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No. [redacted]

14 November 1967

TO: [redacted]
C. Murphy
A. Johnson

THRU: [redacted]

FROM: [redacted]

SUBJECT: MISSION 1040-1 and 1040-2 FINAL REPORT

Enclosed is the Final Performance Evaluation Report for Mission 1040-1 and 1040-2.

[redacted] Manager
Advanced Projects

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Copy No. [redacted]

CORONA J

PERFORMANCE EVALUATION REPORT

MISSION 1040-1 and 1040-2

FTV 1636...J-35

5 October 1967

Approved: [redacted]
Manager
Advanced Projects

Approved: [redacted] for
Program Mgr.

[redacted]

[redacted]

FOREWORD

This report details the performance of the payload system during the operational phase of the Program [redacted] light Test Vehicle U636.

Lockheed Missiles and Space Company has the responsibility for evaluating payload performance under the Level-of-Effort and "J" System contracts.

This document is the final payload test and performance evaluation report for Missions 1010-1 and 1010-2 which was launched on 30 March 1967.

[redacted]

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[redacted]

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INTRODUCTION

This report presents the final performance evaluation of Missions 1040-1 and 1040-2 of the Corona Program. The purpose of this report is to define the performance characteristics of the J-35 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 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 1040, placed into orbit by Flight Test Vehicle #1636 and LV-2A booster #501, 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 J-35 payload system. This Corona "J" system is designed to acquire search and reconnaissance photography of selected areas of the earth from orbital altitudes. The planned mission was two, 5 day photographic periods with no deactivate period. The vehicle was flown nose forward.

B. MISSION DESCRIPTION

The payload was launched from Vandenberg Air Force Base (VAFB) at 1854 Z (1054 PST) on 30 March 1967. 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 consisting of tracking and command stations at [redacted] under central control of the Satellite Test Center at Sunnyvale, California. Mission 1040-1 consisted of a 5 day operation and was completed by air recovery on 4 April 1967. Mission 1040-2 was completed with an air recovery on 8 April 1967 following a 4 day photographic operation.

The comparison of the planned and actual orbit parameters is tabulated as follows:

[redacted]

ORBITAL PARAMETERS

Parameter	REV-1 Predicted	REV-42 Actuals	REV-110 Actuals
Period (Min.)	90.30	90.265	90.091
Perigee (N.M.)	99.85	99.668	100.603
Apogee (N.M.)	214.77	214.130	210.450
Inclination (Deg.)	85.00	85.054	85.054
Perigee Latitude (Deg. N.)	20.37	28.271	45.391
Eccentricity	0.01597	0.01591	0.01529

C. PANORAMIC CAMERAS

The image quality was rated better than Mission 1038 and comparable to Mission 1039. This was a nose forward flight.

D. STELLAR-INDEX CAMERAS

Both units produced good photography for vehicle orientation data reduction. The Stellar images were point type.

E. OTHER SUB-SYSTEMS

The clock, instrumentation, command, thermal control pressure make-up and recovery subsystems performed satisfactorily.

SCHEMATIC INBOARD PROFILE - CORONA J SYSTEM

J-35
MISSION 1040

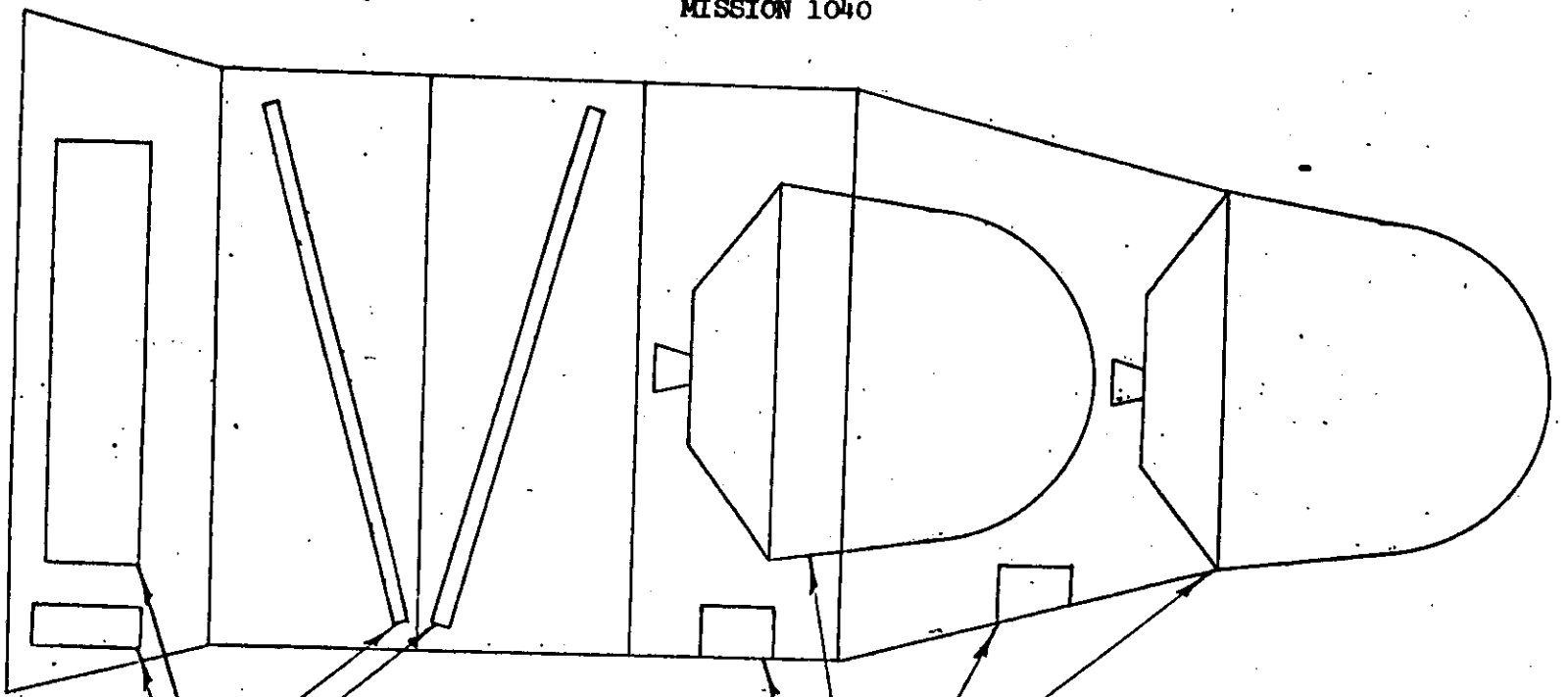

FIGURE 1-1

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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 J-35 payload system was subjected to an environmental HIVOS chamber test from 30 March through 6 April 1966. A total of 5542 cycles was operated in the master instrument and 5579 cycles in the slave. The internal camera pressures experienced during this test were 0.7 to 80 microns.

The pan instruments operated satisfactorily except for the random occurrence of light or absent horizon fiducials, camera serial number and binary index imagery. This condition was checked and it was determined to be caused by voltage irregularities in the HIVOS cabling.

The only Corona observed was random occurrences of low density start-up Corona.

Payload scratching was at a minimum. Slight scan head scratches were confined to the start of scan.

The cut and wrap function was normal.

The operations of S/I D-78 and D-92 were entirely acceptable for the 425 frames cycled in each unit.

B. RESOLUTION TEST

Resolution and theodolite tests were performed on 18 April 1966. Results of the thru-focus resolution tests of pan instruments 196 and 197 show the following characteristics:

Master Pan Instrument No. 196

Maximum high contrast resolution 169 lines/mm at -0.001 focal position.

Maximum low contrast resolution 110 lines/mm at -.001 focal position.

Slave Instrument No. 197

Maximum high contrast resolution 187 lines/mm at +0.001 focal position.

Maximum low contrast resolution 116 lines/mm at 0.00 focal position.

Both instruments met the system requirements specification.

C. LIGHT LEAK TEST

The system was rated acceptable for flight and placed in storage. On removal from storage the space structure was disassembled and a new recovery barrel was integrated to the system. The second light leak test indicated an excessive leak from the master camera drum seals. The seals were adjusted and checked out for flight acceptability.

D. FLIGHT READINESS

The Flight Readiness test of Panoramic Instrument #196 and 197 was completed without incident on 20 March 1967. Examination of the processed 3404 type film exhibits from Instrument #196 and 197 revealed acceptable camera performance including tracking, normal rail scratches, horizon camera performance including tracking, normal rail scratches, horizon fiducials and shutter function, time track, serial number, binary index marks, binary word, shrinkage markers, and uniformity of fogged format.

Processed film exhibits from the Post Storage Baseline test from Stellar/Index cameras D-78 and D-92 demonstrated acceptable performance. Reseau, fiducial, and correlation lamp imagery, produced on film type 3401 by both stellar cameras, were rated good. Reseau and correlation lamp imagery produced on film type 3400 by both index cameras was acceptable.

Flight film spools were placed in the supply cassette without incident on 21 March 1967.

The J-35 system pre-flight acceptance run was initiated on 22 March 1967. Film transport was terminated when the field flattener rollers on Master camera #196 appeared to exhibit abnormal operation. The field flattener rollers were changed using those from J-40 system. Subsequent film operations on the morning of 23 March 1967 revealed normal J-35 system performance.

The J-35 system was accepted for flight.

Customer review and final J-35 system buy off was concluded on the afternoon of 23 March 1967.

[redacted]

SECTION 3

FLIGHT OPERATIONS

A. SUMMARY

All launch, ascent, and injection events occurred as programmed. The orbit achieved was within the 3 sigma dispersions.

Both panoramic cameras operated satisfactorily throughout the flight. Average cycle rates for both cameras deviated from the pre-flight calibrated values by less than 2.0 per cent.

Both the -1 and -2 Stellar/Index cameras, the clock system, and the instrumentation and command systems operated satisfactorily throughout the flight.

The on-orbit internal temperature environment was comparable to the pre-flight predictions.

The on-orbit sine function generator performed normally for the duration of the mission.

Kik-Zorro 38 (early A to B switchover) was performed on Rev 72 by the [redacted] Tracking Station and all transfer functions were normal.

Both recovery systems operated normally throughout the flight.

This vehicle was used as a test agena for in-flight testing of the new UNCLE Command System. Numerous tests were performed with the UNCLE system at all tracking stations. Preliminary evaluation of the UNCLE Command System, as derived from real-time Auggie data is included in Paragraph H. Complete analysis of the UNCLE Command System is continuing.

The analog command system (S-BAND) failed to respond to commands on Rev 43. The cause of this failure was attributed to a failure of the type XI decoder. Command capability returned briefly on Rev 54, 55, and 56. The command system remained inoperative until Rev 113. The command system then functioned properly throughout the remainder of the mission. Payload system commanding was accomplished utilizing the VHF command system from Rev 43 through the remainder of the flight except for the isolated revs in which the analog command system was functioning.

[redacted]

This payload system was flown with the new gold-epoxy recovery barrel in place of the normal vacuum deposited gold finish on the recovery barrel. The remainder of the J-35 payload system conformed to the standard J-1 configuration.

B. PANORAMIC-CAMERA PERFORMANCE

Both panoramic cameras opereted normally throughout the mission. Cycle period data 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. The cut and wrap operation and transfer to the r2 system occurred as programmed utilizing the Kik-Zorro 38 command (early A to B switchover).

The panoramic film was exhausted on Rev 136 Frame No. 61 on the Master (Aft Looking) and Rev 143 Frame No. 13 on the Slave (FWD Looking).

Panoramic Film Consumption (Frames)

	Actual	
	Master	Slave
Sample Off-Spooling	19	19
Pre-Launch	150	148
-1 Mission	2780	2734
-2 Mission	3113	3161
Total	6062	6062

FMC Match

The V/h ramp to orbit match was acceptable throughout the flight. The following settings 6, 8, and 10 were utilized to obtain the optimum FMC match during the flight:

	RTC Commands			Remarks
	6	8	10	
RTC Positions	6	5	6	Launch thru Rev 4
	6	5	7	Rev 4 thru the end of the mission

[redacted]

C. STELLAR/INDEX CAMERA PERFORMANCE

Both the -1 and -2 Stellar/Index cameras operated satisfactorily on all monitored engineering passes.

D. INSTRUMENTATION AND COMMAND SYSTEM PERFORMANCE

The instrumentation and command systems operated properly throughout the flight except for an intermittent vehicle command system failure on the S-Band Link which resulted in the loss of the primary payload command system. Subsequent to this failure, all payload commands were issued by the secondary command system (VHF Link) except for a few revs in which the S-Band command system was operative.

E. CLOCK SYSTEM PERFORMANCE

Clock system operation was normal for the duration of the flight. Satisfactory time correlation between the flight clock and [redacted] Tracking Station time was obtained. Table 3-2 contains the correlation data.

F. PRESSURE MAKE-UP SYSTEM PERFORMANCE

Pressure make-up system performance was normal throughout the flight. Average gas consumption was approximately 8.7 psi/min for the 234 minutes of total operate time. The system had a surplus of 360 PSIA at the end of the mission.

G. THERMAL ENVIRONMENT

Temperature data for the [redacted] acquisitions are included in Table 3-3. The average instrument temperatures ranged from a high of 80°F on the Master and 77°F on the Slave to a low of 68°F on the Master and 65°F on the Slave.

The thermal control paint pattern on the payload system and on the gold-epoxy R-Barrel were modified for this flight. This modification produced temperature predictions of 75°F ± 5°F on the Master and 70°F ± 5°F on the Slave.

[redacted]

H. UNCLE COMMAND SYSTEM FLIGHT TEST

FLIGHT OBSERVATIONS (Based on AUGIE data and real-time microwave records from 13 [redacted] passes)

1. UNCLE System will accept "clear" and "special" execute commands at 20 and 1000 Bits/Second.

   The [redacted] microwave data indicates however that periodic command failures will occur during a repetitive sequence, the incidence of failures being significantly higher at low elevations (weak signal strengths).

2. In no observed case did a "false" command execute.

   Testing included "long" and "short" commands, parity errors, simultaneous bits, false address as well as a false KIK UNCLE 40 (secure execute) command.

3. Antenna point error is not critical.

   The command antenna drive was stopped in a number of cases while commanding in a repetitive mode. Commands continued to be accepted for up to two minutes in these cases.

4. UNCLE somewhat succeptible to "turn on" and random bits at low signal strength.

   Under certain conditions the UNCLE receiver appears to accept (or generate) a significant number of data bits. These bits are accepted by the decoder and load the shift register. No spurious decoder command outputs were observed but a probability study is recommended.

[redacted]

5. Effective command horizon requires further investigation.

   The effective, reliable UNCLE commanding horizon appears somewhat limited (UNCLE commanding being negated by noise, etc., during periods of relatively high elevation). This command horizon should be established by further analysis of data from passes where repetitive commanding was performed near acquisition and fade.

6. 84 task accomplishments by Satellite Control Facility (in spite of "unscheduled" requirement to use ZEKE system extensively) will provide ample data for analysis.

[redacted]

J-35 FLIGHT

REV. MODE	OP R	RAMP A	TUR SECS	SYSTEM CALIB.	ACTUAL	UNIT DEV.	SYSTEM DEV.	ACTUAL	UNIT DEV.	SYSTEM DEV.	196/197 DIFF.
				INST. 196			INST. 197				
008	A	6 5	80	3.887	3.809	1.75F	2.02F	3.832	1.70F	1.43F	0.60
016	A	6 5	1705	2.248	2.242	0.30S	0.25F	2.273	0.59S	1.18S	1.38
047	A	6 5	1793	2.221	2.250	1.77S	1.30S	2.250	0.75S	1.30S	0.0
079	B	6 5	1781	2.224	2.225	0.61S	0.05S	2.250	0.63S	1.18S	1.12
111	B	6 5	1999	2.215	2.225	0.70S	0.45S	2.243	0.34S	1.27S	0.81
127	B	6 5	2054	2.222	2.235	1.08S	0.57S	2.250	0.69S	1.24S	0.67

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

[redacted]

[redacted]

CLOCK CORRELATION SUMMARY.

ORDER FIT ONE

SYS TIME I/P	CL TIME I/P	COMP SYS TM	DELTA ST	REV	STA
0.234034810 05	0.264803656D 06	0.2340348620 05	-0.0052	8	
0.685006778D 05	0.309986965D 06	0.6850678860 05	-0.0106	16	
0.237174830 05	0.351517662D 06	0.2371747940 05	0.0036	24	
0.687286730D 05	0.396528917D 06	0.6872872770 05	0.0023	32	
0.239957610 05	0.438195952D 06	0.2399575660 05	0.0044	40	
0.636092980 05	0.477809499D 06	0.6360929770 05	0.0003	47	
0.242340920 05	0.524834294D 06	0.2423406570 05	0.0063	56	
0.638284780 05	0.275577760D 05	0.6382847390 05	0.0041	63	
0.244788860 05	0.746081940D 05	0.2447888490 05	0.0011	72	
0.640137930 05	0.114143106D 06	0.6401379100 05	0.0020	79	
0.246063030 05	0.161135623D 06	0.2460630110 05	0.0019	88	
0.641149100 05	0.200644236D 06	0.6411490820 05	0.0018	95	
0.247245470 05	0.247653881D 06	0.2472454630 05	0.0007	104	
0.642217210 05	0.287151066D 06	0.6422172540 05	-0.0044	111	
0.248058290 05	0.334135181D 06	0.2480583350 05	-0.0045	120	
0.642793380 05	0.373608700D 06	0.6427934660 05	-0.0086	127	
0.194847350 05	0.415214099D 06	0.1948473940 05	-0.0044	135	
0.642978530 05	0.460027210D 06	0.6429784380 05	0.0092	143	

A0=-0.24140013050 06 A1= 0.9999998516690 00

SIGMA=0.00494 NO. POINTS= 18

RATIO OF CLOCK TIME TO SYS TIME= 0.1000000146130 01

ORDER FIT TWO

SYS TIME I/P	CL TIME I/P	COMP SYS TM	DELTA ST	REV	STA
0.234034810 05	0.264803656D 06	0.2340348290 05	-0.0019	8	
0.685006778D 05	0.309906965D 06	0.6850678640 05	-0.0084	16	
0.237174830 05	0.351517662D 06	0.2371747830 05	0.0047	24	
0.687287300 05	0.396528917D 06	0.6872872750 05	0.0025	32	
0.239957610 05	0.438195952D 06	0.2399575710 05	0.0039	40	
0.636092980 05	0.477809499D 06	0.6360929870 05	-0.0007	47	
0.242340920 05	0.524834294D 06	0.2423408730 05	0.0047	56	
0.638284780 05	0.275577760D 05	0.6382847570 05	0.0023	63	
0.244788860 05	0.746081940D 05	0.2447888690 05	-0.0009	72	
0.640137930 05	0.114143106D 06	0.6401379300 05	-0.0000	79	
0.246063030 05	0.161135623D 06	0.2460630290 05	0.0001	88	
0.641149100 05	0.200644236D 06	0.6411490960 05	0.0002	95	
0.247245470 05	0.247653881D 06	0.2472454730 05	-0.0003	104	
0.642217210 05	0.287151066D 06	0.6422172590 05	-0.0049	111	
0.248058290 05	0.334135181D 06	0.2480583310 05	-0.0041	120	
0.642793380 05	0.373608700D 06	0.6427934550 05	-0.0075	127	
0.194847350 05	0.415214099D 06	0.1948473730 05	-0.0023	135	
0.642978530 05	0.460027210D 06	0.6429784050 05	0.0125	143	

A0=-0.24140014440 06 A1= 0.9999999020060 00

A2=-0.3970929120648D-13

TABLE 3-2

[redacted]

TABLE 3-3

J-35 TEMPERATURE SUMMARY

SENSOR	ORBITS ACQUIRED																	
										A	B							
Master Camera	8	16	24	32	40	47	56	63	72	79	88	99	104	111	120	127	135	143
3	72	63	65	63	68	63	69	63	67	63	63	58	63	59	63	60	63	59
4	80	69	73	68	73	70	74	68	74	68	72	66	72	67	71	67	72	67
5	81	72	76	72	78	73	78	72	77	73	74	70	74	72	74	72	75	71
6	82	75	78	75	79	77	80	76	79	77	77	73	78	75	78	76	79	76
7	80	73	78	74	78	75	78	74	78	75	74	70	74	71	74	72	75	72
8	83	73	80	73	79	74	79	74	79	74	77	71	77	72	77	73	77	71
9	84	74	82	74	81	75	81	75	75	76	79	73	79	74	79	75	80	74
11	78	68	74	68	75	67	75	71	75	67	72	72	73	62	73	66	74	69
12	80	68	77	68	75	68	76	68	74	68	71	64	71	66	71	66	71	65
13	79	71	73	71	75	71	76	72	75	71	72	67	72	68	72	69	74	70
AVG	80	74	78	74	76	71	77	71	76	71	73	68	73	69	73	70	74	70
Slave Camera																		
3	76	67	70	67	75	69	76	69	76	71	73	66	72	68	74	69	76	70
4	80	71	76	72	80	75	80	73	80	75	77	70	77	72	78	73	79	73
5	76	67	77	68	72	69	75	69	72	69	70	73	69	65	70	66	70	65
6	75	67	70	68	72	70	74	68	71	68	66	62	66	63	66	64	67	64
7	77	69	73	69	74	71	75	70	73	70	69	64	68	66	68	66	70	66
8	79	71	75	72	78	73	78	73	77	72	74	67	73	69	74	69	74	69
9	76	67	72	68	72	69	74	67	72	68	69	62	68	64	69	64	69	63
11	68	62	68	62	65	65	67	63	65	65	61	61	59	63	61	63	61	58
12	78	68	74	69	77	71	79	70	77	71	75	67	75	68	76	70	76	70
13	74	67	71	68	70	69	73	68	70	69	66	63	64	65	64	65	65	63
AVG	77	69	74	66	73	70	75	69	73	70	70	66	69	66	70	67	71	66
Supply Spool																		
1	64	59	58	60	64	62	65	62	65	56	60	57	60	58	60	59	62	59
2	66	62	64	62	68	64	69	64	69	65	65	61	64	62	64	62	66	62

TABLE 3-3

J-35 TEMPERATURE SUMMARY

SENSOR	ORBITS ACQUIRED										A | B						
Fair ("A") Barrel #1 ("B")	8	16	24	32	40	47	56	63	72	79	88	95	104	111	120	127	135	143
1	29	98	23	68	29	74	29	71	22	77	14	27	18	27	14	27	18	30
2	15	22	20	9	12	9	12	9	9	9	57	39	54	39	51	39	48	39
3	-2	02	-2	-2	-2	2	-2	2	-9	5	65	80	65	83	65	83	60	109
4	39	45	27	42	39	45	36	45	33	45	46	76	49	79	49	82	46	102
5	50	75	32	12	47	81	44	81	44	84	35	53	98	56	38	59	38	59
6	37	107	27	89	37	92	37	95	37	104	--	--	--	--	--	--	--	--
Barrel #2																		
1	43	46	28	46	39	49	46	52	43	55	33	55	36	58	36	61	36	58
2	42	67	27	58	39	61	48	64	42	73	42	67	42	70	43	73	42	94
3	70	109	37	82	67	88	70	85	64	94	64	79	64	82	64	82	58	109
4	64	55	36	46	64	49	64	46	58	43	52	37	52	40	46	40	46	37
5	59	52	33	56	56	56	56	56	49	52	31	37	34	37	34	43	31	40
Conic Adapter																		
1	42	57	30	57	45	63	45	63	45	69	35	69	38	75	35	78	38	78
Clock																		
1	68	62	36	64	72	66	68	64	68	64	58	56	60	58	58	60	60	58
2	63	59	53	59	63	61	65	59	63	59	53	51	55	53	57	55	53	53
Thrust Cone "A" to "B" SRV																		
1	42	32	36	31	34	31	37	30	33	30	55	52	56	53	54	54	56	53
2	61	49	43	48	53	48	53	48	52	69	71	67	71	69	71	69	72	69
R Barrel																		
1	57	101	32	85	57	88	51	88	54	94	54	88	57	94	54	94	51	119
2	50	47	31	31	44	31	44	31	38	31	35	28	38	28	35	28	35	31
Recovery Battery "B" SRV																		
1	64	58	57	57	57	56	57	57	57	57	80	76	82	74	75	78	77	81
Master Cassette "A" SRV																		
2	68	63	64	66	67	67	66	65	65	64	--	--	--	--	--	--	--	--

SECTION 4

MISSION 1040-1 RECOVERY SYSTEM

SRV #721 was received at A/P on 24 November 1965. The receiving weight was 149.95 pounds. After modifications and incorporation of outstanding E.O.'s, the SRV was delivered to Systems Test for incorporation into the J-35 system.

The capsule was shipped to VAFB on 26 March 1967.

The -1 recovery capsule was successfully recovered by air catch Rev 81 at 1517 PST on 4 April 1967. All re-entry events appeared normal and occurred within tolerance. The capsule impact point was approximately 8 N.M. south of the predicted impact point.

	Latitude	Longitude
Predicted	25° 45.2' N	156° 37.4' W
Actual	25° 36.8' N	156° 36.6' W

The re-entry sequence of events is contained in Table 4-1.

MISSION 1040-1

RECOVERY SEQUENCE OF EVENTS

Event	Delta Time (Seconds) Actual	Nominal
*Arm	76.71	77.0 ± 1.0
*Transfer	1.98	2.0 ± 0.25
Electrical Disconnect	0.86	0.900 $^{+0.430}_{-0.400}$
Separation	---	---
**Spin	3.40	3.4 ± 0.30
Retro	7.49	7.55 ± 0.45
Despin	10.67	10.75 ± 0.59
T/C Separation	1.51	1.5 ± 0.15
***"G" Switch Open	493.37	493.4
Parachute Cover Off	33.39	34.0 ± 1.5
Drogue Chute Deployed	0.68	0.63 ± 0.08
Main Chute Bag Separate	10.82	10.0 $^{+3.0}_{-2.2}$
Main Chute Deployed	0.52	0.52 ± 0.13
Main Chute Disreef	4.88	4.5 ± 0.80

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

TABLE 4-1

SECTION 5

MISSION 1040-2 RECOVERY SYSTEM

SRV #722 was received at A/P on 24 November 1965. The receiving weight was 152.00 pounds. After modifications and incorporation of outstanding E.O.'s the unit was delivered to Systems Test for mating to the J-35 system.

The capsule was shipped to VAFB on 26 March 1967.

The -2 recovery capsule was successfully recovered by air-catch on Rev 145 at 1524 PST on 8 April 1967. All re-entry events appeared normal and occurred within tolerance. The capsule impact point was slightly south of the predicted impact point.

	Latitude	Longitude
Predicted	26° 02.6' N	164° 48.4' W
Actual	25° 58.4' N	164° 47.4' W

The re-entry sequence of events is contained in Table 5-1.

MISSION 1040-2

RECOVERY SEQUENCE OF EVENTS

Event	Delta Time (Seconds) Actual	Nominal
*Arm	76.83	77.0 ± 1.0
*Transfer	2.0	2.0 ± 0.25
Electrical Disconnect	0.88	0.900 + 0.430 - 0.400
Separation	---	---
**Spin	3.40	3.4 ± 0.30
Retro	7.55	7.55 ± 0.45
Despin	10.60	10.75 ± 0.59
T/C Separation	1.50	1.5 ± 0.15
***"G" Switch Open	511.80	514.1
Parachute Cover Off	33.47	34.0 ± 1.5
Drogue Chute Deployed	0.65	0.63 ± 0.08
Main Chute Bag Separate	10.19	10.0 + 3.0 - 2.2
Main Chute Deployed	0.54	0.52 ± 0.13
Main Chute Disreef	4.63	4.5 ± 0.80

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

TABLE 5-1

SECTION 6

J-35 PANORAMIC CAMERAS

A. COMPONENT ASSIGNMENT

Component	Master (AFT) Serial Number	Slave (FWD) Serial Number
Main Camera	196	197
Main Camera Lens	1952435	1972435
Supply Horizon Camera	299-G6H	293-G6H
Supply Horizon Camera Lens	E12851	E12901
Take-up Horizon Camera	298-G5H	294-G5H
Take-up Horizon Camera Lens	E12847	E12884
Supply Cassette	SC-47	SC-47

B. CAMERA DATA AND FLIGHT SETTINGS

Main Camera:		
Lens	24"f/3.5	24"f/3.5
Slit Width	0.175"	0.225"
Filter Type	Wratten 21	Wratten 234
Film Type (Eastman)	3404	3404
Supply Horizon Cameras:		
	Starboard	Port
Lens	55 mm f/6.3	55 mm f/6.3
Aperture Setting	f/6.3	f/8.0
Exposure Time	1/100 second	1/100 second
Filter Type	Wratten 25	Wratten 25
Take-up Horizon Cameras:		
	Port	Starboard
Lens	55 mm f/6.3	55 mm f/6.3
Aperture Setting	f/8.0	f/6.3
Exposure Time	1/100 second	1/100 second
Filter Type	Wratten 25	Wratten 25

C. POST FLIGHT PERFORMANCE EVALUATION (Master Camera)

The Master camera produced 2734 frames (7650 Feet) of photography during Mission 1040-1 and 3211 frames (8347 Feet) during Mission 1040-2. Image quality was rated better than Mission 1038 and comparable to Mission 1039. The MTF was 85.

Image quality produced by the Master camera was rated slightly lower in overall sharpness than the Slave camera for Mission 1040-1 and 1040-2. The comparison was made by visual evaluation using original negative and duplicate positive films magnified by 20 to 50 times. The overall image quality of Mission 1040-1 was judged to be comparable to Mission 1040-2.

Auxiliary data recording such as H.O. fiducials, timing track, binary word, serial number, index marks, S/I slur pulse, and blanked pulse were operational throughout Mission 1040-1 and 1040-2. An intermittent minus density streak up to one quarter inch wide was present on master camera photography throughout Mission 1040-1. The steak appears to follow the field flattener. Minus density marking is attributed to foreign particles on the field flattener and camera filter. Improvements in cleanliness procedures have been implemented which are expected to result in fewer minus density marks in flight payload.

Small areas of smeared imagery (in the scan direction) appeared at the take-up end of the Master formats intermittently throughout Mission 1040-1 and 1040-2. Smeared areas are approximately one quarter of an inch wide and extend across the width of the format. Some of the smeared imagery occurs in minus density bands that are also approximately one quarter of an inch wide and extend across the width of the format. Banding is characteristic of an interlocking system. Ground tests at the Advanced Projects facility have been extended to include format fogging operations at camera cycle rates expected in flight as a means of detecting and correcting banding caused by marginal lens/detent interlock chatter.

Minor light leak fog is present on the fifth and next to last frame of most passes. The fog density is commensurate with the camera off periods.

D. POST FLIGHT PERFORMANCE EVALUATION (Slave Camera)

The Slave camera produced 2780 frames (7780 Feet of photography during Mission 1040-1 and 3115 frames (8286 Feet) of photography during Mission 1040-2. Visual comparison of original negative and duplicate positive from Mission 1040-1 and 1040-2 indicate that Slave camera photography is slightly sharper than the Master camera photography.

Auxillary data recprding such as H.O. fiducials, timing track, binary word, serial number, index marks, blanked pulse, and start of pass mark were operational throughout Missions 1040-1 and 1040-2.

Heavy plus density light struck areas were observed in frames 69, 70, and 72 pass D-53 of the Slave camera Mission 1040-1. Fogging was caused by a high intensity light discharge from the satellite recovery vehicle during the post flight film retrieval operation. After a considerable diagnostic effort was completed it was concluded that the source of the momentary light flash was caused by an electrical discharge of some sort in the vicinity of the capsule. The exact cause is unknown. No further action is contemplated.

Several minus density streaks were present on the Slave camera original negative film from Missions 1040-1 and 1040-2. The Slave minus density streaks were approximately one sixteenth to one eighth of an inch wide. The minus density streaks followed the movement of the field flattener. The minus density streaks are attributed to emulsion dust and/or foreign particles on the surface of the field flatteners. As in the master camera this condition was not present at the start of Mission 1040-1.

Minus density bands approximately one fourth inch wide across the format were present at the take-up end of many frames. Occurrence was random. One frame of photography contained seven minus density bands. Imagery in some of the minus density bands was soft but not smeared. Corrective action consists of disassembling and checking all lens/stove detent mechanisms and correcting to flight configuration prior to launch.

In addition, ground testing at Advanced Projects will be extended to diagnose banding when it occurs at camera cycle rates expected in flight.

A small plus density mark one sixty-fourth of an inch in diameter was present throughout Mission 1040-1 and 1040-2 Slave camera photography. The subject mark reoccurred at regular intervals of six and one-fourth inches. The plus density mark is believed to be caused by a small high spot on the frame metering roller rubber surface.

Minor light leak fog is present on the first and third from the last frame of photography on some passes. No corrective action is indicated.

[redacted]

SECTION 7

MISSION 1040 STELLAR-INDEX CAMERAS

A. COMPONENT ASSIGNMENT

Component	-1 Mission Serial Number	-2 Mission Serial Number
Camera	D-78	D-92
Index Reseau	95	79
Stellar Reseau	96	110

B. CAMERA DATA AND FLIGHT SETTINGS

Stellar Camera:		
Lens	85 mm f/1.8	85 mm f/1.8
Exposure Time	1 second	2 seconds
Filter Type	None	None
Film Type (Eastman)	3401	3401
Index Camera:		
Lens	38 mm f/4.5	38 mm f/4.5
Exposure Time	1/500 second	1/500 second
Filter Type	Wratten 21	Wratten 21
Film Type (Eastman)	3400	3400

[redacted]

C. POST FLIGHT EVALUATION (Mission 1040-1)

The Stellar/Index film recovered consisted of 439 frames of photography from each film path of S/I D-78/95/96. Minus density streaks, so often present in -1 Mission photography in previous flights, was not present in Mission 1040-1 Stellar photography.

Stars appear as point imagery in all S/I D-78 frames. Point imagery is attributed to an exposure time of one second. There are approximately 20 Stellar images in each frame of photography. Stellar baffle flare into Stellar photography was very low as evidenced by the fact that 30 per cent of the reseau grid was not detectable on every frame. Minor edge fog is present along both film edges but does not affect the active format area. The Stellar fiducials and correlation lamp imagery were acceptable throughout the photography.

The Index camera operated well throughout the mission producing 439 frames of photography. Newton rings are visible over areas of low contrast but do not interfere with the usability of the photography. Several very small minus density spots approximately 1/100 inch in diameter are present in the active format area throughout the mission. Foreign particles on the reseau grid are suspect since the minus density pattern remains the same on each format. Clean room procedures have been reviewed and improved to minimize foreign particles in the payload prior to launch. One plus density spot one sixty-fourth inch in diameter is present in each frame of Index photography near the film edge outside the active format area. The plus density spot is believed to correspond to a hole in the mirrored surface of the reseau plate. No corrective action is indicated. The correlation lamp imagery was acceptable throughout the mission.

D. POST FLIGHT EVALUATION (Mission 1040-2)

Stellar/Index camera D-92/79/118 operated throughout Mission 1040-2. The Stellar and Index cameras each produced 498 frames of photography. Approximately 20 Stellar images are present in each frame of Stellar photography. Stellar images generally appear as point images. Sufficient baffle flare light was present to properly expose the reseau grid onto each Stellar format. Minor edge fog is present along both edges of the Stellar film. Two plus density streaks occurred outside the active Stellar format area along the camera serial number edge. The plus density streaks start in the pre-flight film and continue throughout the mission. Associated with the streaks is emulsion cracking. As the mission progressed, the cracking disappeared and the density of the streak diminished. No known cause could be found that explained the plus density streaks and emulsion cracking found in the Stellar film. Stellar fiducial and frame correlation lamp imagery were acceptable throughout the mission.

Several small hair like minus density marks are present on every frame of Index camera photography. The effect on terrain imagery is not significant. Index camera correlation lamp imagery is acceptable throughout the mission.

SECTION 8

PANORAMIC CAMERA EXPOSURE

The Master camera contained a 0.175 inch slit and a Wratten 21 filter. The Slave camera had a 0.225 inch slit and a Wratten 23A filter. These conditions placed the nominal exposure on the full processing curve.

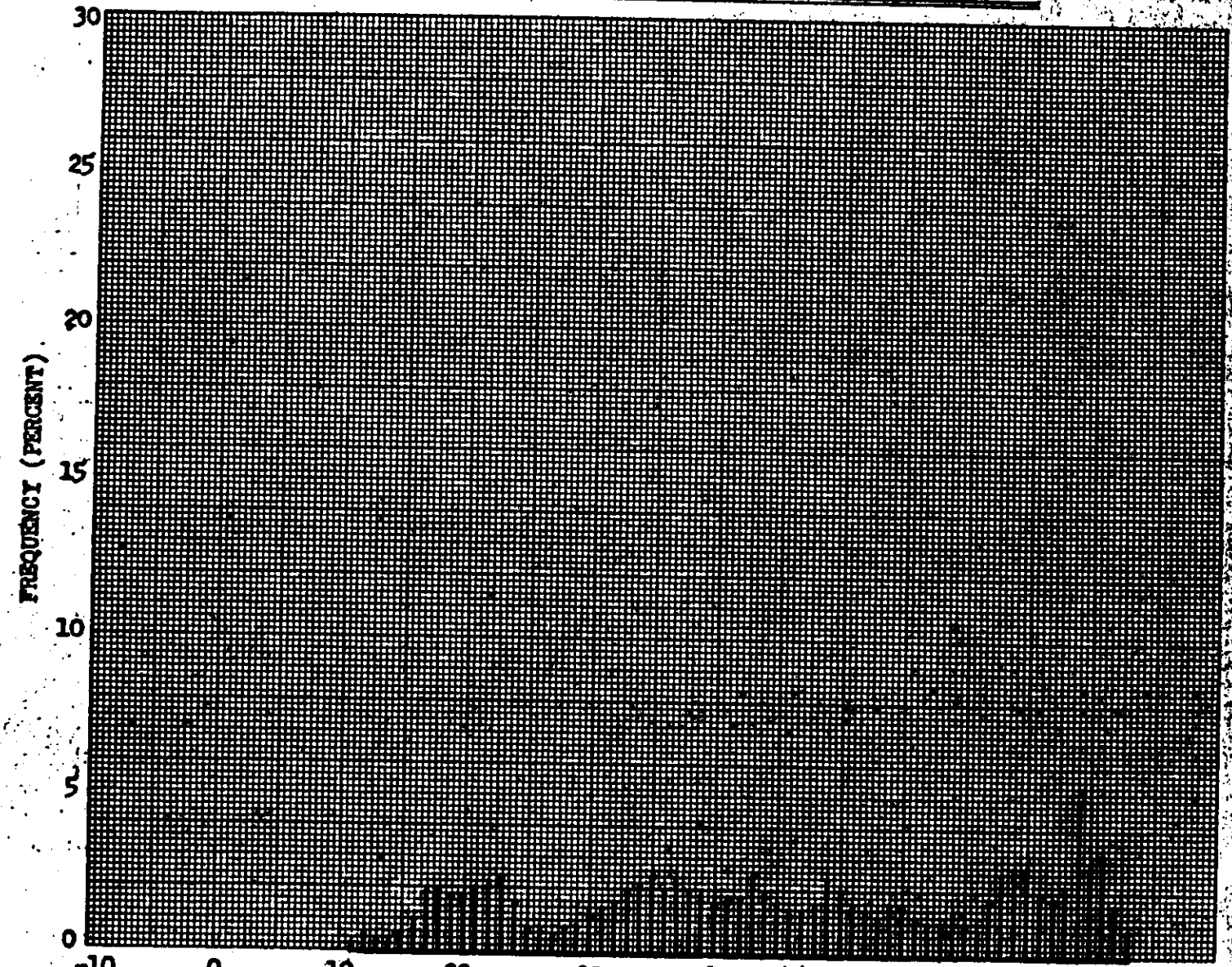
The frequency distributions of the solar elevations and solar azimuths encountered during the photographic operations are shown in Figures 8-1 to 8-4.

The nominal exposure times of the Master and Slave cameras are shown as a function of latitude for passes D-1, D-49, D-97, and D-145 in Figures 8-5 to 8-12. 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]. The transition phase is a result of process machine development level changes.

Mission	Camera		Primary	Intermediate	Full	Transition
1040-1	FWD	Predicted	0	79	21	
		Reported	9	21	49	21
1040-1	AFT	Predicted	0	67	33	
		Reported	12	34	36	18
1040-2	FWD	Predicted	0	66	34	
		Reported	5	22	55	18
1040-2	AFT	Predicted	1	58	41	
		Reported	2	28	55	15

C/ [redacted]

SOLAR ELEVATION FREQUENCY DISTRIBUTION



Mission No: 1040-1

Payload No: J-35

Camera No: 197

Launch Date: 3-30-67

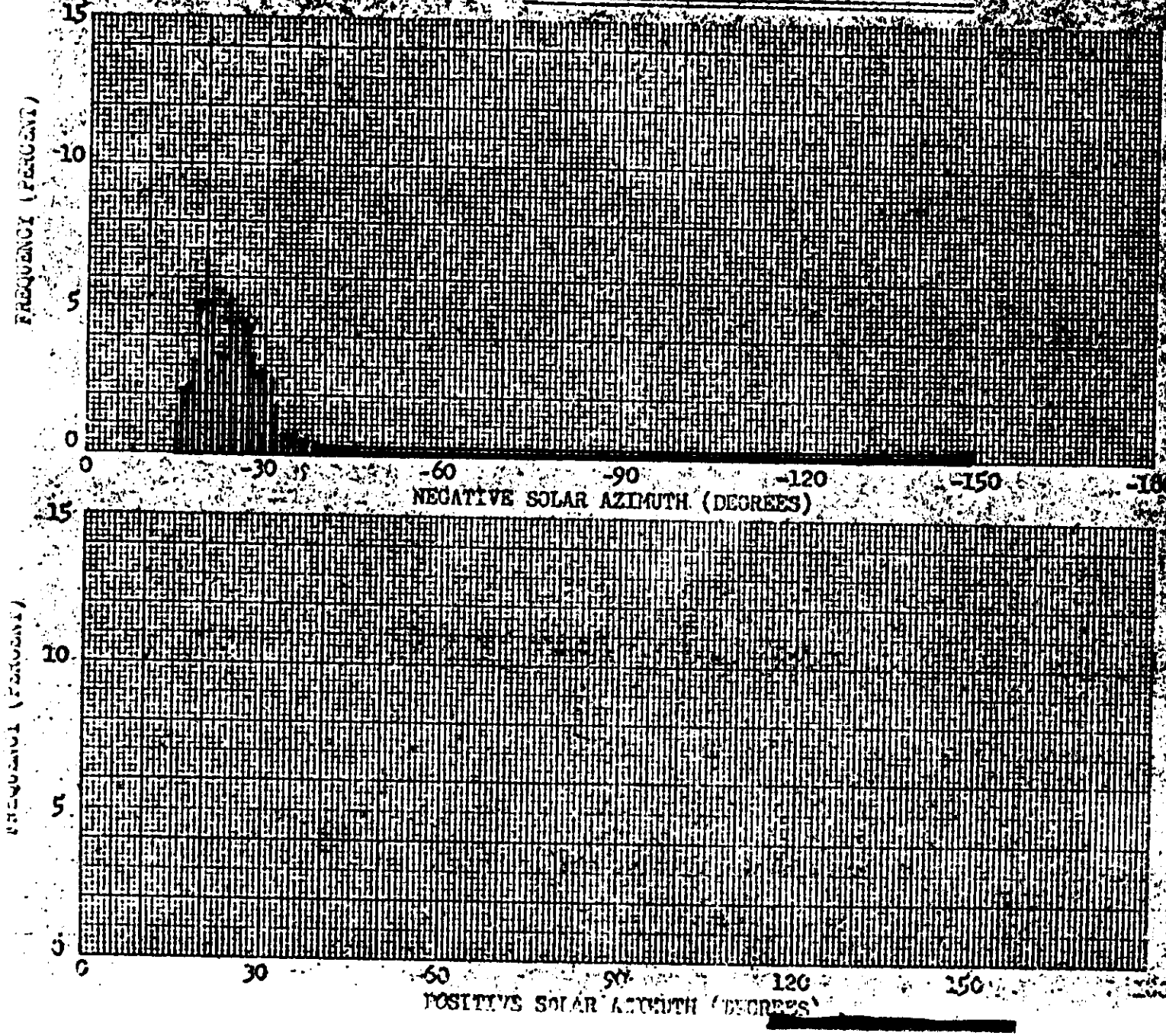
Launch Time: 1854 Z

Inclination: 75.85

FIGURE 8-1

[redacted]

SOLAR AZIMUTH FREQUENCY DISTRIBUTION



Mission No: 1040-1

Payload No: [illegible]

Camera No: 197

[illegible] Date: 3-30-67

Launch Time: 1854 Z

[illegible]: 85

SUN ROTATION

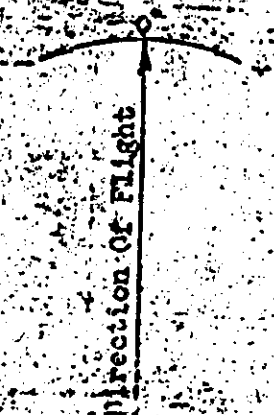
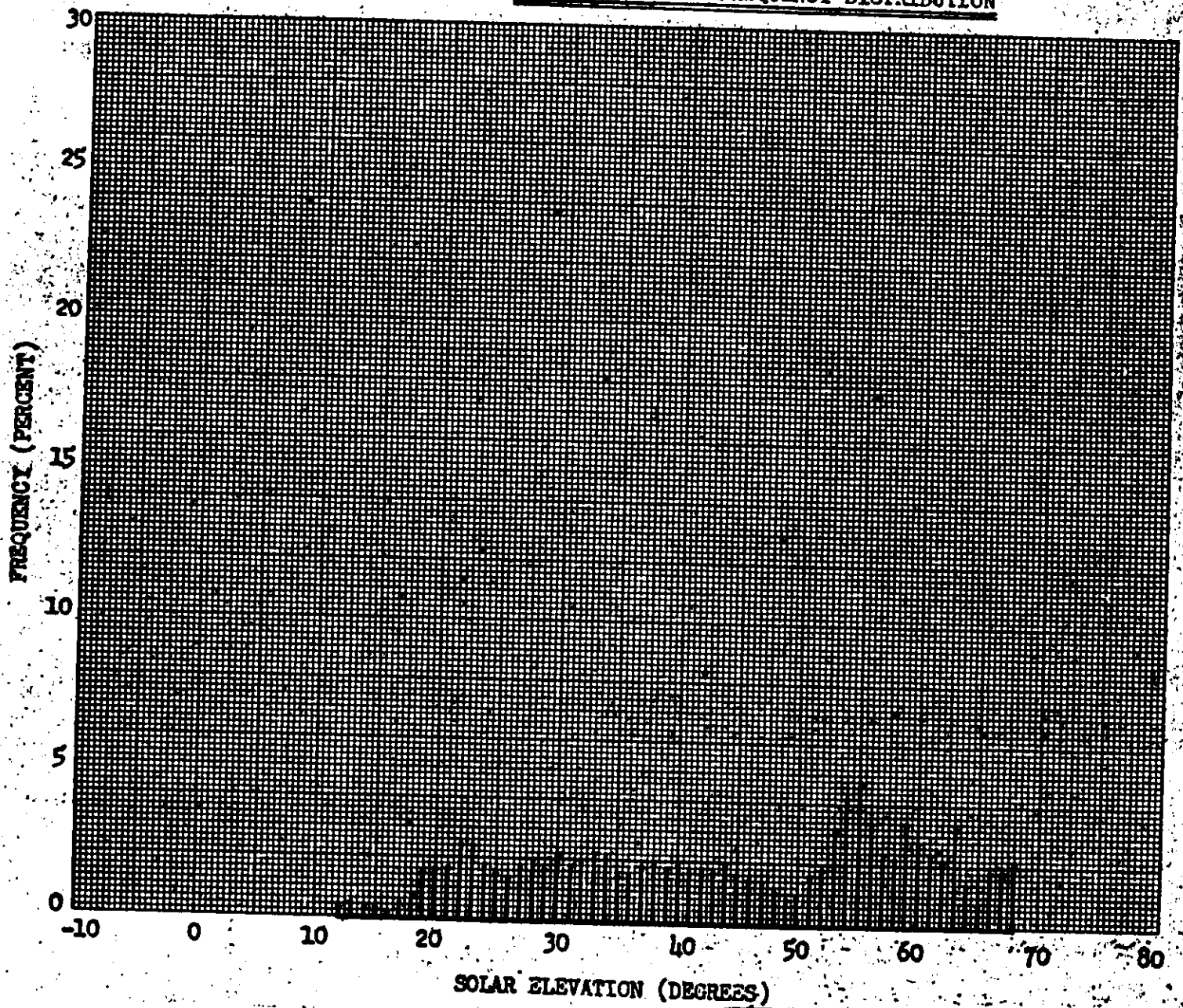


FIGURE 8-2

C/[redacted]

SOLAR ELEVATION FREQUENCY DISTRIBUTION



Mission No: 1040-2

Payload No: J-35

Camera No: 197

Launch Date: 3-30-67

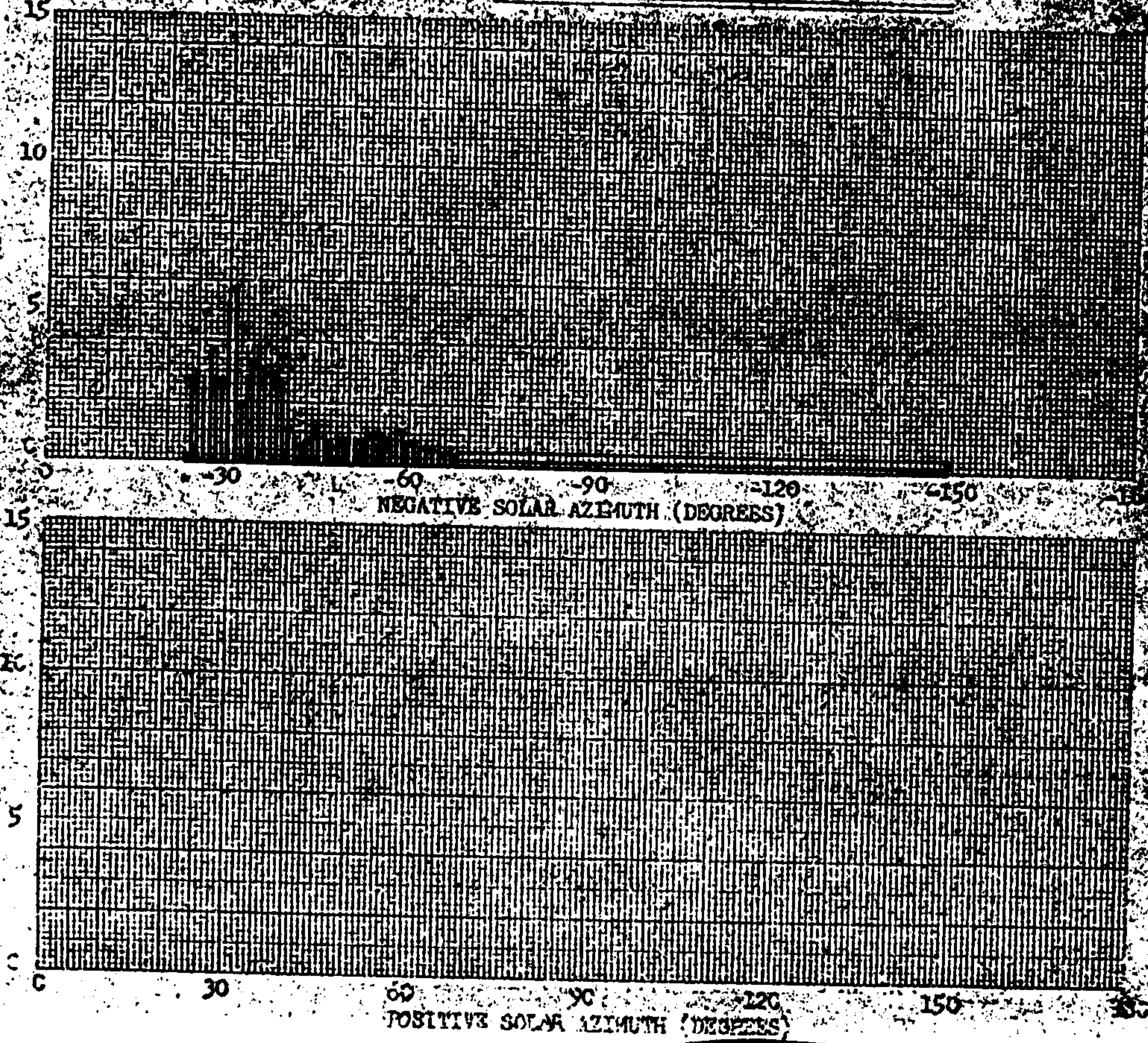
Launch Time: 1854 Z

Inclination: 85

FIGURE 8-3

[redacted]

SOLAR AZIMUTH FREQUENCY DISTRIBUTION



Mission No: 1040-2

[illegible] No: [illegible]

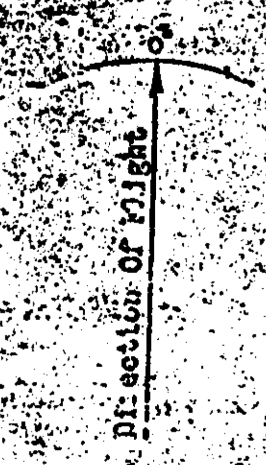
Camera No: 197

[illegible]

[illegible] 1054 2

[illegible] 85

[illegible] NOTATION

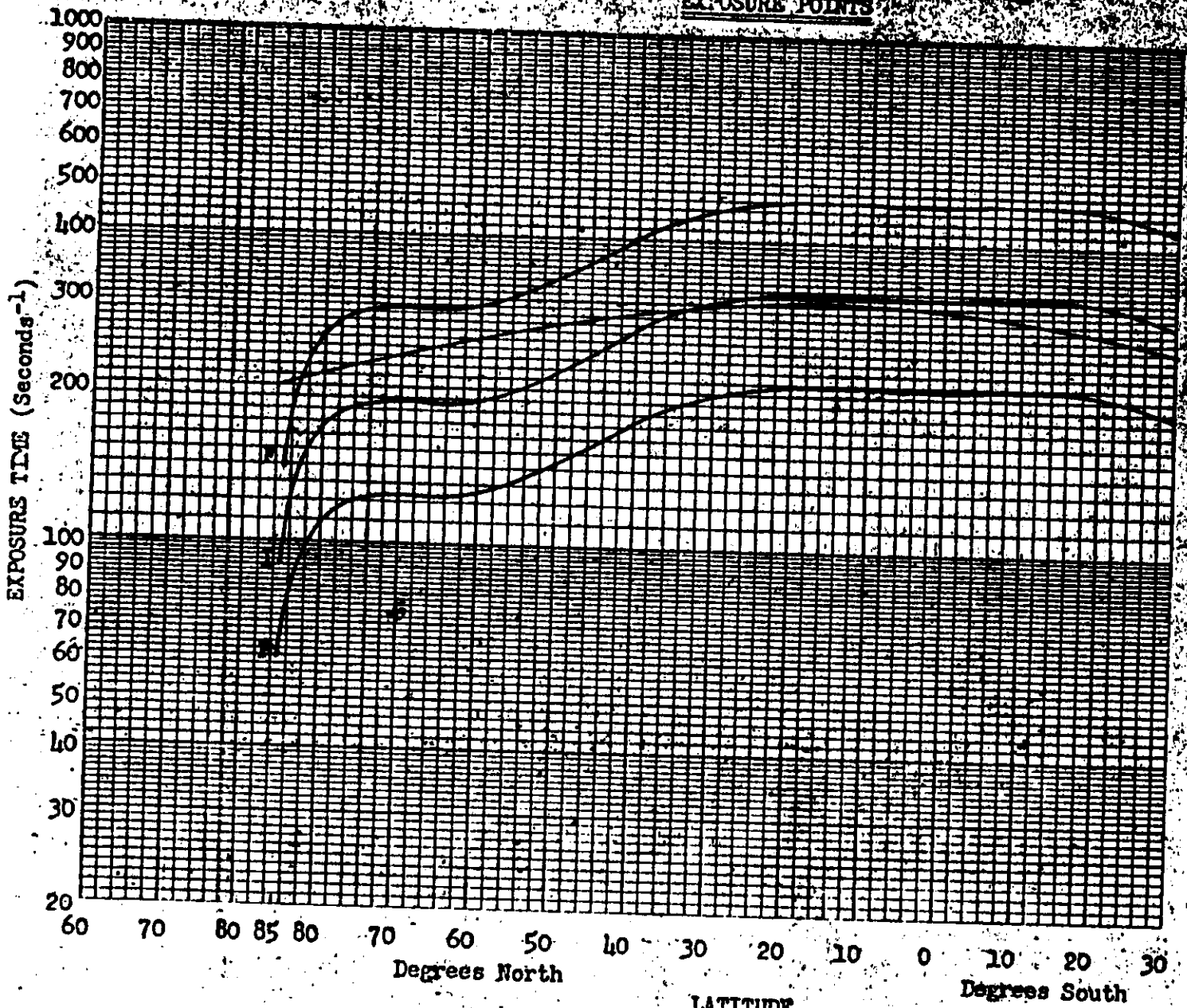


[redacted]

FIGURE 8-4

[redacted]

EXPOSURE POINTS



Mission No: 1040

Payload No: J-35

Camera No: * 197

Pass No: 4

Launch Date: 3/30/67

Launch Time: 1854 Z

Slit Width: .225

Filter Type: Wratten 23A

Film Type: 3404

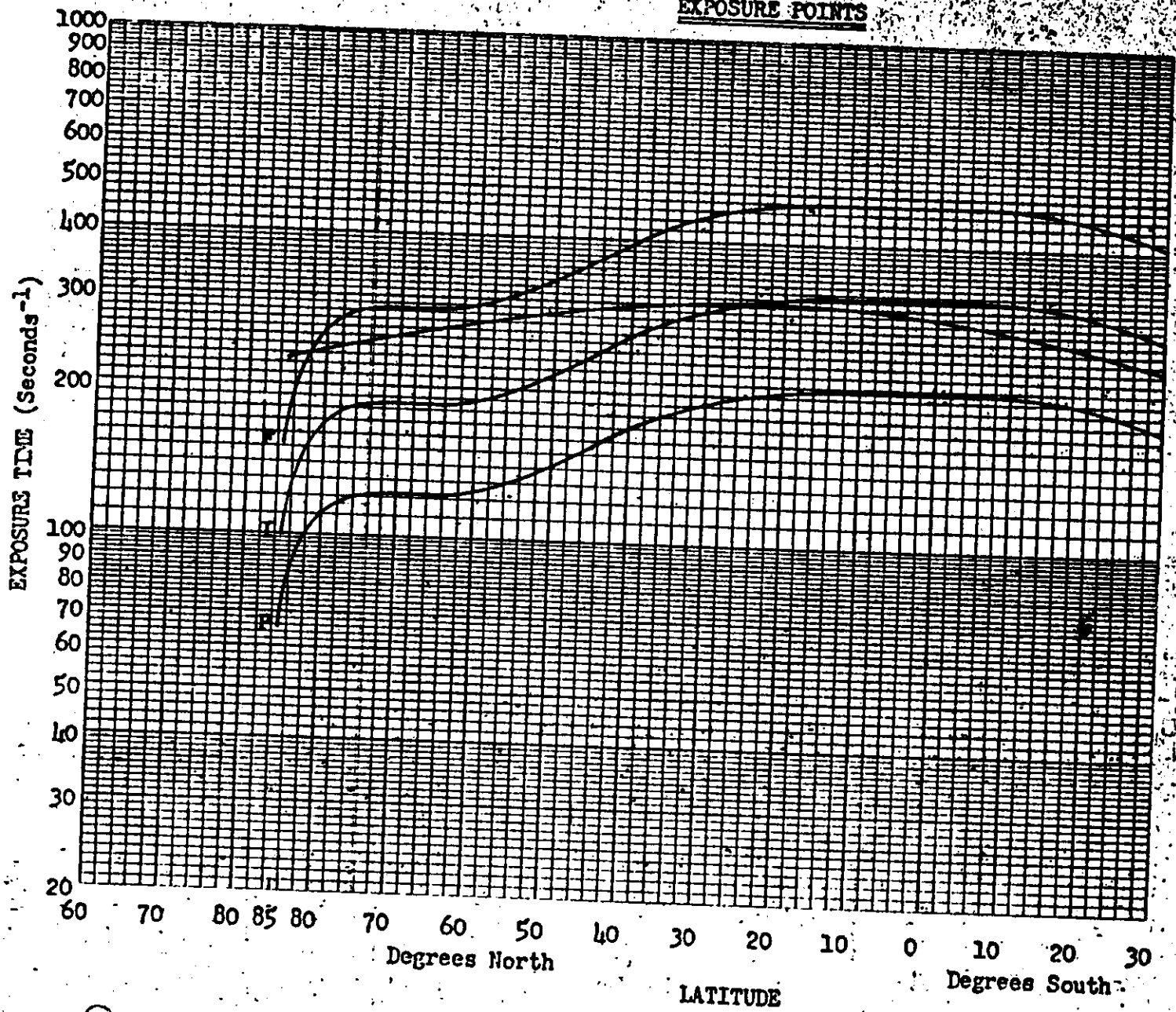
* FORWARD LOOKING

FIGURE 8-5

[redacted]

[redacted]

EXPOSURE POINTS



Mission No: 1040

Payload No: J-35

Camera No: *2197

Pass No: 69

Launch Date: 3/30/67

Launch Time: 1854 Z

Slit Width: .225

Filter Type: Wratten 23A

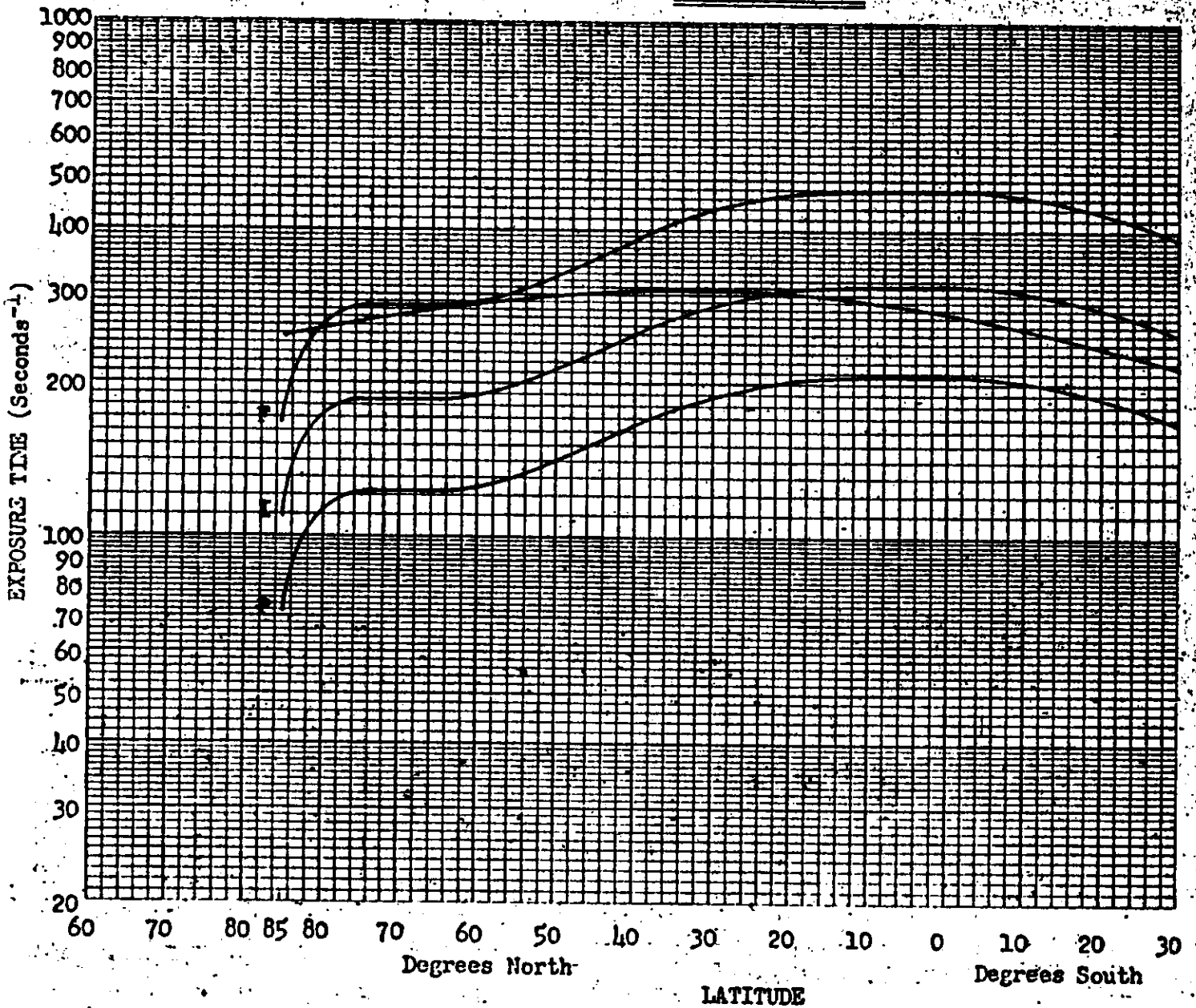
Film Type: 3404

* FORWARD LOOKING

FIGURE

[redacted]

EXPOSURE POINTS



Mission No: 1040

Payload No: J-35

Camera No: * 197

Pass No: 97

Launch Date: 3/30/67

Launch Time: 1854 Z

Slit Width: .225

Filter Type: Wratten 23A

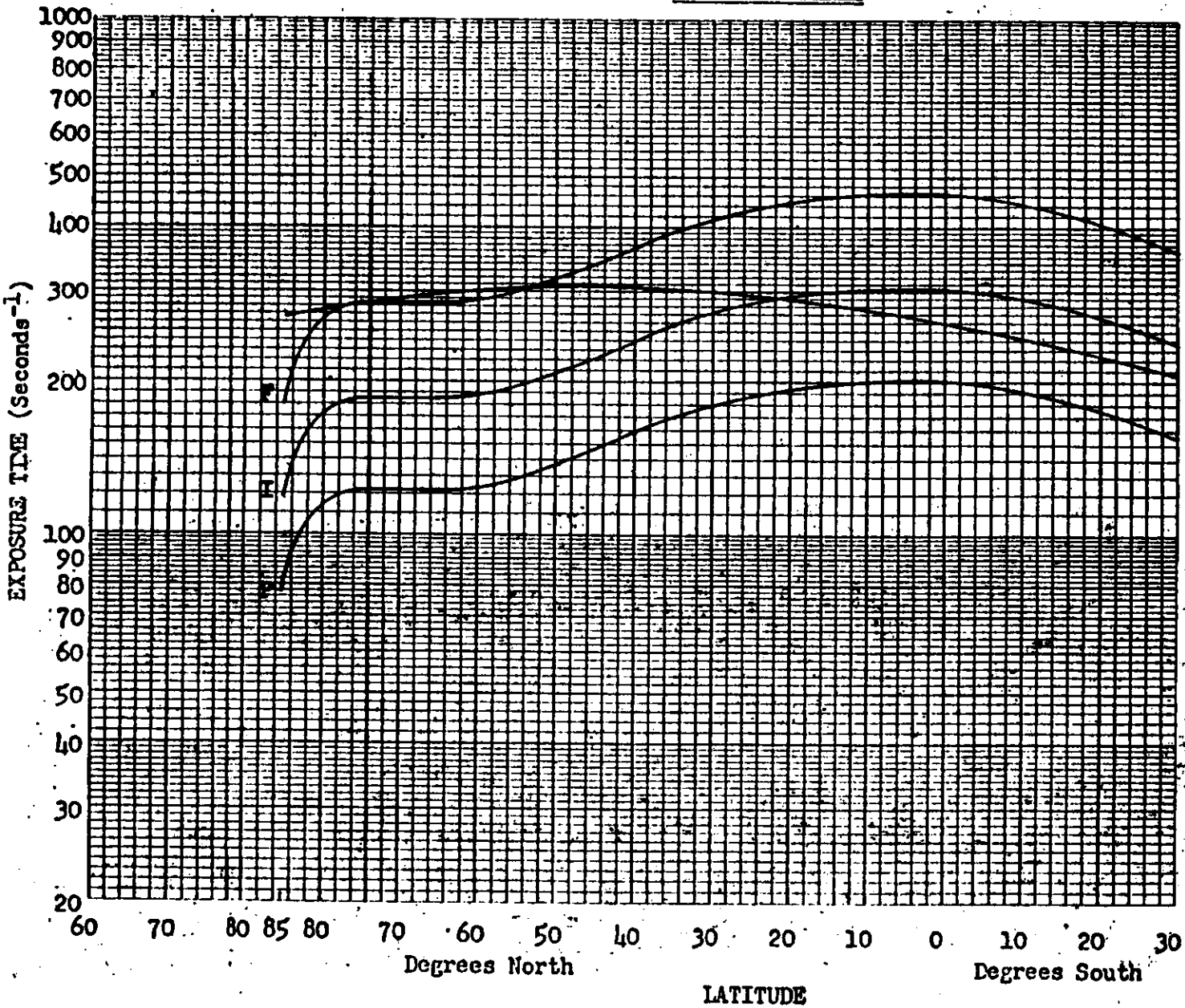
Film Type: 3404

* FORWARD LOOKING

FIGURE 8-7

C/[redacted]

EXPOSURE POINTS



Mission No: 1040

Payload No: J-35

Camera No: * 197

Pass No: 145

Launch Date: 3/30/67

Launch Time: 1854 Z

Slit Width: .225

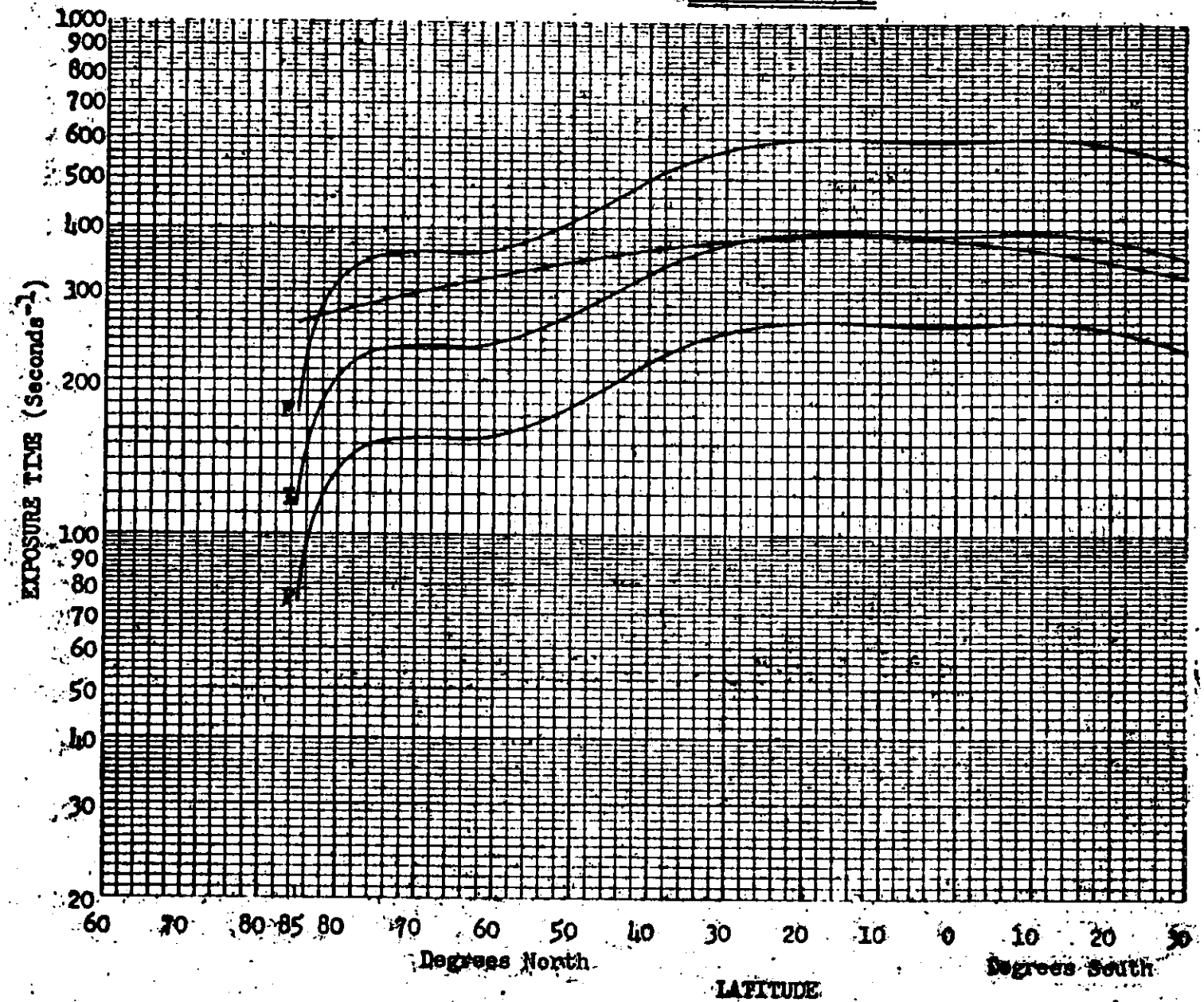
Filter Type: Wratten 23A

Film Type: 3404

* FOFWARD LOOKING

FIGURE 8-8

EXPOSURE POINTS



Mission No: 1040

Payload No: J-35

Camera No: * 196

Pass No: 1

Launch Date: 3/30/67

Launch Time: 1854 Z

Slit Width: .175

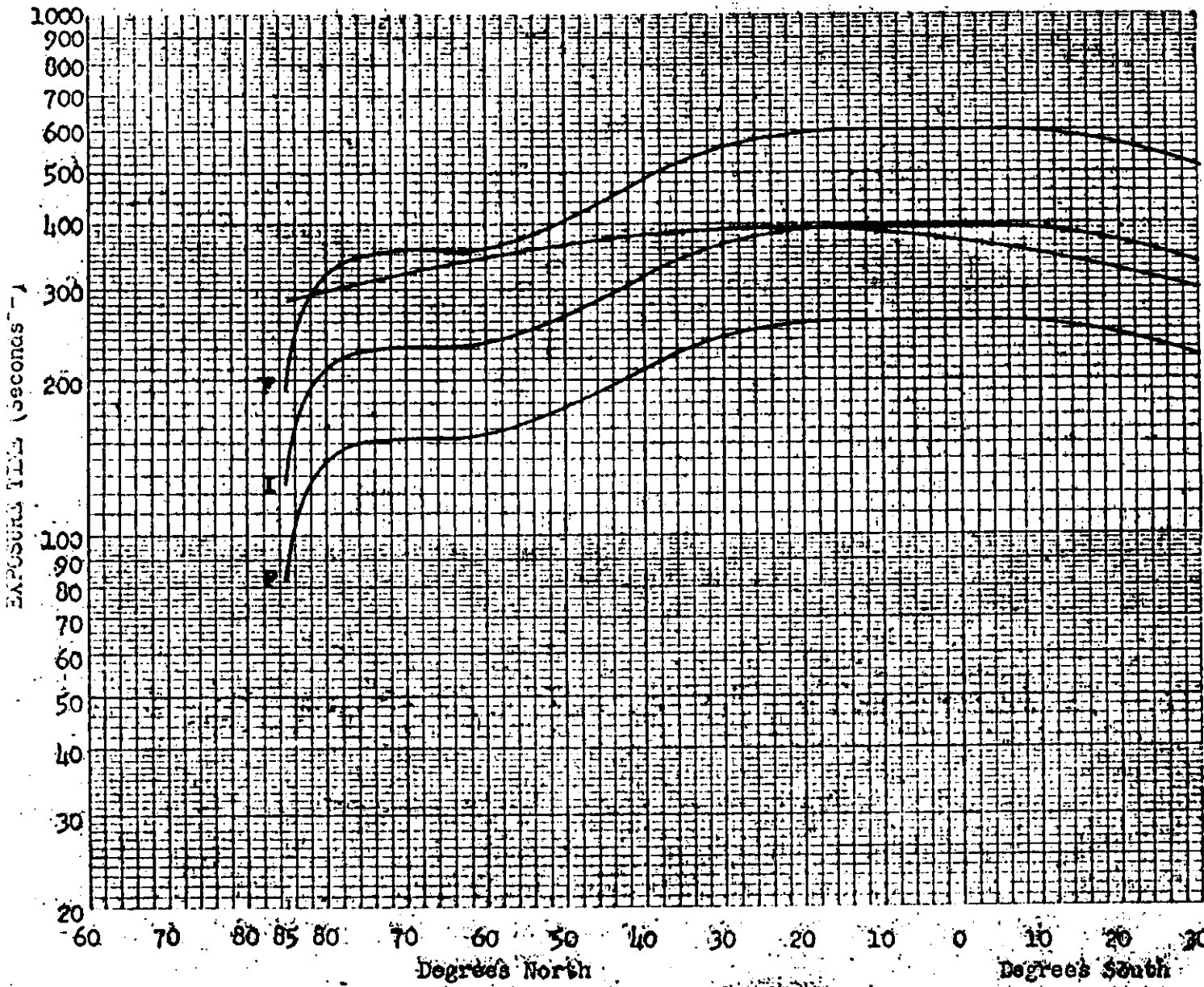
Filter Type: Wratten 21

Film Type: 3404

* AFT LOOKING

FIGURE 8-9

EXPOSURE POINTS



Mission No: 1040

Payload No: J-35

Camera No: * 196

Pass No: 49

Launch Date: 3/30/67

Launch Time: 1854 Z

Slit Width: .175

Filter Type: Wratten 21

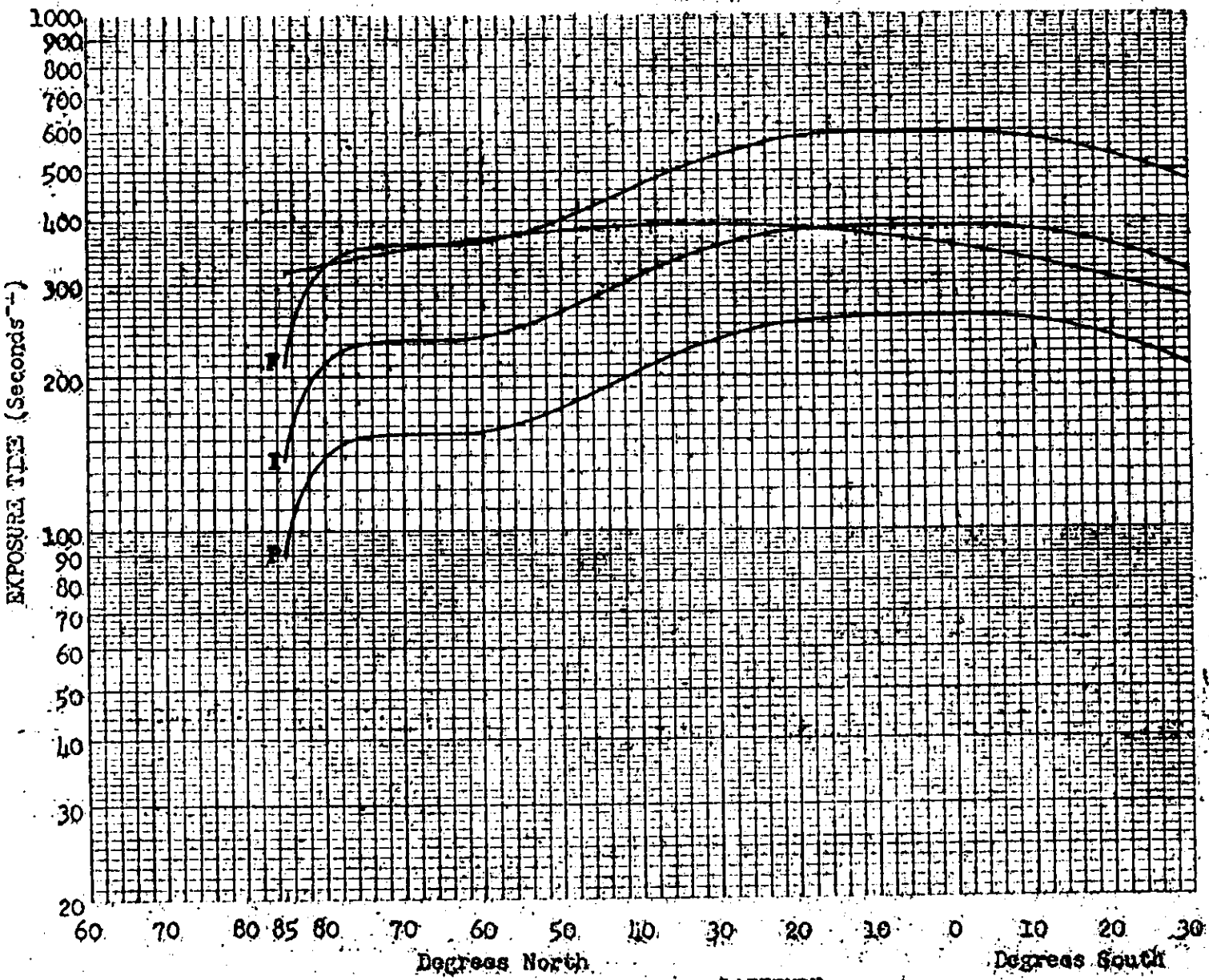
Film Type: 3404

* AFT LOOKING

FIGURE 8-10

[redacted]

EXPOSURE POINTS



Mission No: 1040

Payload No: J-35

Camera No: * 196

Pass No: 97

Launch Date: 3/30/67

Launch Time: 1854 Z

Slit Width: .175

Filter Type: Wratten 21

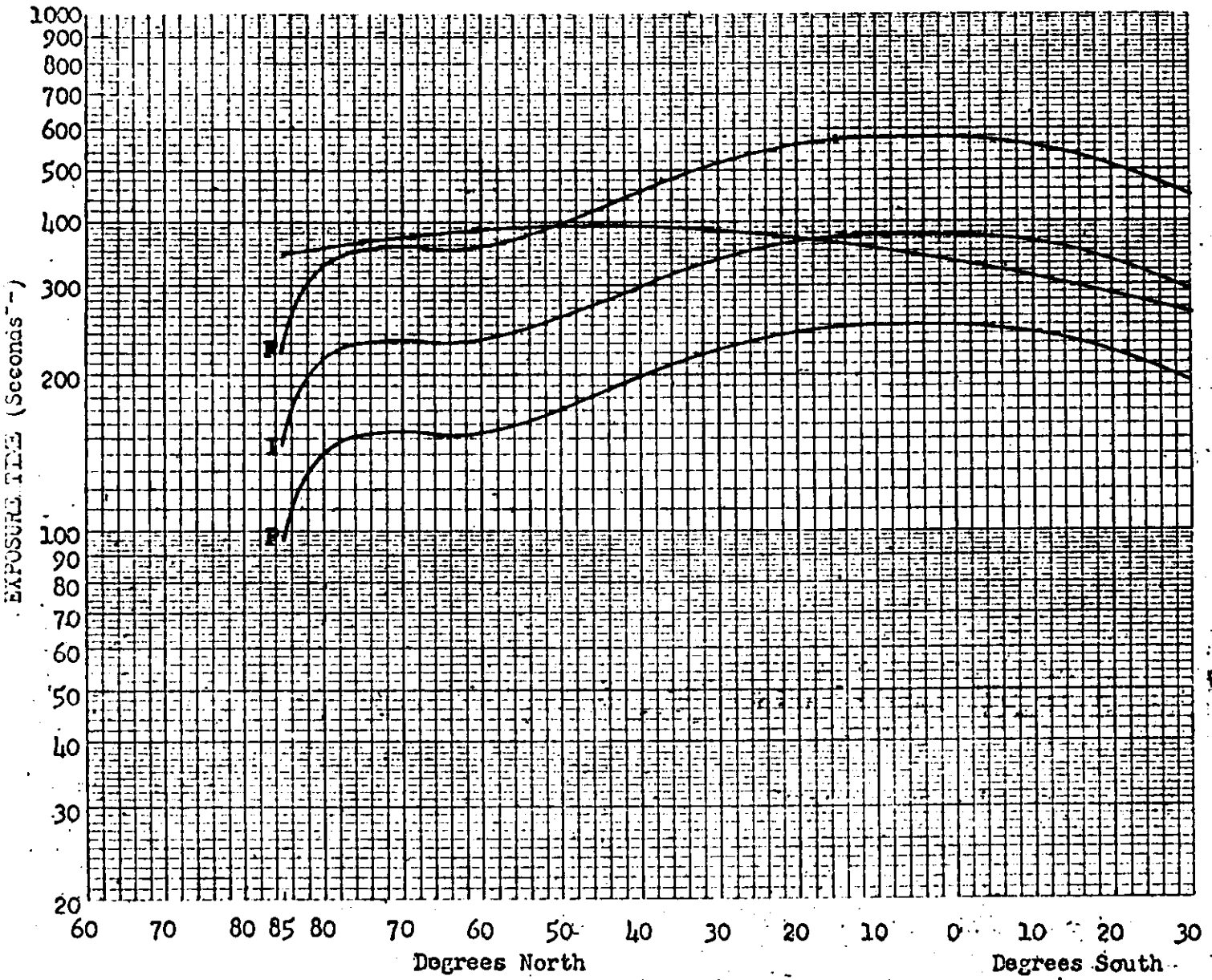
Film Type: 3404

* AFT LOOKING

FIGURE 3-11

[redacted]

EXPOSURE POINTS



Mission No: 1040

Payload No: J-35

Camera No: * 196

Pass No: 145

Launch Date: 3/30/67

Launch Time: 1854 Z

Slit Width: .175

Filter Type: Wratten 21

Film Type: 3404

* AFT LOOKING

FIGURE 8-12

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	Transition
1040-1	FWD	Predicted	0	79	21	
		Reported	9	21	49	21
		Computed	2	35	63	
1040-1	AFT	Predicted	0	67	33	
		Reported	12	34	36	18
		Computed	2	53	45	
1040-2	FWD	Predicted	0	66	34	
		Reported	5	22	55	18
		Computed	3	29	68	
1040-2	AFT	Predicted	1	58	41	
		Reported	2	28	55	15
		Computed	0	32	68	

The tabulations of density frequency distributions for Missions 1040-1 and 1040-2 are included in Appendix A, Table A-1 thru A-4. The graphical presentation of the density distribution are computer plotted in Appendix A, Figures A-1 thru A-39.

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. The area measured for D-Min is selected subjectively and is not necessarily the absolute D-Min in the photography.

A density range chart Figure 9-1 is included in this report. This type of chart for Missions 1004 to 1031 is included in the A/P final report for Mission 1031.

These charts are produced from the same density measurements previously mentioned in this section. The computer produced the mean, median and range figures for the various processing levels used. The chart includes the number of frames (samples) in which the density measurements were made. These measurements are made on approximately every tenth frame throughout the mission.

MISSION 1040-1 INSTR - FWD 5/23/ PROCESSING AND EXPOSURE ANALYSIS

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP&PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	3	0 PC	33 PC	67 PC	0 PC	0 PC
INTERMEDIATE	76	0 PC	7 PC	74 PC	20 PC	0 PC
FULL	137	1 PC	0 PC	82 PC	16 PC	1 PC
ALL LEVELS	216	0 PC	3 PC	79 PC	17 PC	0 PC

MISSION 1040-1 INSTR - AFT 5/23/ PROCESSING AND EXPOSURE ANALYSIS

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP&PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	6	0 PC	50 PC	33 PC	0 PC	17 PC
INTERMEDIATE	121	0 PC	9 PC	78 PC	12 PC	1 PC
FULL	103	3 PC	0 PC	83 PC	14 PC	0 PC
ALL LEVELS	230	1 PC	6 PC	79 PC	13 PC	1 PC

MISSION 1040-2 INSTR - FWD 5/23/ PROCESSING AND EXPOSURE ANALYSIS

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP&PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	6	0 PC	17 PC	67 PC	0 PC	17 PC
INTERMEDIATE	76	0 PC	1 PC	71 PC	25 PC	3 PC
FULL	176	2 PC	0 PC	73 PC	26 PC	0 PC
ALL LEVELS	258	1 PC	1 PC	72 PC	25 PC	1 PC

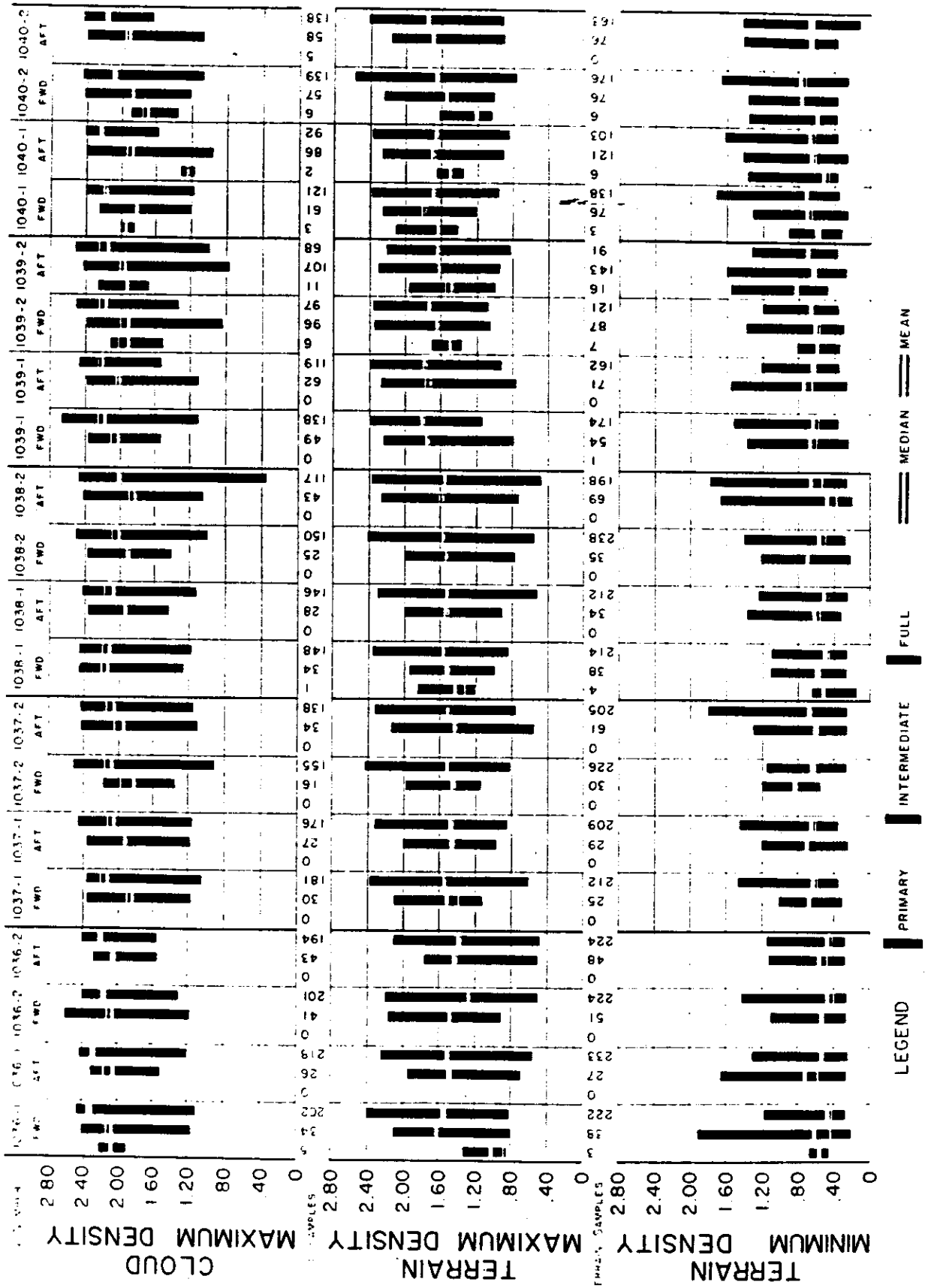
MISSION 1040-2 INSTR - AFT 5/23/ PROCESSING AND EXPOSURE ANALYSIS

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP&PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	0	0 PC	0 PC	3 PC	41 PC	39 PC
INTERMEDIATE	76	0 PC	7 PC	75 PC	17 PC	1 PC
FULL	163	5 PC	0 PC	79 PC	16 PC	0 PC
ALL LEVELS	239	3 PC	2 PC	78 PC	16 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

TABLE 9-1

J MISSION DENSITY RANGES



SECTION 10

PERFORMANCE MEASUREMENTS

The photography acquired by both panoramic cameras during Missions 1040-1 and 1040-2 received a MTP rating of 85. A summary is tabulated below of the MTF/AIM resolution values measured by AFSPPF. The micro-densitometer slit was 1 micron by 80 microns for the edge scan analysis.

Mission	Camera	Cycles/mm	Average	Ground Resolution
1040-1	FWD	94	70	17.6
1040-2	FWD	61		
1040-1	AFT	68	73	16.4
1040-2	AFT	75		

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 included in this report.

SECTION 11

VEHICLE ATTITUDE

The vehicle attitude errors for both Mission 1040-1 and 1040-2 were derived from the reduction of the Stellar camera photography. This attitude date 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 11-1 through 11-6 show these distributions for Mission 1040-1 and Figures 11-7 through 11-12 for Mission 1040-2.

The summary table below lists the maximum attitude errors and rates that were experienced during 90% of the FWD camera photographic operations, excluding the first six frames of each operation, and the total range of the errors and rates.

	Mission 1040-1		Mission 1040-2	
	90%	Range	90%	Range
Pitch Error (°)	0.30	-0.48 to +0.34	0.29	-0.50 to +0.30
Roll Error (°)	0.56	-0.66 to -0.15	0.46	-0.62 to +0.40
Yaw Error (°)	2.99	-3.2 to +0.8	2.96	-3.2 to +0.60
Pitch Rate (°/hr.)	22.12	-46 to +32	27.22	-60 to +38
Roll Rate (°/hr.)	23.22	-38 to +98	26.47	-65 to +79
Yaw Rate (°/hr.)	28.59	-84 to +32	28.74	-74 to +36

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

[redacted]

FRAMES 1-3 OF 240

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

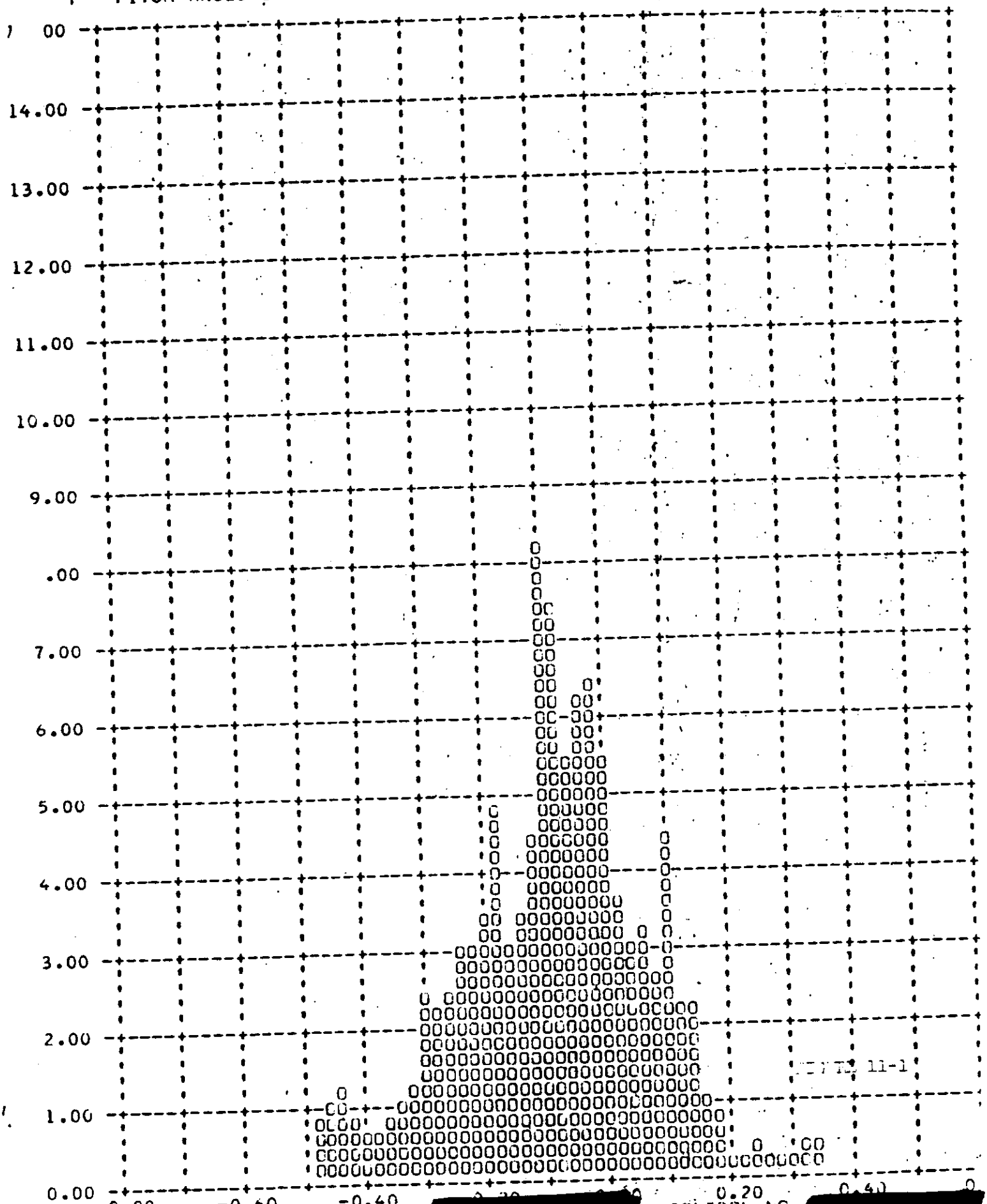


FIG. 11-1

[redacted]

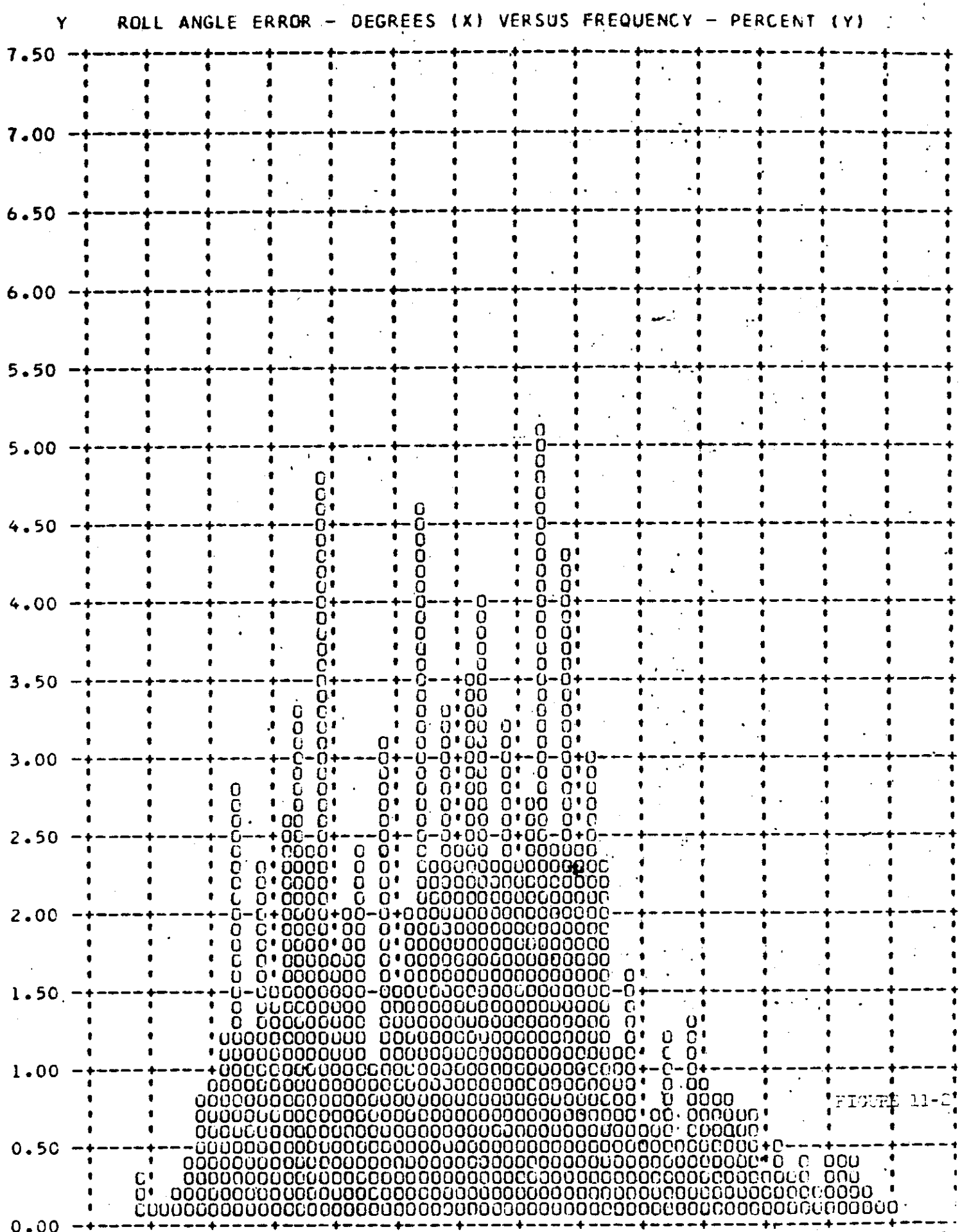


FIGURE 11-C

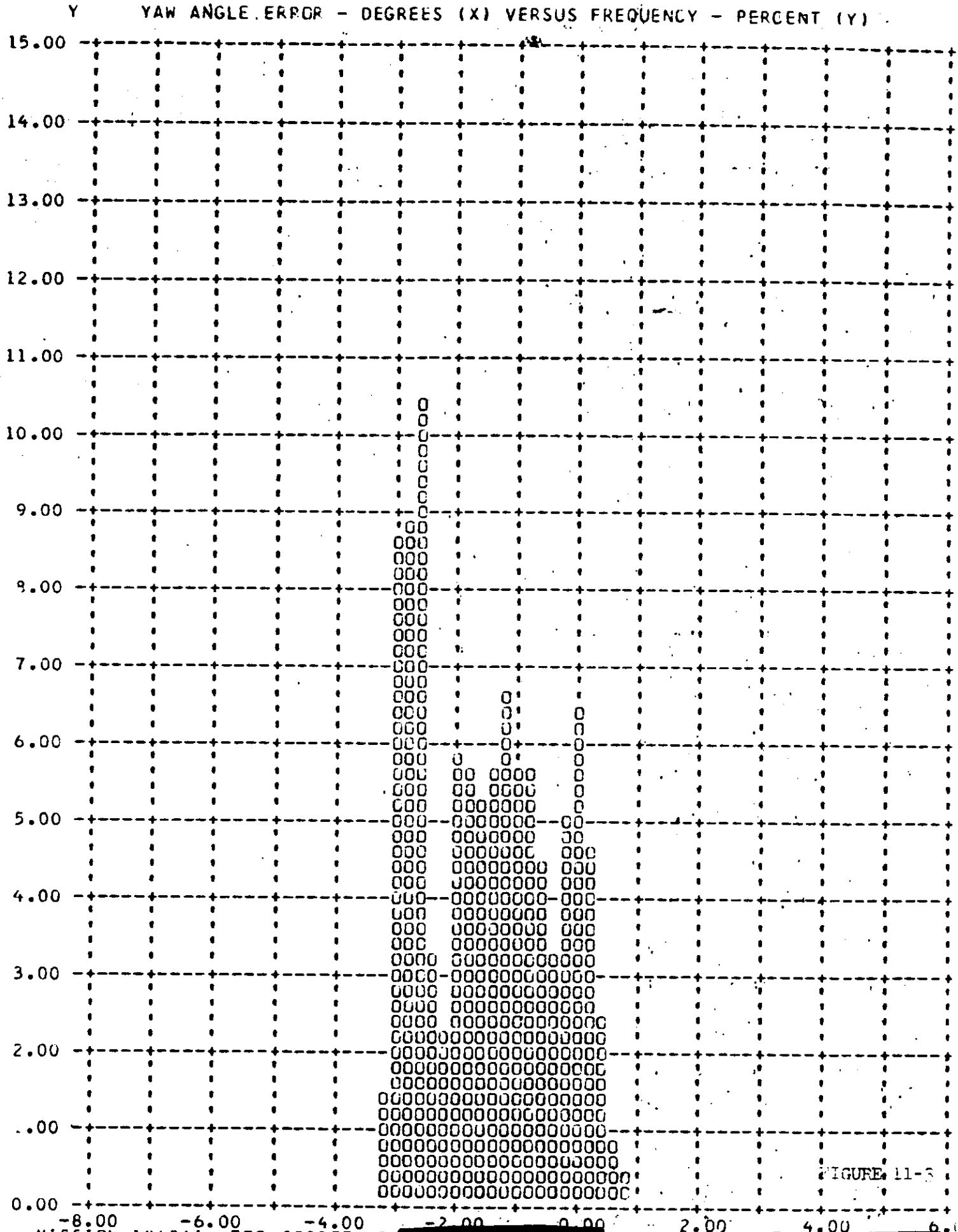

Y YAW ANGLE ERROR - DEGREES (X) VERSUS FREQUENCY - PERCENT (Y)
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
-8.00
-6.00
-4.00
-2.00
0.00
2.00
4.00
6.00

FIGURE 11-3

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

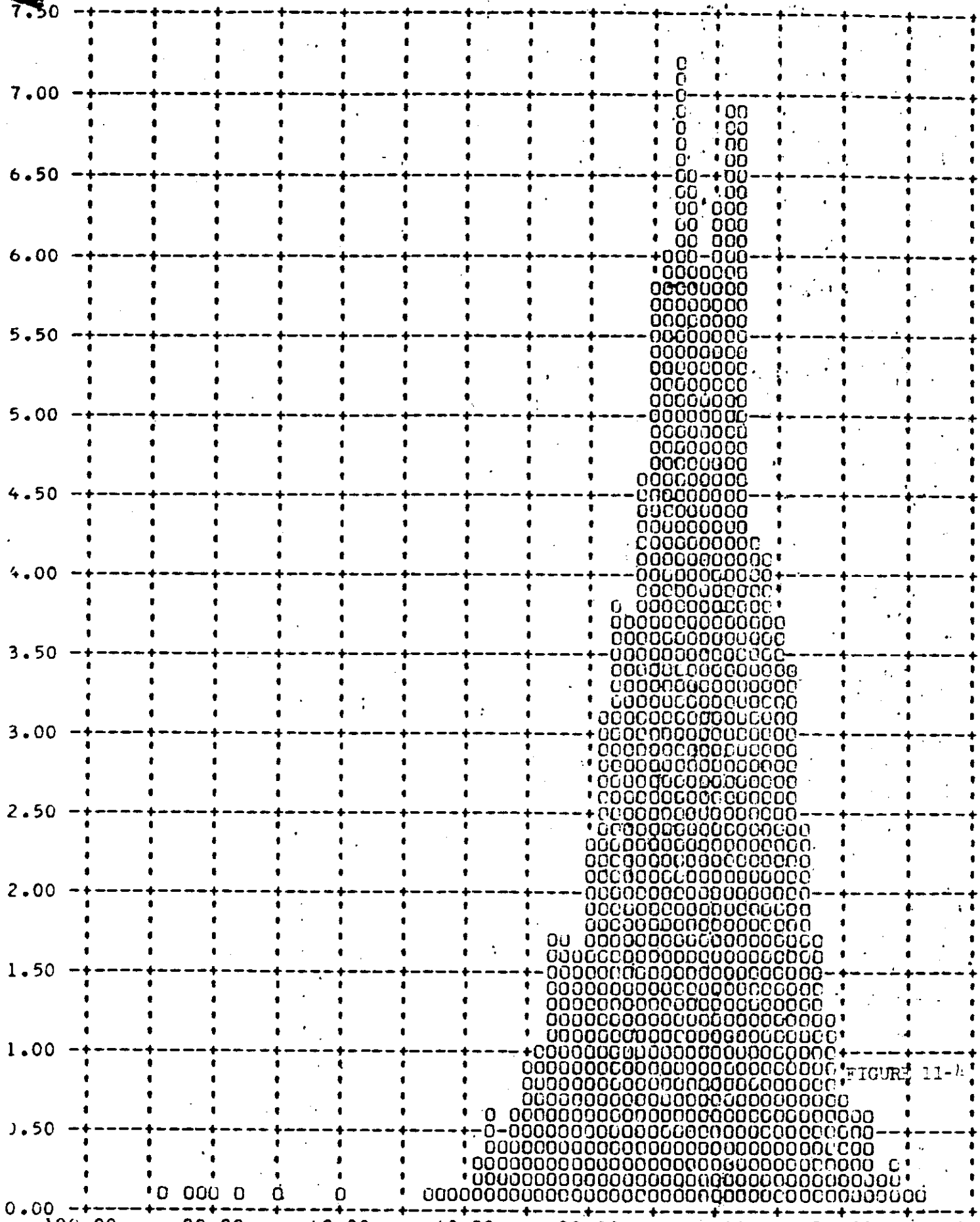


FIGURE 11-4

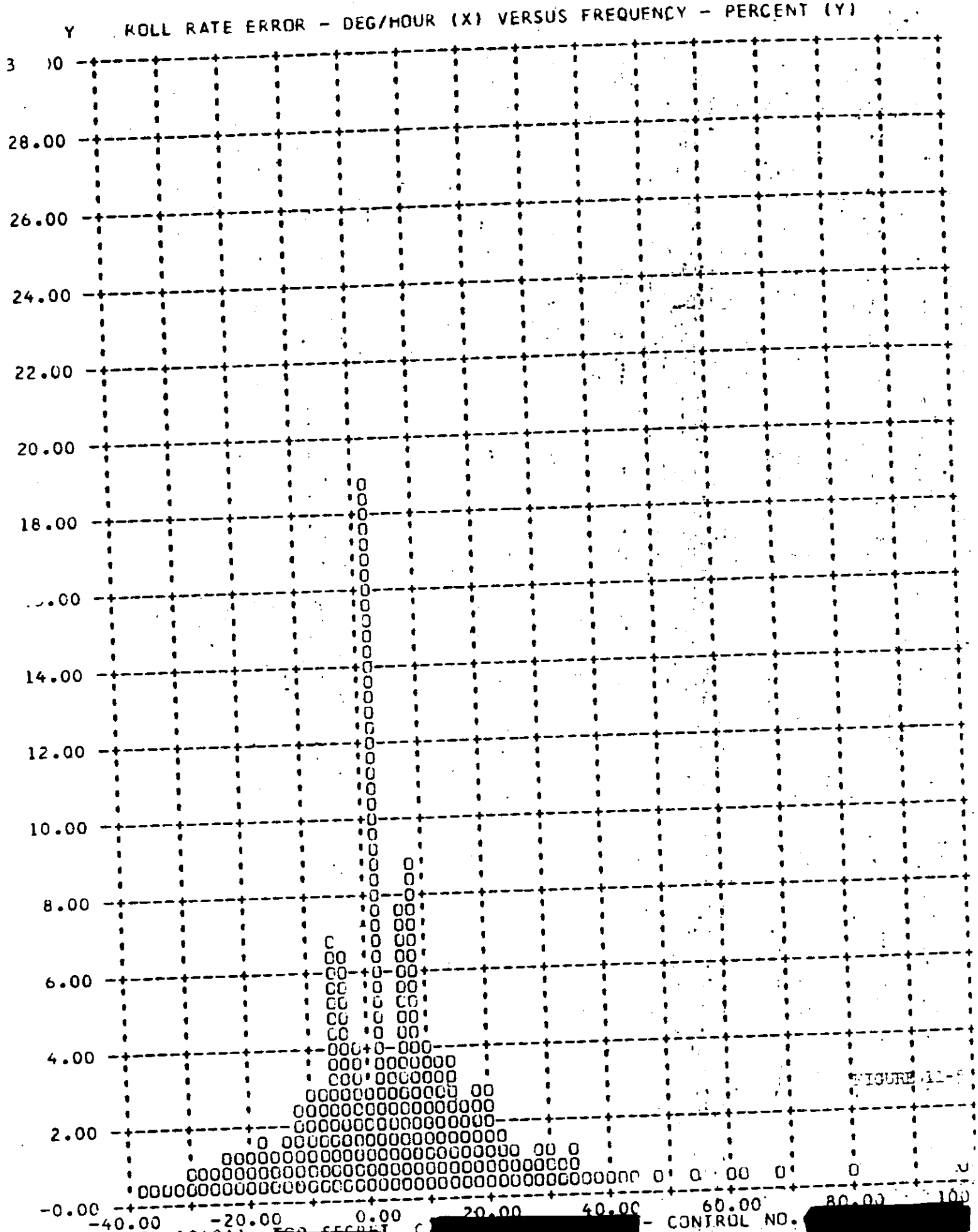

ROLL RATE ERROR - DEG/HOUR (X) VERSUS FREQUENCY - PERCENT (Y)
Y
28.00
26.00
24.00
22.00
20.00
18.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
-0.00
-40.00
-20.00
0.00
20.00
40.00
60.00
80.00
100

FIGURE 11-

[redacted] FRAMES 1-6 OF EACH OF UNITED [redacted] PERCENT = 28.5

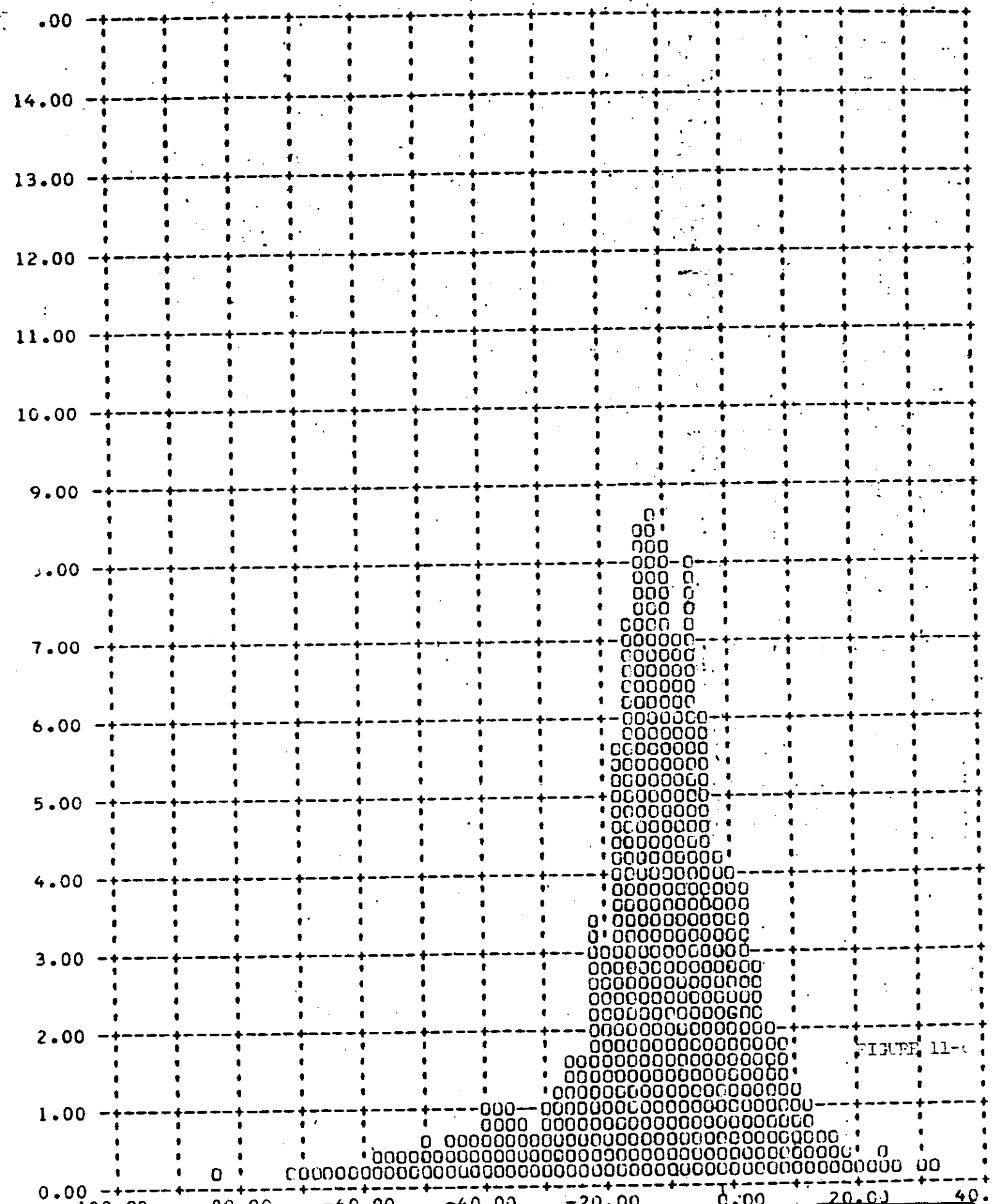


FIGURE 11-

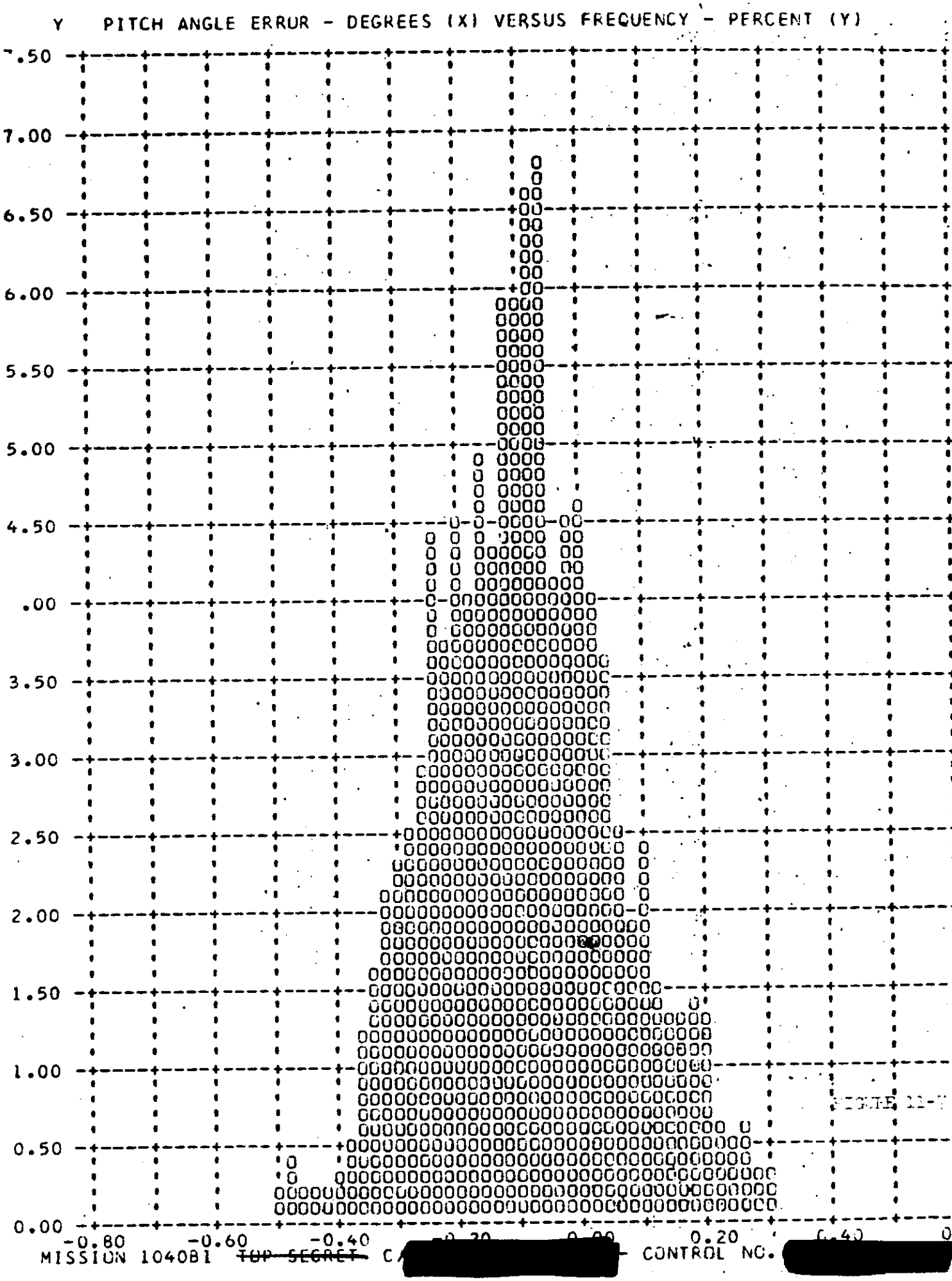
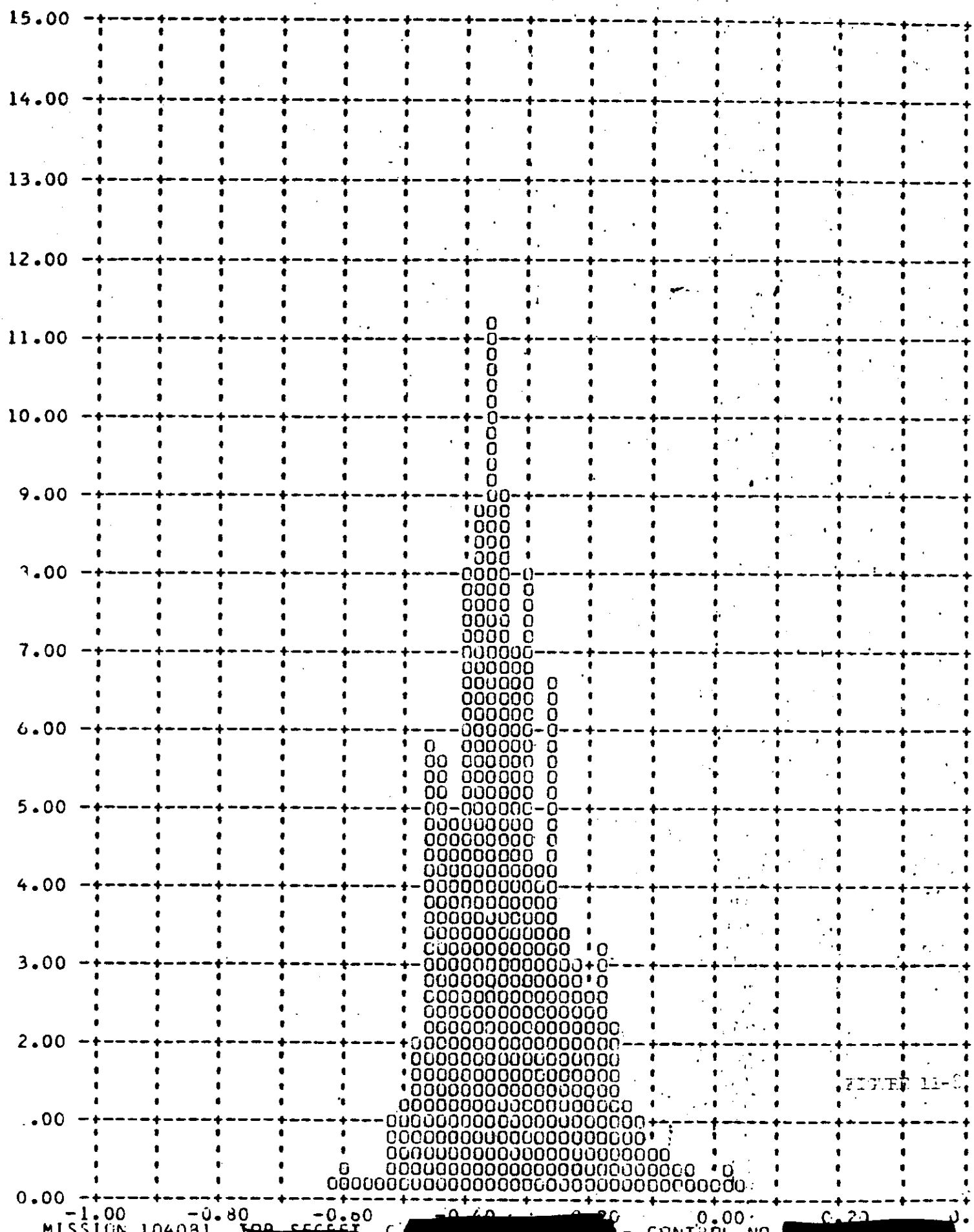

Y PITCH ANGLE ERROR - DEGREES (X) VERSUS FREQUENCY - PERCENT (Y)
7.50
7.00
6.50
6.00
5.50
5.00
4.50
.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
-0.80
-0.60
-0.40
0.20
0.40
0.
MISSION 1040BI TOP SECRET C[redacted] CONTROL NO. [redacted]

FIGURE 11-7


Y ROLL ANGLE ERROR - DEGREES (X) VERSUS FREQUENCY - PERCENT (Y)
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
-1.00
-0.80
0.00

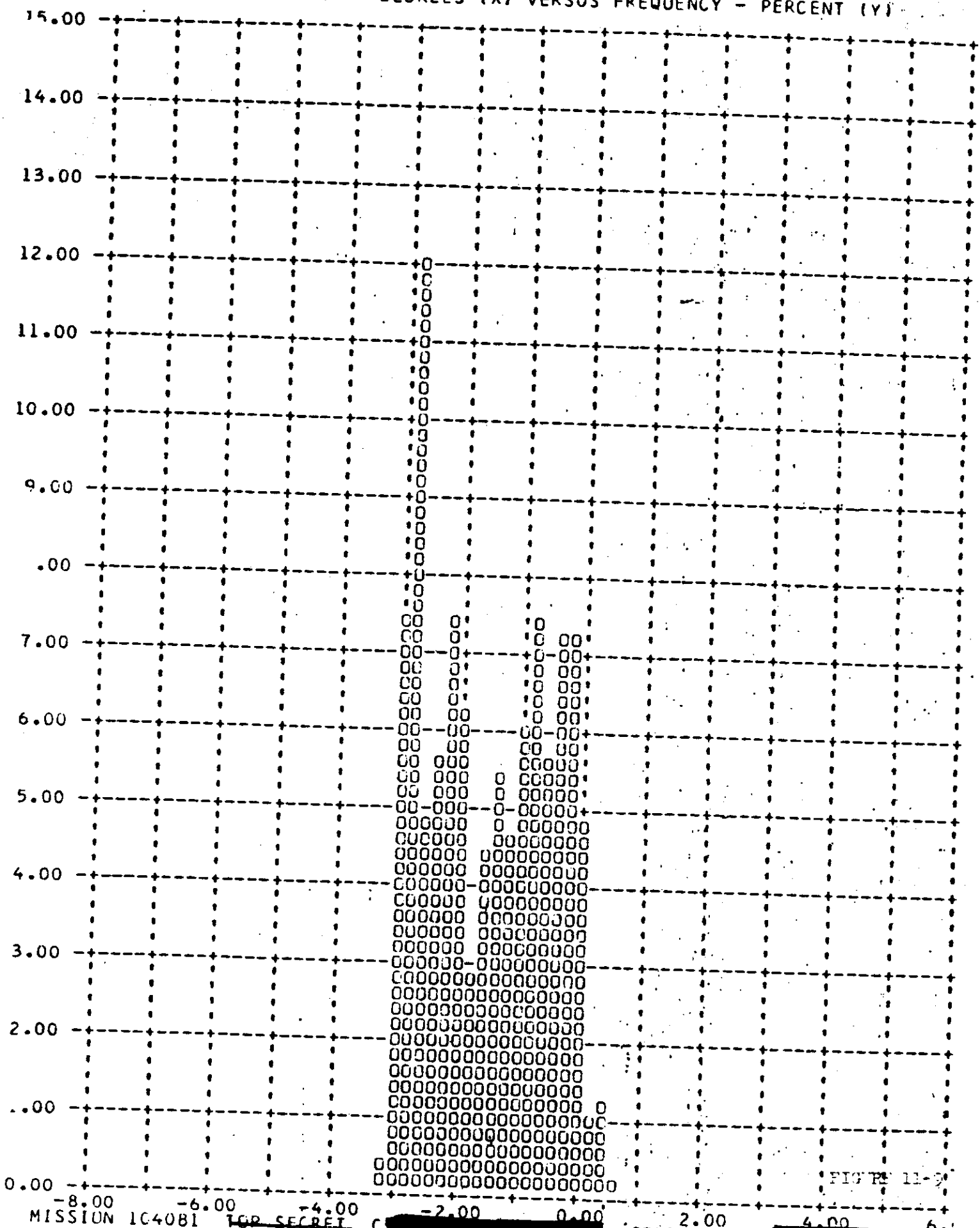

Y YAW ANGLE ERROR - DEGREES (X) VERSUS FREQUENCY - PERCENT (Y)
15.00
14.00
13.00
12.00
11.00
10.00
9.00
.00
7.00
6.00
5.00
4.00
3.00
2.00
..00
0.00
-8.00
-6.00
-4.00
-2.00
0.00
2.00
4.00
6.

FIGURE 11-9

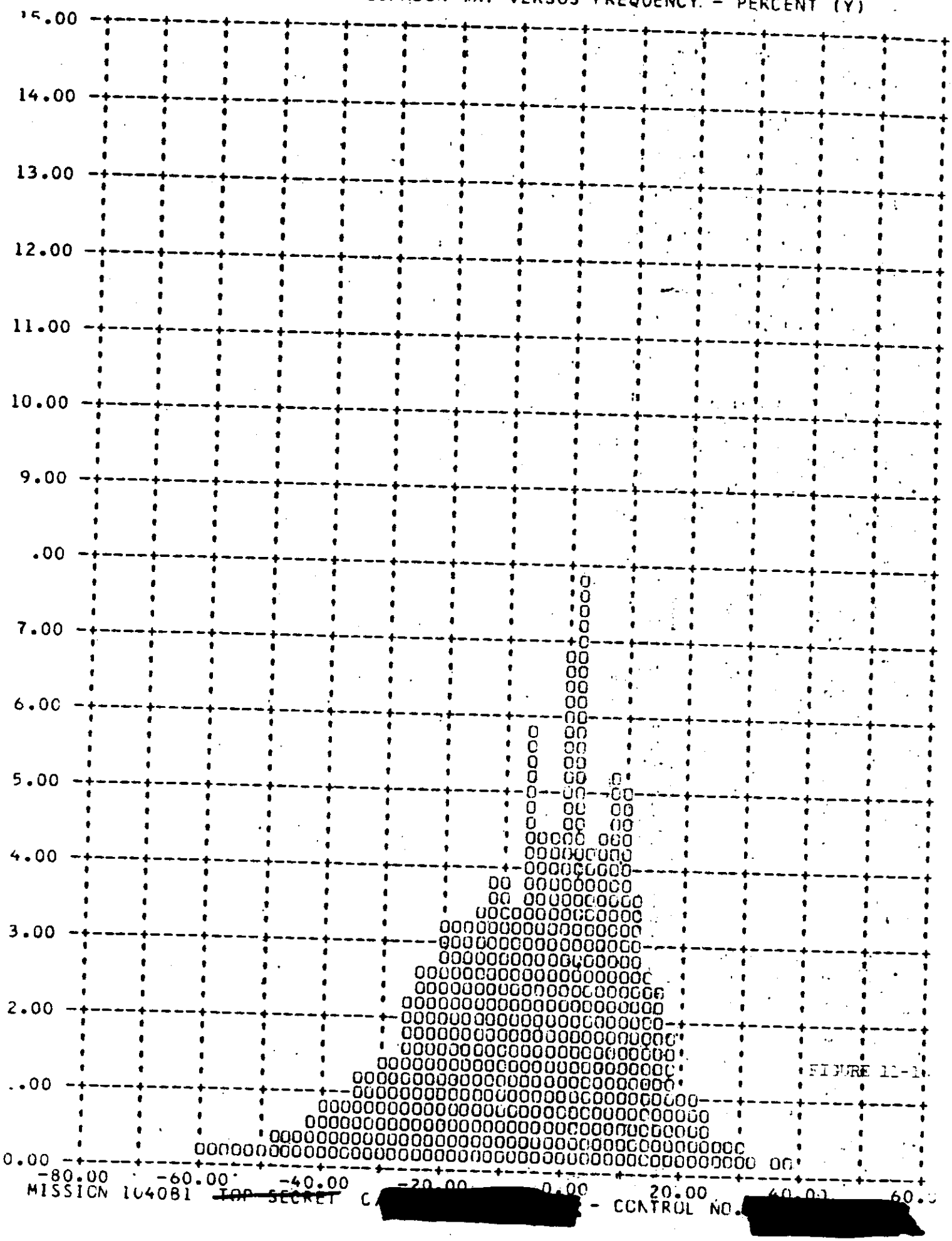

Y PITCH RATE ERROR - DEG/HOUR (X) VERSUS FREQUENCY - PERCENT (Y)
15.00
14.00
13.00
12.00
11.00
10.00
9.00
.00
7.00
6.00
5.00
4.00
3.00
2.00
..00
0.00
-80.00
-60.00
-40.00
-20.00
0.00
20.00
40.00
60.00

FIGURE 11-1.

[redacted]

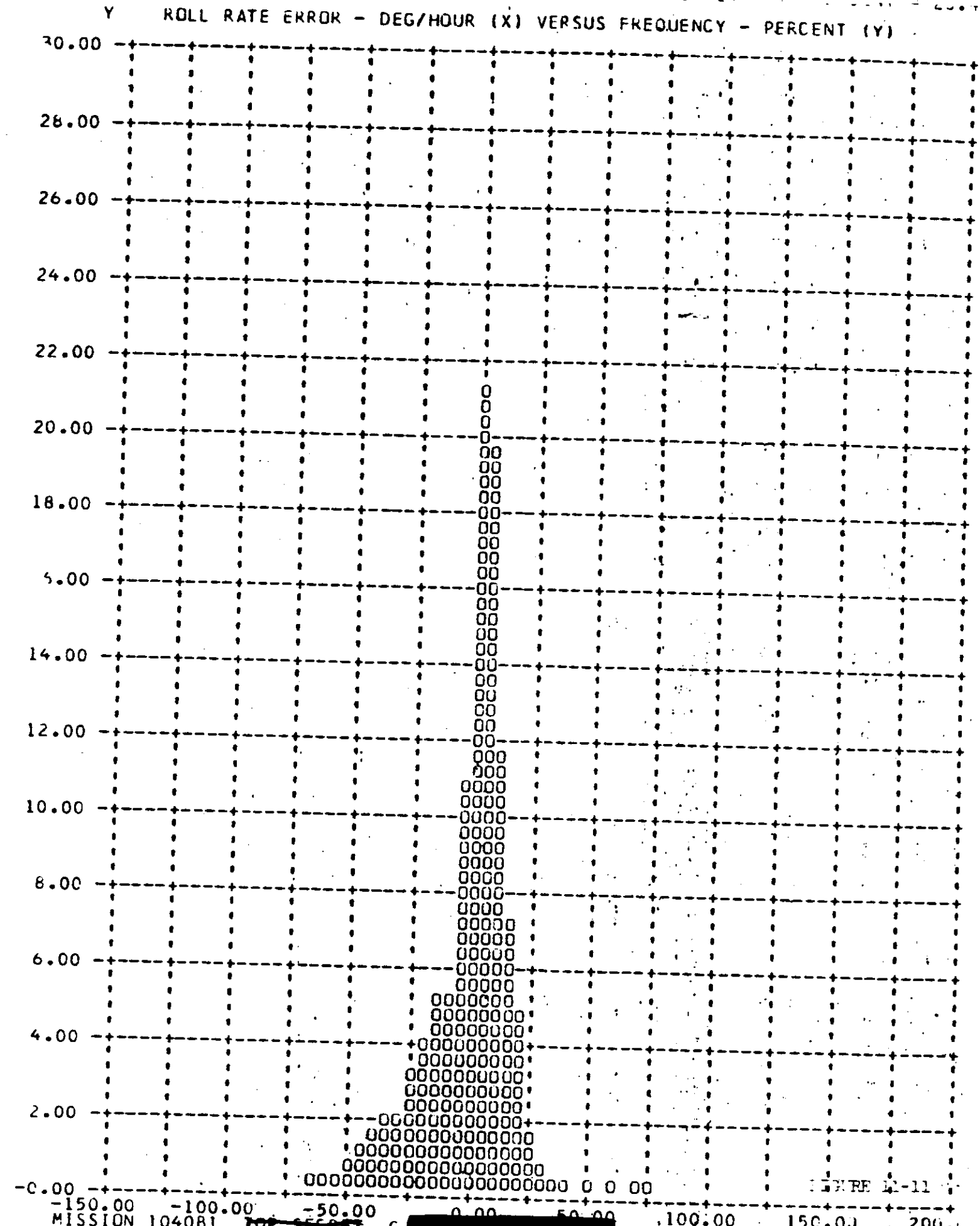


FIGURE 4-11

FRAMES 1-6 OF EACH OF UNLISTED [redacted] PERCENT = 20.1

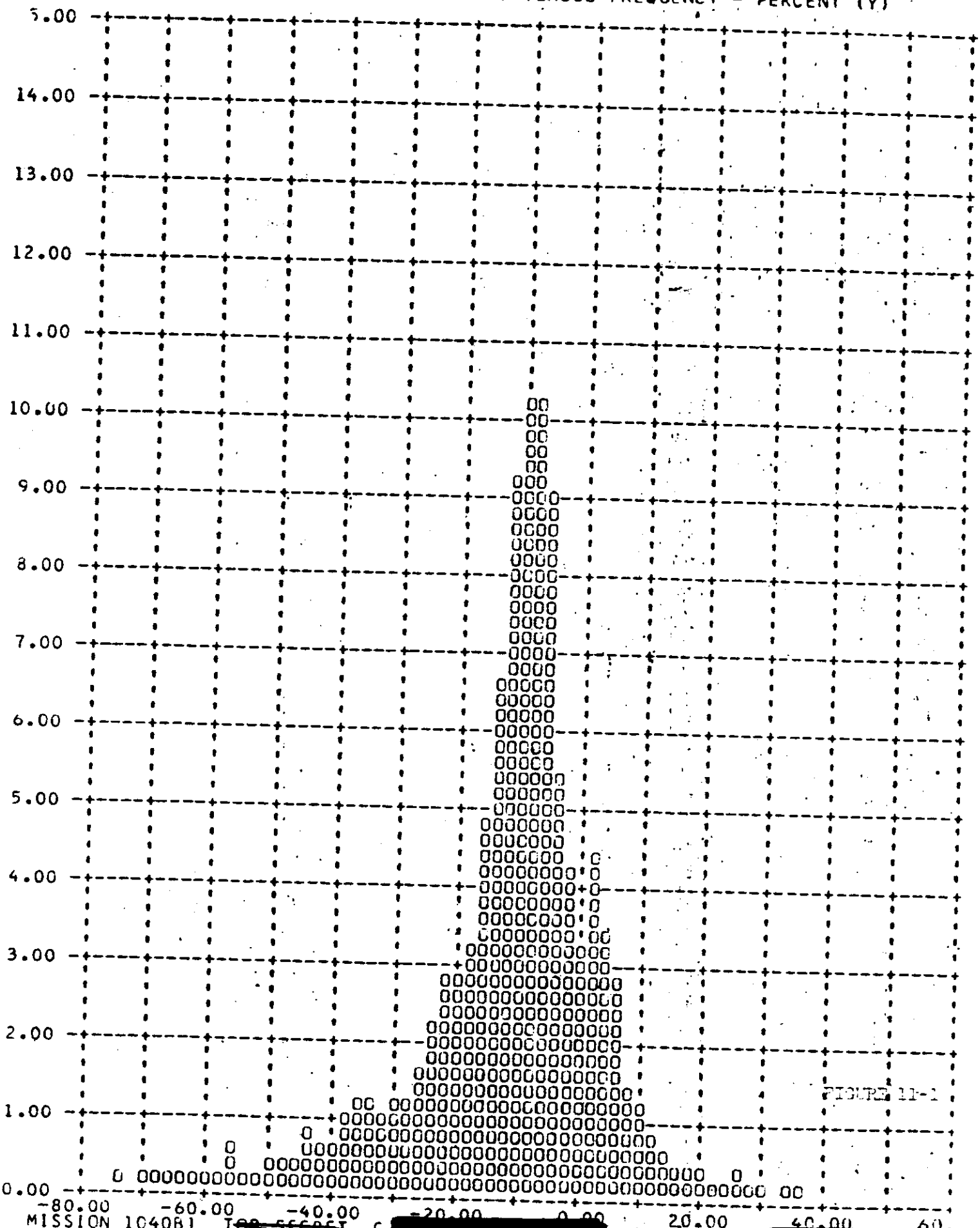


FIGURE 11-1

MISSION 1040B1 TOP SECRET C[redacted] CONTROL NO. [redacted]

SECTION 12

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 of 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 12-1 through 12-16.

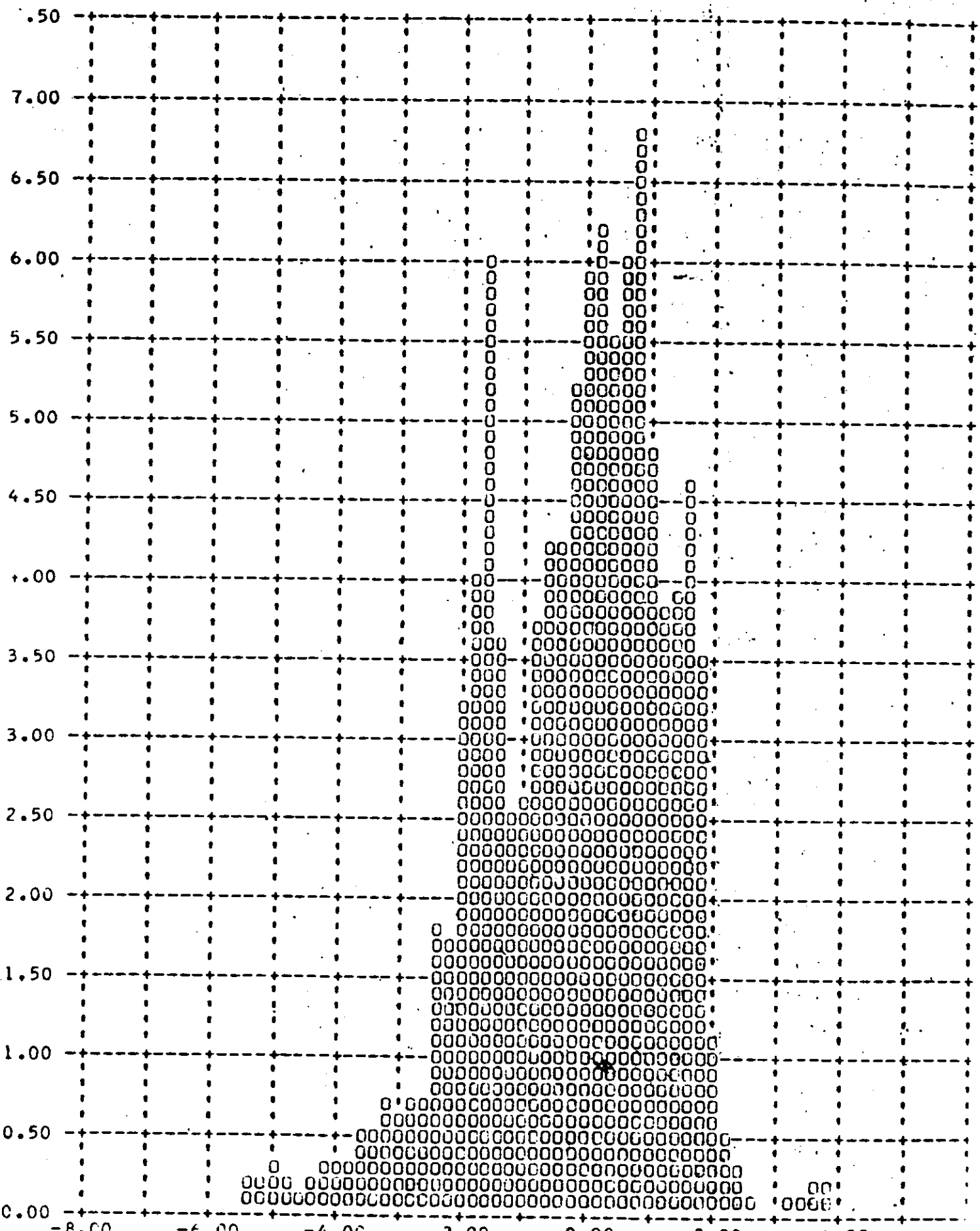
The summary table 12-1 presents the maximum V/h ratio errors and resolution limits that existed during 90% of the photographic operations and the total range of values during all operations that were computed.

MISSION 1040

V/h RATIO AND RESOLUTION LIMITS

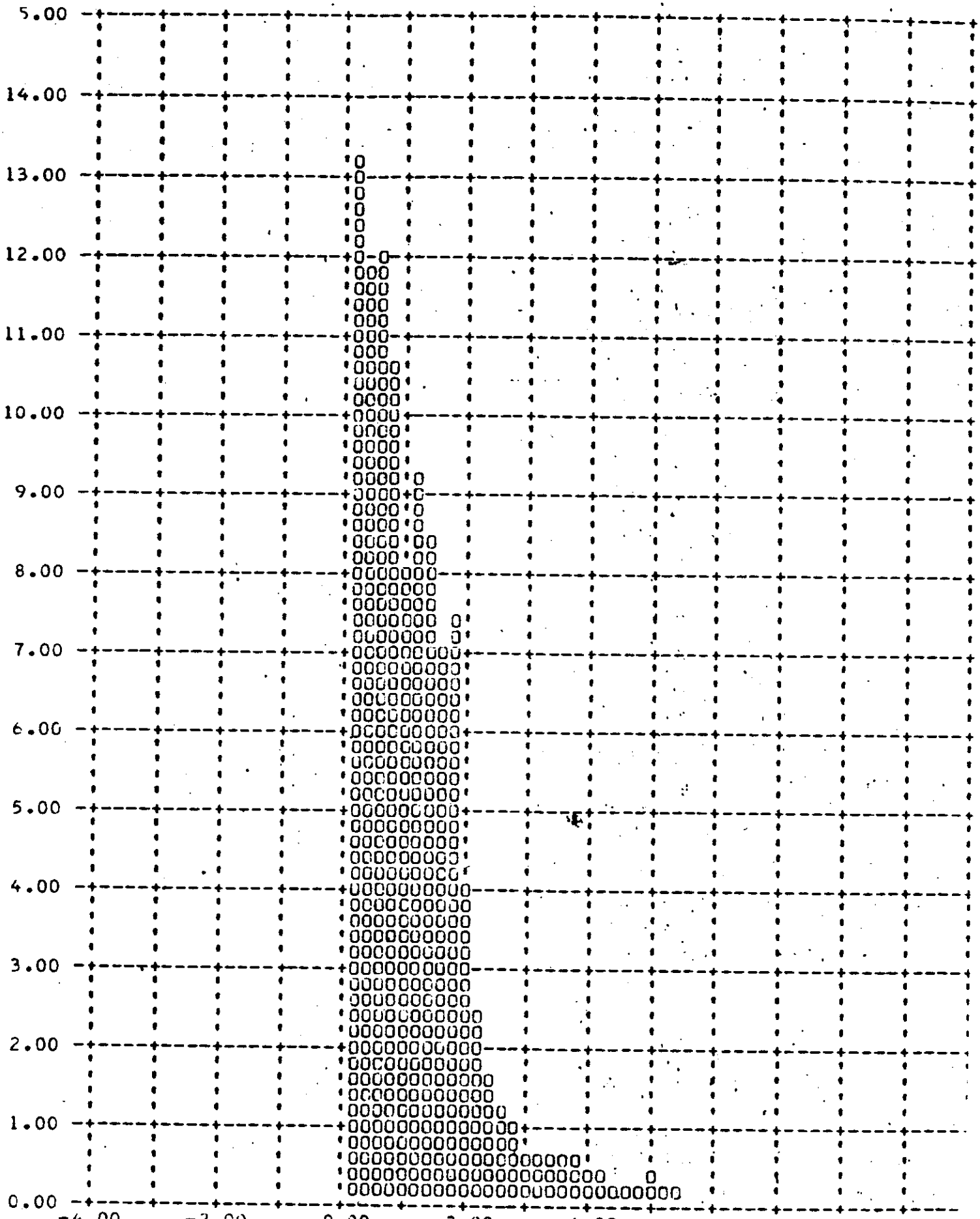
VALUE	UNITS	CAMERA	MISSION 1040-1 90%	MISSION 1040-1 Range	MISSION 1040-2 90%	MISSION 1040-2 Range
V/h Ratio Error	%	FWD	2.67	-3.0 to +5.8	1.66	-3.2 to +7.2
		AFT	2.15	-5.2 to +3.8	2.72	-5.6 to +5.8
Along Track Resolution Limit	Feet	FWD	3.95	0.2 to 9.8	2.20	0.2 to 12.6
		AFT	1.99	0.2 to 5.4	2.54	0.2 to 7.6
Cross Track Resolution Limit	Feet	FWD	2.19	0.2 to 3.8	2.05	0.05 to 2.8
		AFT	2.53	0.2 to 4.6	2.28	0.2 to 3.6

TABLE 12-1


Y V/H RATIO ERROR - PERCENT (X) VERSUS FREQUENCY - PERCENT (Y)
.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
-8.00
-6.00
-4.00
-2.00
0.00
2.00
4.00

MISSION 1040A1 ~~TOP SECRET~~ C[redacted] - CONTROL NO. [redacted]

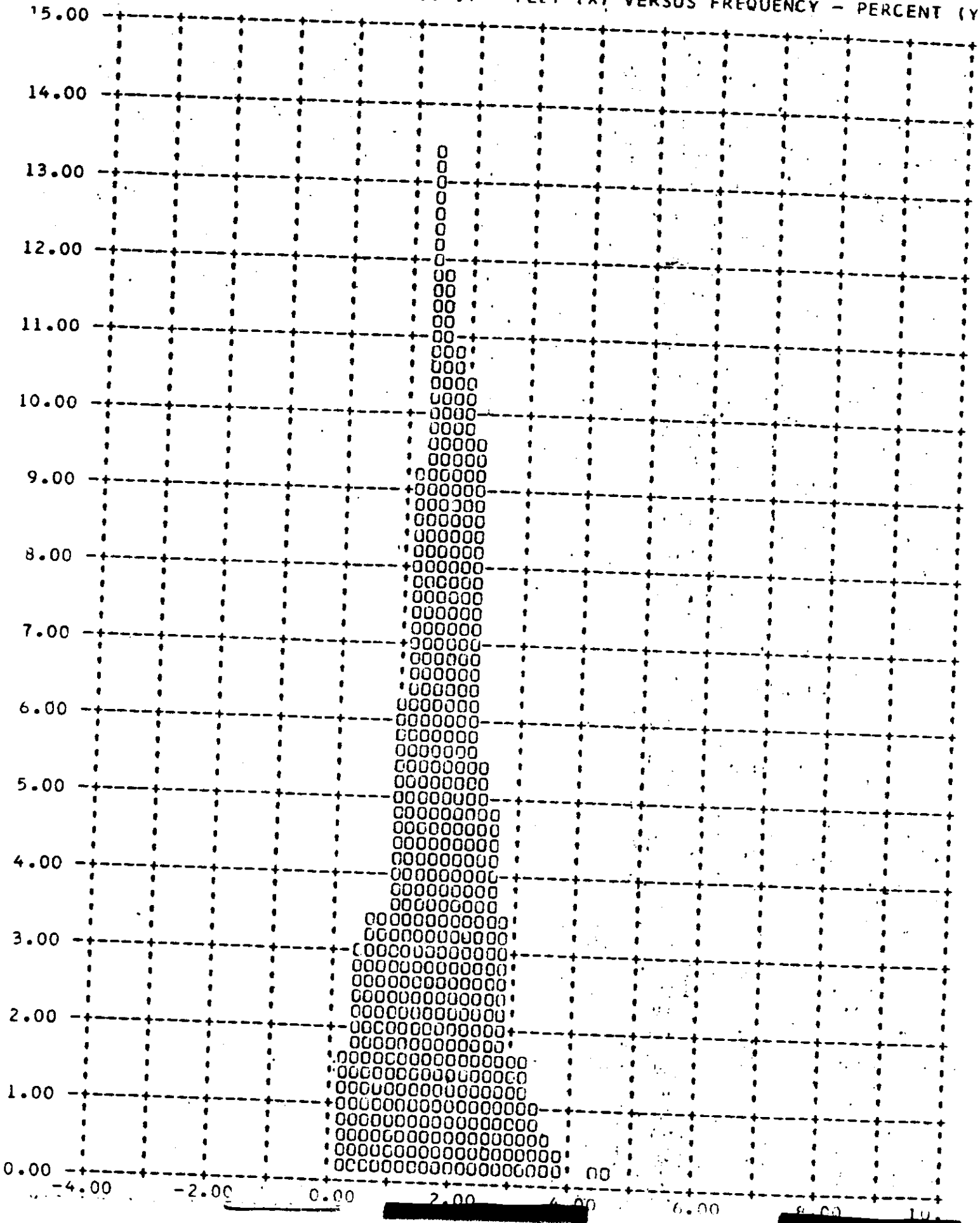
FRAMES 1-6 OF EACH UP OMITTED 90 PERCENT = 1.9



MISSION 1040A1 ~~TOP SECRET~~ C[redacted] - CONTROL NO. [redacted]

FRAMES 1-6 OF EACH UP OMITTED 90 PERCENT [illegible] 2.5

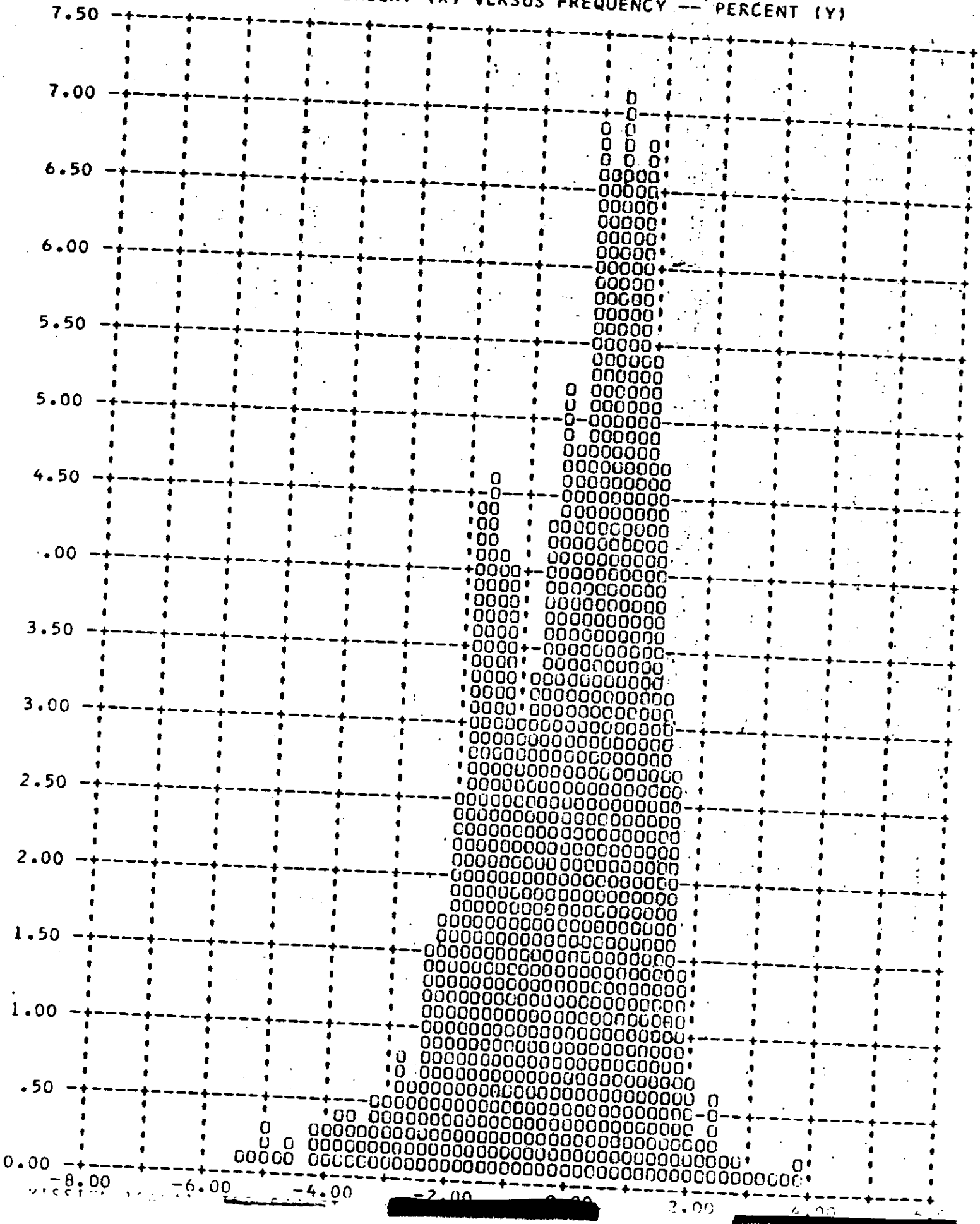
Y CROSS TRACK RESOLUTION LIMIT - FEET (X) VERSUS FREQUENCY - PERCENT (Y



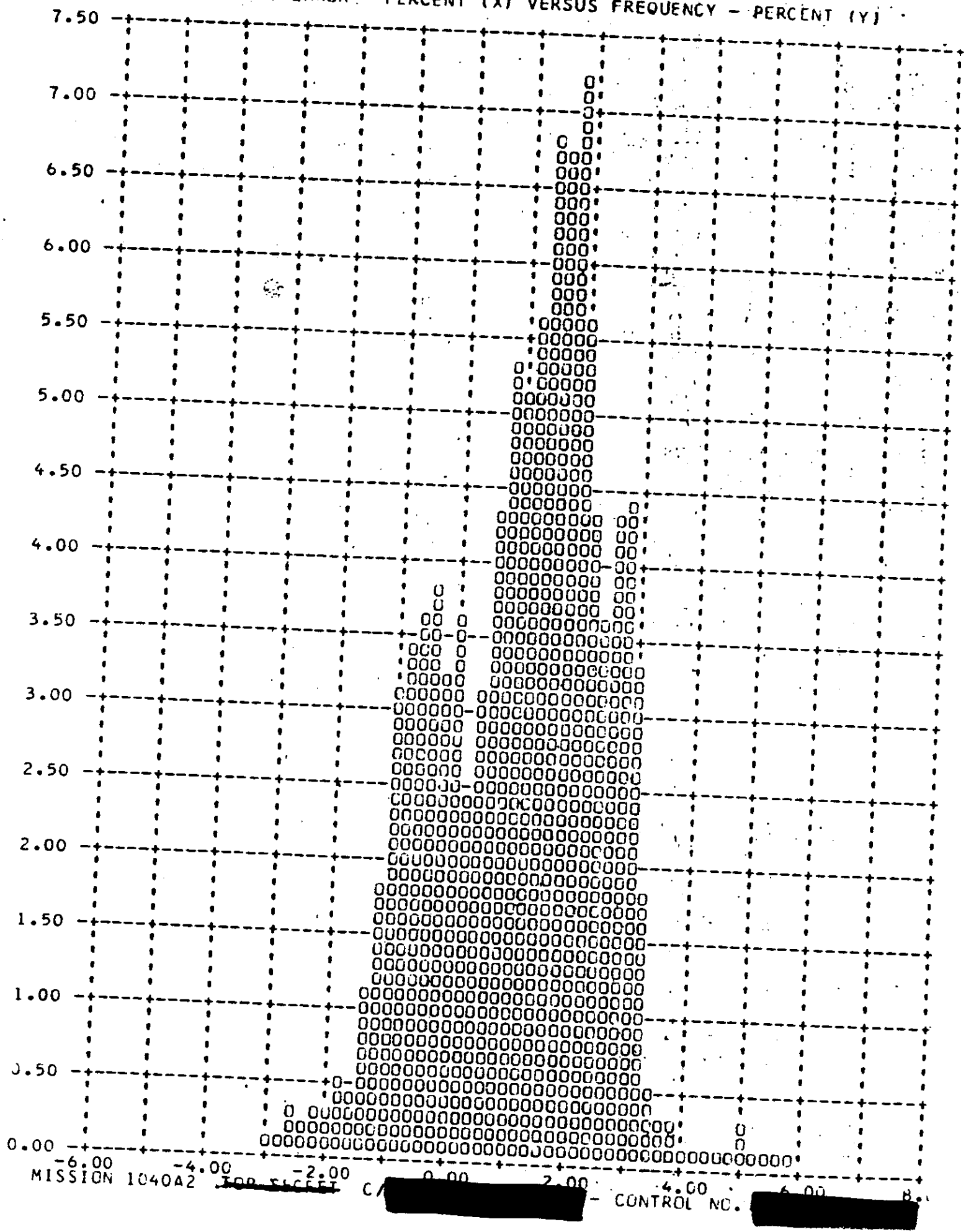
MISSION 1040A1 ~~TOP SECRET~~ C[redacted] - CONTROL NO. [redacted]

FRAMES 1-6 OF EACH UP OMITTED 90 PERCENT = 2.1

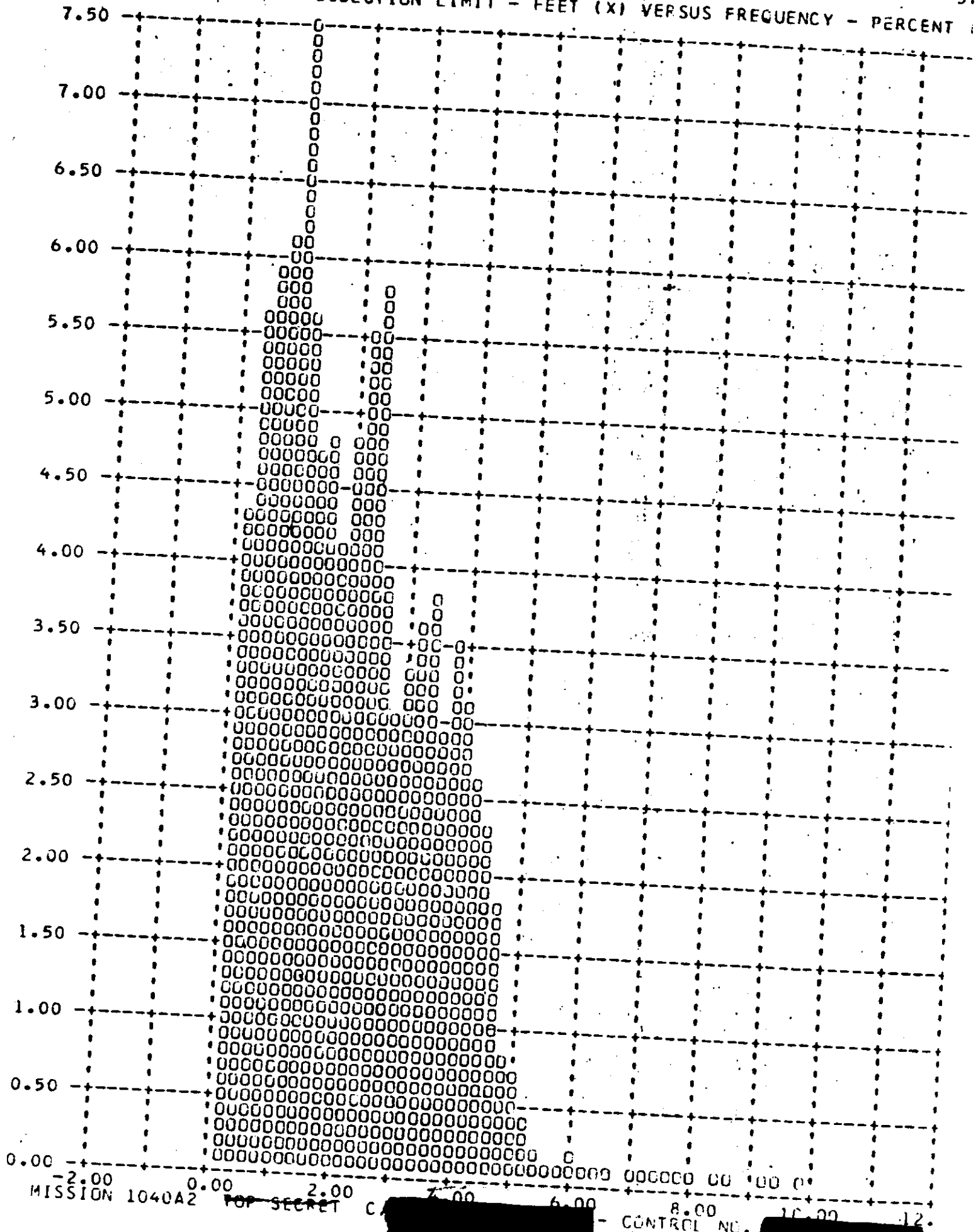
Y IMC ERROR -- PERCENT (X) VERSUS FREQUENCY -- PERCENT (Y)



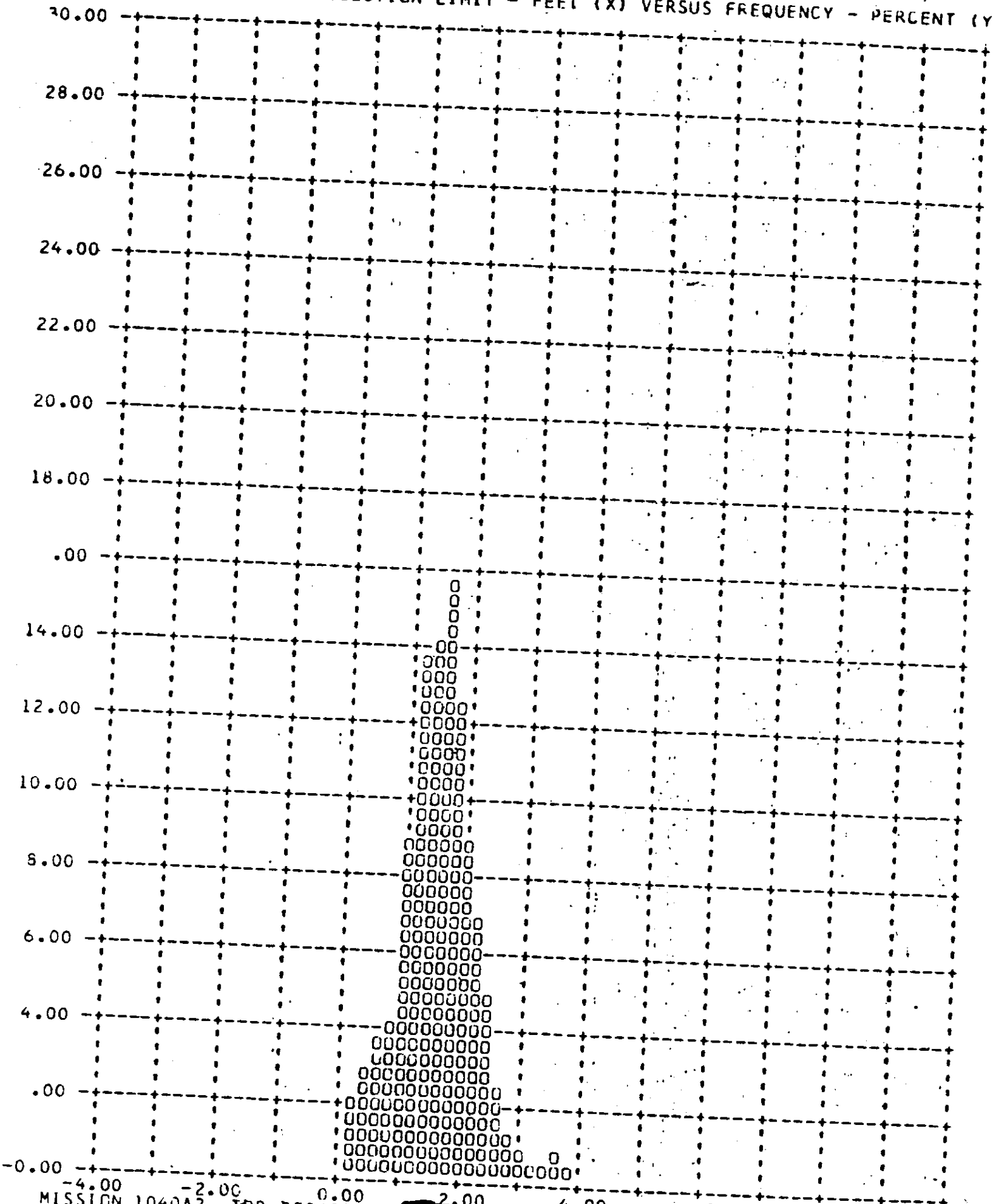
FRAMES 1-6 OF EACH OPERATION - 90 PERCENT = 2.0

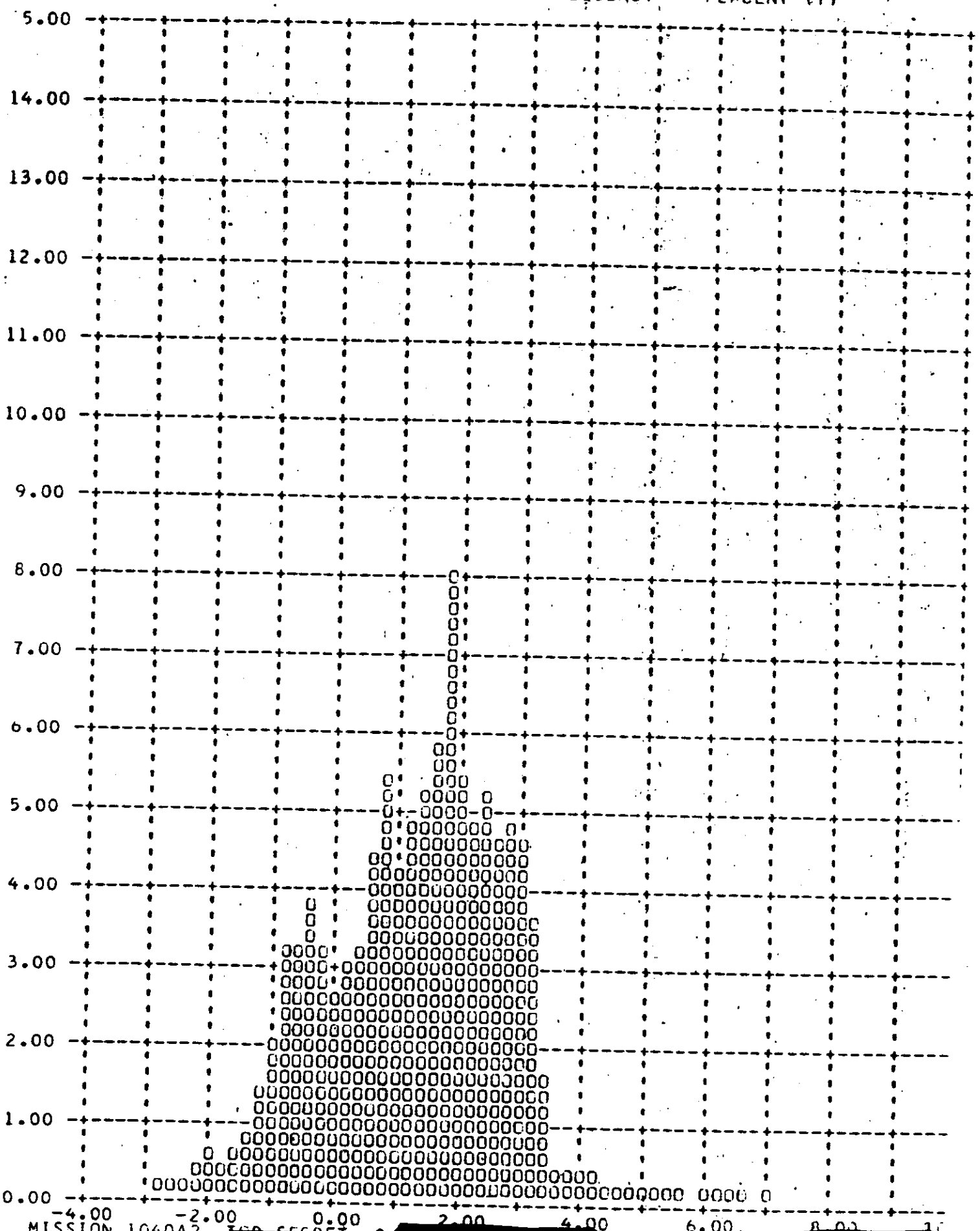


FRAMES 1-6 OF EACH DP OMITTED [redacted] 90 PERCENT = 3.

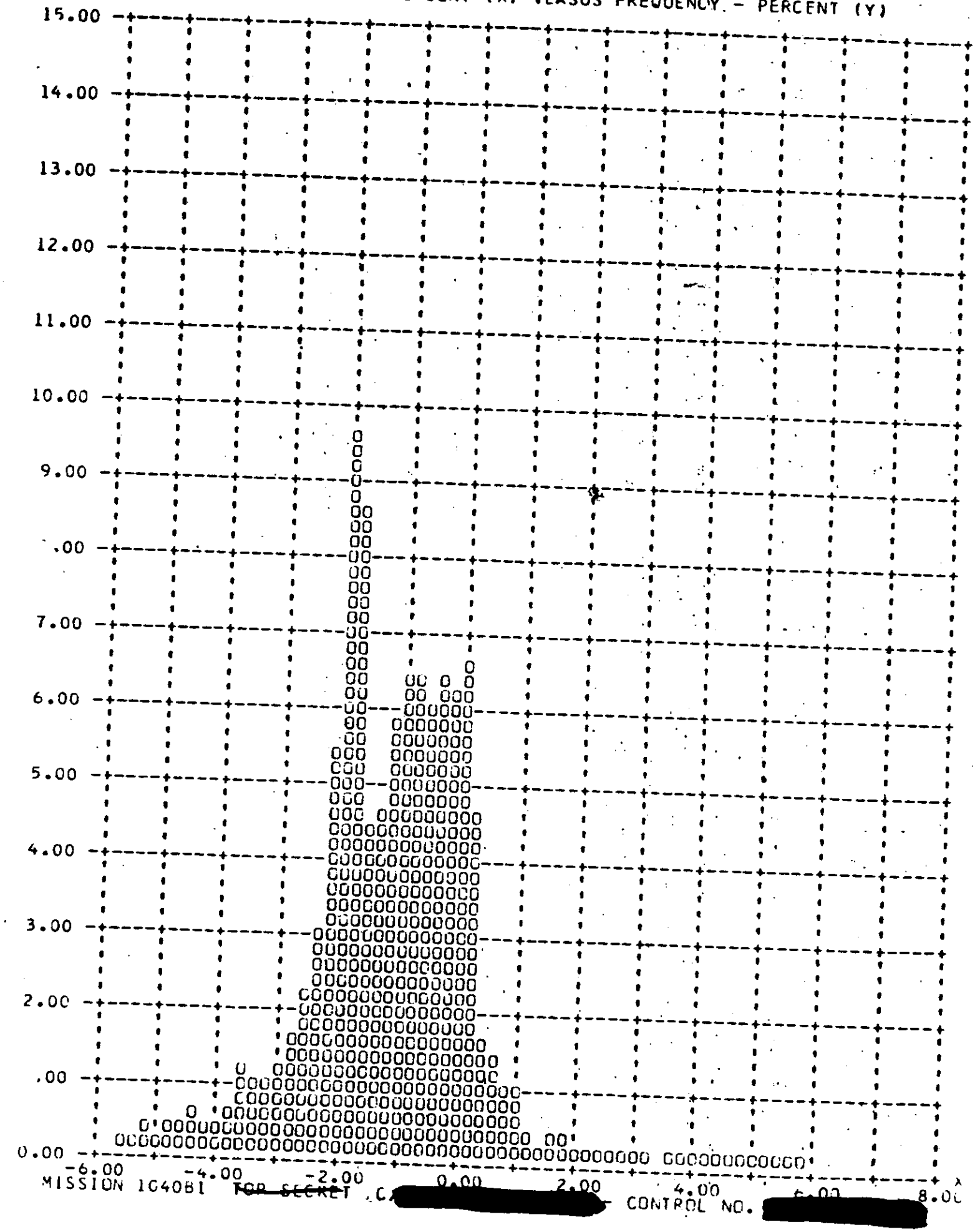


[redacted] FRAMES 1-6 OF EACH OP OMITTED [redacted] 90 PERCENT = 2.19



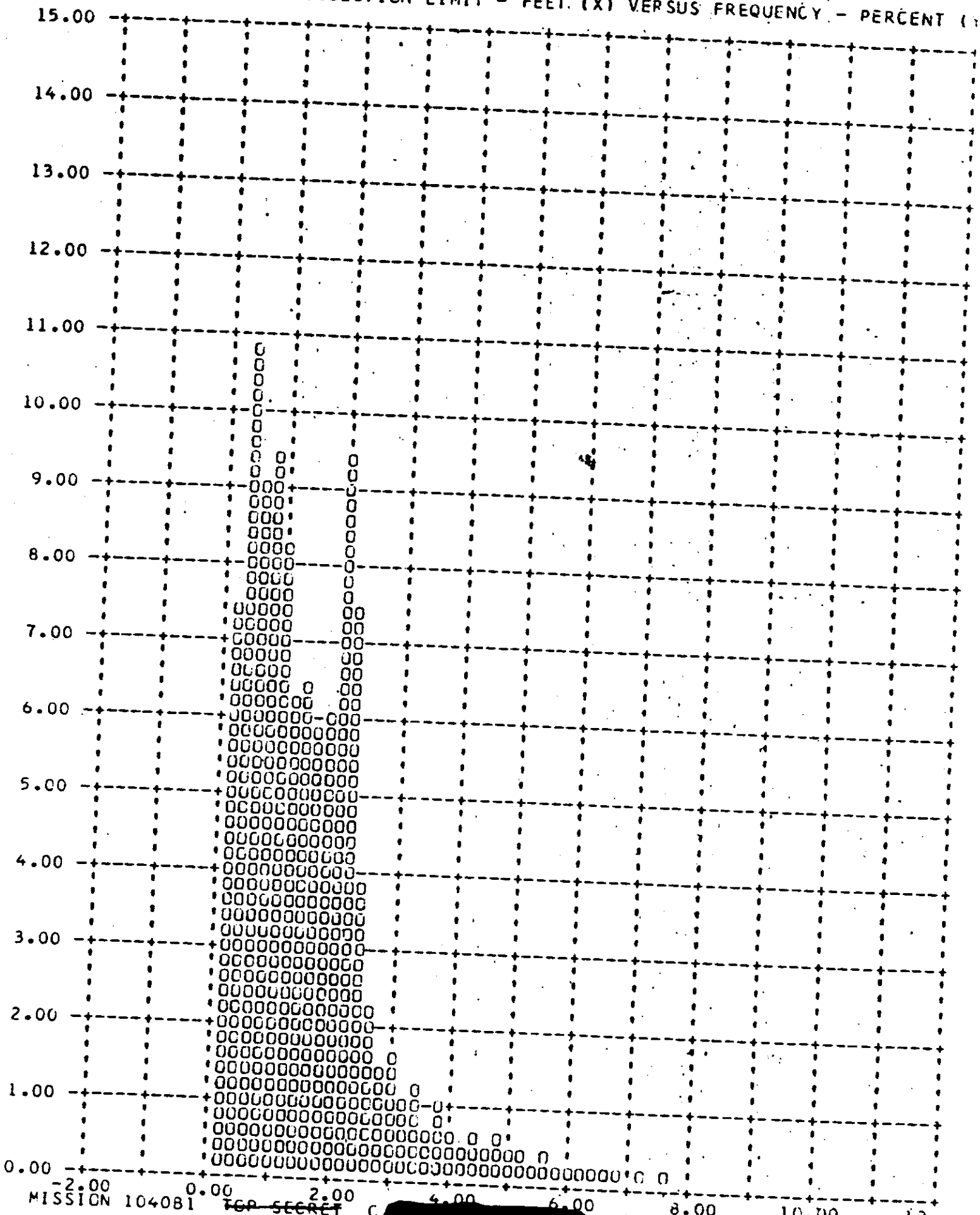

Y IMC ERROR -- PERCENT (X) VERSUS FREQUENCY -- PERCENT (Y)
5.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
-4.00
-2.00
0.00
2.00
4.00
6.00
8.00

[redacted] FRAMES 1-6 OF EACH UP OMITTED [redacted] 90 PERCENT = 2.12



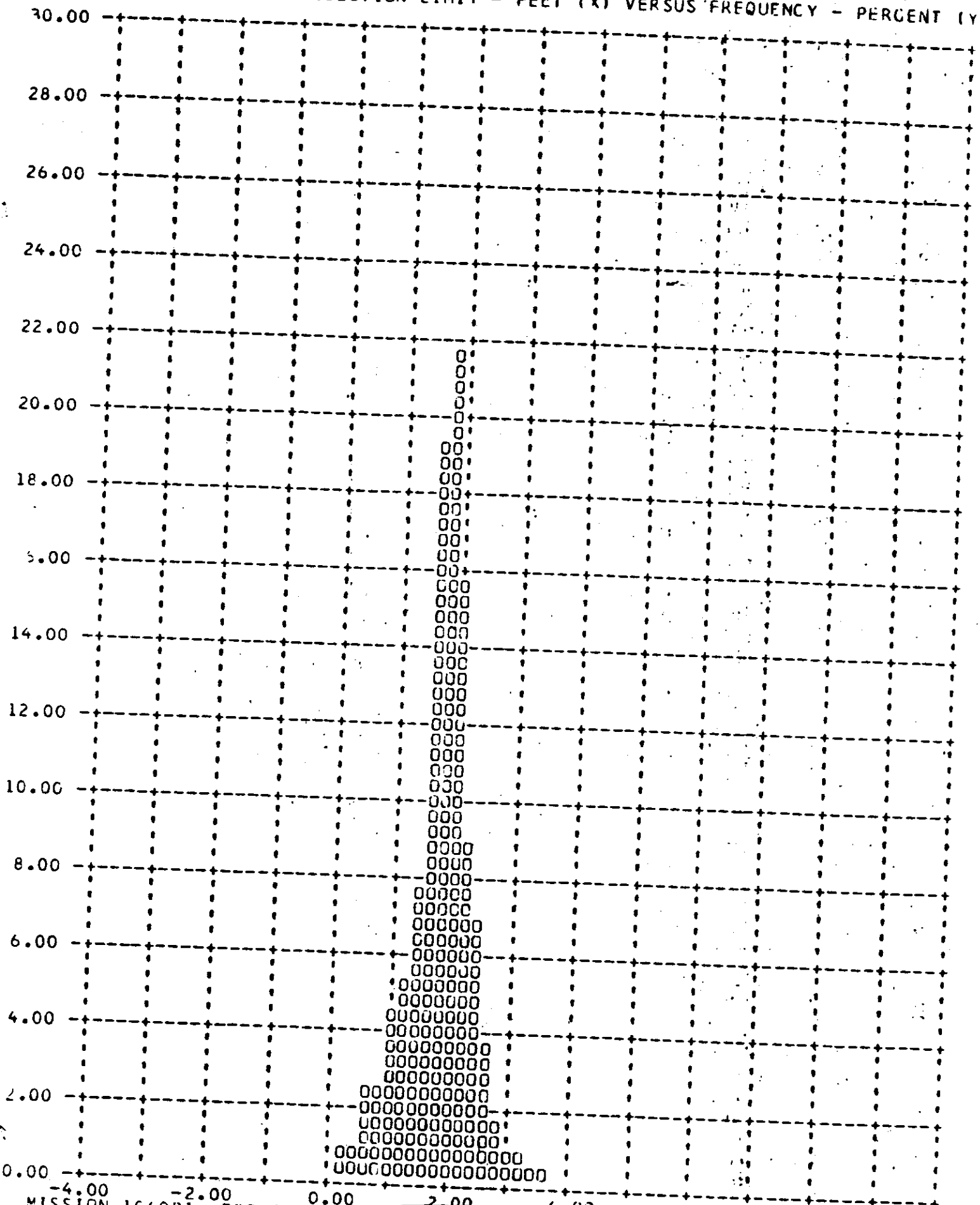
MISSION 1G40B1 ~~FOR SECRET~~ C[redacted] CONTROL NO. [redacted]

[redacted] FRAMES 1 & 3 OF EACH GP OMITTED 90 [redacted]



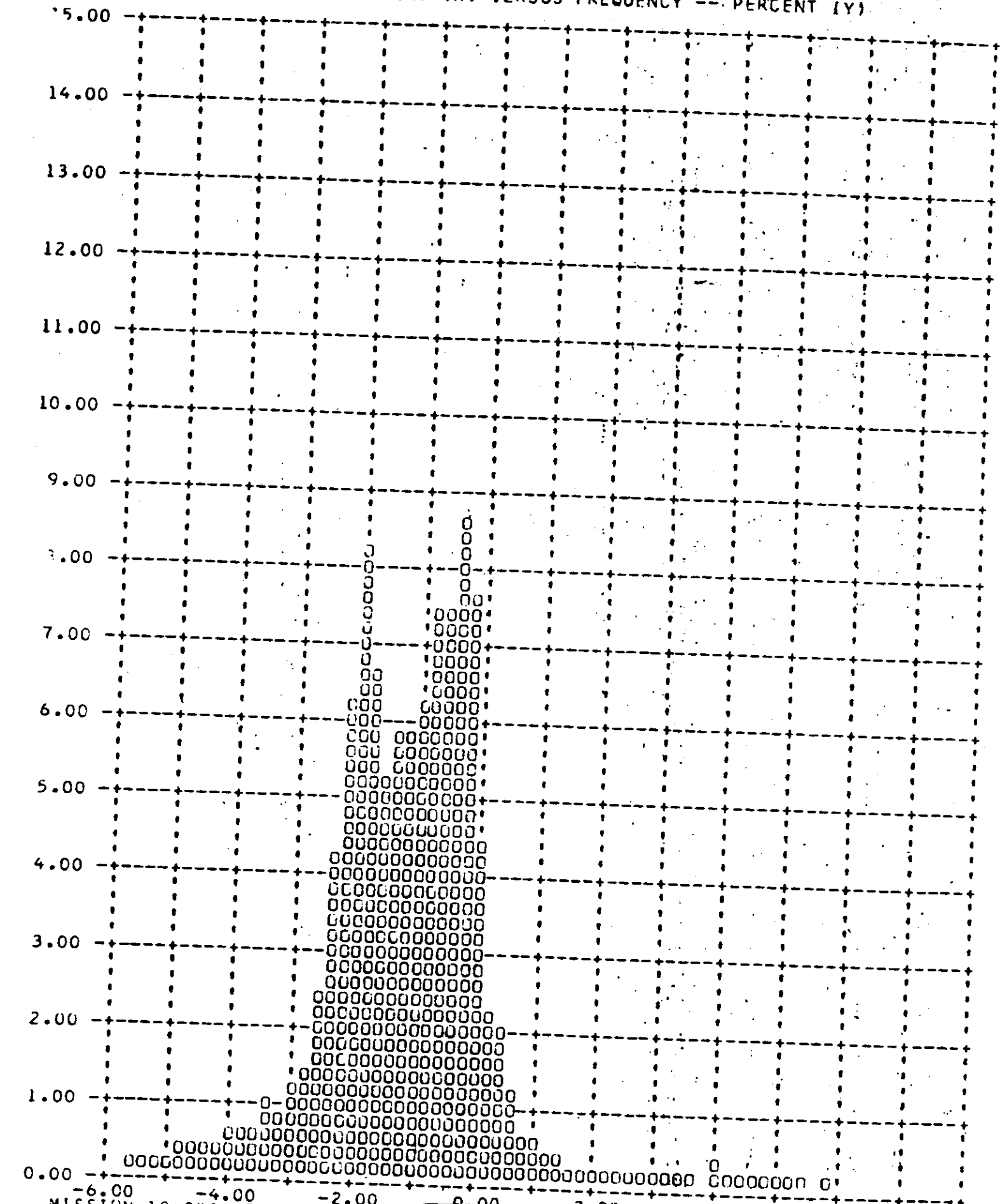
MISSION 104081 ~~TOP SECRET~~ C[redacted] - CONTROL NO. [redacted]

[redacted] FRAMES 1-6 OF EACH UP OMITTED [redacted] 90 PERCENT = 2.2

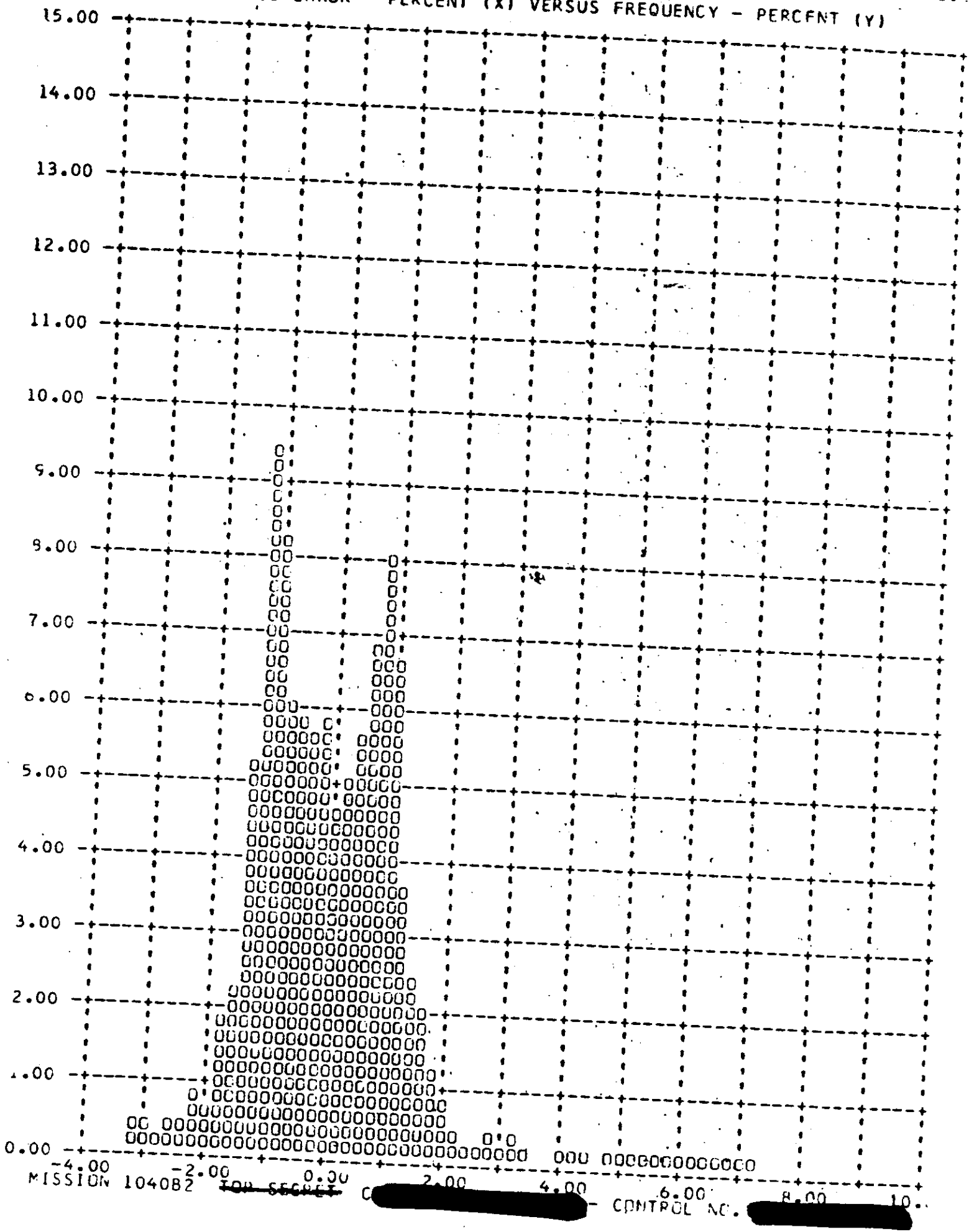


MISSION 1040BI ~~TOP SECRET~~ C[redacted] CONTROL NO. [redacted]

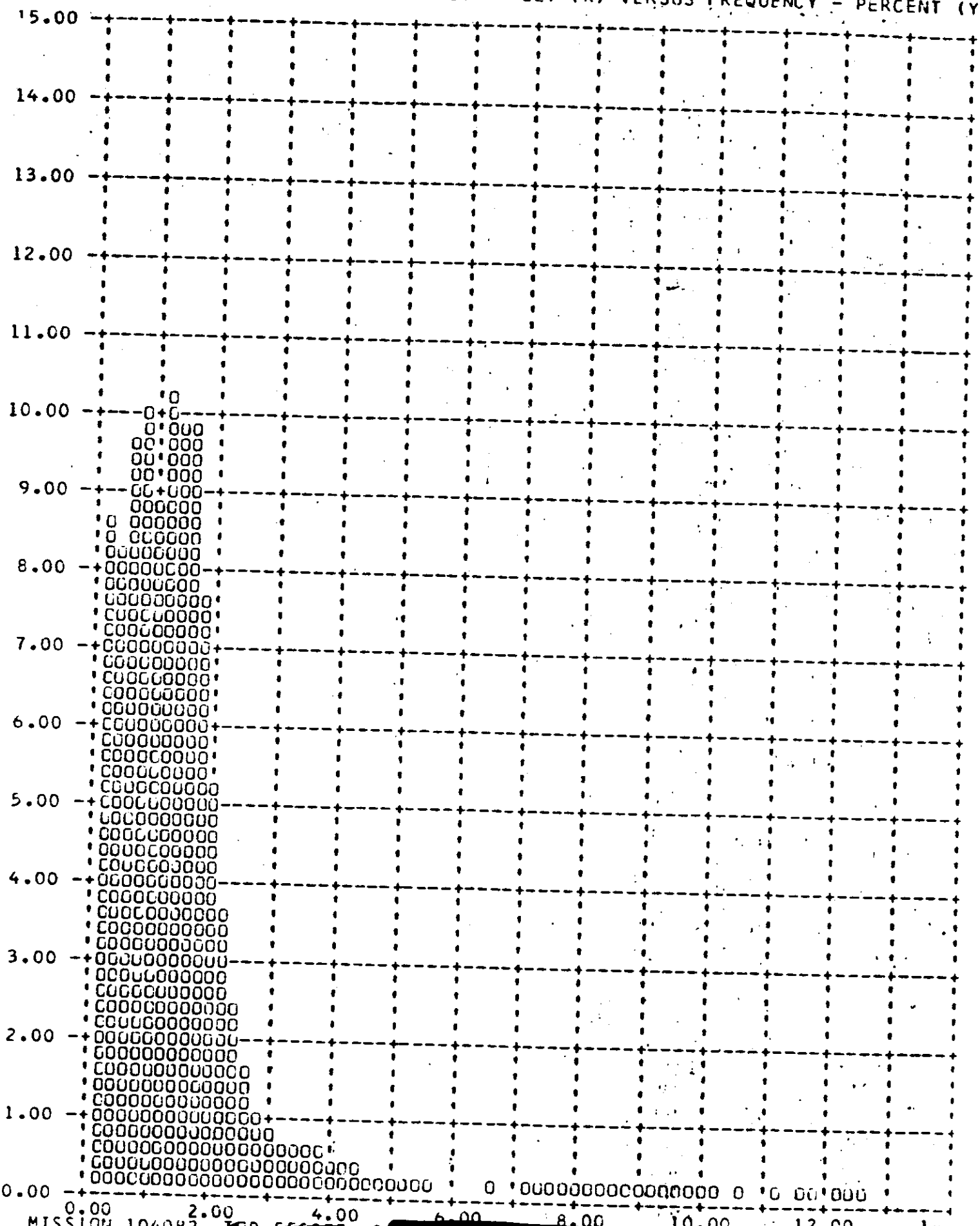
[redacted] FRAMES 1-6 OF EACH UP OMITTED 90 [redacted]



[redacted] FRAMES 1-5 OF EACH UP OMITTED [redacted] 90 PERCENT = 1.0



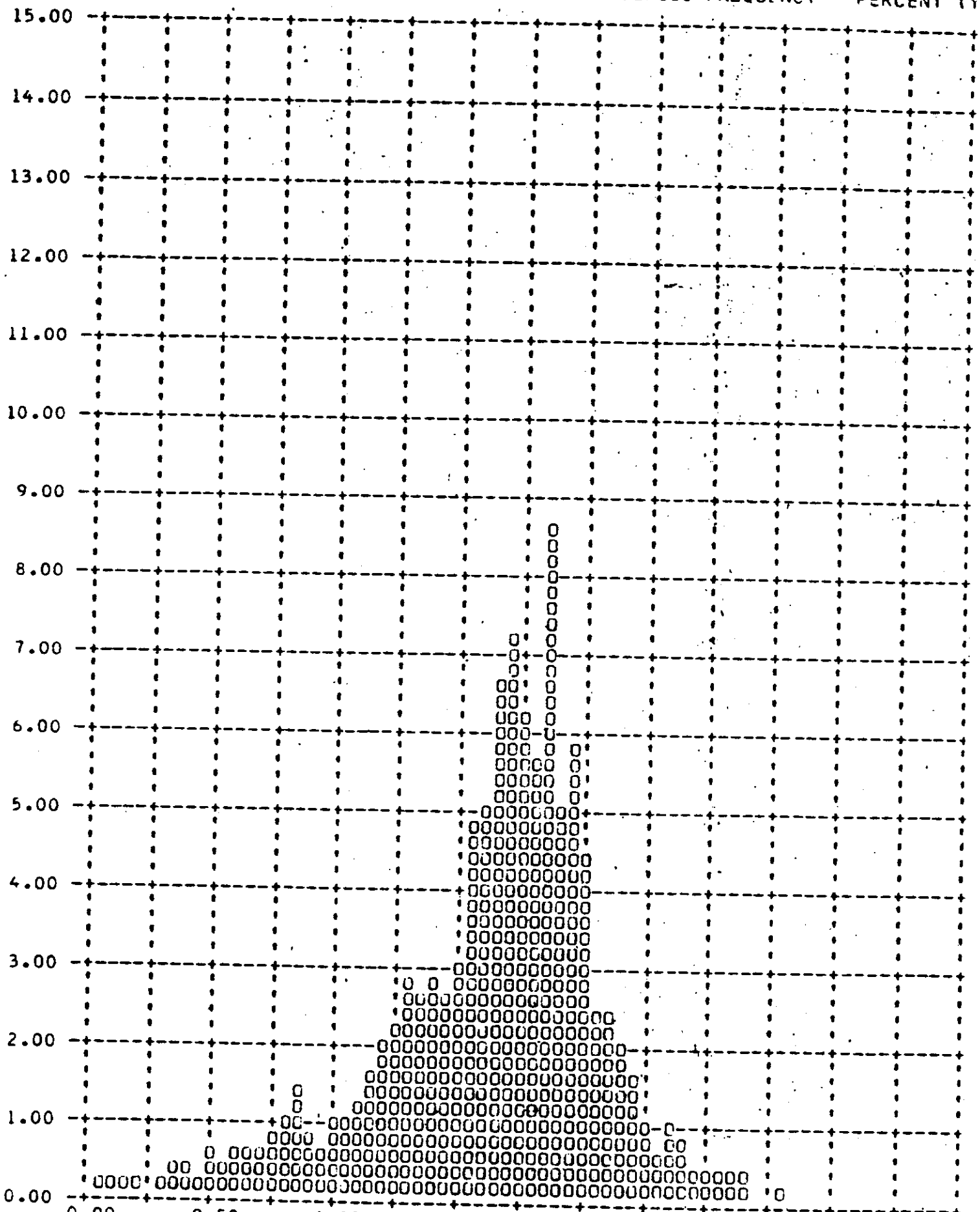
[redacted] FRAMES 1-6 OF EACH OP LIMITED [redacted] 90 PERCENT = 2.2



MISSION 104082 ~~TOP SECRET~~ C[redacted] CONTROL NO. [redacted]

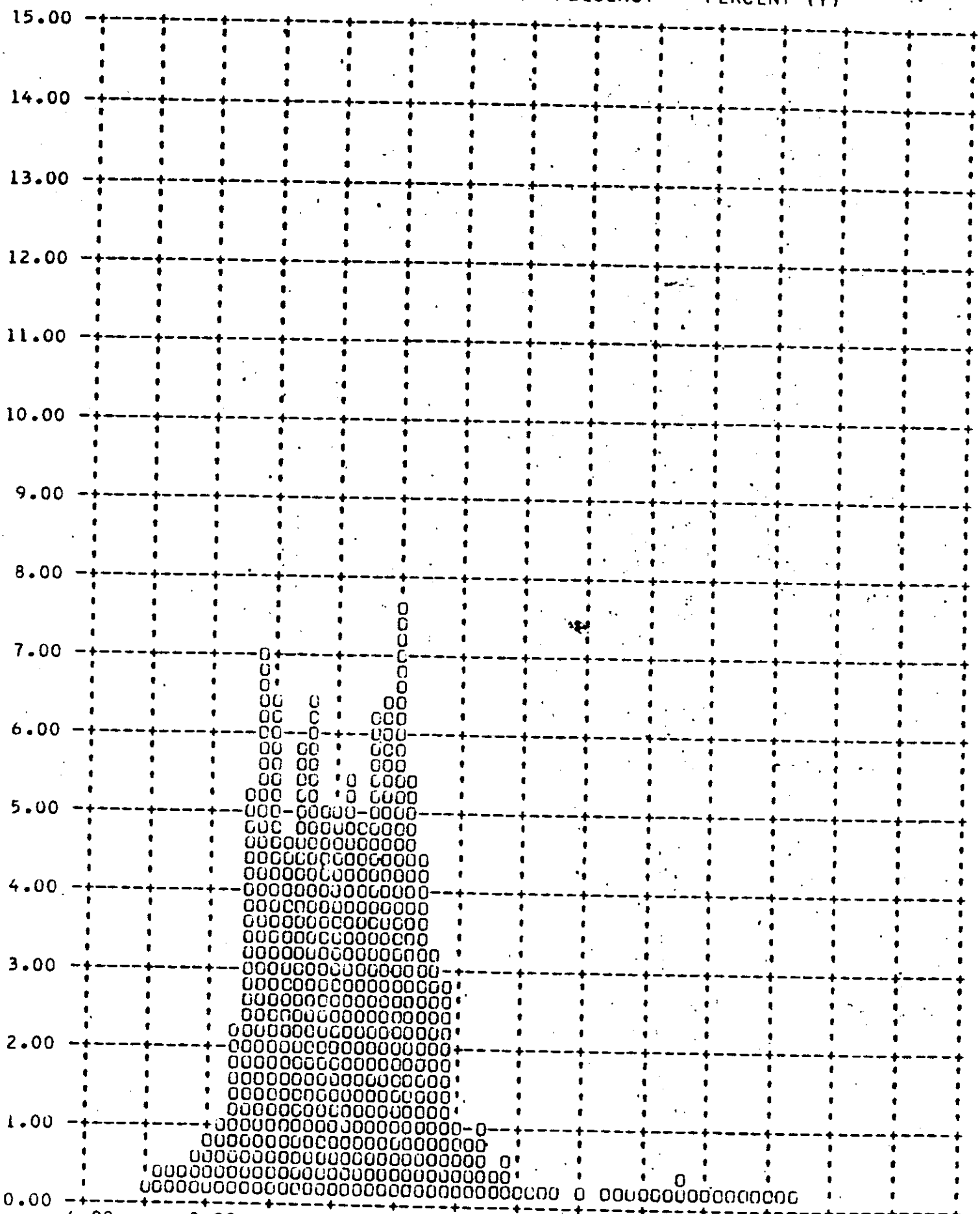
[redacted] FRAMES 1-8 OF EACH OF OMITTED . 90 PERCENT = [redacted] 2.0

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



MISSION 104082 ~~TOP SECRET~~ C[redacted] - CONTROL NO. [redacted]

[redacted] FRAMES 1-6 OF EACH UP UMITTED 90 PERCENT = [redacted]



[redacted]

SECTION 13

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 1040-1		Mission 1040-2	
Emulsion	B + F Density	Radiation	B + F Density	Radiation
Type 3401	0.18	0.5 R	0.22	1.0 R
Royal X Pan	0.21	0.35 R	0.26	0.5 R

These levels are below that which will degrade the photography.

[redacted]

SECTION 14

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 Tables 14-1.

Panoramic Camera Reliability

Sample Size - 175 opportunities to operate.
One failure
Assume - 3000 cycles per camera per mission.
Estimated Reliability = 99.0% at 50% confidence level

Main Camera Door Reliability

Sample Size - 57 vehicles x 2 doors = 114 opportunities to operate.
Estimated Reliability = 99.4% at 50% confidence level

[redacted]

[redacted]

Payload Command and Control

Sample Size - 9840 hours operation in sample
Two failures
Estimated Reliability = 97.4% at 50% confidence level

Payload Clock Reliability

Sample Size - 9840 hours operation in sample
No failures
Estimated Reliability = 99.3% at 50% confidence level

Estimated Reliability of Payload Functioning on orbit = 97.5% at 50% confidence level

Recovery System Reliability

79 opportunities to recover
1 failure - improper separation due to water seal - cutter failure
Estimated Reliability - 97.9 % at 50% confidence level

Stellar-Index Camera Reliability

Sample begins with J5
Sample size = 25,080 cycles
Four failures
Estimated Reliability = 92.4% at 50% confidence level

Horizon Camera Reliability

Sample begins with J5 - 100,500 cycles
Estimated Reliability of Single Camera = 99.0% at 50% confidence level
Estimated Reliability of Four Horizon Cameras at a Parallel Redundant System = 99.9% at 50% confidence level.

[redacted]

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
	OPERATIONS	DOORS	HOURS	HOURS		CAPSULES	CYCLES	CYCLES
9038 to 1008	60 / 1 / 97.3	52 / 0 / 98.6	3124 / 0 / 98.0	3124 / 0 / 98.0	96.1	18 / 1 / 90.7	3400 / 3 / 83.1	12,000 / 0 / 91.7
1009	64 / 1 / 97.4	64 / 0 / 98.7	3216 / 0 / 98.0	3216 / 0 / 98.0	96.2	20 / 1 / 91.8	4250 / 3 / 89.3	15,000 / 0 / 93.4
1010	68 / 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	68 / 0 / 98.9	3600 / 0 / 98.1	3600 / 0 / 98.1	96.8	24 / 1 / 93.0	5525 / 0* / 94.7	21,000 / 0 / 95.2
1012	76 / 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	3940 / 1 / 95.9	3940 / 0 / 98.3	96.0	28 / 1 / 94.0	5950 / 0 / 95.1	26,500 / 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 / 0* / 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	98 / 1 / 98.3	72 / 0 / 99.1	4920 / 1 / 96.8	4920 / 0 / 98.7	96.7	38 / 1 / 95.6	8980 / 1 / 92.3	40,500 / 0 / 97.5
1019	102 / 1 / 98.4	74 / 0 / 99.1	5136 / 1 / 96.9	5136 / 0 / 98.7	96.8	39 / 1 / 95.8	8975** / 1 / 91.5	43,500 / 0 / 97.6

* DESIGN FIX NEGATED PREVIOUS FAILURE CONSIDERATIONS

** 1019 SAMPLE OUT OF SEQUENCE

TABLE 14-1

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 / 98.5	78 / 0 / 99.1	5544 / 1 / 97.1	5544 / 0 / 98.9	96.9	43 / 1 / 96.1	10,680 / 2 / 89.9	48,000 / 0 / 97
1021	104 / 1 / 98.5	76 / 0 / 99.1	5376 / 1 / 97.0	5376 / 0 / 98.8	96.9	41 / 1 / 96.0	9830 / 2 / 89.1	46,500 / 0 / 97
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
1023	114 / 1 / 98.6	82 / 0 / 99.2	6000 / 2 / 95.8	6000 / 0 / 98.9	96.2	47 / 1 / 96.5	12,190 / 2 / 91.1	54,000 / 0 / 98
1024	116 / 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
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
1026	126 / 1 / 98.7	88 / 0 / 99.2	6720 / 2 / 96.3	6720 / 0 / 99.0	96.5	53 / 1 / 96.8	14,740 / 2 / 92.6	63,000 / 0 / 98
1027	128 / 1 / 98.7	90 / 0 / 99.2	6744 / 2 / 96.3	6744 / 0 / 99.0	96.5	55 / 1 / 97.0	15,165 / 3 / 90.0	64,500 / 0 / 98
1028	132 / 1 / 98.7	92 / 0 / 99.2	6960 / 2 / 96.4	6960 / 0 / 99.0	96.7	57 / 1 / 97.1	16,015 / 3 / 90.7	67,500 / 0 / 98
1029	136 / 1 / 98.8	94 / 0 / 99.3	7200 / 2 / 96.5	7200 / 0 / 99.1	96.8	59 / 1 / 97.1	16,580 / 4 / 88.7	70,500 / 0 / 98
1030	140 / 1 / 98.9	96 / 0 / 99.3	7440 / 2 / 96.6	7440 / 0 / 99.1	96.9	61 / 1 / 97.2	17,430 / 4 / 89.3	73,500 / 0 / 98
1031	143 / 1 / 98.8	98 / 0 / 99.3	7704 / 2 / 96.7	7704 / 0 / 99.1	96.9	63 / 1 / 97.3	18,280 / 4 / 89.7	76,500 / 0 / 98

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
1033	147 / 1 / 98.9	100 / 0 / 99.3	7968 / 2 / 96.8	7968 / 0 / 99.2	97.1	65 / 1 / 97.4	19,330 / 4 / 90.2	79,500 / 0 / 98.7
1034	181 / 1 / 98.8	102 / 0 / 99.3	8208 / 2 / 96.9	8208 / 0 / 99.2	97.2	67 / 1 / 97.5	19,960 / 4 / 90.5	82,500 / 0 / 98.7
1035	159 / 1 / 99.0	106 / 0 / 99.4	8760 / 2 / 97.1	8760 / 0 / 99.2	97.4	71 / 1 / 97.6	21,680 / 4 / 91.3	88,500 / 0 / 98.8
1036	165 / 1 / 98.9	104 / 0 / 99.3	8520 / 2 / 97.0	8520 / 0 / 99.2	97.3	69 / 1 / 97.6	20,830 / 4 / 90.9	85,500 / 0 / 98.8
1037	163 / 1 / 99.0	108 / 0 / 99.4	9048 / 2 / 97.2	9048 / 0 / 99.3	97.4	73 / 1 / 97.7	22,530 / 4 / 91.6	91,500 / 0 / 98.9
1038	167 / 1 / 99.0	110 / 0 / 99.4	9336 / 2 / 97.3	9336 / 0 / 99.3	97.5	75 / 1 / 97.8	23,180 / 4 / 91.9	94,500 / 0 / 98.9
1039	171 / 1 / 99.0	112 / 0 / 99.4	9600 / 2 / 97.4	9600 / 0 / 99.3	97.6	77 / 1 / 97.8	24,230 / 4 / 92.1	97,500 / 0 / 98.9
1040	175 / 1 / 99.0	114 / 0 / 99.4	9840 / 2 / 97.4	9840 / 0 / 99.3	97.6	79 / 1 / 97.9	25,080 / 4 / 92.4	100,500 / 0 / 99.0

SECTION 15

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 15-1 through 15-3.

The summary data was started with Mission 1004 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, 1005 and 1032 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-05	1174	2/15/64	2138 Z	74.9	99.9	29.0	49 / 112	124	0.250	W-21	125	0.250	W-21	D29/29/29 / D42/42/37
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	D48/47/48 / D49/53/42
1007	J-07	1809	6/19/64	2318 Z	85.0	99.2	41.5	65 / 128	144	0.250	W-25	145	0.200	W-21	D43/43/43 / D54/56/51
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	D48/45/48 / D33/28/33
1009	J-12	1605	8/7/64	2316 Z	80.1	99.6	39.5	49 / 128	154	0.200	W-21	155	0.200	W-21	D56/54/56 / D38/38/34
1010	J-11	1178	9/14/64	2254 Z	84.9	97.4	42.8	65 / 144	152	0.175	W-21	153	0.175	W-21	D41/41/41 / D44/46/44
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	D30/30/30 / D57/57/67
1012	J-13	1179	10/17/64	2202 Z	75.0	98.2	32.4	49 / 81	156	0.200	W-21	157	0.200	W-21	D51/51/47 / D46/52/55
1013	J-15	1173	11/12/64	2130 Z	80.0	100.0	25.0	65 / 81	168	0.225	W-81	169	0.225	W-81	D52/49/55 / D47/48/54
1014	J-16	1180	11/18/64	2086 Z	70.0	103.2	65.6	81 / 145	162	0.250	W-25	159	0.175	W-21	D53/59/49 / D50/44/48
1015	J-17	1807	12/15/64	2110 Z	79.9	99.7	21.6	81 / 175	138	0.250	W-25	139	0.175	W-21	D61/61/61 / D58/58/58
1016	J-18	1808	1/18/65	2101 Z	79.9	99.4	30.2	81 / 129	172	0.250	W-25	173	0.175	W-21	D55/55/50 / D59/50/59
1017	J-14	1611	2/25/65	2144 Z	75.0	97.2	25.9	81 / 145	140	0.250	W-25	165	0.175	W-21	D21/21/21 / D60/81/1
1018	J-19	1612	3/25/65	2111 Z	96.0	100.2	40.3	66 / 99	122	0.250	W-25	123	0.175	W-21	D20/20/20 / D22/22/22
1019	J-04	1614	4/29/65	2144 Z	85.0	99.1	27.1	80 / —	118	0.250	W-25	119	0.175	W-21	D39/39/35 / D19/18/19
1020	J-20	1613	6/9/65	2158 Z	75.1	97.1	40.6	97 / 113	136	0.250	W-25	137	0.175	W-21	D67/65/80 / D62/65/65
1021	J-21	1615	5/18/65	1803 Z	75.0	109.2	24.3	81 / 161	166	0.175	W-21	167	0.250	W-25	D63/69/69 / D25/27/25
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	D65/77/70 / D24/24/24
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	D17/19/82 / D66/75/72
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	D69/72/84 / D64/82/66
1025	JX-28	1616	10/5/65	1746 Z	75.0	112.9	44.3	81 / 161	142	0.175	W-21	127	0.175	W-21	D73/78/88 / D70/88/81
1026	J-25	1620	10/28/65	2117 Z	75.0	93.0	17.0	81 / 160	174	0.225	W-25	175	0.150	W-21	D75/92/93 / D72/89/85
1027	JX-27	1621	12/9/65	2110 Z	80.0	97.4	17.3	17 / 33	164	0.250	W-25	163	0.175	W-21	D71/87/87 / D68/74/83
1028	J-26	1610	12/24/65	2106 Z	80.0	97.6	28.4	81 / 144	176	0.250	W-25	177	0.175	W-21	D77/91/97 / D74/76/95

TABLE 15-1

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
1029	J-27	1623	2/2/66	2132 Z	75.1	99.5	22.5	81 / 160	178	0.275	W-25	179	0.175	W-21	D79/94/91 / D76/70/94
1030	J-29	1622	3/9/66	2202 Z	75.0	97.5	18.7	81 / 159	182	0.275	W-25	183	0.175	W-21	D94/100/107 / D82/195/102
1031	J-30	1627	4/7/66	2202 Z	75.1	104.5	23.3	113 / 177	184	0.225	W-23A	185	0.150	W-21	D83/101/89 / D86/106/86
1032	J-28	1625	5/3/66	1925 Z	—	—	—	— / —	180	0.150	W-21	181	0.150	W-21	D81/97/101 / D80/73/100
1033	J-33	1630	5/24/66	0213 Z	66.1	102.0	60.7	82 / 178	194	0.200	W-21	195	0.200	W-21	D91/105/109 / D84/102/75
1034	J-31	1628	6/21/66	2131 Z	80.1	105.4	18.2	81 / 161	186	0.200	W-23A	187	0.150	W-21	D85/109/76 / D87/107/105
1035	J-36	1629	9/20/66	2114 Z	85.0	99.5	29.1	81 / 160	188	0.225	W-23A	189	0.175	W-21	D95/112/113 / D96/104/116
1036	J-32	1631	8/9/66	2046 Z	100.0	102.4	22.9	115 / 212	190	0.200	W-23A	191	0.150	W-21	D89/110/111 / D88/108/106
1037	J-38	1632	11/8/66	1957 Z	100.0	91.8	14.5	66 / 197	198	0.225	W-23A	199	0.175	W-21	D101/128/128 / D106/136/134
1038	J-34	1629	1/14/67	2128 Z	80.1	96.9	29.2	81 / 193	192	0.225	W-23A	193	0.175	W-21	D93/86/112 / D90/111/108
1039	J-39	1635	2/22/67	2202 Z	80.0	97.0	30.2	81 / 177	206	0.225	W-23A	207	0.175	W-21	D103/131/132 / D100/125/125
1040	J-35	1636	3/30/67	1854 Z	85.1	99.7	28.3	81 / 145	196	0.175	W-21	197	0.225	W-23A	D78/95/96 / D92/79/110

TABLE 15-1

REC/JSN 1/68

PERFORMANCE SUMMARY

MISSION NUMBER	CAMERA	SERIAL NUMBER	M I P VALUE	VISUAL RES	AFSPPL MTF/AIM SLIT (μ)	AFSPPL MTF/AIM AVERAGE	[redacted] MTF/AIM SLIT (μ)	[redacted] MTF/AIM AVERAGE	[redacted] SLIT (μ)	[redacted] AVERAGE ALL	[redacted] 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
1004-1	FWD	124	85	78	350	97	43	109	320	115	127	0.45	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	76		88		113		82	90	0.74	0.50	0.91	44.0	30.0	29.0	4.9	6.8	6.5
	AFT			73		83		106		89	95									
1006-1	FWD	148	90	78	350	65	43	88	320	84	97	0.41	0.42	1.14	26.8	28.5	27.8	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	7.0
	AFT			83		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	5.1	9.4
	AFT			86		63		83		97	110							4.8	2.1	7.6
1007-2	FWD	145	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	0.39	0.94	43.8	23.9	29.6	2.9	4.9	5.9
	AFT			76		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	0.65	0.65	0.71	29.2	22.7	27.6	3.3	5.5	5.8
	AFT			89		85				79	83									
1009-2	FWD	155	85	94		85				78	84	0.48	0.65	0.59	33.6	23.9	27.2	2.6	4.9	5.9
	AFT			87		87				72	79									
1010-1	FWD	152	85	90	360	90	80	88	80	87	96	0.93	0.50	0.87	39.1	23.6	30.8	4.5	2.3	4.4
	AFT			88		86		80		92	103									
1010-2	FWD	153	85	92		81		82		82	93	0.59	0.70	1.21	46.4	23.6	30.7	4.6	7.6	3.8
	AFT			90		82		85		87	98									
1011-1	FWD	160	90	84	350	76	80	96	80	78	87	0.77	0.39	0.97	43.1	28.9	31.1	2.3	5.3	5.6
	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	—	1.5	4.8	—
	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	6.9	3.3	5.9
	AFT			89				96		88	98									
1013-1	FWD	158	85	89	—	—	80	94	80	85	99	0.64	0.32	1.34	36.9	29.0	32.3	3.7	7.8	8.3
	AFT	159		77				97		81	103	0.64	0.32	1.34	36.9	29.0	32.3	4.5	9.6	8.2
1014-1	FWD	162	80	87	—	—	80	78	80	74	86	0.82	0.41	1.46	35.0	36.1	36.5	2.2	6.2	8.8
	AFT			83				80		95	107	0.62	0.41	1.44	34.8	36.0	36.3	3.3	2.8	6.3
1014-2	FWD	139	80	83				75		70	77	1.06	0.55	—	38.4	36.4	—	1.4	8.4	—
	AFT			86				84		80	88	1.06	0.59	—	38.1	66.0	—	3.2	2.2	—
1015-1	FWD	138	85	87	—	—	80	76	80	90	—	0.65	0.38	0.53	47.0	29.4	38.2	5.0	5.5	7.8
	AFT			87				73		97		0.64	0.39	0.53	46.9	29.2	38.2	6.3	3.4	5.5
1015-2	FWD	141	85	83				72		89		0.50	0.61	0.64	39.1	27.1	36.2	3.2	6.8	7.5
	AFT			82				72		90		0.50	0.61	0.64	39.1	27.0	36.3	3.3	4.6	5.3
1016-1	FWD	132	85	86	—	—	80	58	80	81	—	0.72	0.83	2.01	48.9	30.2	40.4	2.0	5.9	10.3
	AFT			83				61		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				55		92		0.85	0.93	2.19	42.2	27.2	39.9	1.8	4.9	8.0
	AFT			91				56		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	57	80	78	86	0.49	0.76	2.50	35.5	32.2	38.4	3.3	9.8	11.6
	AFT			75				70		94	107	0.49	0.76	2.49	35.3	32.0	38.5	4.3	8.3	8.1
1017-2	FWD	165	85	85				65		80	94	0.89	0.45	—	36.5	34.0	—	1.8	6.2	—
	AFT			85				69		86	101	0.69	0.45	—	36.3	33.8	—	2.3	5.3	—
1018-1	FWD	122	85	79	—	—	80	70	80	82	92	0.91	0.48	—	47.4	36.7	—	3.4	5.6	—
	AFT			77				74		96	109	0.90	0.47	—	48.2	36.2	—	3.2	3.7	—
1018-2	FWD	123	85	84				75		77	89	0.84	0.63	—	34.7	30.7	—	3.1	5.6	—
	AFT			88				71		91	103	0.85	0.63	—	34.8	30.7	—	2.8	4.1	—

REC/JOM 4/68

TABLE 15-2

PERFORMANCE SUMMARY

MISSION NUMBER	CAMERA	SERIAL NUMBER	M T F VALUE	VISUAL RES.	AFSPPF MTF/AIM SLIT (μ)	AFSPPF MTF/AIM AVERAGE	[redacted] MTF/AIM SLIT (μ)	[redacted] MTF/AIM AVERAGE	[redacted] MTF/AIM SLIT (μ)	[redacted] MTF/AIM AVERAGE ALL	[redacted] MTF/AIM 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	61	—	—	80	76	80	88	104	0.43	0.36	0.97	31.6	34.7	33.0	3.3	9.3	9.1
	AFT	119		99				63		87	101	0.44	0.37	0.96	31.6	34.9	38.1	3.8	8.0	8.5
1020-1	FWD	138	80	88				69		78	90	0.46	0.35	0.78	37.4	31.8	26.7	5.4	5.6	8.4
	AFT			89	—	—	80	82	80	94	105	0.46	0.35	0.78	37.4	31.8	26.7	5.3	4.2	8.9
1020-2	FWD	137		—				—		—	—	0.41	0.17	1.06	42.6	23.8	42.5	3.5	6.4	7.6
	AFT			—				—		—	—	0.41	0.17	1.06	42.6	23.8	42.5	3.4	4.5	2.8
1021-1	FWD	166	85	88				77		86	99	0.55	0.37	0.81	34.9	32.6	26.2	2.7	8.8	8.0
	AFT			90	—	—	80	90	80	98	109	0.55	0.38	0.81	34.8	33.0	26.3	5.4	8.6	5.5
1021-2	FWD	167	85	85				74		88	112	0.59	0.65	—	44.7	50.6	—	3.1	9.2	—
	AFT			74				62		—	—	—	—	—	—	—	—	—	—	—
1022-1	FWD	168	85	88				66		78	91	0.47	0.51	0.89	28.3	27.1	23.8	3.5	9.8	8.6
	AFT			91	—	—	80	83	80	101	111	0.47	0.51	0.90	27.9	26.6	23.8	3.0	8.2	6.1
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	5.9
1023-1	FWD	170	85					94		97	110	0.49	0.33	0.50	33.0	28.7	23.5	3.4	4.0	6.4
	AFT			—	—	—	80	87	80	85	101	0.49	0.33	0.50	32.9	28.7	23.5	3.5	2.7	4.3
1023-2	FWD	171	85					71		76	87	0.42	0.36	0.53	29.7	21.0	28.6	2.4	3.9	6.3
	AFT							89		68	78	0.43	0.37	0.53	29.6	21.3	28.6	2.5	2.7	4.2
1024-1	FWD	172	85					79		90	102	0.42	0.25	0.62	32.2	24.9	30.5	2.6	5.9	6.8
	AFT			—	—	—	80	98	80	94	105	0.42	0.25	0.62	32.2	24.9	30.4	2.1	3.8	4.5
1024-2	FWD	173	85					86		89	101	0.38	0.31	0.93	30.4	24.5	36.4	5.5	4.7	5.4
	AFT							95		100	114	0.36	0.31	0.93	30.6	23.6	36.4	5.1	3.3	3.6
1025-1	FWD	142	85					87		80	97	0.50	0.41	0.85	28.1	28.7	25.9	2.0	3.9	6.7
	AFT			—	—	—	80	97	80	101	114	0.51	0.42	0.85	28.6	29.7	25.7	3.2	2.8	6.8
1025-2	FWD	127	85					85		98	107	0.52	0.44	0.82	28.0	26.1	29.0	1.7	4.7	6.9
	AFT							91		89	103	0.52	0.44	0.82	28.1	26.0	29.0	1.8	6.7	6.9
1026-1	FWD	174	85					76		80	92	0.65	0.24	0.70	37.9	33.2	28.5	6.1	13.5	6.2
	AFT			—	—	—	80	88	80	98	113	0.65	0.24	0.70	37.9	33.2	28.5	6.1	9.1	4.1
1026-2	FWD	175	85					85		92	104	0.55	0.56	0.87	41.1	46.5	30.8	6.1	5.5	6.7
	AFT							93		90	103	0.59	0.65	0.88	43.3	50.0	27.7	6.7	3.3	4.5
1027-1	FWD	164	85	—	—	—	80	69	80	80	—	0.51	0.37	0.74	47.2	25.5	26.4	4.7	10.5	7.2
	AFT	163						79		92		0.51	0.37	0.74	47.3	25.2	26.2	3.8	6.0	5.2
1028-1	FWD	176	85					81		89		0.52	0.37	0.50	36.6	28.0	30.5	3.9	4.8	8.0
	AFT			—	—	—	80	92	80	93	—	0.52	0.37	0.50	36.6	28.0	30.5	3.1	4.0	5.6
1028-2	FWD	177	85					88		87		0.76	0.52	—	42.7	25.7	—	3.2	4.2	—
	AFT							77		84		0.76	0.52	—	42.5	25.6	—	2.9	3.3	—
1029-1	FWD	178	85			[illegible] 89		[illegible] 91		77		0.67	0.34	0.77	29.1	31.3	34.4	2.9	7.8	7.4
	AFT			—	80	91	80	95	80	73	—	0.68	0.33	0.77	28.5	30.8	34.6	4.6	3.3	4.8
1029-2	FWD	179	85			83		82		77		0.64	0.48	0.44	38.8	32.5	25.7	2.3	7.5	7.5
	AFT					91		94		81		0.65	0.48	0.44	37.5	32.1	25.7	3.6	2.9	4.9
1030-1	FWD	182	85			95		76		66		0.67	0.25	0.89	29.6	22.7	36.1	3.9	8.9	8.6
	AFT			—	80	74	80	79	80	77	—	0.67	0.25	0.89	29.6	22.8	35.9	5.4	5.1	5.6
1030-2	FWD	183	88			77		81		71		0.70	0.27	0.87	28.4	22.7	36.3	4.9	11.2	8.6
	AFT					91		74		71		0.70	0.26	0.87	28.2	21.9	36.3	5.0	6.6	5.5
1031-1	FWD	184	85			85		76		80	—	0.50	0.47	0.96	16.2	17.3	28.6	6.1	13.8	6.4
	AFT			—	80	57	80	71	80	66	—	0.54	0.41	0.91	18.1	18.7	22.8	6.0	12.0	5.6
1031-2	FWD	186	85			91		94		74		0.57	0.20	0.75	19.0	19.3	15.7	5.4	10.3	4.9
	AFT					—		—		—		—	—	—	—	—	—	—	—	—
1033-1	FWD	194	85			77		94		87		0.11	0.33	0.80	11.3	34.9	27.3	3.5	8.2	6.2
	AFT			—	80	67	80	93	80	72	—	0.15	0.27	0.39	8.2	59.6	18.8	4.9	8.1	5.6
1033-2	FWD	195	85			75		90		98		0.21	0.24	1.09	22.3	49.3	17.5	2.6	5.8	6.9
	AFT					93		92		73		0.20	0.24	1.08	22.3	50.7	17.4	2.9	7.3	6.7

TABLE 15-2

PERFORMANCE SUMMARY

MISSION NUMBER	CAMERA	SERIAL NUMBER	M.T.F. VALUE	AFSPPF MTF/AIM			90% ATTITUDE ERROR (°)			90% ATTITUDE RATES (°/SEC)			90% V/H ERROR (%)	90% RESOLUTION LIMIT (FEET)		I.M.C. ERROR
				AVERAGE (LP/MM)	SLIT (μ)	AVERAGE (LP/MM)	PITCH	ROLL	YAW	PITCH	ROLL	YAW		ALONG TRACK	CROSS TRACK	
1034 - 1	FWD	186 / 187	80	76	80	81	0.20	0.19	0.99	19.3	20.4	24.9	13.0	17.6	9.9	—
	AFT			93		90	0.20	0.19	0.99	19.3	20.4	24.9	13.2	13.6	4.8	—
1034 - 2	FWD		80	74		89	0.34	0.36	0.33	21.1	28.9	18.2	8.7	10.4	7.1	—
	AFT			69		86	0.34	0.36	0.33	21.1	29.0	18.2	8.9	9.0	6.3	—
1035 - 1	FWD	188 / 189	85	86	80	—	0.16	0.55	2.39	18.9	27.9	33.9	4.0	4.8	3.7	4.0
	AFT			80			0.17	0.54	2.43	19.3	23.4	32.2	4.1	3.7	2.4	4.1
1035 - 2	FWD		85	81			0.16	0.50	3.02	18.4	30.1	27.6	3.2	4.0	3.6	3.2
	AFT			82			0.17	0.51	3.02	19.9	24.7	26.3	3.4	3.3	2.4	3.4
1036 - 1	FWD	190 / 191	85	89	80	—	0.76	0.96	0.60	31.2	25.6	29.5	3.4	5.1	6.8	—
	AFT			84			0.76	0.98	0.60	31.1	25.5	29.4	3.5	3.5	5.1	—
1036 - 2	FWD		86	73			0.94	0.70	0.40	33.0	29.7	23.3	3.3	3.5	6.8	—
	AFT			84			0.94	0.70	0.40	32.9	29.7	23.3	3.4	2.7	4.9	—
1037 - 1	FWD	198 / 199	85	80	80	—	0.25	0.25	1.50	22.8	40.0	29.3	9.5	10.1	8.0	9.8
	AFT			71			0.25	0.27	1.51	26.7	36.9	32.4	10.1	8.0	8.1	10.3
1037 - 2	FWD		85	88			0.24	0.30	1.17	26.5	32.5	26.2	6.3	6.6	7.5	8.5
	AFT			81			0.27	0.32	1.18	33.8	36.8	33.4	8.6	6.4	5.9	7.0
1038 - 1	FWD	192 / 193	80	83	80	—	0.22	0.25	2.98	18.7	33.7	39.9	5.6	4.1	3.7	3.5
	AFT			78			0.27	0.24	2.99	41.8	27.2	34.4	3.4	3.5	2.5	3.7
1038 - 2	FWD		80	63			0.39	0.51	2.87	20.0	48.7	27.8	3.4	3.6	3.8	3.1
	AFT			77			0.39	0.51	2.90	30.4	28.3	27.3	3.4	3.6	2.4	3.9
1039 - 1	FWD	206 / 207	85	59	80	—	0.21	0.43	3.03	19.0	27.8	39.2	9.1	9.2	4.6	8.2
	AFT			71			0.20	0.41	3.05	37.5	25.0	28.5	8.2	4.8	3.5	8.2
1039 - 2	FWD		88	71			0.30	0.54	2.50	33.1	30.2	26.0	8.6	5.4	5.4	4.7
	AFT			65			0.34	0.53	2.52	27.1	24.2	23.9	4.8	4.6	3.8	5.0
1040 - 1	FWD	196 / 197	85	84	80	—	0.33	0.66	2.99	26.06	22.26	29.41	2.67	3.98	2.19	2.07
	AFT			68			0.30	0.56	3.00	22.12	23.22	28.59	2.16	1.99	2.53	2.10
1040 - 2	FWD		86	81			0.32	0.49	2.96	27.62	30.00	36.58	1.66	2.20	2.09	1.72
	AFT			75			0.29	0.45	2.96	22.22	26.47	28.74	2.72	2.54	2.28	2.54

TABLE 15-2

EXPOSURE-PROCESSING SUMMARY

SSION UMBER	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 (%)	CLOUD 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	0.28	1.92	0.71	0.61	0.60	2.15	1.45	1.50	0.84	2.26	1.94	2.00	4	7	84	17	7	45
	AFT	23	70	21	152	0	92	8	26	55	19	3	87	10	0.15	1.70	0.66	0.60	0.39	2.26	1.46	1.45	0.80	2.30	1.96	2.02	1	13	70	14	3	45
1020-1	FWD	30	75	19	156	0	19	81	13	48	39	1	58	41	0.23	1.30	0.55	0.52	0.80	2.28	1.57	1.54	1.40	2.38	2.10	2.16	1	18	78	4	0	42
	AFT	29	75	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	6	0	42
1020-2	FWD	47	69	18	35	INSUFFICIENT DATA																										
	AFT	46	68	17	35																											
1021-1	FWD	15	66	-148	-23	0	68	32	14	39	47	1	52	47	0.25	1.90	0.64	0.58	0.74	2.18	1.50	1.50	0.97	2.36	1.92	2.00	5	9	72	11	3	35
	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	1.45	1.42	0.85	2.30	1.90	2.00	5	5	75	12	3	35
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	66	6	0	20
	AFT	13	52	-133	-41	0	100	0	53	25	22	0	50	50	0.33	1.38	0.76	0.76	0.70	2.30	1.52	1.50	1.30	2.36	1.94	1.94	6	0	71	21	1	20
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	35
	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	1.58	1.30	2.47	2.21	2.25	4	15	71	9	1	35
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	1.45	1.45	1.16	2.45	2.23	2.28	35	28	35	1	0	45
	AFT	28	74	19	152	0	100	0	10	44	46	0	53	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	45
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	35
	AFT	20	81	5	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	65	7	0	35
1023-2	FWD	29	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	35
	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	35
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	0.58	2.34	1.97	2.03	27	49	23	0	0	35
	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	35
1024-2	FWD	9	79	11	151	0	0	100	12	19	69	0	25	75	0.24	1.17	0.46	0.42	0.35	2.40	1.30	1.27	1.01	2.45	1.91	1.99	36	3	58	2	0	35
	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	25	50	5	0	35
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	35
	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	35
1025-2	FWD	0	56	-124	-31	0	71	29	3	42	55	0	56	44	0.18	1.22	0.45	0.39	0.26	2.24	1.32	1.33	0.63	2.29	1.78	1.89	29	24	45	4	0	22
	AFT	0	56	-122	-33	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	22
1026-1	FWD	0	57	23	135	0	4	96	0	21	79	0	24	76	0.20	1.26	0.38	0.33	0.31	2.27	1.22	1.22	0.40	2.28	1.77	1.87	57	13	28	2	0	45
	AFT	0	57	21	135	0	5	95	0	4	96	0	38	62	0.20	1.16	0.39	0.34	0.24	2.36	1.29	1.30	0.37	2.40	1.78	1.86	39	27	33	1	0	45
1026-2	FWD	1	72	8	84	0	0	100	1	5	94	0	5	95	0.19	1.32	0.36	0.30	0.23	2.17	1.05	1.02	0.48	2.24	1.63	1.70	78	2	19	1	0	50
	AFT	0	57	13	78	0	0	100	2	5	93	0	15	85	0.21	1.35	0.39	0.32	0.27	2.20	1.08	1.03	0.30	2.26	1.61	1.70	60	12	25	3	0	50
1027-1	FWD	3	63	26	110	0	0	100	0	0	100	0	3	97	0.26	1.54	0.52	0.46	0.58	2.38	1.45	1.52	0.71	2.39	2.03	2.10	38	2	58	4	0	50
	AFT	2	63	28	108	0	0	100	0	21	79	0	20	80	0.26	1.34	0.56	0.53	0.34	2.30	1.46	1.46	0.40	2.40	1.96	2.06	12	3	78	7	0	50
1028-1	FWD	3	73	15	135	0	4	96	0	4	96	0	11	89	0.22	1.08	0.37	0.32	0.40	2.32	1.42	1.42	0.62	2.30	1.77	1.83	65	6	28	1	0	30
	AFT	1	73	14	133	0	5	95	0	16	84	0	11	89	0.20	1.01	0.41	0.36	0.30	2.23	1.35	1.40	0.68	2.26	1.72	1.77	56	5	37	1	0	30
1028-2	FWD	2	81	5	48	0	3	97	1	9	90	0	15	85	0.23	0.98	0.40	0.35	0.37	2.20	1.36	1.38	0.30	2.33	1.72	1.77	59	3	37	1	0	30
	AFT	1	80	5	43	0	10	90	0	6	94	0	6	94	0.22	1.40	0.50	0.40	0.28	2.21	1.40	1.43	0.30	2.35	1.69	1.75	47	1	44	7	1	30
1029-1	FWD	3	63	18	130	0	8	92	1	16	83	0	14	86	0.25	1.80	0.64	0.54	0.50	2.30	1.72	1.76	0.48	2.39	2.03	2.08	20	0	62	14	3	35
	AFT	2	62	16	128	0	20	80	0	21	79	0	25	75	0.16	1.73	0.57	0.48	0.20	2.32	1.62	1.65	0.36	2.40	1.91	1.95	24	5	59	10	1	35
1029-2	FWD	0	80	4	146	0	4	96	2	28	70	0	20	80	0.22	1.68	0.54	0.45	0.31	2.35	1.52	1.59	0.45	2.40	1.88	2.00	33	5	50	11	2	25
	AFT	0	80	3	145	0	10	90	2	24	74	0	25	75	0.20	1.58	0.56	0.49	0.30	2.34	1.52	1.60	0.34	2.40	1.87	1.93	23	5	59	11	2	25
1030-1	FWD	5	63	27	130	0	58	42	5	32	63	1	52	47	0.30	1.86	0.81	0.75	0.61	2.34	1.75	1.79	0.78	2.38	2.01	2.08	4	3	61	28	5	40
	AFT	4	63	22	129	0	53	47	0	46	54	0	71	29	0.25	1.64	0.76	0.69	0.66	2.30	1.69	1.74	1.00	2.40	1.97	2.05	1	9	64	22	4	40
1030-2	FWD	3	78	10	158	1	42	57	0	33	67	0	70	30	0.24	1.65	0.64	0.57	0.76	2.26	1.69	1.70	1.17	2.36	1.99	2.05	5	9	71	13	2	30
	AFT	2	78	7	157	1	23	76	0	28	72	0	30	70	0.34	1.94	0.82	0.77	0.83	2.40	1.79	1.82	0.63	2.43	2.06	2.10	2	0	66	30	2	30
1031-1	FWD	17	70	20	140	0	99	1	18	34	48	0	51	49	0.25	1.67	0.71	0.63	0.72	2.33	1.74	1.80	1.36	2.43	2.10	2.18	2	8	70	17	3	45
	AFT	17	70	18	140	0	14	86	15	43	42	0	47	53	0.24	1.66	0.71	0.62	0.53	2.35	1.65	1.70	1.15	2.35	2.00	2.05	4	4	70	18	4	45
1031-2	FWD	19	82	6	67	0	99	1	8	53	39	0	60	40	0.26	1.88	0.80	0.72	0.46	2.84	1.73	1.82	1.40	2.57	2.05	2.09	0	5	64	22	9	40
	AFT	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1033-1	FWD	10	47	46	135	0	89	11	0	3	97	0	2	98	0.28	1.10	0.54	0.50	0.70	2.28	1.35	1.30	1.26	2.42	2.15	2.20	11	1	85	3	0	45
	AFT	11	47	45	135	0	10	90	3	8	89	0	3	97	0.30	1.20	0.53	0.50	0.64	2.32	1.40	1.40	0.84	2.44	2.13	2.20	8	1	90	1	0	45
1033-2	FWD	0	54	34	131	0	84	16	1	4	99	0	0	100	0.30	1.52	0.53	0.49	0.49	2.30	1.30	1.26	0.54	2.41	2.15	2.21	16	0	79	5	0	50
	AFT	0	54	34	131	0	86	14	0	5	95	0	1	99	0.26	1.38	0.54	0.50	0.50	2.32	1.25	1.20	0.38	2.44	2.15	2.24	12	0	84	4	0	50

TABLE 15-3

EXPOSURE - PROCESSING SUMMARY

MISSION NUMBER	CAMERA	SOLAR ELEVATION RANGE (°)		SOLAR AZIMUTH RANGE (°)		PREDICTED PROCESSING (%)			REPORTED PROCESSING (%)			COMPUTED PROCESSING (%)			TERRAIN D-MIN				TERRAIN D-MAX				CLOUD D-MAX				UNDER EXPOSED (%)	UNDER PROCESSED (%)	NOMINAL EXP & PRO (%)	OVER PROCESSED (%)	OVER EXPOSED (%)	CLOUD COVER (%)
		LOW	HIGH	LOW	HIGH	P	I	F	P	I	F	P	I	F	RANGE LOW	RANGE HIGH	MEAN	MEDIAN	RANGE LOW	RANGE HIGH	MEAN	MEDIAN	RANGE LOW	RANGE HIGH	MEAN	MEDIAN						
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	60	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	26	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	59	27	9	35
	AFT	-4	68	10	131	7	76	17	37	50	13	4	77	19	0.29	1.91	0.81	0.73	0.36	2.39	1.89	1.99	0.43	2.46	1.89	1.98	0	4	67	20	9	35
1006-1	FWD	38	56	52	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	56	52	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	1	58	40	1	60
1006-2	FWD	32	64	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	45
	AFT	32	64	36	147	2	98	0	35	40	25	21	54	25	0.28	1.34	0.62	0.58	0.65	2.19	1.48	1.47	1.56	2.80	2.12	2.16	0	11	77	9	3	45
1007-1	FWD	12	49	50	103	0	5	95	1	20	79	0	25	75	0.26	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	1.52	1.52	1.54	2.39	2.20	2.24	1	13	80	5	1	60
1007-2	FWD	32	57	43	112	9	25	76	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	65
	AFT	31	57	38	117	0	100	0	19	41	40	3	88	9	0.28	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	65
1008-1	FWD	30	51	50	102	0	100	0	4	32	64	1	35	64	0.32	1.48	0.86	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	51	50	102	0	100	0	4	27	69	0	34	66	0.32	1.57	0.71	0.69	0.81	2.21	1.57	1.58	1.08	2.37	2.21	2.24	1	1	84	13	0	45
1008-2	FWD	29	56	42	105	0	100	0	3	31	66	0	27	73	0.44	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	65
	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	65
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	1.53	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	1.53	1.53	1.06	2.45	2.25	2.30	4	4	74	17	0	55
	AFT	23	58	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	48
	AFT	18	47	45	83	0	21	79	0	19	81	0	16	84	0.27	1.25	0.57	0.52	0.76	2.42	1.45	1.41	0.96	2.46	2.20	2.26	9	4	81	6	0	48
1010-2	FWD	15	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	45
	AFT	15	52	38	76	0	50	50	0	23	77	0	25	75	0.20	1.48	0.59	0.56	0.50	2.40	1.47	1.45	1.29	2.48	2.18	2.22	13	3	76	8	0	45
1011-1	FWD	2	55	33	66	0	64	36	2	23	75	2	23	75	0.18	0.99	0.50	0.46	0.56	2.36	1.48	1.43	0.78	2.40	2.07	2.16	17	11	70	2	0	40
	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	2.16	3	7	81	8	0	40
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	60
	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	60
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	1.49	1.42	0.67	2.34	1.91	2.00	4	9	80	7	0	40
	AFT	0	57	34	105	0	77	23	3	15	82	0	10	90	0.30	1.27	0.68	0.62	0.48	2.33	1.55	1.58	0.70	2.38	1.98	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	0.56	0.36	0.52	2.29	1.56	1.59	1.21	2.41	2.03	2.10	7	13	76	4	0	47
	AFT	0	56	26	82	0	64	36	2	7	91	0	33	67	0.28	1.86	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	47
1014-1	FWD	0	59	15	71	0	21	79	1	38	61	0	63	37	0.17	0.99	0.40	0.36	0.25	2.36	1.40	1.42	1.01	2.36	1.94	2.05	27	33	39	1	0	40
	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	40
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	1.30	1.36	0.42	2.36	1.72	1.80	31	40	27	2	0	40
	AFT	0	78	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	45
	AFT	4	68	18	67	0	30	70	0	5	95	0	4	96	0.29	1.20	0.60	0.56	0.46	2.28	1.49	1.50	0.80	2.36	1.86	1.95	14	0	77	8	0	45
1015-2	FWD	0	80	-2	71	0	10	90	0	10	90	0	11	89	0.22	1.10	0.50	0.46	0.34	2.07	1.29	1.30	0.28	2.34	1.69	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	0.62	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	18	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	45
	AFT	4	69	18	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	45
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	1.45	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	0.26	2.32	1.52	1.60	0.30	2.49	1.75	1.82	23	5	65	6	1	40
1017-1	FWD	-11	50	24	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	1.82	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	1.82	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	30
	AFT	1	79	7	135	0	7	93	18	62	20	0	89	11	0.20	1.54	0.64	0.62	0.30	2.30	1.62	1.68	0.38	2.34	1.85	1.92	2	13	74	10	1	30
1018-1	FWD	8	77	13	134	0	0	100	9	63	28	1	83	16	0.19	1.48	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	5	72	23	0.18	1.36	0.62	0.58	0.68	2.20	1.68	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	0.50	2.24	1.50	1.54	0.90	2.26	1.85	1.91	1	31	58	9	4	45
	AFT	8	77	10	132	0	15	85	1	50	49	0	74	26	0.22	1.50	0.81	0.79	0.94	2.28	1.70	1.74	1.09	2.35	1.98	2.04	0	5	58	35	2	45

REC/JOW
4/65

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 (%)	NORMAL EXP. & PRO (%)	OVER PROCESSED (%)	OVER EXPOSED (%)	CLOUD 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						
1034-1	FWD	23	77	18	165	0	96	4	3	21	76	0	20	80	0.25	1.80	0.87	0.50	0.55	2.42	1.58	1.61	0.88	2.45	2.22	2.26	18	3	78	7	2	38
	AFT	23	77	10	168	0	55	45	8	31	67	0	18	84	0.25	1.63	0.66	0.50	0.41	2.35	1.38	1.60	0.97	2.44	2.19	2.25	18	4	77	7	0	35
1034-2	FWD	29	86	C	178	0	88	12	9	28	63	0	27	73	0.19	1.82	0.67	0.52	0.72	2.40	1.63	1.80	1.21	2.47	2.25	2.31	12	4	78	8	0	48
	AFT	30	86	0	178	0	41	59	6	37	57	0	34	66	0.26	1.60	0.54	0.49	0.70	2.32	1.59	1.62	1.08	2.48	2.22	2.29	12	10	73	4	2	45
1035-1	FWD	13	68	19	144	0	17	83	0	11	89	0	5	95	0.28	1.90	0.52	0.45	0.61	2.44	1.40	1.40	1.06	2.45	2.15	2.22	23	1	71	4	1	30
	AFT	13	68	18	144	0	5	95	1	14	85	0	9	91	0.24	1.38	0.50	0.43	0.60	2.42	1.48	1.53	0.90	2.55	2.15	2.24	27	3	66	6	0	30
1035-2	FWD	4	51	10	158	0	22	78	4	18	78	0	18	82	0.21	1.50	0.52	0.47	0.45	2.35	1.32	1.30	0.96	2.50	2.09	2.18	24	4	68	4	0	40
	AFT	3	61	9	158	0	23	77	1	20	79	0	12	88	0.21	1.39	0.55	0.51	0.80	2.25	1.34	1.30	0.74	2.60	2.09	2.16	14	3	78	7	0	40
1036-1	FWD	13	82	7	170	0	66	34	8	14	78	1	14	85	0.20	1.91	0.48	0.42	0.80	2.40	1.64	1.93	1.10	2.47	2.26	2.33	33	8	58	2	1	40
	AFT	18	83	8	171	0	5	95	3	9	88	0	10	90	0.24	1.65	0.65	0.81	0.55	2.28	1.49	1.52	1.20	2.43	2.23	2.28	12	5	80	3	0	40
1036-2	FWD	10	78	12	167	0	15	85	1	19	80	0	18	82	0.26	1.43	0.47	0.42	0.50	2.20	1.30	1.36	1.18	2.60	2.12	2.18	38	6	53	3	0	35
	AFT	12	78	9	169	0	4	96	3	20	77	0	17	83	0.28	1.18	0.48	0.44	0.48	2.10	1.37	1.40	0.54	2.40	2.18	2.20	20	4	64	4	10	35
1037-1	FWD	9	84	-172	-8	0	29	71	8	10	82	0	11	89	0.31	1.47	0.84	0.58	0.81	2.36	1.84	1.83	1.05	2.46	2.07	2.14	4	1	83	12	0	35
	AFT	9	84	-171	-8	0	25	75	0	19	81	0	12	88	0.25	1.49	0.66	0.61	0.84	2.33	1.48	1.44	1.15	2.45	2.02	2.10	3	2	79	16	0	35
1037-2	FWD	8	87	-176	-3	0	25	75	14	26	60	0	12	88	0.26	1.20	0.66	0.61	0.82	2.43	1.81	1.46	0.90	2.50	2.04	2.12	4	0	84	13	0	30
	AFT	8	87	-173	-3	0	24	76	11	33	56	0	23	77	0.25	1.80	0.67	0.64	0.85	2.33	1.84	1.45	1.10	2.45	2.08	2.10	4	5	77	14	0	30
1038-1	FWD	5	65	18	131	0	22	78	2	18	82	1	15	84	0.16	1.11	0.51	0.46	0.84	2.36	1.56	1.52	1.18	2.48	2.11	2.19	29	31	69	3	0	35
	AFT	6	69	18	130	0	22	78	1	13	86	0	14	86	0.25	1.37	0.53	0.47	0.52	2.31	1.53	1.52	1.13	2.43	2.05	2.18	33	3	87	6	0	35
1038-2	FWD	7	90	1	164	1	37	62	0	15	85	0	13	88	0.21	1.40	0.68	0.51	0.65	2.42	1.87	1.84	1.00	2.50	1.99	2.06	23	1	85	10	0	40
	AFT	7	90	1	164	3	29	68	0	27	73	0	26	74	0.19	1.78	0.61	0.49	0.47	2.38	1.56	1.57	0.35	2.48	1.96	2.01	14	12	86	17	1	40
1039-1	FWD	7	55	27	140	0	68	38	8	22	70	1	24	75	0.24	1.65	0.65	0.58	0.79	2.39	1.78	1.80	1.11	2.68	2.14	2.18	3	6	79	14	0	40
	AFT	7	55	25	140	0	60	40	6	30	64	0	31	69	0.27	1.55	0.67	0.62	0.77	2.39	1.75	1.79	1.11	2.47	2.13	2.18	4	4	77	15	0	40
1039-2	FWD	8	75	10	144	4	61	35	19	38	43	3	41	56	0.30	1.38	0.88	0.59	1.06	2.36	1.69	1.86	0.88	2.50	2.04	2.12	2	4	84	12	0	35
	AFT	8	75	10	144	2	47	51	20	45	35	7	57	36	0.27	1.60	0.67	0.65	0.83	2.30	1.61	1.80	0.77	2.81	2.08	2.09	4	4	81	12	2	35
1040-1	FWD	11	73	-149	-18	0	79	21	10	31	59	2	36	63	0.25	1.71	0.71	0.68	0.84	2.38	1.71	1.74	1.18	2.40	2.06	2.10	0	3	79	17	0	25
	AFT	11	73	-149	-18	0	67	33	14	42	44	2	55	45	0.26	1.82	0.68	0.60	0.85	2.38	1.65	1.64	0.96	2.41	2.04	2.15	1	1	79	15	4	25
1040-2	FWD	12	68	-148	-21	0	66	34	7	30	63	3	29	68	0.24	1.87	0.77	0.72	0.77	2.58	1.81	1.81	1.08	2.48	2.01	2.08	2	1	72	25	1	30
	AFT	11	68	-149	-24	1	58	41	3	36	62	0	32	68	0.11	1.43	0.68	0.83	0.90	2.43	1.72	1.74	1.07	2.48	2.00	2.12	3	2	78	16	0	30

SECTION A

APPENDIX

MISSION * 1040-1 * INSTRUMENT * FWD 5/23/67 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	1	0	0	0	0	0	1	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	1	0	0	0	0	0	0	0	0	1	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	1	0	0	1	0	0	2	0	0
0.36	0	0	0	0	0	0	0	0	0	0	0	0
0.37	0	0	0	1	0	0	0	0	0	1	0	0
0.38	0	0	0	2	0	0	0	0	0	2	0	0
0.39	0	0	0	0	0	0	0	0	0	0	0	0
0.40	0	0	0	1	0	0	1	0	0	2	0	0
0.41	0	0	0	0	0	0	0	0	0	0	0	0
0.42	0	0	0	1	0	0	0	0	0	1	0	0
0.43	0	0	0	3	0	0	4	0	0	7	0	0
0.44	0	0	0	0	0	0	2	0	0	2	0	0
0.45	0	0	0	0	0	0	0	0	0	0	0	0
0.46	0	0	0	1	0	0	4	0	0	5	0	0
0.47	0	0	0	0	0	0	1	0	0	1	0	0
0.48	0	0	0	4	0	0	1	0	0	5	0	0
0.49	0	0	0	0	0	0	3	0	0	3	0	0
0.50	0	0	0	2	0	0	4	0	0	6	0	0
SUBTOTAL	1	0	0	17	0	0	21	0	0	39	0	0

TABLE A-1

MISSION * 1040-1 * INSTRUMENT * FWD 5/23/67 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	4	0	0	6	0	0
0.52	0	0	0	1	0	0	2	0	0	3	0	0
0.53	0	0	0	0	0	0	1	0	0	1	0	0
0.54	0	0	0	3	0	0	3	0	0	6	0	0
0.55	1	0	0	2	0	0	2	0	0	5	0	0
0.56	0	0	0	1	0	0	3	0	0	4	0	0
0.57	0	0	0	2	0	0	1	0	0	3	0	0
0.58	0	0	0	2	0	0	4	0	0	6	0	0
0.59	0	0	0	0	0	0	2	0	0	2	0	0
0.60	0	0	0	2	0	0	2	0	0	4	0	0
0.61	0	0	0	1	0	0	3	0	0	4	0	0
0.62	0	0	0	1	0	0	3	0	0	4	0	0
0.63	0	0	0	2	0	0	2	0	0	4	0	0
0.64	0	0	0	3	0	0	2	0	0	5	0	0
0.65	0	0	0	0	0	0	3	0	0	3	0	0
0.66	0	0	0	1	0	0	3	0	0	4	0	0
0.67	0	0	0	1	0	0	1	0	0	2	0	0
0.68	0	0	0	2	0	0	1	0	0	3	0	0
0.69	0	0	0	0	0	0	5	0	0	5	0	0
0.70	0	0	0	1	0	0	2	0	0	3	0	0
0.71	0	0	0	0	0	0	3	0	0	3	0	0
0.72	0	0	0	1	0	0	3	0	0	4	0	0
0.73	0	0	0	1	0	0	3	0	0	4	0	0
0.74	0	0	0	1	0	0	3	0	0	4	0	0
0.75	0	0	0	1	0	0	3	0	0	4	0	0
0.76	0	0	0	3	0	0	2	0	0	5	0	0
0.77	0	0	0	1	0	0	4	0	0	5	0	0
0.78	0	0	0	0	0	0	2	0	0	2	0	0
0.79	0	0	0	0	0	0	2	0	0	2	0	0
0.80	0	0	0	3	0	0	1	0	0	4	0	0
0.81	0	0	0	1	0	0	3	0	0	4	0	0
0.82	0	0	0	0	0	0	4	0	0	4	0	0
0.83	0	0	0	1	0	0	1	0	0	2	0	0
0.84	0	0	0	1	0	0	2	0	0	3	0	0
0.85	0	0	0	0	0	0	3	0	0	3	0	0
0.86	0	0	0	0	0	0	2	0	0	2	0	0
0.87	0	0	0	1	0	0	2	0	0	3	0	0
0.88	0	0	0	1	0	0	1	0	0	2	0	0
0.89	0	0	0	1	0	0	1	0	0	2	0	0
0.90	1	0	0	1	0	0	0	0	0	2	0	0
0.91	0	0	0	2	0	0	1	0	0	3	0	0
0.92	0	0	0	3	0	0	0	0	0	3	0	0
0.93	0	0	0	0	0	0	2	0	0	2	0	0
0.94	0	0	0	0	0	0	1	0	0	1	0	0
0.95	0	0	0	1	0	0	1	0	0	2	0	0
0.96	0	0	0	0	0	0	1	0	0	1	0	0
0.97	0	0	0	1	0	0	0	0	0	1	0	0
0.98	0	0	0	0	0	0	1	0	0	2	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	2	0	0	2	0
SUBTOTAL	2	0	0	51	0	0	103	5	0	156	5	0

TABLE A-1

MISSION * 1040-1 * INSTRUMENT * FWD 5/23/67 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	4	0	0	4	0	0
1.02	0	0	0	0	0	0	0	0	0	0	0	0
1.03	0	0	0	0	0	0	0	1	0	0	1	0
1.04	0	0	0	1	0	0	0	0	0	1	0	0
1.05	0	0	0	1	0	0	1	0	0	2	0	0
1.06	0	0	0	0	0	0	0	1	0	0	1	0
1.07	0	0	0	0	0	0	0	1	0	0	1	0
1.08	0	0	0	1	0	0	0	0	0	1	0	0
1.09	0	0	0	0	0	0	2	0	0	2	0	0
1.10	0	0	0	0	0	0	1	0	0	1	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	1	0	0	1	0
1.13	0	0	0	0	0	0	0	1	0	0	1	0
1.14	0	0	0	0	0	0	2	1	0	2	1	0
1.15	0	0	0	0	0	0	0	1	0	0	1	0
1.16	0	0	0	0	0	0	0	1	0	0	1	0
1.17	0	0	0	0	0	0	0	1	0	0	1	0
1.18	0	0	0	0	0	0	0	1	0	0	1	0
1.19	0	0	0	0	0	0	0	1	0	0	1	0
1.20	0	0	0	1	0	0	0	1	0	1	1	0
1.21	0	0	0	0	1	0	0	2	0	0	2	0
1.22	0	0	0	0	1	0	1	1	0	1	2	0
1.23	0	0	0	1	4	0	0	2	0	1	4	0
1.24	0	0	0	0	0	0	0	2	0	0	2	0
1.25	0	0	0	0	0	0	0	2	0	0	2	0
1.26	0	0	0	0	0	0	0	2	0	0	2	0
1.27	0	0	0	0	1	0	0	1	0	0	1	0
1.28	0	0	0	0	0	0	0	1	0	0	1	0
1.29	0	0	0	0	0	0	0	1	0	0	1	0
1.30	0	0	0	1	0	0	0	1	0	1	1	0
1.31	0	0	0	2	0	0	0	2	0	2	2	0
1.32	0	0	0	0	0	0	0	2	0	0	2	0
1.33	0	0	0	0	0	0	0	0	1	0	0	1
1.34	0	0	0	0	0	0	0	0	0	0	0	0
1.35	0	0	0	0	0	0	0	1	0	0	1	0
1.36	0	0	0	0	0	0	0	5	0	0	6	0
1.37	0	0	0	0	0	0	0	3	0	0	3	0
1.38	0	0	0	0	0	0	0	4	0	0	6	0
1.39	0	1	0	0	0	0	0	2	0	0	3	0
1.40	0	1	0	0	0	0	0	1	0	0	2	0
1.41	0	1	0	0	0	0	0	1	0	0	2	0
1.42	0	0	0	0	0	0	0	1	0	0	1	0
1.43	0	0	0	0	0	0	0	1	0	0	1	0
1.44	0	0	0	0	0	0	1	0	0	1	0	0
1.45	0	0	0	0	0	0	0	1	0	0	1	0
1.46	0	0	0	0	0	0	0	1	0	0	1	0
1.47	0	0	0	0	0	0	0	2	0	0	2	0
1.48	0	0	0	0	0	0	0	2	0	0	2	0
1.49	0	0	0	0	0	0	0	0	1	0	0	1
1.50	0	0	0	0	1	0	0	1	0	0	2	0
SUBTOTAL	0	2	0	8	17	7	12	44	2	20	63	9

TABLE A-1

MISSION * 1040-1 * INSTRUMENT * FWD 5/23/67 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	2	0	0	2	1
1.52	0	0	0	0	3	0	0	0	0	0	3	0
1.53	0	0	0	0	0	2	0	1	0	0	1	0
1.54	0	0	0	0	2	0	0	0	0	0	2	0
1.55	0	0	0	0	0	1	0	1	0	0	1	0
1.56	0	0	0	0	1	0	0	1	0	0	1	0
1.57	0	0	0	0	0	0	0	0	1	0	0	1
1.58	0	0	0	0	0	1	0	2	0	0	2	0
1.59	0	0	0	0	1	0	0	2	0	0	2	0
1.60	0	0	0	0	3	0	0	3	0	0	3	0
1.61	0	0	0	0	0	1	0	1	0	0	1	0
1.62	0	0	0	0	0	0	0	2	0	0	2	0
1.63	0	0	0	0	0	0	0	0	0	0	0	0
1.64	0	0	0	0	0	2	0	2	0	0	2	0
1.65	0	0	0	0	1	0	0	1	0	0	2	0
1.66	0	0	0	0	1	0	0	1	0	0	2	0
1.67	0	0	0	0	0	1	0	0	1	0	1	1
1.68	0	0	0	0	2	0	0	1	0	0	2	0
1.69	0	0	0	0	0	0	0	1	1	0	1	1
1.70	0	0	0	0	0	2	0	1	0	0	1	2
1.71	0	0	0	0	0	1	0	1	1	0	1	2
1.72	0	0	0	0	0	0	0	0	1	0	0	1
1.73	0	0	0	0	0	0	0	1	0	0	1	0
1.74	0	0	0	0	0	4	0	1	1	0	1	5
1.75	0	0	0	0	0	0	0	0	1	0	0	1
1.76	0	0	0	0	0	2	0	0	0	0	0	2
1.77	0	0	0	0	0	0	0	2	0	0	2	0
1.78	0	0	0	0	0	2	0	0	0	0	0	2
1.79	0	0	0	0	0	0	0	1	0	0	1	0
1.80	0	0	0	0	0	1	0	0	0	0	0	1
1.81	0	0	0	0	0	0	0	0	1	0	0	1
1.82	0	0	0	0	0	1	0	0	0	0	0	1
1.83	0	0	0	0	0	0	0	0	0	0	0	0
1.84	0	0	0	0	0	1	0	0	0	0	0	1
1.85	0	0	1	0	0	0	0	0	0	0	0	1
1.86	0	0	0	0	0	0	0	0	0	0	0	0
1.87	0	0	0	0	0	1	0	0	0	0	0	1
1.88	0	0	0	0	0	0	0	0	0	0	0	0
1.89	0	0	0	0	0	0	0	0	0	0	0	0
1.90	0	0	0	0	0	0	0	0	0	0	0	0
1.91	0	0	0	0	0	0	0	0	0	0	0	0
1.92	0	0	0	0	0	0	0	0	0	0	0	0
1.93	0	0	0	0	0	0	0	0	0	0	0	0
1.94	0	0	0	0	0	0	0	0	0	0	0	0
1.95	0	0	0	0	0	0	0	0	0	0	0	0
1.96	0	0	0	0	0	0	0	0	0	0	0	0
1.97	0	0	0	0	0	0	0	0	0	0	0	0
1.98	0	0	0	0	0	0	0	0	0	0	0	0
1.99	0	0	0	0	0	0	0	0	0	0	0	0
2.00	0	0	2	0	1	2	0	0	2	0	1	6
SUBTOTAL	0	0	3	0	40	38	1	62	21	1	102	62

TABLE A-1

MISSION * 1040-1 * INSTRUMENT * FWD 5/23/67 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	1	0	0	1	1	0	2	1
2.02	0	0	0	0	1	1	0	0	2	0	1	3
2.03	0	0	0	0	2	0	0	1	1	0	3	1
2.04	0	0	0	0	0	0	0	0	1	0	0	1
2.05	0	0	0	0	0	3	0	1	2	0	1	5
2.06	0	0	0	0	0	4	0	1	1	0	1	5
2.07	0	0	0	0	0	0	0	0	1	0	0	1
2.08	0	0	0	0	1	0	0	0	0	0	1	0
2.09	0	0	0	0	2	0	0	1	0	0	3	0
2.10	0	1	0	0	1	2	0	2	5	0	4	7
2.11	0	0	0	0	1	1	0	2	2	0	3	2
2.12	0	0	0	0	1	0	0	0	2	0	1	2
2.13	0	0	0	0	0	0	0	0	1	0	0	1
2.14	0	0	0	0	3	0	0	1	5	0	4	5
2.15	0	0	0	0	1	0	0	1	3	0	2	3
2.16	0	0	0	0	0	1	0	1	2	0	1	3
2.17	0	0	0	0	1	1	0	0	2	0	1	3
2.18	0	0	0	0	0	0	0	2	1	0	2	1
2.19	0	0	0	0	0	1	0	0	1	0	0	1
2.20	0	0	0	0	0	0	0	0	7	0	0	7
2.21	0	0	0	0	0	1	0	0	5	0	0	6
2.22	0	0	0	0	1	0	0	0	2	0	1	2
2.23	0	0	0	0	0	0	0	0	1	0	0	1
2.24	0	0	0	0	2	1	0	0	3	0	0	4
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	0	0	0	1	0	0	1
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	1	0	0	19	16	0	27	98	0	47	114

TABLE A-1

~~TOP SECRET~~ C[redacted]

MISSION * 1040-1 * INSTRUMENT * FWD 5/23/67 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	3	3	3	76	76	61	137	138	121	216	217	185

MISSION 1040-1 INSTR - FWD 5/23/ PROCESSING AND EXPOSURE A

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP&PROC	OVER PROCESSED	EXP
PRIMARY	3	0 PC	33 PC	67 PC	0 PC	
INTERMEDIATE	76	0 PC	7 PC	74 PC	20 PC	
FULL	137	1 PC	0 PC	82 PC	16 PC	
ALL LEVELS	216	0 PC	3 PC	79 PC	17 PC	

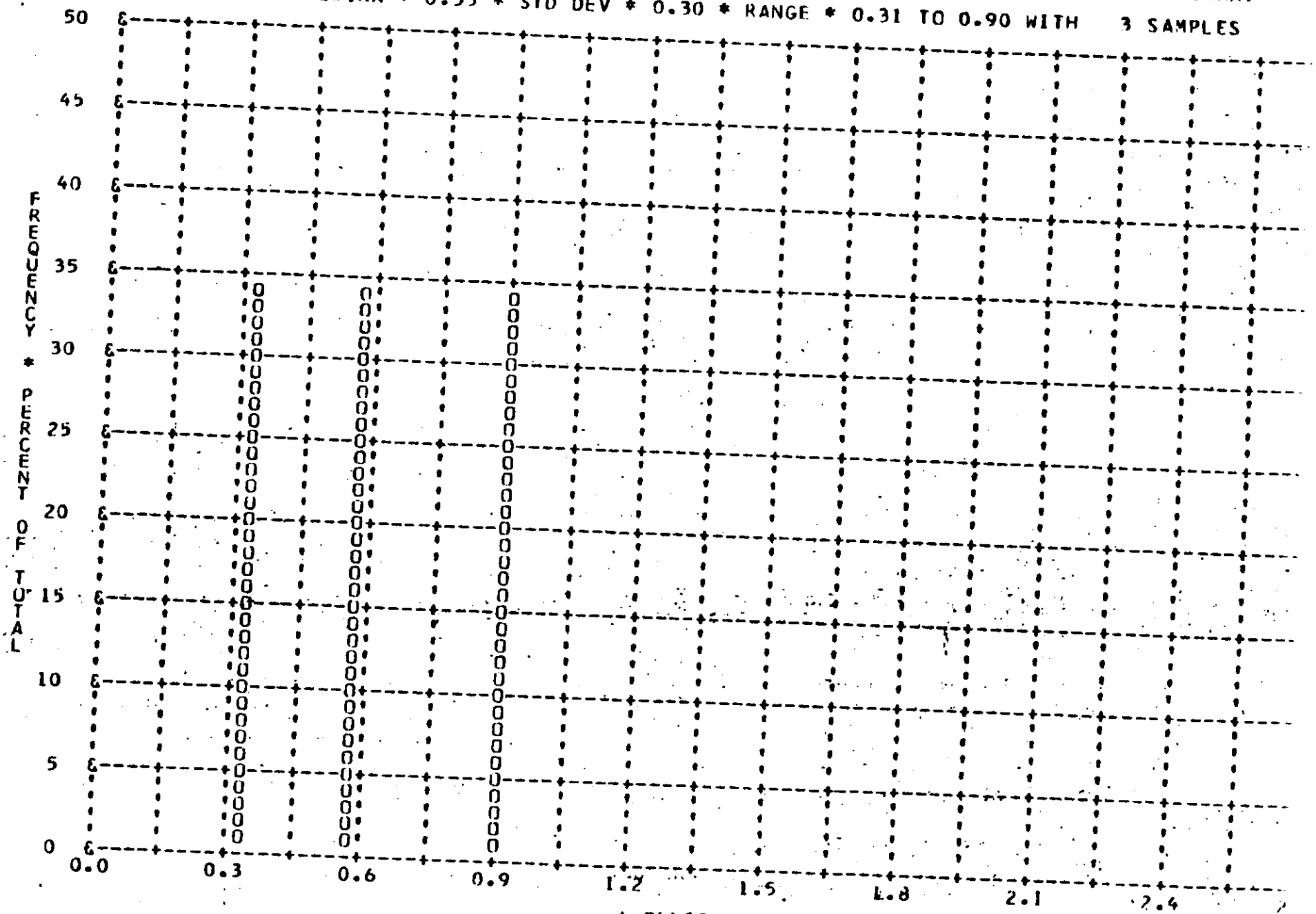
PROCESS LEVEL	BASE & FOG	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP&PROC	OVER PROCESSED	EXP
PRIMARY	0.01-0.09	0.01-0.13	0.14-0.39	0.40-0.90	---------	0.91
INTERMED	0.10-0.17	0.01-0.20	0.21-0.39	0.40-0.90	0.91-1.34	1.35
FULL	0.18 AND UP	0.01-0.39	---------	0.40-0.90	0.91-1.69	1.70

~~TOP SECRET~~ C[redacted]

TABLE A-1

MISSION * 1040-1 * INSTR * FWD * 5/23/7PLOT OF D MIN * TERRAIN * PROCESSING * PRIMARY

AIRTH MEAN * 0.59 * MEDIAN * 0.55 * STD DEV * 0.30 * RANGE * 0.31 TO 0.90 WITH 3 SAMPLES



MISSION * 1040-1 * INSTR * FWD * 5/23/7 PLOT OF D MAX * TERRAIN * PROCESSING * PRIMARY

AIRTH MEAN * 1.63 * MEDIAN * 1.41 * STD DEV * 0.40 * RANGE * 1.39 TO 2.10 WITH 3 SAMPLES

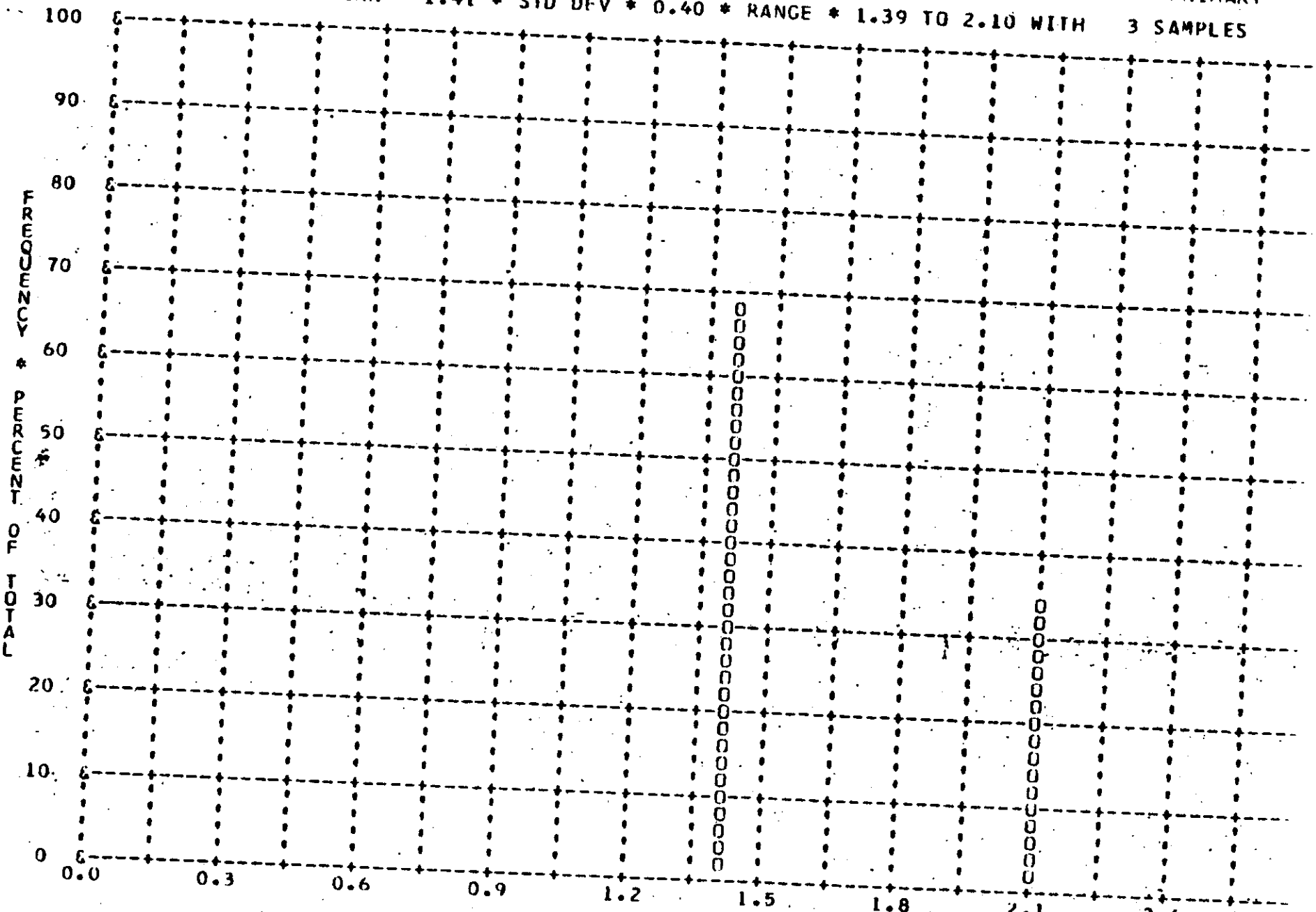


FIGURE A-

MISSION * 1040-1 * INSTR * FWD * 5/23/7PLOT OF D MAX * CLOUD * PROCESSING * PRIMARY

AIRTH MEAN * 1.95 * MEDIAN * 2.00 * STD DEV * 0.09 * RANGE * 1.85 TO 2.00 WITH 3 SAMPLES

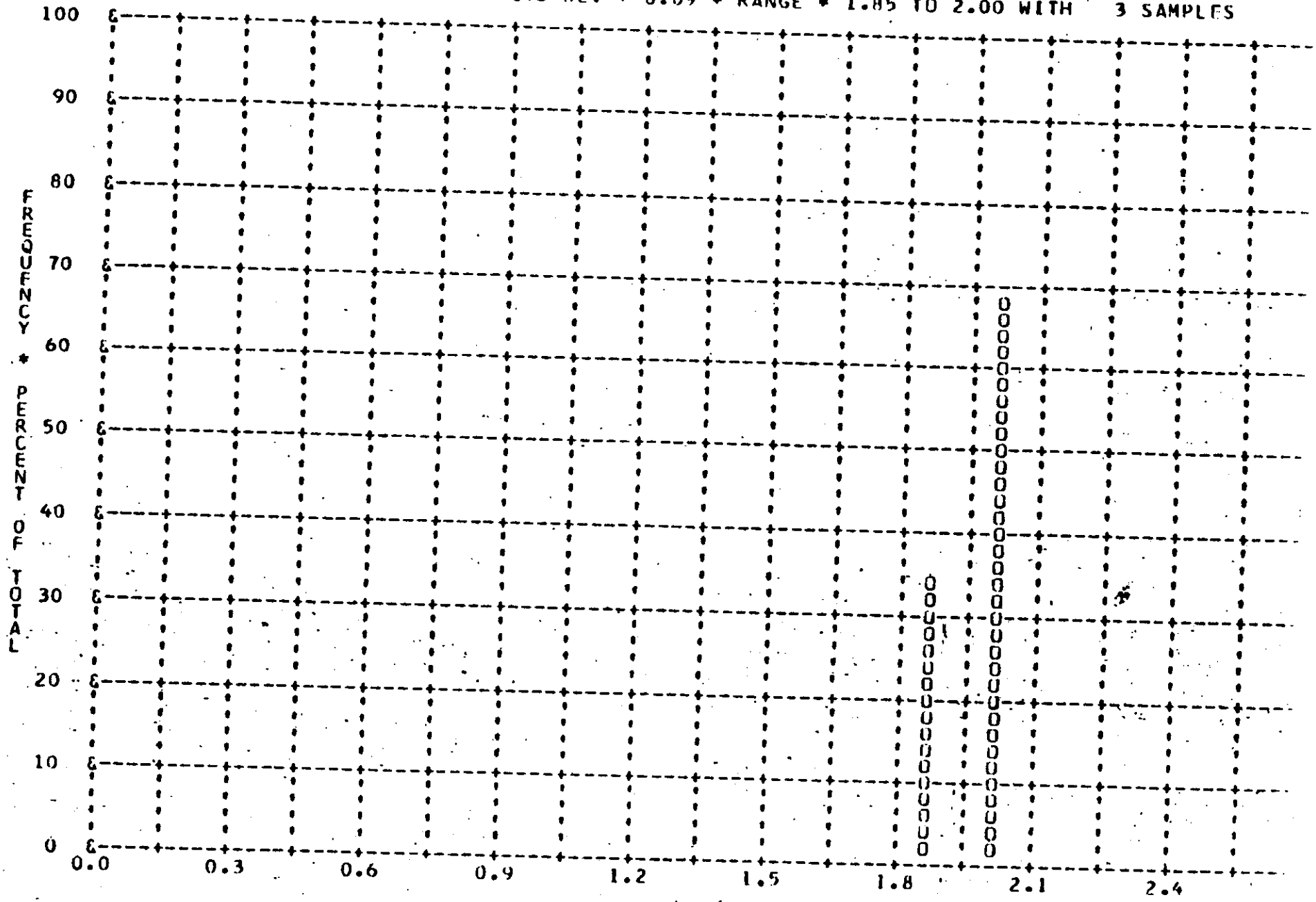
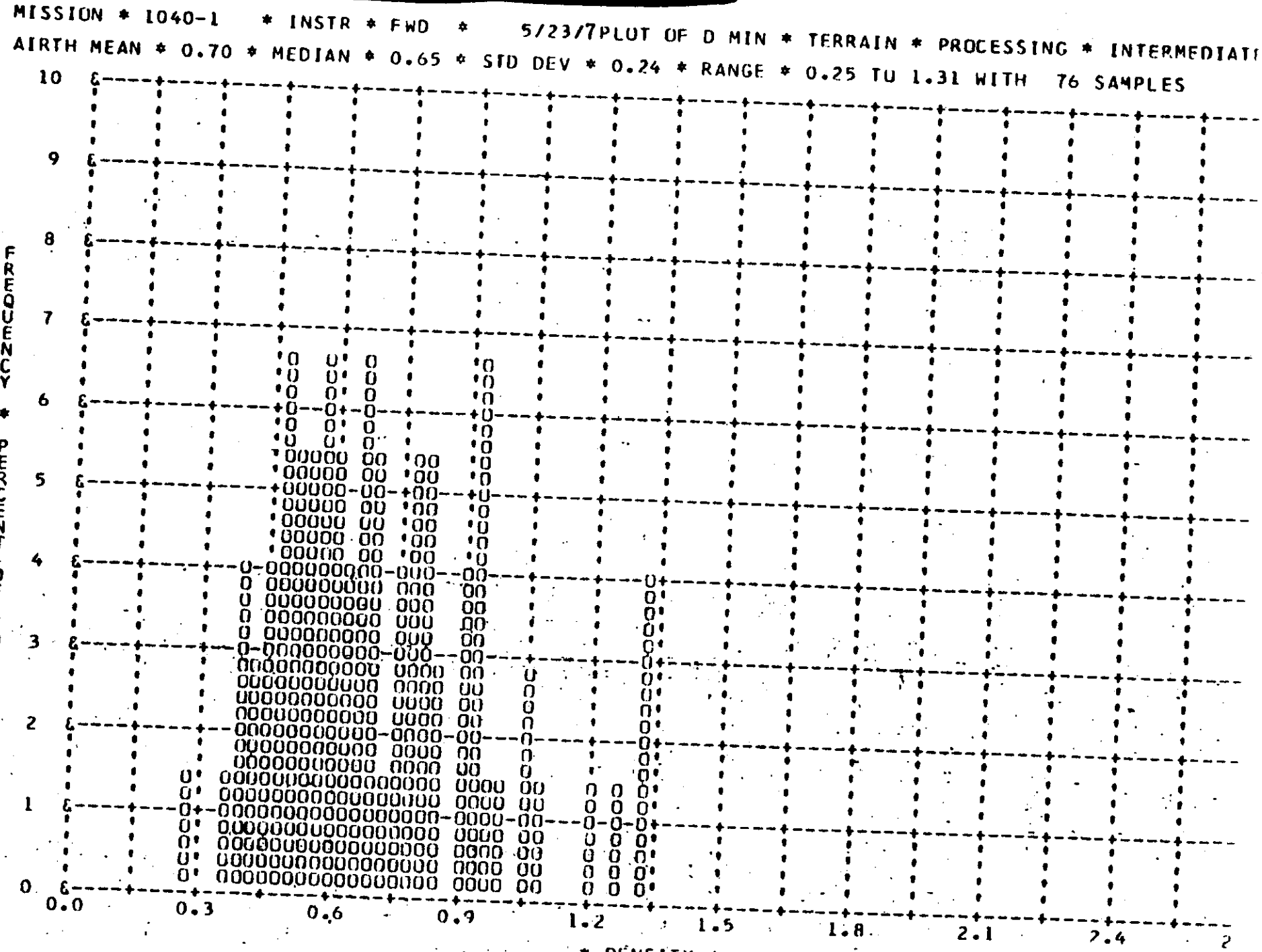


FIGURE A-3

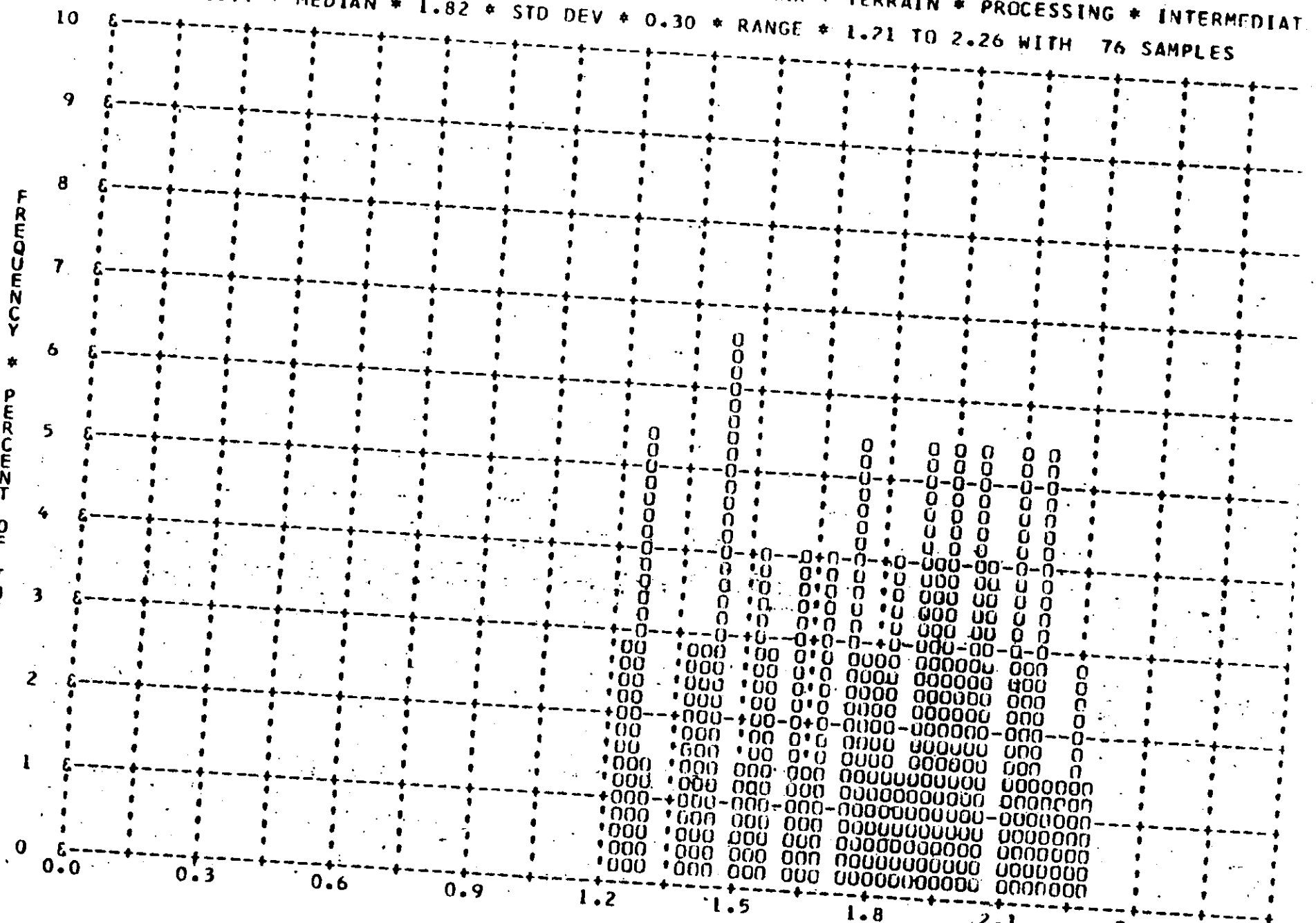


[redacted]

FIGURE A-4

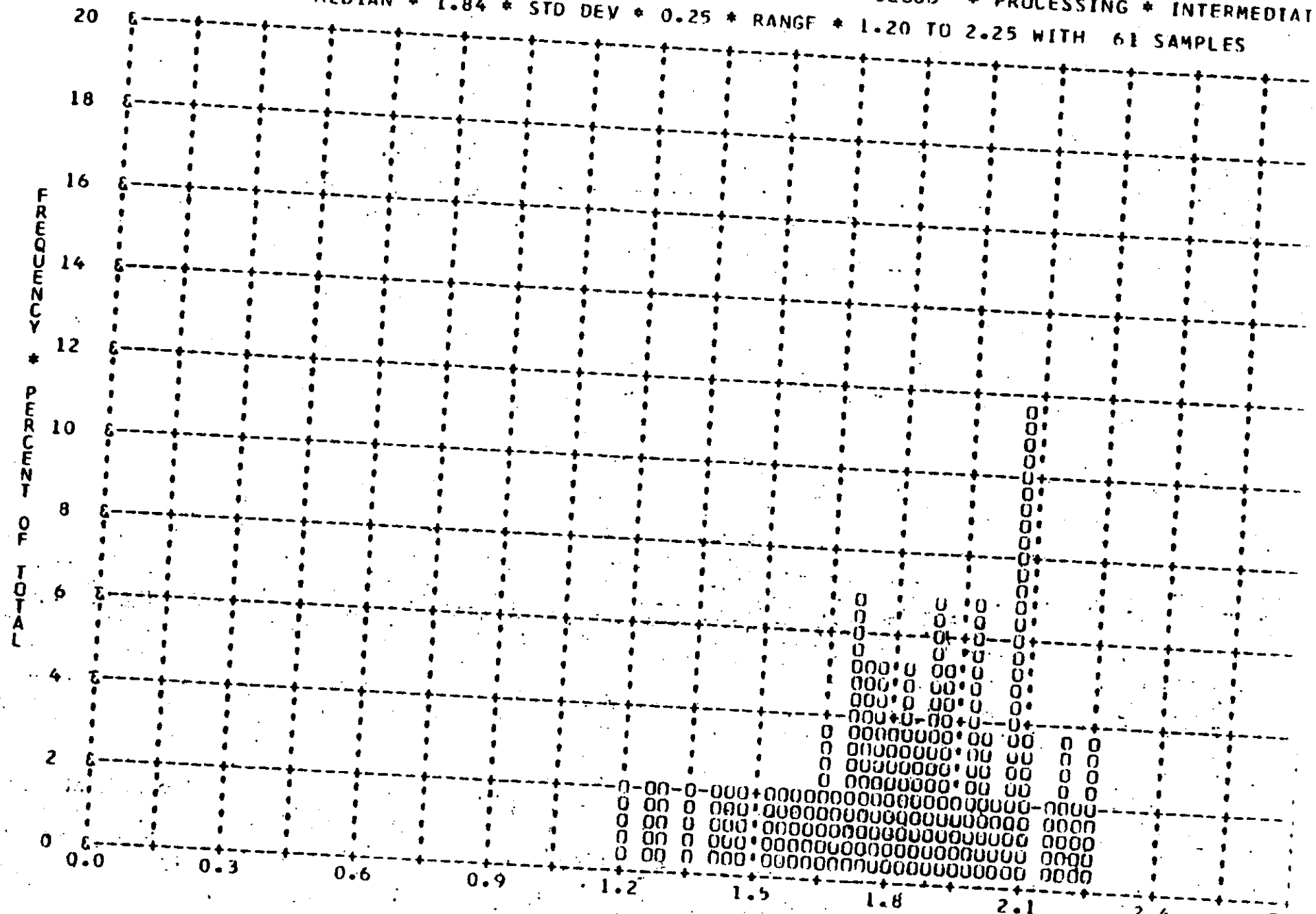
MISSION * 1040-1 * INSTR * FWD * 5/23/7PLOT OF D MAX * TERRAIN * PROCESSING * INTERMEDIAT

AIRTH MEAN * 1.77 * MEDIAN * 1.82 * STD DEV * 0.30 * RANGE * 1.21 TO 2.26 WITH 76 SAMPLES



MISSION * 1040-1 * INSTR * FWD * 5/23/7PLOT OF D MAX * CLOUD * PROCESSING * INTERMEDIAT

AIRTH MEAN * 1.83 * MEDIAN * 1.84 * STD DEV * 0.25 * RANGE * 1.20 TO 2.25 WITH 61 SAMPLES



MISSION * 1040-1 * INSTR * FWD * 5/23/7 PLOT OF D MIN * TERRAIN * PROCESSING * FULL

AIRTH MEAN * 0.72 * MEDIAN * 0.70 * STD DEV * 0.21 * RANGE * 0.35 TO 1.71 WITH 137 SAMPLES

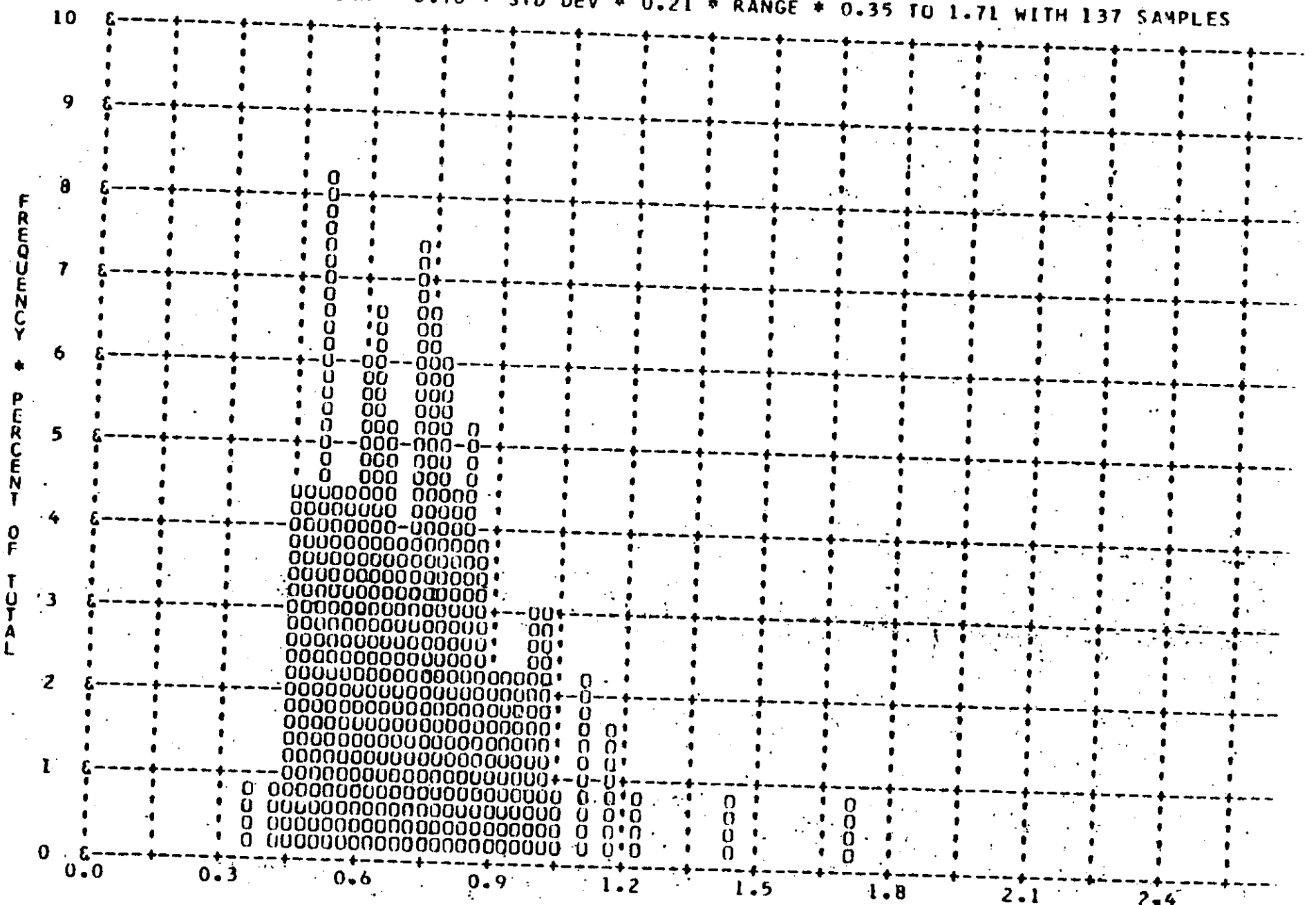


FIGURE A-7

MISSION * 1040-1 * INSTR * FWD * 5/23/7PLOT OF D MAX * TERRAIN * PROCESSING * FULL

AIRTH MEAN * 1.67 * MEDIAN * 1.69 * STD DEV * 0.36 * RANGE * 0.94 TO 2.38 WITH 138 SAMPLES

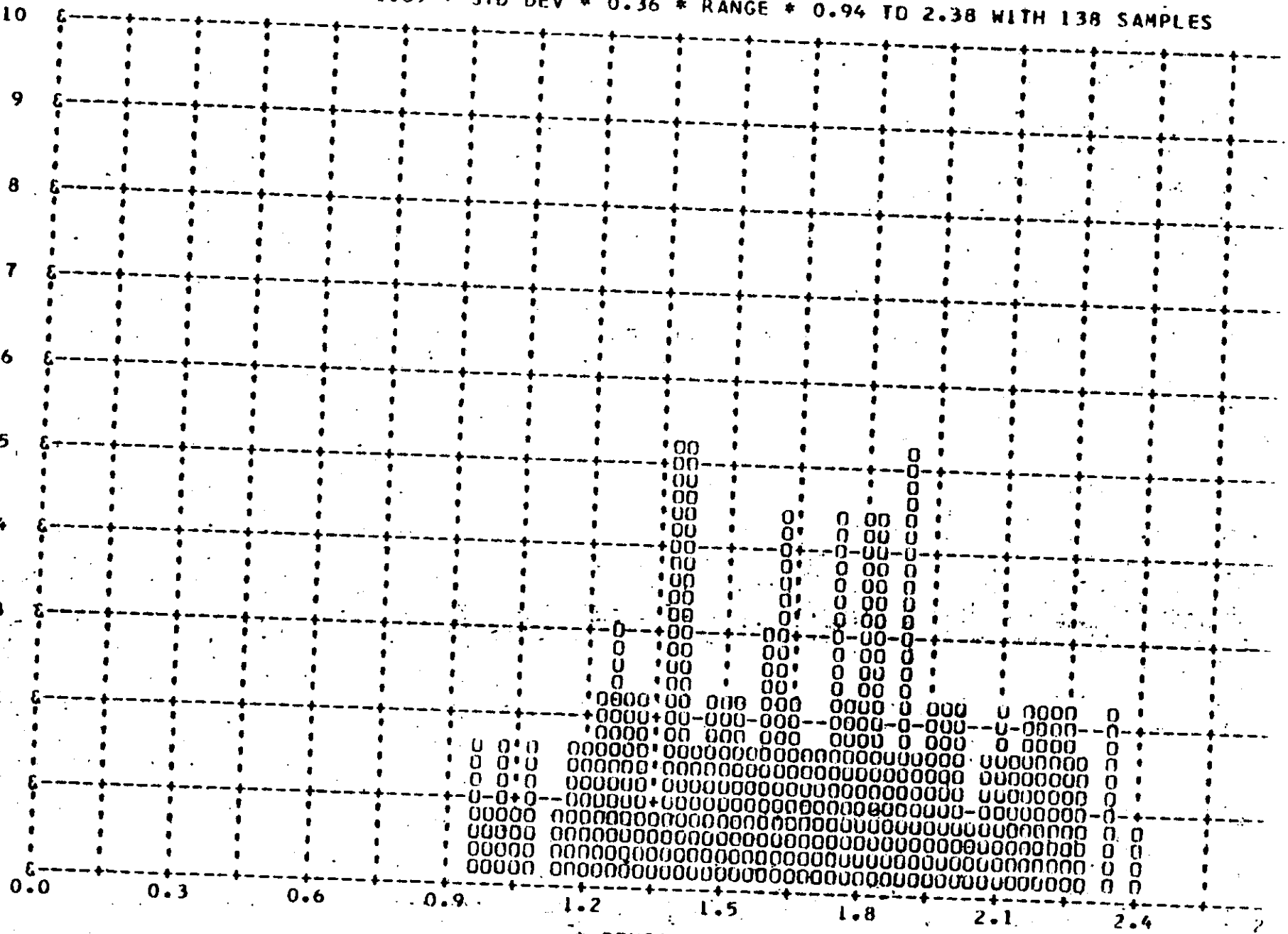


FIGURE A-8

MISSION * 1040-1 * INSTR * FWD * 5/23/7PLOT OF D MAX * CLOUD * PROCESSING * FULL

AIRTH MEAN * 2.15 * MEDIAN * 2.20 * STD DEV * 0.20 * RANGE * 1.18 TO 2.40 WITH 121 SAMPLES

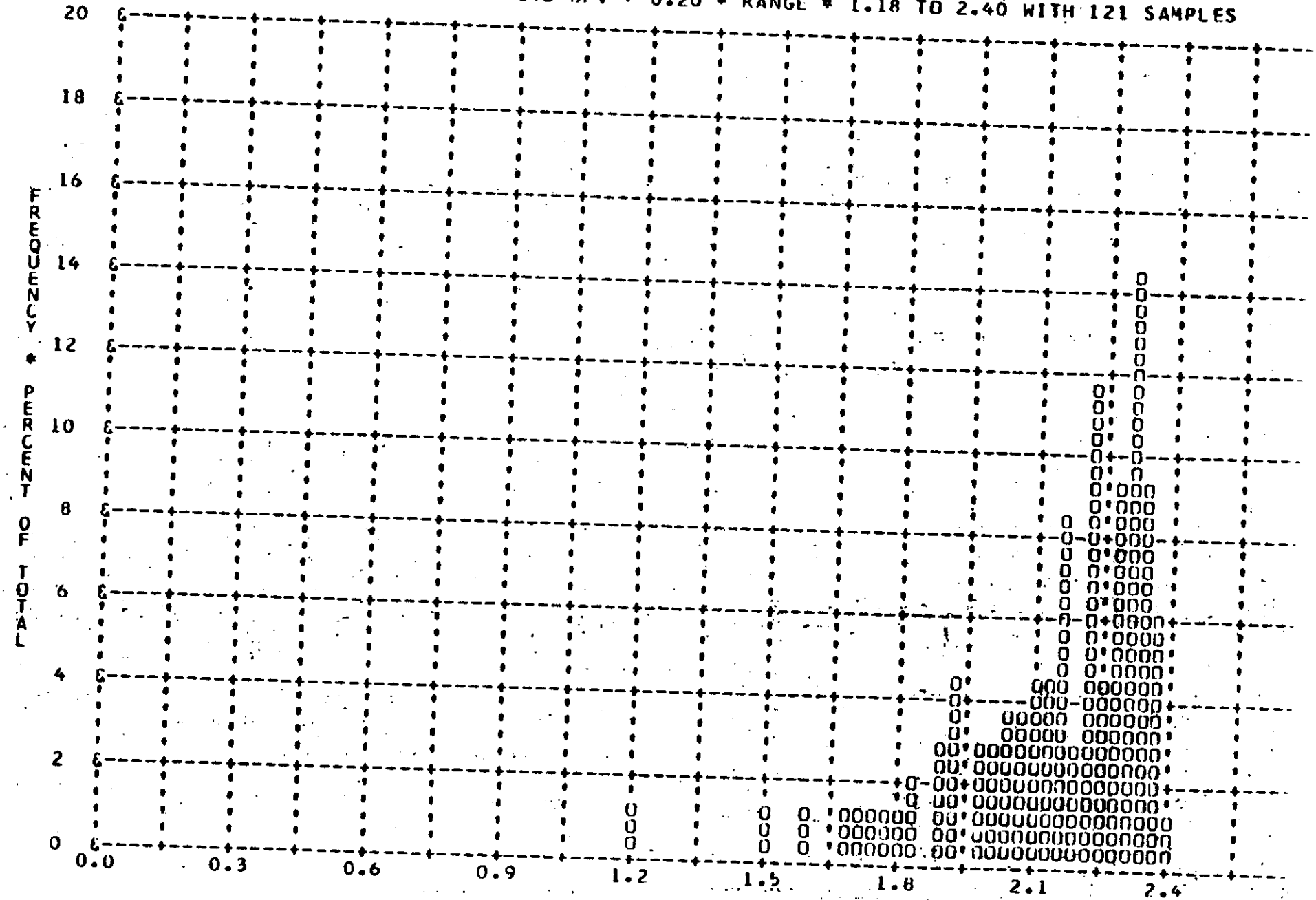
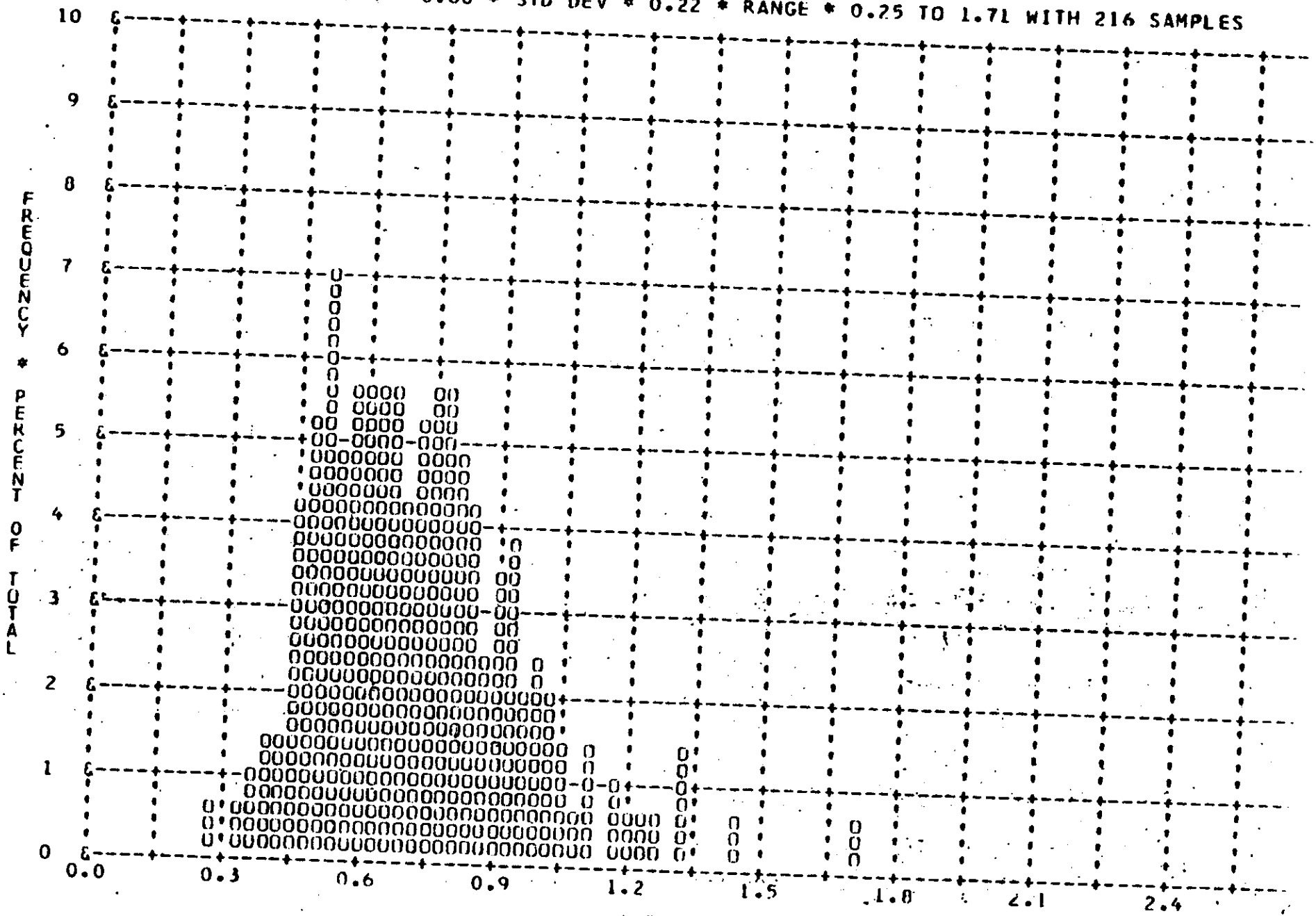


FIGURE A-9

~~TOP SECRET~~ C [redacted]

MISSION * 1040-1 * INSTR * FWD * 5/23/7 PLOT OF D MIN * TERRAIN * PROCESSING * ALL LEVELS

AIRTH MEAN * 0.71 * MEDIAN * 0.68 * STD DEV * 0.22 * RANGE * 0.25 TO 1.71 WITH 216 SAMPLES



~~TOP SECRET~~ C [redacted]

A-16

MISSION * 1040-1 * INSTR * FWD * 5/23/7PLOT OF D MAX * TERRAIN * PROCESSING * ALL LEVELS

AIRTH MEAN * 1.71 * MEDIAN * 1.74 * STD DEV * 0.34 * RANGE * 0.94 TO 2.38 WITH 217 SAMPLES

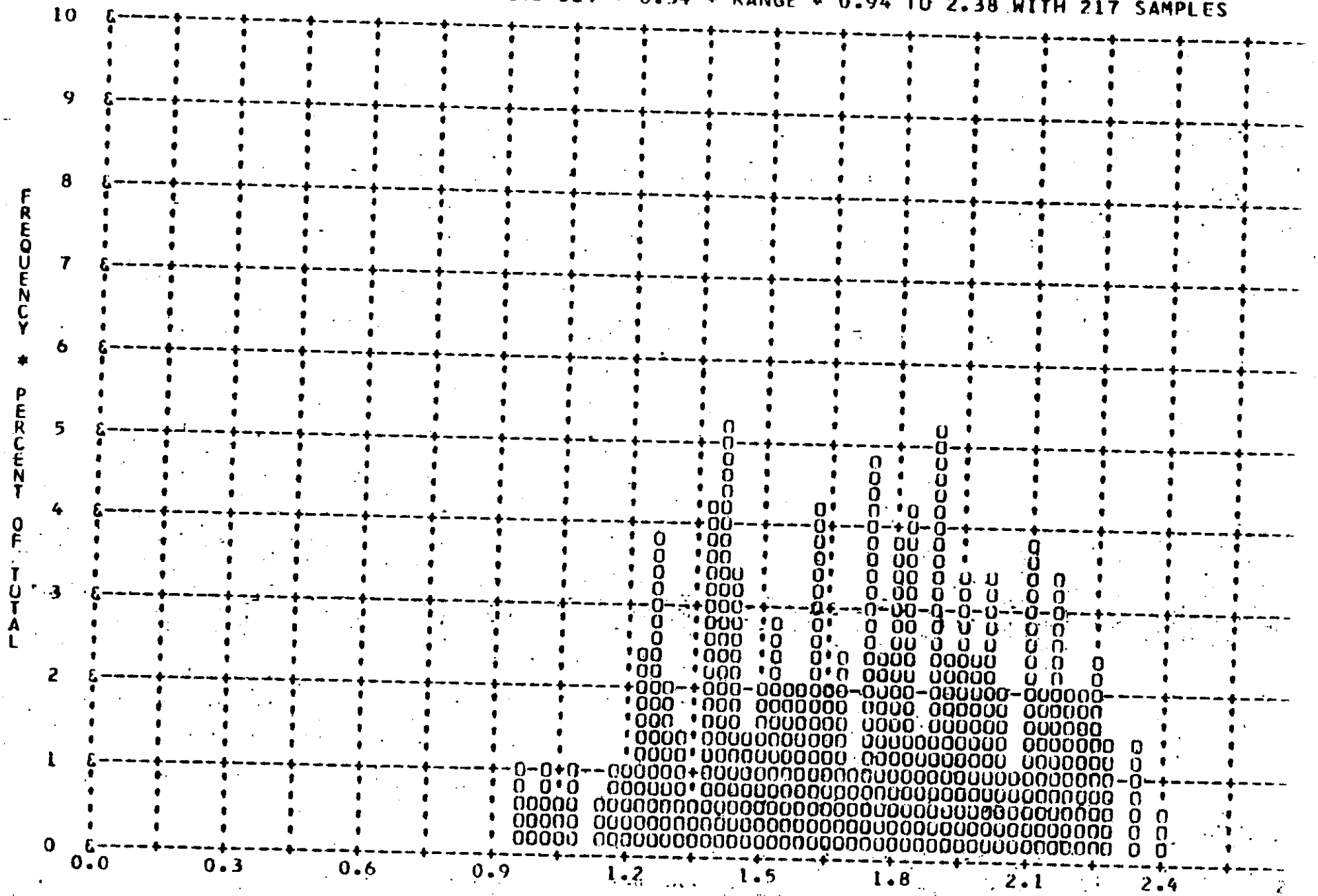


FIGURE A-11

MISSION * 1040-1 * INSTR * FWD * 5/23/7PLOT OF D MAX * CLOUD * PROCESSING * ALL LEVELS

AIRTH MEAN * 2.04 * MEDIAN * 2.10 * STD DEV * 0.27 * RANGE * 1.18 TO 2.40 WITH 185 SAMPLES

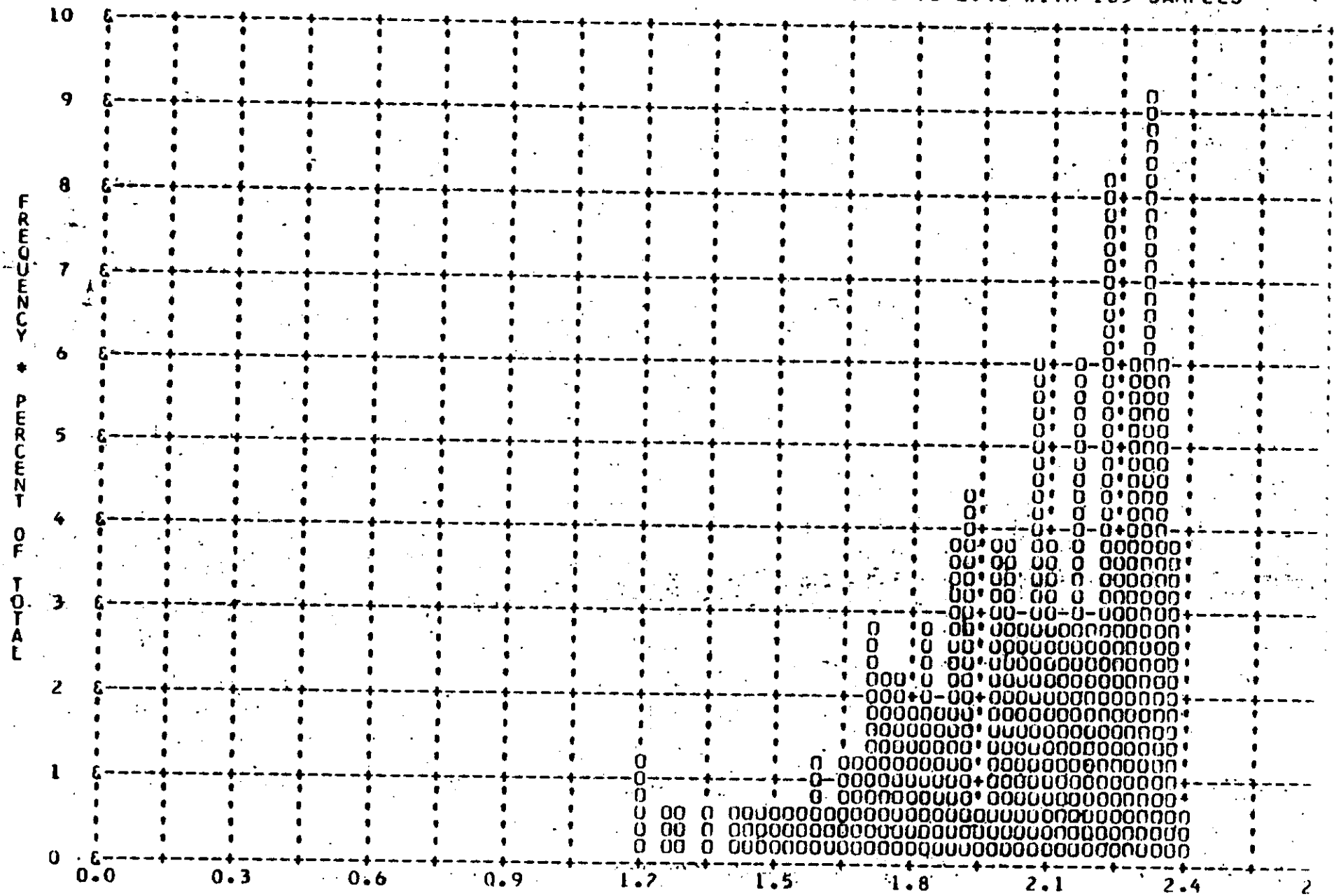


FIGURE A-12

~~TOP SECRET~~ C [redacted]

MISSION * L040-1 * INSTRUMENT * AFT 5/23/67 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	1	0	0	0	0	0	1	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	2	0	0	0	0	0	2	0	0
0.31	0	0	0	0	0	0	0	0	0	0	0	0
0.32	0	0	0	3	0	0	0	0	0	3	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	1	0	0	0	0	0	0	0	0	2	0	0
0.37	1	0	0	3	0	0	0	0	0	5	0	0
0.38	0	0	0	2	0	0	0	0	0	3	0	0
0.39	1	0	0	0	0	0	0	0	0	1	0	0
0.40	0	0	0	2	0	0	0	0	0	2	0	0
0.41	0	0	0	5	0	0	0	0	0	5	0	0
0.42	0	0	0	1	0	0	0	0	0	1	0	0
0.43	0	0	0	0	0	0	0	0	0	0	0	0
0.44	0	0	0	4	0	0	0	0	0	4	0	0
0.45	0	0	0	3	0	0	0	0	0	3	0	0
0.46	1	0	0	2	0	0	0	0	0	3	0	0
0.47	0	0	0	0	0	0	0	0	0	0	0	0
0.48	0	0	0	2	0	0	0	0	0	2	0	0
0.49	0	0	0	2	0	0	0	0	0	2	0	0
0.50	1	0	0	2	0	0	2	0	0	4	0	0
SUBTOTAL	5	0	0	34	0	0	24	0	0	63	0	0

~~TOP SECRET~~ C [redacted]

TABLE A-2

MISSION * 1040-1 * INSTRUMENT * AFT 5/23/67 DENSITY FRFQ 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	5	0	0	7	0	0
0.52	0	0	0	2	0	0	4	0	0	6	0	0
0.53	0	0	0	2	0	0	1	0	0	3	0	0
0.54	0	0	0	1	0	0	1	0	0	2	0	0
0.55	0	0	0	3	0	0	2	0	0	5	0	0
0.56	0	0	0	4	0	0	2	0	0	6	0	0
0.57	0	0	0	4	0	0	4	0	0	8	0	0
0.58	0	0	0	3	0	0	3	0	0	6	0	0
0.59	0	0	0	4	0	0	2	0	0	6	0	0
0.60	0	0	0	2	0	0	2	0	0	4	0	0
0.61	0	0	0	3	0	0	2	0	0	5	0	0
0.62	0	0	0	3	0	0	2	0	0	5	0	0
0.63	0	0	0	3	0	0	4	0	0	7	0	0
0.64	0	0	0	1	0	0	1	0	0	2	0	0
0.65	0	0	0	0	0	0	2	0	0	2	0	0
0.66	0	0	0	0	0	0	1	0	0	1	0	0
0.67	0	0	0	0	0	0	3	0	0	3	0	0
0.68	0	0	0	0	0	0	1	0	0	1	0	0
0.69	0	0	0	0	0	0	1	0	0	1	0	0
0.70	0	0	0	3	0	0	1	0	0	4	0	0
0.71	0	0	0	2	0	0	1	0	0	3	0	0
0.72	0	0	0	0	0	0	2	0	0	2	0	0
0.73	0	0	0	3	0	0	1	0	0	4	0	0
0.74	0	0	0	4	0	0	2	0	0	6	0	0
0.75	0	0	0	1	0	0	0	0	0	1	0	0
0.76	0	0	0	3	0	0	2	0	0	5	0	0
0.77	0	0	0	1	0	0	2	0	0	4	0	0
0.78	0	0	0	1	0	0	1	0	0	3	0	0
0.79	0	0	0	1	0	0	0	0	0	1	0	0
0.80	0	0	0	1	0	0	2	0	0	3	0	0
0.81	0	0	0	2	0	0	1	0	0	3	0	0
0.82	0	0	0	1	0	0	1	0	0	2	0	0
0.83	0	0	0	0	0	0	2	0	0	2	0	0
0.84	0	0	0	2	0	0	0	0	0	2	0	0
0.85	0	0	0	1	0	0	2	0	0	3	0	0
0.86	0	0	0	3	0	0	1	0	0	4	0	0
0.87	0	0	0	1	0	0	0	0	0	1	0	0
0.88	0	0	0	0	0	0	1	0	0	1	0	0
0.89	0	0	0	1	0	0	1	0	0	2	0	0
0.90	0	0	0	0	0	0	1	0	0	1	0	0
0.91	0	0	0	1	0	0	0	0	0	1	0	0
0.92	0	0	0	1	0	0	1	0	0	2	0	0
0.93	0	0	0	0	0	0	1	0	0	1	0	0
0.94	0	0	0	1	0	0	0	0	0	1	0	0
0.95	0	0	0	0	0	0	1	0	0	1	0	0
0.96	0	0	0	1	0	0	0	0	0	1	0	0
0.97	1	0	0	0	0	0	1	0	0	2	0	0
0.98	0	0	0	2	0	0	0	0	0	2	0	0
0.99	0	0	0	0	0	0	0	0	0	0	0	0
1.00	0	0	0	2	0	0	0	0	0	2	0	0
SUBTOTAL	1	0	0	80	3	1	69	4	0	150	7	1

TABLE A-2

~~TOP SECRET~~ C [redacted]

MISSION * 1040-1 * INSTRUMENT * AFT * 5/23/67 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	0	0	0	1	0	0	1	0	0
1.03	0	0	0	0	0	0	1	0	0	1	0	0
1.04	0	0	0	0	1	0	2	0	0	2	1	0
1.05	0	0	0	0	1	0	2	0	0	2	1	0
1.06	0	0	0	0	0	0	0	0	0	0	0	0
1.07	0	0	0	0	1	0	0	0	0	0	1	0
1.08	0	0	0	0	1	0	0	3	0	0	3	0
1.09	0	0	0	0	1	0	0	1	0	0	1	0
1.10	0	0	0	1	1	0	0	1	0	1	2	0
1.11	0	0	0	1	0	0	0	0	0	1	0	0
1.12	0	0	0	2	0	0	0	1	0	2	1	0
1.13	0	0	0	0	0	0	0	0	0	0	0	0
1.14	0	0	0	0	0	2	1	0	0	1	0	2
1.15	0	0	0	0	1	0	1	0	0	1	1	0
1.16	0	0	0	1	0	1	0	2	0	1	2	1
1.17	0	0	0	1	1	0	1	0	0	1	1	0
1.18	0	0	1	0	1	0	0	0	0	0	1	0
1.19	0	0	0	0	1	0	0	0	0	0	1	0
1.20	0	0	0	0	0	0	0	0	0	0	0	0
1.21	0	0	0	0	1	0	0	0	0	0	1	0
1.22	0	0	0	0	2	0	1	0	0	1	2	0
1.23	0	0	0	0	1	2	0	0	0	0	1	2
1.24	0	0	0	0	2	0	0	0	0	0	2	0
1.25	0	0	0	0	4	0	0	1	0	0	5	0
1.26	0	0	0	0	2	0	0	1	0	0	2	0
1.27	0	0	0	1	1	0	0	1	0	1	2	0
1.28	0	0	0	0	1	0	0	1	0	1	2	0
1.29	0	0	0	0	1	3	0	4	0	0	5	3
1.30	0	0	0	0	3	0	0	0	0	0	3	0
1.31	0	0	0	0	1	0	0	0	0	0	1	0
1.32	0	0	0	0	0	1	0	0	0	0	1	0
1.33	0	0	0	0	0	2	0	0	0	0	2	0
1.34	0	0	0	0	0	0	0	0	0	0	0	0
1.35	0	1	0	0	0	0	0	4	0	0	5	0
1.36	0	0	0	0	1	0	0	1	0	0	2	0
1.37	0	1	0	0	0	0	0	0	0	0	1	0
1.38	0	0	0	0	0	1	0	1	0	0	1	1
1.39	0	0	0	0	0	0	0	2	0	0	2	0
1.40	0	0	0	0	2	0	0	0	0	0	2	0
1.41	0	0	0	0	2	0	1	0	0	1	2	0
1.42	0	0	0	0	3	1	0	0	0	0	3	1
1.43	0	1	0	1	1	0	0	1	0	1	3	0
1.44	0	0	0	0	0	1	1	6	0	1	6	1
1.45	0	0	0	0	1	0	0	2	0	0	3	0
1.46	0	0	0	0	0	1	0	1	0	0	1	1
1.47	0	0	0	0	1	0	0	0	0	0	1	0
1.48	0	0	0	0	1	0	0	2	0	0	3	0
1.49	0	0	0	0	0	0	0	2	0	0	2	0
1.50	0	1	0	0	1	0	0	1	0	0	3	0
SUBTOTAL	0	4	2	7	40	13	9	37	0	16	81	15

~~TOP SECRET~~ C [redacted]

TABLE A-2

MISSION * 1040-1 * INSTRUMENT * AFT 5/23/67 DENSITY FRFQ 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	1	0	0	1	0	0	2	0
1.52	0	0	0	0	2	0	0	1	0	0	3	0
1.53	0	0	0	0	0	0	0	1	0	0	1	0
1.54	0	0	0	0	1	0	0	3	0	0	3	0
1.55	0	0	0	0	1	0	0	1	0	0	2	0
1.56	0	0	0	0	1	0	0	0	0	0	1	0
1.57	0	1	0	0	1	0	0	0	0	0	2	0
1.58	0	0	0	0	1	0	0	1	0	0	1	0
1.59	0	0	0	0	2	0	0	1	0	0	2	0
1.60	0	0	0	0	1	0	0	1	0	0	1	0
1.61	0	0	0	0	2	0	0	2	0	0	1	0
1.62	0	0	0	0	0	0	0	1	0	0	1	0
1.63	0	0	0	0	1	0	0	1	0	0	2	0
1.64	0	2	0	0	2	0	0	1	0	0	1	0
1.65	0	0	0	0	1	0	0	1	0	0	1	0
1.66	0	0	0	0	1	0	0	0	0	0	1	0
1.67	0	0	0	0	2	0	0	1	0	0	1	0
1.68	0	0	0	0	1	0	0	2	0	0	1	0
1.69	0	0	0	0	1	0	0	2	0	0	1	0
1.70	0	0	0	0	1	0	0	2	0	0	1	0
1.71	0	0	0	0	1	0	0	2	0	0	1	0
1.72	0	0	0	0	1	0	0	2	0	0	1	0
1.73	0	0	0	0	1	0	0	2	0	0	1	0
1.74	0	0	0	0	1	0	0	2	0	0	1	0
1.75	0	0	0	0	1	0	0	2	0	0	1	0
1.76	0	0	0	0	1	0	0	2	0	0	1	0
1.77	0	0	0	0	1	0	0	2	0	0	1	0
1.78	0	0	0	0	1	0	0	2	0	0	1	0
1.79	0	0	0	0	1	0	0	2	0	0	1	0
1.80	0	0	0	0	1	0	0	2	0	0	1	0
1.81	0	0	0	0	1	0	0	2	0	0	1	0
1.82	0	0	0	0	1	0	0	2	0	0	1	0
1.83	0	0	0	0	1	0	0	2	0	0	1	0
1.84	0	0	0	0	1	0	0	2	0	0	1	0
1.85	0	0	0	0	1	0	0	2	0	0	1	0
1.86	0	0	0	0	1	0	0	2	0	0	1	0
1.87	0	0	0	0	1	0	0	2	0	0	1	0
1.88	0	0	0	0	1	0	0	2	0	0	1	0
1.89	0	0	0	0	1	0	0	2	0	0	1	0
1.90	0	0	0	0	1	0	0	2	0	0	1	0
1.91	0	0	0	0	1	0	0	2	0	0	1	0
1.92	0	0	0	0	1	0	0	2	0	0	1	0
1.93	0	0	0	0	1	0	0	2	0	0	1	0
1.94	0	0	0	0	1	0	0	2	0	0	1	0
1.95	0	0	0	0	1	0	0	2	0	0	1	0
1.96	0	0	0	0	1	0	0	2	0	0	1	0
1.97	0	0	0	0	1	0	0	2	0	0	1	0
1.98	0	0	0	0	1	0	0	2	0	0	1	0
1.99	0	0	0	0	1	0	0	2	0	0	1	0
2.00	0	0	0	0	2	0	0	2	0	0	1	0
SUBTOTAL	0	3	0	0	55	39	1	49	11	1	107	50

TABLE A-2

MISSION * 1040-1 * INSTRUMENT * AFT 5/23/67 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	1	0	0	2	1	0	3	1
2.02	0	0	0	0	2	1	0	1	1	0	3	2
2.03	0	0	0	0	1	0	0	0	0	0	1	0
2.04	0	0	0	0	0	1	0	0	0	0	0	1
2.05	0	0	0	0	1	2	0	0	0	0	1	2
2.06	0	0	0	0	0	1	0	0	0	0	1	2
2.07	0	0	0	0	1	2	0	0	0	0	1	2
2.08	0	0	0	0	0	1	0	0	0	0	1	2
2.09	0	0	0	0	1	1	0	0	1	0	1	2
2.10	0	0	0	0	0	2	0	1	0	0	1	2
2.11	0	0	0	0	0	1	0	1	1	0	1	2
2.12	0	0	0	0	0	0	0	1	1	0	1	2
2.13	0	0	0	0	0	1	0	0	1	0	1	2
2.14	0	0	0	0	0	2	0	0	1	0	1	2
2.15	0	0	0	0	1	2	0	0	1	0	1	2
2.16	0	0	0	0	0	2	0	0	1	0	1	2
2.17	0	0	0	0	0	2	0	0	1	0	2	2
2.18	0	0	0	0	0	1	0	0	1	0	2	2
2.19	0	0	0	0	0	3	0	0	1	0	2	4
2.20	0	0	0	0	0	2	0	0	1	0	3	4
2.21	0	0	0	0	0	2	0	0	1	0	3	5
2.22	0	0	0	0	0	0	0	0	2	0	2	5
2.23	0	0	0	0	0	1	0	0	2	0	2	5
2.24	0	0	0	0	0	0	0	0	1	0	1	5
2.25	0	0	0	0	0	0	0	0	1	0	1	5
2.26	0	0	0	0	0	1	0	0	1	0	1	5
2.27	0	0	0	0	0	0	0	0	1	0	1	5
2.28	0	0	0	0	0	0	0	0	1	0	1	5
2.29	0	0	0	0	0	0	0	0	1	0	1	5
2.30	0	0	0	0	0	0	0	0	1	0	1	5
2.31	0	0	0	0	0	0	0	0	1	0	1	5
2.32	0	0	0	0	0	0	0	0	1	0	1	5
2.33	0	0	0	0	0	0	0	0	1	0	1	5
2.34	0	0	0	0	0	0	0	0	1	0	1	5
2.35	0	0	0	0	0	0	0	0	1	0	1	5
2.36	0	0	0	0	0	0	0	0	1	0	1	5
2.37	0	0	0	0	0	0	0	0	1	0	1	5
2.38	0	0	0	0	0	0	0	0	1	0	1	5
2.39	0	0	0	0	0	0	0	0	1	0	1	5
2.40	0	0	0	0	0	0	0	0	1	0	1	5
2.41	0	0	0	0	0	0	0	0	1	0	1	5
2.42	0	0	0	0	0	0	0	0	1	0	1	5
2.43	0	0	0	0	0	0	0	0	1	0	1	5
2.44	0	0	0	0	0	0	0	0	1	0	1	5
2.45	0	0	0	0	0	0	0	0	1	0	1	5
2.46	0	0	0	0	0	0	0	0	1	0	1	5
2.47	0	0	0	0	0	0	0	0	1	0	1	5
2.48	0	0	0	0	0	0	0	0	1	0	1	5
2.49	0	0	0	0	0	0	0	0	1	0	1	5
2.50	0	0	0	0	0	0	0	0	1	0	1	5
SUBTOTAL	0	0	0	0	24	33	0	16	81	0	40	114

TABLE A-2

MISSION * 1040-1 * INSTRUMENT * AFT 5/23/67 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	6	7	2	121	122	86	103	106	92	230	235	180

MISSION 1040-1 INSTR - AFT 5/23/ PROCESSING AND EXPOSURE ANALYS

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP&PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	6	0 PC	50 PC	33 PC	0 PC	17 PC
INTERMEDIATE	121	0 PC	9 PC	78 PC	12 PC	1 PC
FULL	103	3 PC	0 PC	83 PC	14 PC	0 PC
ALL LEVELS	230	1 PC	6 PC	79 PC	13 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 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

TABLE A-2

MISSION * 1040-1 * INSTR * AFT * 5/23/7 PLOT OF D MIN * TERRAIN * PROCESSING * PRIMARY
AIRTH MEAN * 0.51 * MEDIAN * 0.46 * STD DEV * 0.23 * RANGE * 0.36 TO 0.97 WITH 6 SAMPLES

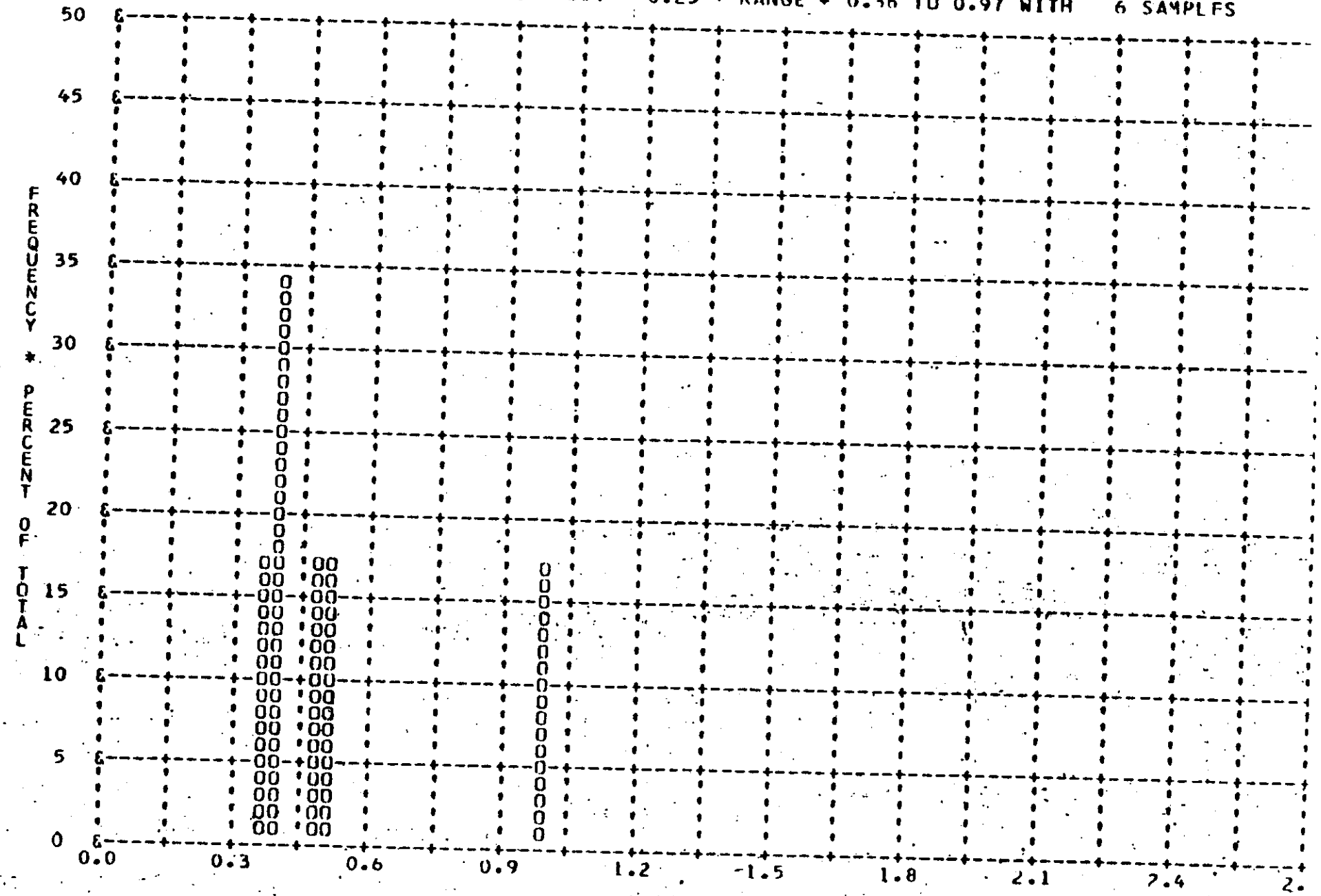


FIGURE A-13

MISSION * 1040-1 * INSTR * AFT * 5/23/7PLOT OF D MAX * TERRAIN * PROCESSING * PRIMARY

AIRTH MEAN * 1.50 * MEDIAN * 1.50 * STD DEV * 0.12 * RANGE * 1.35 TO 1.64 WITH 7 SAMPLES

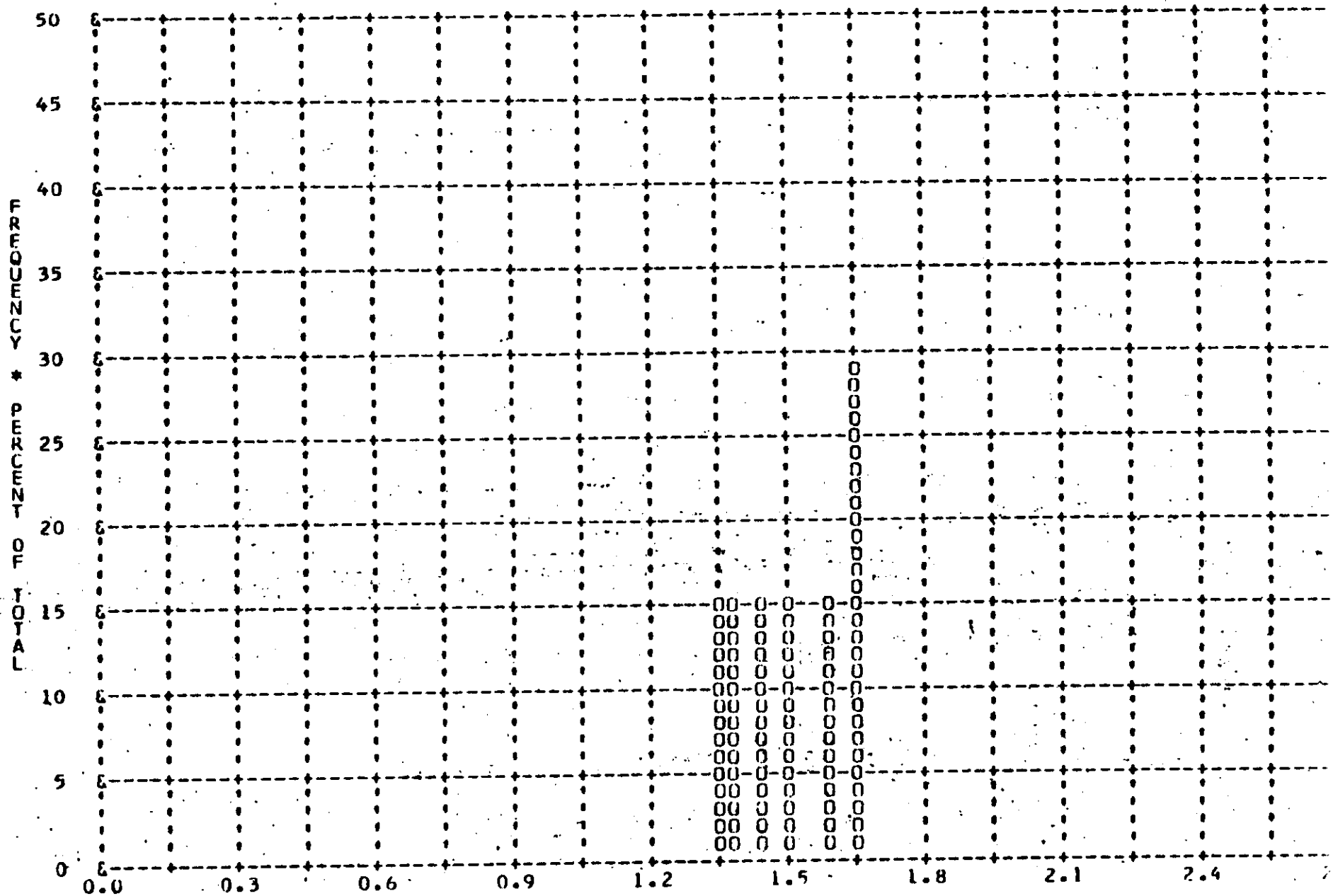


FIGURE A-14

MISSION * 1040-1 * INSTR * AFT * 5/23/7PLOT OF D MAX * CLOUD * PROCESSING * PRIMARY

AIRTH MEAN * 1.24 * MEDIAN * 1.31 * STD DEV * 0.09 * RANGE * 1.18 TO 1.31 WITH 2 SAMPLES

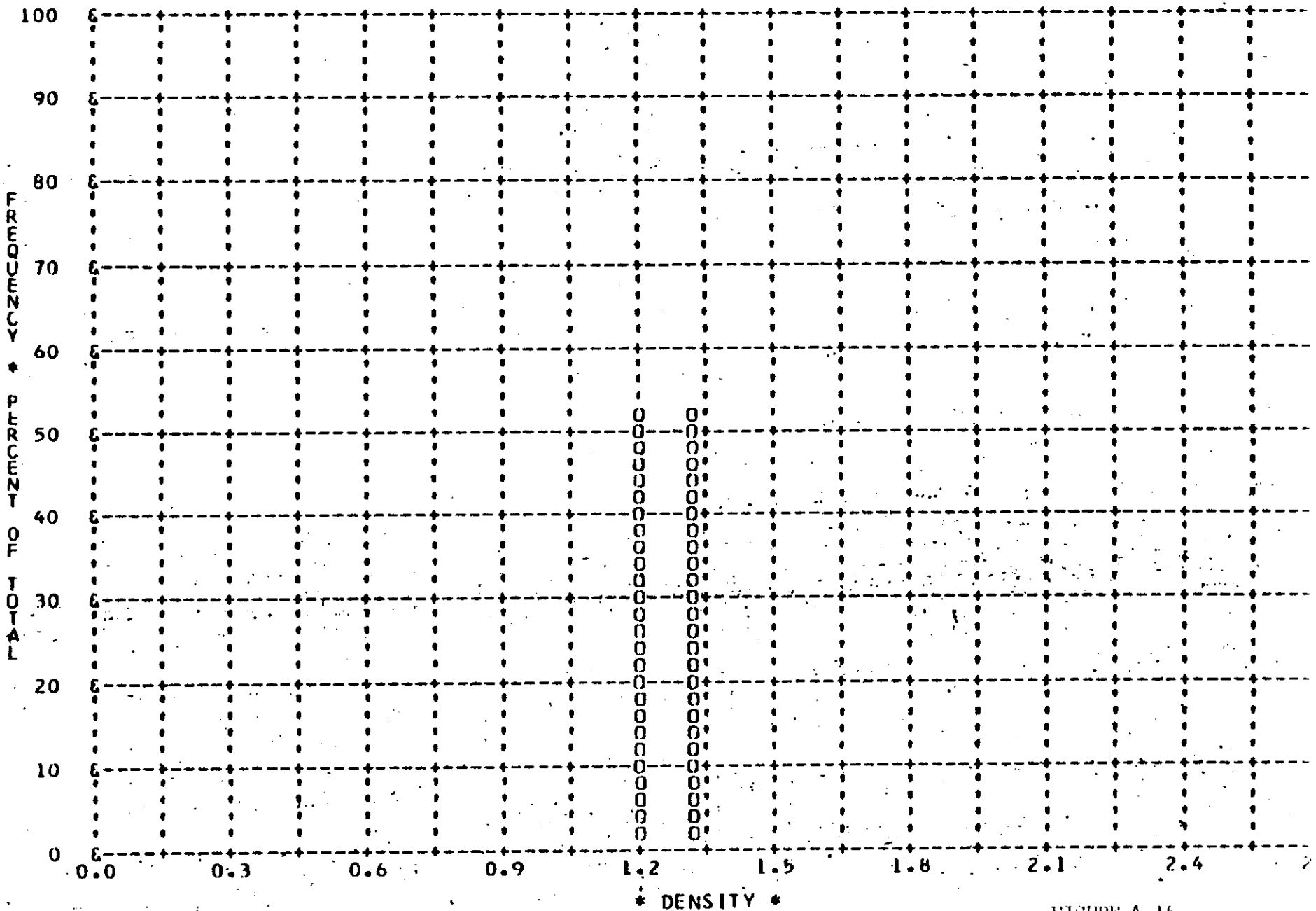


FIGURE A-15

MISSION * 1040-1 * INSTR * AFT * 5/23/7PLOT OF D MIN * TERRAIN * PROCESSING * INTERMEDIAT

AIRTH MEAN * 0.65 * MEDIAN * 0.60 * STD DEV * 0.22 * RANGE * 0.26 TO 1.43 WITH 121 SAMPLES

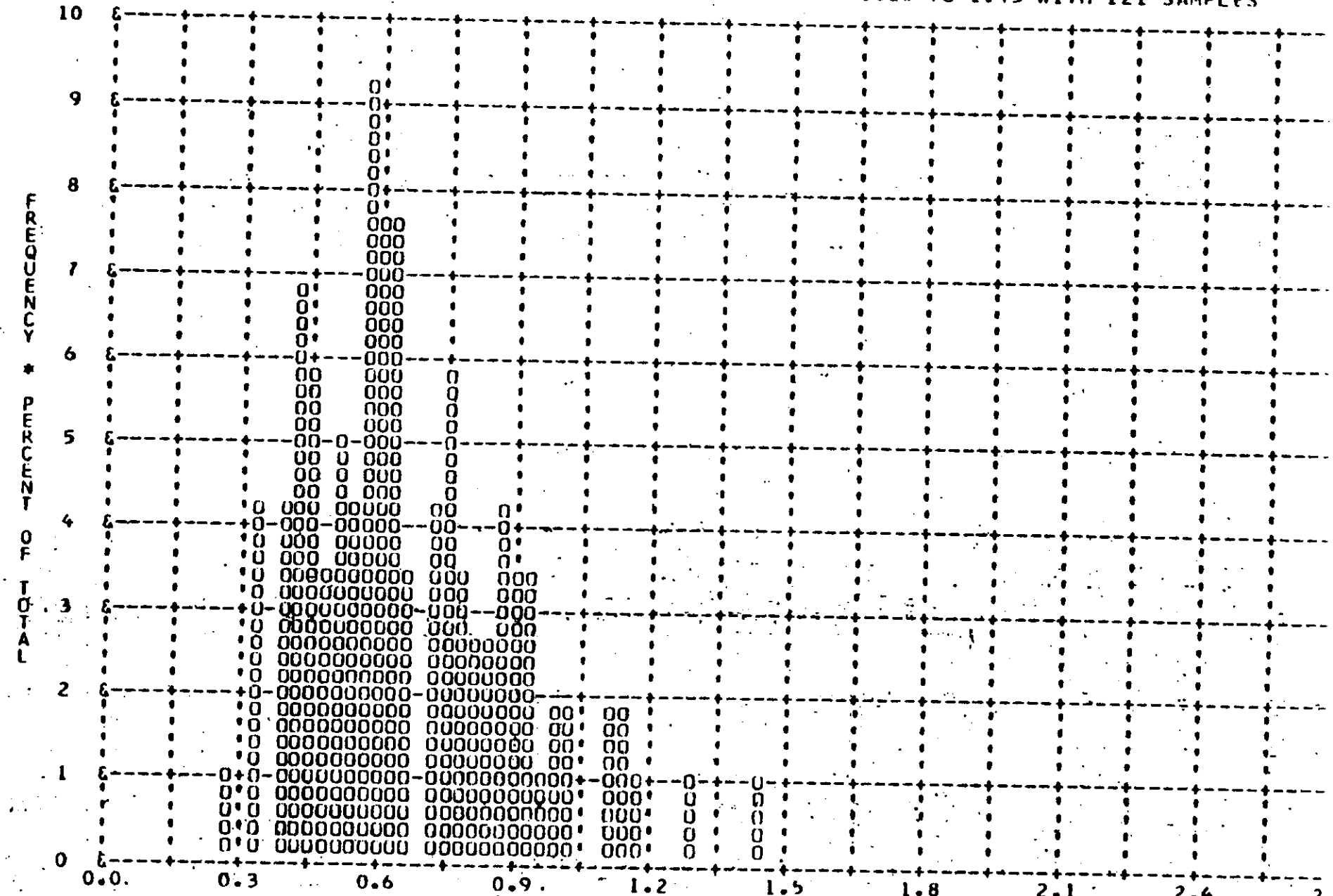
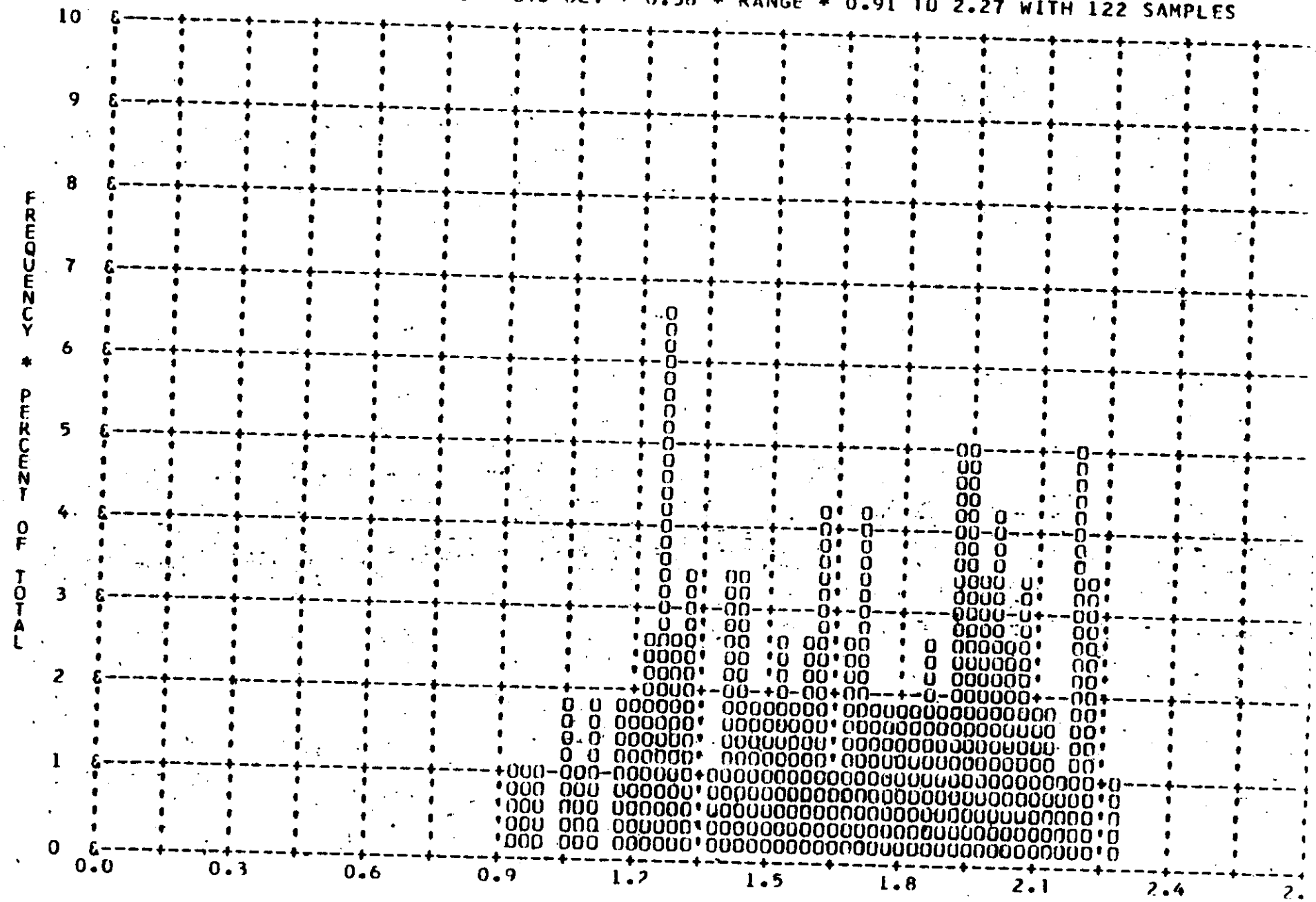


FIGURE A-16

MISSION * 1040-1 * INSTR * AFT * 5/23/7PLOT OF D MAX * TERRAIN * PROCESSING * INTERMEDIAT

AIRTH MEAN * 1.67 * MEDIAN * 1.70 * STD DEV * 0.36 * RANGE * 0.91 TO 2.27 WITH 122 SAMPLES



MISSION * 1040-1 * INSTR * AFT * 5/23/7PLOT OF D MAX * CLOUD * PROCESSING * INTERMEDIATE
AIRTH MEAN * 1.87 * MEDIAN * 1.94 * STD DEV * 0.32 * RANGE * 0.96 TO 2.40 WITH 86 SAMPLES

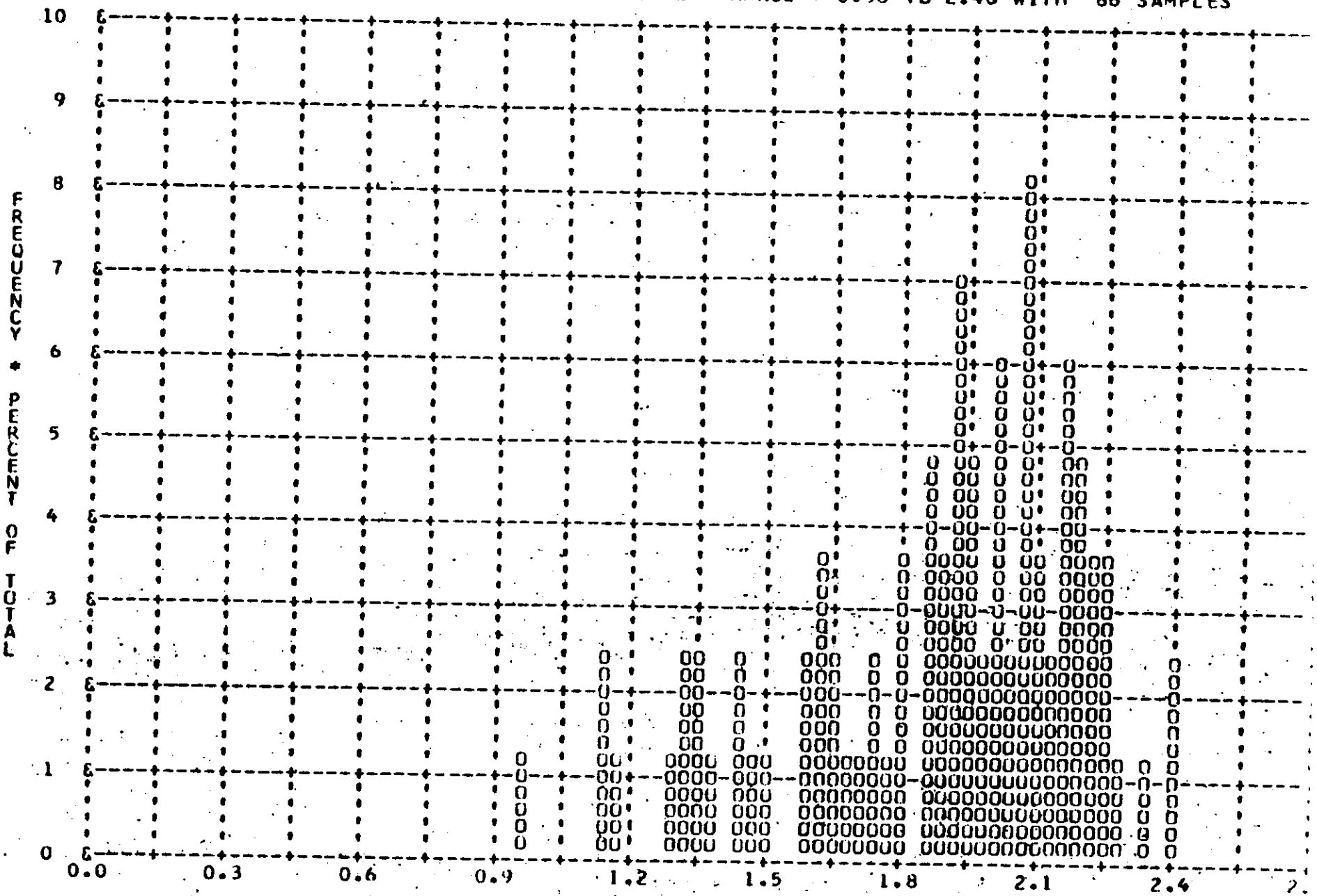


FIGURE A-18

MISSION * 1040-1 * INSTR * AFT * 5/23/7PLOT OF D MIN * TERRAIN * PROCESSING * FULL

AIRTH MEAN * 0.67 * MEDIAN * 0.61 * STD DEV * 0.24 * RANGE * 0.36 TO 1.62 WITH 103 SAMPLES

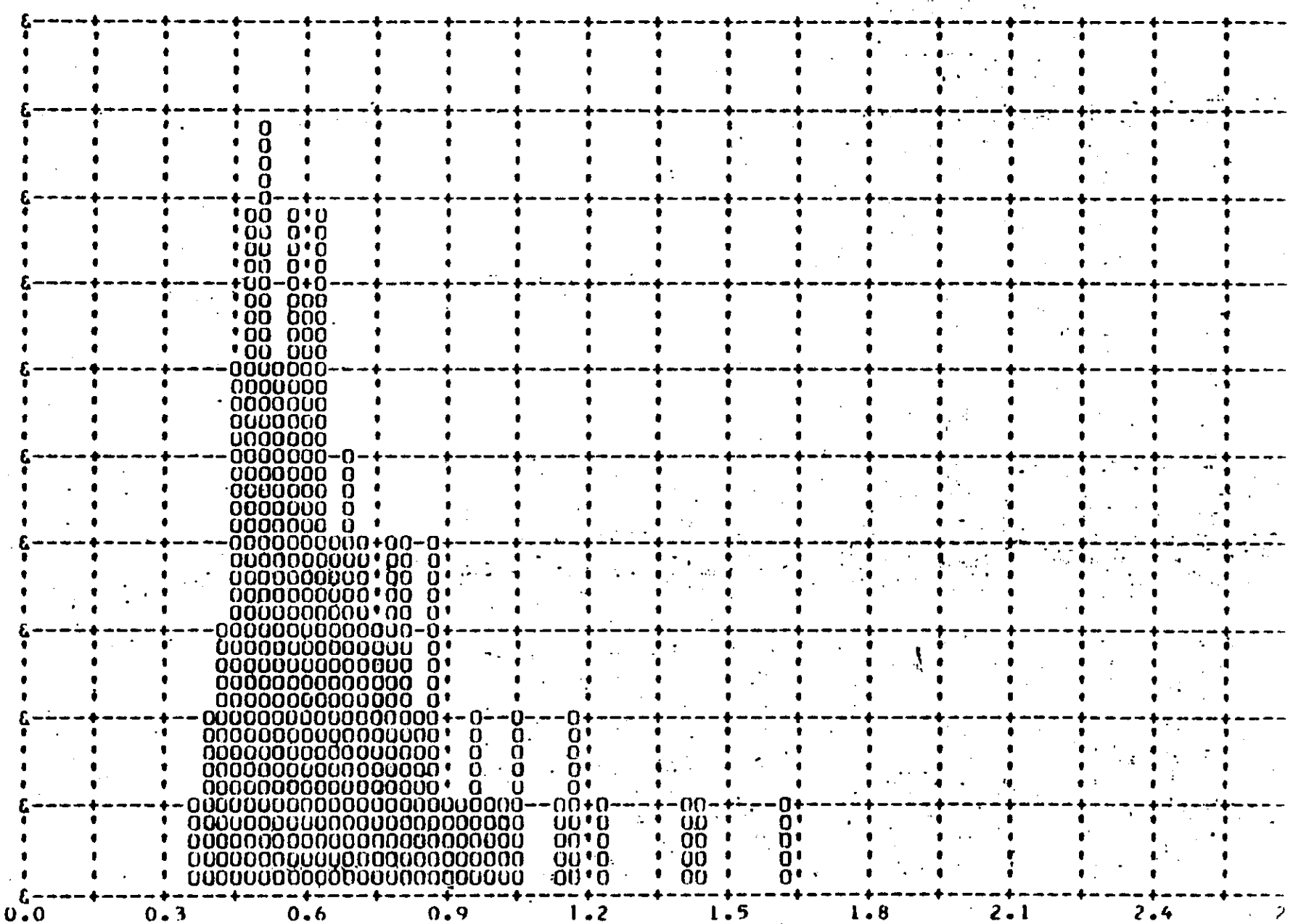


FIGURE A-19

MISSION * 1040-1 * INSTR * AFT * 5/23/7PLOT OF D MAX * TERRAIN * PROCESSING * FULL

AIRTH MEAN * 1.65 * MEDIAN * 1.63 * STD DEV * 0.35 * RANGE * 0.85 TO 2.38 WITH 106 SAMPLES

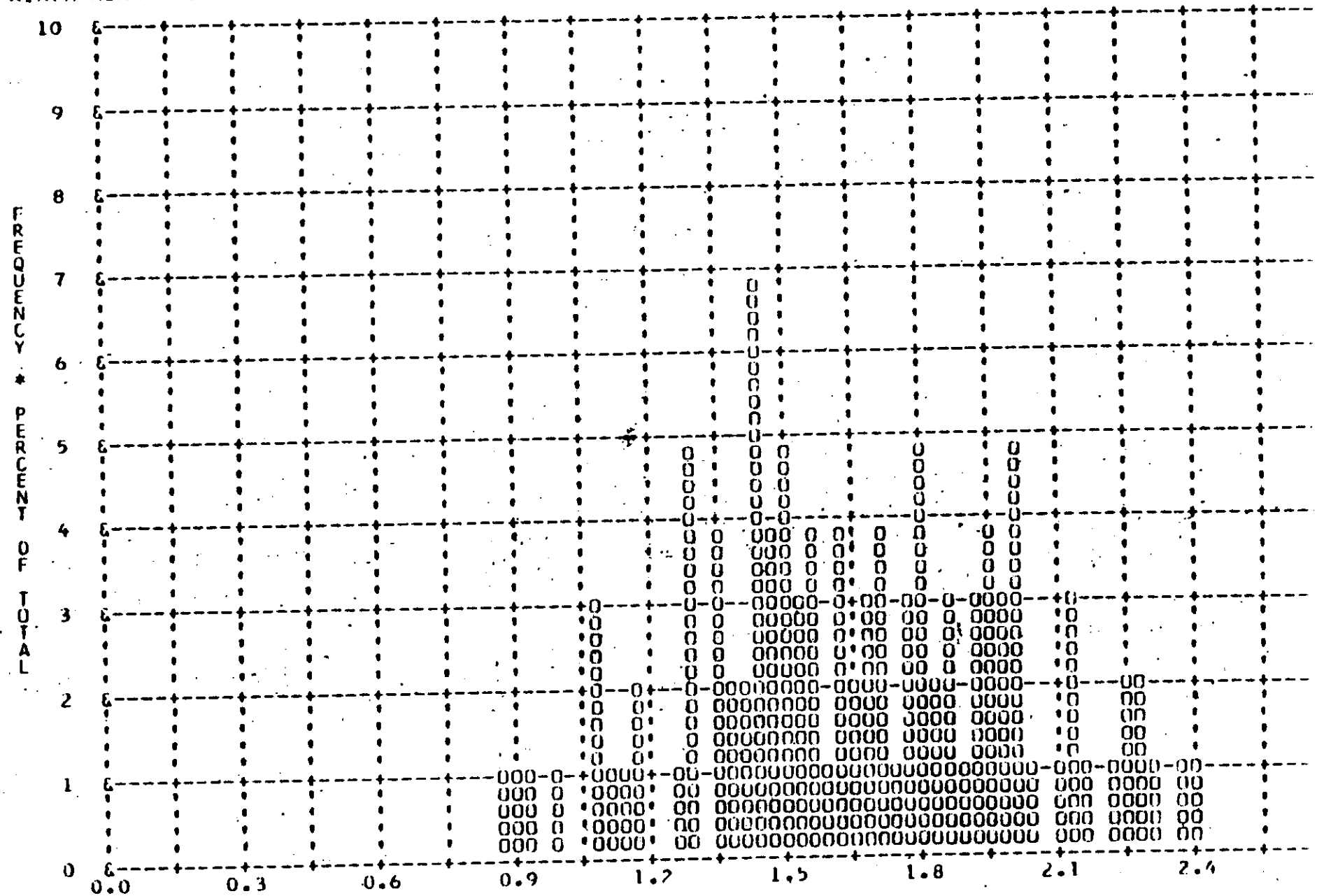


FIGURE A-[illegible]

MISSION * 1040-1 * INSTR * AFT * 5/23/7 PLOT OF D MAX * CLOUD * PROCESSING * FULL

AIRTH MEAN * 2.22 * MEDIAN * 2.26 * STD DEV * 0.17 * RANGE * 1.58 TO 2.41 WITH 92 SAMPLES

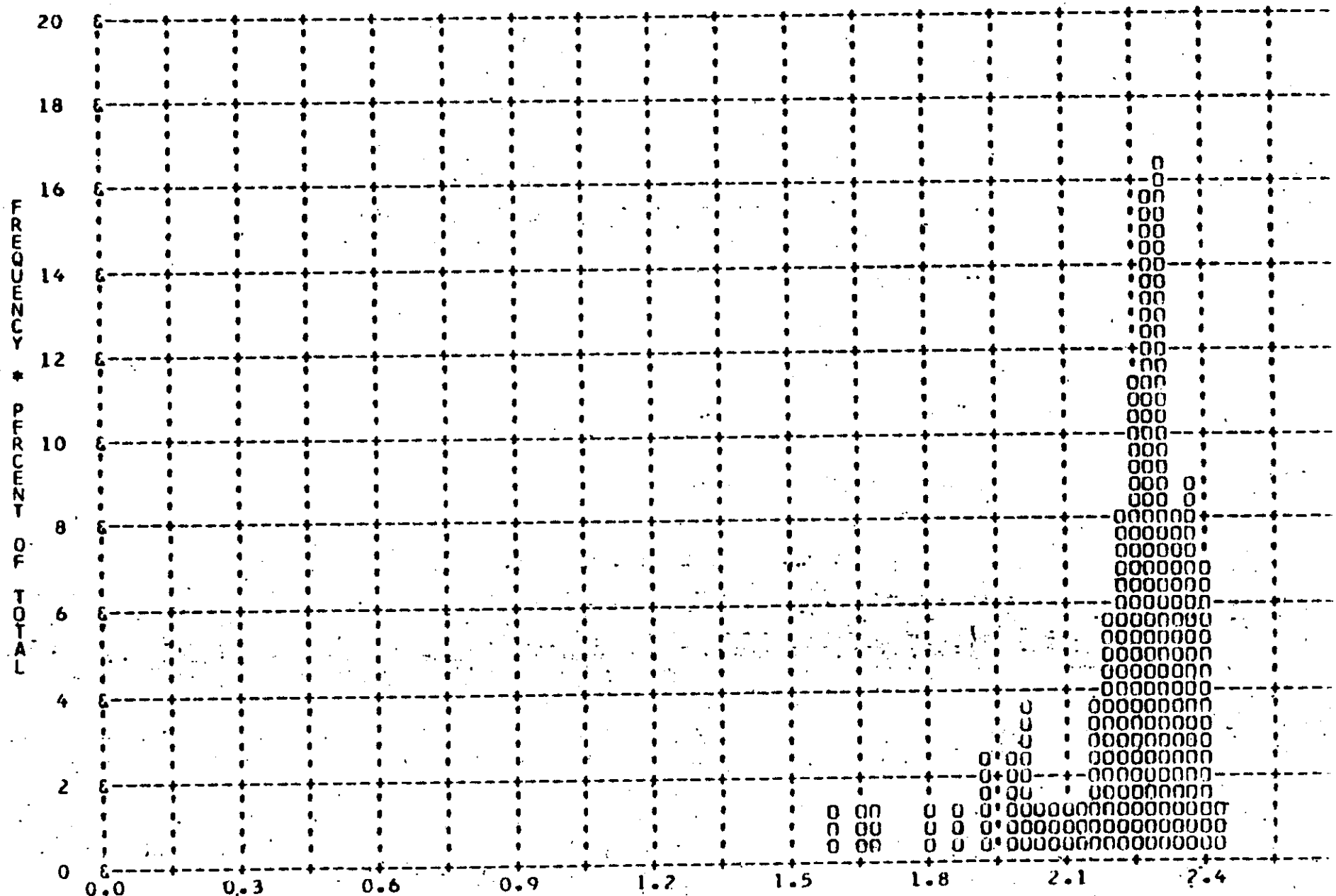


FIGURE A-21

MISSION * 1040-1 * INSTR * AFT * 5/23/7PLOT OF D MIN * TERRAIN * PROCESSING * ALL LEVELS

AIRTH MEAN * 0.66 * MEDIAN * 0.60 * STD DEV * 0.23 * RANGE * 0.26 TO 1.62 WITH 230 SAMPLES

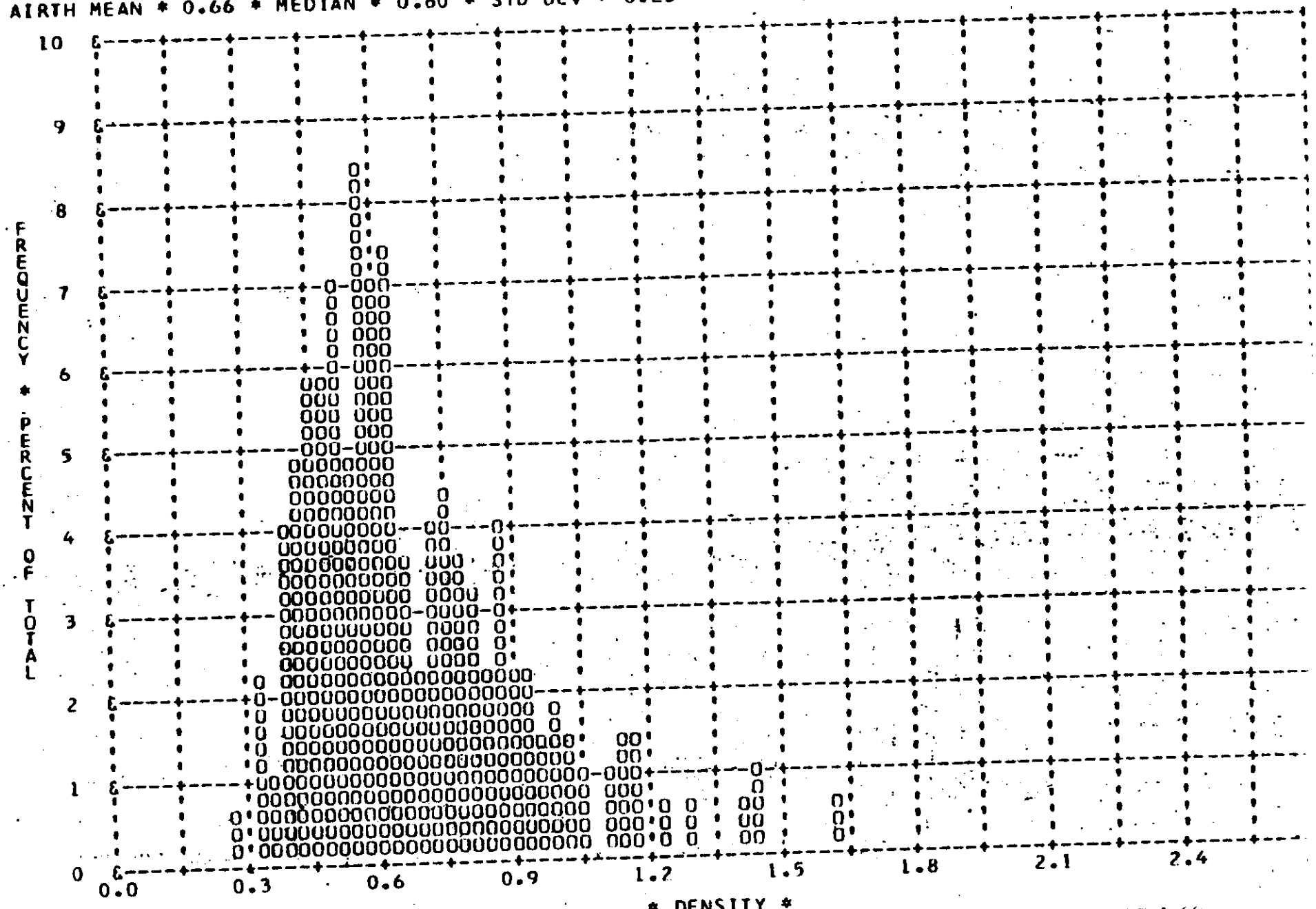


FIGURE A-[illegible]

MISSION * 1040-1 * INSTR * AFT * 5/23/7PLOT OF D MAX * TERRAIN * PROCESSING * ALL LEVELS

AIRTH MEAN * 1.65 * MEDIAN * 1.64 * STD DEV * 0.35 * RANGE * 0.85 TO 2.38 WITH 235 SAMPLES

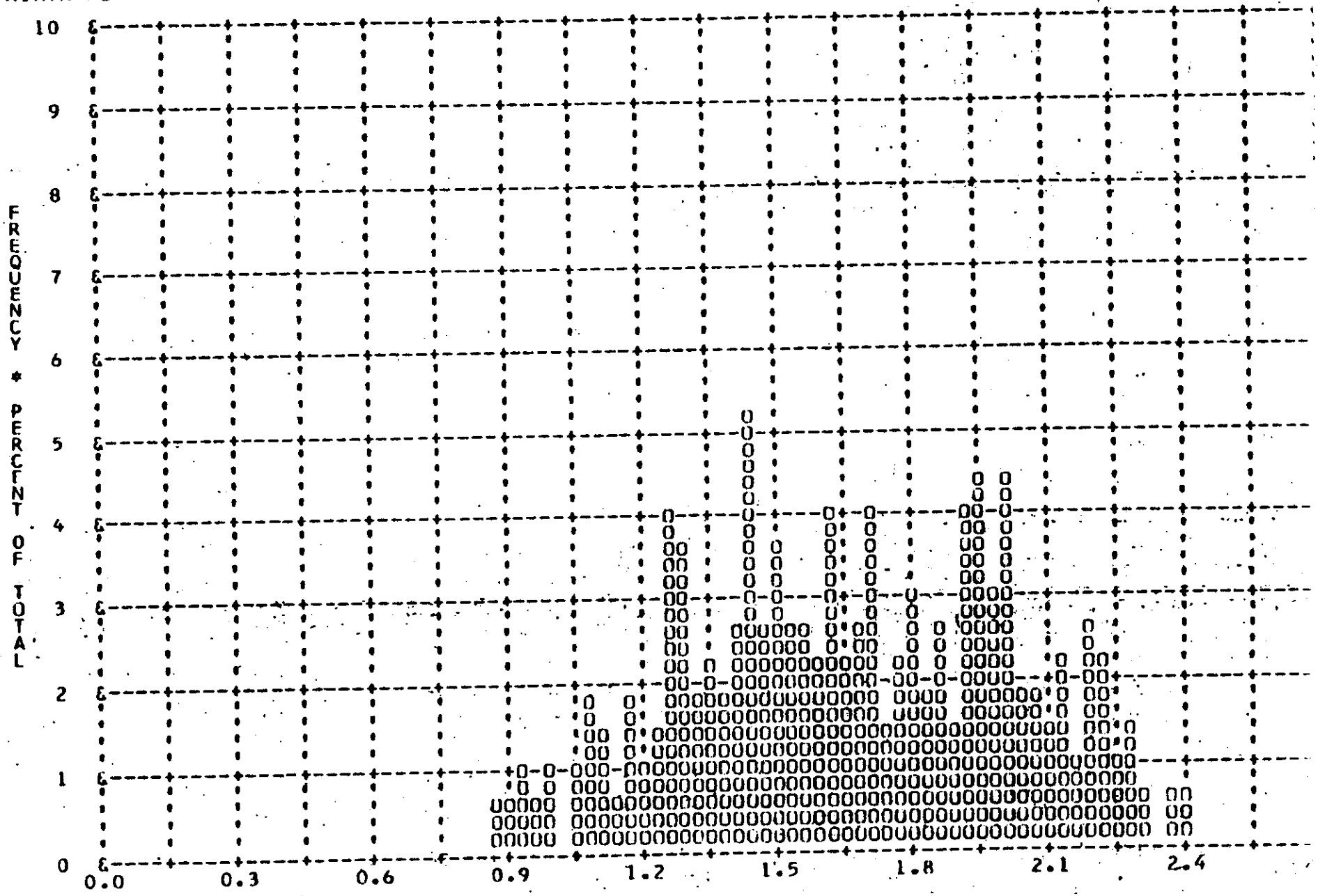


FIGURE A-23

MISSION * 1040-1 * INSTR * AFT * 5/23/7PLOT OF D MAX * CLOUD * PROCESSING * ALL LEVELS

AIRTH MEAN * 2.04 * MEDIAN * 2.15 * STD DEV * 0.32 * RANGE * 0.96 TO 2.41 WITH 180 SAMPLES

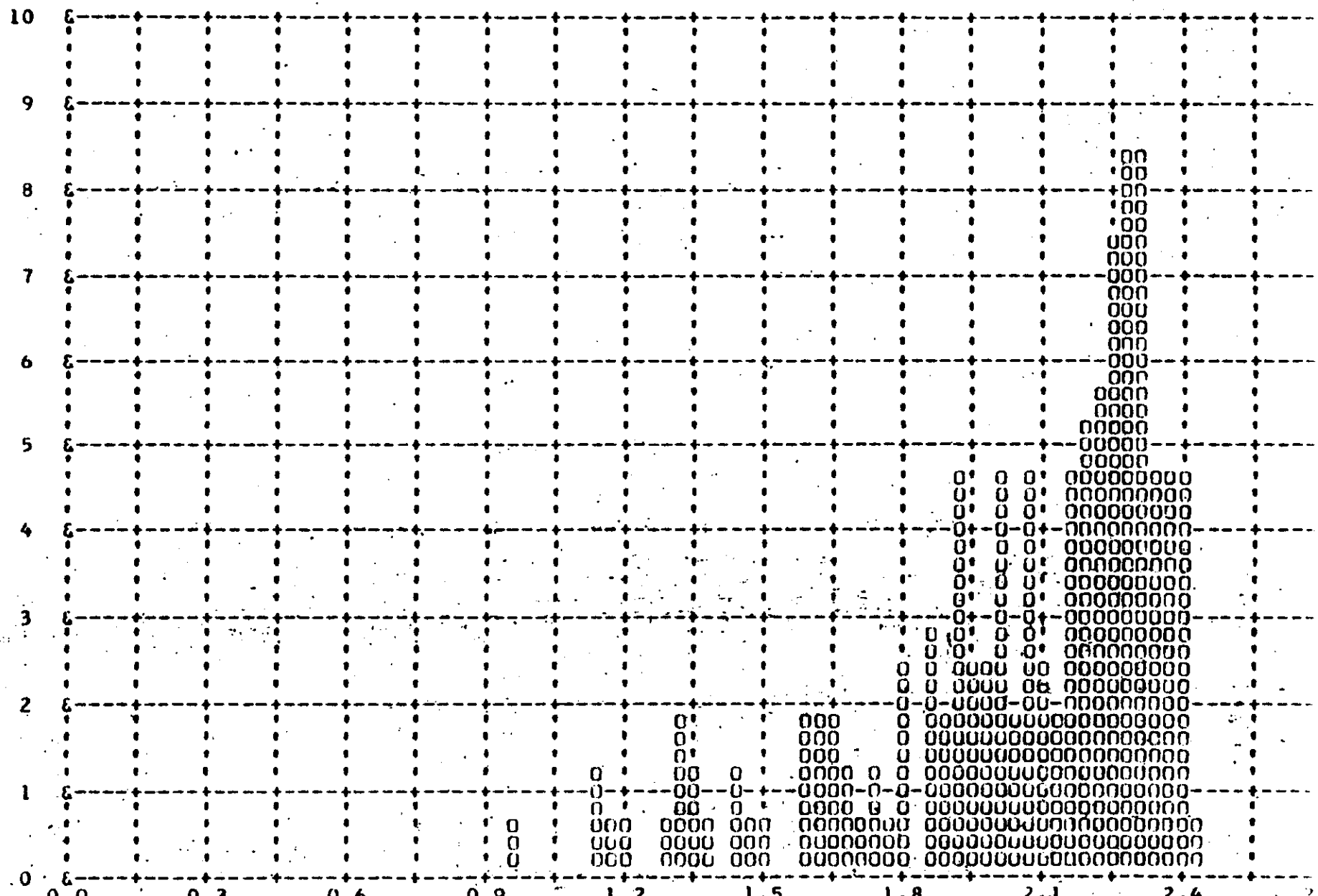


FIGURE A-24

MISSION * 1040-2 * INSTRUMENT * FWD 5/23/67 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	1	0	0	1	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	1	0	0	0	0	0	1	0	0
0.37	1	0	0	0	0	0	1	0	0	2	0	0
0.38	0	0	0	0	0	0	0	0	0	0	0	0
0.39	0	0	0	0	0	0	1	0	0	1	0	0
0.40	0	0	0	1	0	0	0	0	0	1	0	0
0.41	0	0	0	0	0	0	1	0	0	1	0	0
0.42	0	0	0	1	0	0	1	0	0	2	0	0
0.43	0	0	0	0	0	0	4	0	0	4	0	0
0.44	1	0	0	3	0	0	2	0	0	6	0	0
0.45	0	0	0	0	0	0	1	0	0	1	0	0
0.46	0	0	0	0	0	0	0	0	0	0	0	0
0.47	1	0	0	1	0	0	4	0	0	6	0	0
0.48	0	0	0	0	0	0	1	0	0	1	0	0
0.49	0	0	0	1	0	0	1	0	0	2	0	0
0.50	0	0	0	0	0	0	1	0	0	1	0	0
SUBTOTAL	3	0	0	8	0	0	19	0	0	30	0	0

TABLE A-3

MISSION * 1040-2 * INSTRUMENT * FWD 5/23/67 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	1	0	0	2	0	0
0.52	0	0	0	1	0	0	1	0	0	2	0	0
0.53	0	0	0	1	0	0	3	0	0	4	0	0
0.54	0	0	0	0	0	0	1	0	0	1	0	0
0.55	0	0	0	2	0	0	4	0	0	6	0	0
0.56	0	0	0	5	0	0	5	0	0	10	0	0
0.57	0	0	0	0	0	0	5	0	0	5	0	0
0.58	0	0	0	0	0	0	5	0	0	5	0	0
0.59	0	0	0	3	0	0	3	0	0	6	0	0
0.60	1	0	0	1	0	0	4	0	0	6	0	0
0.61	0	0	0	1	0	0	4	0	0	5	0	0
0.62	0	0	0	2	0	0	3	0	0	5	0	0
0.63	0	0	0	0	0	0	9	0	0	9	0	0
0.64	0	0	0	0	0	0	4	0	0	4	0	0
0.65	0	0	0	3	0	0	2	0	0	5	0	0
0.66	0	0	0	2	0	0	1	0	0	3	0	0
0.67	0	0	0	2	0	0	3	0	0	3	0	0
0.68	0	0	0	2	0	0	4	0	0	6	0	0
0.69	1	0	0	2	0	0	3	0	0	4	0	0
0.70	1	0	0	2	0	0	4	0	0	6	0	0
0.71	0	0	0	0	0	0	0	0	0	0	0	0
0.72	0	0	0	1	0	0	2	0	0	3	0	0
0.73	0	0	0	1	0	0	5	0	0	6	0	0
0.74	0	0	0	1	0	0	0	0	0	1	0	0
0.75	0	0	0	1	0	0	2	0	0	3	0	0
0.76	0	0	0	1	0	0	5	0	0	6	0	0
0.77	0	0	0	3	0	0	4	1	0	7	1	0
0.78	0	0	0	2	0	0	2	0	0	4	0	0
0.79	0	0	0	1	0	0	3	0	0	4	0	0
0.80	0	0	0	2	0	0	2	0	0	4	0	0
0.81	0	0	0	1	0	0	0	0	0	1	0	0
0.82	0	0	0	0	0	0	2	0	0	2	0	0
0.83	0	0	0	1	0	0	3	1	0	4	1	0
0.84	0	0	0	0	0	0	1	0	0	1	0	0
0.85	0	0	0	1	0	0	1	0	0	2	0	0
0.86	0	0	0	2	0	0	4	0	0	6	0	0
0.87	0	0	0	0	0	0	1	0	0	1	0	0
0.88	0	0	0	0	0	0	2	0	0	2	0	0
0.89	0	0	0	1	0	0	3	0	0	4	0	0
0.90	0	0	0	2	0	0	1	0	0	3	0	0
0.91	0	0	0	1	0	0	2	0	0	3	0	0
0.92	0	0	0	1	0	0	0	0	0	1	0	0
0.93	0	0	0	1	0	0	1	0	0	2	0	0
0.94	0	0	0	2	0	0	0	0	0	2	0	0
0.95	0	0	0	1	0	0	0	0	0	1	0	0
0.96	1	0	0	0	0	0	2	0	0	3	0	0
0.97	0	0	0	1	0	0	2	0	0	3	0	0
0.98	0	0	0	0	0	0	3	1	0	3	1	0
0.99	0	0	0	1	0	0	2	1	0	3	1	0
1.00	0	0	0	2	0	0	0	0	0	2	0	0
SUBTOTAL	3	0	0	57	0	0	124	5	0	184	5	0

TABLE A-3

MISSION * 1040-2 * INSTRUMENT * FWD 5/23/67 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	2	1	0	2	1	0
1.02	0	0	0	1	2	0	1	1	0	2	3	0
1.03	0	0	0	2	0	0	1	1	0	3	1	0
1.04	0	1	0	0	0	0	1	1	0	1	2	0
1.05	0	1	0	0	0	0	1	1	0	1	2	0
1.06	0	0	0	0	0	0	0	2	0	0	2	0
1.07	0	0	0	0	0	0	1	0	0	1	0	0
1.08	0	0	0	0	1	0	1	0	1	1	1	1
1.09	0	0	0	0	0	0	0	1	0	0	1	0
1.10	0	0	0	0	0	0	0	1	0	0	1	0
1.11	0	1	0	0	0	0	1	0	0	1	1	0
1.12	0	0	0	0	0	0	2	0	0	2	0	0
1.13	0	0	0	0	0	0	1	0	0	1	0	0
1.14	0	0	0	0	1	0	0	0	0	0	1	0
1.15	0	0	0	1	0	0	0	0	0	1	0	0
1.16	0	0	0	2	0	0	0	1	0	2	1	0
1.17	0	0	0	0	0	1	1	2	0	1	3	0
1.18	0	0	0	1	0	0	1	2	0	1	3	0
1.19	0	1	0	0	0	0	1	2	0	1	3	0
1.20	0	0	0	0	2	0	0	1	0	0	3	0
1.21	0	0	0	1	1	0	1	1	0	2	2	0
1.22	0	0	0	0	1	0	1	0	0	1	1	0
1.23	0	0	0	1	0	0	2	0	0	1	0	0
1.24	0	0	0	1	0	0	2	0	0	3	0	0
1.25	0	0	0	0	1	0	0	0	0	0	1	0
1.26	0	0	0	0	0	0	2	3	0	2	3	0
1.27	0	0	0	0	1	0	1	0	0	1	1	0
1.28	0	0	0	0	0	0	1	2	0	1	2	0
1.29	0	0	0	0	0	0	2	0	0	2	0	0
1.30	0	1	0	0	0	1	1	4	0	1	6	0
1.31	0	0	0	0	0	1	0	5	0	0	5	0
1.32	0	0	0	0	0	0	0	5	0	0	5	0
1.33	0	0	0	0	0	2	0	0	0	0	2	0
1.34	0	0	0	0	0	1	0	1	0	0	2	0
1.35	0	0	1	0	1	0	1	0	0	1	0	2
1.36	0	0	0	1	3	0	0	1	0	1	4	0
1.37	0	0	0	1	0	0	0	1	0	1	1	0
1.38	0	0	0	1	0	0	0	1	0	1	1	0
1.39	0	0	0	0	1	0	0	1	0	0	2	0
1.40	0	0	0	0	0	1	0	1	0	0	1	1
1.41	0	0	0	0	0	0	1	0	0	1	0	0
1.42	0	0	0	0	0	4	0	0	0	0	0	4
1.43	0	0	0	0	1	2	0	1	0	0	1	2
1.44	0	0	0	0	2	0	0	1	0	0	2	0
1.45	0	0	0	0	2	1	0	0	0	0	2	1
1.46	0	0	0	0	3	0	0	0	1	0	3	0
1.47	0	0	0	0	1	1	0	0	1	0	1	1
1.48	0	0	0	0	1	0	0	1	0	0	2	0
1.49	0	0	0	0	1	1	0	0	1	0	1	1
1.50	0	0	0	0	1	0	0	0	1	0	1	1
SUBTOTAL	0	5	1	11	37	4	30	47	3	41	89	8

TABLE A-3

MISSION * 1040-2 * INSTRUMENT * FWD 5/23/67 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	2	0	0	2	0
1.52	0	0	0	0	0	0	0	3	0	0	3	0
1.53	0	0	0	0	1	1	0	2	1	0	3	2
1.54	0	0	0	0	1	0	0	2	0	0	1	0
1.55	0	0	0	0	2	0	0	3	0	0	5	0
1.56	0	0	0	0	0	0	0	3	0	0	3	0
1.57	0	0	0	0	1	1	0	2	0	0	3	1
1.58	0	0	0	0	1	2	1	1	0	1	2	2
1.59	0	0	0	0	3	0	0	2	1	0	5	1
1.60	0	0	1	0	1	1	1	7	0	1	8	2
1.61	0	0	0	0	1	0	1	2	1	0	3	1
1.62	0	1	0	0	0	1	0	5	1	0	6	2
1.63	0	0	0	0	2	1	0	5	1	0	7	1
1.64	0	0	0	0	1	3	0	2	1	0	3	4
1.65	0	0	0	0	2	0	0	3	0	0	5	0
1.66	0	0	0	0	0	1	0	2	0	0	2	1
1.67	0	0	0	0	2	0	1	0	0	1	2	0
1.68	0	0	1	0	0	2	0	1	1	0	3	3
1.69	0	0	1	0	2	1	0	1	0	0	3	2
1.70	0	0	0	0	2	1	0	0	1	0	2	2
1.71	0	0	0	0	0	1	0	1	0	0	1	1
1.72	0	0	0	0	0	1	0	1	1	0	1	1
1.73	0	0	0	0	1	1	0	2	0	0	3	1
1.74	0	0	0	0	0	1	0	1	0	0	1	1
1.75	0	0	0	0	1	0	0	1	0	0	2	1
1.76	0	0	0	0	0	0	0	6	2	0	6	2
1.77	0	0	1	0	0	1	0	3	1	0	3	2
1.78	0	0	0	0	1	0	0	1	4	0	2	4
1.79	0	0	0	0	0	1	0	1	0	0	1	1
1.80	0	0	0	0	1	1	0	3	2	0	4	3
1.81	0	0	0	0	0	1	0	2	0	0	2	0
1.82	0	0	1	0	2	1	0	0	1	0	2	3
1.83	0	0	0	0	0	1	0	2	0	0	2	0
1.84	0	0	0	0	1	0	0	2	1	0	3	1
1.85	0	0	0	0	0	1	0	0	1	0	0	2
1.86	0	0	0	0	0	1	0	1	1	0	1	2
1.87	0	0	0	0	0	1	0	3	0	0	3	1
1.88	0	0	0	0	2	1	0	1	1	0	3	2
1.89	0	0	1	0	0	1	0	3	1	0	3	3
1.90	0	0	0	0	1	0	0	1	2	0	2	2
1.91	0	0	0	0	0	1	0	1	0	0	1	1
1.92	0	0	0	0	0	1	0	3	2	0	3	3
1.93	0	0	0	0	0	1	0	1	0	0	1	1
1.94	0	0	0	0	0	0	0	3	0	0	3	0
1.95	0	0	0	0	0	0	0	2	3	0	2	3
1.96	0	0	0	0	1	0	0	0	0	0	1	0
1.97	0	0	0	0	0	0	0	3	0	0	3	0
1.98	0	0	0	0	0	1	0	2	1	0	2	2
1.99	0	0	0	0	1	0	0	1	2	0	2	2
2.00	0	0	0	0	0	2	0	0	4	0	0	6
SUBTOTAL	0	1	5	0	34	32	3	97	38	3	132	75

TABLE A-3

~~TOP SECRET~~ C [redacted]

MISSION * 1040-2 * INSTRUMENT * FWD 5/23/67 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	2	0	0	2
2.02	0	0	0	0	1	0	0	0	2	0	1	2
2.03	0	0	0	0	0	1	0	3	3	0	3	4
2.04	0	0	0	0	0	2	0	0	4	0	0	5
2.05	0	0	0	0	0	0	0	0	3	0	0	3
2.06	0	0	0	0	1	1	0	2	4	0	3	5
2.07	0	0	0	0	1	0	0	0	2	0	1	2
2.08	0	0	0	0	0	0	0	2	4	0	2	4
2.09	0	0	0	0	1	1	0	0	2	0	1	3
2.10	0	0	0	0	0	0	0	1	4	0	1	4
2.11	0	0	0	0	0	0	0	1	3	0	1	3
2.12	0	0	0	0	0	1	0	0	3	0	0	4
2.13	0	0	0	0	0	0	0	3	4	0	3	4
2.14	0	0	0	0	0	3	0	1	2	0	1	5
2.15	0	0	0	0	0	0	0	0	1	0	0	1
2.16	0	0	0	0	0	0	0	2	1	0	2	1
2.17	0	0	0	0	0	1	0	2	1	0	2	2
2.18	0	0	0	0	0	2	0	0	6	0	0	8
2.19	0	0	0	0	0	2	0	1	5	0	1	7
2.20	0	0	0	0	0	0	0	0	1	0	0	1
2.21	0	0	0	0	0	0	0	1	2	0	1	2
2.22	0	0	0	0	0	0	0	0	3	0	0	3
2.23	0	0	0	0	0	1	0	0	3	0	0	3
2.24	0	0	0	0	1	2	0	1	3	0	2	5
2.25	0	0	0	0	0	0	0	1	3	0	1	3
2.26	0	0	0	0	0	1	0	0	4	0	0	5
2.27	0	0	0	0	0	0	0	1	1	0	1	1
2.28	0	0	0	0	0	1	0	0	4	0	0	5
2.29	0	0	0	0	0	0	0	2	1	0	2	1
2.30	0	0	0	0	0	0	0	0	1	0	0	1
2.31	0	0	0	0	0	0	0	0	1	0	0	1
2.32	0	0	0	0	0	2	0	0	4	0	0	6
2.33	0	0	0	0	0	0	0	0	1	0	0	1
2.34	0	0	0	0	0	0	0	1	2	0	1	2
2.35	0	0	0	0	0	0	0	0	0	0	0	0
2.36	0	0	0	0	0	0	0	1	1	0	1	1
2.37	0	0	0	0	0	0	0	0	1	0	0	1
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	1	0	0	1
2.41	0	0	0	0	0	0	0	0	2	0	0	2
2.42	0	0	0	0	0	0	0	0	0	0	0	0
2.43	0	0	0	0	0	1	0	0	0	0	0	1
2.44	0	0	0	0	0	0	0	0	1	0	0	1
2.45	0	0	0	0	0	0	0	0	2	0	0	2
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	5	21	0	26	98	0	31	119

~~TOP SECRET~~ C [redacted]

TABLE A-3

MISSION * 1040-2 * INSTRUMENT * FWD 5/23/67 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	1	0	0	1	0
2.58	0	0	0	0	0	0	0	1	0	0	1	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	1	0	0	1	0
TOTAL	6	6	6	76	76	57	176	176	139	258	258	202

MISSION 1040-2 INSTR - FWD 5/23/ PROCESSING AND EXPOSURE ANALYSI

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP&PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	6	0 PC	17 PC	67 PC	0 PC	17 PC
INTERMEDIATE	76	0 PC	1 PC	71 PC	25 PC	3 PC
FULL	176	2 PC	0 PC	73 PC	26 PC	0 PC
ALL LEVELS	258	1 PC	1 PC	72 PC	25 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 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

TABLE A-3

MISS.ON * 1040-2 * INSTR * FWD * 5/23/7PLOT OF D MIN * TERRAIN * PROCESSING * PRIMARY

AIRTH MEAN * 0.59 * MEDIAN * 0.60 * STD DEV * 0.22 * RANGE * 0.37 TO 0.96 WITH 6 SAMPLES

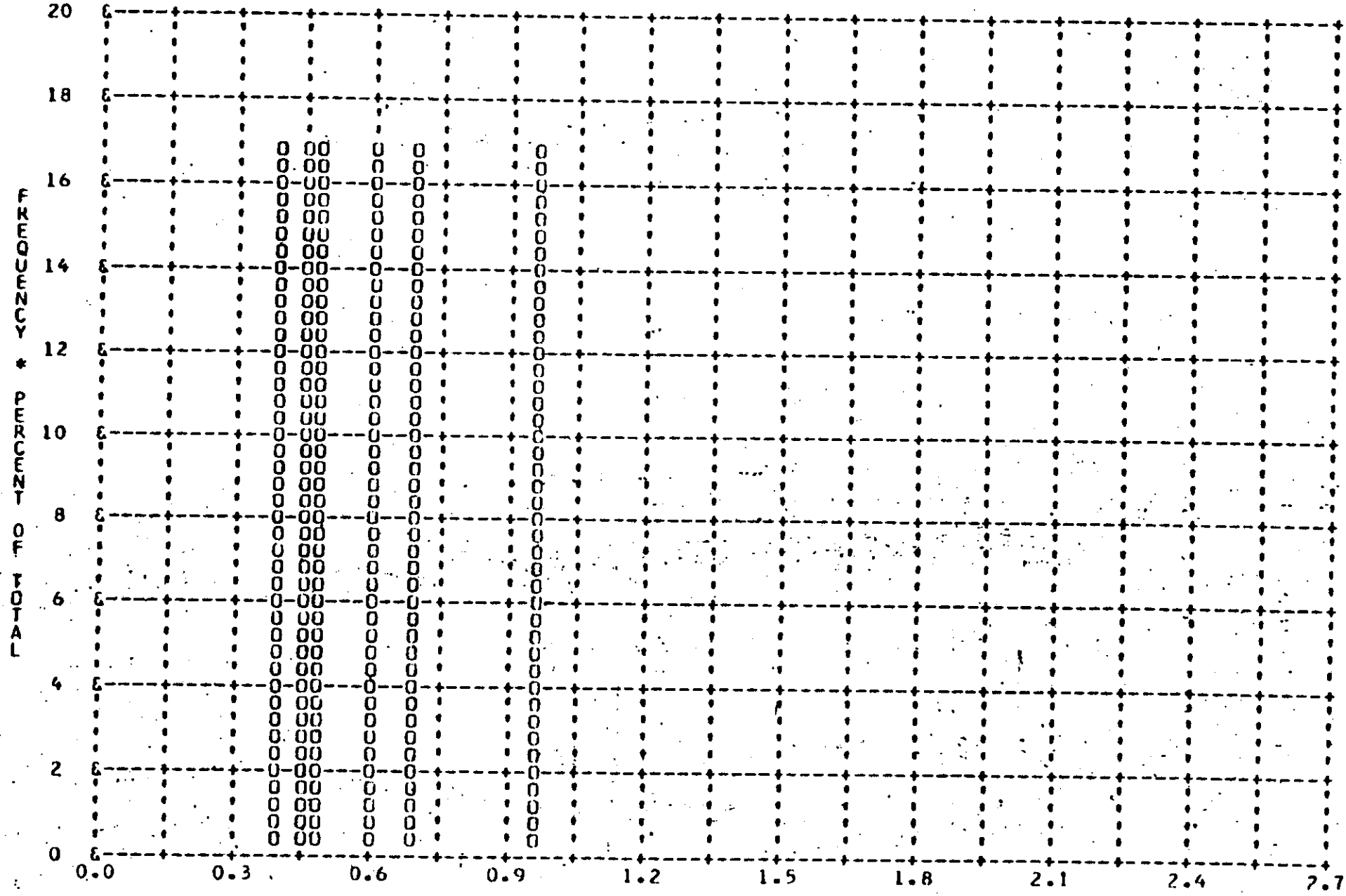


FIGURE A-25

MISSION * 1040-2 * INSTR * FWD * 5/23/7 PLOT OF D MAX * TERRAIN * PROCESSING * PRIMARY

AIRTH MEAN * 1.22 * MEDIAN * 1.19 * STD DEV * 0.22 * RANGE * 1.04 TO 1.62 WITH 6 SAMPLES

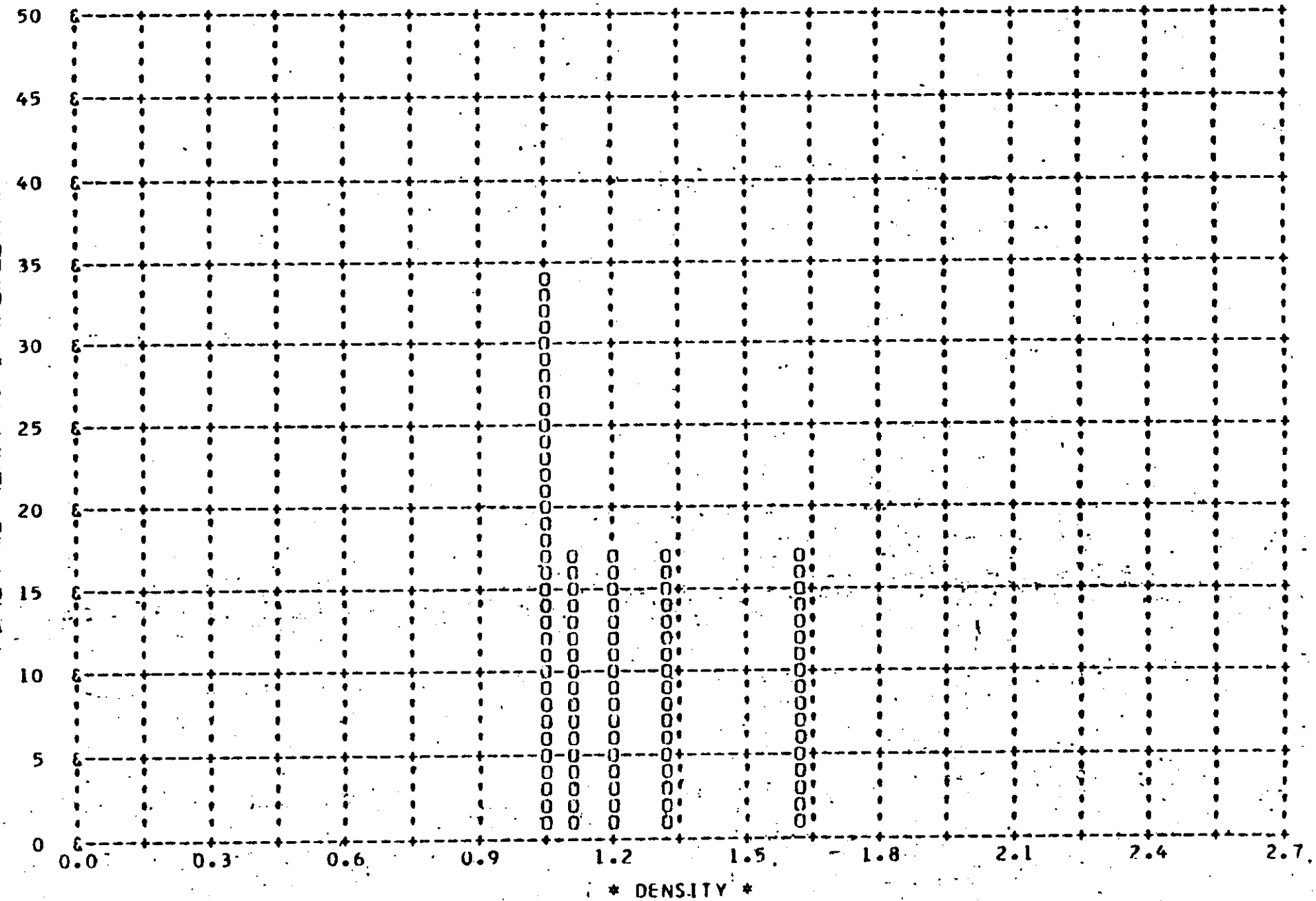


FIGURE A-26

MISSION * 1040-2 * INSTR * FWD * 5/23/7 PLOT OF D MAX * CLOUD * PROCESSING * PRIMARY

AIRTH MEAN * 1.69 * MEDIAN * 1.77 * STD DEV * 0.19 * RANGE * 1.35 TO 1.89 WITH 6 SAMPLES

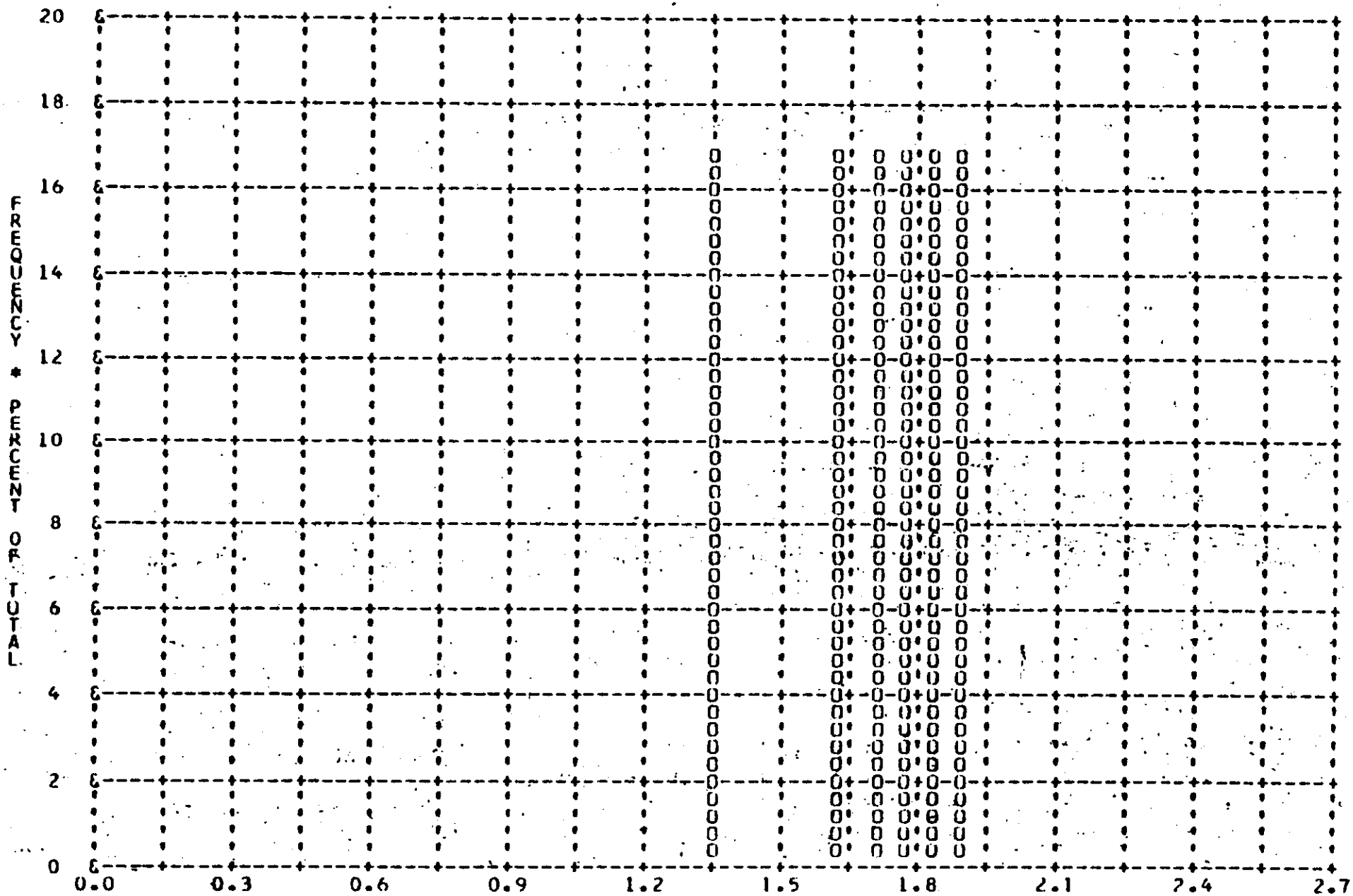


FIGURE A-27

MISSION * 1040-2 * INSTR * FWD * 5/23/7PLOT OF D MIN * TERRAIN * PROCESSING * INTERMEDIATE

AIRTH MEAN * 0.77 * MEDIAN * 0.76 * STD DEV * 0.23 * RANGE * 0.36 TO 1.37 WITH 76 SAMPLES

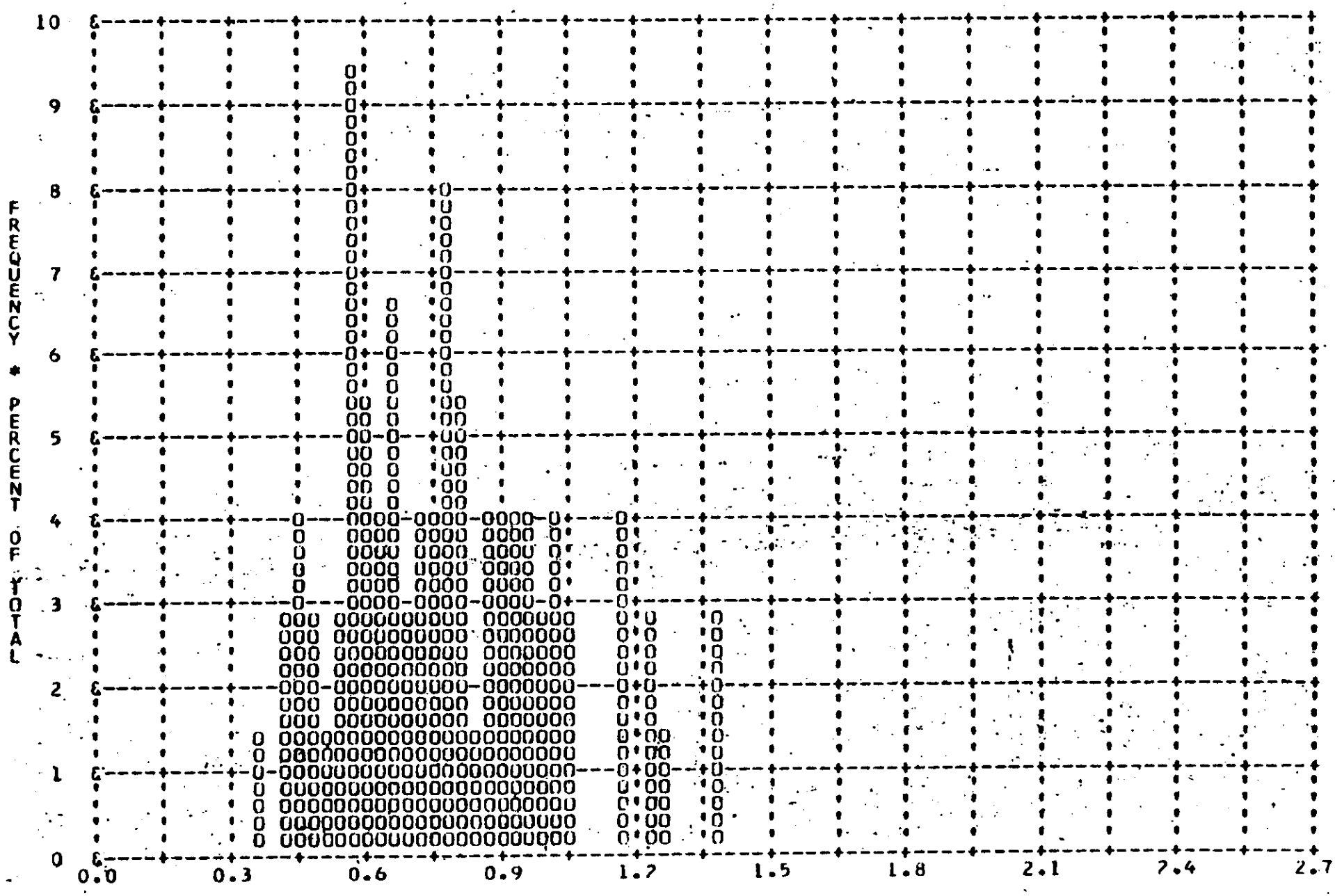


FIGURE A-28

MISSION * 1040-2 * INSTR * FWD * 5/23/7PLOT OF D MAX * TERRAIN * PROCESSING * INTERMEDIATE

AIRTH MEAN * 1.55 * MEDIAN * 1.54 * STD DEV * 0.26 * RANGE * 1.02 TO 2.24 WITH 76 SAMPLES

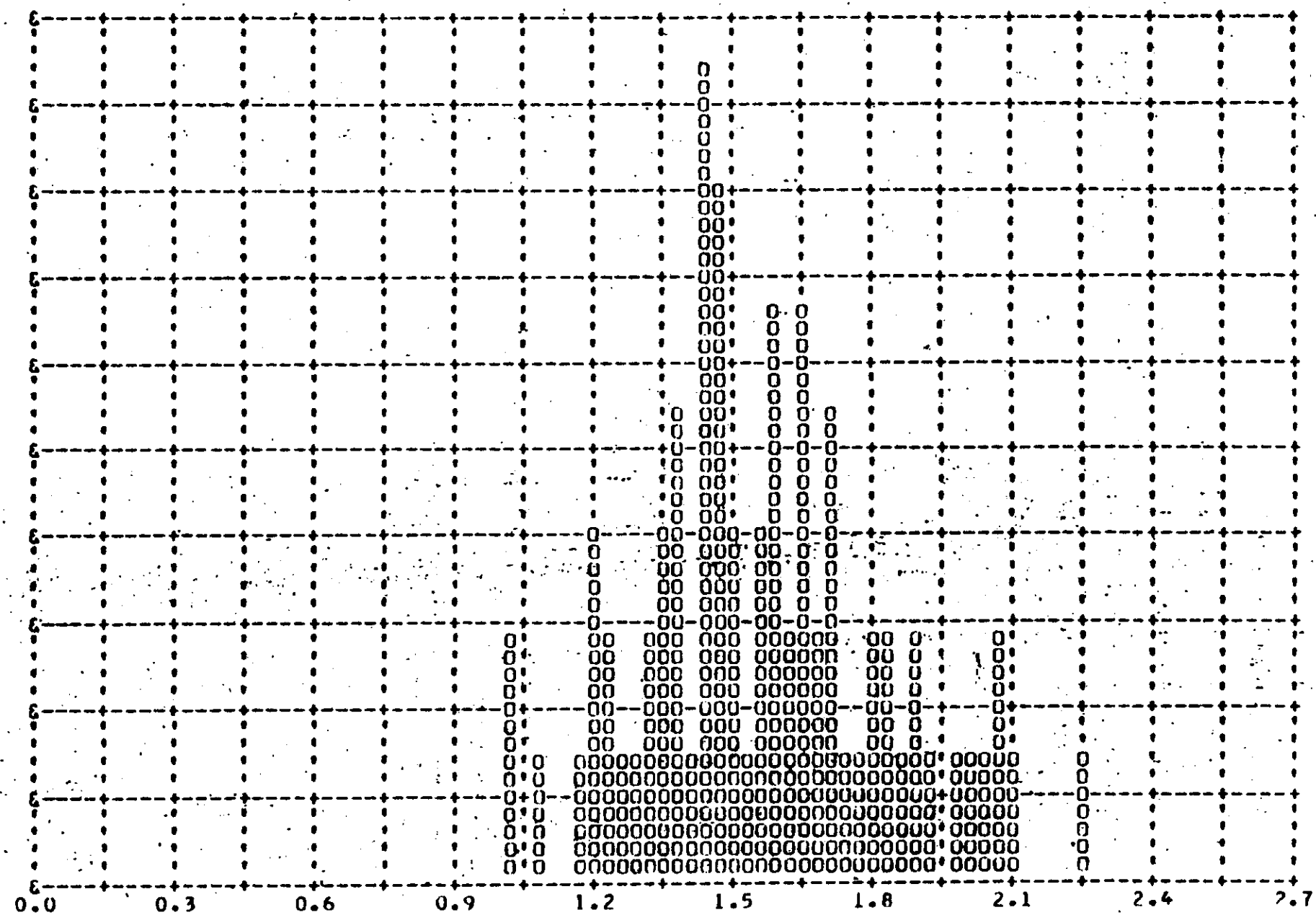


FIGURE A-29

MISSION * 1040-2 * INSTR * FWD * 5/23/7 PLOT OF D MAX * CLOUD * PROCESSING * INTERMEDIATE

AIRTH MEAN * 1.88 * MEDIAN * 1.88 * STD DEV * 0.28 * RANGE * 1.22 TO 2.43 WITH 57 SAMPLES

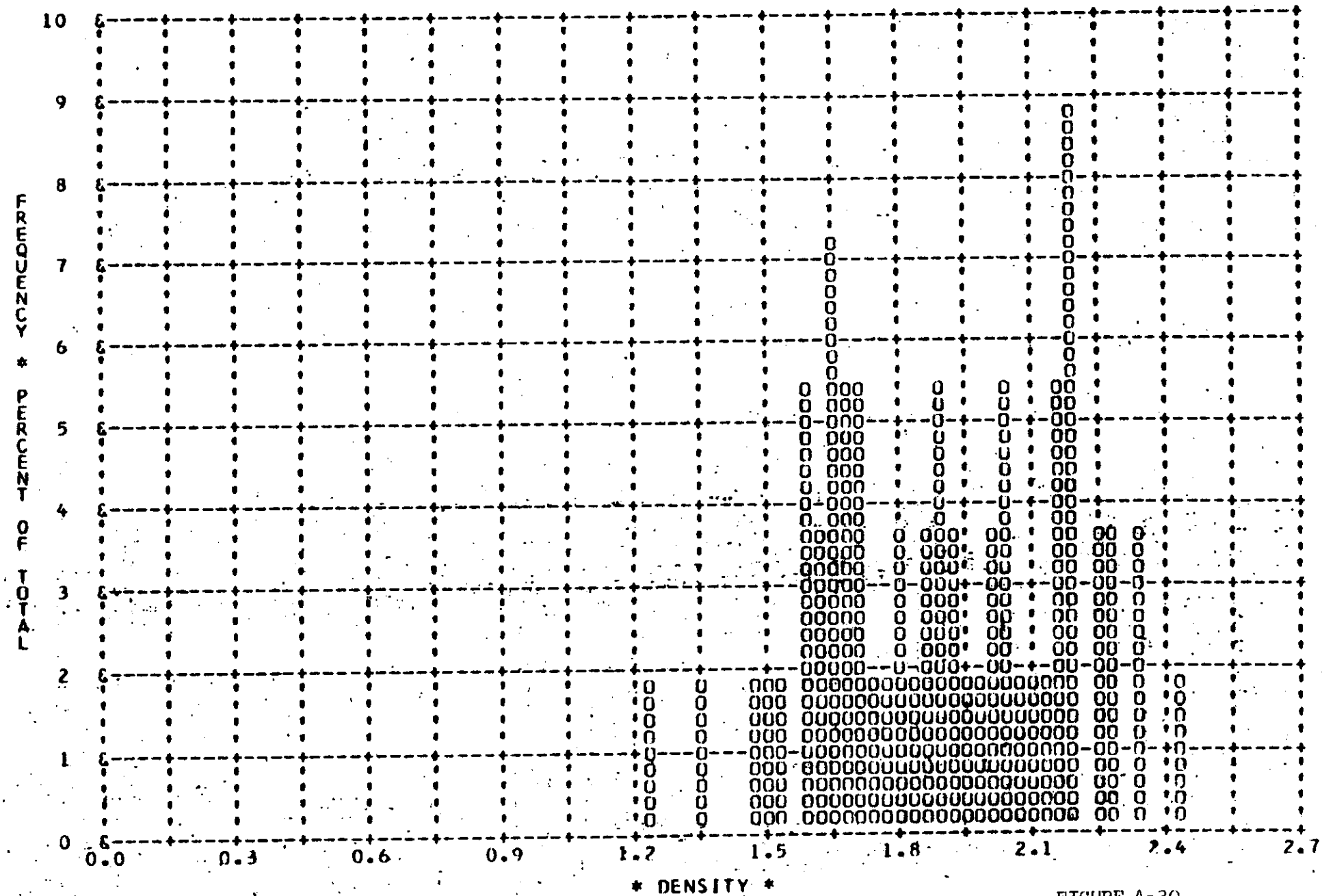


FIGURE A-30

MISSION * 1040-2 * INSTR * FWD * 5/23/7PLOT OF D MIN * TERRAIN * PROCESSING * FULL

AIRTH MEAN * 0.78 * MEDIAN * 0.72 * STD DEV * 0.27 * RANGE * 0.24 TO 1.67 WITH 176 SAMPLES

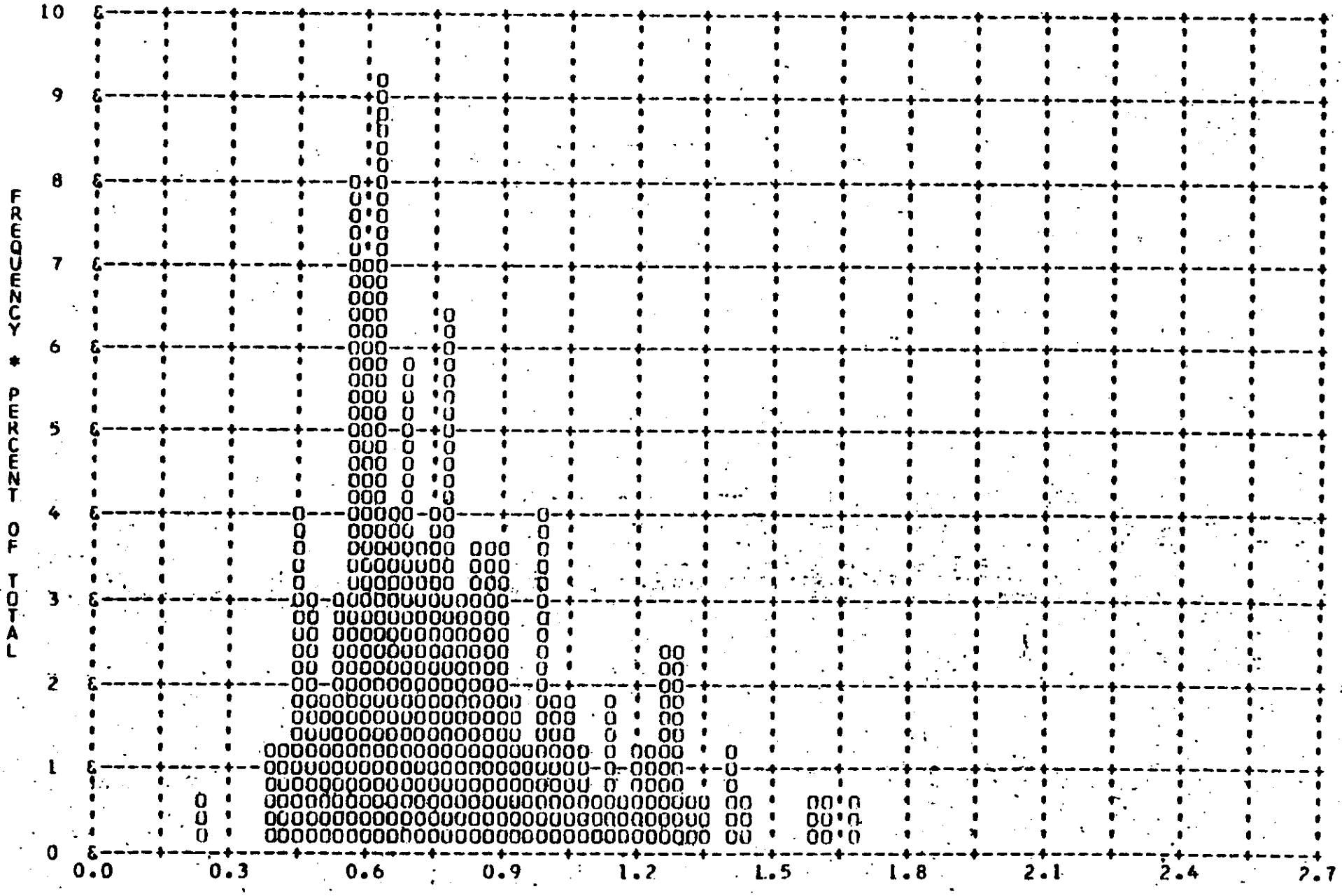


FIGURE A-31

MISSION * 1040-2 * INSTR * FWD * 5/23/7PLOT OF D MAX * TERRAIN * PROCESSING * FULL

AIRTH MEAN * 1.65 * MEDIAN * 1.63 * STD DEV * 0.34 * RANGE * 0.77 TO 2.58 WITH 176 SAMPLES

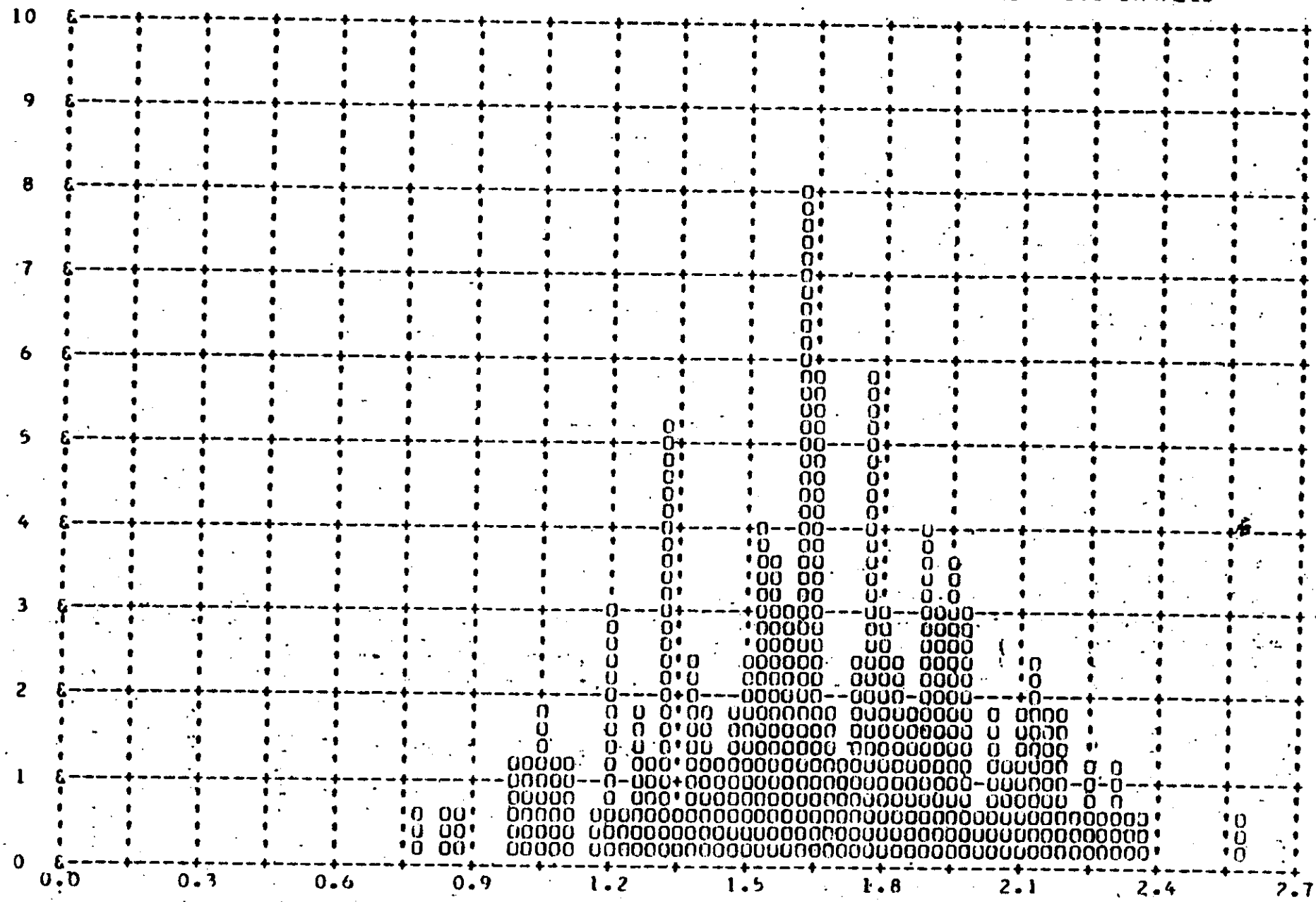


FIGURE A-32

MISSION * 1040-2 * INSTR * FWD * 5/23/7PLOT OF D MAX * CLOUD * PROCESSING * FULL

AIRTH MEAN * 2.07 * MEDIAN * 2.10 * STD DEV * 0.23 * RANGE * 1.08 TO 2.45 WITH 139 SAMPLES

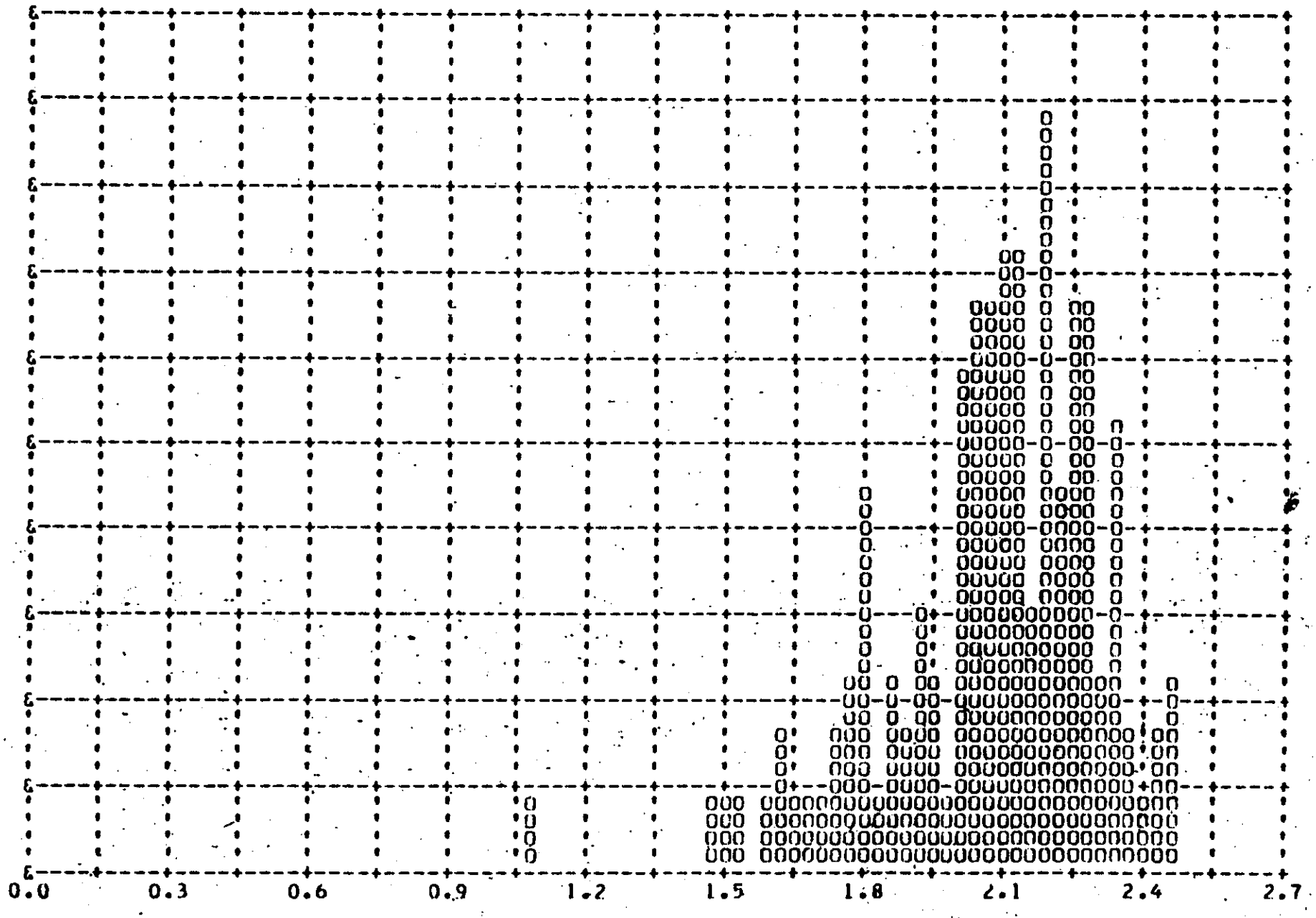


FIGURE A-33

MISSION * 1040-2 * INSTR * FWD * 5/23/7PLOT OF D MIN * TERRAIN * PROCESSING * ALL LEVELS

AIRTH MEAN * 0.77 * MEDIAN * 0.72 * STD DEV * 0.26 * RANGE * 0.24 TO 1.67 WITH 258 SAMPLES

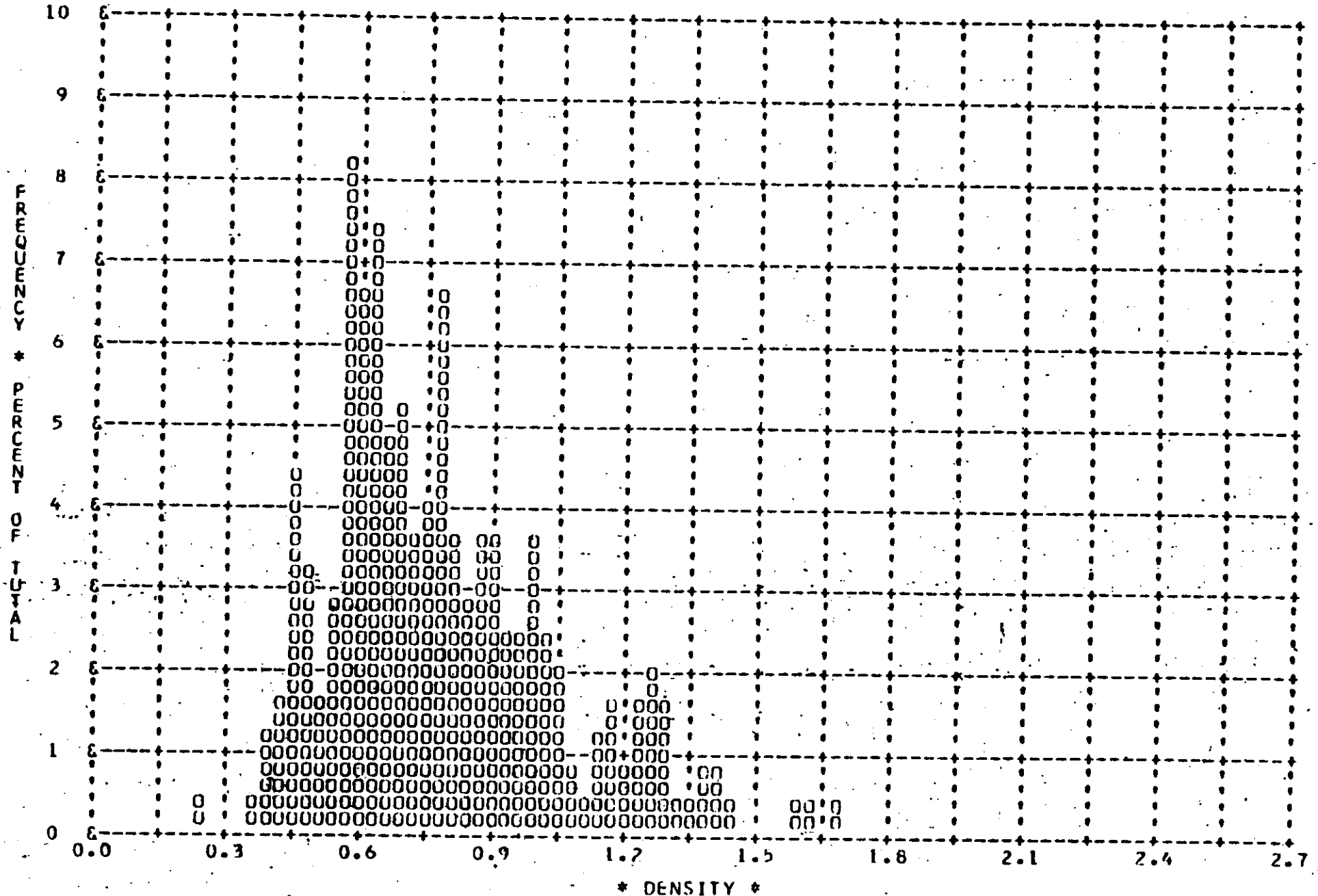


FIGURE A-3b

MISSION * 1040-2 * INSTR * FWD * 5/23/7PLOT OF D MAX * TERRAIN * PROCESSING * ALL LEVELS

AIRTH MEAN * 1.61 * MEDIAN * 1.61 * STD DEV * 0.33 * RANGE * 0.77 TO 2.58 WITH 258 SAMPLES

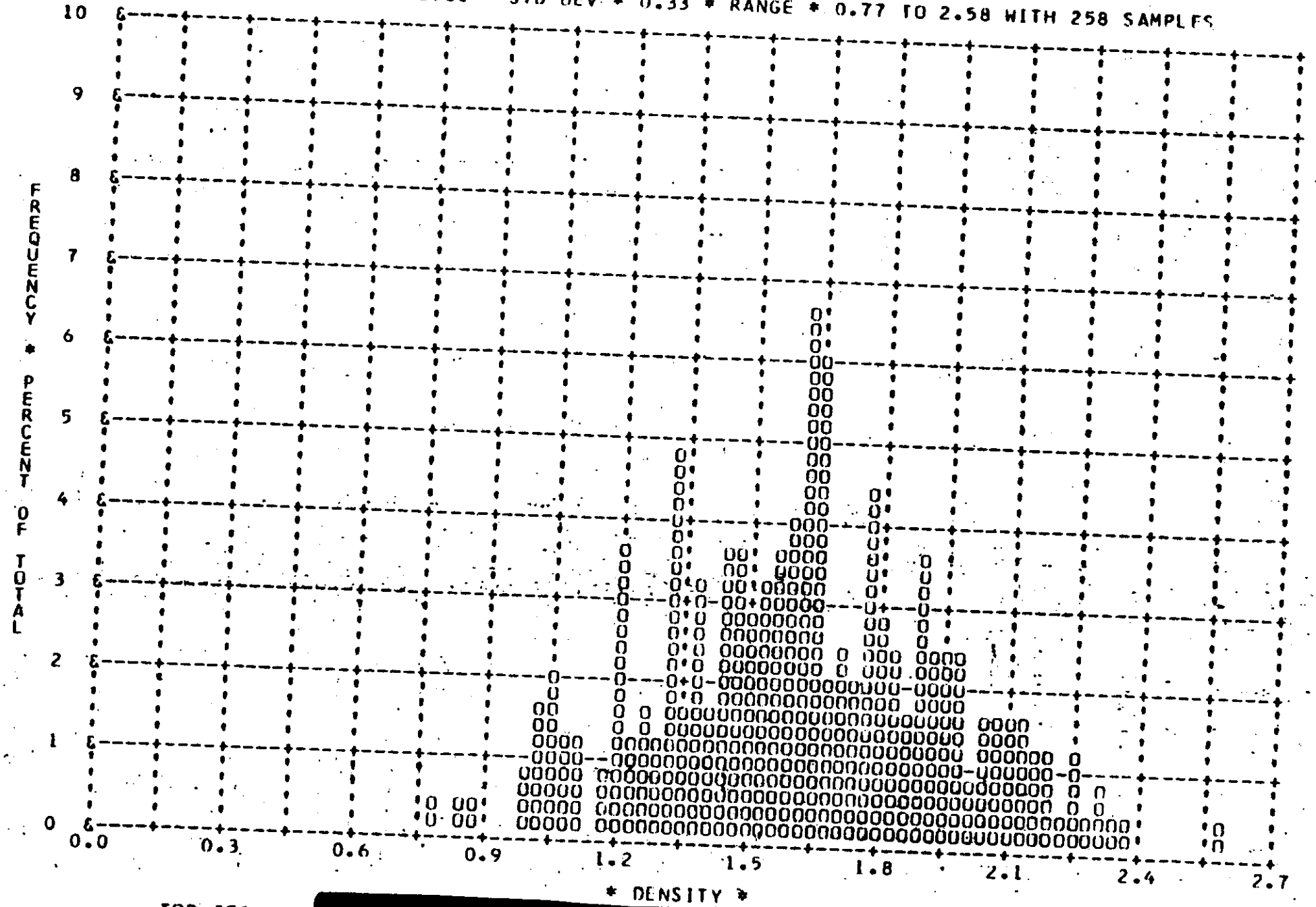


FIGURE A-35

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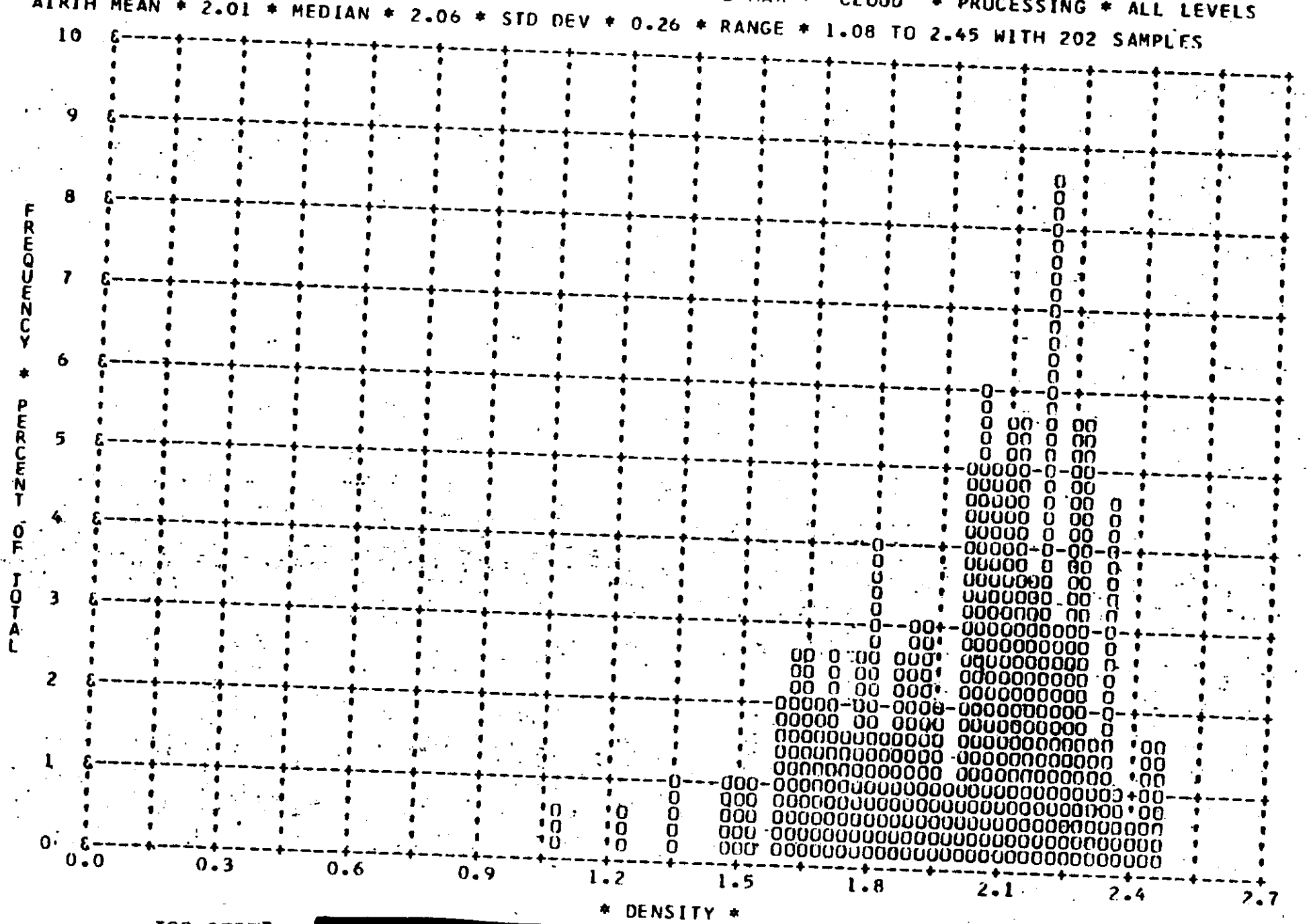

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FIGURE A-36

~~TOP SECRET~~ C [redacted]

MISSION * 1040-2 * INSTRUMENT * AFT. 5/23/67 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	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	19	0	0	34	0	0	53	0	0

~~TOP SECRET~~ C [redacted]

TABLE A-4

MISSION * 1040-2 * INSTRUMENT * AFT 5/23/67 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	3	0	0	5	0	0
0.52	0	0	0	1	0	0	3	0	0	4	0	0
0.53	0	0	0	3	0	0	2	0	0	5	0	0
0.54	0	0	0	2	0	0	6	0	0	8	0	0
0.55	0	0	0	2	0	0	3	0	0	5	0	0
0.56	0	0	0	1	0	0	6	0	0	7	0	0
0.57	0	0	0	0	0	0	3	0	0	3	0	0
0.58	0	0	0	2	0	0	4	0	0	6	0	0
0.59	0	0	0	1	0	0	3	0	0	5	0	0
0.60	0	0	0	2	0	0	4	0	0	5	0	0
0.61	0	0	0	1	0	0	3	0	0	5	0	0
0.62	0	0	0	0	0	0	6	0	0	7	0	0
0.63	0	0	0	2	0	0	3	0	0	3	0	0
0.64	0	0	0	3	0	0	5	0	0	5	0	0
0.65	0	0	0	1	0	0	1	0	0	6	0	0
0.66	0	0	0	2	0	0	2	0	0	6	0	0
0.67	0	0	0	3	0	0	1	0	0	3	0	0
0.68	0	0	0	0	0	0	2	0	0	4	0	0
0.69	0	0	0	2	0	0	1	0	0	2	0	0
0.70	0	0	0	2	0	0	1	0	0	3	0	0
0.71	0	0	0	1	0	0	2	0	0	1	0	0
0.72	0	0	0	0	0	0	4	0	0	4	0	0
0.73	0	0	0	1	0	0	3	0	0	6	0	0
0.74	0	0	0	1	0	0	3	0	0	4	0	0
0.75	0	0	0	1	0	0	1	0	0	3	0	0
0.76	0	0	0	2	0	0	1	0	0	1	0	0
0.77	0	0	0	1	0	0	2	0	0	2	0	0
0.78	0	0	0	2	0	0	3	0	0	4	0	0
0.79	0	0	0	1	0	0	1	0	0	3	0	0
0.80	0	0	0	1	0	0	2	0	0	4	0	0
0.81	0	0	0	1	0	0	2	0	0	2	0	0
0.82	0	0	0	0	0	0	3	0	0	2	0	0
0.83	0	0	0	1	0	0	1	0	0	1	0	0
0.84	0	0	0	0	0	0	2	0	0	4	0	0
0.85	0	0	0	1	0	0	1	0	0	2	0	0
0.86	0	0	0	0	0	0	4	0	0	2	0	0
0.87	0	0	0	0	0	0	2	0	0	7	0	0
0.88	0	0	0	1	0	0	6	0	0	1	0	0
0.89	0	0	0	0	0	0	1	0	0	0	0	0
0.90	0	0	0	0	0	0	1	0	0	2	0	0
0.91	0	0	0	0	0	0	1	0	0	3	0	0
0.92	0	0	0	0	0	0	1	0	0	1	0	0
0.93	0	0	0	0	0	0	1	0	0	5	0	0
0.94	0	0	0	0	0	0	1	0	0	0	0	0
0.95	0	0	0	0	0	0	1	0	0	2	0	0
0.96	0	0	0	0	0	0	1	0	0	1	0	0
0.97	0	0	0	0	0	0	1	0	0	4	0	0
0.98	0	0	0	0	0	0	1	0	0	1	0	0
0.99	0	0	0	0	0	0	1	0	0	0	0	0
1.00	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	50	1	0	115	4	0	165	5	0

TABLE A-4

~~TOP SECRET~~ C/[redacted]

MISSION * 1040-2 * INSTRUMENT * AFT 5/23/67 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	1	0	2	0	0	2	1	0
1.02	0	0	0	0	0	0	0	0	0	0	0	0
1.03	0	0	0	1	0	0	0	1	0	1	0	0
1.04	0	0	0	0	0	0	0	0	0	0	0	0
1.05	0	0	0	3	0	0	0	0	0	3	0	0
1.06	0	0	0	0	0	0	1	0	0	1	0	0
1.07	0	0	0	0	0	0	0	0	0	0	0	0
1.08	0	0	0	0	0	0	0	0	0	0	0	0
1.09	0	0	0	0	0	0	0	0	0	0	0	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	7	15	3	14	31	0	21	46	3

~~TOP SECRET~~ C/[redacted]

TABLE A-4

MISSION * 1040-2 * INSTRUMENT * AFT 5/23/67 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	0	0	1	0
1.52	0	0	0	0	1	0	0	0	0	0	1	0
1.53	0	0	1	0	0	0	0	2	0	0	3	0
1.54	0	0	0	0	1	0	0	2	0	0	2	0
1.55	0	0	0	0	1	0	0	1	0	0	2	0
1.56	0	0	0	0	0	0	0	4	0	0	2	0
1.57	0	0	0	0	1	0	0	1	0	0	2	0
1.58	0	0	0	0	2	0	0	2	0	0	6	0
1.59	0	0	0	0	2	0	0	3	0	0	3	0
1.60	0	0	0	0	2	0	0	4	0	0	4	0
1.61	0	0	0	0	1	0	0	5	0	0	5	0
1.62	0	0	0	0	3	0	0	3	0	0	3	0
1.63	0	0	0	0	1	0	0	2	0	0	4	0
1.64	0	0	0	0	3	0	0	1	0	0	3	0
1.65	0	0	0	0	0	0	0	3	0	0	3	0
1.66	0	0	0	0	2	0	0	2	0	0	4	0
1.67	0	0	0	0	1	0	0	4	0	0	4	0
1.68	0	0	0	0	0	0	0	3	0	0	3	0
1.69	0	0	0	0	2	0	0	4	0	0	5	0
1.70	0	0	0	0	1	0	0	3	0	0	4	0
1.71	0	0	0	0	1	0	0	2	0	0	3	0
1.72	0	0	0	0	2	0	0	4	0	0	4	0
1.73	0	0	0	0	1	0	0	3	0	0	4	0
1.74	0	0	0	0	1	0	0	2	0	0	3	0
1.75	0	0	0	0	1	0	0	3	0	0	4	0
1.76	0	0	0	0	1	0	0	2	0	0	3	0
1.77	0	0	0	0	1	0	0	3	0	0	4	0
1.78	0	0	0	0	1	0	0	2	0	0	3	0
1.79	0	0	0	0	1	0	0	3	0	0	4	0
1.80	0	0	0	0	1	0	0	2	0	0	3	0
1.81	0	0	0	0	1	0	0	3	0	0	4	0
1.82	0	0	0	0	1	0	0	2	0	0	3	0
1.83	0	0	0	0	1	0	0	3	0	0	4	0
1.84	0	0	0	0	1	0	0	2	0	0	3	0
1.85	0	0	0	0	1	0	0	3	0	0	4	0
1.86	0	0	0	0	1	0	0	2	0	0	3	0
1.87	0	0	0	0	1	0	0	3	0	0	4	0
1.88	0	0	0	0	1	0	0	2	0	0	3	0
1.89	0	0	0	0	1	0	0	3	0	0	4	0
1.90	0	0	0	0	1	0	0	2	0	0	3	0
1.91	0	0	0	0	1	0	0	3	0	0	4	0
1.92	0	0	0	0	1	0	0	2	0	0	3	0
1.93	0	0	0	0	1	0	0	3	0	0	4	0
1.94	0	0	0	0	1	0	0	2	0	0	3	0
1.95	0	0	0	0	1	0	0	3	0	0	4	0
1.96	0	0	0	0	1	0	0	2	0	0	3	0
1.97	0	0	0	0	1	0	0	3	0	0	4	0
1.98	0	0	0	0	1	0	0	2	0	0	3	0
1.99	0	0	0	0	1	0	0	3	0	0	4	0
2.00	0	0	0	0	1	0	0	2	0	0	3	0
SUBTOTAL	0	0	5	0	54	29	0	96	24	0	150	58

TABLE A-4

MISSION * 1040-2 * INSTRUMENT * AFT 5/23/67 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	2	2	0	2	3
2.02	0	0	0	0	0	2	0	3	3	0	3	5
2.03	0	0	0	0	0	0	0	3	1	0	3	1
2.04	0	0	0	0	0	1	0	0	0	0	0	1
2.05	0	0	0	0	0	0	0	4	2	0	4	2
2.06	0	0	0	0	2	1	0	1	2	0	3	3
2.07	0	0	0	0	2	0	0	1	3	0	3	3
2.08	0	0	0	0	0	1	0	1	5	0	1	6
2.09	0	0	0	0	1	2	0	0	2	0	1	4
2.10	0	0	0	0	1	1	0	1	3	0	1	4
2.11	0	0	0	0	0	2	0	2	1	0	2	3
2.12	0	0	0	0	1	3	0	1	3	0	2	6
2.13	0	0	0	0	0	1	0	1	2	0	1	3
2.14	0	0	0	0	0	2	0	0	2	0	0	4
2.15	0	0	0	0	0	0	0	1	3	0	1	3
2.16	0	0	0	0	0	0	0	1	3	0	1	3
2.17	0	0	0	0	1	1	0	0	7	0	1	8
2.18	0	0	0	0	0	1	0	3	1	0	3	2
2.19	0	0	0	0	0	0	0	1	4	0	1	4
2.20	0	0	0	0	0	0	0	1	2	0	1	2
2.21	0	0	0	0	0	1	0	0	4	0	0	5
2.22	0	0	0	0	0	1	0	1	3	0	1	4
2.23	0	0	0	0	0	0	0	0	2	0	0	2
2.24	0	0	0	0	0	0	0	0	2	0	0	2
2.25	0	0	0	0	0	2	0	0	2	0	0	4
2.26	0	0	0	0	0	0	0	1	3	0	1	3
2.27	0	0	0	0	0	0	0	1	5	0	1	5
2.28	0	0	0	0	0	0	0	0	2	0	0	2
2.29	0	0	0	0	0	0	0	0	5	0	0	5
2.30	0	0	0	0	0	0	0	1	1	0	1	1
2.31	0	0	0	0	0	0	0	1	2	0	1	2
2.32	0	0	0	0	0	1	0	1	4	0	1	5
2.33	0	0	0	0	0	0	0	0	5	0	0	5
2.34	0	0	0	0	0	1	0	0	5	0	0	6
2.35	0	0	0	0	0	0	0	0	5	0	0	5
2.36	0	0	0	0	0	0	0	0	6	0	0	6
2.37	0	0	0	0	0	0	0	0	1	0	0	1
2.38	0	0	0	0	0	0	0	0	4	0	0	4
2.39	0	0	0	0	0	0	0	0	0	0	0	0
2.40	0	0	0	0	0	1	0	0	0	0	0	1
2.41	0	0	0	0	0	0	0	0	0	0	0	0
2.42	0	0	0	0	0	0	0	0	1	0	0	1
2.43	0	0	0	0	0	0	0	1	0	0	1	0
2.44	0	0	0	0	0	0	0	0	1	0	0	1
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	7	26	0	34	114	0	41	140

TABLE A-4

MISSION * 1040-2 * INSTRUMENT * AFT 5/23/67 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	5	76	77	58	163	165	138	239	242	201

MISSION 1040-2 INSTR - AFT 5/23/ 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	3 PC	41 PC	39 PC
INTERMEDIATE	76	0 PC	7 PC	75 PC	17 PC	1 PC
FULL	163	5 PC	0 PC	79 PC	16 PC	0 PC
ALL LEVELS	239	3 PC	2 PC	78 PC	16 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 U
INTERMED	0.10-0.17	0.01-0.20	0.21-0.39	0.40-0.90	0.91-1.34	1.35 AND U
FULL	0.18 AND UP	0.01-0.39	---------	0.40-0.90	0.91-1.69	1.70 AND U

TABLE A-4

~~TOP SECRET~~ C [redacted]

MISSION * 1040-2 * INSTR * AFT * 5/23/7 PLOT OF D MIN * TERRAIN * PROCESSING * INTERMEDIATE

AIRTH MEAN * 0.67 * MEDIAN * 0.64 * STD DEV * 0.22 * RANGE * 0.37 TO 1.42 WITH 76 SAMPLES

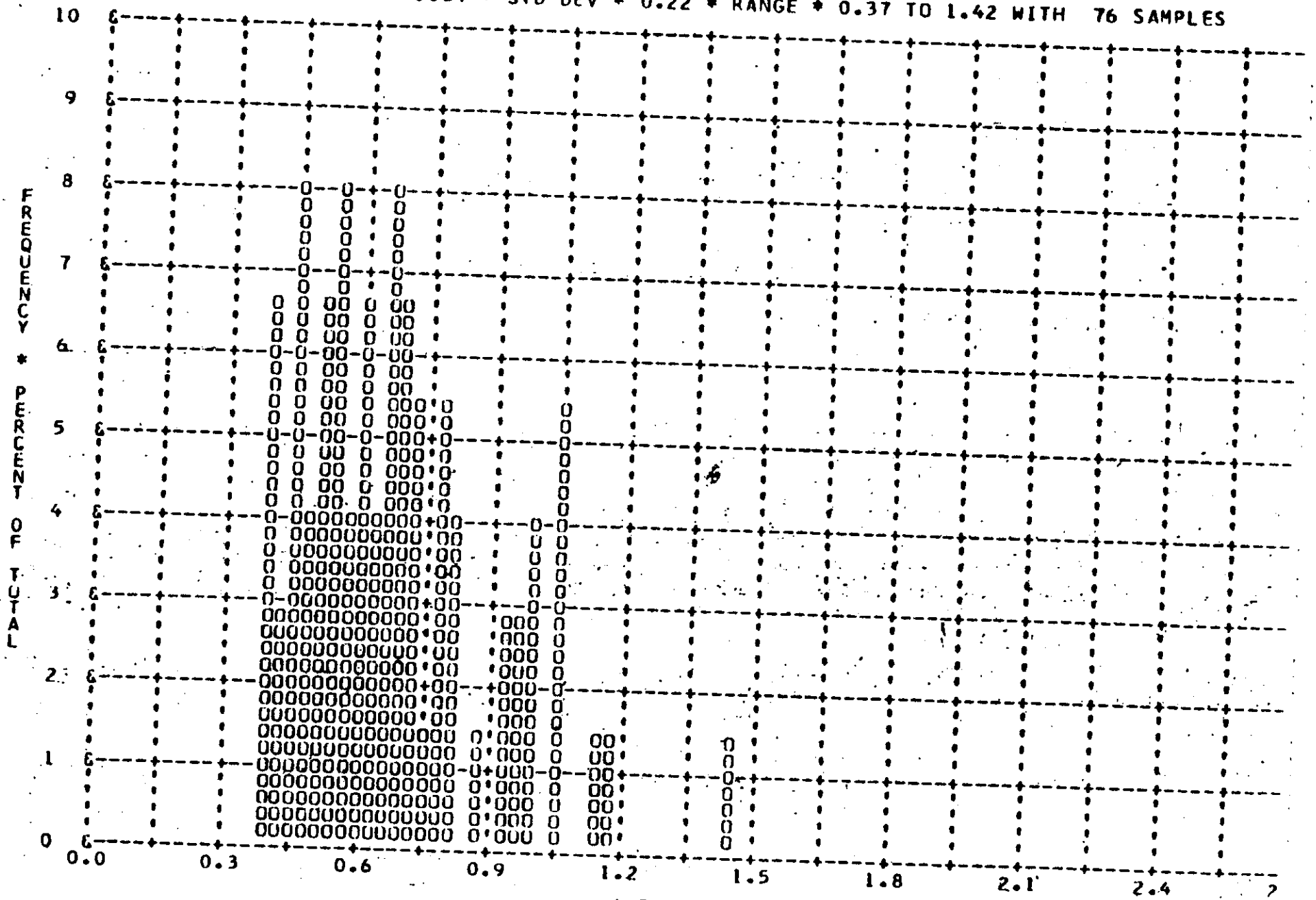

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FIGURE A-37

MISSION * 1040-2 * INSTR * AFT * 5/23/7 PLOT OF D MAX * TERRAIN * PROCESSING * INTERMEDIATE

AIRTH MEAN * 1.69 * MEDIAN * 1.68 * STD DEV * 0.26 * RANGE * 0.90 TO 2.17 WITH 77 SAMPLES

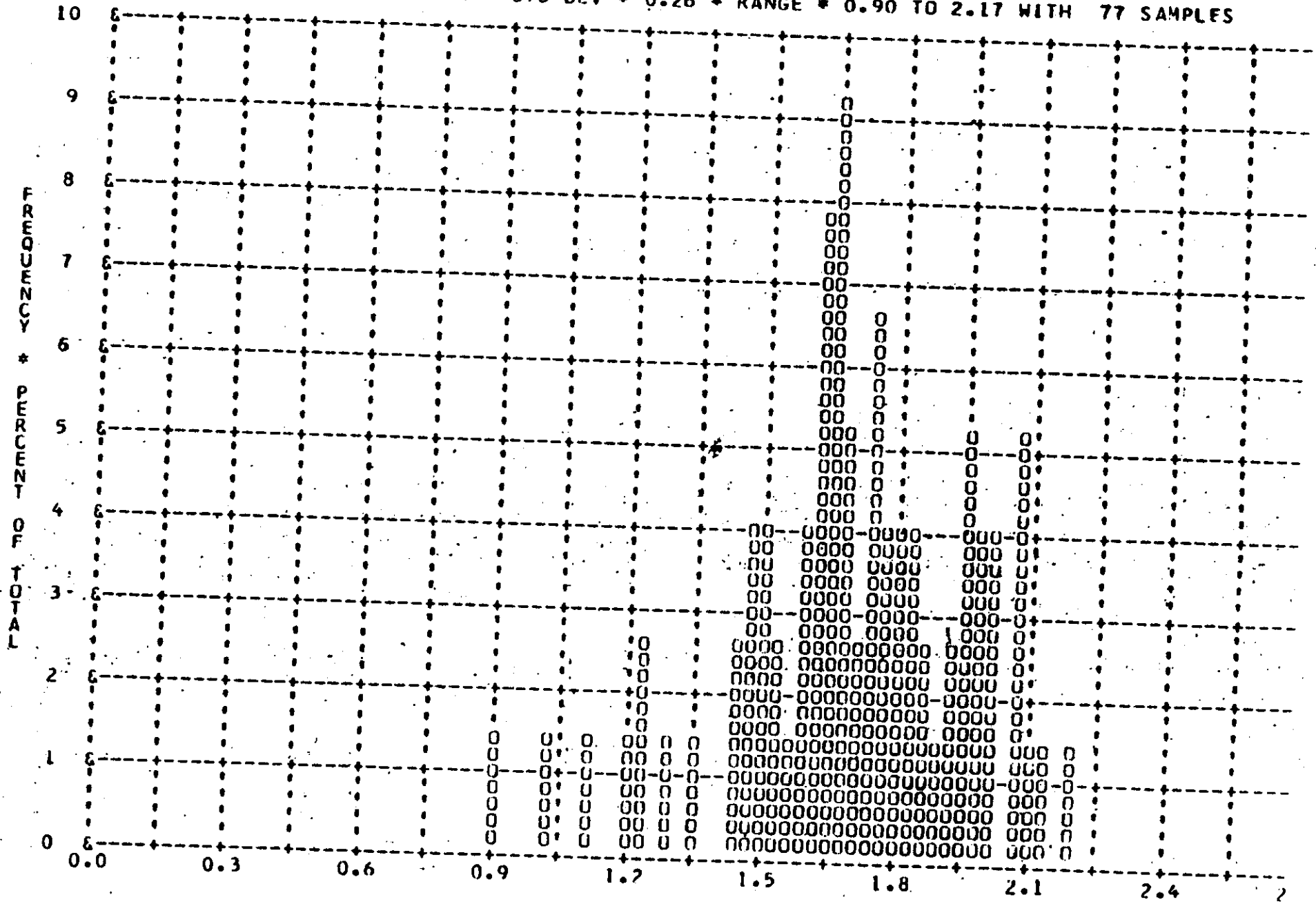

FIGURE A-38

MISSION * 1040-2 * INSTR * AFT * 5/23/7PLOT OF D MAX * CLOUD * PROCESSING * INTERMEDIATE

AIRTH MEAN * 1.92 * MEDIAN * 1.97 * STD DEV * 0.26 * RANGE * 1.07 TO 2.40 WITH 58 SAMPLES

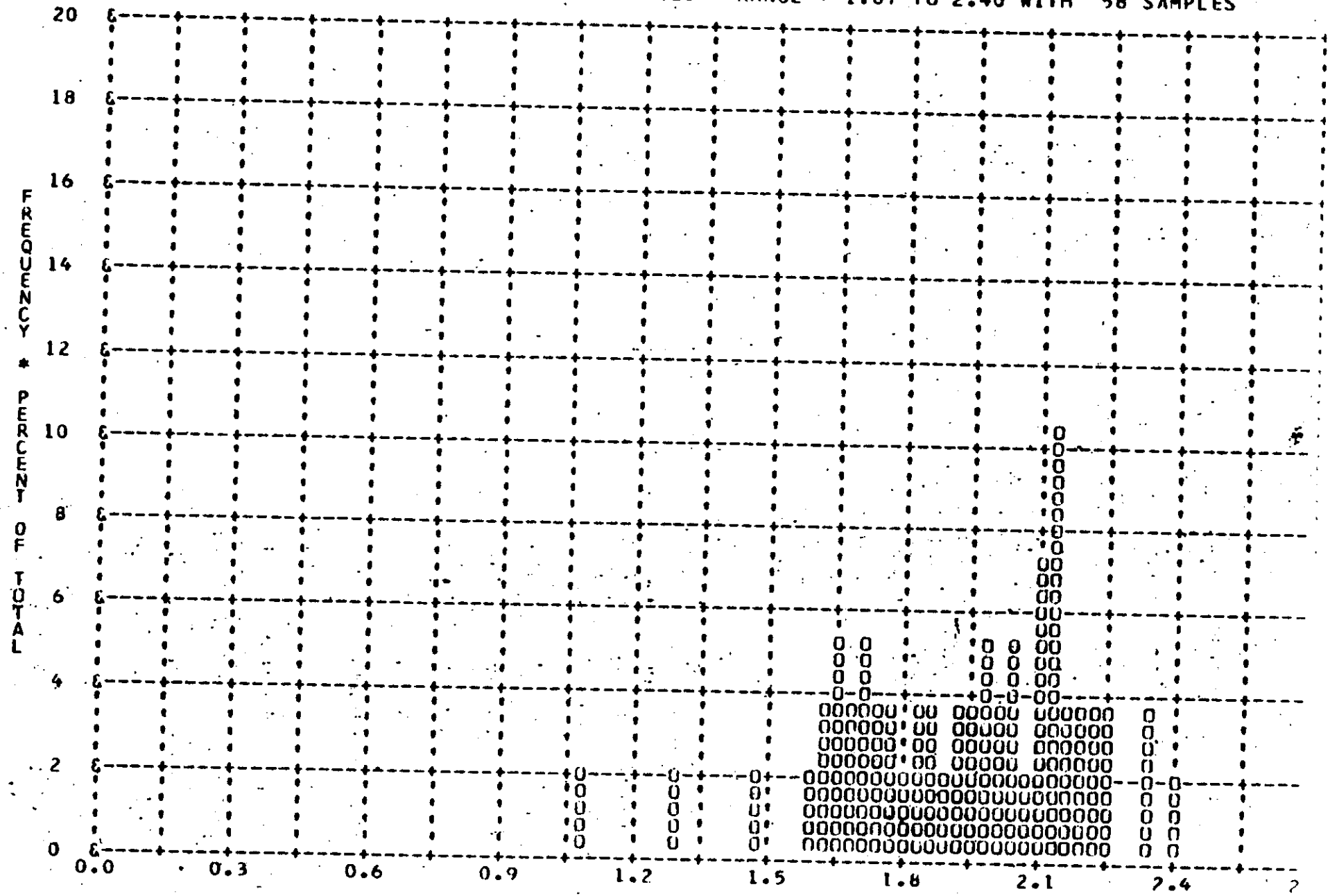

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FIGURE A-20

MISSION * 1040-2 * INSTR * AFT * 5/23/7 PLOT OF D MIN * TERRAIN * PROCESSING * FULL

AIRTH MEAN * 0.68 * MEDIAN * 0.63 * STD DEV * 0.22 * RANGE * 0.11 TO 1.43 WITH 163 SAMPLES

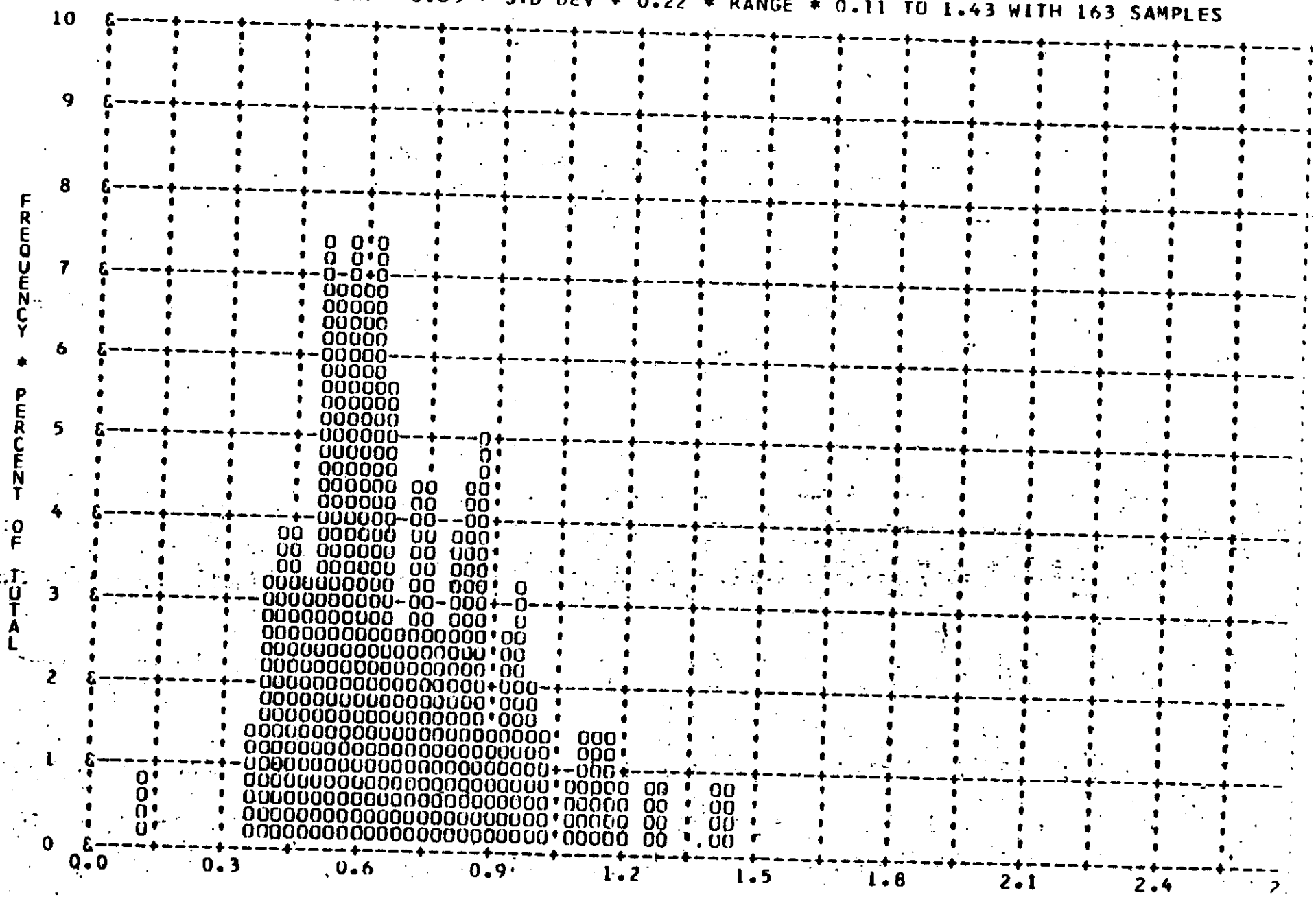
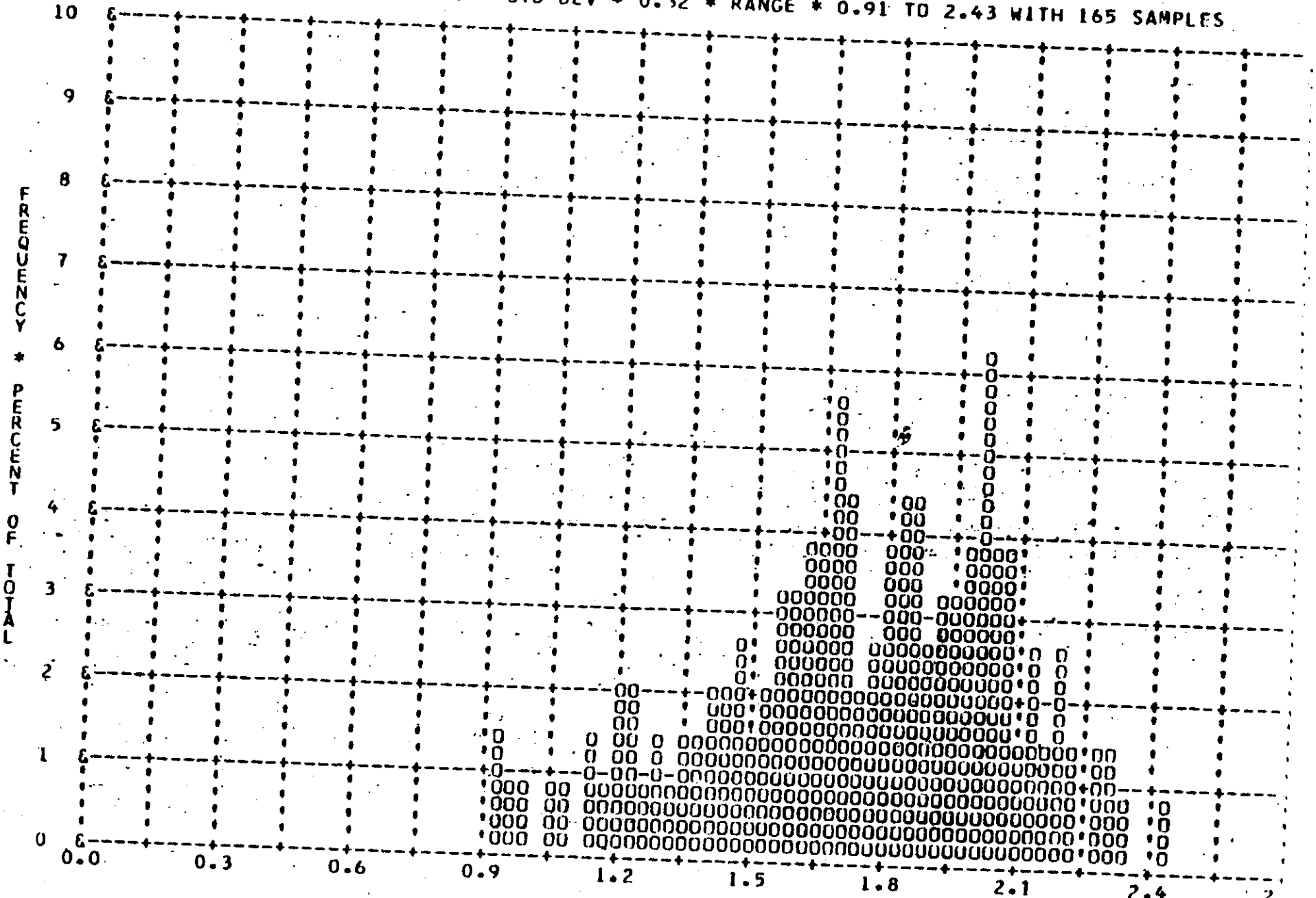


FIGURE A-4c

MISSION * 1040-2 * INSTR * AFT * 5/23/7PLOT OF D MAX * TERRAIN * PROCESSING * FULL

AIRTH MEAN * 1.74 * MEDIAN * 1.77 * STD DEV * 0.32 * RANGE * 0.91 TO 2.43 WITH 165 SAMPLES



MISSION * 1040-2 * INSTR * AFT * 5/23/7PLOT OF D MAX * CLOUD * PROCESSING * FULL

AIRTH MEAN * 2.16 * MEDIAN * 2.19 * STD DEV * 0.18 * RANGE * 1.64 TO 2.45 WITH 138 SAMPLES

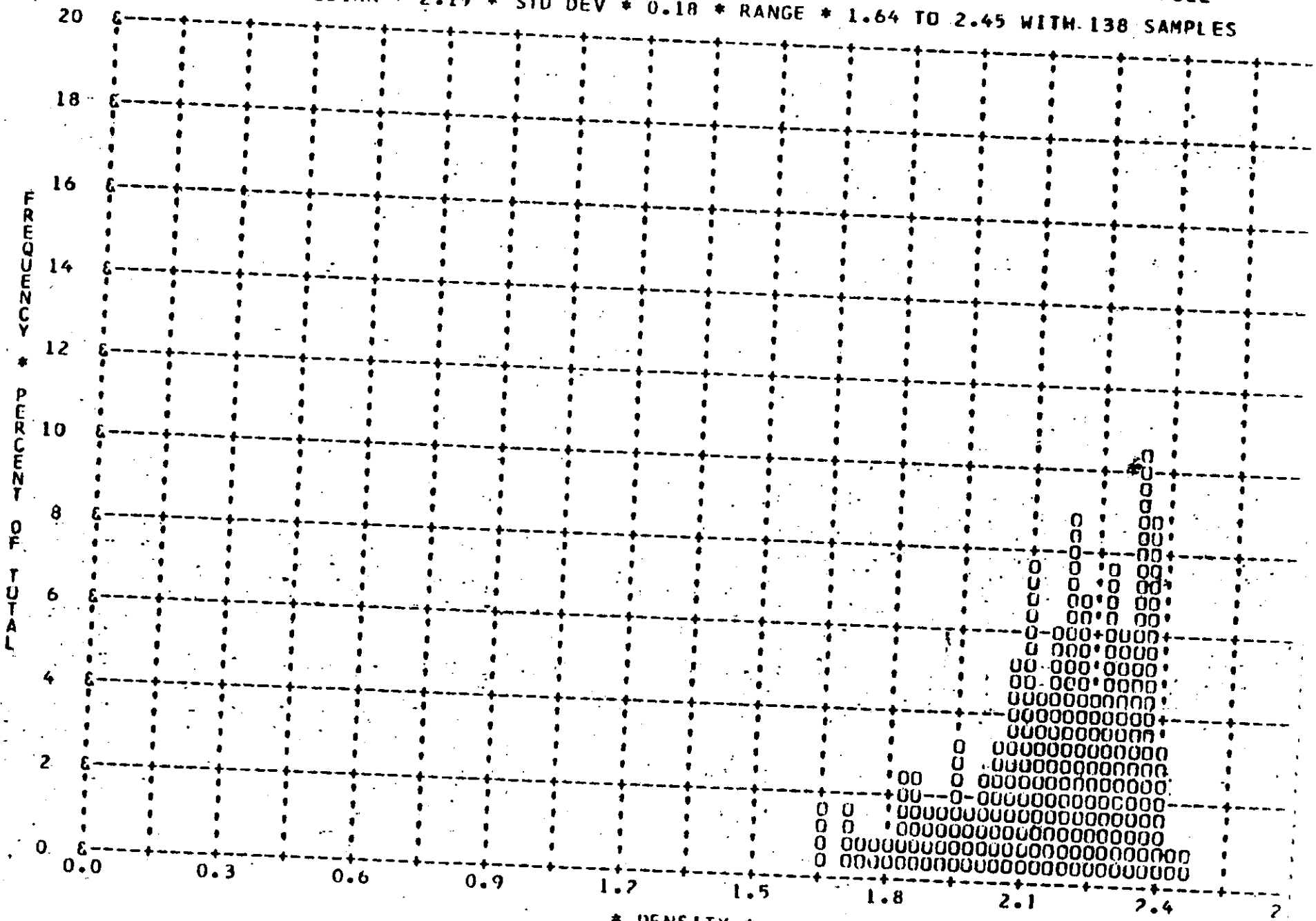
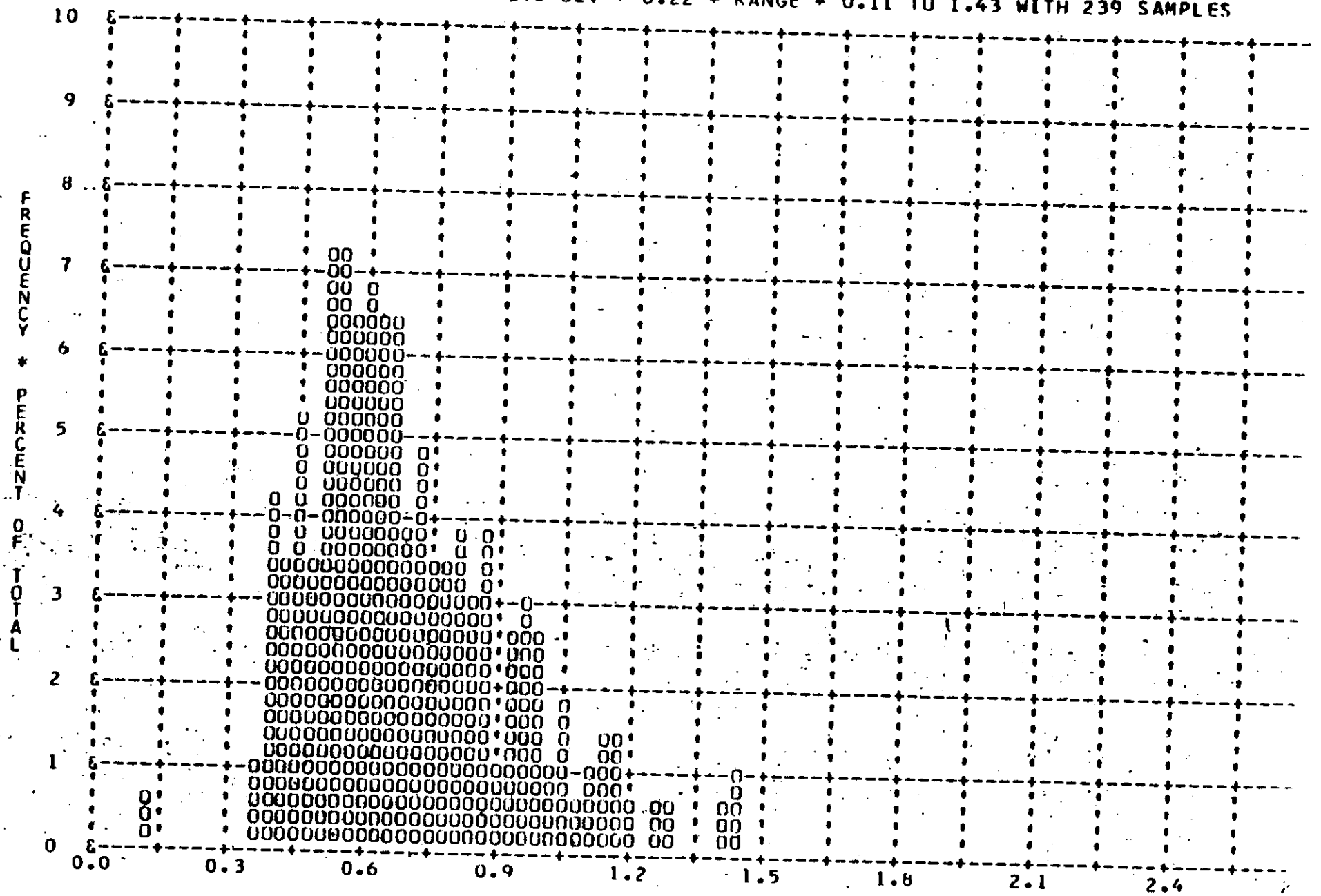


FIGURE A-4

MISSION * 1040-2 * INSTR * AFT * 5/23/7PLOT OF D MIN * TERRAIN * PROCESSING * ALL LEVELS

AIRTH MEAN * 0.68 * MEDIAN * 0.63 * STD DEV * 0.22 * RANGE * 0.11 TO 1.43 WITH 239 SAMPLES



MISSION * 1040-2 * INSTR * AFT * 5/23/7PLOT OF D MAX * TERRAIN * PROCESSING * ALL LEVELS

AIRTH MEAN * 1.72 * MEDIAN * 1.74 * STD DEV * 0.30 * RANGE * 0.90 TO 2.43 WITH 242 SAMPLES

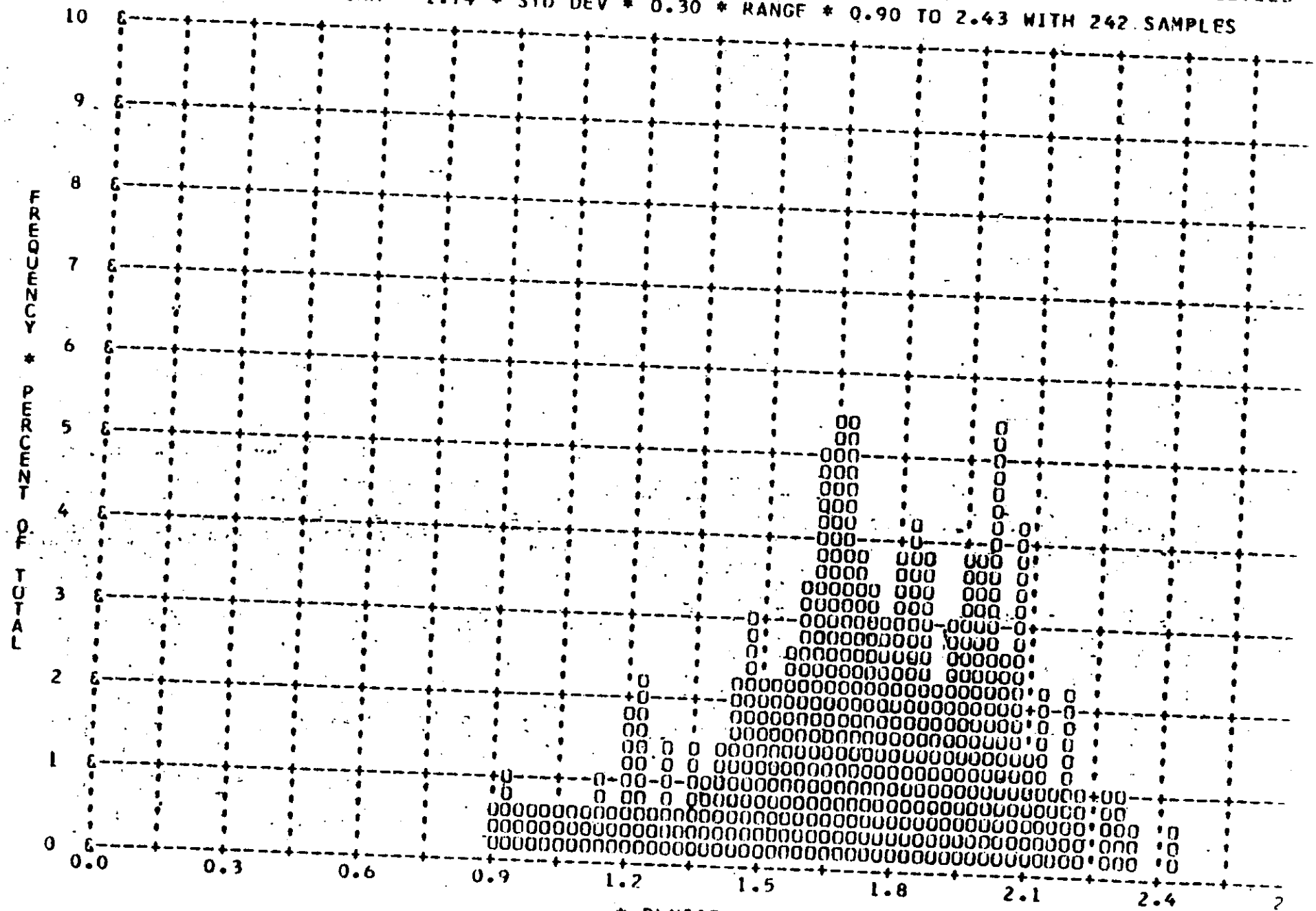
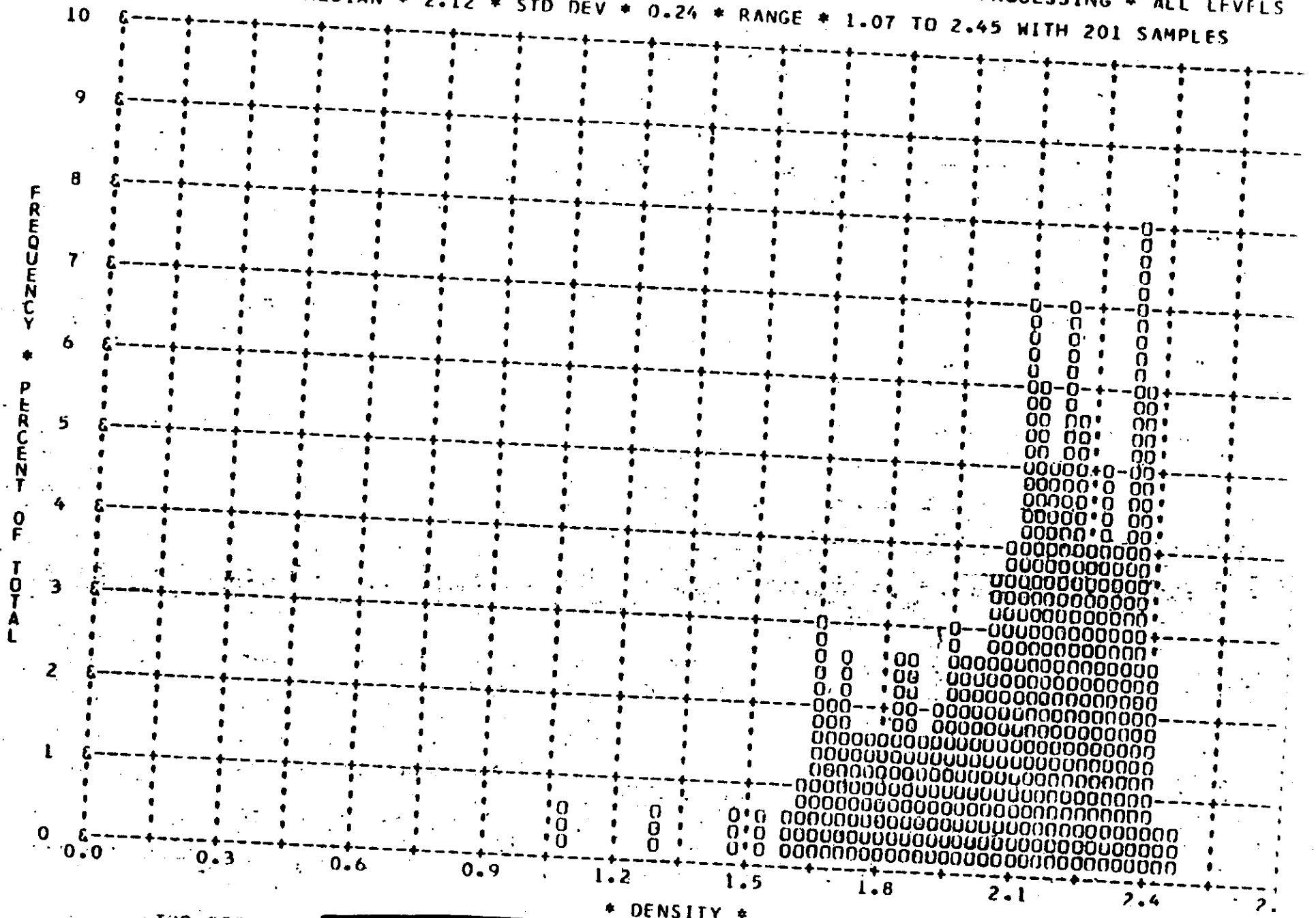


FIGURE A-12

~~TOP SECRET~~ C [redacted]

MISSION * 1040-2 * INSTR * AFT * 5/23/7PLOT OF D MAX * CLOUD * PROCESSING * ALL LEVELS

AIRTH MEAN * 2.08 * MEDIAN * 2.12 * STD DEV * 0.24 * RANGE * 1.07 TO 2.45 WITH 201 SAMPLES



~~TOP SECRET~~ C [redacted]

Distribution:

Copy No.	To
[redacted]	[redacted]