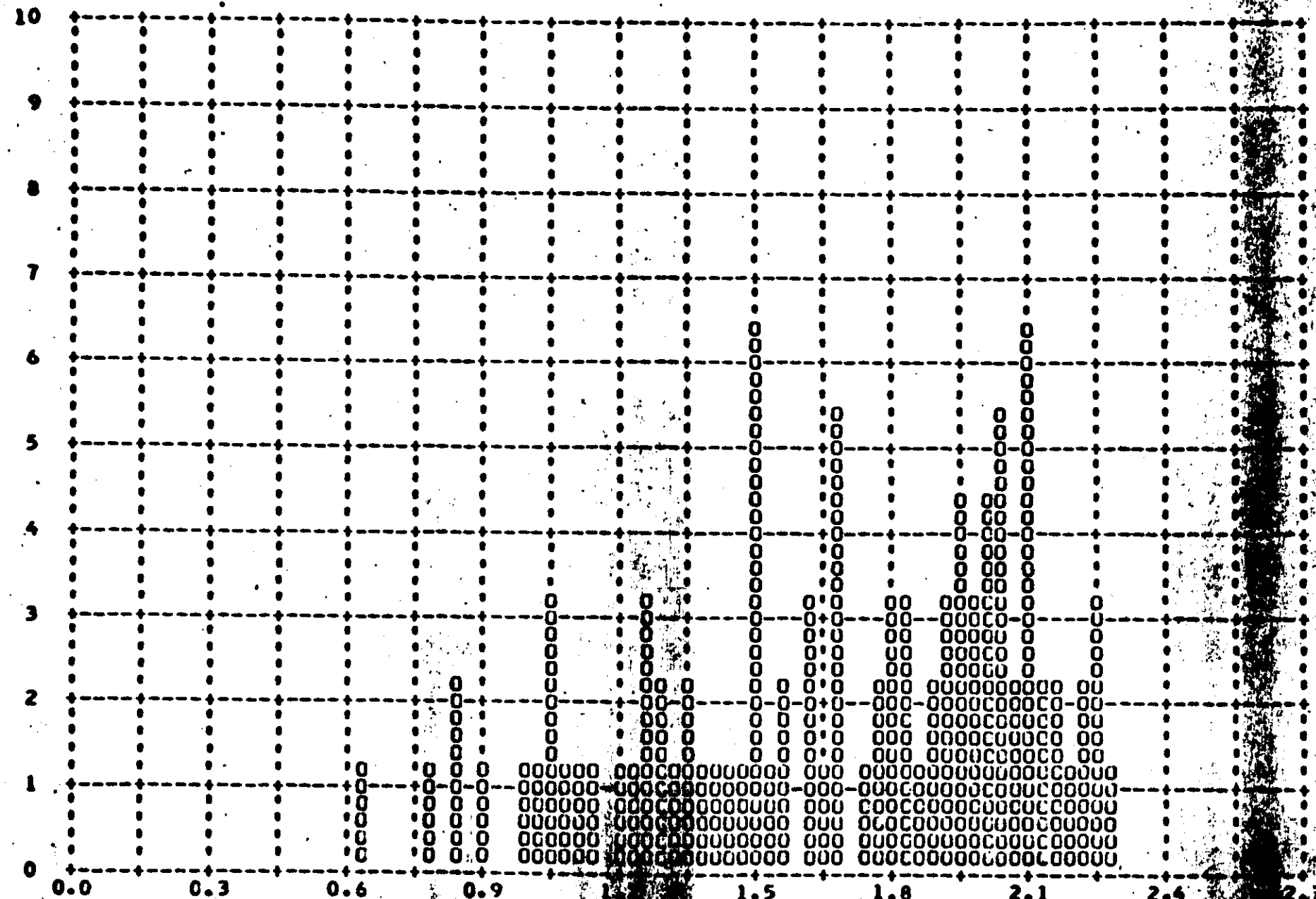


FIGURE A-28

MISSION • 1025-2 • INSTR • FRWD • 12/30/65 PLOT OF D MIN • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 0.45 • MEDIAN • 0.39 • STD DEV • 0.20 • RANGE • 0.18 TO 1.22 WITH 260 SAMPLES

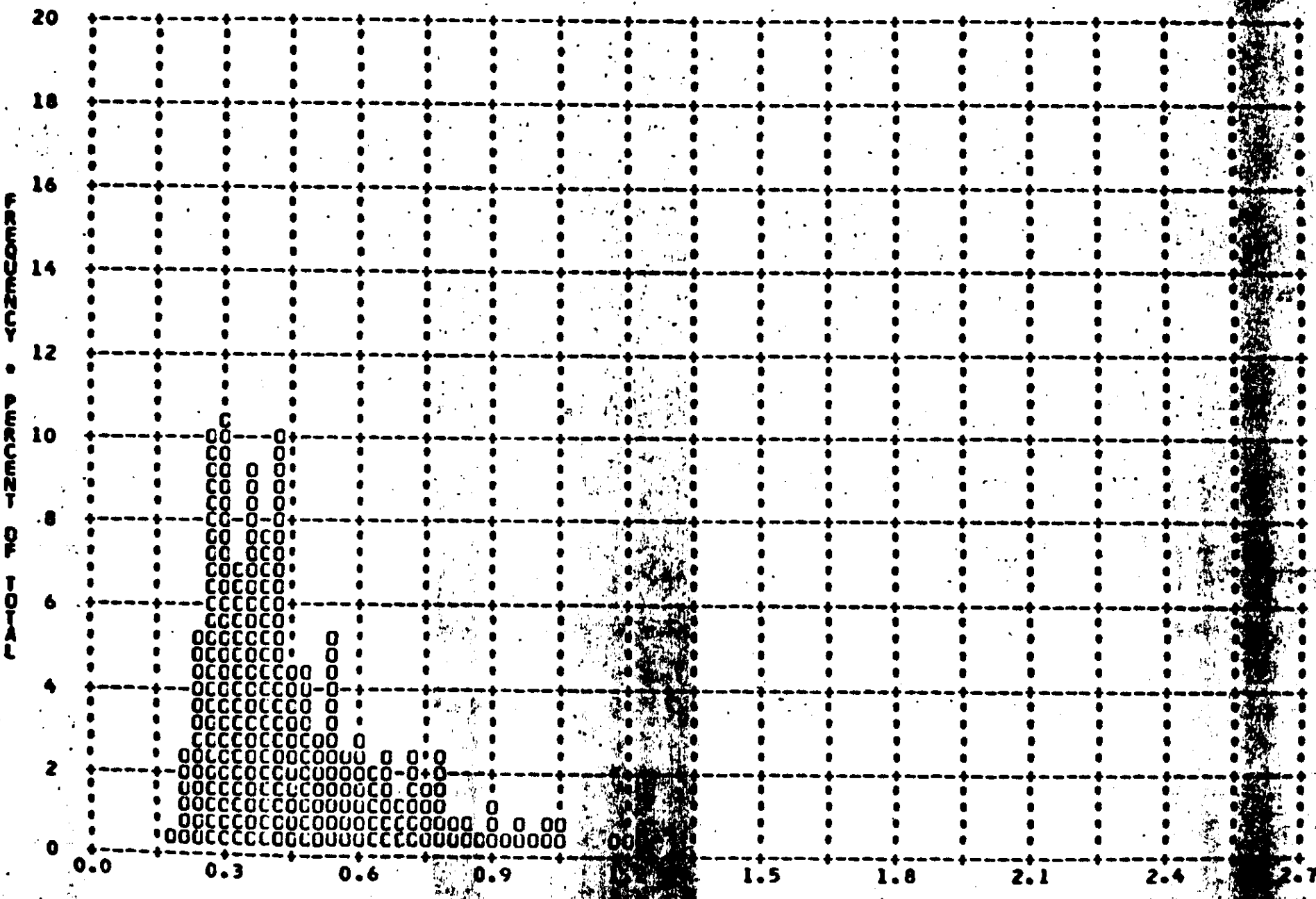


FIGURE A-26

MISSION • 1025-2 • INSTR • FRWD • 12/30/65 PLOT OF D MAX • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 1.32 • MEDIAN • 1.33 • STD DEV • 0.41 • RANGE • 0.26 TO 2.24 WITH 260 SAMPLES

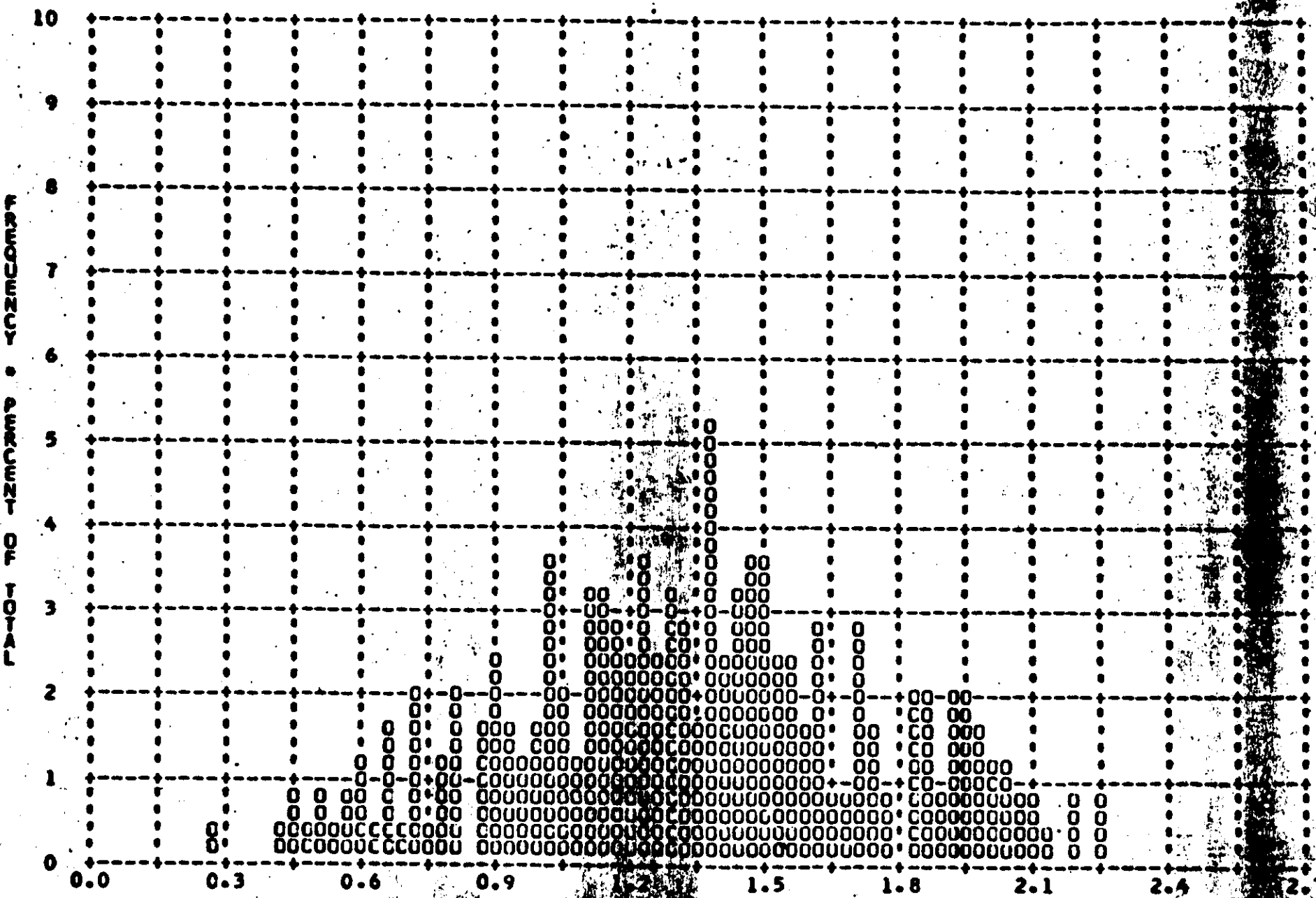


FIGURE A-27

MISSION • 1025-2 • INSTR • FRWD • 12/30/65 PLOT OF D MAX • CLOUD • PROCESSING • ALL LEVELS

ARITH MEAN • 1.78 • MEDIAN • 1.87 • STD DEV • 0.37 • RANGE • 0.63 TO 2.29 WITH 177 SAMPLES

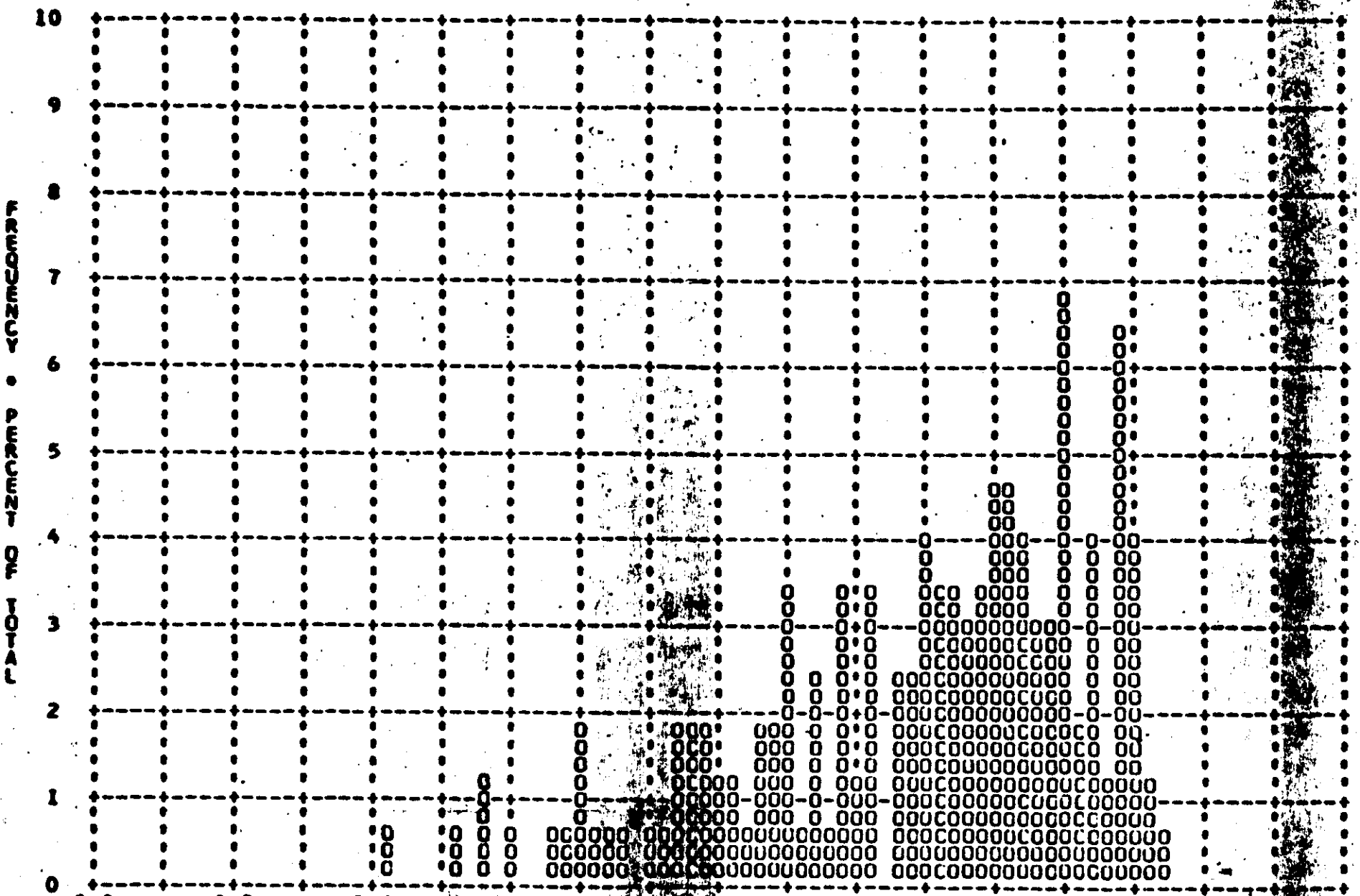


FIGURE A-28

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

MISSION • 1025-2 • INSTRUMENT • AFT 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.01	0	0	0	0	0	0	0	0	0	0	0	0
0.02	0	0	0	0	0	0	0	0	0	0	0	0
0.03	0	0	0	0	0	0	0	0	0	0	0	0
0.04	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0
0.06	0	0	0	0	0	0	0	0	0	0	0	0
0.07	0	0	0	0	0	0	0	0	0	0	0	0
0.08	0	0	0	0	0	0	0	0	0	0	0	0
0.09	0	0	0	0	0	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0	0	0	0	0	0
0.11	0	0	0	0	0	0	0	0	0	0	0	0
0.12	0	0	0	0	0	0	0	0	0	0	0	0
0.13	0	0	0	0	0	0	0	0	0	0	0	0
0.14	0	0	0	0	0	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0	0	0	0	0	0
0.16	0	0	0	0	0	0	0	0	0	0	0	0
0.17	0	0	0	0	0	0	0	0	0	0	0	0
0.18	0	0	0	0	0	0	0	0	0	0	0	0
0.19	0	0	0	0	0	0	0	0	0	0	0	0
0.20	0	0	0	0	0	0	0	0	0	0	0	0
0.21	0	0	0	0	0	0	0	0	0	0	0	0
0.22	0	0	0	0	0	0	0	0	0	0	0	0
0.23	0	0	0	0	0	0	0	0	0	0	0	0
0.24	0	0	0	0	0	0	0	0	0	0	0	0
0.25	0	0	0	0	0	0	0	0	0	0	0	0
0.26	0	0	0	0	0	0	0	0	0	0	0	0
0.27	0	0	0	0	0	0	0	0	0	0	0	0
0.28	0	0	0	0	0	0	0	0	0	0	0	0
0.29	0	0	0	0	0	0	0	0	0	0	0	0
0.30	0	0	0	0	0	0	0	0	0	0	0	0
0.31	0	0	0	0	0	0	0	0	0	0	0	0
0.32	0	0	0	0	0	0	0	0	0	0	0	0
0.33	0	0	0	0	0	0	0	0	0	0	0	0
0.34	0	0	0	0	0	0	0	0	0	0	0	0
0.35	0	0	0	0	0	0	0	0	0	0	0	0
0.36	0	0	0	0	0	0	0	0	0	0	0	0
0.37	0	0	0	0	0	0	0	0	0	0	0	0
0.38	0	0	0	0	0	0	0	0	0	0	0	0
0.39	0	0	0	0	0	0	0	0	0	0	0	0
0.40	0	0	0	0	0	0	0	0	0	0	0	0
0.41	0	0	0	0	0	0	0	0	0	0	0	0
0.42	0	0	0	0	0	0	0	0	0	0	0	0
0.43	0	0	0	0	0	0	0	0	0	0	0	0
0.44	0	0	0	0	0	0	0	0	0	0	0	0
0.45	0	0	0	0	0	0	0	0	0	0	0	0
0.46	0	0	0	0	0	0	0	0	0	0	0	0
0.47	0	0	0	0	0	0	0	0	0	0	0	0
0.48	0	0	0	0	0	0	0	0	0	0	0	0
0.49	0	0	0	0	0	0	0	0	0	0	0	0
0.50	0	0	0	1	0	0	1	0	0	1	0	0
SUBTOTAL	0	0	0	58	2	1	83	9	0	141	11	1

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

TABLE A-4

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

MISSION • 1025-2 • INSTRUMENT • AFT 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.51	0	0	0	1	0	0	4	0	0	5	0	0
0.52	0	0	0	4	0	0	8	0	0	12	0	0
0.53	0	0	0	1	0	0	1	0	0	2	0	0
0.54	0	0	0	4	0	0	2	1	0	6	1	0
0.55	0	0	0	2	0	0	0	2	0	2	2	0
0.56	0	0	0	1	0	0	2	1	0	3	1	0
0.57	0	0	0	1	0	0	1	1	0	2	1	0
0.58	0	0	0	3	0	0	2	1	0	5	1	0
0.59	0	0	0	2	0	0	0	2	0	2	2	0
0.60	0	0	0	4	0	0	2	1	0	6	1	0
0.61	0	0	0	2	0	0	3	1	0	5	1	0
0.62	0	0	0	3	0	0	0	1	0	3	1	0
0.63	0	0	0	2	0	0	1	0	0	3	0	0
0.64	0	0	0	3	0	0	2	0	0	5	0	0
0.65	0	0	0	4	0	0	1	1	0	5	1	0
0.66	0	0	0	1	0	0	2	1	0	3	1	0
0.67	0	0	0	2	0	0	1	0	0	3	0	0
0.68	0	0	0	4	0	0	1	0	0	5	0	0
0.69	0	0	0	1	0	0	2	0	0	3	0	0
0.70	0	0	0	4	0	0	1	0	0	5	0	0
0.71	0	0	0	0	1	0	1	0	0	1	1	0
0.72	0	0	0	1	0	0	1	0	0	2	0	0
0.73	0	0	0	0	1	0	0	1	0	0	2	0
0.74	0	0	0	2	0	0	2	1	0	4	1	0
0.75	0	0	0	0	1	0	0	0	0	0	1	0
0.76	0	0	0	2	0	0	1	0	0	3	0	0
0.77	0	0	0	3	0	0	1	2	0	4	2	0
0.78	0	0	0	1	0	0	0	1	0	1	1	0
0.79	0	0	0	0	1	0	0	0	0	0	1	0
0.80	0	0	0	1	0	0	0	1	0	1	1	0
0.81	0	0	0	0	1	0	0	0	0	0	1	0
0.82	0	0	0	1	0	0	0	1	0	1	1	0
0.83	0	0	0	0	1	0	0	0	0	0	1	0
0.84	0	0	0	1	0	0	1	0	0	2	0	0
0.85	0	0	0	0	1	0	0	0	0	0	1	0
0.86	0	0	0	2	0	0	0	1	0	2	1	0
0.87	0	0	0	1	0	0	1	1	0	2	1	0
0.88	0	0	0	0	1	0	0	0	0	0	1	0
0.89	0	0	0	1	0	0	1	2	0	2	2	0
0.90	0	0	0	2	0	0	0	2	0	2	2	0
0.91	0	0	0	0	1	0	0	0	0	0	1	0
0.92	0	0	0	2	0	0	0	2	0	2	2	0
0.93	0	0	0	0	1	0	0	0	0	0	1	0
0.94	0	0	0	2	0	0	1	1	0	3	1	0
0.95	0	0	0	0	1	0	0	0	0	0	1	0
0.96	0	0	0	2	0	0	0	1	0	2	1	0
0.97	0	0	0	0	1	0	0	0	0	0	1	0
0.98	0	0	0	1	0	0	1	2	0	2	2	0
0.99	0	0	0	0	1	0	0	0	0	0	1	0
1.00	0	0	0	0	0	0	1	0	0	1	0	0
SUBTOTAL	0	0	0	69	14	0	46	31	9	115	45	9

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

TABLE A-4

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

MISSION • 1025-2 • INSTRUMENT • AFT 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.01	0	0	0	0	0	0	0	1	0	0	1	0
1.02	0	0	0	0	3	0	0	1	0	0	1	0
1.03	0	0	0	0	1	0	0	1	0	0	1	0
1.04	0	0	0	0	1	0	0	0	0	0	1	0
1.05	0	0	0	0	1	0	0	0	0	0	1	0
1.06	0	0	0	0	2	0	0	0	0	0	2	0
1.07	0	0	0	0	1	0	0	0	0	0	1	0
1.08	0	0	0	0	1	0	0	0	0	0	1	0
1.09	0	0	0	0	1	0	0	0	0	0	1	0
1.10	0	0	0	0	0	0	0	0	0	0	0	0
1.11	0	0	0	0	0	0	0	0	0	0	0	0
1.12	0	0	0	0	0	0	0	0	0	0	0	0
1.13	0	0	0	0	0	0	0	0	0	0	0	0
1.14	0	0	0	0	0	0	0	0	0	0	0	0
1.15	0	0	0	0	0	0	0	0	0	0	0	0
1.16	0	0	0	0	0	0	0	0	0	0	0	0
1.17	0	0	0	0	0	0	0	0	0	0	0	0
1.18	0	0	0	0	0	0	0	0	0	0	0	0
1.19	0	0	0	0	0	0	0	0	0	0	0	0
1.20	0	0	0	0	0	0	0	0	0	0	0	0
1.21	0	0	0	0	0	0	0	0	0	0	0	0
1.22	0	0	0	0	0	0	0	0	0	0	0	0
1.23	0	0	0	0	0	0	0	0	0	0	0	0
1.24	0	0	0	0	0	0	0	0	0	0	0	0
1.25	0	0	0	0	0	0	0	0	0	0	0	0
1.26	0	0	0	0	0	0	0	0	0	0	0	0
1.27	0	0	0	0	0	0	0	0	0	0	0	0
1.28	0	0	0	0	0	0	0	0	0	0	0	0
1.29	0	0	0	0	0	0	0	0	0	0	0	0
1.30	0	0	0	0	0	0	0	0	0	0	0	0
1.31	0	0	0	0	0	0	0	0	0	0	0	0
1.32	0	0	0	0	0	0	0	0	0	0	0	0
1.33	0	0	0	0	0	0	0	0	0	0	0	0
1.34	0	0	0	0	0	0	0	0	0	0	0	0
1.35	0	0	0	0	0	0	0	0	0	0	0	0
1.36	0	0	0	0	0	0	0	0	0	0	0	0
1.37	0	0	0	0	0	0	0	0	0	0	0	0
1.38	0	0	0	0	0	0	0	0	0	0	0	0
1.39	0	0	0	0	0	0	0	0	0	0	0	0
1.40	0	0	0	0	0	0	0	0	0	0	0	0
1.41	0	0	0	0	0	0	0	0	0	0	0	0
1.42	0	0	0	0	0	0	0	0	0	0	0	0
1.43	0	0	0	0	0	0	0	0	0	0	0	0
1.44	0	0	0	0	0	0	0	0	0	0	0	0
1.45	0	0	0	0	0	0	0	0	0	0	0	0
1.46	0	0	0	0	0	0	0	0	0	0	0	0
1.47	0	0	0	0	0	0	0	0	0	0	0	0
1.48	0	0	0	0	0	0	0	0	0	0	0	0
1.49	0	0	0	0	0	0	0	0	0	0	0	0
1.50	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	8	87	15	3	47	16	11	134	31

~~TOP SECRET~~ [redacted] CONTROL NO. [redacted]

TABLE A-4

~~TOP SECRET~~ [redacted] CONTROL NO. [redacted]

MISSION • 1025-2 • INSTRUMENT • AFT 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.51	0	0	0	0	0	1	0	1	1	0	1	2
1.52	0	0	0	0	0	1	0	1	1	0	1	2
1.53	0	0	0	0	1	1	0	1	1	0	2	3
1.54	0	0	0	0	2	1	0	1	2	0	3	5
1.55	0	0	0	0	3	1	0	2	2	0	5	7
1.56	0	0	0	0	3	0	0	2	1	0	5	6
1.57	0	0	0	0	2	1	0	1	2	0	3	5
1.58	0	0	0	0	1	1	0	2	0	0	3	4
1.59	0	0	0	0	2	1	0	2	0	0	4	5
1.60	0	0	0	0	2	1	0	1	1	0	4	5
1.61	0	0	0	0	1	1	0	1	1	0	2	3
1.62	0	0	0	0	1	0	0	1	0	0	2	2
1.63	0	0	0	0	3	1	0	1	1	0	4	5
1.64	0	0	0	0	2	1	0	1	1	0	3	4
1.65	0	0	0	0	2	0	0	1	1	0	3	4
1.66	0	0	0	0	1	1	0	1	2	0	2	4
1.67	0	0	0	0	1	0	0	1	2	0	2	4
1.68	0	0	0	0	1	0	0	2	0	0	2	4
1.69	0	0	0	0	0	1	0	2	0	0	2	4
1.70	0	0	0	0	0	0	0	2	1	0	2	5
1.71	0	0	0	0	0	0	0	2	0	0	2	4
1.72	0	0	0	0	0	0	0	2	0	0	2	4
1.73	0	0	0	0	0	0	0	2	0	0	2	4
1.74	0	0	0	0	0	0	0	2	0	0	2	4
1.75	0	0	0	0	0	0	0	2	0	0	2	4
1.76	0	0	0	0	0	0	0	2	0	0	2	4
1.77	0	0	0	0	0	0	0	2	0	0	2	4
1.78	0	0	0	0	0	0	0	2	0	0	2	4
1.79	0	0	0	0	0	0	0	2	0	0	2	4
1.80	0	0	0	0	0	0	0	2	0	0	2	4
1.81	0	0	0	0	0	0	0	2	0	0	2	4
1.82	0	0	0	0	0	0	0	2	0	0	2	4
1.83	0	0	0	0	0	0	0	2	0	0	2	4
1.84	0	0	0	0	0	0	0	2	0	0	2	4
1.85	0	0	0	0	0	0	0	2	0	0	2	4
1.86	0	0	0	0	0	0	0	2	0	0	2	4
1.87	0	0	0	0	0	0	0	2	0	0	2	4
1.88	0	0	0	0	0	0	0	2	0	0	2	4
1.89	0	0	0	0	0	0	0	2	0	0	2	4
1.90	0	0	0	0	0	0	0	2	0	0	2	4
1.91	0	0	0	0	0	0	0	2	0	0	2	4
1.92	0	0	0	0	0	0	0	2	0	0	2	4
1.93	0	0	0	0	0	0	0	2	0	0	2	4
1.94	0	0	0	0	0	0	0	2	0	0	2	4
1.95	0	0	0	0	0	0	0	2	0	0	2	4
1.96	0	0	0	0	0	0	0	2	0	0	2	4
1.97	0	0	0	0	0	0	0	2	0	0	2	4
1.98	0	0	0	0	0	0	0	2	0	0	2	4
1.99	0	0	0	0	0	0	0	2	0	0	2	4
2.00	0	0	0	0	0	0	0	2	0	0	2	4
SUBTOTAL	0	0	0	0	31	39	0	41	50	0	72	89

~~TOP SECRET~~ [redacted] CONTROL NO. [redacted]

TABLE A-4

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

MISSION • 1025-2 • INSTRUMENT • AFT 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.01	0	0	0	0	0	2	0	1	0	0	1	2
2.02	0	0	0	0	0	2	0	0	3	0	0	2
2.03	0	0	0	0	0	3	0	1	0	0	1	3
2.04	0	0	0	0	0	1	0	0	3	0	0	1
2.05	0	0	0	0	0	1	0	0	3	0	0	1
2.06	0	0	0	0	0	1	0	0	1	0	0	2
2.07	0	0	0	0	0	1	0	0	1	0	0	2
2.08	0	0	0	0	0	2	0	0	0	0	0	2
2.09	0	0	0	0	0	1	0	0	0	0	0	1
2.10	0	0	0	0	0	3	0	0	0	0	0	3
2.11	0	0	0	0	0	3	0	0	0	0	0	3
2.12	0	0	0	0	0	3	0	0	1	0	0	4
2.13	0	0	0	0	0	0	0	0	1	0	0	1
2.14	0	0	0	0	0	1	0	0	1	0	0	1
2.15	0	0	0	0	0	0	0	0	1	0	0	1
2.16	0	0	0	0	0	0	0	1	0	0	1	0
2.17	0	0	0	0	0	1	0	1	0	0	1	0
2.18	0	0	0	0	0	2	0	0	1	0	0	3
2.19	0	0	0	0	0	2	0	0	0	0	0	2
2.20	0	0	0	0	0	2	0	0	0	0	0	2
2.21	0	0	0	0	0	2	0	0	0	0	0	2
2.22	0	0	0	0	0	0	0	0	0	0	0	0
2.23	0	0	0	0	0	0	0	0	0	0	0	0
2.24	0	0	0	0	0	0	0	0	0	0	0	0
2.25	0	0	0	0	0	0	0	0	0	0	0	0
2.26	0	0	0	0	0	0	0	0	0	0	0	0
2.27	0	0	0	0	0	0	0	0	0	0	0	0
2.28	0	0	0	0	0	0	0	0	0	0	0	0
2.29	0	0	0	0	0	0	0	0	0	0	0	0
2.30	0	0	0	0	0	0	0	0	0	0	0	0
2.31	0	0	0	0	0	0	0	0	0	0	0	0
2.32	0	0	0	0	0	0	0	0	0	0	0	0
2.33	0	0	0	0	0	0	0	0	0	0	0	0
2.34	0	0	0	0	0	0	0	0	0	0	0	0
2.35	0	0	0	0	0	0	0	0	0	0	0	0
2.36	0	0	0	0	0	0	0	0	0	0	0	0
2.37	0	0	0	0	0	0	0	0	0	0	0	0
2.38	0	0	0	0	0	0	0	0	0	0	0	0
2.39	0	0	0	0	0	0	0	0	0	0	0	0
2.40	0	0	0	0	0	0	0	0	0	0	0	0
2.41	0	0	0	0	0	0	0	0	0	0	0	0
2.42	0	0	0	0	0	0	0	0	0	0	0	0
2.43	0	0	0	0	0	0	0	0	0	0	0	0
2.44	0	0	0	0	0	0	0	0	0	0	0	0
2.45	0	0	0	0	0	0	0	0	0	0	0	0
2.46	0	0	0	0	0	0	0	0	0	0	0	0
2.47	0	0	0	0	0	0	0	0	0	0	0	0
2.48	0	0	0	0	0	0	0	0	0	0	0	0
2.49	0	0	0	0	0	0	0	0	0	0	0	0
2.50	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	1	27	0	4	11	0	5	38

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

TABLE A-4

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

MISSION • 1025-2 • INSTRUMENT • AFT 12/30/65 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.51	0	0	0	0	0	0	0	0	0	0	0	0
2.52	0	0	0	0	0	0	0	0	0	0	0	0
2.53	0	0	0	0	0	0	0	0	0	0	0	0
2.54	0	0	0	0	0	0	0	0	0	0	0	0
2.55	0	0	0	0	0	0	0	0	0	0	0	0
2.56	0	0	0	0	0	0	0	0	0	0	0	0
2.57	0	0	0	0	0	0	0	0	0	0	0	0
2.58	0	0	0	0	0	0	0	0	0	0	0	0
2.59	0	0	0	0	0	0	0	0	0	0	0	0
2.60	0	0	0	0	0	0	0	0	0	0	0	0
2.61	0	0	0	0	0	0	0	0	0	0	0	0
2.62	0	0	0	0	0	0	0	0	0	0	0	0
2.63	0	0	0	0	0	0	0	0	0	0	0	0
2.64	0	0	0	0	0	0	0	0	0	0	0	0
2.65	0	0	0	0	0	0	0	0	0	0	0	0
2.66	0	0	0	0	0	0	0	0	0	0	0	0
2.67	0	0	0	0	0	0	0	0	0	0	0	0
2.68	0	0	0	0	0	0	0	0	0	0	0	0
2.69	0	0	0	0	0	0	0	0	0	0	0	0
2.70	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	135	135	82	132	132	86	267	267	168

MISSION 1025-2 INSTR - AFT 12/30/65 PROCESSING AND EXPOSURE ANALYS

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	0	0 PC	0 PC	0 PC	0 PC	0 PC
INTERMEDIATE	135	0 PC	24 PC	67 PC	10 PC	0 PC
FULL	132	39 PC	0 PC	55 PC	6 PC	0 PC
ALL LEVELS	267	19 PC	12 PC	61 PC	8 PC	0 PC

PROCESS LEVEL	BASE + FOG	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP+PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	0.01-0.09	0.01-0.13	0.14-0.39	0.40-0.90	----------	0.91 AND
INTERMED	0.10-0.17	0.01-0.20	0.21-0.39	0.40-0.90	0.91-1.34	1.35 AND
FULL	0.18 AND UP	0.01-0.39	----------	0.40-0.90	0.91-1.69	1.70 AND

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

TABLE A-4

~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

MISSION • 1025-2 • INSTR • AFT • 12/30/65 PLOT OF D MIN • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 0.58 • MEDIAN • 0.54 • STD DEV • 0.24 • RANGE • 0.22 TO 1.24 WITH 135 SAMPLES

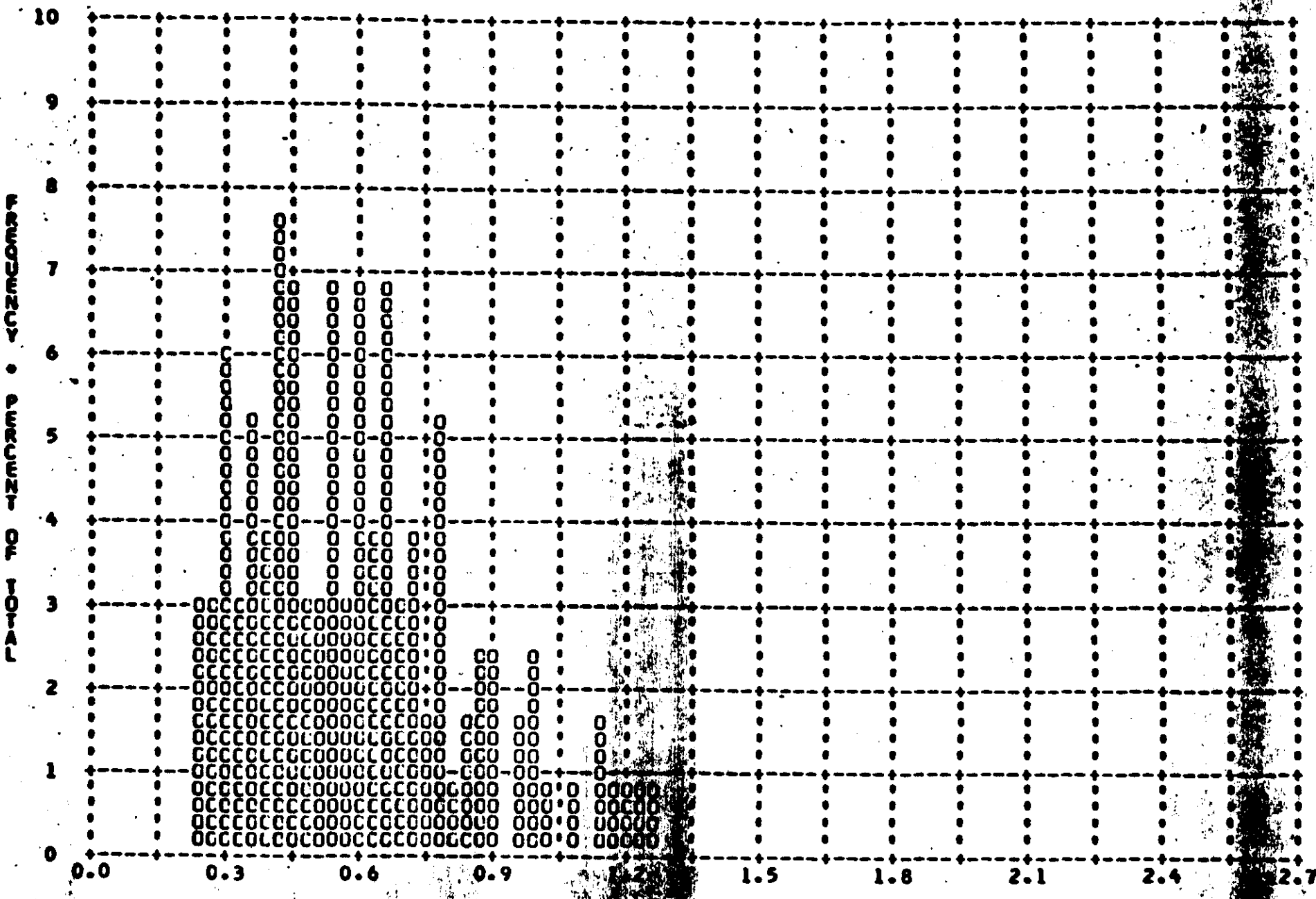
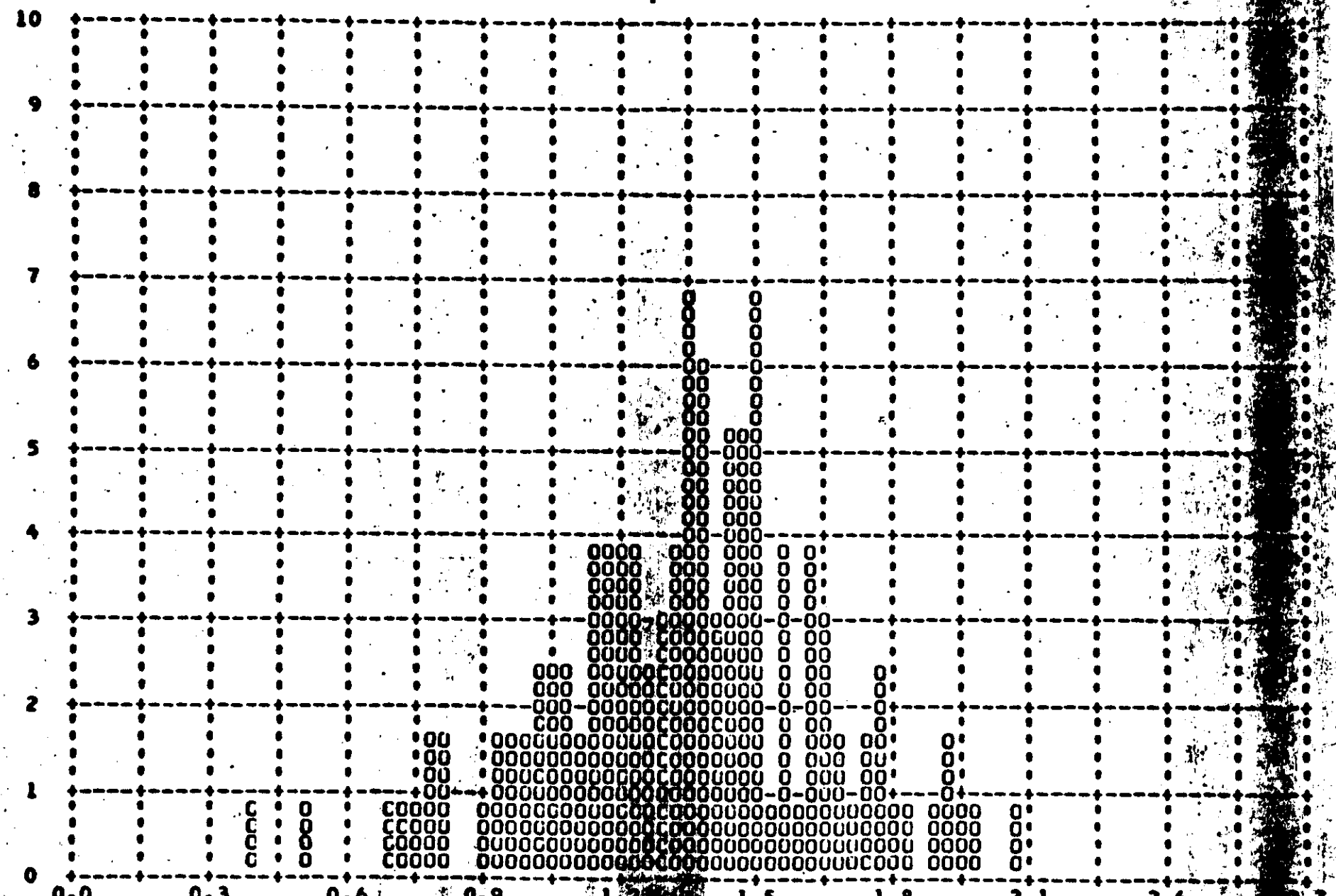


FIGURE A-29

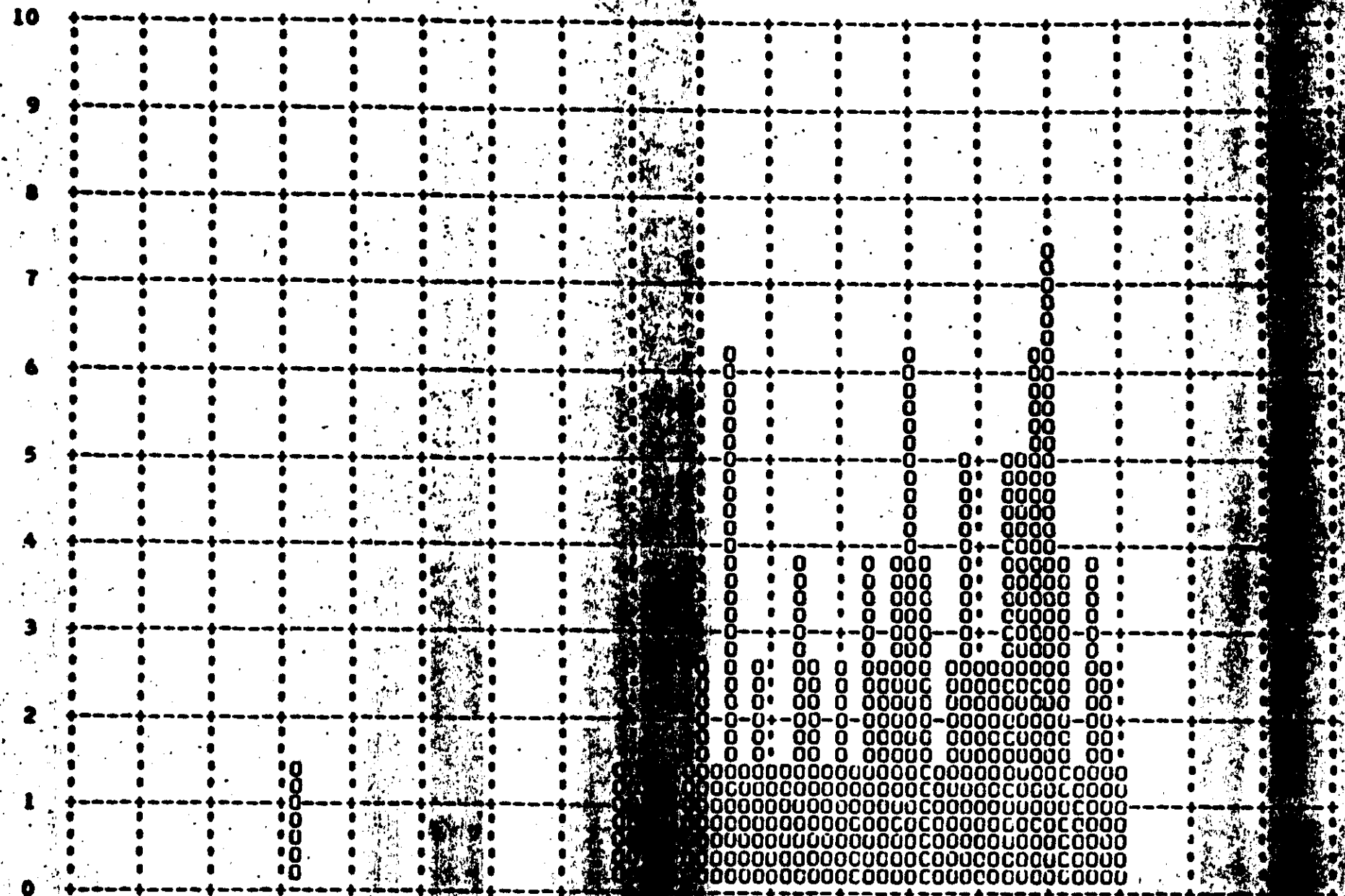
MISSION • 1025-2 • INSTR • AFT • 12/30/65 PLOT OF D MAX • TERRAIN • PROCESSING • INTERMEDIATE

ARITH MEAN • 1.33 • MEDIAN • 1.35 • STD DEV • 0.30 • RANGE • 0.39 TO 2.06 WITH 135 SAMPLES



MISSION • 1025-2 • INSTR • AFT • 12/30/65 PLOT OF D MAX • CLOUD • PROCESSING • INTERMED

ARITH MEAN • 1.79 • MEDIAN • 1.83 • STD DEV • 0.31 • RANGE • 0.48 TO 2.23 WITH 82 SAMPLES



FREQUENCY • PERCENT OF TOTAL

FIGURE A-31

MISSION • 1025-2 • INSTR • AFT • 12/30/65 PLOT OF D MIN • TERRAIN • PROCESSING • FULL

ARITH MEAN • 0.48 • MEDIAN • 0.43 • STD DEV • 0.21 • RANGE • 0.21 TO 1.32 WITH 132 SAMPLES

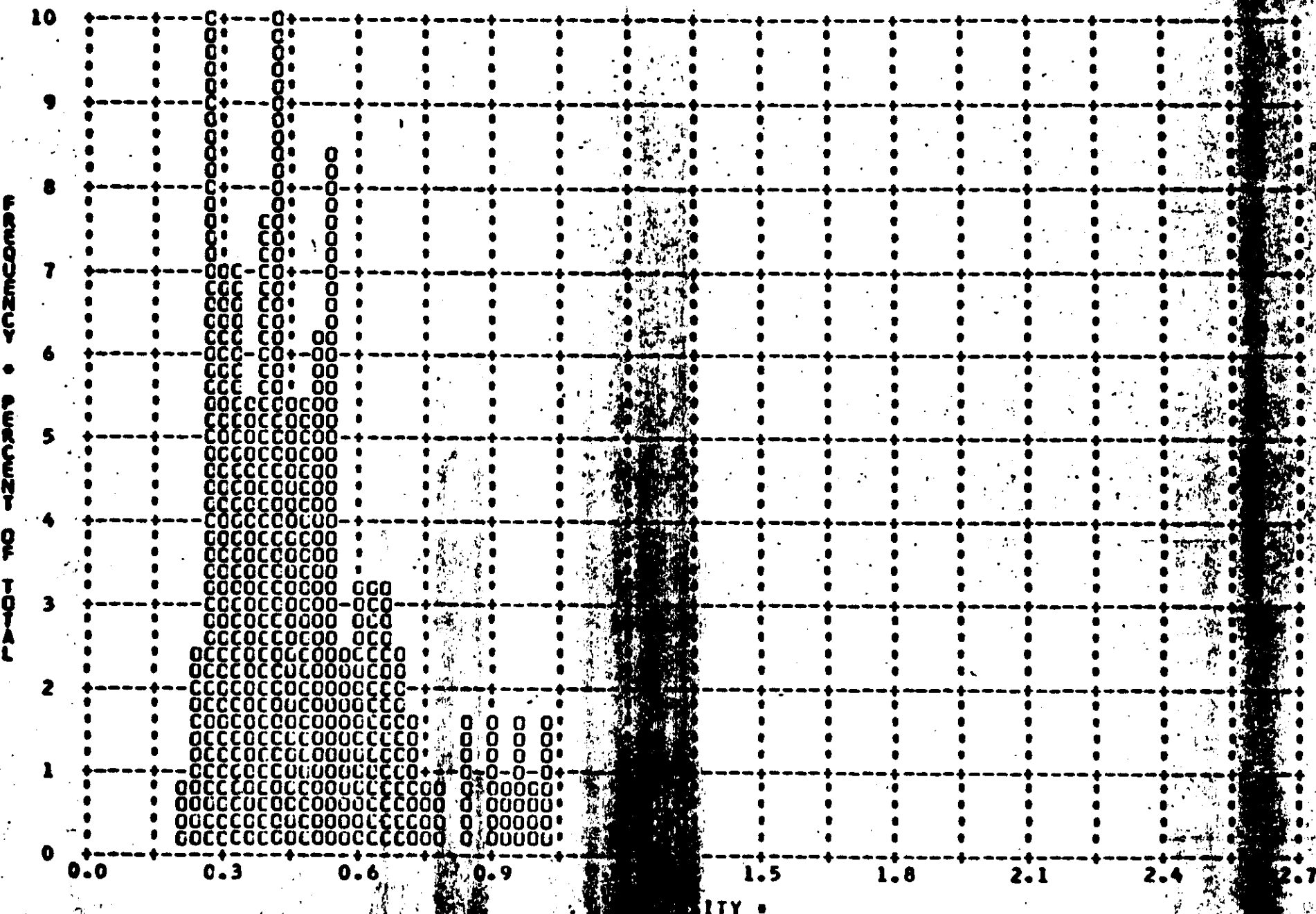


FIGURE A-32

MISSION • 1025-2 • INSTR • AFT • 12/30/65 PLOT OF D MAX • TERRAIN • PROCESSING • FULL

ARITH MEAN • 1.28 • MEDIAN • 1.35 • STD DEV • 0.46 • RANGE • 0.39 TO 2.16 WITH 132 SAMPLES

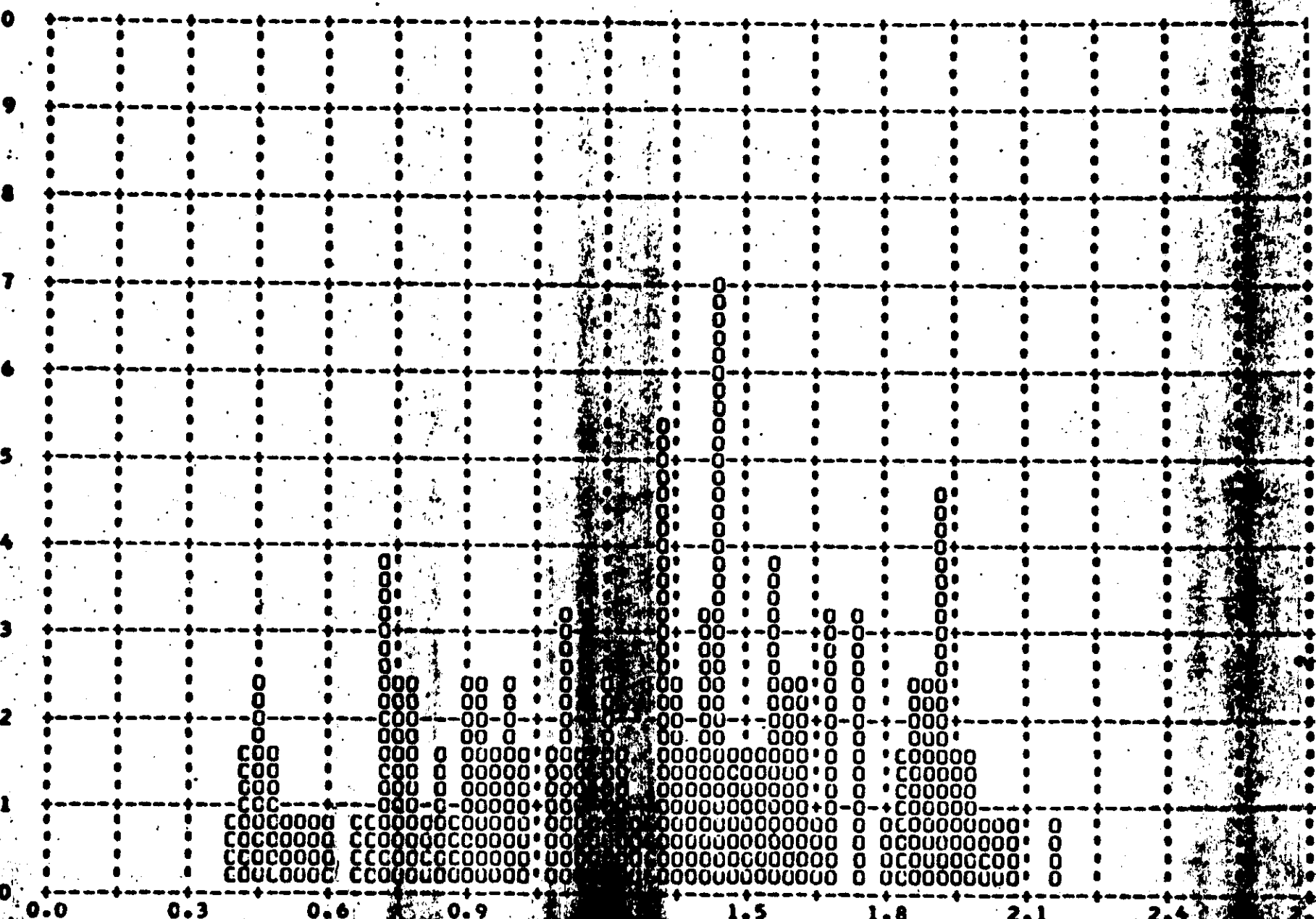


FIGURE A-33

MISSION • 1025-2 • INSTR • AFT • 12/30/65 PLOT OF D MAX • CLOUD • PROCESSING • FULL

ARITH MEAN • 1.63 • MEDIAN • 1.75 • STD DEV • 0.40 • RANGE • 0.62 TO 2.18 WITH 86 SAMPLES

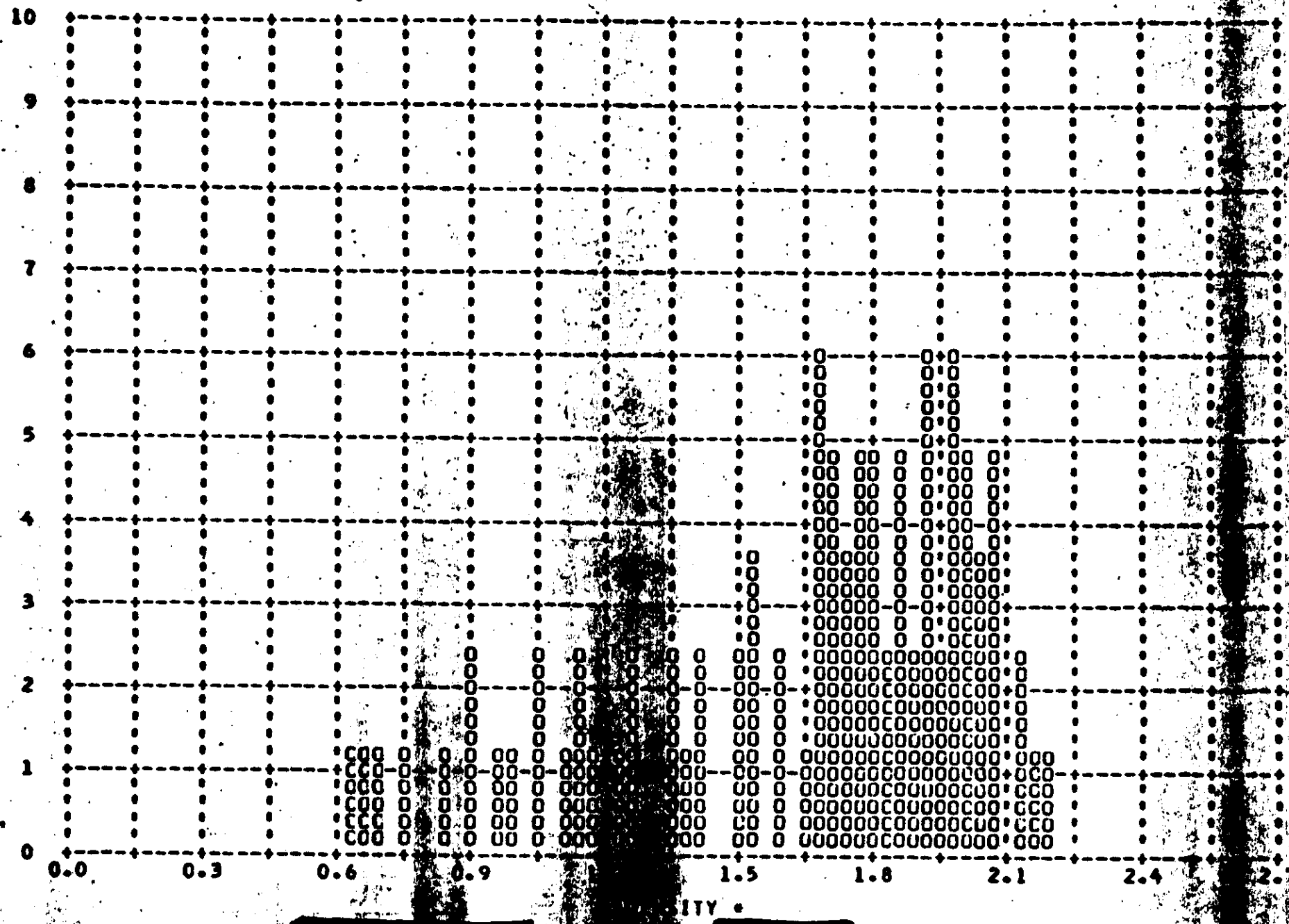


FIGURE A-34

MISSION • 1025-2 • INSTR • AFT • 12/30/65 PLOT OF D MIN • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 0.53 • MEDIAN • 0.48 • STD DEV • 0.23 • RANGE • 0.21 TO 1.32 WITH 267 SAMPLES

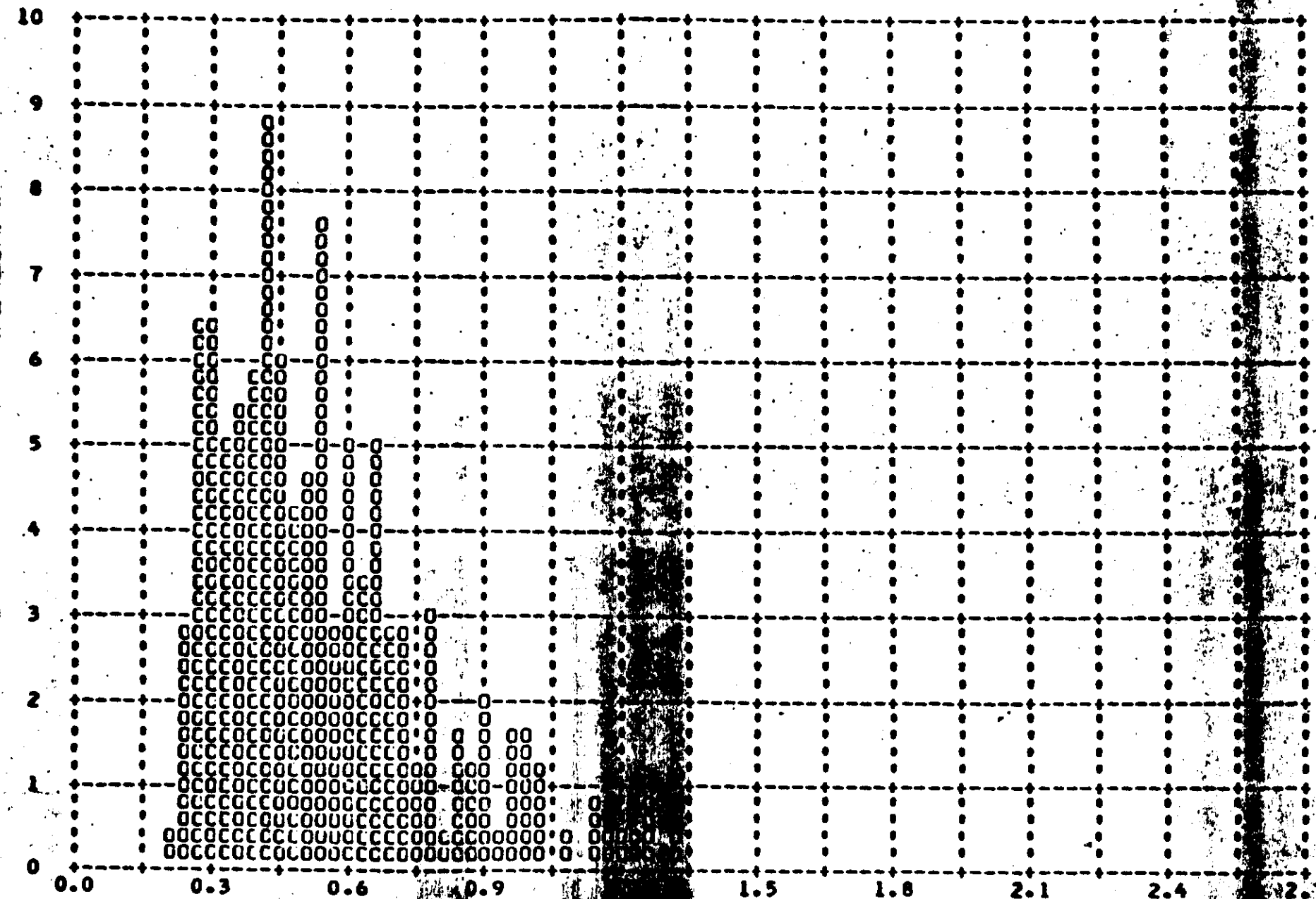


FIGURE A-35

MISSION • 1025-2 • INSTR • AFT • 12/30/65 PLOT OF D MAX • TERRAIN • PROCESSING • ALL LEVELS

ARITH MEAN • 1.31 • MEDIAN • 1.35 • STD DEV • 0.38 • RANGE • 0.39 TO 2.16 WITH 267 SAMPLES

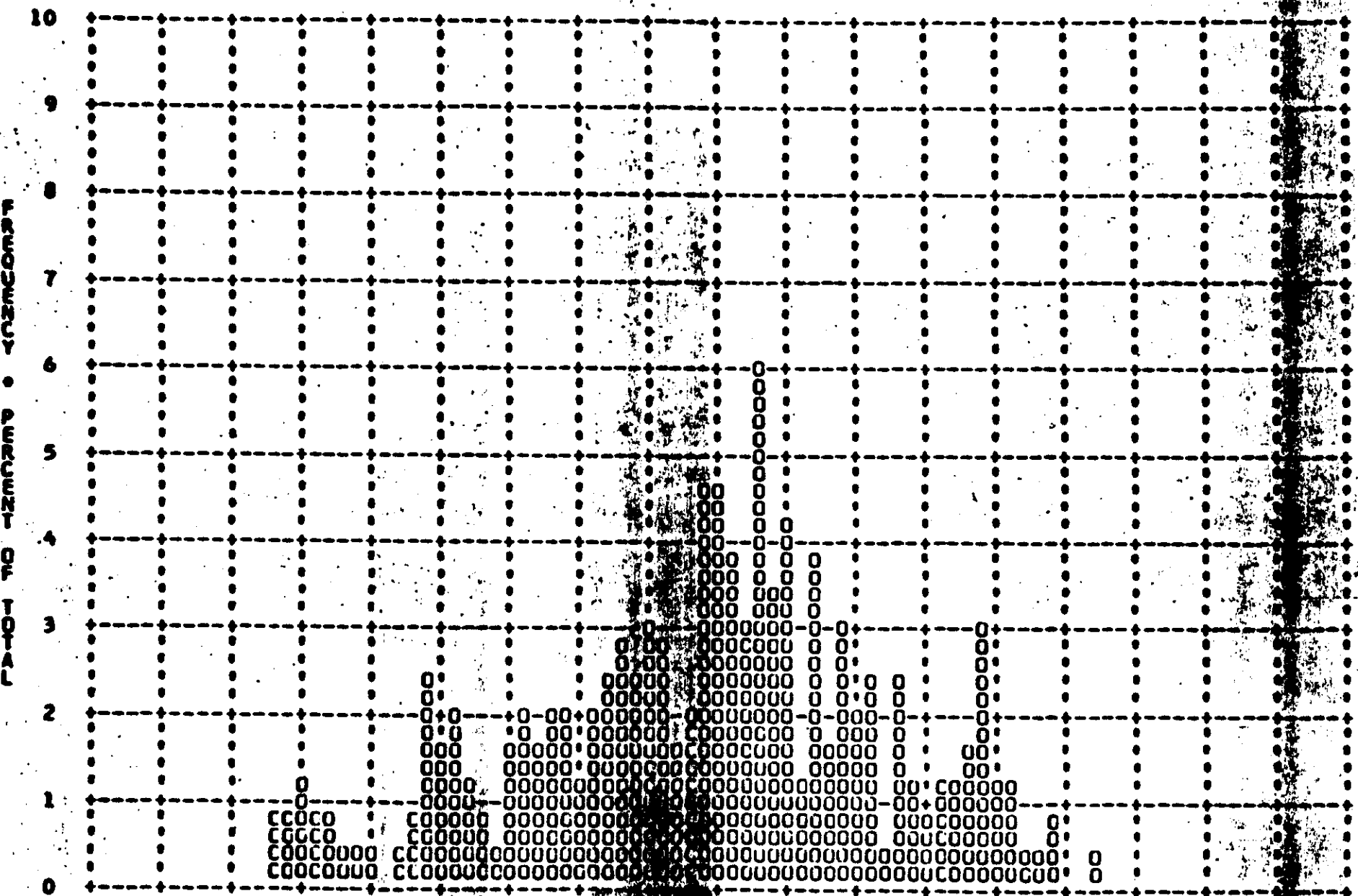


FIGURE A-36

MISSION • 1025-2 • INSTR • AFT • 12/30/65 PLOT OF D MAX • CLOUD • PROCESSING • ALL LEVELS

ARITH MEAN • 1.71 • MEDIAN • 1.79 • STD DEV • 0.37 • RANGE • 0.48 TO 2.23 WITH 168 SAMPLES

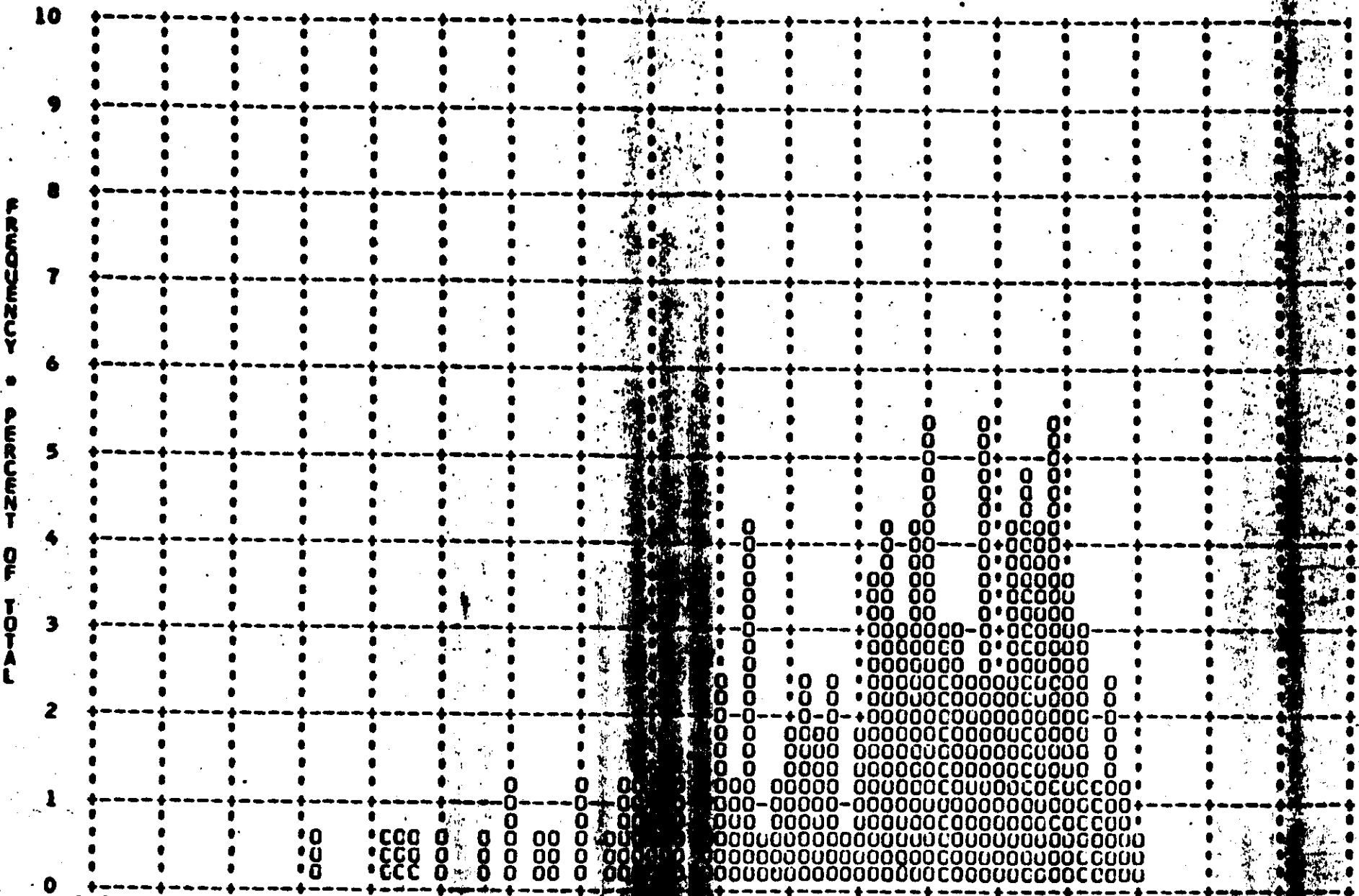


FIGURE A-37

Distribution:

Copy No.	To
[redacted]	[redacted]