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15 March 1968

TO: [REDACTED]

THRU: [REDACTED]

FROM: [REDACTED]

SUBJECT: MISSION 1042-1 and 1042-2 FINAL REPORT (J-37)

Enclosed is the Final Evaluation Report for Mission 1042-1
and 1042-2.

[REDACTED] Manager
Advanced Projects

Declassified and Released by the N R O

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CORONA J

PERFORMANCE EVALUATION REPORT

MISSION 1042-1 and 1042-2

PTV 1633, J-37

APPROVED

[REDACTED]

Manager
Advanced Projects

APPROVED

[REDACTED]

Mgr.
Program

[REDACTED]

FOREWORD

This report details the performance of the payload system during the operational phase of the Program [redacted] Flight Test Vehicle 1633.

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 1042-1 and 1042-2 which was launched on 16 June 1967.

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INTRODUCTION

This report presents the final performance evaluation of Missions 1042-1 and 1042-2 of the Corona Program. The purpose of this report is to define the performance characteristics of the J-37 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 ITTK at the facilities of NPIC and AFSPEF. 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 MTP/AM resolution are produced by AFSPEF. 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 selection for the mission.

SECTION 1

SYSTEM PERFORMANCE

A. MISSION OBJECTIVES

The payload section of Mission 1042, placed into orbit by Flight Test Vehicle #1633 and THORAD Booster #509, 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 equipment. Figure 1-1 presents an inboard profile of the J-37 payload system. This Corona "J" system is designed to acquire search and reconnaissance photography of selected areas of the earth from orbital altitudes. A seven day -1 mission and a seven day -2 mission was planned.

B. MISSION DESCRIPTION

The payload was launched from Vandenberg Air Force Base (VAFB) at 2135:22 Z (1435:22 PDT) on 16 June 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 1042-1 consisted of a 6 day operation and was completed by air recovery on 22 June 1967. Mission 1042-2 was completed with an air recovery on 1 July 1967 following a 9 day photographic operation.

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

ORBITAL PARAMETERS

<u>Parameter</u>	<u>Predicted</u>	<u>Rev. 45 Actuals</u>	<u>Rev. 165 Actuals</u>
Period (Min.)	90.13	89.94	89.88
Perigee (N.M.)	99.5	96.55	100.64
Apogee (N.M.)	205.4	200.77	201.01
Inclination (Deg.)	80.0	80.011	80.011
Perigee Latitude (Deg.N.)	17.0	29.14	50.17
Eccentricity	0.0148	0.01452	0.01399

C. OTHER SUB-SYSTEMS

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

D. RADIATION DOSAGE

<u>Emulsion</u>	<u>Mission 1042-1</u>		<u>Mission 1042-2</u>	
	<u>B + F Density</u>	<u>Radiation</u>	<u>B + F Density</u>	<u>Radiation</u>
Type 3401	0.20	0.7R	0.24	1.10R
Royal X Pan	0.28	0.55R	0.34	0.75R

These levels are much below that which will degrade the photography.

SCHMATIC INBOARD PROFILE - CORONA J SYSTEM

MISSION 1042

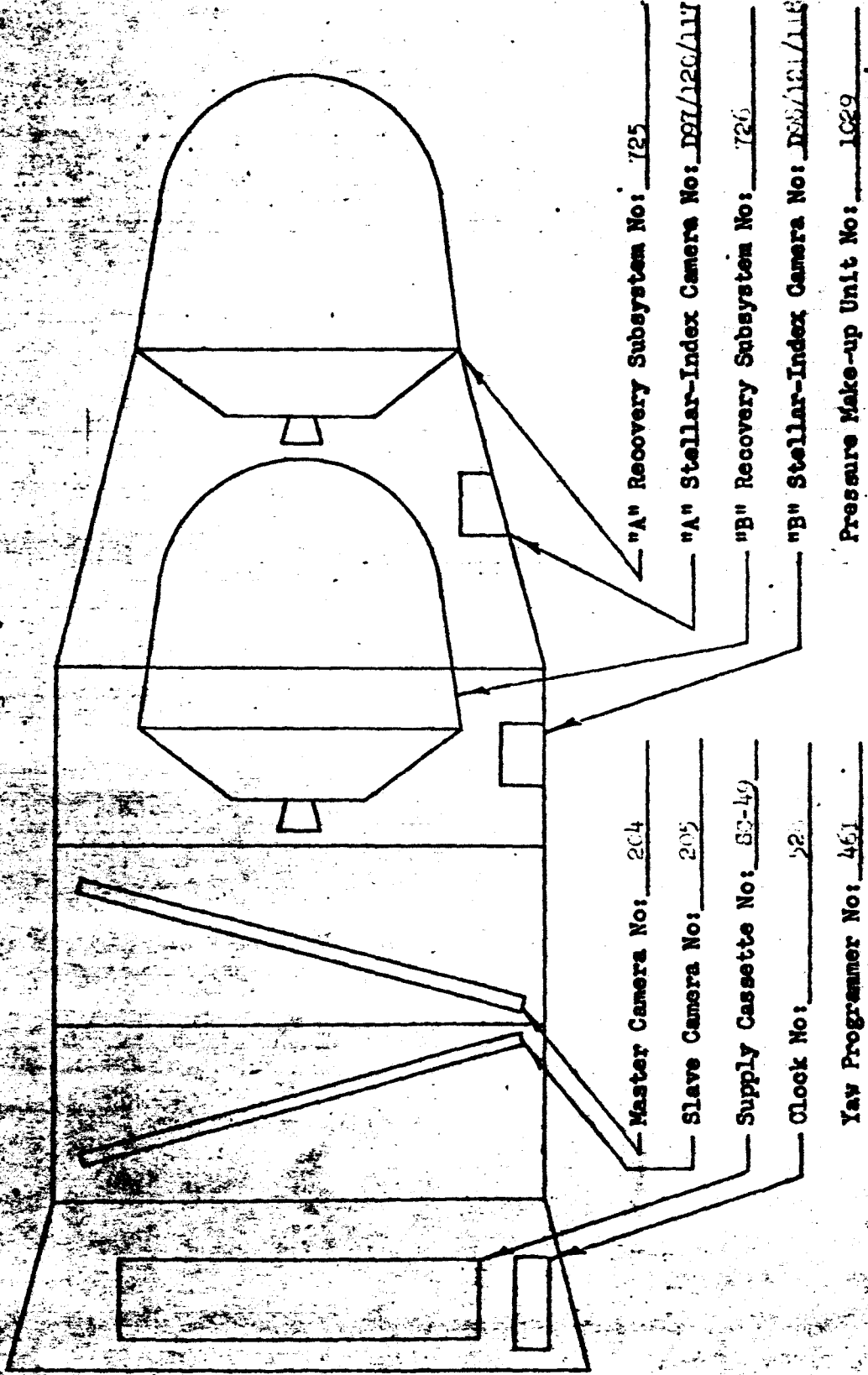


FIGURE 1-1

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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-37 payload system was subjected to an environmental MIVOC chamber test from 1 June through 3 June 1966. The Master instrument operated for 4498 cycles and the Slave for 5348 cycles. The pressure range was from 1 micron to 76 microns.

The Master instrument #204 contained color film 50281 and the Slave instrument #205 used 3404 type film. The color film was processed at [REDACTED]

Continuous type input and frame metering roller Corona discharge fog occurred at camera start up pressures below 3 microns. The first 1 to 5 frames of film through the input metering roller were affected by large areas of heavy fog depending upon the start up pressure and the rate of pressure increase.

When start up pressure ranged between 3 and 5 microns, usually only two Corona discharge enlarged metering roller sit marks were observed, one from each metering roller affecting up to 6 inches of film with heavy fog.

At camera start up pressures from approximately 5 to 18 microns usually only a small input metering roller sit mark was produced from 1/4 to 1 inch wide. The highest camera start up pressure experience in the HIVOS chamber was 18 microns. For additional data, the referenced document contains internal camera pressure data for every camera operation performed at altitude.

With PMU on during camera operation usually only the frame metering roller sit mark was present and on some camera starts there were no fog marks of any kind. The internal camera pressure sweep ranged from 1 to 76 microns.

At camera start up pressures below 5 microns only one small input metering roller Corona discharge spot was observed on the third frame from the start of pass mark. Above 5 microns pressure no Corona discharge fog was observed in the test film.

D-97 (A) and D-98 (E) both demonstrated satisfactory electro-mechanical operation throughout the altitude test.

Minor acceptable Corona discharge fog was present on the Stellar film from S/I D-98. Low density Corona discharge fog was present on approximately 4% of the 436 Stellar frames from S/I D-98.

Approximately 2% of the Stellar frames from S/I D-97 were affected by minor acceptable low density Corona discharge fog. Corona discharge fog recorded a maximum of 0.1 density above the base plus fog level. Minor dendritic edge static was present on A and B bucket Stellar/Index film.

Fiducial and correlation lamp imagery was good in Stellar/Index photography from S/I D-97 and D-98.

All auxiliary data recording was present and acceptable on the pan instruments. Auxiliary data recording included horizon fiducials, timing track, blanking pulse, slur pulse, binary word, start of pass mark, and serial number.

The pressure make-up system, demand system, clock accuracy, transfer from -1 to -2 by 17-16 and the gas programmer operated satisfactorily.

Both pan instruments operated with slightly fast cycle periods. The motor was replaced to correct this condition.

Both S/I units operated normally.

The Master instrument 204 was flown with 3404 type film payload.

B. RESOLUTION TESTS

Resolution and threshold tests were performed on 20 July 1966. Results of the three-focus resolution tests of pan instruments 204 and 205 show the following characteristics:

Master Pan Instrument No. 204

Maximum high contrast resolution 103 lines/mm at + 0.001 focal position (SO-121 Color Film).

Maximum low contrast resolution 73 lines/mm at 0.000 focal position (SO-121 Color Film).

Maximum low contrast resolution 115 lines/mm at - 0.001 focal position (Film Type 3404). High contrast was not run.

Slave Instrument No. 205 (Film Type 3404)

Maximum high contrast resolution 182 lines/mm at 0.000 focal position.

Maximum low contrast resolution 127 lines/mm at + 0.001 focal position.

Both instruments met the system requirements specification.

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C. LIGHT LEAK TEST

The J-37 system was tested for light leaks on 8 September 1966.

One fog region was noted on each film. Since both fog regions could be traced to leaks at either the Master instrument drum or main boot, a visual inspection was made using the pan format fogging lamp and dark-adapted eyes. Several boot leaks were identified and corrected. Verification was made by the same visual method. Although the visual verification is not a standard procedure, it is considered superior for the conditions that were encountered. Light leakage characteristics of the J-37 system are considered acceptable for flight.

D. FLIGHT READINESS AND CERTIFICATION

The Flight Readiness test of Panoramic Instruments #204 and 205 was completed using film type 3404 on 2 June 1967. Minor banding was present on some formats of Instrument #205. No banding was observed on film from Instrument #204. Timing track imagery of Instrument #205 was partially obstructed in several places in all formats. The obstruction was believed to be emulsion build up on the rail of Instrument #205. Some H.O. fiducials of both instruments are needlessly large. However, H.O. fiducials are all considered acceptable for flight. The serial number, binary word, and H.O. shutter open and closure are operationally acceptable.

The rails were cleaned. The film exhibit after this cleaning showed the timing track imagery of #205 was improved. Instruments #204 and #205 were considered acceptable for flight.

Processed film exhibits from the Post Storage Baseline test from Stellar/Index cameras D-97 and D-98 demonstrated acceptable camera performance. Reseau, fiducial, and correlation lamp imagery, produced on film type 3401 by both Stellar cameras was acceptable. Reseau and correlation lamp imagery produced on film type 3400 by both Index cameras was acceptable. All S/I shutters opened and closed properly as evidenced by correctly fogged film exhibits.

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The main supply cassette was loaded for flight on 5 June 1967 with film from Box 45. It was observed that the film from spool 176B was spot welded between wraps along one film edge. Spool 176B was removed from the supply cassette of J-37 system for A/P inspection and then returned to Eastman Kodak Company for their evaluation of the unacceptable spot welded condition. Spool 3B from the flight backup film supply replaced spool 176B in the supply cassette of J-37 system.

Spool 191T from Box 45 was acceptable and remained in the supply cassette for use in Instrument 204. Spool 3B from Box 28 was found to be acceptable for Instrument 205 flight use.

Final system operation with all payloads was completed on 5 June 1967 without incident. Customer review and final J-37 system buy off was concluded on the afternoon of 6 June 1967.

SECTION 3

FLIGHT OPERATIONS

A. SUMMARY

All launch, ascent, and injection events occurred as programmed resulting in an orbit 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 1.5 per cent.

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

The on-orbit sine function generator (CS'G) performed normally for the duration of the mission.

KIK-ZORRO 38 (early A to B switchover) was performed on Rev. 88 by the [REDACTED] Tracking Station and all transfer functions were normal.

B. PANORAMIC CAMERA PERFORMANCE

Both panoramic cameras operated normally throughout the mission. 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 -2 system occurred as programmed utilizing the KIK-ZORRO 38 command (early A to B switchover) on Rev. 88.

The panoramic film was exhausted on Rev. 233 frame No. 61 on the Master and frame No. 117 on the Slave.

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Panoramic Film Consumption (Frames)

	<u>Actual</u>	
	<u>Master</u>	<u>Slave</u>
Pre-Launch	113	115
-1 Mission	2876	2846
-2 Mission	3050	3085
Total	6039	6046

FMC Match

The V/H ramp to orbit match was acceptable throughout the flight. The following settings of RPC 6, 8, and 10 were used to attain the optimum match during the flight.

RPC Position	Remarks
6 8 10	
6 5 6	Launch thru Rev. 3
6 4 7	Rev. 4 thru Rev. 11
6 3 7	Rev. 12 thru Rev. 102
6 4 9	Rev. 103 thru Rev. 105
7 3 9	Rev. 106 thru Rev. 139
6 4 9	Rev. 140 thru Rev. 240

OAS Operation

A single OAS rocket was fired on Rev. 102. All telemetry monitors and subsequent orbital parameters confirmed successful operation.

<u>Parameter</u>	<u>Prior to OAS</u> <u>Rev. 102</u>	<u>After OAS</u> <u>Rev. 103</u>
Period - Min.	89.83	90.02
Apogee - N.M.	198.05	203.78
Perigee - N.M.	97.45	99.79
Eccentricity	0.0140	0.0145
Inclination - Deg.	80.01	80.01
Argument of Perigee - Deg.	137.95	143.27

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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 the tens position on the instrument No. 2 cycle counter. The counter hung up between positions 9 and 0 on five different occasions throughout the flight. However, the counter did not lose any counts and therefore did not create an operational problem.

The redundant status commutator (Link II Ch. 12) failed on Rev. 6 and remained inoperative for the duration of the mission. This did not present any operational problems because the primary status commutator performed satisfactorily throughout the mission.

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.

F. PRESSURE MAKE-UP SYSTEM PERFORMANCE

The pressure make-up system performed normally throughout the flight. Average gas consumption was approximately 8.5 PSI/min. for the 229 minutes of total operate time. The system had a surplus of 500 PSIA at the end of the mission.

G. THERMAL ENVIRONMENT

The average instrument temperatures ranged from a high of 85°F on the Master and 82°F on the Slave to a low of 66°F on the Master and 64°F on the Slave.

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SECTION 4

MISSION 1042 RECOVERY SYSTEMS

-1 Mission

The -1 recovery capsule was successfully recovered by air-catch on Rev. 97 at 2335 GMT on 22 June 1967. All re-entry events appeared normal and occurred within specified tolerances except despin which occurred 0.86 seconds early. Capsule impact was within the nominal 3 sigma dispersions.

	Latitude	Longitude
Predicted	20° 30.1' N	154° 27.5' W
Actual	20° 46' N	154° 33' W

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

-2 Mission

The -2 recovery capsule was successfully recovered after a water impact on Rev. 240 at 2151 GMT on 1 July 1967. Capsule impact was within the 3 sigma dispersions.

	Latitude	Longitude
Predicted	21° 50.0' N	149° 2.0' W
Actual	22° 12' N	149° 11.8' W

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

Capsule attitude appeared to become unstable just prior to nominal G-switch open. The instability caused the G-switch to reset and set several times and the parachute events occurred approximately 60 seconds late causing chute deployment at 20,000 ft. instead of the normal 57,000 ft. The capsule impacted in the water due to the late chute deployment and a water pick-up was performed.

The most probable cause of this instability is attributed to the change of the aerodynamic shape by a piece or pieces of ablative material extended into the airstream.

MISSION 1042

RECOVERY SEQUENCE OF EVENTS

Event	Delta Time (Seconds)		
	Actual		Nominal
	-1	-2	
*Arm	76.84	76.84	77.0 ± 1.0
*Transfer	1.96	1.93	2.0 ± 0.25
Electrical Disconnect	0.94	0.82	0.900 ⁺ ₋ 0.43 0.40
Separation	---	---	---
**Spin	3.24	3.33	3.4 ± 0.30
Retro	7.32	7.28	7.55 ± 0.45
Despin	9.89	10.58	10.75 ± 0.54
T/C Separation	1.50	1.48	1.5 ± 0.15
***"G" Switch Open	484.74	538.60 607.29	- 548.6
Parachute Cover Off	34.20	36.25	34.0 ± 1.5
Drogue Chute Deployed	0.70	0.45	0.63 ± 0.08
Main Chute Bag Separate	10.85	10.37	10.25 ⁺ ₋ 3.0 2.2
Main Chute Deployed	0.58	0.50	0.52 ± 0.13
Main Chute Disreef	4.72	4.37	4.5 ± 0.80

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

Two delta times are given for -2 "G" switch open; the first is the programmed event, the second is the event which triggered the parachute cover off.

TABLE 4-1

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SECTION 5

MISSION 1042 PANORAMIC CAMERAS

A. COMPONENT ASSIGNMENT

<u>COMPONENT</u>	<u>Master (Fwd) Serial Number</u>	<u>Slave (Aft) Serial Number</u>
Main Camera	204	205
Main Camera Lens	2192435	2012435
Supply Horizon Camera	306-G6H	305-G6H
Supply Horizon Camera Lens	E12871	E19098
Take-up Horizon Camera	306-G5H	305-G5H
Take-up Horizon Camera Lens	E12853	E12879
Supply Cassette	SC-49	SC-49

B. CAMERA DATA AND FLIGHT SETTINGS

Main Camera:

Lens	24" f/3.5	24" f/3.5
Slit Width	0.200"	0.150
Filter Type	Wratten 23A	Wratten 21
Film Type (E.K.)	3404	3404

Supply Horizon Cameras:

	<u>Port</u>	<u>Starboard</u>
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

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B. CAMERA DATA AND FLIGHT SETTINGS (Continued)

Take-up Horizon Cameras:	<u>Starboard</u>	<u>Port</u>
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

Mission 1042-1 and -2 were considered to produce some of the best image quality to date. The Master #201 and the Slave instrument #205 both operated well throughout the mission. Fewer than usual anomalies were experienced in Mission 1042-1 and -2. Unusually crisp imagery was obtained from both pan-cameras in cloud free areas.

Low haze conditions appeared to persist throughout the mission accounting for part of the good quality terrain imagery. The aft looking instrument (#204) was given an MIP rating of 85. The MIP number was selected from pass D-183 frame 022. The forward looking instrument (#205) was given an MIP rating of 85 on pass D-053, frame 10.

Emulsion scratches appeared intermittently throughout Mission 1042-1 and -2 in film from the forward looking instrument. Some of the scratches were severe, the most predominant ones being 1, 1-1/3, and 1-5/8 inches from the titled edge and running parallel to the long axis of the film. Occasionally the scratches extend into the horizon area. At present the scratches cannot be attributed to any particular phase of the flight operation. The subject scratches were not present on test film exhibits prior to launch.

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A small area of out-of-focus imagery on the Master Camera in present intermittantly through the Mission 1042-1 only. It is located approximately one and one-half inches from the supply end of the film and continues for up to two inches along the binary edge extending up to one inch into the active format. This condition ceased to exist after the cut and wrap function. It appears that this anomaly was caused by tension/tracking variations. A critique was held to determine the adequacy of current procedures and techniques used to establish camera tracking, roll lift measurements and film tension. As a result, it was determined that present procedures are adequate.

During Mission 1042-2 imagery produced by the port looking horizon camera (a part of the left looking pan camera) gradually became more underexposed beginning at pass P-028. At pass P-180 the port horizon camera was degraded sufficiently to consider the imagery difficult to use. This condition could be the result of a loose F-stop mechanism with the iris gradually closing up. In the future all horizon camera F-stop mechanisms will be examined during pre-flight testing to insure proper exposure.

Minor light fog patterns affected a small part of up to two frames of some operations from both cameras. No noticeable image degradation was reported. Fog patterns appeared normal and similar to those observed in previous missions.

The last seven frames of Mission 1042 slave camera film were degraded extensively by numerous stains that appear to be the result of contact with water prior to processing. A small amount of water was reported in the -2 recovery system after the Recovery Vehicle was retrieved from

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the ocean. The water stains on the slave camera film were probably caused by the wet recovery of the record recovery vehicle.

Minor minus density streaks are present intermittently throughout the slave film record. They appear to follow the field flattener movement. Scan head roller scratches on both pan camera film records appear minor and are similar to previous missions.

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SECTION 6

MISSION 1042 STELLAR-INDEX CAMERAS

A. COMPONENT ASSIGNMENT

<u>Component</u>	<u>-1 Mission Serial Number</u>	<u>-2 Mission Serial Number</u>
Camera	D-97	D-98
Index Reseau	120	121
Stellar Reseau	117	118

B. CAMERA DATA AND FLIGHT SETTINGS

Stellar Camera:

Lens	85 mm f/1.8	85 mm f/1.8
Exposure Time	1 second	1 second
Filter Type	None	None
Film Type (E.K.)	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 (E.K.)	3400	3400

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C. POST FLIGHT EVALUATION

The Stellar and Index Cameras operated successfully throughout Mission 1042-1 and 1042-2. S/I Unit #D 97/120/117 was used in the -1 mission while Unit #D 98/121/118 was employed in the -2 mission. Approximately 15 to 20 star images were recorded in each frame of stellar photography during the first mission. During the second mission 10 to 15 stars were recorded per frame.

Index camera imagery from 1042-1 and -2 is good and compares favorably with that obtained from recent missions of this system. Light fog flare affects approximately 60 percent of each stellar frame of the -1 mission and 20 percent of each frame of the -2 mission. The stellar resseau grid and serial number were sharp for both stellar cameras.

Three out of four stellar fiducials present in Mission 1042-1 photography were unreadable due to excessive density. Stellar fiducials, although readable prior to launch, were marginally high in density. Stellar fiducial density shall be adjusted, prior to launch on future systems, to a lower acceptable level relative to fiducials released for Mission 1042.

The last 46 frames of the index camera film from Mission 1042-1 contained two heavy emulsion scratches. The scratches are plus density and are parallel to the film edge. The cause is unknown.

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Minor variations were observed in the index camera metered film length as observed by changes in frame line width of the first 60 index camera frames. Index terrain imagery was not affected. Depending on index camera clutch and take-up tensions the non-uniform metering may be considered a normal function during operation.

One unexposed frame of steller and index film was observed from the -1 mission. Correlation of the gun exposures to the S/I Control revealed that the S/I did not receive the shutter wind command during the switch over sequence at the end of Mission 1042-1. This caused one frame of the steller and index frames to be unexposed.

SECTION 7

PANORAMIC CAMERA EXPOSURE

The Master camera contained a 0.200 inch slit and a Wratten 23A filter. The Slave camera had a 0.150 inch slit and a Wratten 23 filter. These conditions placed the nominal exposure between the full and the intermediate processing curve.

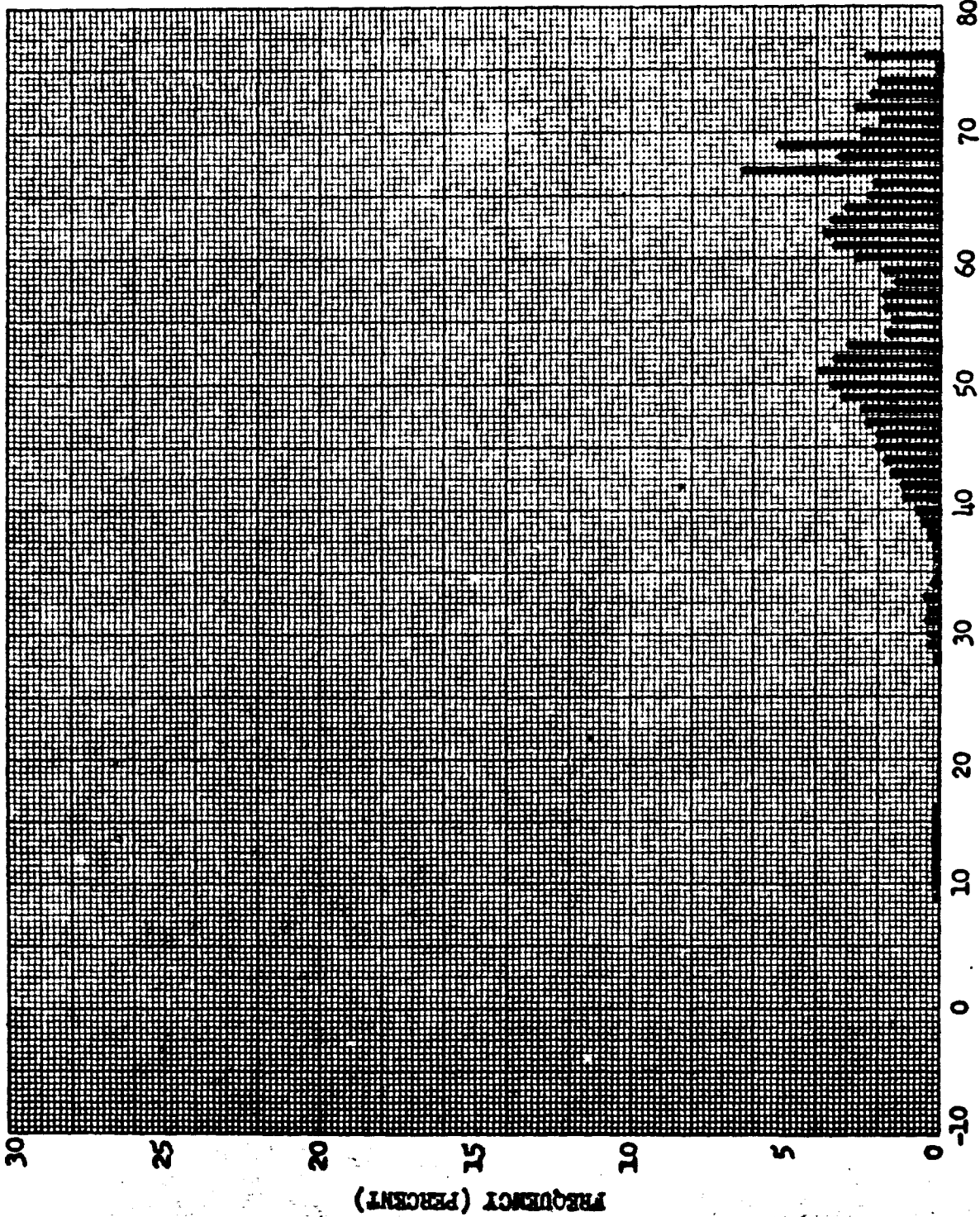
The frequency distributions of the solar elevations and solar azimuths encountered during the photographic operations are shown in Figures 7-1 to 7-4.

The nominal exposure times of the Master and Slave cameras are shown as a function of latitude for passes D-1, D-89 and D-240 in Figures 7-5 to 7-10. 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]

<u>Mission</u>	<u>Camera</u>		<u>% Primary</u>	<u>% Intermediate</u>	<u>% Full</u>
1042-1	FWD	Predicted	0	19	81
		Reported	9	9	82
1042-1	AFT	Predicted	0	7	93
		Reported	5	8	87
1042-2	FWD	Predicted	0	11	89
		Reported	5	16	79
1042-2	AFT	Predicted	0	10	90
		Reported	8	16	76

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SOLAR ELEVATION FREQUENCY DISTRIBUTION



Mission No: 1042-1
Payload No: J-37
Camera No: 204
Launch Date: 6/16/67
Launch Time: 2135 Z
Inclination: 80°

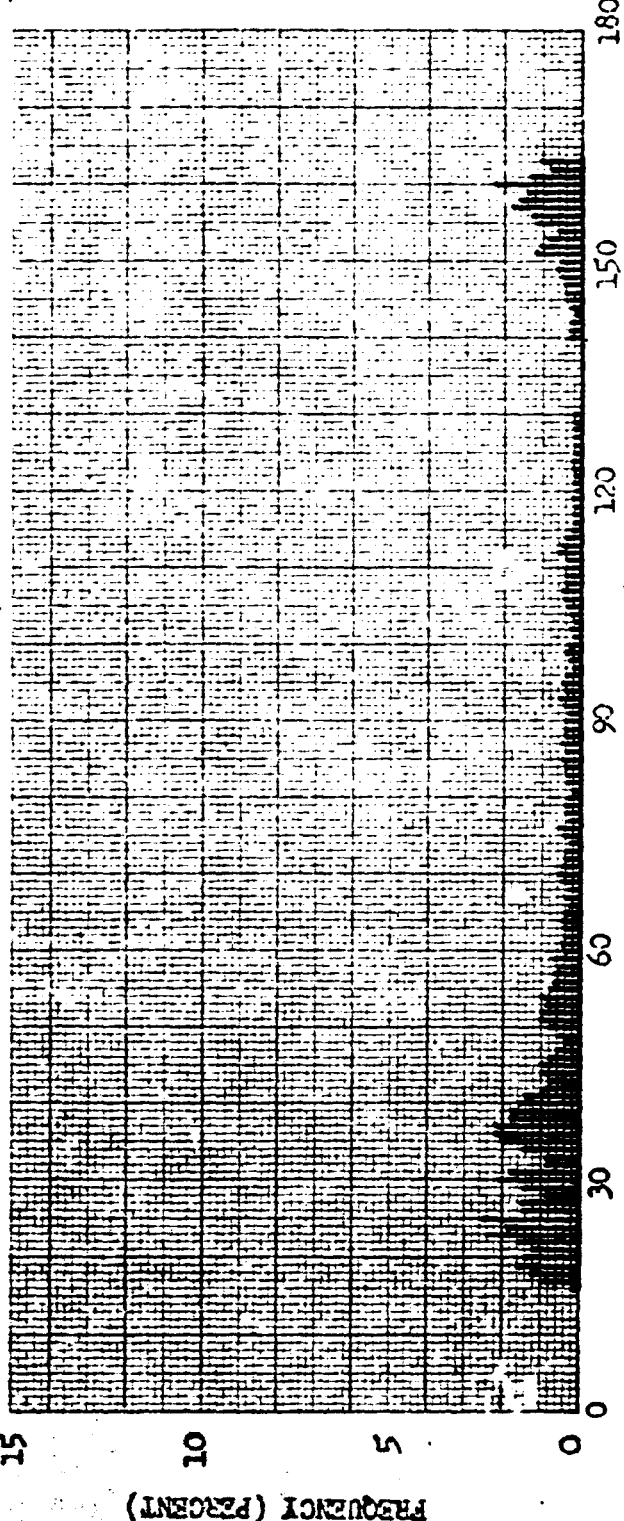
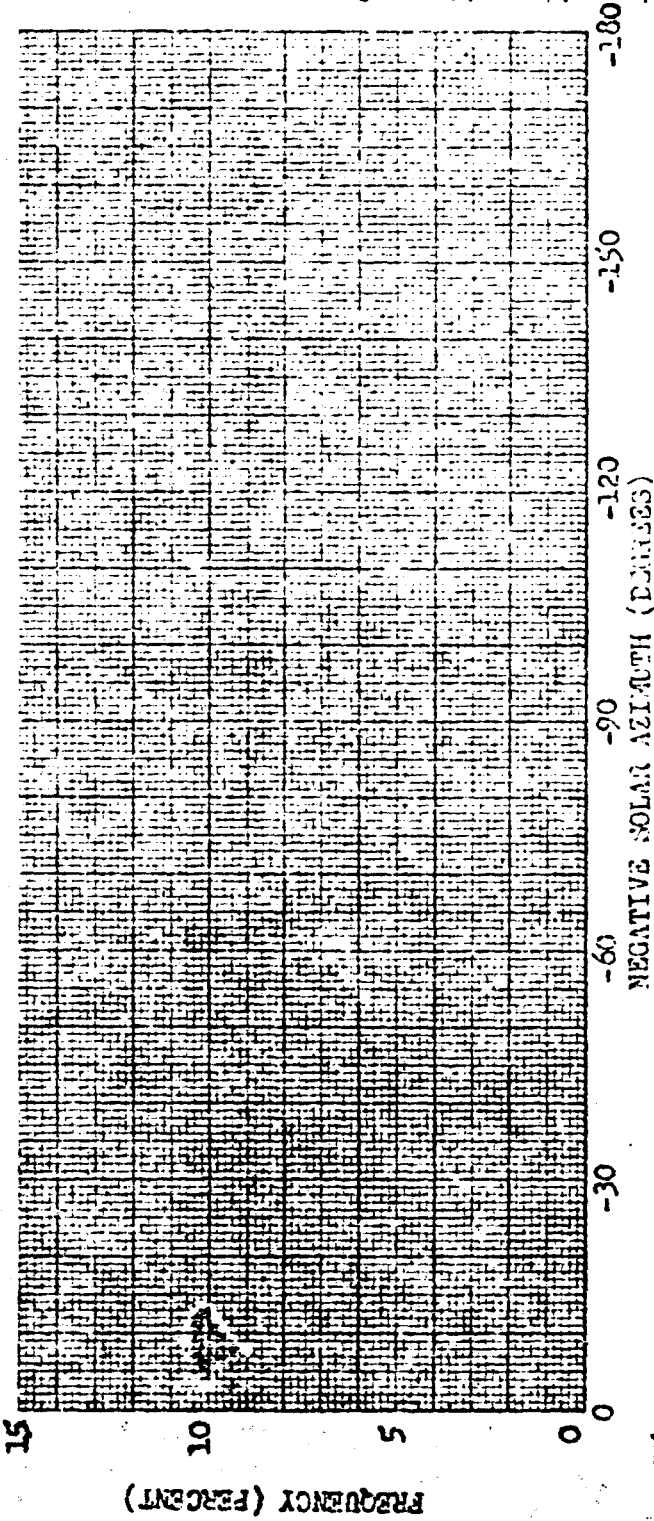
SOLAR ELEVATION (DEGREES)

FIGURE 7-1

~~TOP SECRET-C/~~ [REDACTED]

~~TOP SECRET C/~~ [REDACTED] NO. [REDACTED]

SOLAR AZIMUTH FREQUENCY DISTRIBUTION



Mission No: 1042-1
Payload No: J-37
Camera No: 204
Launch Date: 6/16/67
Launch Time: 2135 Z
Inclination: 80°

SIGN NOTATION

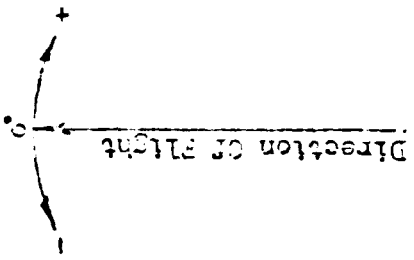


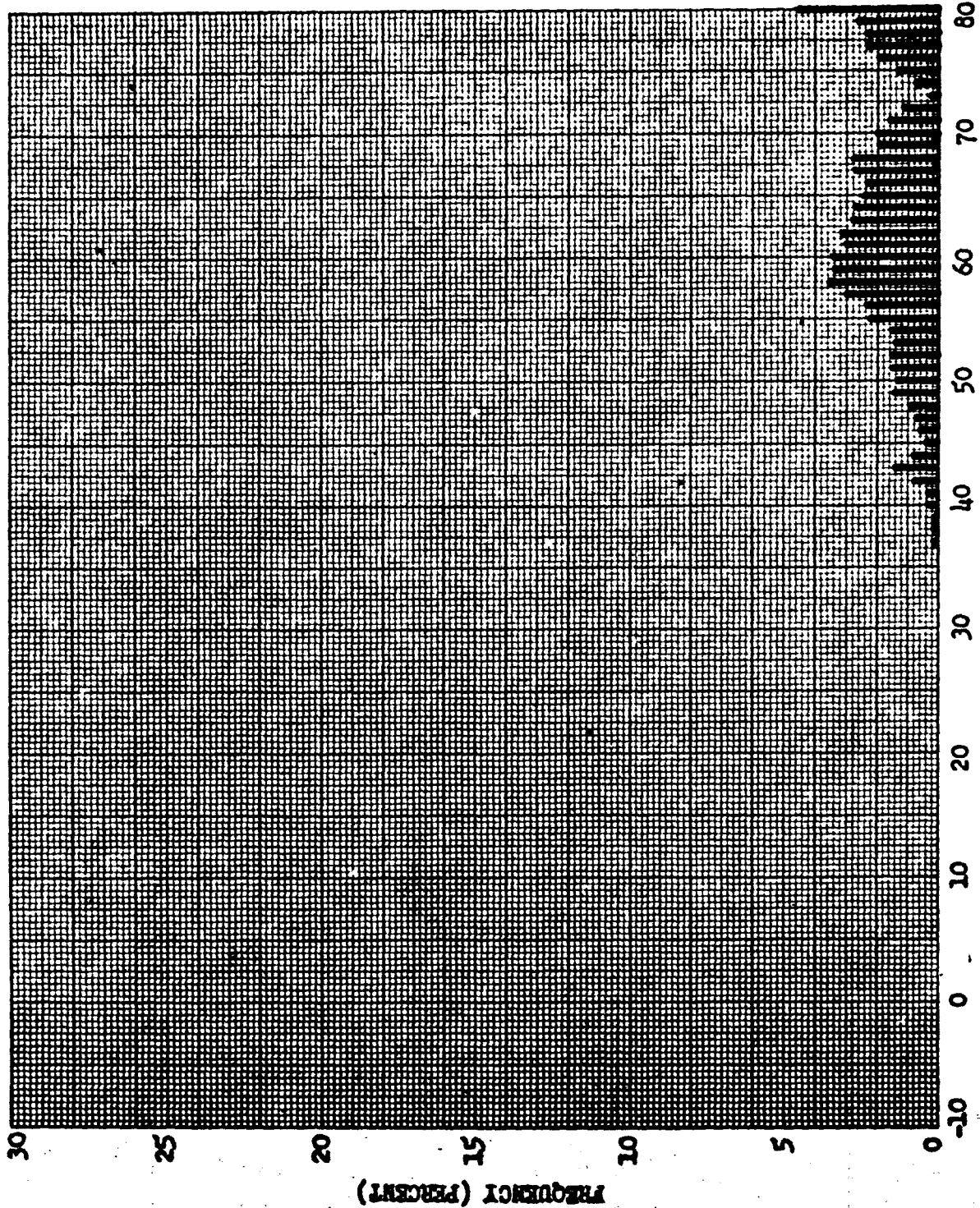
FIGURE 7-2

[REDACTED]

~~TOP SECRET C/~~

NO.

SOLAR ELEVATION FREQUENCY DISTRIBUTION



Mission No: 1012-2

Payload No: J-37

Camera No: 204

Launch Date: 6/16/67

Launch Time: 2135 Z

Inclination: 80°

SOLAR ELEVATION (DEGREES)

FIGURE 7-3

~~TOP SECRET C/~~

TOP SECRET-C/ [REDACTED] NO. [REDACTED]

SOLAR AZIMUTH FREQUENCY DISTRIBUTION

Mission No: 1042-2
Payload No: J-37
Camera No: 204
Launch Date: 6/16/67
Launch Time: 2135 Z

Latitude: 80°
SIGN POSITIVE

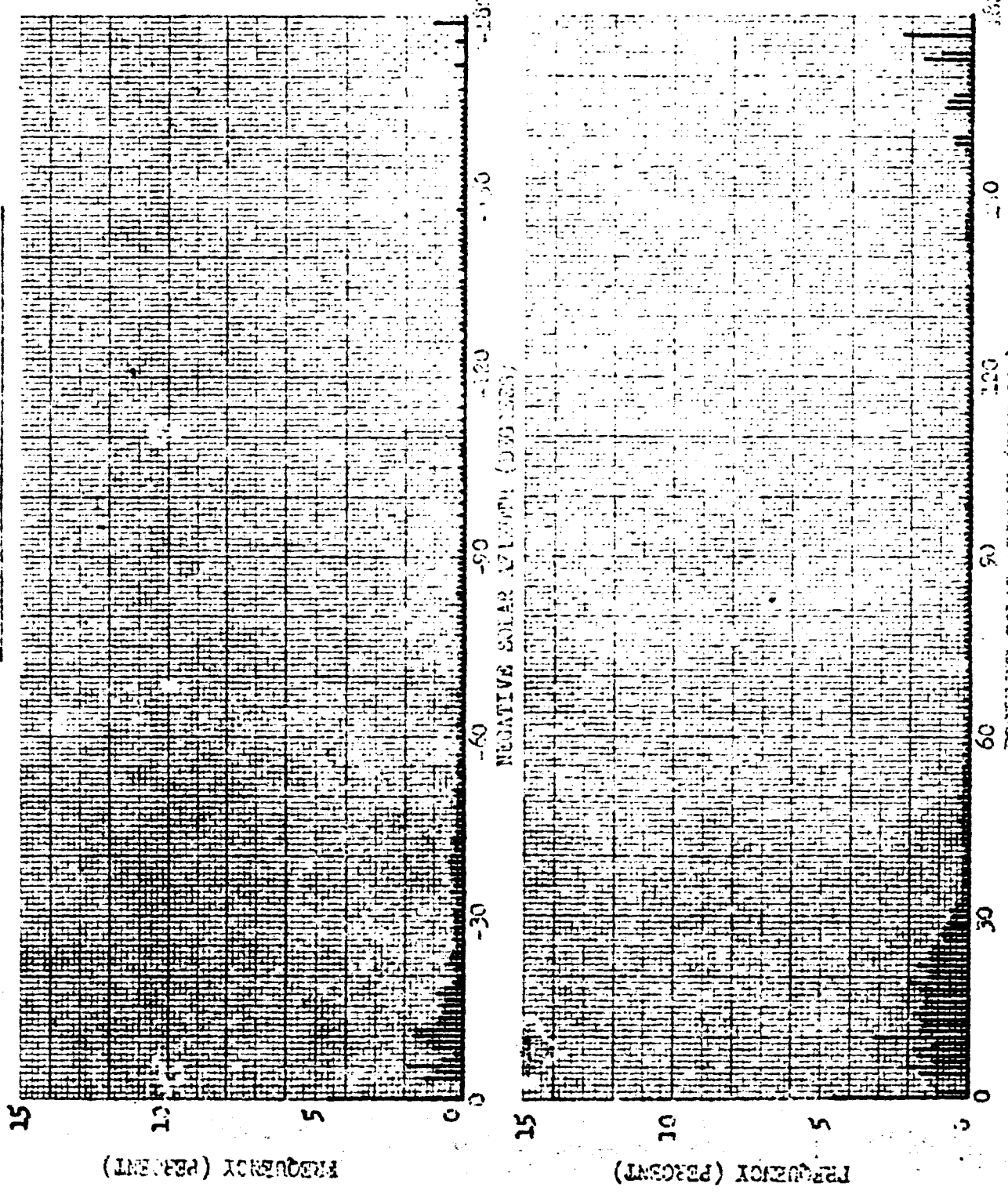
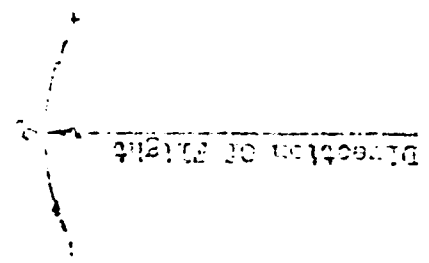
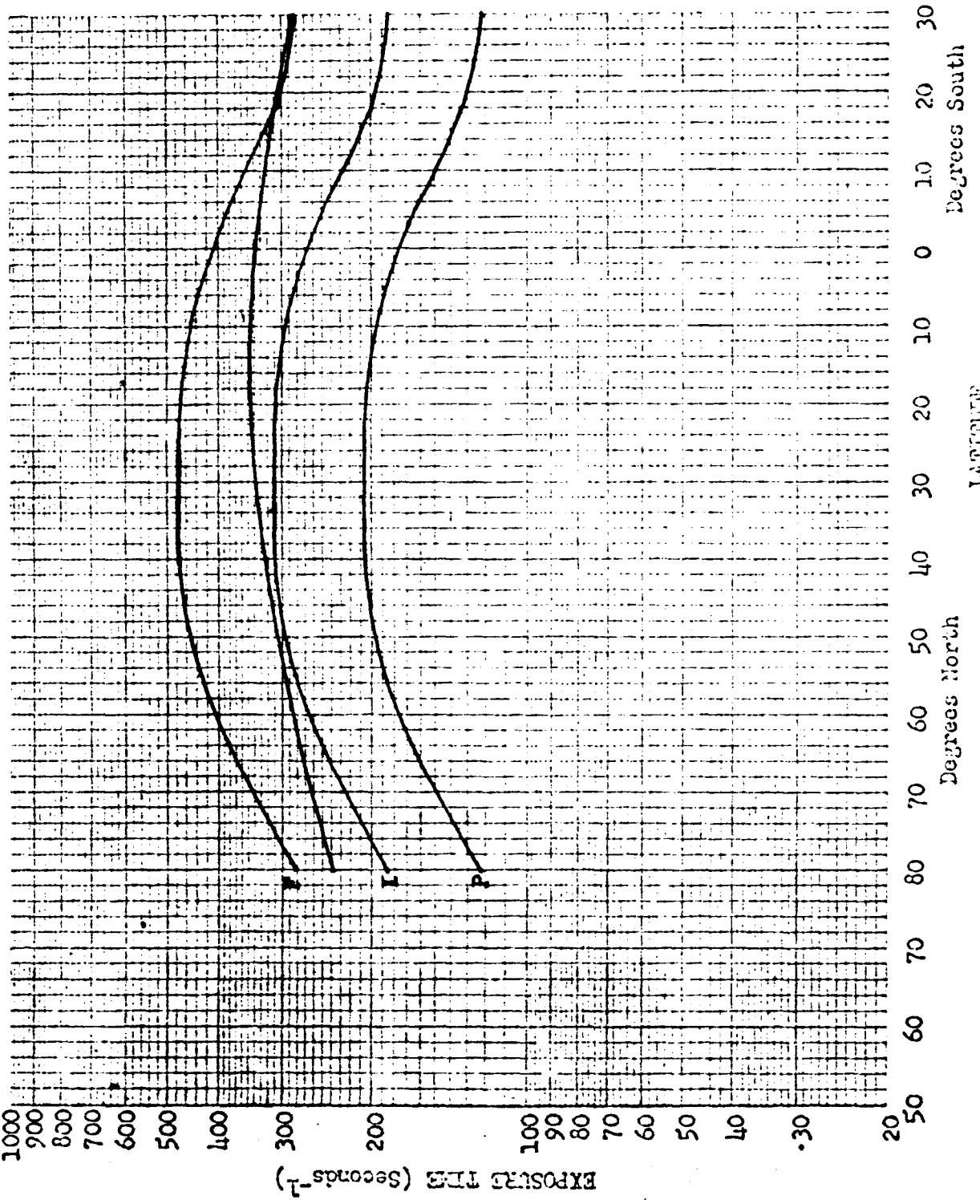


FIGURE 7-4

EXPOSURE POINTS

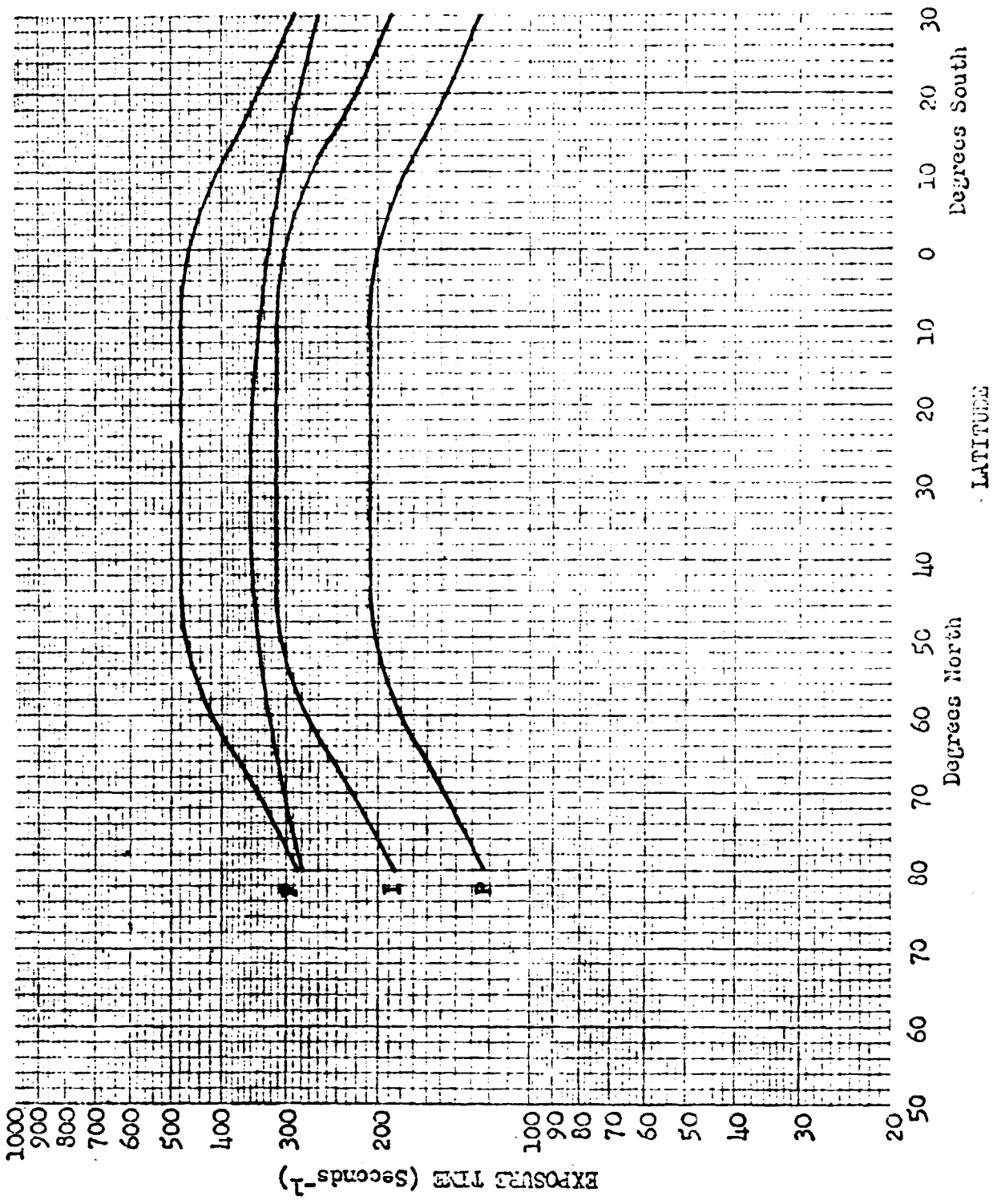


Mission No: 1042
Payload No: J-37
Camera No: 204
Pass No: 1
Launch Date: 6/16/67
Launch Time: 2135 Z
Slit Width: .200
Filter Type: Wratten 23A
Film Type: 3404

FIGURE 7-5

~~TOP SECRET-C/~~ [REDACTED] NO. [REDACTED]

EXPOSURE POINTS



Mission No: 1042
Payload No: J-37
Camera No: 204
Pass No: 89
Launch Date: 6/16/67
Launch Time: 2135
Slit Width: .200
Filter Type: Wratten 23A
Film Type: 3104

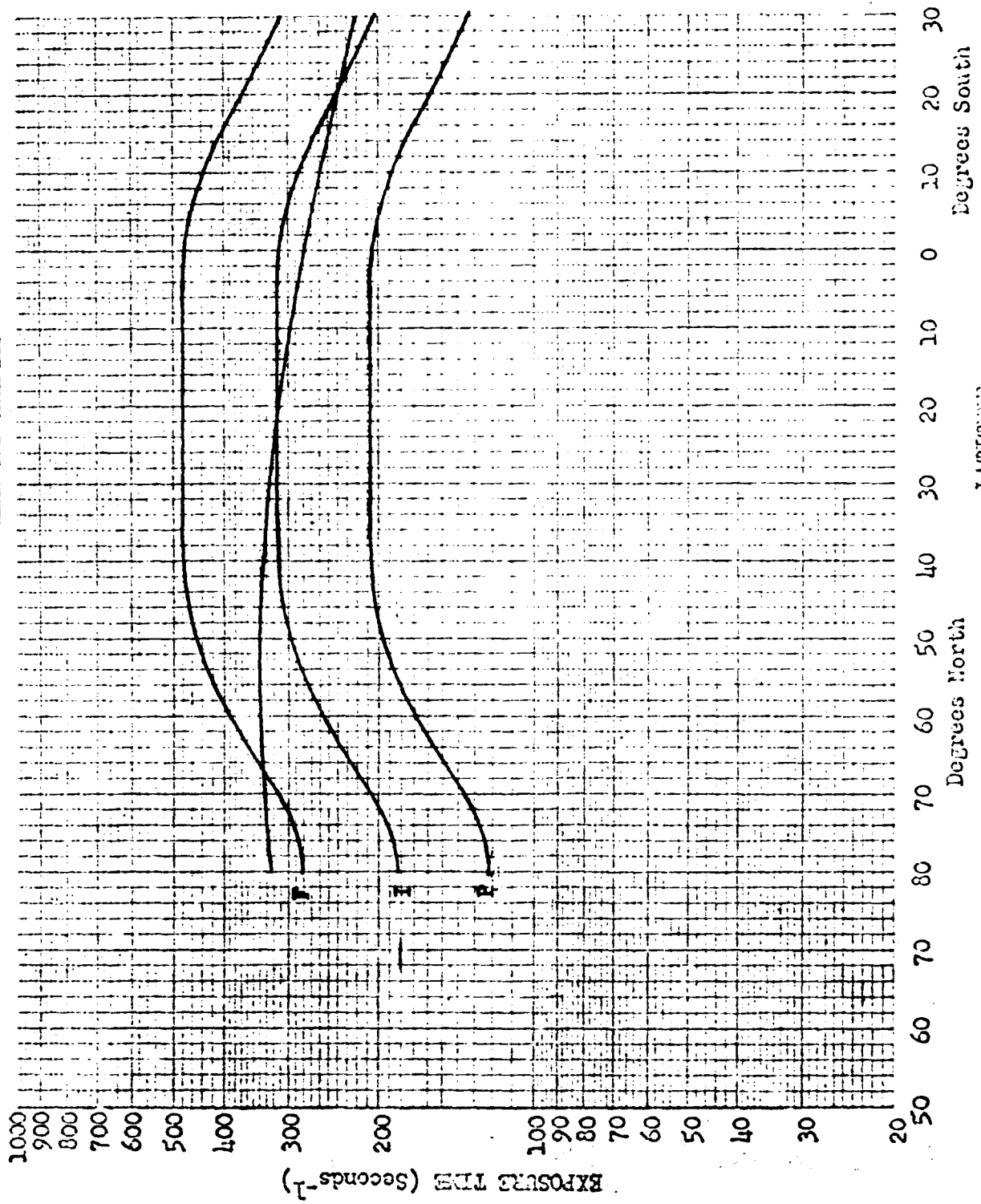
FIGURE 7-6

~~TOP SECRET-C/~~ [REDACTED]

~~TOP SECRET C/~~

NO.

EXPOSURE POINTS



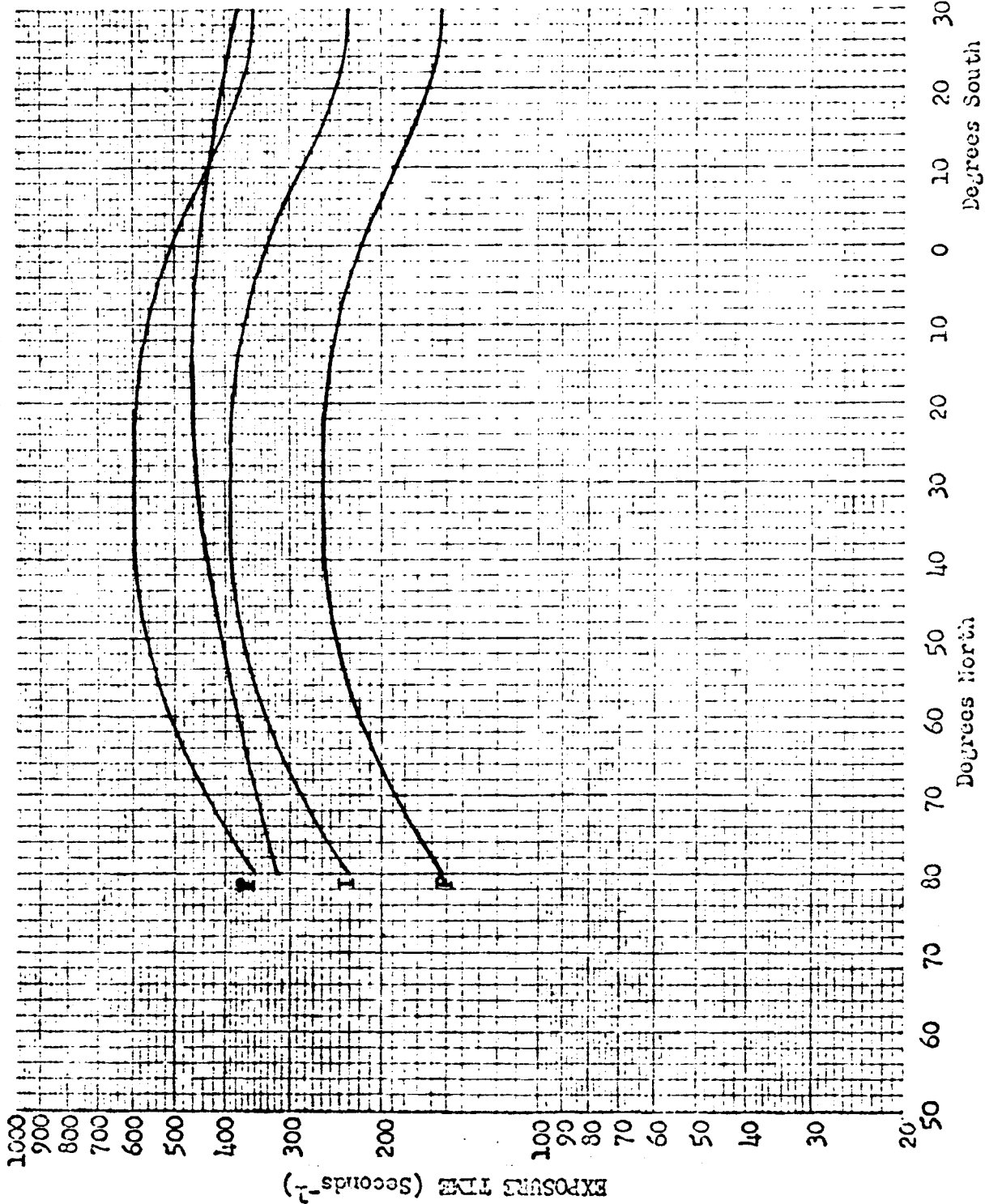
Mission No: 1042
 Payload No: J-37
 Camera No: 204
 Pass No: 240
 Launch Date: 6/16/67
 Launch Time: 2135 Z
 Slit Width: .200
 Filter Type: Wratten 23A
 Film Type: 3404

LATITUDE

FIGURE 7-7

~~TOP SECRET C/~~

EXPOSURE POINTS



Mission No: 1042

Payload No: J-37

Camera No: 205

Pass No: 1

Launch Date: 6/16/67

Launch Time: 2135 Z

Slit Width: .150

Filter Type: Wratten 21

Film Type: 3404

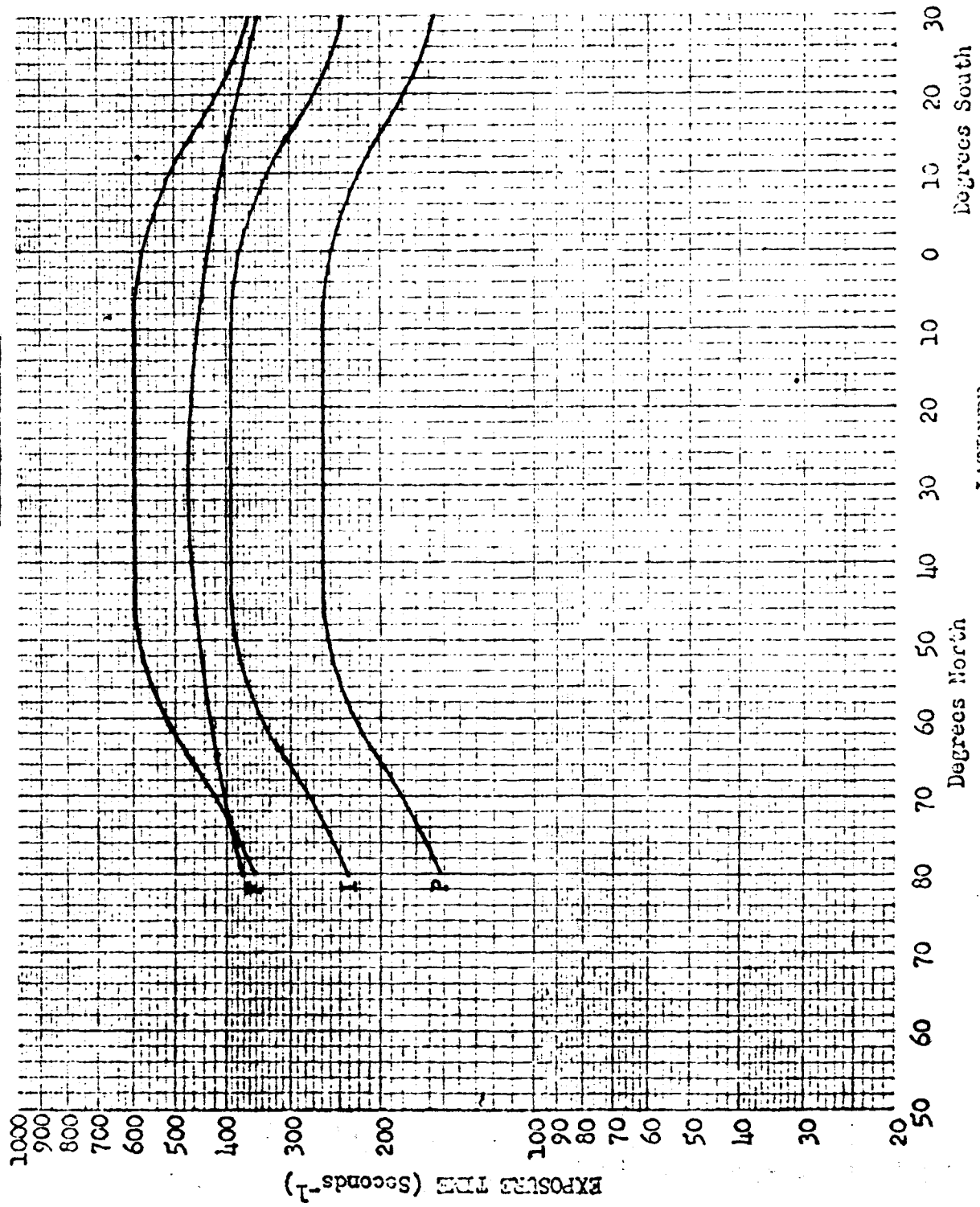
LATITUDE

FIGURE 7-8

TOP SECRET-C/

NO.

EXPOSURE POINTS

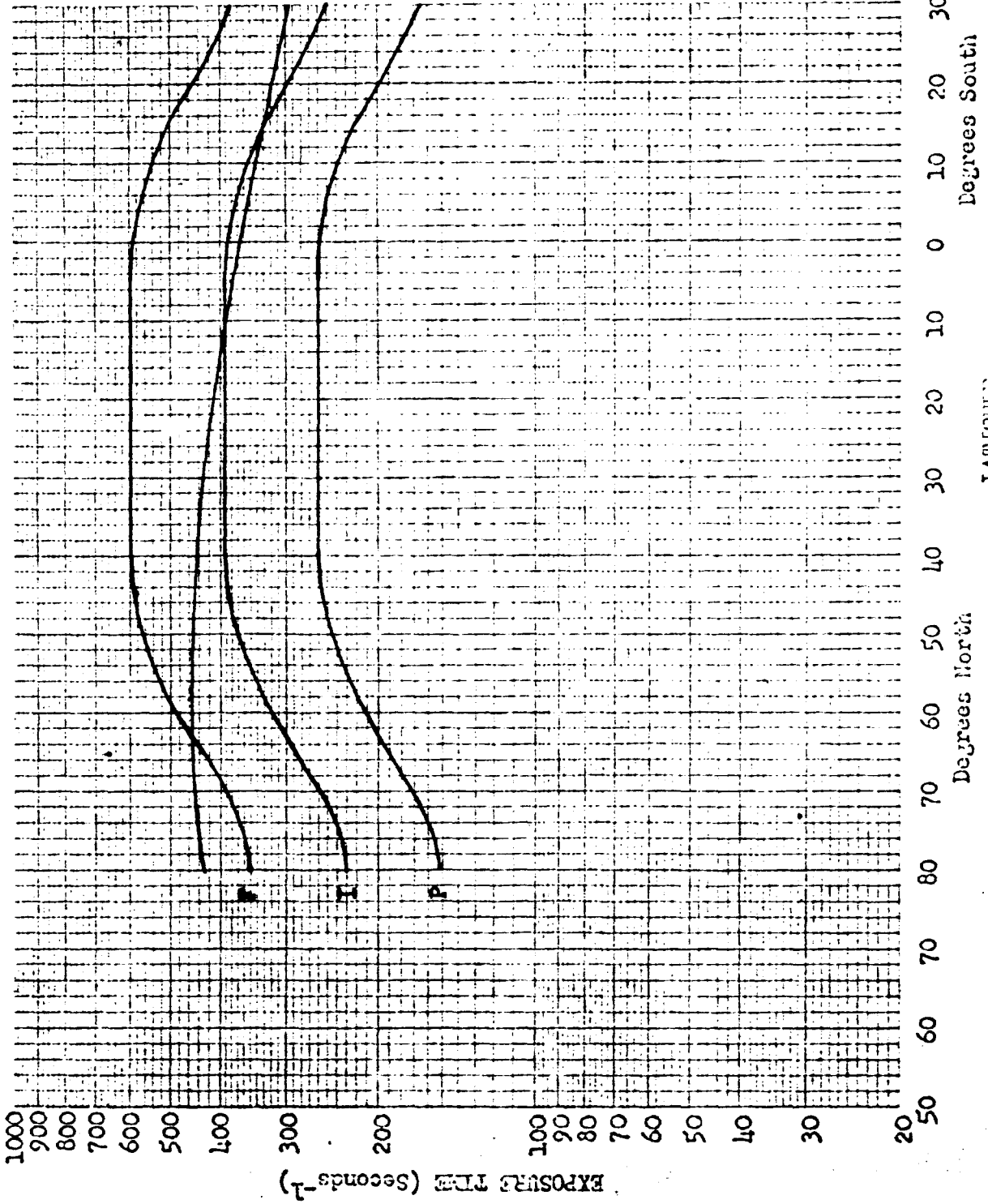


Mission No: 1042
 Payload No: J-37
 Camera No: 205
 Pass No: 89
 Launch Date: 6/16/67
 Launch Time: 2135 Z
 Slit Width: .150
 Filter Type: Wratten 21
 Film Type: 3404

FIGURE 7-9

TOP SECRET-C

EXPOSURE POINTS



Mission No: 1012
 Payload No: J-37
 Camera No: 205
 Pass No: 240
 Launch Date: 6/16/67
 Launch Time: 2135 Z
 Slit Width: .150
 Filter Type: Wratten 21
 Film Type: 3404

LATITUDE
FIGURE 7-10

C. [REDACTED] NO. [REDACTED]

SECTION 8

PERFORMANCE MEASUREMENTS

The photography acquired by both panoramic cameras during Missions 1042-1 and 1042-2 received a MIP rating of 85. A summary is tabulated below of the MTF/AM resolution values measured by AFSPPF and reported in cycles/mm. The microdensitometer slit used was 1 micron by 80 microns.

<u>Mission</u>	<u>Camera</u>	<u>Cycles/mm</u>	<u>Avg.</u>	<u>Ground Resolution</u>
1042-1	FWD	79		
			74	15.4'
1042-2	FWD	70		
1042-1	AFT	85		
			79	14.5'
1042-2	AFT	74		

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. These values were determined by using the "Interim MTF/AM Program" technique.

C. [REDACTED] NO. [REDACTED]

SECTION 9

DIFFUSE DENSITY MEASUREMENTS

The diffuse density measurements made by AMSPIT 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.

<u>Mission</u>	<u>Camera</u>		<u>% Primary</u>	<u>% Intermediate</u>	<u>% Full</u>
1042-1	FWD	Predicted	0	19	81
		Reported	9	9	82
		Computed	0	15	85
1042-1	AFT	Predicted	0	7	93
		Reported	5	8	87
		Computed	0	13	77
1042-2	FWD	Predicted	0	11	89
		Reported	5	16	79
		Computed	0	11	89
1042-2	AFT	Predicted	0	10	90
		Reported	8	16	76
		Computed	0	10	90

C [REDACTED] NO. [REDACTED]

The tabulations of density frequency distributions for Mission 1042-1 and 1042-2 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-56.

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 is presented in Figure 9-1. 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.

~~TOP SECRET C~~

MISSION 1042-1		INSTR - FWD		9/8/67		PROCESSING AND EXPOSURE ANALYSIS		
PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXPE&PRUC	OVER PROCESSED	OVER EXPOSED		
PRIMARY	0	0 PC	0 PC	0 PC	19 PC	19 PC		
INTERMEDIATE	37	0 PC	3 PC	51 PC	41 PC	5 PC		
FULL	212	8 PC	0 PC	85 PC	6 PC	0 PC		
ALL LEVELS	249	7 PC	0 PC	80 PC	11 PC	1 PC		

MISSION 1042-1		INSTR - AFT		9/8/67		PROCESSING AND EXPOSURE ANALYSIS		
PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXPE&PRUC	OVER PROCESSED	OVER EXPOSED		
PRIMARY	0	0 PC	0 PC	0 PC	31 PC	31 PC		
INTERMEDIATE	59	10 PC	3 PC	59 PC	27 PC	0 PC		
FULL	195	4 PC	0 PC	90 PC	6 PC	0 PC		
ALL LEVELS	254	5 PC	1 PC	63 PC	11 PC	0 PC		

MISSION 1042-2		INSTR - FWD		9/8/67		PROCESSING AND EXPOSURE ANALYSIS		
PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXPE&PRUC	OVER PROCESSED	OVER EXPOSED		
PRIMARY	0	0 PC	0 PC	0 PC	13 PC	13 PC		
INTERMEDIATE	24	4 PC	4 PC	67 PC	25 PC	0 PC		
FULL	202	27 PC	0 PC	66 PC	7 PC	0 PC		
ALL LEVELS	226	24 PC	0 PC	66 PC	9 PC	0 PC		

MISSION 1042-2		INSTR - AFT		9/8/67		PROCESSING AND EXPOSURE ANALYSIS		
PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXPE&PRUC	OVER PROCESSED	OVER EXPOSED		
PRIMARY	0	0 PC	0 PC	0 PC	11 PC	11 PC		
INTERMEDIATE	21	0 PC	19 PC	71 PC	10 PC	0 PC		
FULL	196	22 PC	0 PC	75 PC	3 PC	0 PC		
ALL LEVELS	217	20 PC	2 PC	75 PC	4 PC	0 PC		

PROCESS LEVEL	BASE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXPE&PRUC	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		

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TABLE 9-1

J MISSION DENSITY RANGES

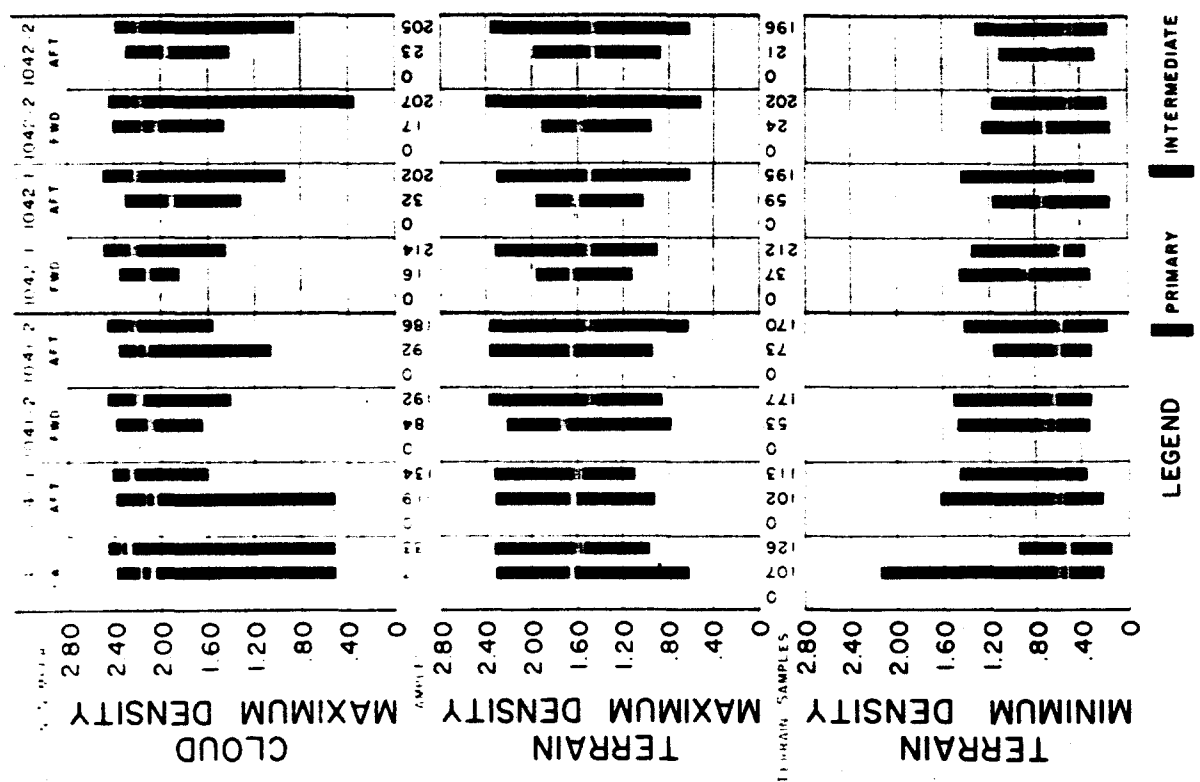


FIGURE 9 - 1

SECTION 10
VEHICLE ATTITUDE

The vehicle attitude errors for both Mission 1042-1 and 1042-2 were derived from the reduction of the Stellar camera photography. This attitude data is supplied to A/P by NPIC.

The attitude errors for each frame and the attitude control rates are calculated at the A/P computer facility. The computer also plots the frequency distribution of the rates and errors. Figures 10-1 through 10-6 show these distributions for Mission 1042-1 and Figures 10-7 through 10-12 for Mission 1042-2.

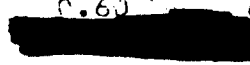
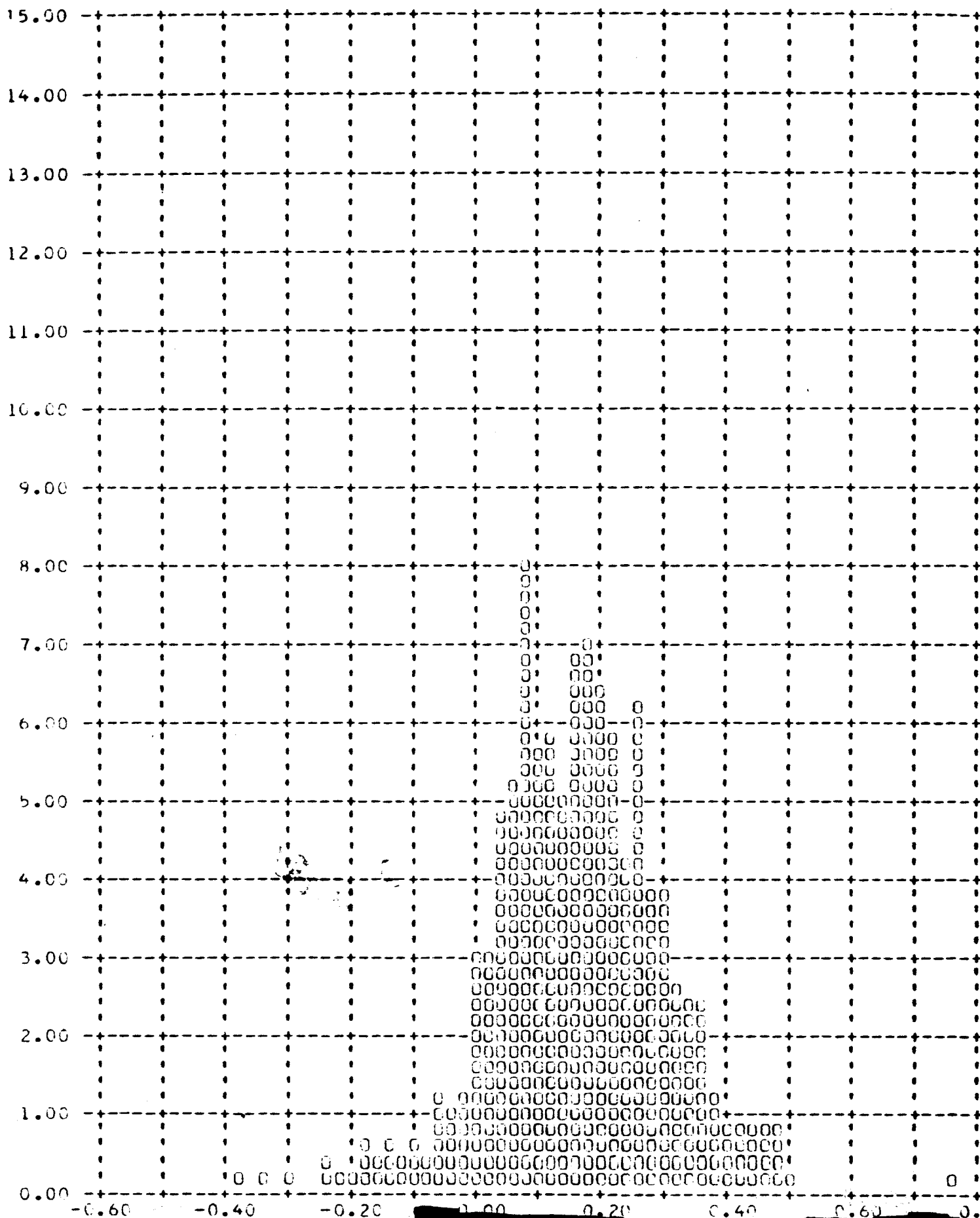
The summary table below lists the maximum attitude errors and rates that were experienced during 90% of the FWD camera photographic operations, excluding the first six frames of each operation, and the total range of the errors and rates.

Value	Mission 1042-1		Mission 1042-2	
	90%	Range	90%	Range
Pitch Error (°)	0.31	-0.38 to +0.76	0.31	-0.14 to +0.66
Roll Error (°)	0.22	-0.50 to +0.34	0.38	-0.26 to +0.74
Yaw Error (°)	2.26	-3.15 to -0.15	2.39	-3.15 to -0.20
Pitch Rate (°/hr.)	22.47	-85 to +50	16.13	-76 to +36
Roll Rate (°/hr.)	38.26	-85 to +100	46.07	-95 to +75
Yaw Rate (°/hr.)	27.04	-65 to +75	31.35	-32 to -92

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.



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



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

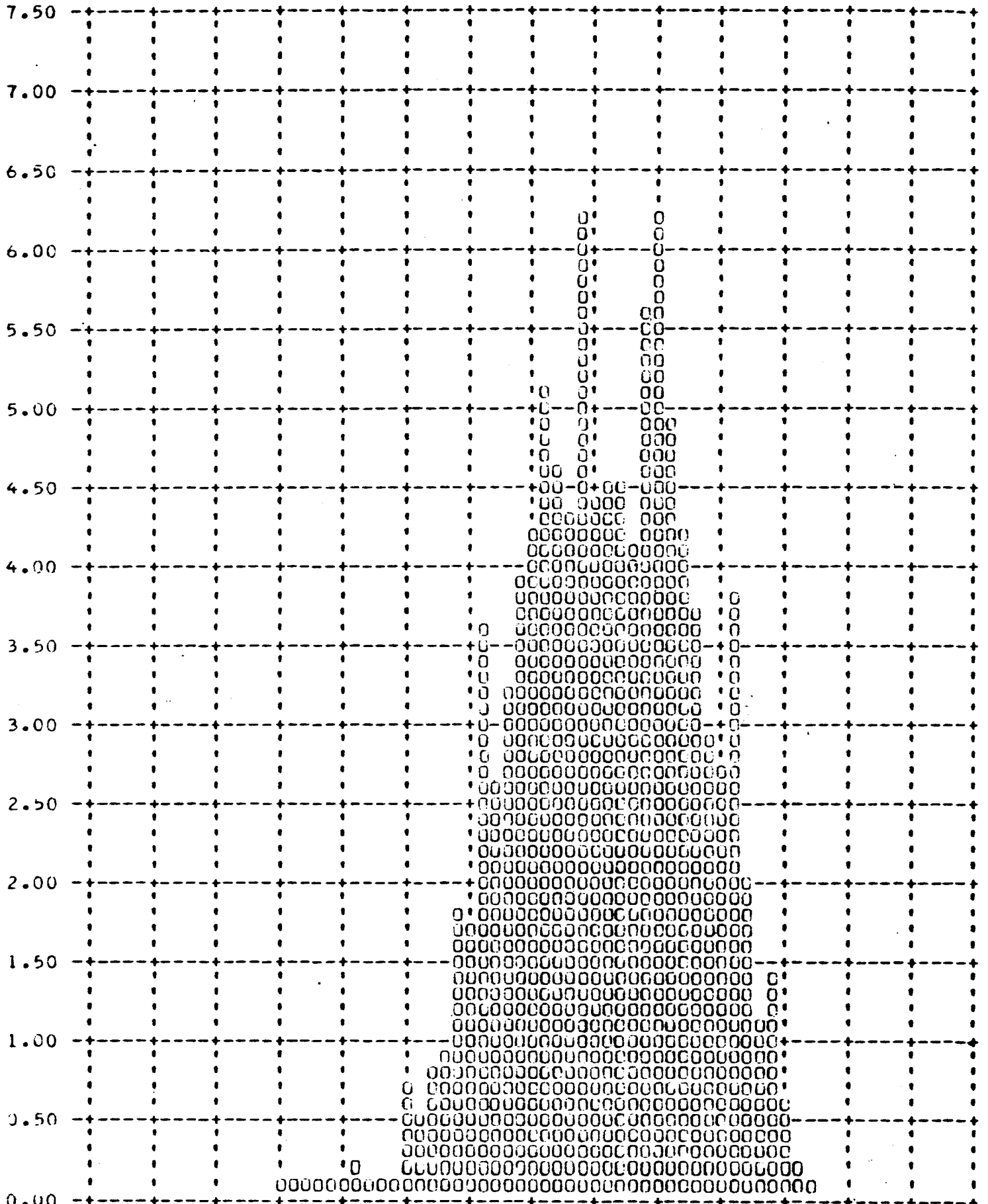
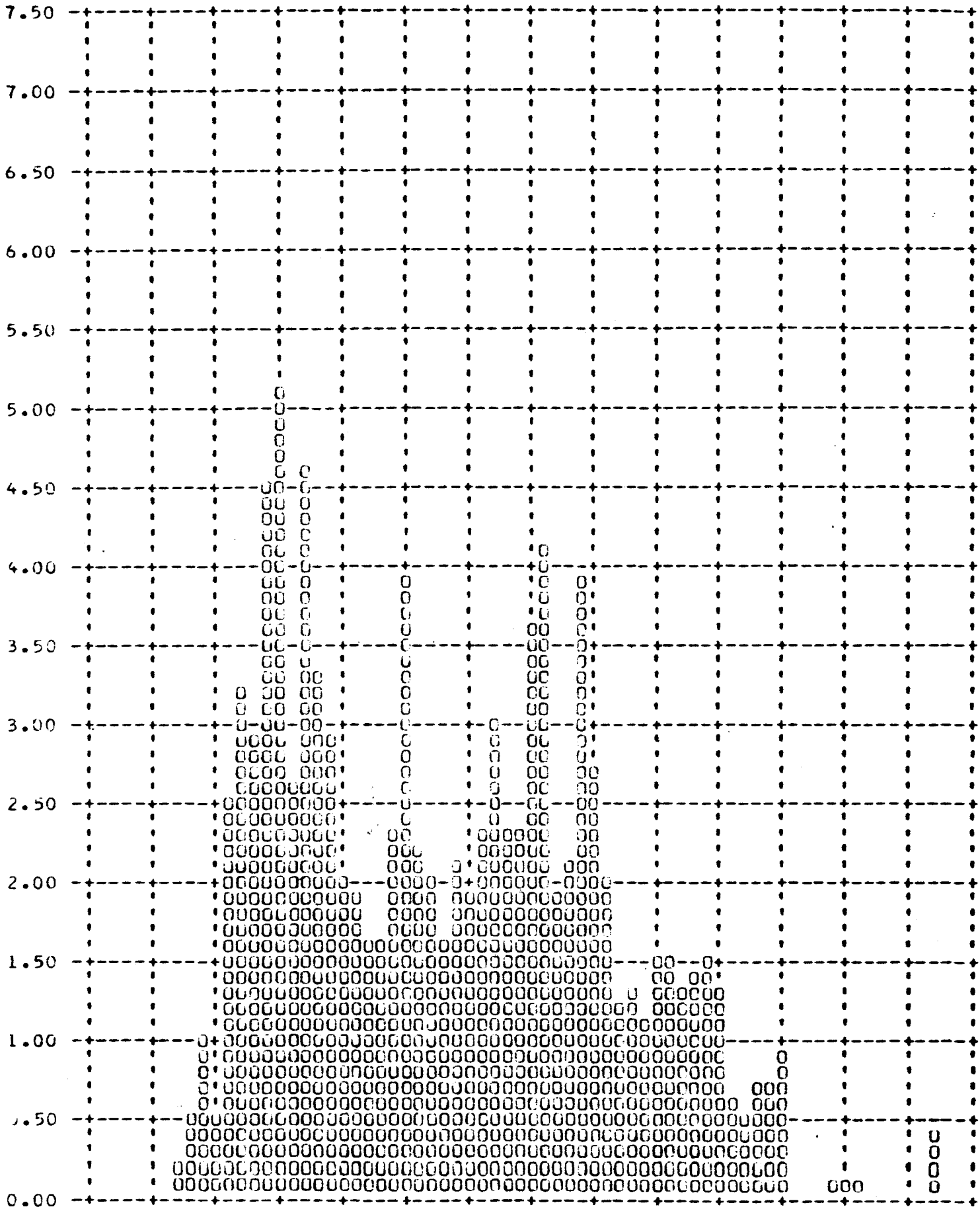
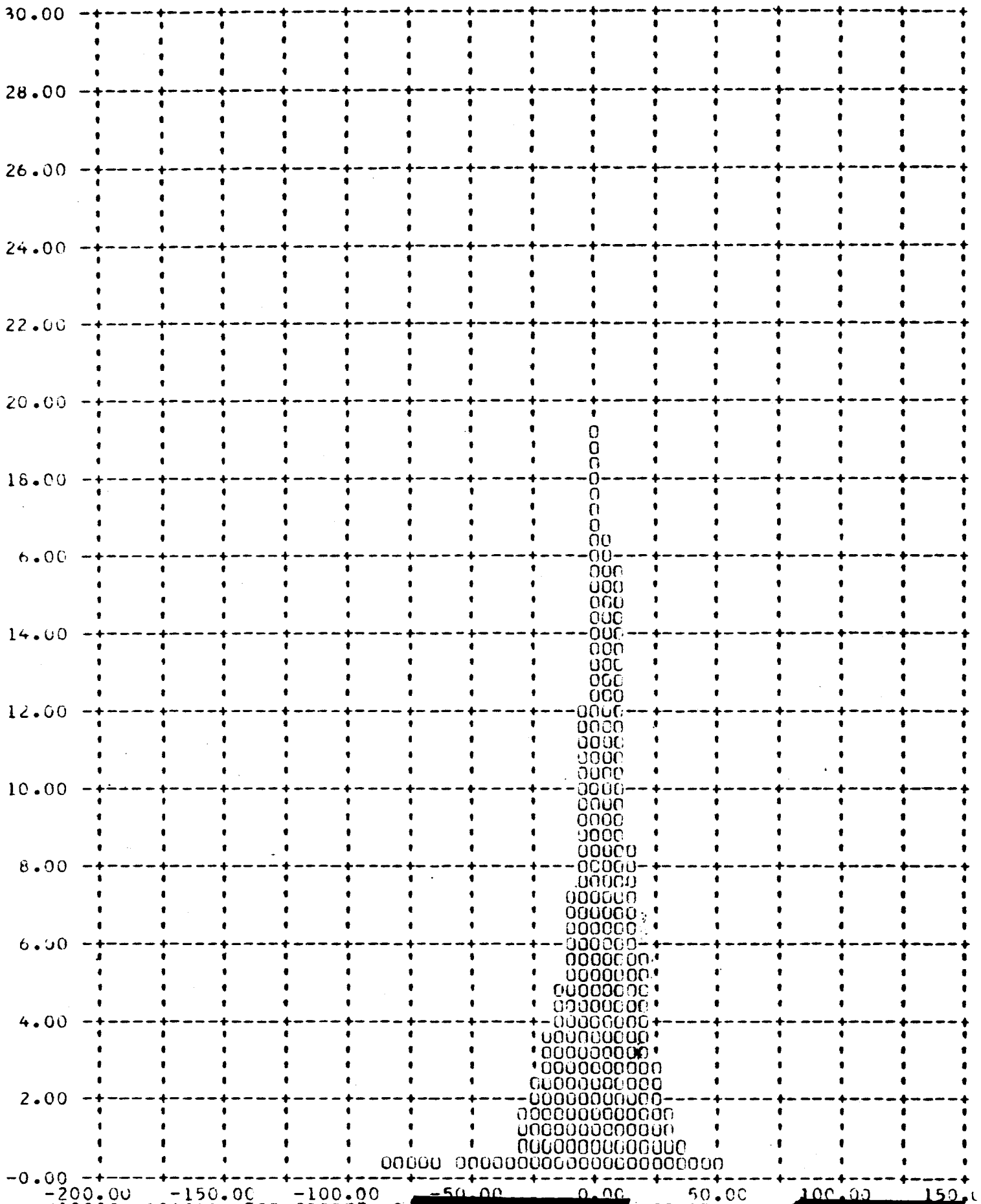


Figure 10-2

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



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



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

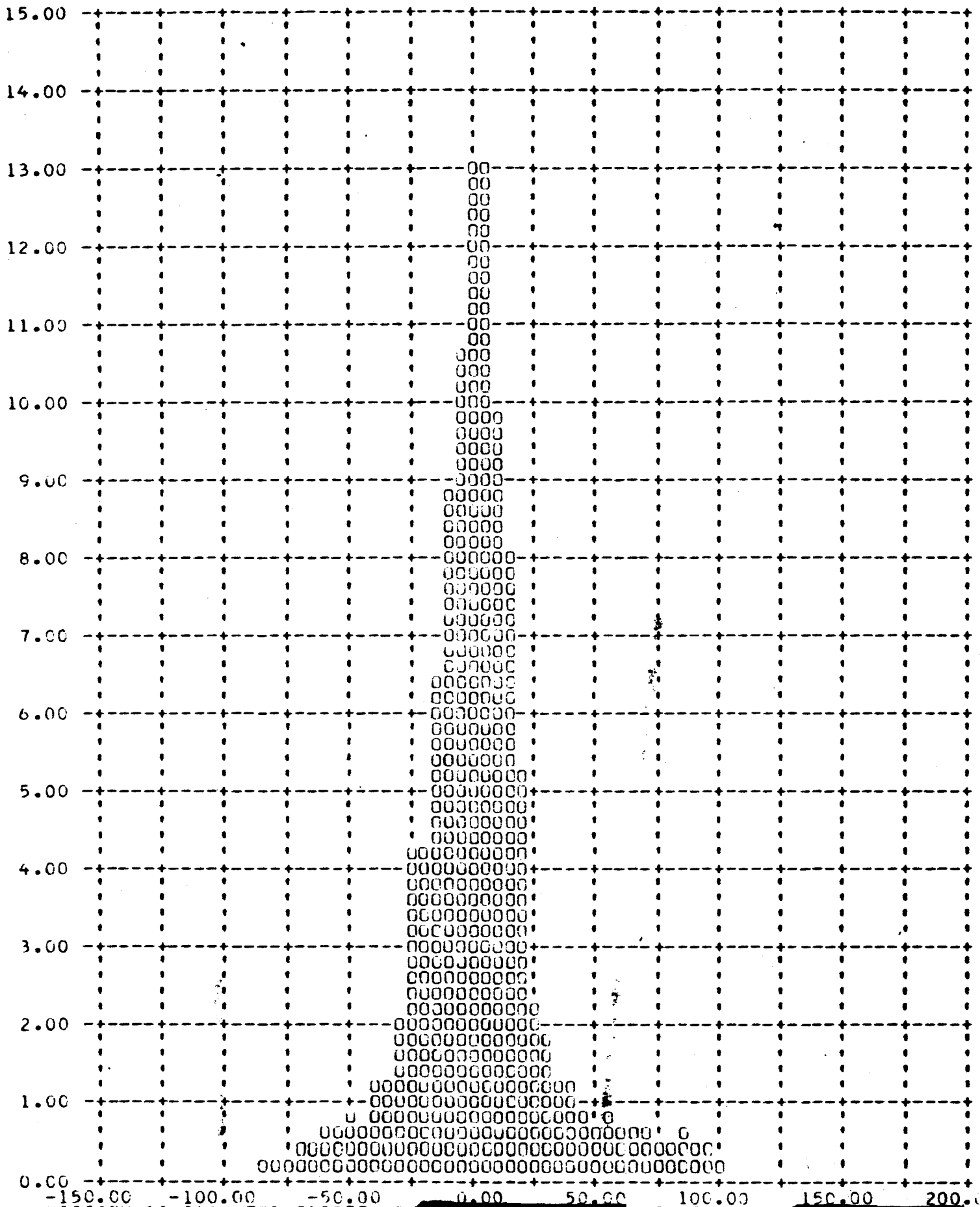


FIGURE 10-5

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

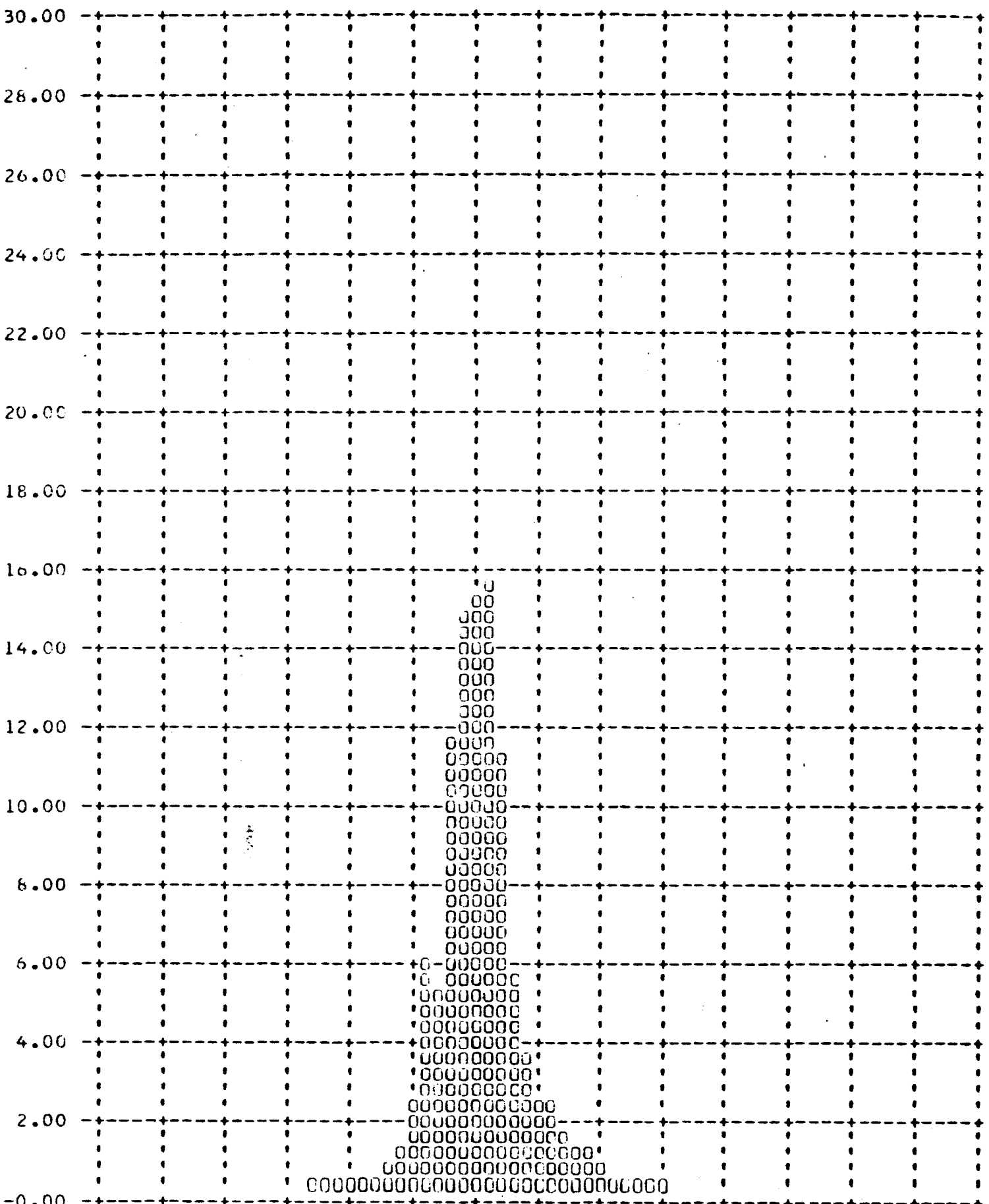


FIGURE 10-6

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

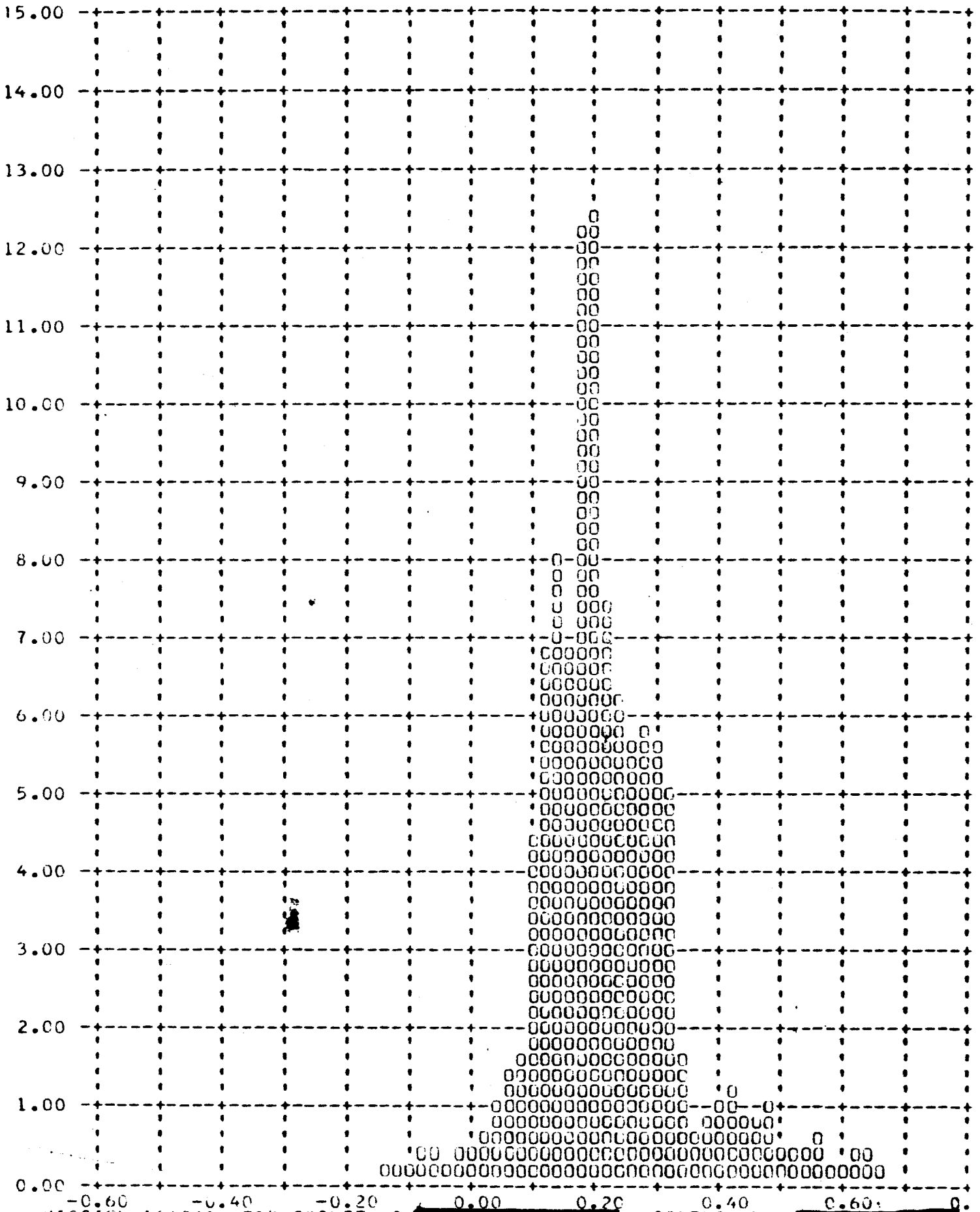


FIGURE 10-7

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

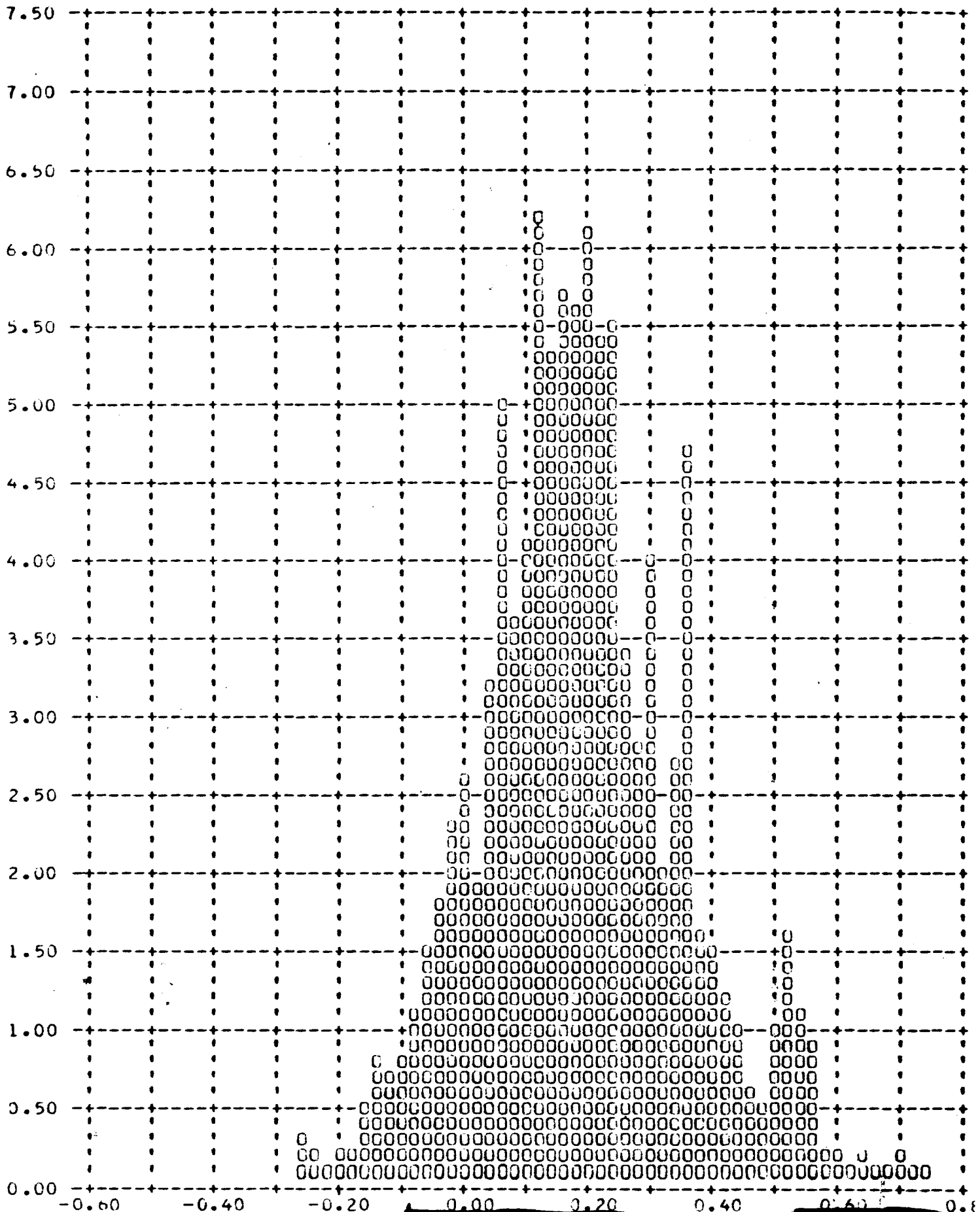


FIGURE 10-8

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

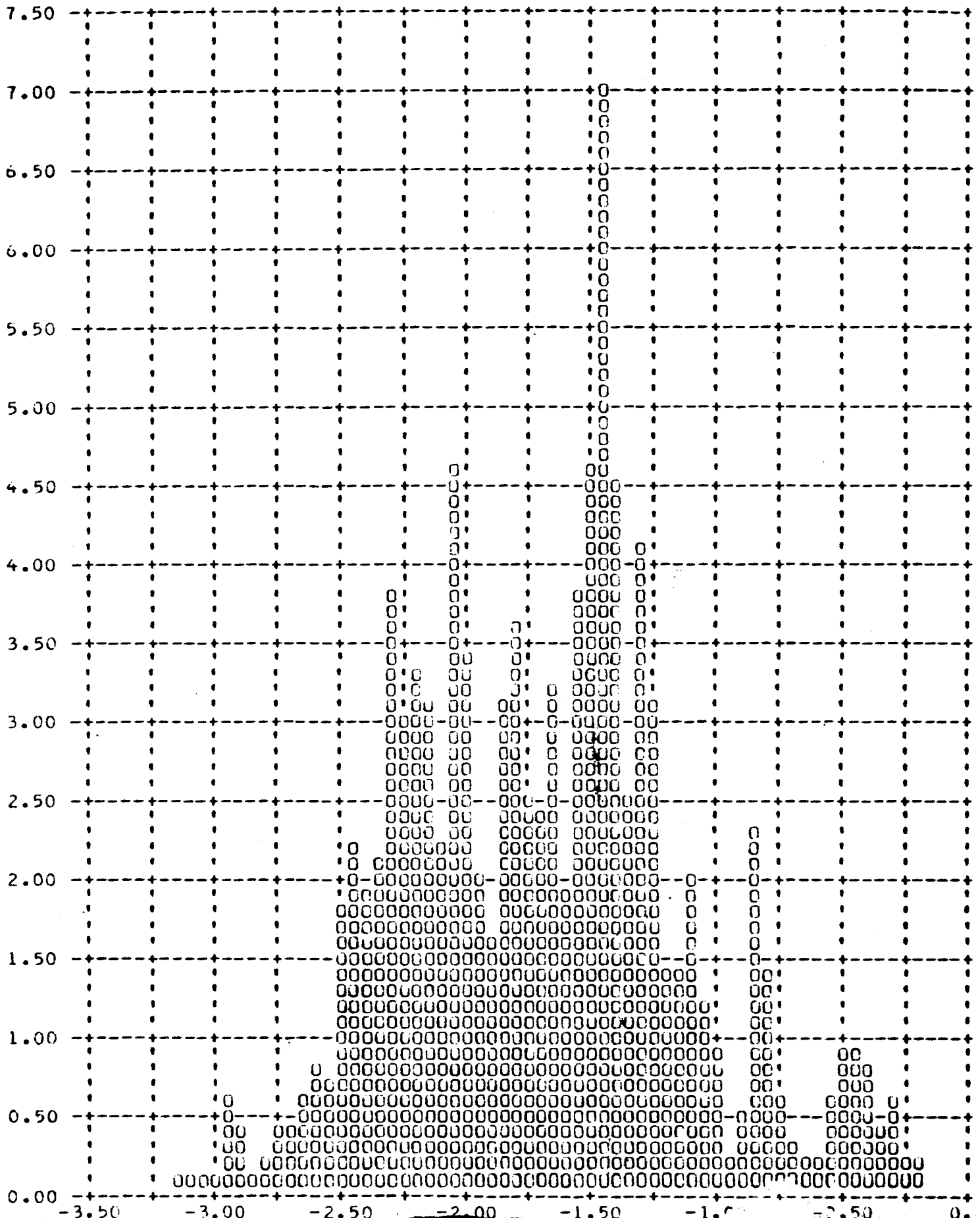


FIGURE 10-9

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

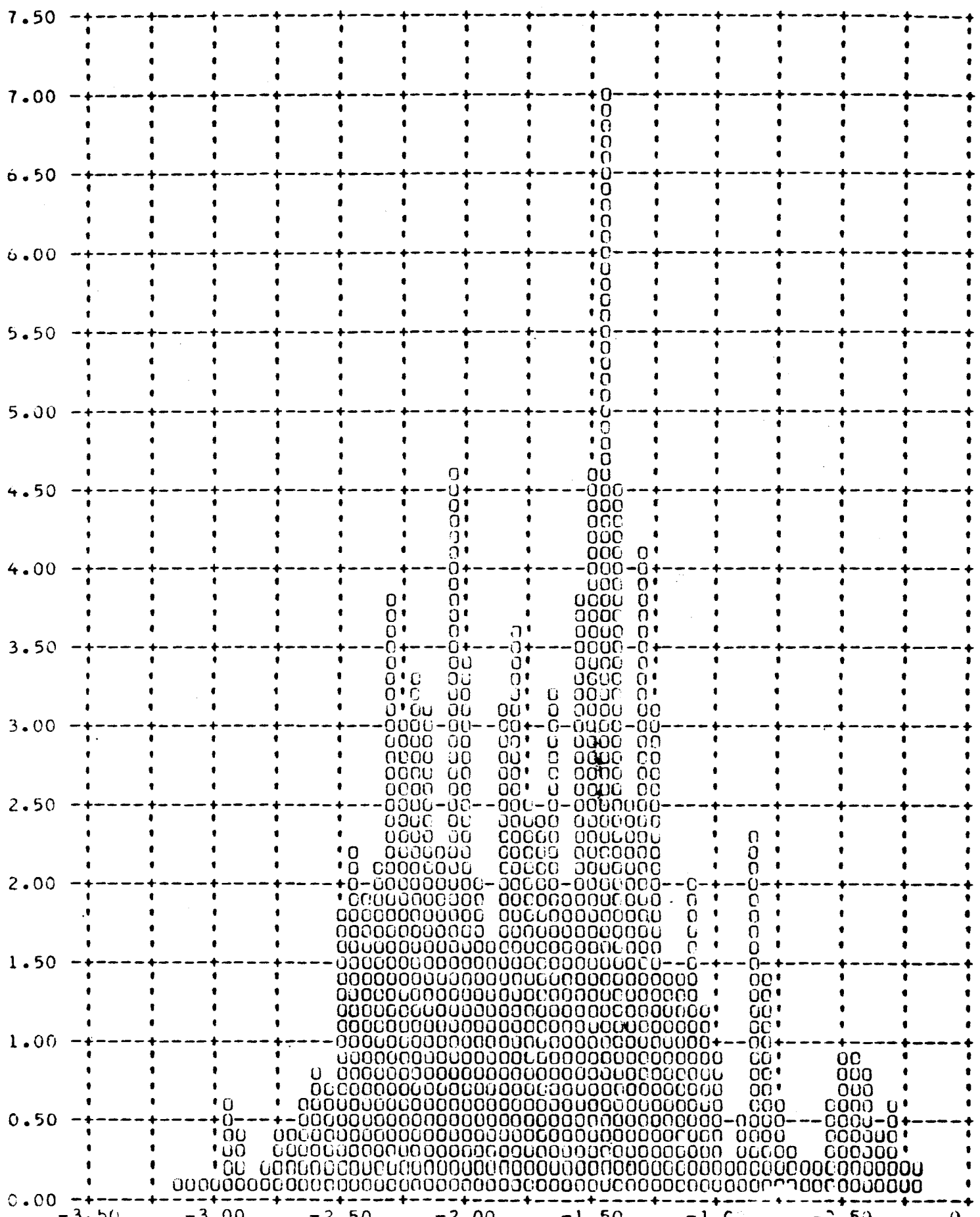
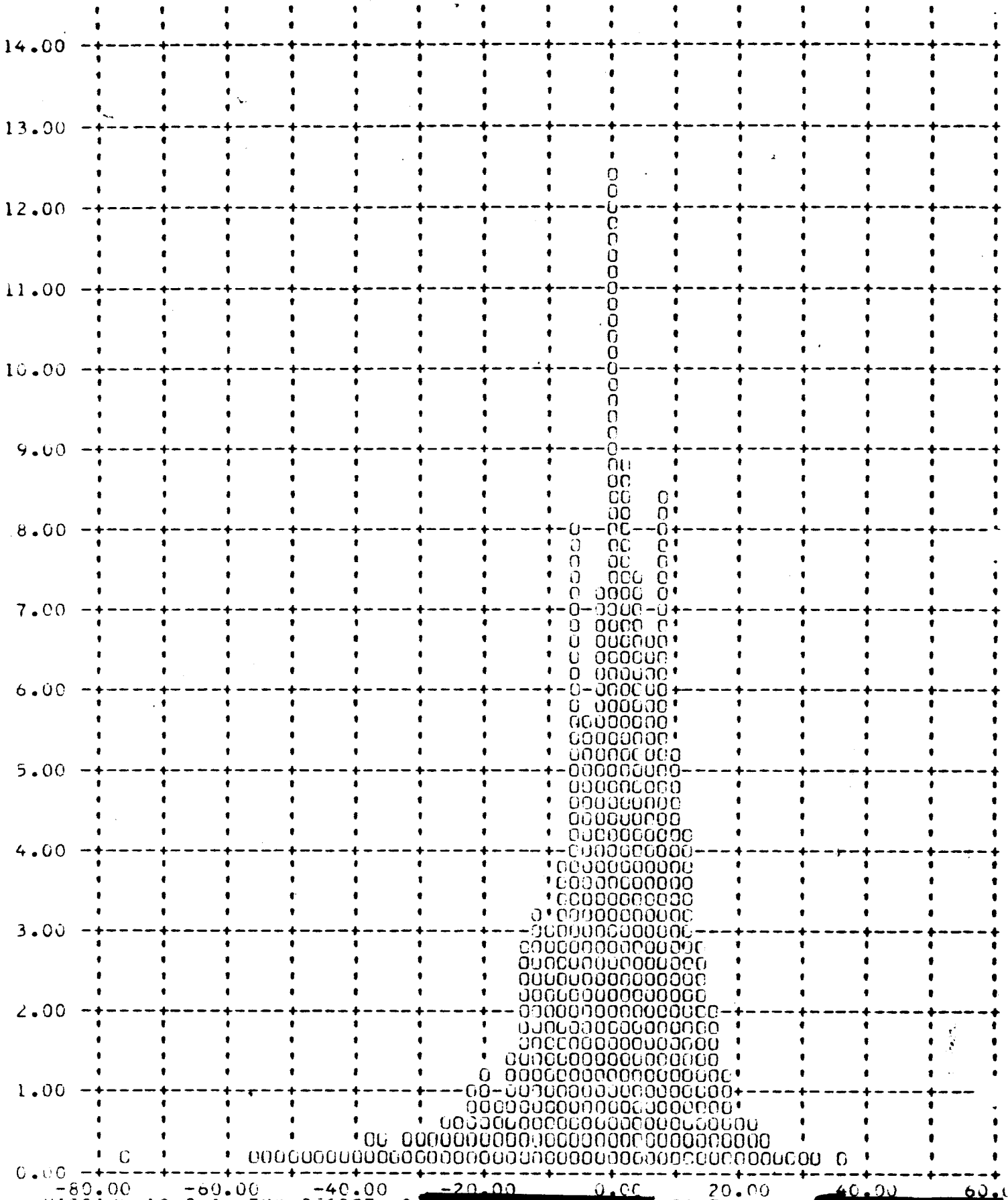


FIGURE 10-9

MISSION 1042B1

FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 16.13

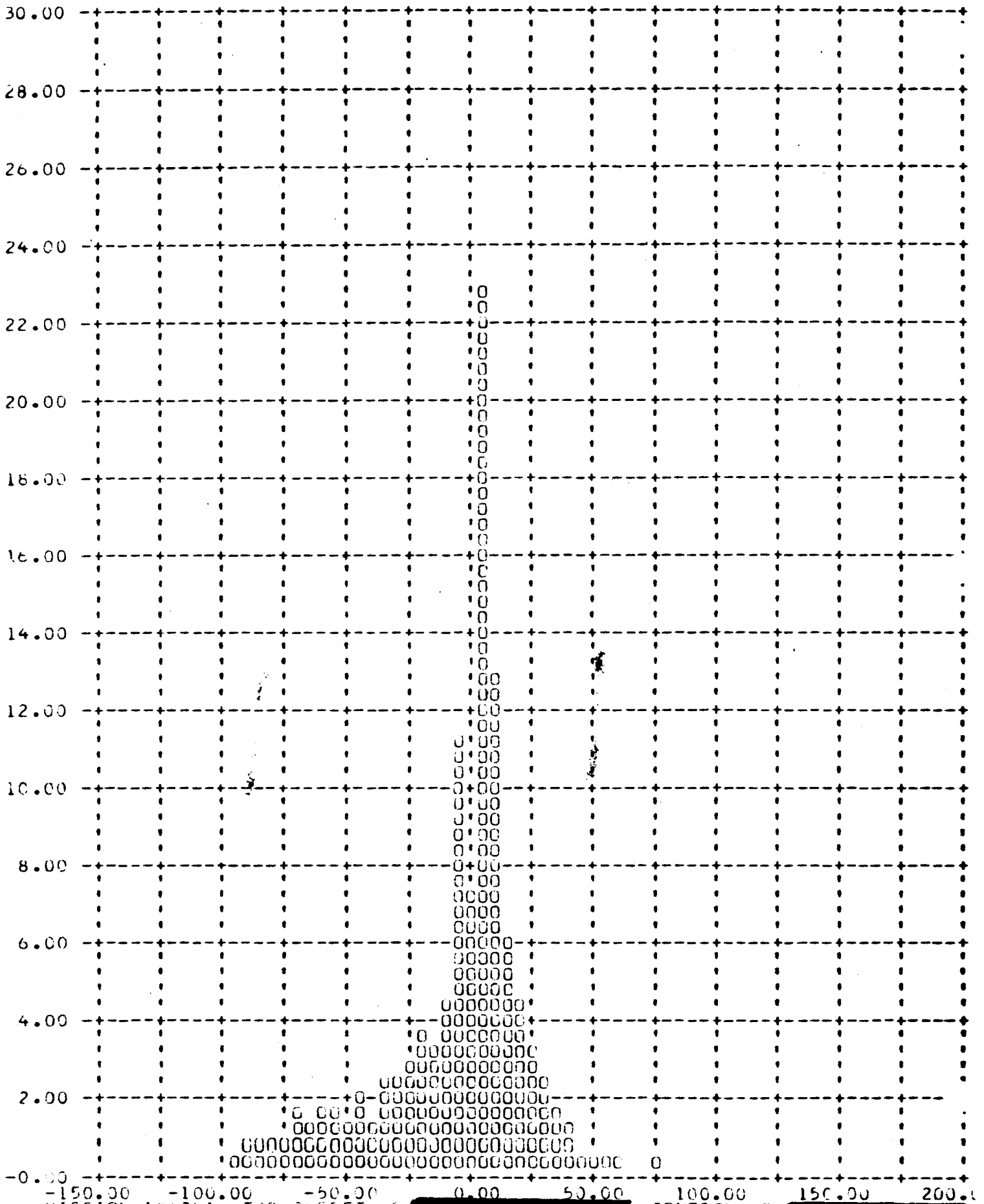
Y PITCH RATE ERROR - DEG/HOUR (X) VERSUS FREQUENCY - PERCENT (Y)



-80.00 -60.00 -40.00 -20.00 0.00 20.00 40.00 60.00
MISSION 1042B1 ~~TOP SECRET C/~~ ~~XXXXXXXXXX~~ CONTROL NO. ~~XXXXXXXXXX~~

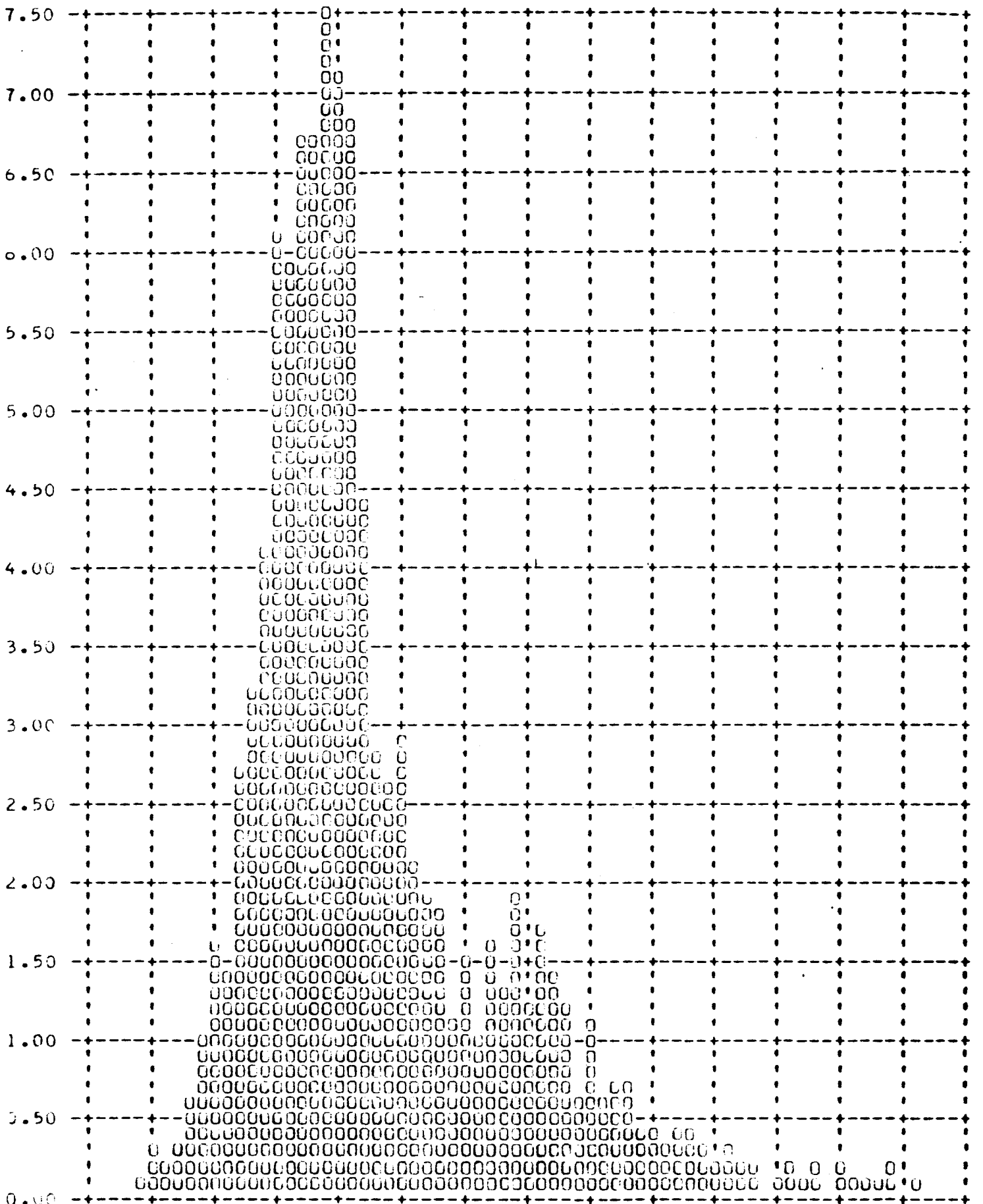
FIGURE 10-10

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





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



C [REDACTED] No. [REDACTED]

SECTION 11

IMAGE SHEET ANALYSIS

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

The computer rejects the first six frames of all operations as the large V/h error induced by camera start-up is not representative of the overall system operations. The frequency distribution of the V/h errors and resolution limits are computer plotted and are shown in Figures 11-1 through 11-16.

The summary table 11-1 presents the maximum V/h ratio error and resolution limits that existed during 90% of the photographic operations and the total range of values during all operations that were computed.

~~TOP SECRET~~ C/ [REDACTED]
 [REDACTED] No. [REDACTED]

MISSION 1042

V/h RATIO AND RESOLUTION LIMITS

VALUE	UNITS	CAMERA	MISSION 1042-1		MISSION 1042-2	
			90%	Range	90%	Range
V/h Ratio Error	%	FWD	3.09	-5.4 to +4.8	2.06	-8.5 to +4.0
		AFT	3.21	-6.6 to +3.8	2.60	-9.8 to +3.2
Along Track Resolution Limit	Feet	FWD	3.32	0.2 to 7.8	2.52	0.2 to 11.0
		AFT	2.65	0.2 to 7.4	2.26	0.2 to 10.2
Cross Track Resolution Limit	Feet	FWD	1.52	0.2 to 2.85	2.19	0.1 to 3.5
		AFT	1.11	0.5 to 2.75	1.81	0.4 to 4.4

TABLE 11-1

~~TOP SECRET~~ C/ [REDACTED]

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

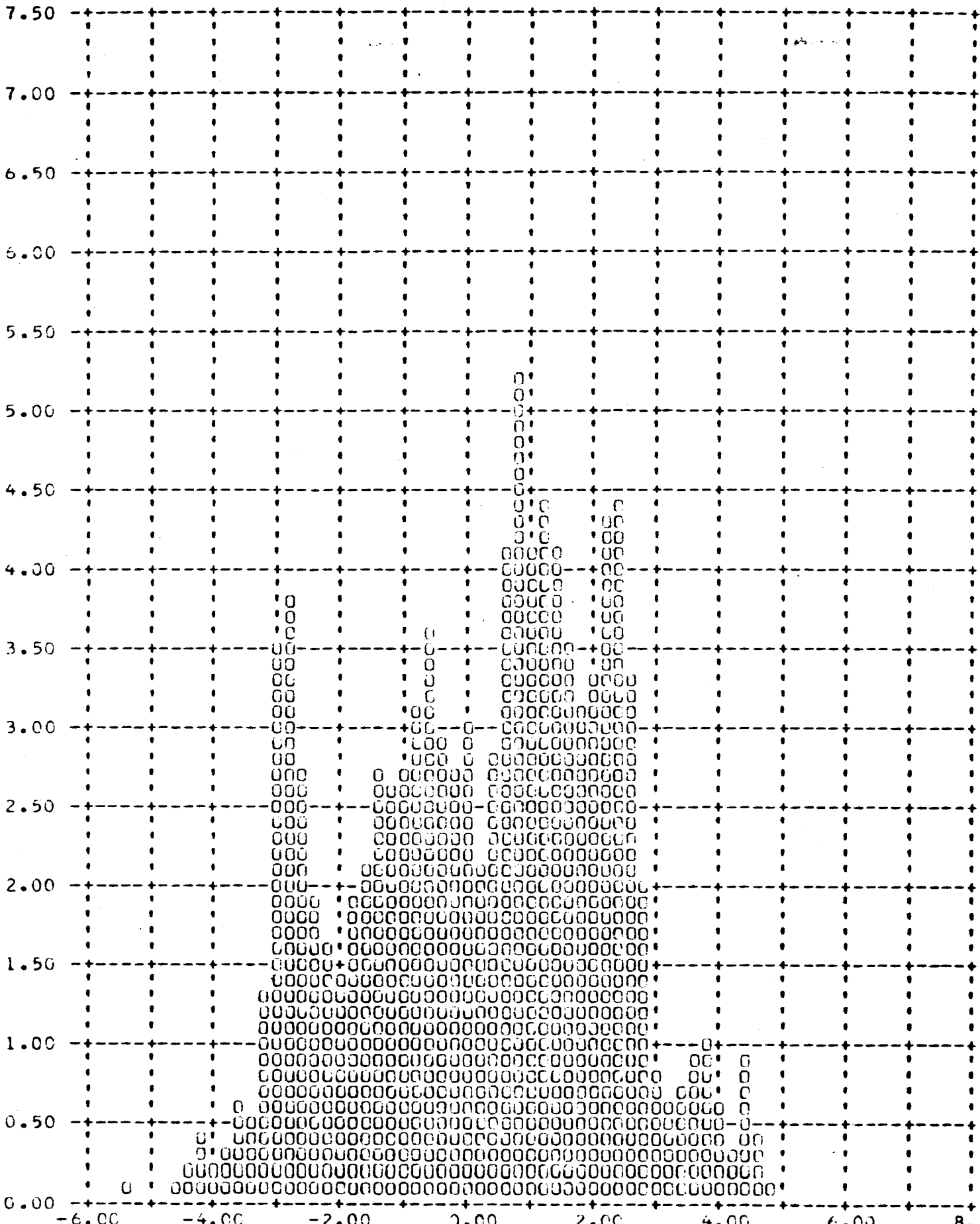
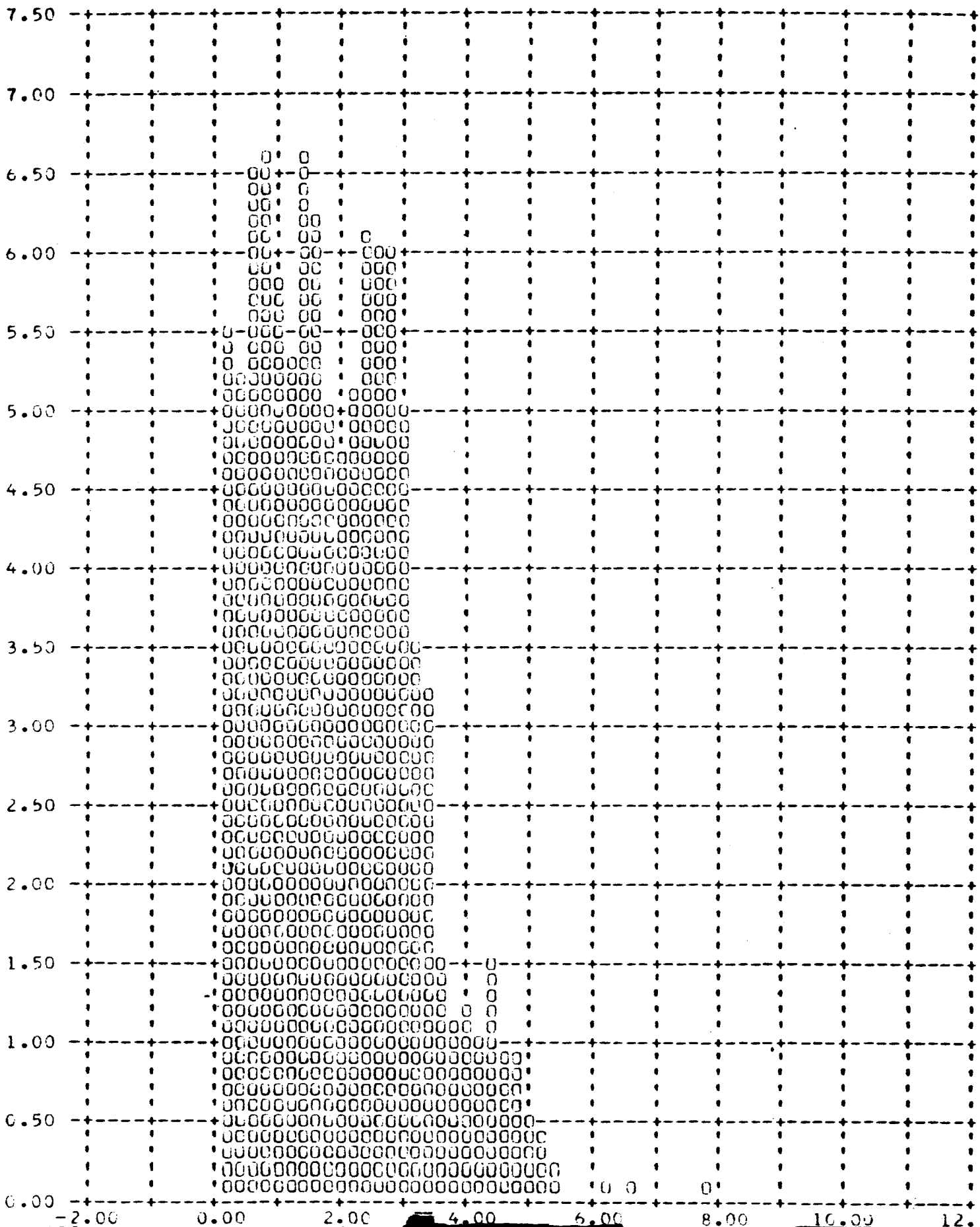


FIGURE 11-1

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



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

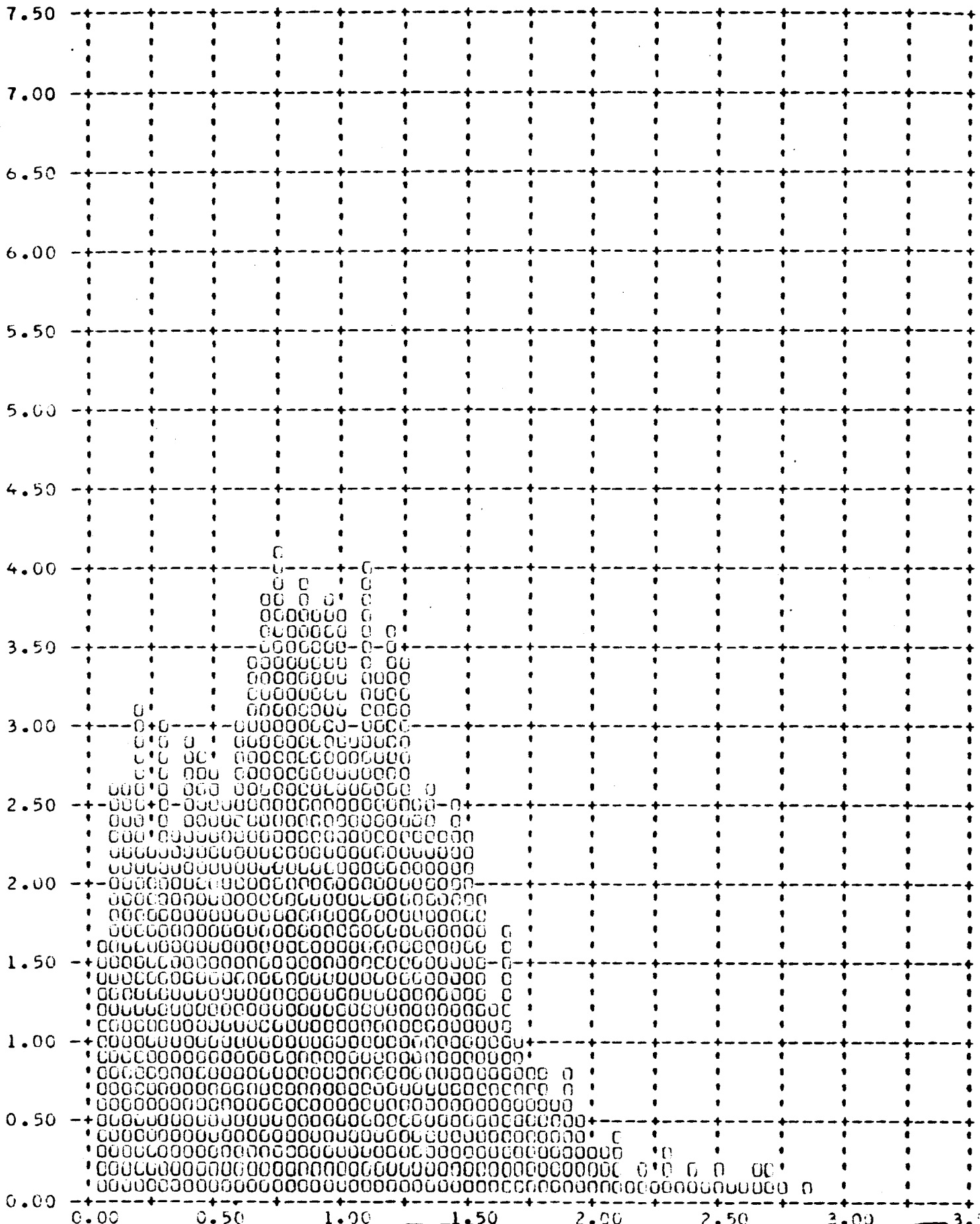


FIGURE 11-3

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

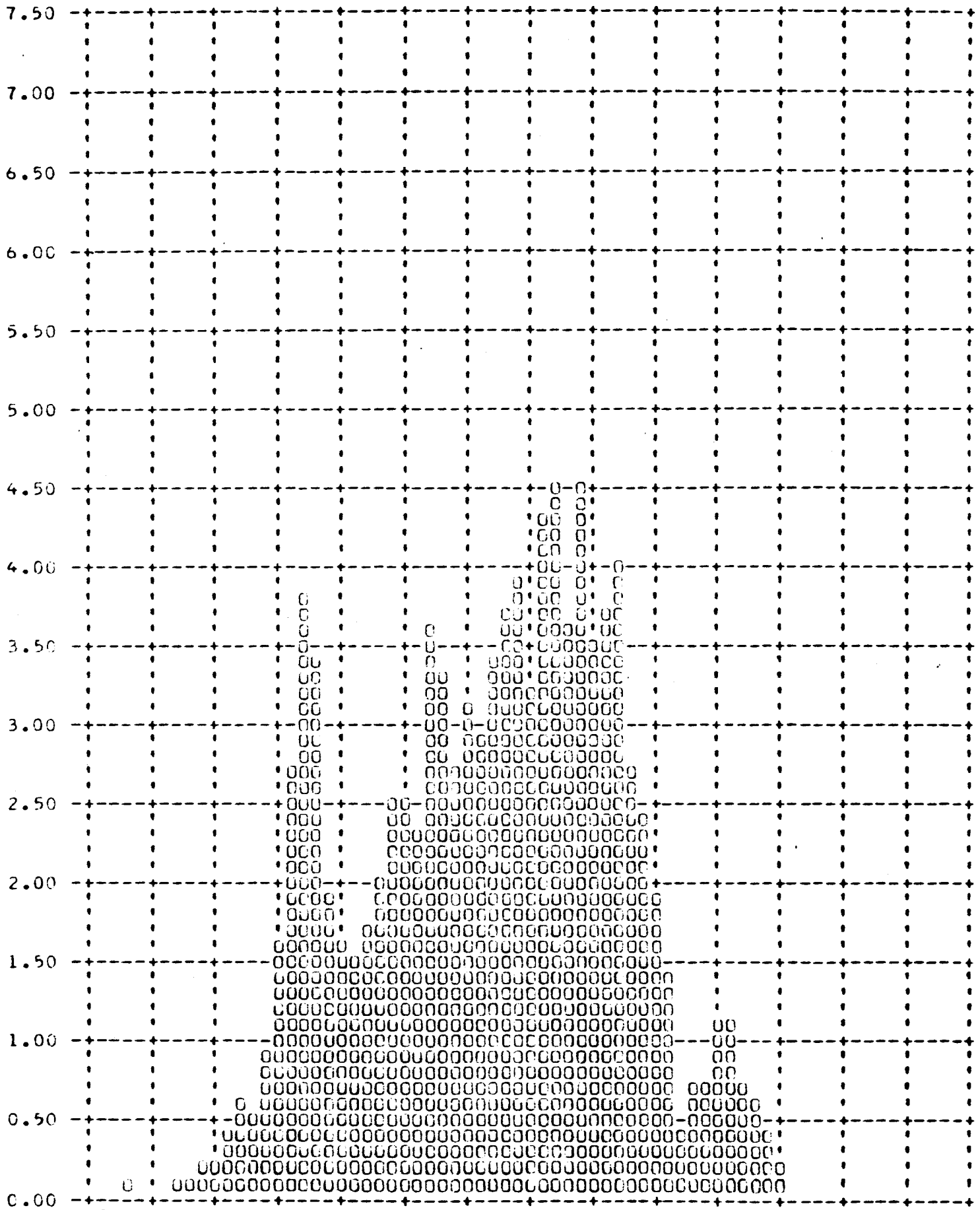
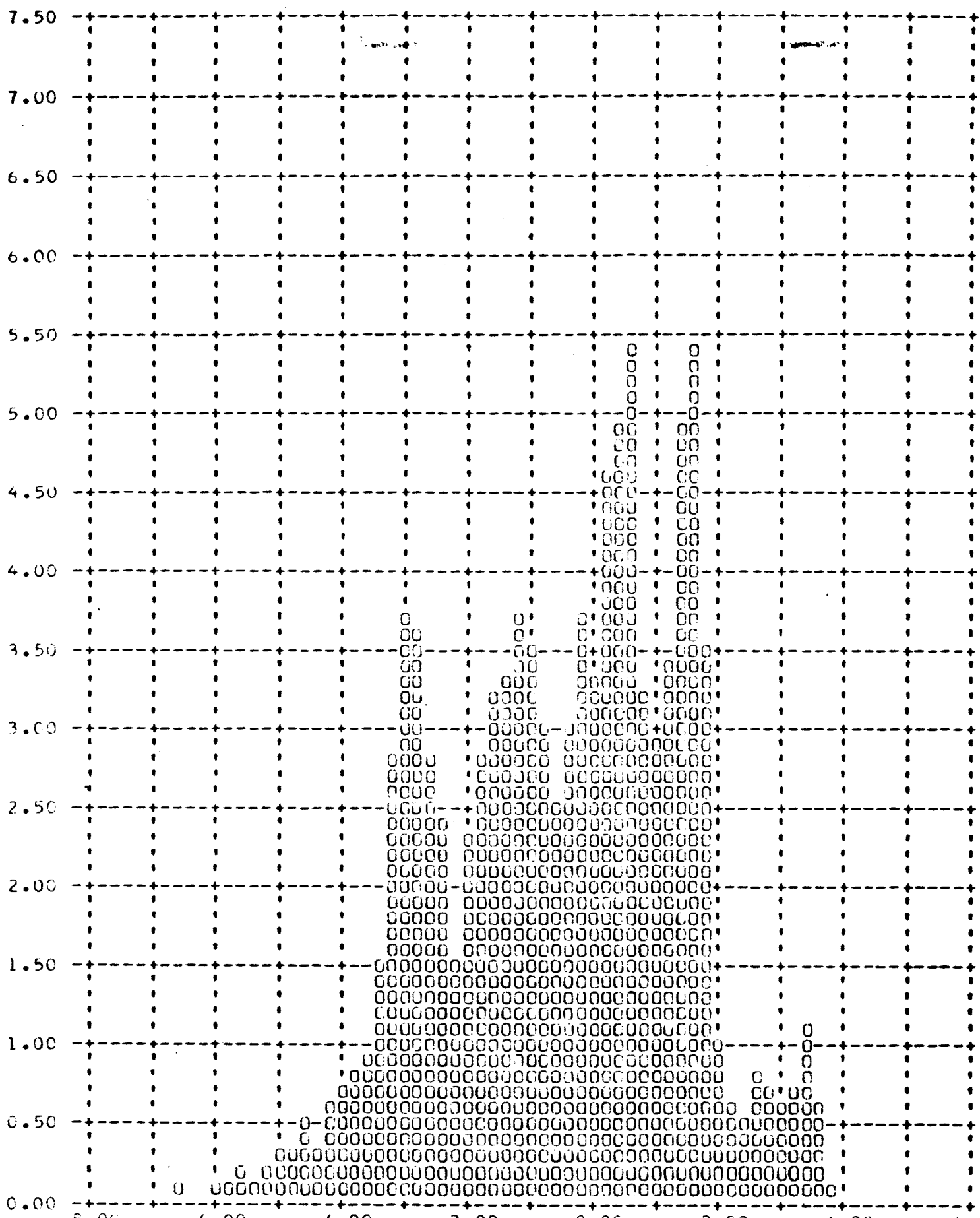
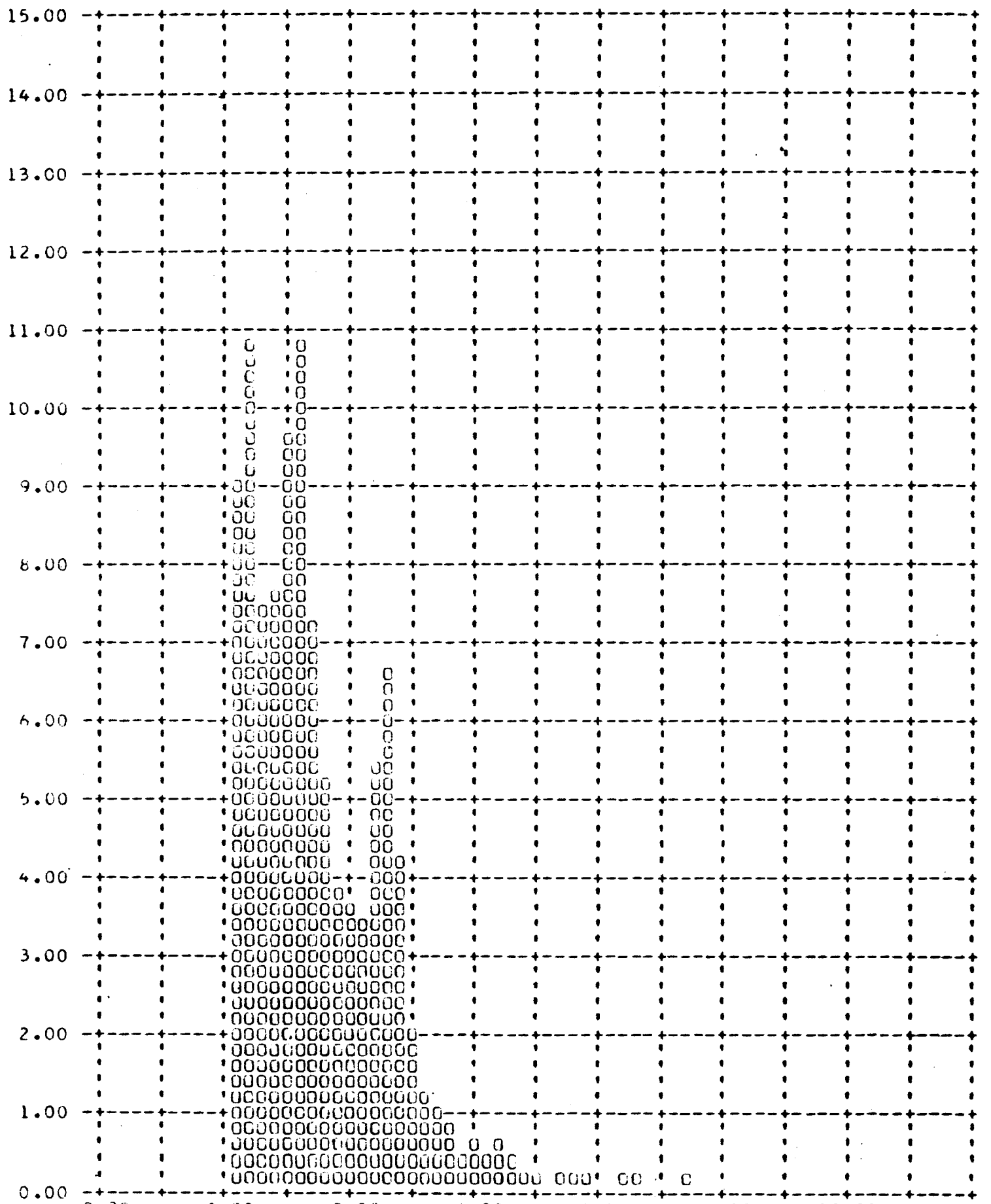


FIGURE 11-4

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



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



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

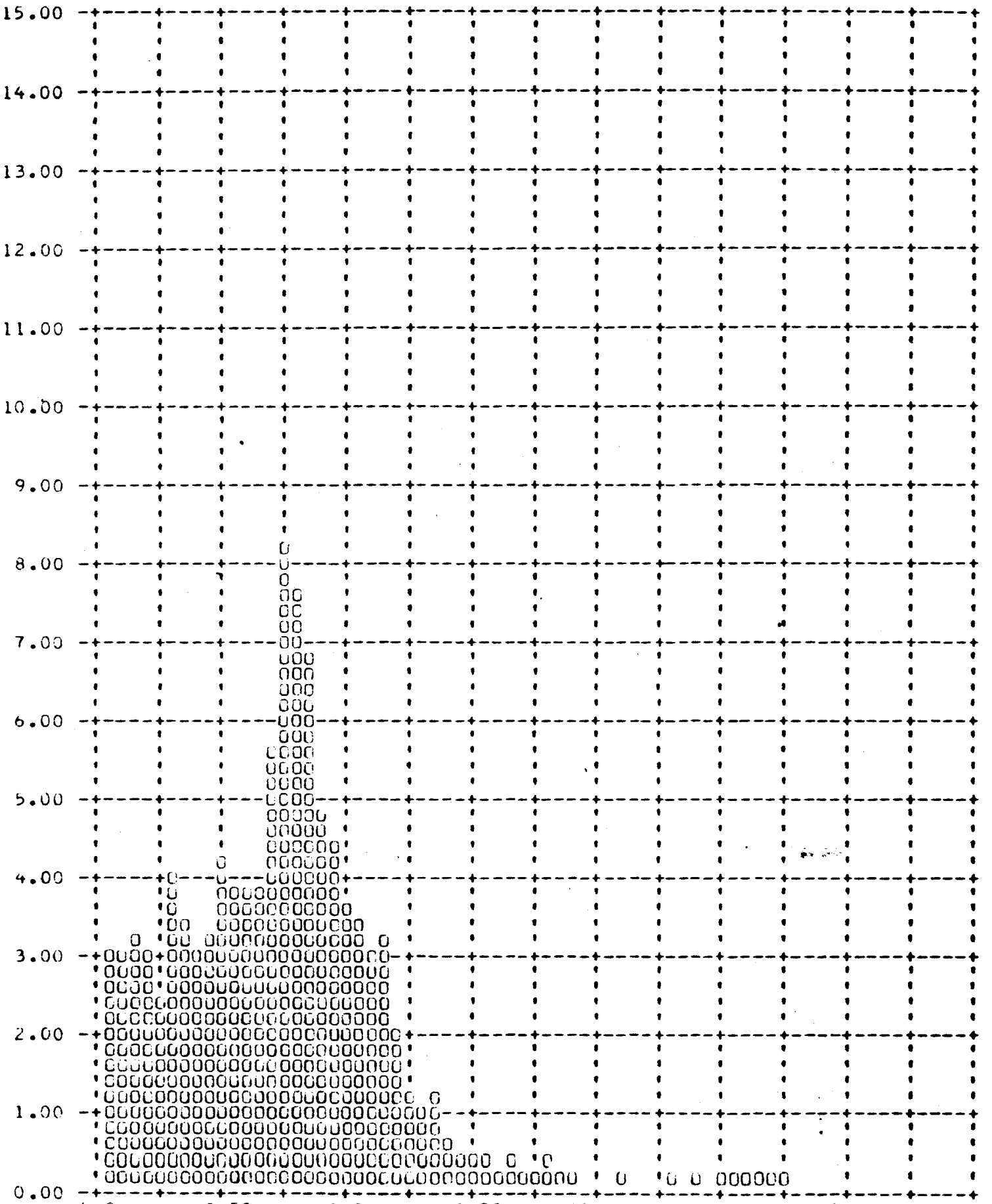
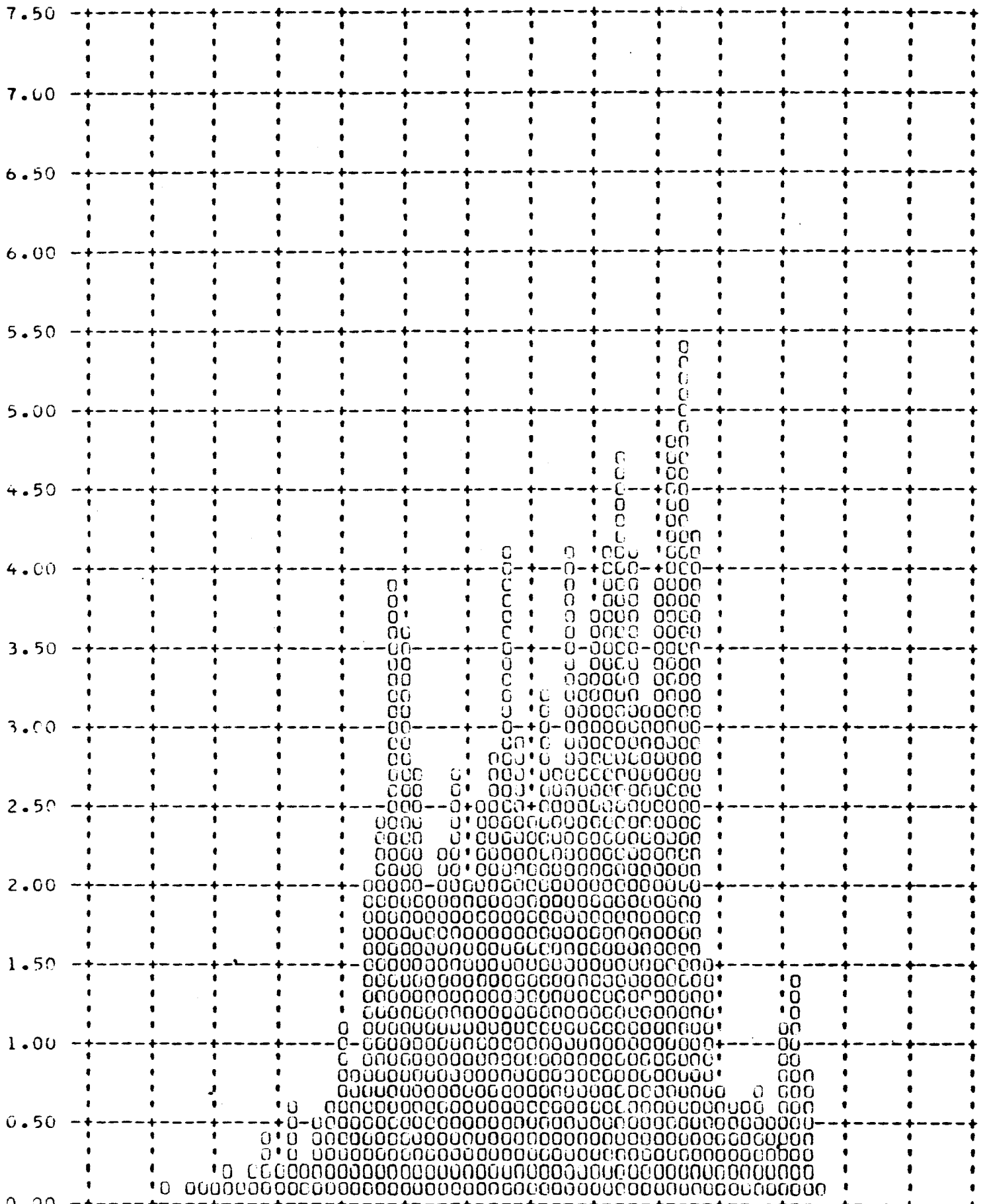
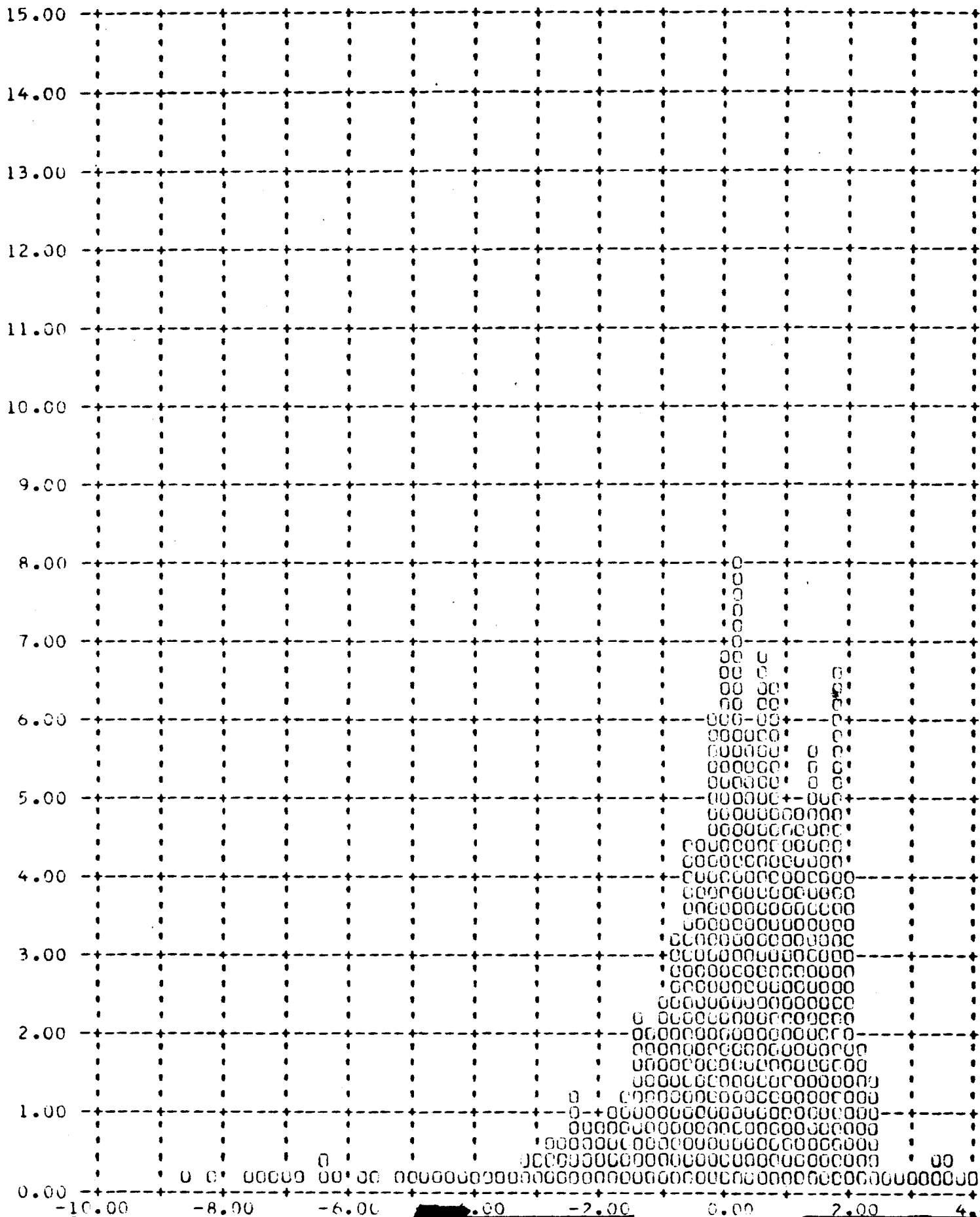


FIGURE 11-7

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



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



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

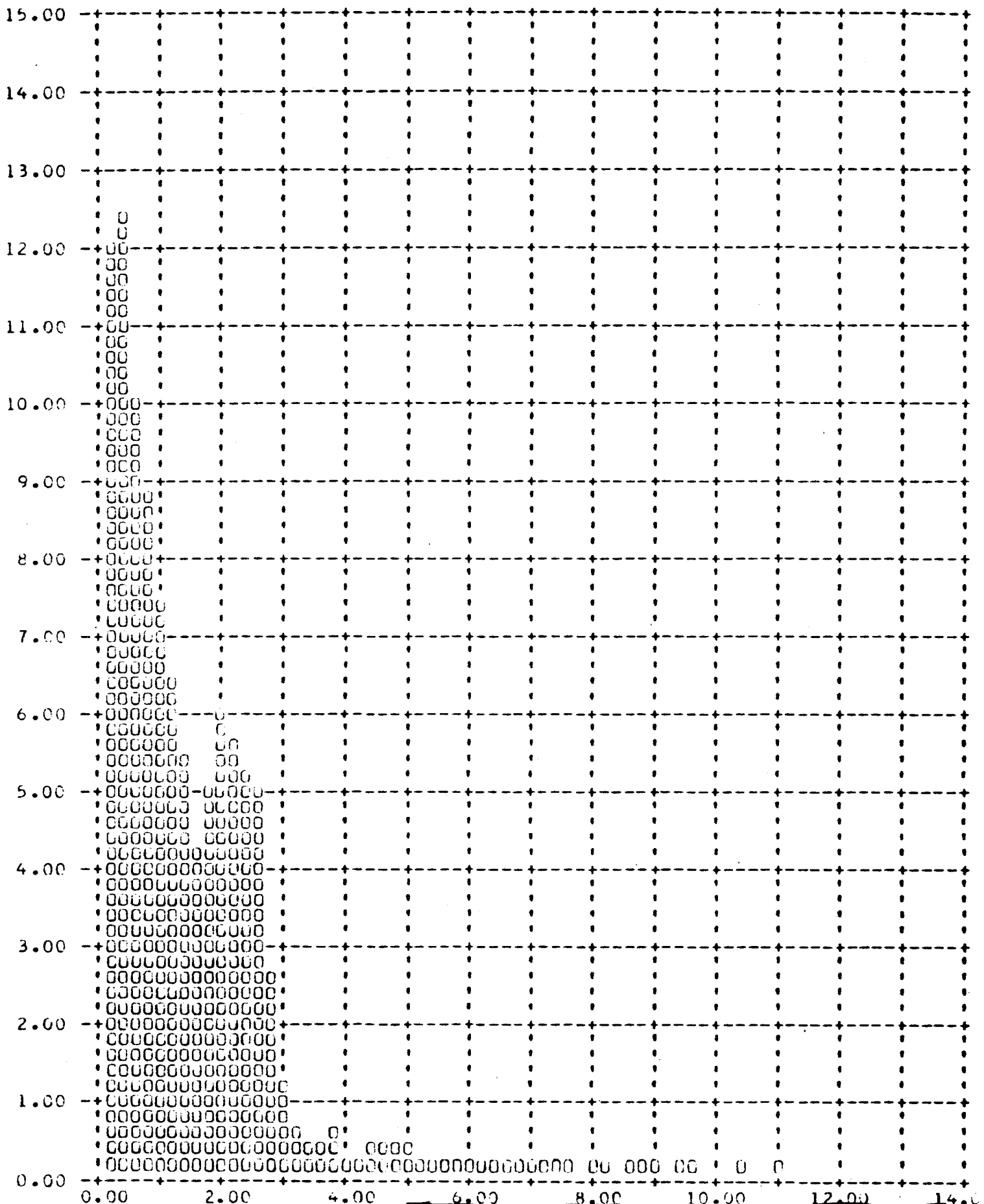
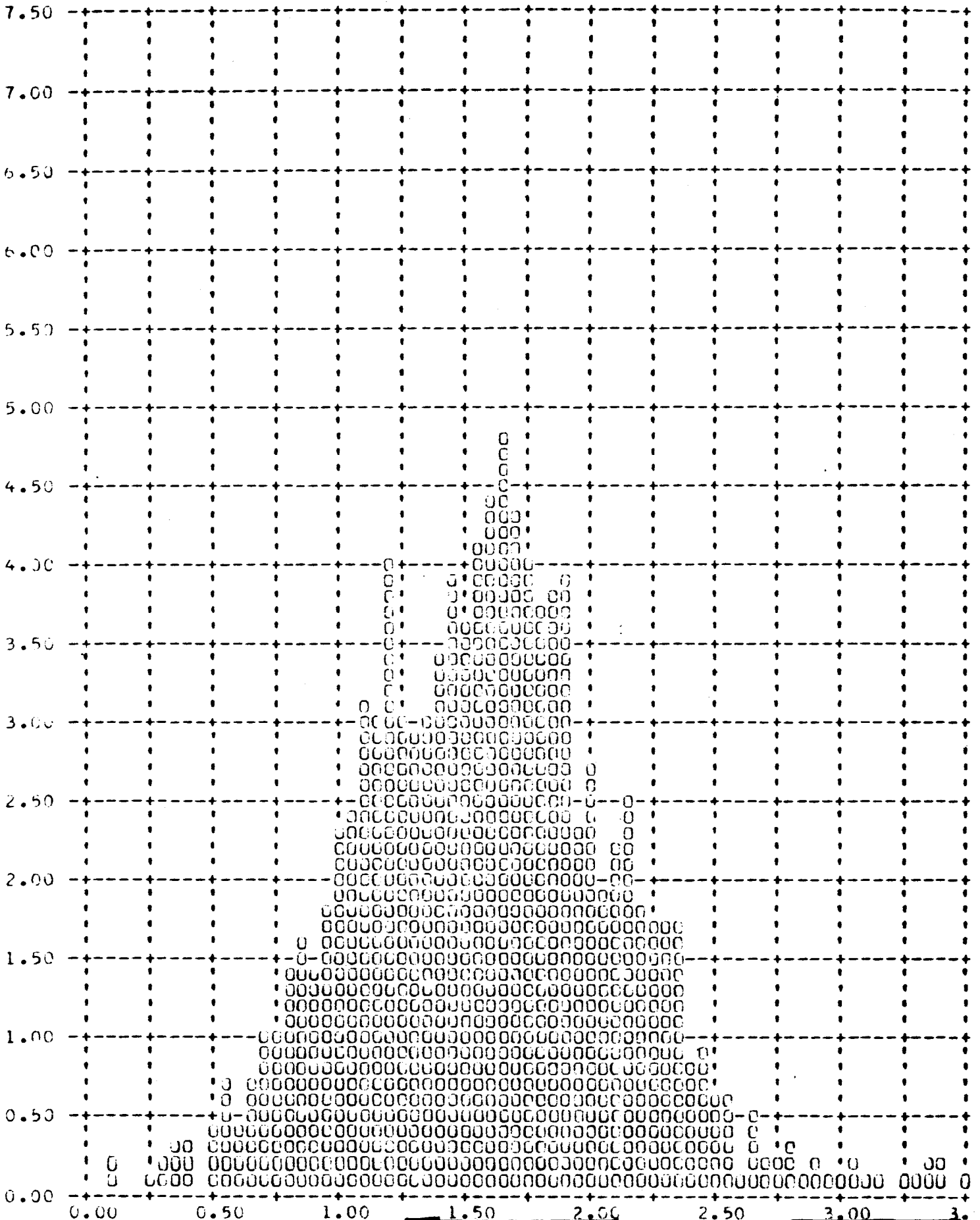


FIGURE 11-10

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



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

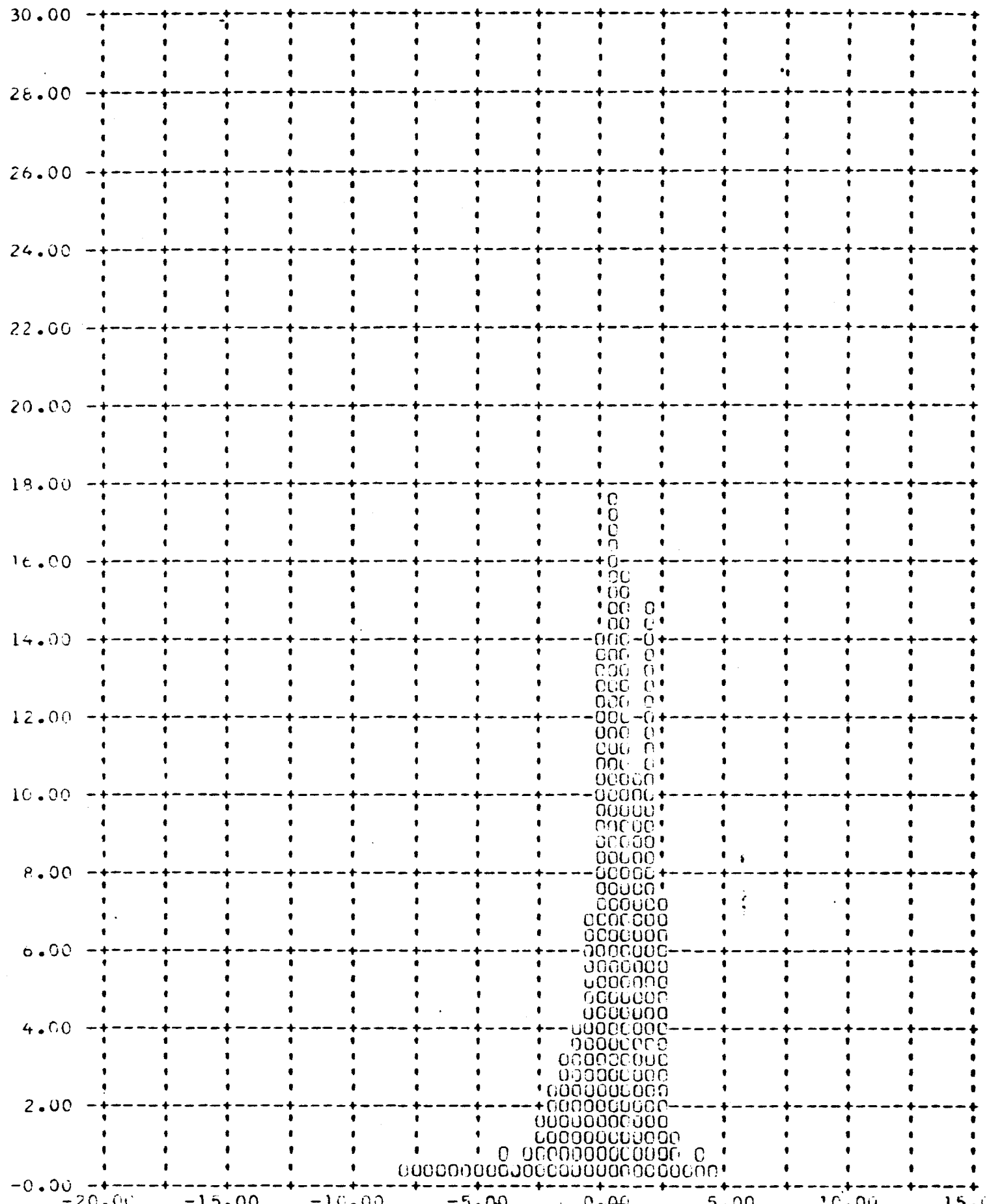


FIGURE 11-12

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

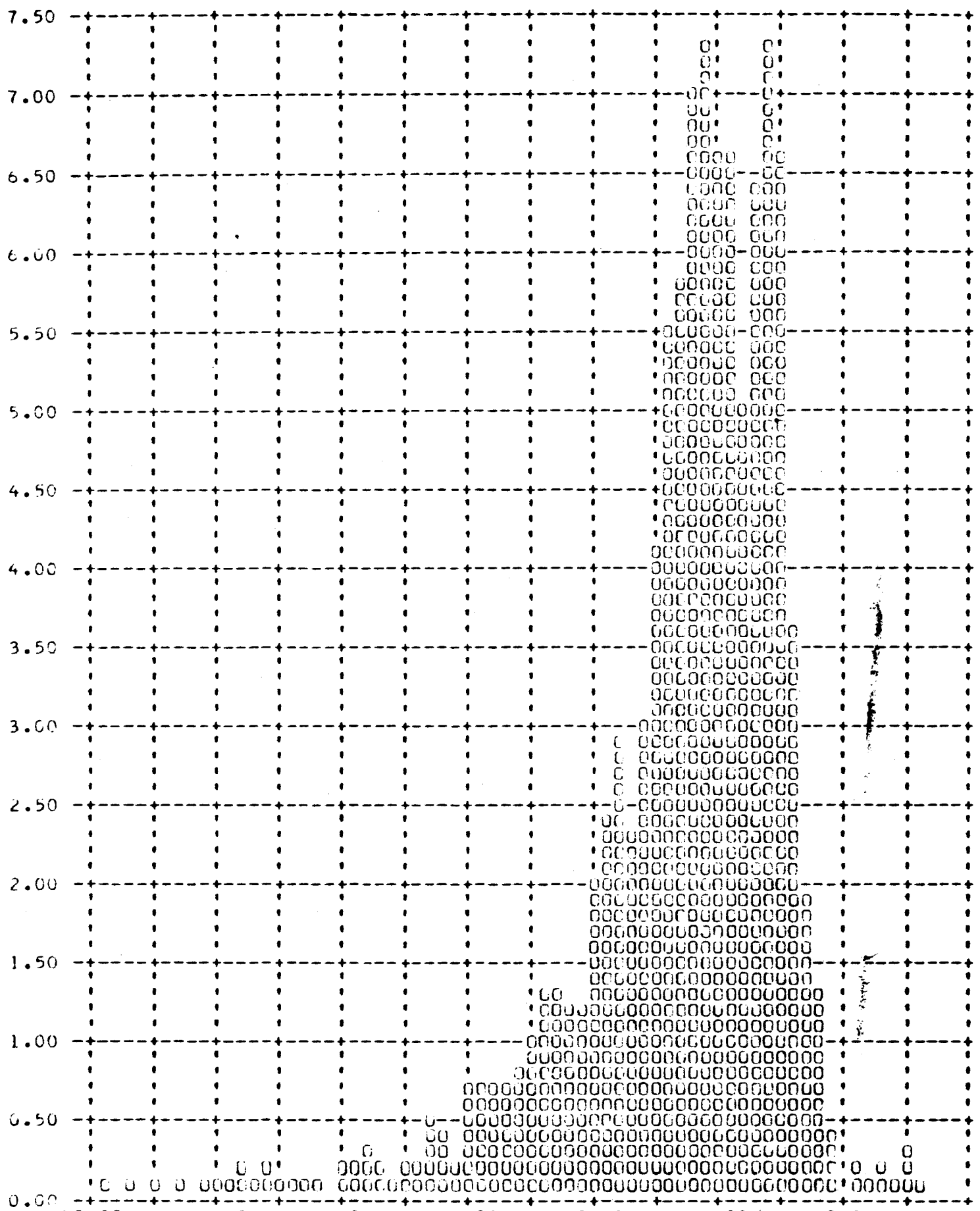


FIGURE 11-13

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

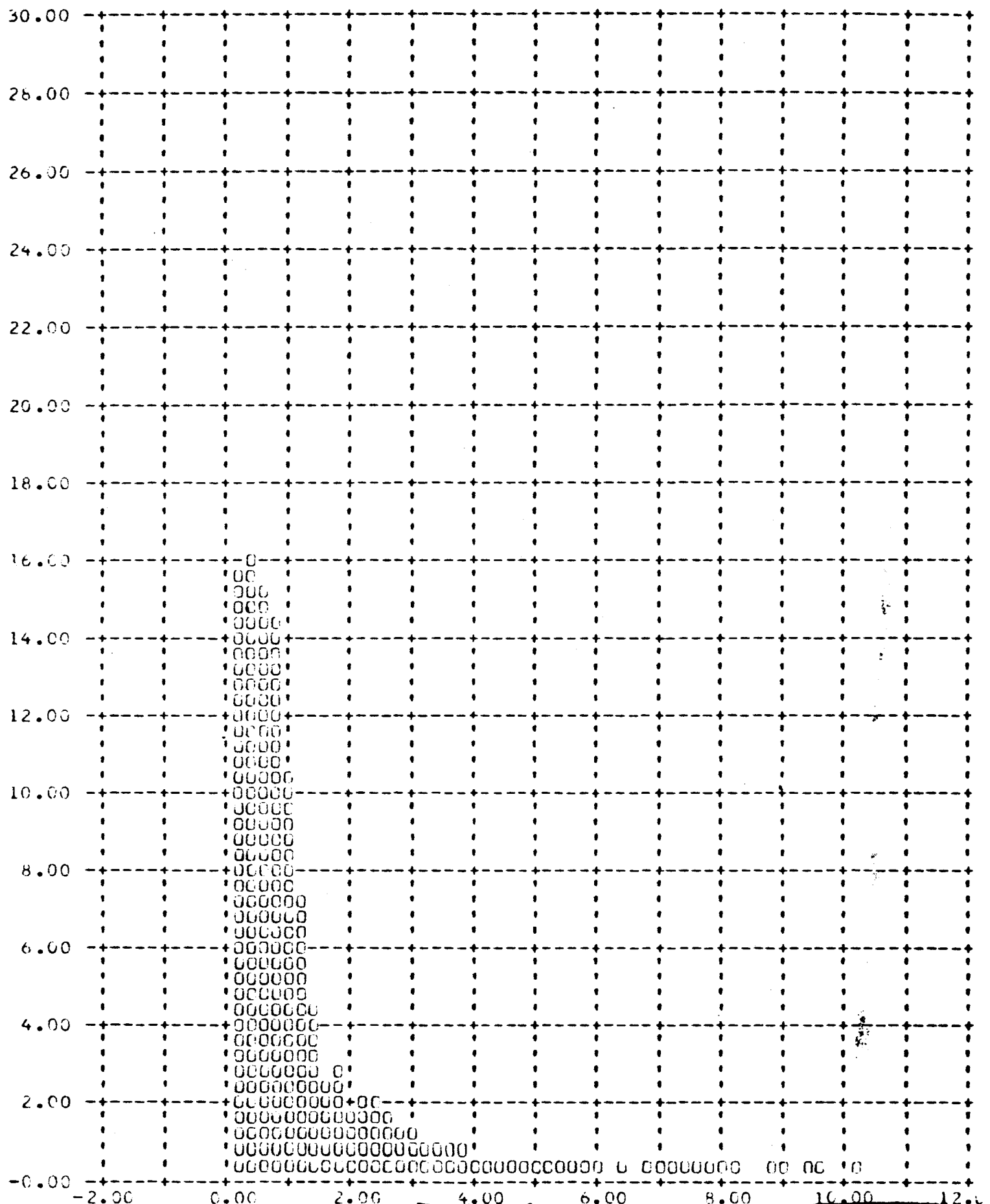
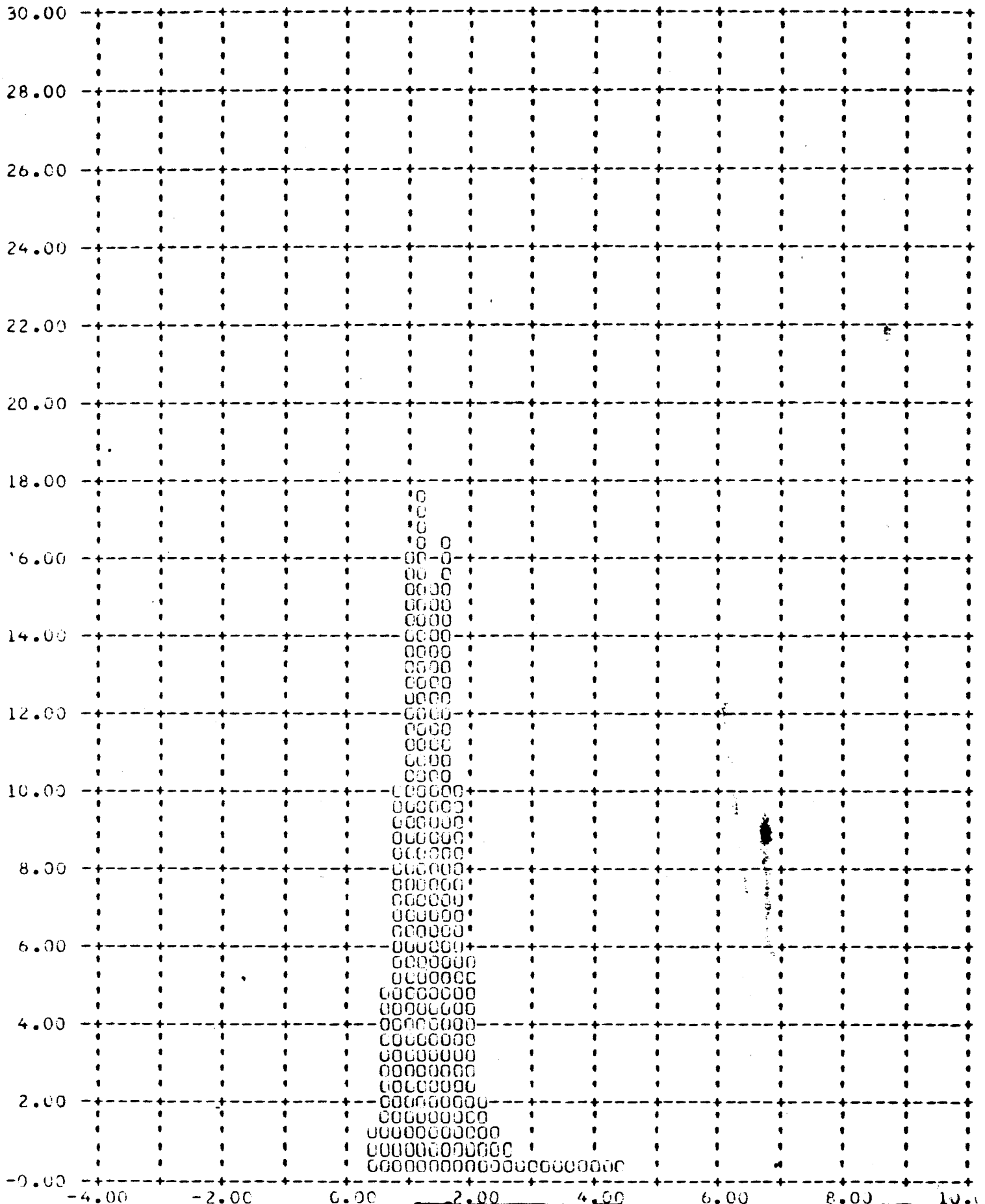


FIGURE 11-14

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



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

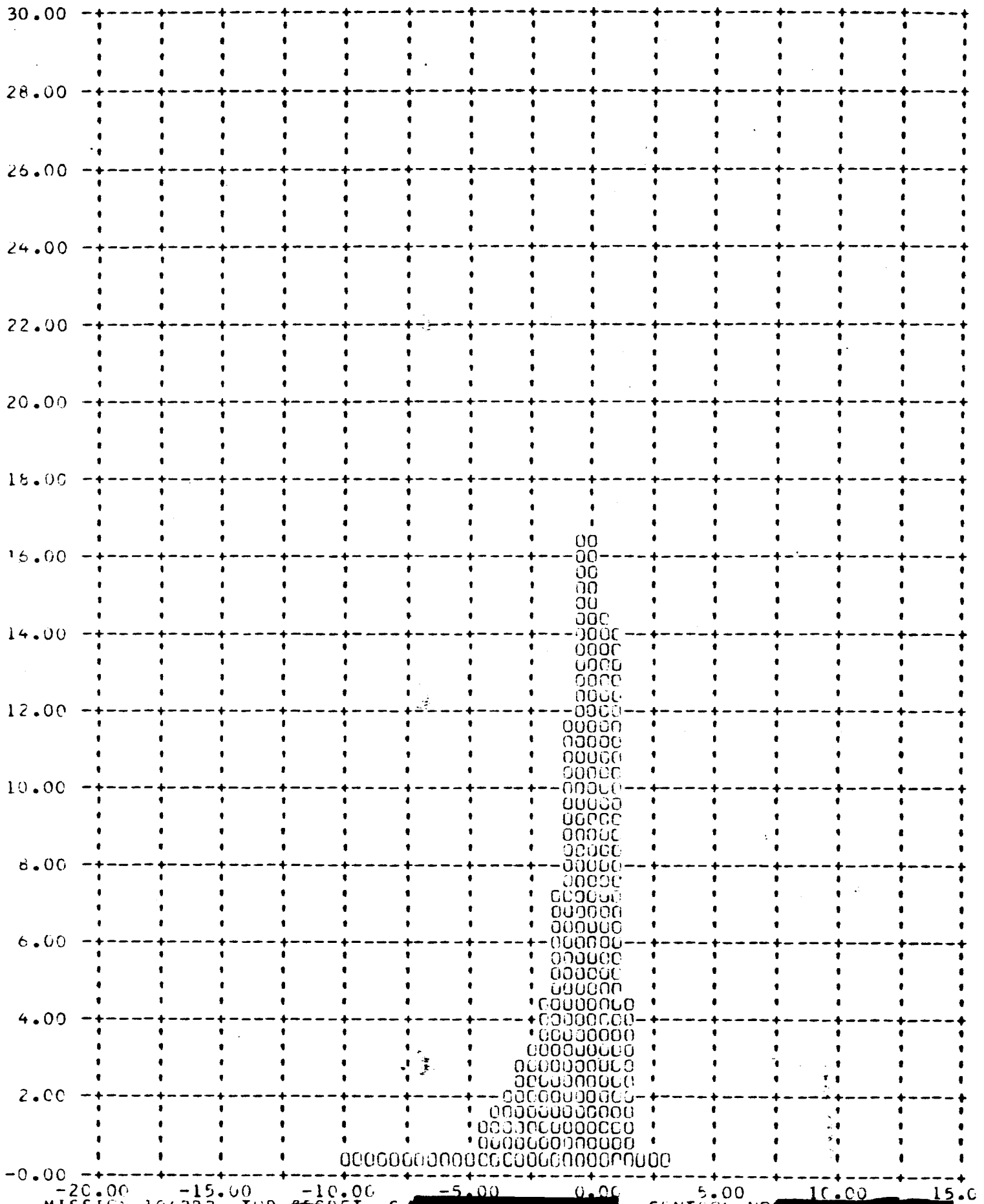


FIGURE 11-16

SECRET NO. [REDACTED]

SECTION 12

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 modifications. 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 12-1.

Panoramic Camera Reliability

Sample Size - 123 opportunities to operate.

One failure - S/I Programmer on System J-19

Assume - 3000 cycles per camera per mission.

Estimated Reliability = 99.1% at 50% confidence level

Main Camera Door Reliability

Sample Size - 59 vehicles x 2 doors = 118 opportunities to operate

Estimated Reliability = 99.4% at 50% confidence level.

Payload Command and Control

Sample Size - 10,536 hours operation in sample

Two failures

Estimated Reliability = 97.6% at 50% confidence level.

Payload Clock Reliability

Sample Size - 10,536 hours operation in sample

No failures

Estimated Reliability = 99.4% at 50% confidence level

Estimated Reliability of Payload Functioning on orbit = 97.7 at 50% confidence level

Recovery System Reliability

83 opportunities to recover

1 failure - improper separation due to water seal - cutter failure

Estimated Reliability = 98.0% at 50% confidence level

Stellar-Index Camera Reliability

Sample begins with J5

Sample size = 26,730 cycles

Four failures

Estimated Reliability = 92.8% at 50% confidence level

Horizon Camera Reliability

Sample begins with J5 - 106,500 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.

ESTIMATED RELIABILITY SUMMARY

(AT 50% CONFIDENCE LEVEL)

SESSION NUMBER	PRIMARY FUNCTIONS						SECONDARY FUNCTIONS					
	PANORAMIC CAMERA SAMPLE FAILURES RELIABILITY	PANORAMIC CAMERA DOORS SAMPLE FAILURES RELIABILITY	COMMAND & CONTROL SYSTEM SAMPLE FAILURES RELIABILITY	PAYLOAD CLOCK SAMPLE FAILURES RELIABILITY	ON-ORBIT FUNCTIONS RELIABILITY	RECOVERY SYSTEM SAMPLE FAILURES RELIABILITY	STELLAR-INDEX CAMERAS SAMPLE FAILURES RELIABILITY	HORIZON CAMERAS SAMPLE FAILURES RELIABILITY				
9038 TO 1008	90 1 97.3	92 0 98.6	3124 0 98.0	3124 0 98.0	96.1	18 1 90.7	3400 3 93.1	12,000 0 91.7				
1009	64 1 97.4	3216 0 98.0	3216 0 98.0	3216 0 98.0	96.2	20 1 91.6	4250 3 69.3	15,000 0 93.4				
1010	68 1 97.5	3432 0 98.1	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	3600 0 98.1	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	3720 0 98.2	3720 0 98.2	3720 0 98.2	96.9	26 1 93.6	5825 0 94.7	24,000 0 95.8				
1013	78 1 97.8	3940 0 98.0	3940 0 98.0	3940 0 98.3	96.0	28 1 94.0	6375 0 95.1	25,500 0 96.0				
1014	82 1 97.9	4056 0 98.0	4056 0 98.3	4056 0 98.3	96.1	30 1 94.4	6725 1 99.6	28,500 0 96.4				
1015	86 1 98.0	4320 0 98.0	4320 0 98.5	4320 0 98.5	96.1	32 1 94.8	7225 1 90.4	31,500 0 96.7				
1016	90 1 98.1	4560 0 98.0	4560 0 98.5	4560 0 98.5	96.4	34 1 95.2	7650 1 91.0	34,500 0 97.0				
1017	94 1 98.3	4760 0 98.0	4760 0 98.6	4760 0 98.6	97.6	36 1 95.4	8225 1 92.3	37,500 0 97.3				
1018	98 1 98.3	4920 0 98.0	4920 0 98.7	4920 0 98.7	96.7	38 1 96.8	8980 1 92.3	40,800 0 97.5				
1019	102 1 98.4	5186 0 98.0	5186 0 98.9	5186 0 98.9	96.8	39 1 96.8	9075 1 91.5	43,500 0 97.6				

REVISION FOR NEGATED PREVIOUS FAILURE CONSIDERATIONS

ESTIMATED RELIABILITY SUMMARY

(AT 50% CONFIDENCE LEVEL)

MISSION NUMBER	PRIMARY FUNCTIONS						SECONDARY FUNCTIONS						
	PANORAMIC CAMERA SAMPLE FAILURES	PANORAMIC CAMERA DOORS SAMPLE FAILURES	PANORAMIC CAMERA COMMAND & CONTROL SYSTEM SAMPLE FAILURES	PAYLOAD CLOCK SAMPLE FAILURES	ON-ORBIT FUNCTIONS RELIABILITY	RECOVERY SYSTEM SAMPLE FAILURES	STELLAR - INDEX CAMERAS SAMPLE FAILURES	HORIZON CAMERAS SAMPLE FAILURES	RELIABILITY	RELIABILITY	RELIABILITY	RELIABILITY	
1020	108	78	5544	5544	96.9	43	10,680	48,000	96.1	2	89.9	0	97.9
1021	104	76	5376	5376	96.9	41	9830	46,500	96.0	2	89.1	0	97.8
1022	112	80	5784	5784	96.9	45	11,550	51,000	96.3	2	90.7	0	96.0
1023	114	82	6000	6000	96.2	47	12,190	54,000	96.5	2	91.1	0	98.1
1024	118	84	6240	6240	96.3	49	13,040	57,000	96.6	2	91.6	0	96.2
1025	122	86	6480	6480	96.4	51	13,890	60,000	96.7	2	92.1	0	98.3
1026	126	88	6720	6720	96.5	53	14,740	63,000	96.8	2	92.6	0	98.4
1027	128	90	6744	6744	96.5	55	15,165	64,500	97.0	3	90.0	0	98.4
1028	132	92	6960	6960	96.7	57	16,015	67,500	97.1	3	90.7	0	98.5
1029	136	94	7200	7200	96.8	59	16,580	70,500	97.1	4	88.7	0	98.5
1030	140	96	7440	7440	96.9	61	17,430	73,500	97.2	4	89.3	0	98.6
1031	143	98	7704	7704	96.9	63	18,280	76,500	97.3	4	89.7	0	98.6

NO

SECTION 13

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 13-1 through 13-3.

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.

Notice of Missing Page(s)

Page 75 of the original document was missing.

TOP SECRET/NO. [REDACTED]

MISSION SUMMARY

MISSION NUMBER	PAYLOAD NUMBER	VEHICLE NUMBER	LAUNCH DATE	LAUNCH TIME	ORBIT INCLINATION (°)	PERIGEE ALTITUDE (NM)	PERIGEE LOCATION (°N)	RECOVERY PASS	MASTER CAMERAS		SLAVE CAMERA	STELLAR INDEX CAMERA NUMBER
									CAMERA NUMBER	SLIDER TYPE		
1029	J-27	1623	2/2/66	2:52 Z	75.1	35.5	22.5	81 150	178	W-25	0.175	076/91/91
1030	J-29	1622	3/9/66	2202 Z	75.0	37.5	16.7	91 159	87	W-25	0.175	094/101/07
1031	J-30	1627	4/7/66	2202 Z	75.1	104.5	23.3	113 177	84	W-23A	0.150	003/101/09
1032	J-20	1625	5/1/66	1925 Z					102	W-21	0.130	081/97/01
1033	J-33	1630	5/24/66	0213 Z	66.1	102.0	30.7	42 175	54	W-21	0.200	091/107/109
1034	J-31	1626	6/2/66	2131 Z	80.1	65.4	16.2	81 171	106	W-23A	0.150	065/003/16
1035	J-36	1628	9/20/66	2114 Z	55.0	95.5	29.1	11 160	86	W-23A	0.175	095/112/113
1036	J-32	1631	0/9/67	2045 Z	100.0	62.4	23.1	15 215	72	W-21	0.150	063/091/11
1037	J-38	1632	11/2/66	0507 Z	100.0	91.2	14.3	56 197	136	W-23A	0.175	061/026/128
1038	J-34	1629	1/16/67	2128 Z	80.1	96.9	25.2	91 193	191	W-23A	0.175	093/86/112
1039	J-39	1635	2/22/67	2202 Z	80.0	57.0	30.2	61 177	205	W-23A	0.175	060/111/108
1040	J-35	1636	3/30/67	1854 Z	85.1	99.7	32.3	81 143	196	W-23A	0.225	078/95/96
1041	J-40	1634	5/9/67	2152 Z	80.1	100.1	33.0	93 215	208	W-23A	0.175	060/125/123
1042	J-37	1633	6/16/67	2135 Z	80.0	36.5	29.1	97 240	204	W-23A	0.150	092/79/110
									205	W-21	0.150	062/127/127
									206	W-21	0.150	052/121/118

TABLE 13-1

PERFORMANCE SUMMARY

MISSION NUMBER	CAMERA	SERIAL NUMBER	M I P VALUE	VISUAL RES	AFSPPL		SLIT (μ)	SLIT AVERAGE (μ)	AVERAGE		SLIT (μ)	90% ATTITUDE ERROR (°)			90% ATTITUDE RATES (°/HR)			90% V/H ERROR (%)	90% RESOLUTION LIMIT (FEET)	
					AVERAGE	MTF			ALL	HIGH		PITCH	ROLL	YAW	PITCH	ROLL	YAW		ALONG TRACK	CROSS TRACK
1004-1	FWD	124	85	78	97	109	350	43	115	127	320	0.45	0.42	1.08	30.0	25.0	21.0	5.1	7.7	6.1
1004-2	AFT	125	85	86	80	96	350	43	117	124	320	0.74	0.50	0.91	44.0	30.0	25.0	4.9	6.8	6.6
1006-1	FWD	148	80	78	65	88	350	43	89	95	320	0.41	0.42	1.14	26.8	28.5	27.8	15.4	13.8	8.7
1006-2	AFT	149	80	85	64	81	350	43	87	92	320	0.49	0.40	1.08	31.1	27.9	30.0	11.6	10.1	7.0
1007-1	FWD	144	85	80	60	80	350	43	82	91	320	0.58	0.46	1.43	37.6	23.9	29.9	3.6	3.1	9.5
1007-2	AFT	145	88	81	63	83	350	43	97	110	320	0.64	0.47	—	43.0	29.8	—	4.6	2.1	7.6
1008-1	FWD	150	85	80	80	95	350	45	74	81	320	0.59	0.39	0.94	43.8	23.9	29.6	2.9	4.9	8.9
1008-2	AFT	151	85	82	73	89	350	45	88	95	320	0.63	0.36	0.71	42.9	24.0	32.5	2.8	4.2	5.4
1009-1	FWD	154	85	92	80	80	350	—	83	88	80	0.65	0.65	0.71	29.2	22.7	27.6	3.3	5.3	5.8
1009-2	AFT	155	85	89	85	85	350	—	76	84	80	0.48	0.65	0.59	33.6	23.9	27.2	2.6	4.9	5.9
1010-1	FWD	152	85	90	90	88	350	80	72	79	80	0.93	0.30	0.87	38.1	23.6	30.8	4.5	2.3	4.4
1010-2	AFT	153	85	92	86	80	350	80	92	103	80	0.59	0.70	1.21	45.4	23.6	30.7	4.6	7.5	3.8
1011-1	FWD	160	90	84	76	95	350	80	87	87	80	0.77	0.39	0.97	43.1	28.9	31.1	2.3	5.3	6.6
1012-1	FWD	156	85	91	—	91	—	80	84	98	80	0.65	0.51	—	47.1	35.2	—	1.9	4.8	—
1012-2	AFT	157	85	91	—	89	—	80	89	100	80	0.97	0.77	0.81	45.2	30.7	20.4	5.9	3.3	8.3
1013-1	FWD	158	85	89	—	86	—	80	85	98	80	0.64	0.32	1.34	36.9	29.0	32.3	3.7	7.8	8.2
1014-1	FWD	162	80	87	78	78	—	80	81	103	80	0.82	0.41	1.46	35.0	36.1	36.5	2.2	6.2	6.6
1014-2	AFT	159	80	83	80	80	—	80	95	107	80	1.06	0.85	1.44	38.4	36.0	38.3	3.3	2.9	6.3
1015-1	FWD	138	85	87	—	84	—	80	70	77	80	0.65	0.89	—	38.1	36.0	—	3.2	2.2	—
1015-2	AFT	141	85	82	—	72	—	80	80	88	80	0.50	0.61	0.64	39.1	27.0	35.3	3.3	4.6	—
1016-1	FWD	132	85	85	58	58	—	80	90	—	80	0.72	0.83	2.01	48.9	30.2	40.4	2.0	5.5	10.3
1016-2	AFT	133	85	83	61	61	—	80	84	—	80	0.83	0.93	2.19	40.4	30.1	40.4	2.8	3.4	7.4
1017-1	FWD	140	85	72	57	57	—	80	92	—	80	0.63	0.93	2.19	42.2	27.5	39.9	2.5	4.9	8.0
1017-2	AFT	145	85	85	70	70	—	80	89	—	80	0.49	0.76	2.50	35.5	32.0	36.5	3.3	3.3	11.6
1018-1	FWD	122	85	79	70	74	—	80	86	—	80	0.69	0.45	—	36.3	33.8	—	2.3	5.3	—
1018-2	AFT	123	85	84	78	78	—	80	86	—	80	0.91	0.49	—	47.4	38.7	—	3.4	5.9	—

TABLE 13-2

PERFORMANCE SUMMARY

TOP SECRET-C/ [REDACTED] NO. [REDACTED]

MISSION NUMBER	CAMERA	SERIAL NUMBER	M I P VALUE	VISUAL RES.	SLIT (μ)	AF SPPF		MTF/AIM		SLIT (μ)	AVERAGE SLIT (μ)	AVERAGE		90% ATTITUDE ERROR (")			90% ATTITUDE RATES (°/HR)			90% V/H ERROR (%)	90% RESOLUTION LIMIT (LINE/INCH)	
						AVERAGE	SLIT	SLIT	AVERAGE			PITCH	ROLL	YAW	PITCH	ROLL	YAW	ALONG TRACK	CROSS TRACK			
1019-1	FWD AFT	118 119	85	81 99	—	—	—	80 80	76 63	80 104 101	88 87	104 101	0.36 0.37	0.97 0.96	31.6 34.7 34.9	33.0 33.1	33.0 33.1	3.3 3.8	9.3 5.0	9.1 6.3		
1020-1	FWD AFT	136	80	88	—	—	—	80	69	80	78	90	0.46 0.35	0.78	37.4 31.8	26.7	26.7	5.4	5.8	8.4		
1020-2	FWD AFT	137	—	—	—	—	—	80	82	105	94	105	0.41 0.17	1.06	42.6 23.8	42.5	42.5	3.5	4.2	5.9		
1021-1	FWD AFT	166	85	88	—	—	—	80	77	99	86	99	0.55 0.37	0.81	34.9 32.6	26.2	26.2	2.7	8.8	8.0		
1021-2	FWD AFT	187	85	85 74	—	—	—	80	90 74	109 112	98 88	109 112	0.55 0.59	0.81	34.8 44.7	26.3	26.3	5.4	8.6	5.5		
1022-1	FWD AFT	168	85	88	—	—	—	80	66	91	78	91	0.47 0.47	0.89	28.3 27.9	23.8	23.8	3.5	9.8	8.6		
1022-2	FWD AFT	169	85	90 92	—	—	—	80	83 88	101 84	101 74	111 84	0.47 0.40	0.90	27.9 29.4	23.8	23.8	3.0	6.2	6.1		
1023-1	FWD AFT	170	85	—	—	—	—	80	94	110	97	110	0.49 0.33	0.50	33.0 32.9	23.5	23.5	3.4	4.0	6.4		
1023-2	FWD AFT	171	85	—	—	—	—	80	87 71	101 87	83 76	101 87	0.42 0.36	0.53	29.7 21.0	28.6	28.6	2.4	3.7	4.3		
1024-1	FWD AFT	172	85	—	—	—	—	80	89	102	88	102	0.43 0.25	0.53	29.6 24.9	28.6	28.6	2.5	2.7	8.3		
1024-2	FWD AFT	173	85	—	—	—	—	80	79 95	105 101	94 89	105 101	0.42 0.36	0.62	32.2 32.2	30.5	30.5	2.6	5.9	6.8		
1025-1	FWD AFT	142	85	—	—	—	—	80	86 85	101 103	89 103	101 103	0.31 0.50	0.85	30.6 28.1	36.4	36.4	5.1	3.3	3.6		
1025-2	FWD AFT	127	85	—	—	—	—	80	91	114	96	107	0.52 0.44	0.82	28.0 26.1	29.0	29.0	1.7	4.7	6.9		
1026-1	FWD AFT	174	85	—	—	—	—	80	76	92	80	92	0.65 0.24	0.74	47.2 47.3	26.4	26.4	4.7	10.5	7.2		
1026-2	FWD AFT	175	85	—	—	—	—	80	88 85	113 104	98 90	113 104	0.65 0.59	0.70	37.9 41.1	28.5	30.8	6.1	13.3	6.2		
1027-1	FWD AFT	164 163	85	—	—	—	—	80	69 79	80 92	80 92	80 92	0.51 0.51	0.37	25.5 25.2	29.2	29.2	3.8	6.0	5.2		
1028-1	FWD AFT	176	85	—	—	—	—	80	81 92	88 93	89 93	88 93	0.52 0.76	0.50	36.6 42.7	30.5	30.5	3.9	4.8	8.0		
1028-2	FWD AFT	177	85	—	—	—	—	80	88 77	88 84	87 84	88 84	0.52 0.52	0.50	42.5 25.6	30.5	30.5	3.2	4.2	5.6		
1029-1	FWD AFT	178	85	—	—	—	—	80	76	91	77	91	0.67 0.33	0.77	29.1 31.3	34.4	34.4	2.9	7.8	7.4		
1029-2	FWD AFT	179	85	—	—	—	—	80	83 91	83 91	77 81	83 91	0.64 0.65	0.77	28.5 38.8	34.6	35.7	4.6	4.0	4.8		
1030-1	FWD AFT	182	85	—	—	—	—	80	95	76	66	76	0.67 0.25	0.89	29.6 22.2	36.1	36.1	3.9	8.9	8.6		
1030-2	FWD AFT	183	85	—	—	—	—	80	74 77	81 81	77 71	81 81	0.70 0.70	0.89	28.6 28.4	35.9	36.3	5.4	5.1	5.6		
1031-1	FWD AFT	184	85	—	—	—	—	80	76	80	80	80	0.50 0.41	0.96	16.2 18.1	26.6	22.8	6.1	13.8	6.4		
1031-2	FWD AFT	185	85	—	—	—	—	80	71 94	66 74	66 74	66 74	0.54 0.57	0.91	18.7 19.0	22.8	15.7	6.0	12.0	5.6		
1033-1	FWD AFT	194	85	—	—	—	—	80	94	87	87	87	0.11 0.15	0.80	11.3 8.2	27.3	18.6	3.5	8.2	6.2		
1033-2	FWD AFT	196	85	—	—	—	—	80	90 92	98 73	98 73	98 73	0.21 0.20	1.09	22.3 50.7	17.5	17.4	2.6	6.8	6.7		

TABLE 13-2

TOP SECRET-C

PERFORMANCE SUMMARY

TOP SECRET C/ [REDACTED] NO. [REDACTED]

MISSION NUMBER	CAMERA	SERIAL NUMBER	M.I.P. VALUE	AFSPFF MTF/Altitude		90% ATTITUDE ERROR (°)				90% ATTITUDE RATES (YPR)			90% V/H ERROR (%)	90% RESOLUTION LIMIT (FEET)		I.M.C. ERROR
				Average MTF	Altitude	Pitch	Roll	Yaw	Pitch	Roll	Yaw	Along Track		Cross Track		
1034-1	FWD	186	80	75	90	0.19	0.19	0.19	0.19	20.4	24.8	24.8	15.0	17.8	5.9	---
	AFT			35	50	0.20	0.19	0.19	0.19	20.4	24.8	24.8	15.0	17.8	5.9	
	FWD			77	64	0.34	0.36	0.34	0.34	21.1	24.9	24.9	15.2	10.4	7.1	
1035-1	FWD	187	80	50	80	0.36	0.36	0.36	0.36	29.0	16.2	16.2	6.9	2.0	5.3	---
	AFT			66	80	0.16	0.33	0.16	0.33	27.9	33.0	33.0	4.0	4.8	3.7	
	FWD			80	80	0.17	0.34	0.17	0.34	27.9	32.2	32.2	4.1	3.7	2.4	
1035-2	FWD	188	85	81	60	0.50	0.50	0.50	0.50	30.1	27.5	27.5	3.2	4.0	3.5	---
	AFT			82	60	0.17	0.51	0.17	0.51	24.7	26.3	26.3	3.4	3.3	2.4	
	FWD			32	50	0.76	0.36	0.76	0.36	31.2	29.5	29.5	3.4	5.1	6.8	
1036-1	FWD	190	85	94	50	0.76	0.76	0.76	0.76	29.7	23.5	23.5	3.3	3.6	5.1	---
	AFT			73	50	0.34	0.70	0.34	0.70	29.7	23.5	23.5	3.3	3.6	5.1	
	FWD			85	50	0.94	0.32	0.94	0.32	29.7	23.5	23.5	3.1	3.8	6.5	
1037-1	FWD	191	85	84	50	0.25	0.25	0.25	0.25	29.7	23.5	23.5	3.1	2.7	4.9	---
	AFT			60	50	0.25	0.25	0.25	0.25	60.0	29.3	29.3	9.5	10.1	6.0	
	FWD			71	80	0.25	0.27	0.25	0.27	36.9	22.4	22.4	10.1	8.0	6.0	
1037-2	FWD	192	85	84	50	0.24	0.24	0.24	0.24	28.5	26.2	26.2	6.3	6.6	7.5	---
	AFT			21	50	0.27	0.32	0.27	0.32	36.6	53.4	53.4	6.6	5.4	5.9	
	FWD			55	50	0.32	0.25	0.32	0.25	33.7	39.9	39.9	3.6	4.1	3.7	
1038-1	FWD	193	80	83	50	0.39	0.39	0.39	0.39	46.7	27.8	27.8	3.4	3.3	2.5	---
	AFT			63	50	0.39	0.39	0.39	0.39	46.7	27.8	27.8	3.4	3.6	3.1	
	FWD			77	50	0.39	0.39	0.39	0.39	20.4	27.2	27.2	3.4	3.6	2.4	
1039-1	FWD	206	85	59	80	0.43	0.43	0.43	0.43	27.8	39.2	39.2	5.1	6.2	4.6	---
	AFT			71	80	0.41	0.41	0.41	0.41	23.0	23.5	23.5	5.2	4.2	3.2	
	FWD			21	80	0.50	0.50	0.50	0.50	30.2	25.0	25.0	4.6	5.5	5.4	
1040-1	FWD	196	85	85	60	0.44	0.44	0.44	0.44	34.6	23.9	23.9	4.8	4.6	3.8	---
	AFT			62	60	0.33	0.36	0.33	0.36	22.2	28.4	28.4	2.6	3.9	2.1	
	FWD			88	60	0.30	0.36	0.30	0.36	22.1	28.2	28.2	2.1	1.9	2.5	
1041-1	FWD	197	85	75	60	0.29	0.29	0.29	0.29	20.4	26.7	26.7	1.6	2.2	2.0	---
	AFT			75	60	0.46	0.46	0.46	0.46	20.4	26.7	26.7	2.7	2.2	2.2	
	FWD			72	60	0.34	0.16	0.34	0.16	14.7	12.7	12.7	5.1	6.4	3.4	
1041-2	FWD	209	85	82	80	0.25	0.25	0.25	0.25	13.0	13.0	13.0	5.6	5.7	3.0	---
	AFT			72	80	0.25	0.25	0.25	0.25	13.0	13.0	13.0	5.6	5.7	3.0	
	FWD			72	80	0.25	0.25	0.25	0.25	13.0	13.0	13.0	5.6	5.7	3.0	
1042-1	FWD	201	85	74	90	0.31	0.31	0.31	0.31	30.1	27.0	27.0	5.1	3.3	1.6	---
	AFT			85	90	0.32	0.32	0.32	0.32	30.1	27.0	27.0	5.1	3.3	1.6	
	FWD			70	90	0.32	0.32	0.32	0.32	30.1	27.0	27.0	5.1	3.3	1.6	
1042-2	FWD	205	85	74	90	0.31	0.31	0.31	0.31	31.4	25.6	25.6	2.1	2.5	2.2	---
	AFT			74	90	0.31	0.31	0.31	0.31	31.4	25.6	25.6	2.1	2.5	2.2	
	FWD			74	90	0.31	0.31	0.31	0.31	31.4	25.6	25.6	2.1	2.5	2.2	

TABLE 13-2

TOP SECRET C/ [REDACTED]

SECRET

TOP SECRET C

NO.

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. & PROC. (%)	OVER PROCESSED (%)	OVER EXPOSED (%)	CLOUD COVER (%)					
		LOW	HIGH	LOW	HIGH	P	F	P	F	P	F	LOW	HIGH	MEAN	LOW	HIGH	MEAN	LOW	HIGH	MEAN											
1004-1	FWD	3	61	23	124	5	78	19	4	79	17	0	79	0.26	1.89	0.83	0.78	0.43	2.43	1.97	2.02	100	2.43	2.04	2.08	0	4	60	31	5	36
1004-2	AFT	-3	61	25	124	5	74	21	4	79	17	0	80	0.22	1.56	0.76	0.70	0.93	2.45	1.92	1.94	108	2.43	1.98	2.03	0	4	67	26	3	35
1004-2	FWD	-4	68	10	131	7	76	17	37	50	13	4	83	0.29	1.80	0.83	0.78	0.36	2.30	1.84	1.90	0.41	2.37	1.87	1.95	0	4	59	27	9	35
1004-2	AFT	-4	68	10	131	7	76	17	37	50	13	4	77	0.29	1.81	0.81	0.73	0.36	2.38	1.89	1.99	0.45	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	0.49	0.23	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
1006-2	AFT	38	56	52	140	1	99	0	1	51	48	0	24	0.36	1.66	0.87	0.64	0.96	2.35	1.72	1.72	1.14	2.40	2.24	2.28	0	1	98	40	1	60
1006-2	FWD	32	64	36	147	2	98	0	30	41	29	11	59	0.21	1.14	0.53	0.50	0.56	2.28	1.45	1.50	1.30	2.33	2.11	2.16	2	21	72	4	4	45
1006-2	AFT	32	64	36	147	2	98	0	35	40	25	21	54	0.26	1.34	0.62	0.58	0.65	2.19	1.48	1.47	1.56	2.50	2.12	2.16	0	11	77	9	3	45
1007-1	FWD	12	49	50	103	0	95	1	20	78	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
1007-2	AFT	11	49	48	102	0	100	0	10	42	48	6	77	0.26	1.76	0.58	0.55	0.78	2.31	1.82	1.52	1.54	2.39	2.20	2.24	1	13	60	5	0	60
1007-2	FWD	32	57	43	112	0	25	75	3	28	69	0	26	0.28	1.23	0.81	0.48	0.70	2.32	1.44	1.40	0.90	2.37	2.15	2.20	18	9	71	2	0	65
1007-2	AFT	31	57	38	117	0	100	0	18	41	40	3	88	0.24	1.56	0.60	0.56	0.44	2.27	1.80	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	0.32	1.48	0.66	0.62	0.78	2.24	1.55	1.34	1.46	2.35	2.21	2.24	2	2	86	8	1	46
1008-1	AFT	30	51	50	102	0	100	0	4	27	68	1	34	0.32	1.57	0.71	0.69	0.81	2.21	1.57	1.58	1.08	2.37	2.21	2.24	2	1	84	13	0	48
1008-2	FWD	29	56	42	105	0	100	0	3	31	66	0	27	0.14	1.81	0.76	0.72	0.57	2.10	1.54	1.55	1.09	2.40	2.20	2.25	2	3	73	23	0	60
1008-2	AFT	29	56	42	105	0	100	0	3	30	67	0	29	0.14	1.64	0.77	0.76	0.73	2.18	1.55	1.55	1.09	2.35	2.18	2.22	2	3	73	27	0	65
1009-1	FWD	12	49	42	132	0	100	0	1	26	75	0	34	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	90
1009-2	AFT	12	49	42	132	0	100	0	0	40	60	0	45	0.28	1.42	0.70	0.64	0.92	2.28	1.88	1.55	0.63	2.51	2.32	2.38	4	5	73	20	0	90
1009-2	FWD	23	58	35	138	2	98	0	3	21	76	0	40	0.29	1.55	0.59	0.64	0.73	2.37	1.53	1.53	1.06	2.45	2.25	2.30	4	4	74	17	0	95
1009-2	AFT	23	58	35	138	2	98	0	4	47	49	0	56	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	95
1010-1	FWD	18	47	45	83	0	21	79	0	13	87	0	9	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
1010-1	AFT	18	47	45	83	0	21	79	0	16	84	0	16	0.24	1.25	0.57	0.52	0.78	2.42	1.41	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	0.26	1.51	0.55	0.50	0.53	2.36	1.41	1.38	1.00	2.44	2.14	2.20	22	4	67	8	0	45
1010-2	AFT	15	52	38	76	0	50	50	0	23	77	0	25	0.20	1.48	0.59	0.58	0.50	2.40	1.47	1.45	1.29	2.48	2.18	2.22	13	3	78	9	0	45
1011-1	FWD	2	55	33	66	0	64	36	2	23	75	2	23	0.18	0.99	0.50	0.46	0.36	2.36	1.48	1.43	0.78	2.40	2.07	2.16	17	11	70	3	0	40
1011-1	AFT	2	55	33	66	0	67	33	3	47	50	0	37	0.24	1.46	0.60	0.56	0.50	2.35	1.57	1.55	0.74	2.37	2.11	2.18	3	17	81	8	0	40
1018-1	FWD	0	45	38	71	0	64	36	7	56	37	0	65	0.25	1.30	0.59	0.53	0.94	2.39	1.40	1.42	0.90	2.39	1.93	2.00	6	17	68	10	0	60
1018-1	AFT	0	45	38	71	0	64	36	0	53	67	0	49	0.26	1.40	0.61	0.58	0.47	2.27	1.44	1.40	0.72	2.32	1.89	1.86	9	10	74	11	0	60
1018-2	FWD	0	57	34	106	0	77	23	6	44	50	0	49	0.30	1.20	0.68	0.55	0.73	2.33	1.49	1.42	0.67	2.34	1.91	2.00	4	9	80	27	0	40
1018-2	AFT	0	57	34	106	0	77	23	3	15	82	0	10	0.30	1.27	0.68	0.62	0.48	2.33	1.55	1.58	0.70	2.38	1.96	2.02	4	0	72	23	0	40
1019-1	FWD	0	58	38	83	0	64	36	0	42	58	0	55	0.20	1.66	0.56	0.52	0.52	2.29	1.56	1.59	1.21	2.41	2.03	2.10	7	13	76	4	0	40
1019-1	AFT	0	58	38	83	0	64	36	2	77	91	0	53	0.28	1.56	0.58	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	78	1	38	61	0	63	0.17	0.99	0.40	0.36	0.26	2.38	1.40	1.42	1.01	2.38	1.94	2.05	27	33	39	5	0	40
1014-1	AFT	0	59	14	69	0	31	69	0	13	87	0	36	0.18	1.26	0.51	0.48	0.23	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	0.39	1.06	0.36	0.31	0.33	2.32	1.36	1.36	0.42	2.36	1.72	1.80	31	40	27	2	0	40
1014-2	AFT	0	76	0	34	0	29	71	0	5	95	0	68	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
1018-1	FWD	5	68	19	68	0	62	32	2	29	6	2	98	0.25	1.70	0.54	0.47	0.94	2.28	1.44	1.46	0.46	2.41	1.86	1.90	28	0	65	7	0	45
1018-1	AFT	4	68	18	67	0	50	50	0	11	89	0	4	0.29	1.20	0.50	0.56	0.46	2.28	1.40	1.50	0.80	2.36	1.86	1.90	14	0	77	6	0	45
1018-2	FWD	0	78	-2	71	0	10	90	0	10	90	0	11	0.20	1.10	0.50	0.46	0.34	2.27	1.29	1.30	0.28	2.34	1.69	1.78	28	4	65	3	0	40
1018-2	AFT	0	78	-2	71	0	21	79	0	9	91	0	9	0.28	1.21	0.52	0.52	0.36	2.22	1.37	1.38	0.38	2.40	1.74	1.80	17	4	70	12	0	40
1018-1	FWD	5	69	13	76	0	27	73	1	41	56	0	59	0.13	1.55	0.61	0.45	0.70	2.43	1.67	1.68	0.85	2.44	1.91	1.90	19	17	56	8	1	45
1018-1	AFT	4	69	12	76	0	27	73	0	42	58	0	42	0.13	1.65	0.64	0.58	0.82	2.34	1.69	1.72	0.98</									

EXPOSURE - PROCESSING SUMMARY

MISSION NUMBER	CAMERA	SOLAR ELEVATION RANGE (°)		SOLAR AZIMUTH RANGE (°)		PREDICTED PROCESSING (N)		REPORTED PROCESSING (N)		COMPUTED PROCESSING (N)		TERRAIN (D-MIN)			TERRAIN (D-MAX)			CLOUD RANGE			UNDER EXPOSED (MA)	UNDER PROCESSED (N)	NOMINAL (N)	OVER PROCESSED (N)	OVER EXPOSED (N)	CLOUD COVER (N)						
		LOW	HIGH	LOW	HIGH	P	F	P	F	P	F	LOW	HIGH	MEAN	LOW	HIGH	MEAN	LOW	HIGH	MEAN												
1019-1	FWD	24	70	24	152	0	21	79	22	38	46	4	56	40	0.20	0.82	0.71	0.61	0.60	2.15	1.45	1.50	0.94	2.26	1.94	2.00	4	7	64	177	7	48
	AFT	23	70	21	152	0	32	87	19	35	19	3	87	19	0.15	1.70	0.66	0.60	0.99	2.26	1.46	1.45	0.80	2.30	1.96	2.02	1	13	70	1.4	3	43
1020-1	FWD	30	75	19	155	0	14	81	13	33	33	1	58	51	0.23	1.30	0.55	0.52	0.90	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	30	29	0	74	26	0.23	1.20	0.55	0.54	0.70	2.20	1.47	1.46	1.22	2.29	2.04	2.10	0	18	76	5	0	42
1020-2	FWD	47	69	18	35	0	64	36	15	30	29	0	74	26	0.23	1.20	0.55	0.54	0.70	2.20	1.47	1.46	1.22	2.29	2.04	2.10	0	18	76	5	0	42
	AFT	46	68	17	33	0	68	32	14	39	47	1	58	47	0.25	1.50	0.64	0.68	0.74	2.18	1.50	1.50	0.97	2.36	1.92	2.00	5	9	72	11	13	38
1021-1	FWD	15	66	-18	-23	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	5	35
	AFT	14	66	-17	-23	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	5	35
1021-2	FWD	13	52	-13	-41	0	29	71	13	31	46	0	57	43	0.18	1.52	0.74	0.80	0.60	2.36	1.36	1.34	1.08	2.23	1.82	1.85	14	13	66	16	0	30
	AFT	13	52	-13	-41	0	100	0	33	38	0	50	50	0.33	1.38	0.76	0.76	0.70	2.30	1.32	1.30	1.30	2.36	1.94	1.94	5	5	71	21	0	80	
1022-1	FWD	28	67	30	150	0	36	64	9	36	56	0	42	58	0.16	1.49	0.45	0.40	0.94	2.42	1.57	1.60	1.32	2.35	2.24	2.29	30	19	47	43	0	38
	AFT	27	67	26	150	0	89	11	7	42	51	0	53	37	0.24	1.48	0.57	0.50	0.52	2.30	1.63	1.68	1.30	2.47	2.21	2.25	4	16	71	29	0	45
1022-2	FWD	29	74	21	152	0	8	92	1	37	62	0	43	37	0.20	1.99	0.39	0.55	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	0.90	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	163	0	6	95	19	54	27	0	72	28	0.15	1.26	0.39	0.35	0.43	2.21	1.22	1.22	0.97	2.41	2.05	2.11	20	44	34	2	0	36
	AFT	20	81	5	163	0	11	89	0	39	61	0	42	58	0.20	1.40	0.33	0.48	0.41	2.21	1.31	1.37	0.94	2.45	2.15	2.20	13	14	65	7	0	36
1023-2	FWD	29	81	-13	177	0	17	95	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	80	2	1	38
	AFT	28	80	-13	178	0	1	97	0	34	66	0	28	72	0.22	1.60	0.52	0.48	0.44	2.31	1.24	1.34	1.08	2.46	2.10	2.17	13	10	73	4	0	35
1024-1	FWD	10	64	24	137	0	100	0	57	43	0	72	28	0	17	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	30
	AFT	9	61	21	136	0	100	0	28	72	0	82	18	0	20	1.22	0.40	0.37	0.48	2.32	1.24	1.24	0.94	2.40	1.97	2.06	13	46	39	2	0	34
1024-2	FWD	9	79	1	151	0	100	0	19	69	0	25	75	0	24	1.37	0.46	0.42	0.35	2.40	1.20	1.27	1.01	2.45	1.91	1.99	36	3	58	0	0	39
	AFT	8	79	1	151	0	100	0	22	77	0	66	34	0	20	1.39	0.40	0.40	0.29	2.26	1.31	1.32	0.90	2.40	1.89	1.95	25	25	50	5	0	39
1025-1	FWD	1	70	-23	-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	39
	AFT	0	70	-21	-19	0	72	28	8	43	0	61	39	0	16	1.69	0.49	0.42	0.26	2.26	1.33	1.38	0.23	2.32	1.75	1.90	28	20	47	7	1	36
1025-2	FWD	0	56	-24	-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	21	45	4	0	45
	AFT	0	56	-22	-33	0	73	27	3	45	52	0	51	49	0.21	1.52	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	42
1026-1	FWD	0	57	23	135	0	4	95	0	21	79	0	24	76	0.20	1.26	0.39	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	2.35	1.29	1.30	0.37	2.40	1.76	1.86	39	27	33	1	0	45
1026-2	FWD	1	72	8	84	0	100	0	1	94	0	5	95	0	19	1.32	0.36	0.30	0.23	2.17	1.03	1.08	0.48	2.24	1.63	1.70	78	2	19	1	0	40
	AFT	0	57	13	78	0	100	0	2	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	100	0	3	97	0	21	1.54	0.52	0.46	0.30	2.38	1.45	1.52	0.71	2.39	2.03	2.10	36	2	58	7	0	60
	AFT	2	63	26	108	0	0	100	0	21	79	0	20	80	0.26	1.34	0.58	0.53	0.34	2.30	1.46	1.46	0.40	2.40	1.96	2.06	12	3	78	7	0	60
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	5	28	11	0	30
	AFT	2	73	14	133	0	5	96	0	16	84	0	11	89	0.20	1.01	0.41	0.36	0.30	2.23	1.35	1.40	0.68	2.28	1.72	1.77	58	5	37	11	0	30
1028-2	FWD	2	81	8	48	0	3	97	1	9	90	0	18	85	0.23	0.98	0.40	0.35	0.37	2.20	1.56	1.58	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	0	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	0.30	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	0.52	0.48	0.20	2.32	1.62	1.65	0.36	2.40	1.91	1.95	24	5	59	10	0	35
1029-2	FWD	0	60	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	1.58	0.45	2.40	1.88	1.93	33	5	50	11	2	25
	AFT	0	60	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	38	42	3	32	65	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	3	40
	AFT	4	63	22																												

EXPOSURE - PROCESSING SUMMARY

MISSION NUMBER	CAMERA	SOLAR ELEVATION RANGE (°)		SOLAR AZIMUTH RANGE (°)		PREDICTED PROCESSING TIME (S)		REMARKS		COMPUTED PROCESSING TIME (S)		ERRORS (MIC)		FERRE N. D. MAX		C. MAX		UNDER PROCESSED (%)	MAGNIFICATION PROCESSED (%)	OVER PROCESSED (%)	OVER EXPOSED (%)	CLOUD COVER (%)	
		LOW	HIGH	LOW	HIGH	F	P	F	P	F	P	F	P	F	P	LOW	HIGH						MEAN
1038-1	FWD	23	77	16	165	0	38	4	32	75	0	10	80	0	25	180	0	27	0	3	70	0	39
1038-1	AFT	23	77	10	165	0	38	4	32	75	0	10	80	0	25	180	0	27	0	3	70	0	39
1038-2	FWD	29	66	0	175	0	88	12	32	55	0	27	73	0	15	130	0	27	0	7	76	0	45
1038-2	AFT	30	6	0	175	0	41	59	5	37	0	34	66	0	0	60	0	27	0	10	73	0	45
1039-1	FWD	13	88	19	144	0	117	83	0	89	0	5	95	0	0	120	0	27	0	1	71	0	30
1039-1	AFT	13	88	18	144	0	95	14	23	79	0	5	95	0	0	120	0	27	0	1	68	0	30
1039-2	FWD	4	81	10	158	0	22	18	1	79	0	8	92	0	0	130	0	27	0	3	86	0	40
1039-2	AFT	4	81	8	158	0	22	18	1	79	0	8	92	0	0	130	0	27	0	3	86	0	40
1036-1	FWD	13	62	7	170	0	60	34	1	74	0	4	95	0	0	140	0	27	0	5	59	0	30
1036-1	AFT	13	62	5	171	0	60	34	1	74	0	4	95	0	0	140	0	27	0	5	59	0	30
1036-2	FWD	10	78	12	167	0	15	65	1	85	0	10	80	0	0	160	0	27	0	7	53	0	35
1036-2	AFT	12	78	9	168	0	15	66	0	85	0	10	80	0	0	160	0	27	0	7	53	0	35
1037-1	FWD	9	84	172	16	0	29	71	8	10	42	0	74	0	0	170	0	27	0	1	93	0	35
1037-1	AFT	9	84	171	16	0	29	71	8	10	42	0	74	0	0	170	0	27	0	1	93	0	35
1037-2	FWD	8	87	175	13	0	25	75	14	26	3	0	74	0	0	170	0	27	0	1	93	0	30
1037-2	AFT	8	87	173	13	0	25	75	14	26	3	0	74	0	0	170	0	27	0	1	93	0	30
1038-1	FWD	5	68	15	131	0	27	78	2	18	87	0	5	84	0	16	110	0	4	3	65	0	35
1038-1	AFT	5	68	18	130	0	27	78	2	18	87	0	5	84	0	16	110	0	4	3	65	0	35
1038-2	FWD	7	80	1	164	0	32	68	0	15	45	0	13	84	0	2	140	0	4	1	63	0	40
1038-2	AFT	7	80	1	164	0	32	68	0	15	45	0	13	84	0	2	140	0	4	1	63	0	40
1039-1	FWD	7	65	27	140	0	62	38	1	24	70	0	24	75	0	24	75	0	4	4	79	0	35
1039-1	AFT	7	65	25	140	0	62	38	1	24	70	0	24	75	0	24	75	0	4	4	79	0	35
1039-2	FWD	6	75	10	144	0	41	59	3	38	43	0	41	58	0	33	138	0	5	5	81	0	35
1039-2	AFT	6	75	10	144	0	41	59	3	38	43	0	41	58	0	33	138	0	5	5	81	0	35
1040-1	FWD	11	73	149	18	0	79	21	10	31	59	0	35	53	0	25	171	0	4	3	81	0	35
1040-1	AFT	11	73	149	18	0	79	21	10	31	59	0	35	53	0	25	171	0	4	3	81	0	35
1040-2	FWD	12	68	149	21	0	66	34	7	30	63	0	29	68	0	24	167	0	4	2	78	0	30
1040-2	AFT	12	68	149	21	0	66	34	7	30	63	0	29	68	0	24	167	0	4	2	78	0	30
1041-1	FWD	10	68	30	129	0	100	0	1	40	53	0	46	54	0	14	106	0	3	19	79	0	45
1041-1	AFT	10	68	30	129	0	100	0	1	40	53	0	46	54	0	14	106	0	3	19	79	0	45
1041-2	FWD	28	78	14	126	0	7	23	67	0	7	23	67	0	0	151	0	4	2	2	96	0	45
1041-2	AFT	28	78	14	126	0	7	23	67	0	7	23	67	0	0	151	0	4	2	2	96	0	45
1042-1	FWD	9	76	16	163	0	19	81	9	9	62	0	15	85	0	147	0	0	0	0	80	0	37
1042-1	AFT	9	76	15	164	0	19	81	9	9	62	0	15	85	0	147	0	0	0	0	80	0	37
1042-2	FWD	37	68	179	177	0	1	89	5	16	75	0	1	39	0	123	0	0	0	0	66	0	38
1042-2	AFT	37	68	175	177	0	1	89	5	16	75	0	1	39	0	123	0	0	0	0	66	0	38

~~TOP SECRET~~

C [REDACTED] RD. [REDACTED]

SECTION A

APPENDIX

~~TOP SECRET~~ C [REDACTED]

~~TOP SECRET C~~ [REDACTED]

MISSION # 1042-1 * INSTRUMENT * FWD 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	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	1	0	0	0	0	0	1	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	1	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	1	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	5	0	0	3	0	0	8	0	0

~~TOP SECRET C~~ [REDACTED]

TABLE A-1

MISSION * 1042-1 * INSTRUMENT * FWD 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM
0.51	0	0	0	1	0	0	4	0	0	5	0	0
0.52	0	0	0	1	0	0	4	0	0	5	0	0
0.53	0	0	0	0	0	0	7	0	0	7	0	0
0.54	0	0	0	0	0	0	5	0	0	5	0	0
0.55	0	0	0	0	0	0	7	0	0	7	0	0
0.56	0	0	0	0	0	0	5	0	0	5	0	0
0.57	0	0	0	0	0	0	3	0	0	3	0	0
0.58	0	0	0	1	0	0	6	0	0	7	0	0
0.59	0	0	0	1	0	0	6	0	0	6	0	0
0.60	0	0	0	1	0	0	5	0	0	6	0	0
0.61	0	0	0	1	0	0	7	0	0	7	0	0
0.62	0	0	0	1	0	0	4	0	0	5	0	0
0.63	0	0	0	0	0	0	5	0	0	5	0	0
0.64	0	0	0	0	0	0	5	0	0	5	0	0
0.65	0	0	0	0	0	0	3	0	0	3	0	0
0.66	0	0	0	0	0	0	4	0	0	4	0	0
0.67	0	0	0	0	0	0	4	0	0	4	0	0
0.68	0	0	0	0	0	0	2	0	0	2	0	0
0.69	0	0	0	0	0	0	1	0	0	1	0	0
0.70	0	0	0	0	0	0	3	0	0	3	0	0
0.71	0	0	0	0	0	0	3	0	0	3	0	0
0.72	0	0	0	0	0	0	3	0	0	3	0	0
0.73	0	0	0	1	0	0	1	0	0	1	0	0
0.74	0	0	0	1	0	0	0	0	0	1	0	0
0.75	0	0	0	0	0	0	3	0	0	3	0	0
0.76	0	0	0	0	0	0	3	0	0	3	0	0
0.77	0	0	0	2	0	0	3	0	0	3	0	0
0.78	0	0	0	0	0	0	1	0	0	1	0	0
0.79	0	0	0	1	0	0	0	0	0	1	0	0
0.80	0	0	0	1	0	0	0	0	0	1	0	0
0.81	0	0	0	1	0	0	2	0	0	2	0	0
0.82	0	0	0	1	0	0	1	0	0	2	0	0
0.83	0	0	0	0	0	0	0	0	0	0	0	0
0.84	0	0	0	0	0	0	0	0	0	0	0	0
0.85	0	0	0	1	0	0	1	0	0	2	0	0
0.86	0	0	0	1	0	0	1	0	0	2	0	0
0.87	0	0	0	1	0	0	0	0	0	2	0	0
0.88	0	0	0	0	0	0	3	0	0	3	0	0
0.89	0	0	0	0	0	0	1	1	0	1	1	0
0.90	0	0	0	0	0	0	0	1	0	0	1	0
0.91	0	0	0	0	0	0	1	2	0	1	2	0
0.92	0	0	0	0	0	0	1	2	0	1	2	0
0.93	0	0	0	0	0	0	0	2	0	0	2	0
0.94	0	0	0	0	0	0	1	2	0	1	2	0
0.95	0	0	0	0	0	0	1	1	0	1	1	0
0.96	0	0	0	1	0	0	1	1	0	1	1	0
0.97	0	0	0	1	0	0	0	0	0	1	0	0
0.98	0	0	0	1	0	0	0	0	0	1	0	0
0.99	0	0	0	0	0	0	0	0	0	0	0	0
1.00	0	0	0	0	0	0	1	0	0	1	0	0
SUBTOTAL	0	0	0	18	0	0	119	8	0	137	8	0

TABLE A-1

MISSION * 1042-1 * INSTRUMENT * FWD 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM
1.01	0	0	0	0	0	0	1	0	0	1	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	0	0	0	0	0
1.04	0	0	0	2	0	0	0	0	0	2	0	0
1.05	0	0	0	1	0	0	0	0	0	1	0	0
1.06	0	0	0	1	0	0	0	0	0	0	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	1	0	0	0	0	0	1	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	1	0	0	0	0	0	1	0	0
1.24	0	0	0	1	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	1	0	0	1	0	0
1.27	0	0	0	1	0	0	2	0	0	3	0	0
1.28	0	0	0	1	0	0	0	0	0	1	0	0
1.29	0	0	0	1	0	0	0	0	0	1	0	0
1.30	0	0	0	1	0	0	0	0	0	1	0	0
1.31	0	0	0	1	0	0	1	0	0	2	0	0
1.32	0	0	0	0	0	0	0	0	0	0	0	0
1.33	0	0	0	0	0	0	3	0	0	3	0	0
1.34	0	0	0	0	0	0	2	0	0	2	0	0
1.35	0	0	0	0	0	0	1	0	0	1	0	0
1.36	0	0	0	1	0	0	4	0	0	4	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	14	8	0	9	10	1	23	10	9

TABLE A-1

MISSION * 1042-1 * INSTRUMENT * FWD 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM
1.51	0	0	0	0	0	0	0	2	1	0	2	1
1.52	0	0	0	0	0	0	0	1	0	0	1	0
1.53	0	0	0	0	0	0	0	3	0	0	3	0
1.54	0	0	0	0	0	0	0	0	0	0	0	0
1.55	0	0	0	0	0	0	0	4	0	0	4	0
1.56	0	0	0	0	1	0	0	4	0	0	5	0
1.57	0	0	0	0	1	0	0	2	0	0	3	0
1.58	0	0	0	0	0	0	0	5	0	0	6	0
1.59	0	0	0	0	0	0	0	0	0	0	0	0
1.60	0	0	0	0	1	0	0	5	0	0	6	0
1.61	0	0	0	0	1	0	0	0	0	0	0	0
1.62	0	0	0	0	1	0	0	0	2	0	1	2
1.63	0	0	0	0	0	0	0	3	0	0	4	0
1.64	0	0	0	0	0	0	0	3	0	0	4	0
1.65	0	0	0	0	3	0	0	1	0	0	4	0
1.66	0	0	0	0	0	0	0	2	0	0	3	0
1.67	0	0	0	0	2	0	0	2	1	0	3	1
1.68	0	0	0	0	0	0	0	3	0	0	4	0
1.69	0	0	0	0	0	0	0	1	0	0	2	0
1.70	0	0	0	0	1	0	0	4	0	0	5	0
1.71	0	0	0	0	0	0	0	3	0	0	4	0
1.72	0	0	0	0	1	0	0	4	0	0	5	0
1.73	0	0	0	0	2	0	0	1	0	0	2	0
1.74	0	0	0	0	0	0	0	3	0	0	4	0
1.75	0	0	0	0	0	0	0	3	0	0	4	0
1.76	0	0	0	0	1	0	0	3	0	0	4	0
1.77	0	0	0	0	0	0	0	3	0	0	4	0
1.78	0	0	0	0	0	0	0	3	0	0	4	0
1.79	0	0	0	0	0	0	0	3	0	0	4	0
1.80	0	0	0	0	2	0	0	3	0	0	4	0
1.81	0	0	0	0	0	0	0	0	0	0	0	0
1.82	0	0	0	0	0	0	0	1	0	0	2	0
1.83	0	0	0	0	1	0	0	1	0	0	2	0
1.84	0	0	0	0	1	0	0	1	0	0	2	0
1.85	0	0	0	0	0	0	0	1	0	0	1	0
1.86	0	0	0	0	1	0	0	0	0	0	1	0
1.87	0	0	0	0	0	0	0	0	0	0	0	0
1.88	0	0	0	0	0	0	0	0	0	0	0	0
1.89	0	0	0	0	0	0	0	1	0	0	1	0
1.90	0	0	0	0	1	0	0	1	0	0	2	0
1.91	0	0	0	0	0	0	0	1	0	0	1	0
1.92	0	0	0	0	0	0	0	1	0	0	1	0
1.93	0	0	0	0	0	0	0	4	0	0	4	0
1.94	0	0	0	0	2	0	0	1	0	0	3	0
1.95	0	0	0	0	0	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	0	0	0	0	0	0	0	0
1.98	0	0	0	0	0	0	0	0	1	0	1	0
1.99	0	0	0	0	0	0	0	0	0	0	0	0
2.00	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	24	5	0	93	10	0	122	15

TABLE A-1

MISSION * 1042-1 * INSTRUMENT * FWD 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM
2.01	0	0	0	0	0	0	0	0	1	0	0	1
2.02	0	0	0	0	0	0	0	2	1	0	2	1
2.03	0	0	0	0	0	0	0	2	1	0	2	1
2.04	0	0	0	0	0	0	0	0	4	0	0	4
2.05	0	0	0	0	0	0	0	0	0	0	0	0
2.06	0	0	0	0	0	1	0	0	0	0	0	1
2.07	0	0	0	0	0	1	0	0	4	0	0	2
2.08	0	0	0	0	0	0	0	1	1	0	1	5
2.09	0	0	0	0	0	0	0	1	1	0	1	1
2.10	0	0	0	0	0	0	0	0	1	0	0	1
2.11	0	0	0	0	0	0	0	0	3	0	0	3
2.12	0	0	0	0	0	2	0	0	6	0	1	8
2.13	0	0	0	0	0	0	0	1	2	0	1	2
2.14	0	0	0	0	0	0	0	1	3	0	1	3
2.15	0	0	0	0	0	0	0	0	4	0	0	4
2.16	0	0	0	0	0	0	0	0	4	0	0	4
2.17	0	0	0	0	0	0	0	0	8	0	0	8
2.18	0	0	0	0	0	0	0	1	4	0	1	4
2.19	0	0	0	0	0	0	0	0	7	0	0	7
2.20	0	0	0	0	0	1	0	0	3	0	0	4
2.21	0	0	0	0	0	1	0	0	6	0	0	7
2.22	0	0	0	0	0	0	0	0	0	10	0	10
2.23	0	0	0	0	0	0	0	0	3	0	0	3
2.24	0	0	0	0	0	0	0	0	8	0	0	8
2.25	0	0	0	0	0	0	0	0	3	0	0	3
2.26	0	0	0	0	0	1	0	0	8	0	0	9
2.27	0	0	0	0	0	0	0	0	6	0	0	6
2.28	0	0	0	0	0	0	0	0	13	0	0	13
2.29	0	0	0	0	0	0	0	0	12	0	0	12
2.30	0	0	0	0	0	1	0	0	10	0	0	11
2.31	0	0	0	0	0	1	0	0	7	0	0	7
2.32	0	0	0	0	0	1	0	0	16	0	0	17
2.33	0	0	0	0	0	0	0	1	9	0	0	9
2.34	0	0	0	0	0	0	0	0	5	0	0	5
2.35	0	0	0	0	0	0	0	0	7	0	0	7
2.36	0	0	0	0	0	1	0	0	6	0	0	7
2.37	0	0	0	0	0	0	0	0	3	0	0	3
2.38	0	0	0	0	0	0	0	0	5	0	0	5
2.39	0	0	0	0	0	0	0	0	0	0	0	0
2.40	0	0	0	0	0	0	0	2	2	0	2	2
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	1	0	1	1
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	1	0	1	1
2.50	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	0	11	0	10	203	0	10	214

TABLE A-1

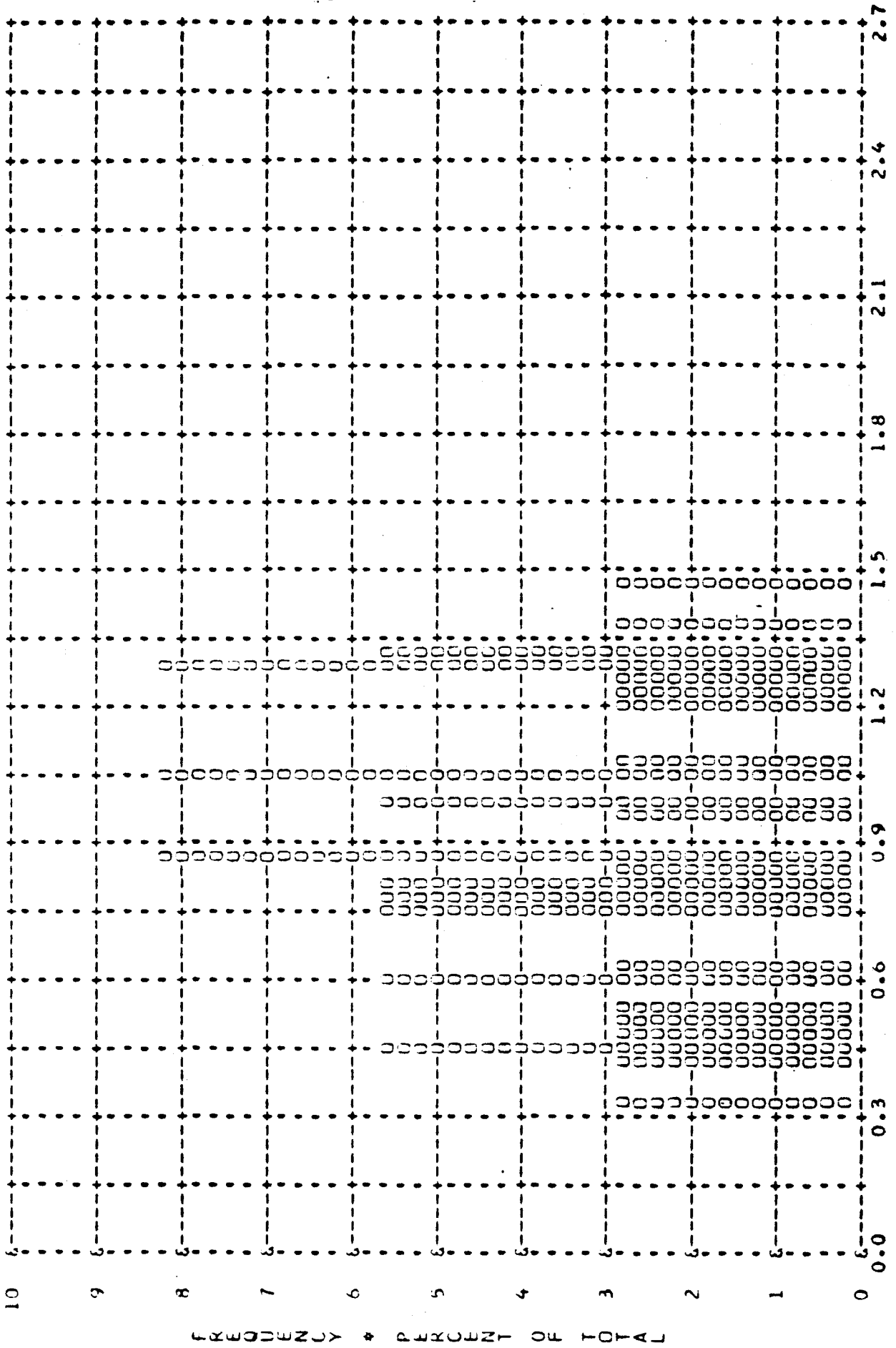
MISSION * 1042-1 * INSTRUMENT * FWD * 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM
2.51	0	0	0	0	0	0	0	0	0	0	0	0
2.52	0	0	0	0	0	0	0	0	0	0	0	0
2.53	0	0	0	0	0	0	0	0	0	0	0	0
2.54	0	0	0	0	0	0	0	0	0	0	0	0
2.55	0	0	0	0	0	0	0	0	0	0	0	0
2.56	0	0	0	0	0	0	0	0	0	0	0	0
2.57	0	0	0	0	0	0	0	0	0	0	0	0
2.58	0	0	0	0	0	0	0	0	0	0	0	0
2.59	0	0	0	0	0	0	0	0	0	0	0	0
2.60	0	0	0	0	0	0	0	0	0	0	0	0
2.61	0	0	0	0	0	0	0	0	0	0	0	0
2.62	0	0	0	0	0	0	0	0	0	0	0	0
2.63	0	0	0	0	0	0	0	0	0	0	0	0
2.64	0	0	0	0	0	0	0	0	0	0	0	0
2.65	0	0	0	0	0	0	0	0	0	0	0	0
2.66	0	0	0	0	0	0	0	0	0	0	0	0
2.67	0	0	0	0	0	0	0	0	0	0	0	0
2.68	0	0	0	0	0	0	0	0	0	0	0	0
2.69	0	0	0	0	0	0	0	0	0	0	0	0
2.70	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	37	37	16	212	212	214	249	249	230

TABLE A-1

~~TOP SECRET~~ C/

MISSION * 1042-1 * INSTR * FWD * 9/8/67 PLOT OF D MIN * TERRAIN * PROCESSING * INTERMEDIATE
AIRTH MEAN * 0.89 * MIDIAN * 0.86 * STD DEV * 0.32 * RANGE * 0.33 TO 1.47 WITH 37 SAMPLES



* DENSITY *

FIGURE A-1

~~TOP SECRET~~ C/

MISSION * 1042-1 * INSTR * FWD * 9/8/67 PLOT OF D MAX * TERRAIN * PROCESSING * INTERMEDIATE
AIRTH MEAN * 1.65 * MEDIAN * 1.67 * STD DEV * 0.21 * RANGE * 1.13 TO 1.97 WITH 37 SAMPLES

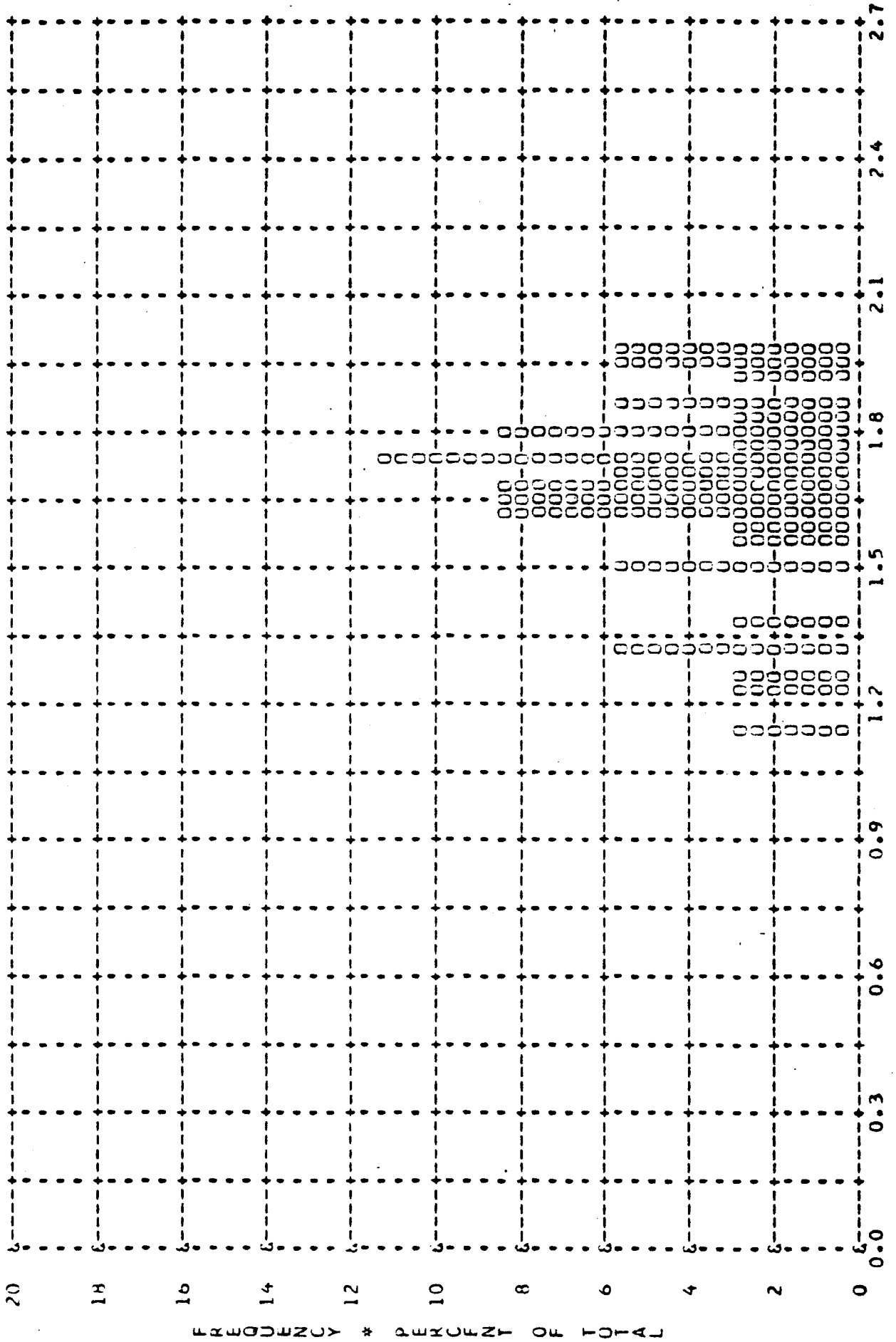


FIGURE A-2

~~TOP SECRET~~ C

MISSION * 1042-1 * INSTR * FWD * 9/8/67 PLOT UF D MAX * CLOUD * PROCESSING * INTERMEDIATE
AIRTH MEAN * 2.11 * MEDIAN * 2.12 * STD DEV * 0.16 * RANGE * 1.85 TG 2.36 WITH 16 SAMPLES

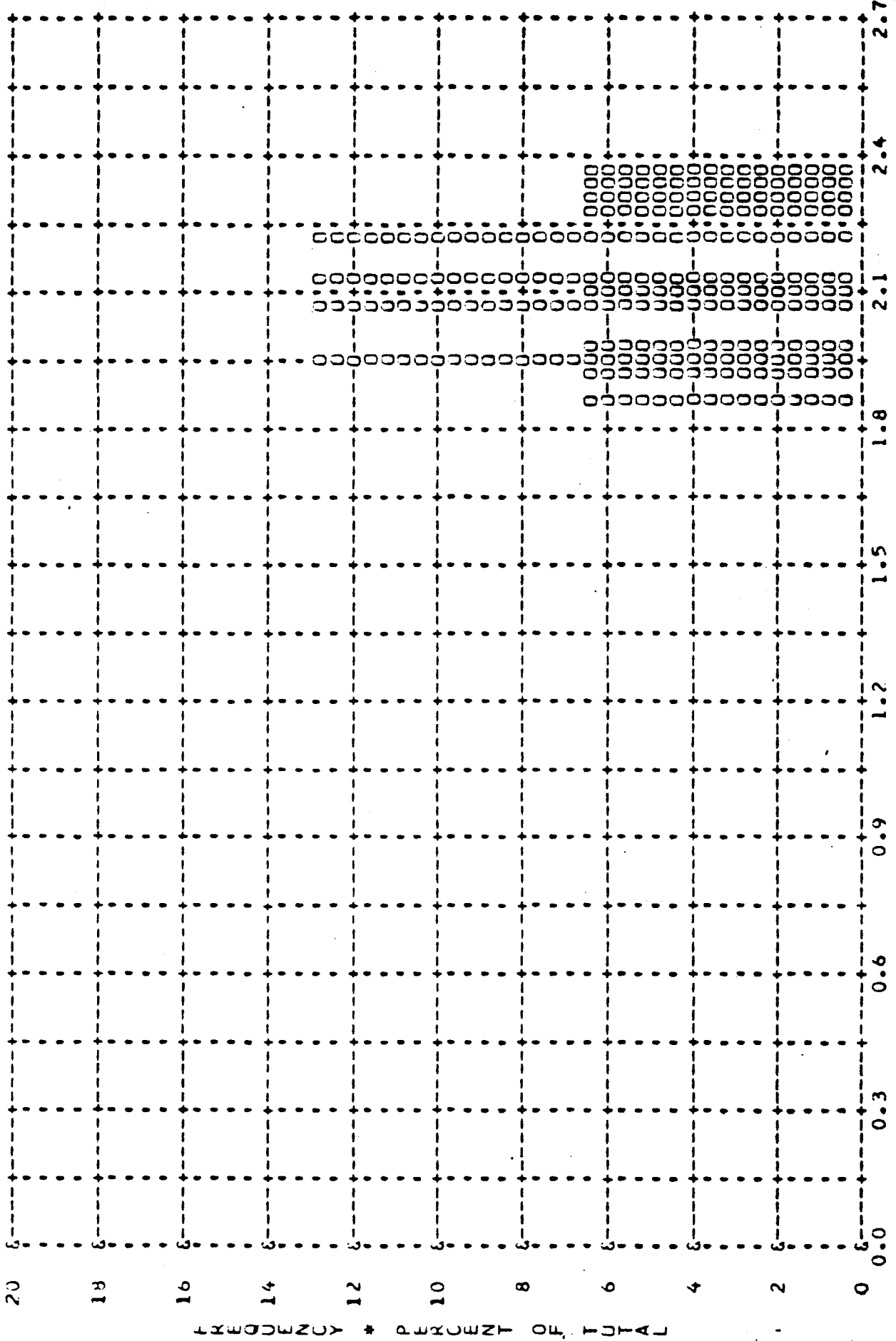


FIGURE A-3

~~TOP SECRET~~ C

MISSION # 1042-1 * INSTR # FWD * 9/8/67 PLOT OF D MIN * TERRAIN * PROCESSING * FULL
AIRTH MEAN * 0.54 * MEDIAN * 0.55 * STD DEV * 0.19 * RANGE * 0.36 TO 1.35 WITH 212 SAMPLES

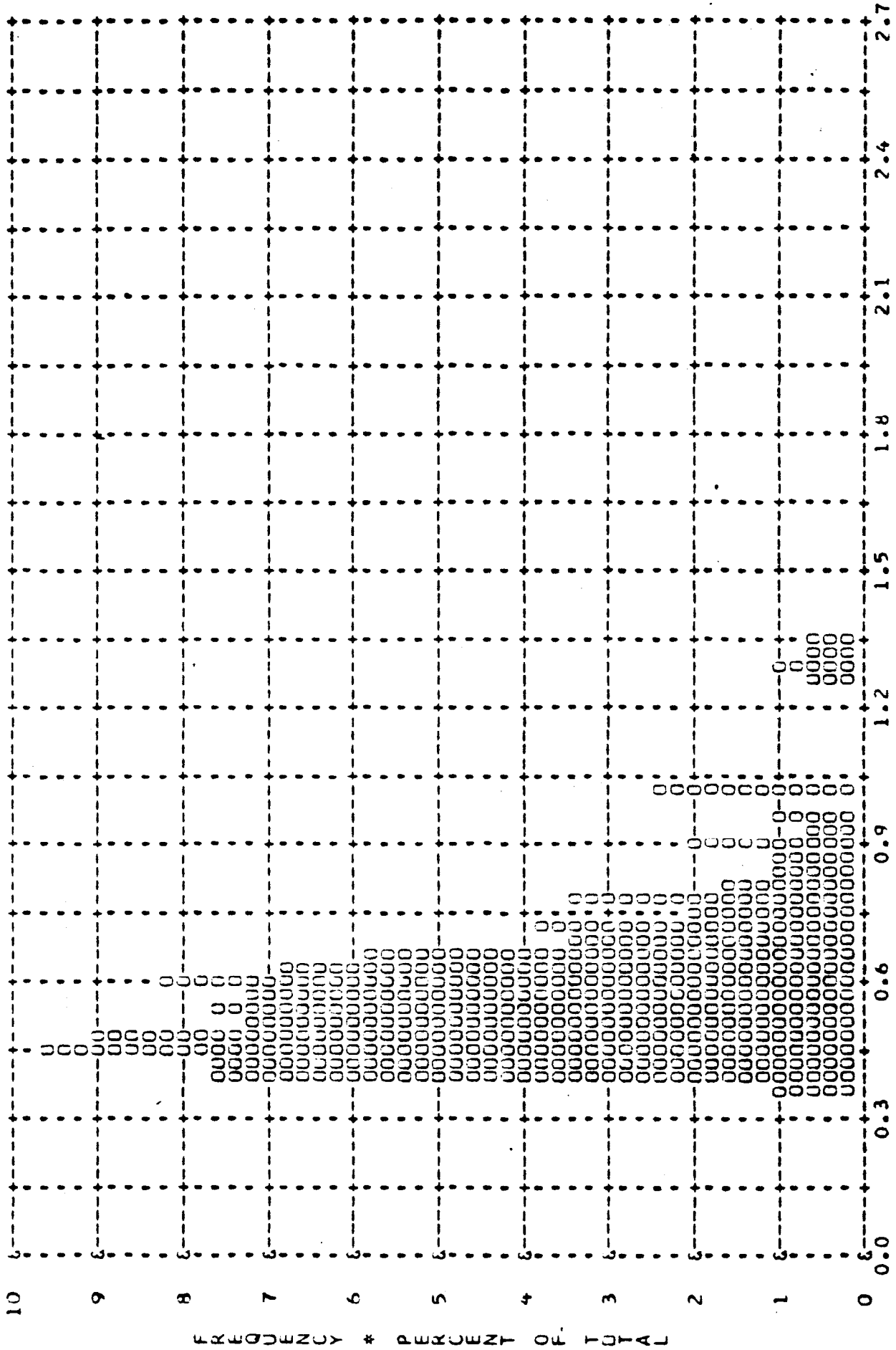


FIGURE A-4

* DENSITY *

~~TOP SECRET C~~

MISSION * 1042-1 * INSTR * FWD * 9/8/67 PLOT OF D MAX * TERRAIN * PROCESSING * FULL
AIRTH MEAN * 1.51 * MEDIAN * 1.49 * STD DEV * 0.20 * RANGE * 0.89 TU 2.33 WITH 212 SAMPLES

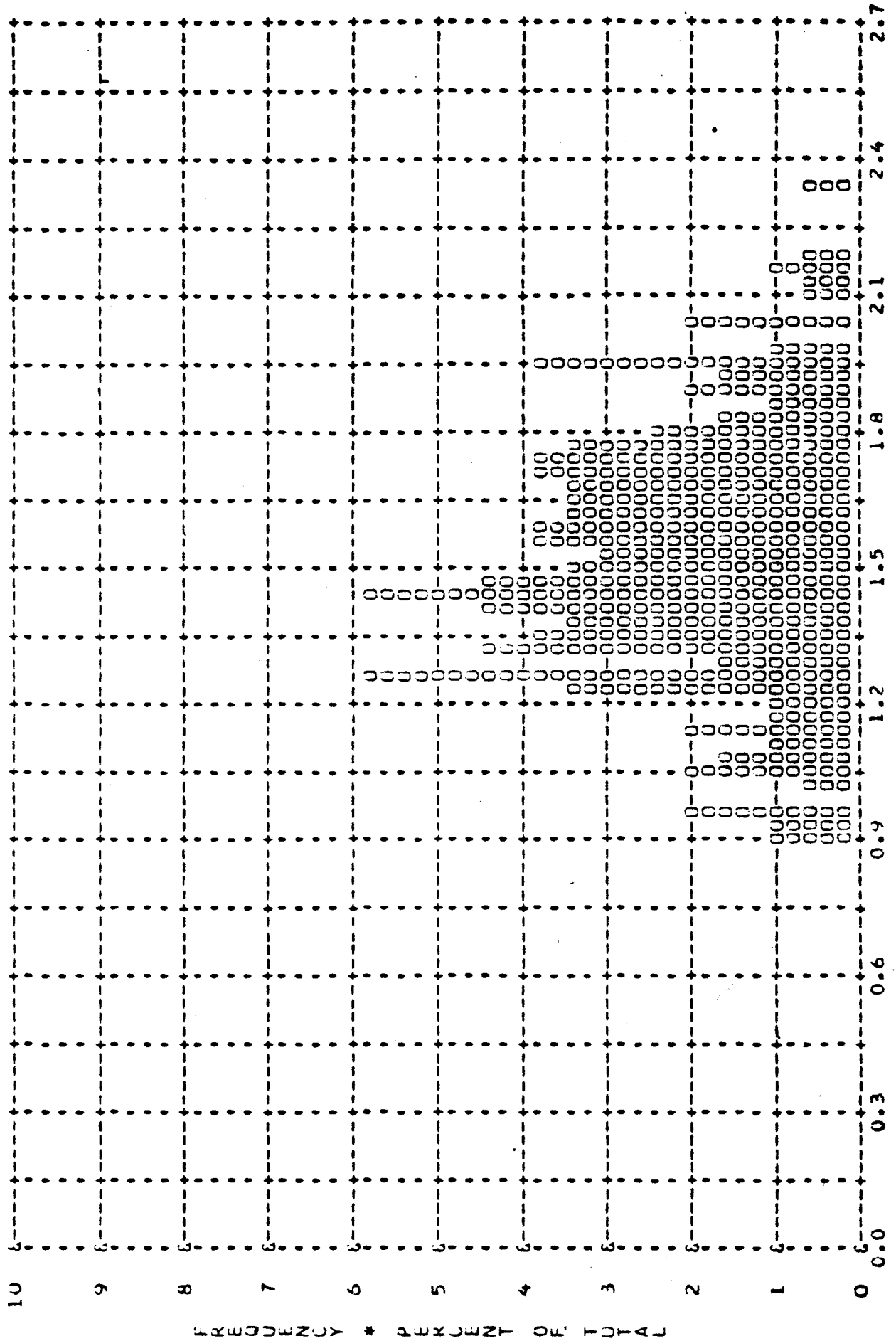
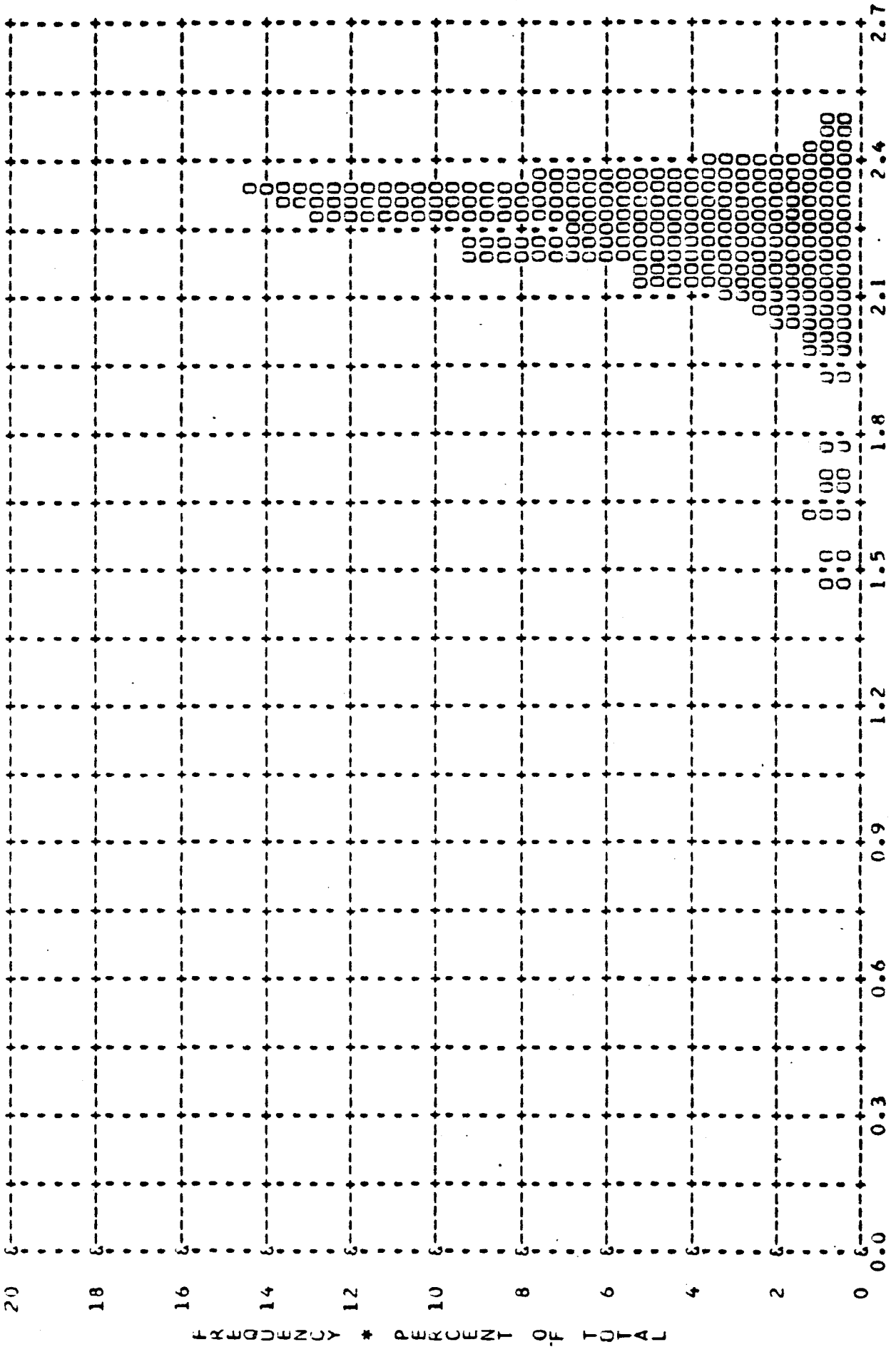


FIGURE A-5

~~TOP SECRET C~~

~~TOP SECRET CA~~

MISSION * 1042-1 * INSTR * FWD * 3/8/67 PLOT OF D MAX * CLOUD * PROCESSING * FULL
AIRTH MEAN * 2.22 * MEDIAN * 2.26 * STD DEV * 0.15 * RANGE * 1.45 TO 2.49 WITH 214 SAMPLES



PICTURE A.6

* DENSITY *

~~TOP SECRET CA~~

MISSION * 1042-1 * INSTR * FWD * 9/8/67 PLOT OF D MIN * TERRAIN * PROCESSING * ALL LEVELS
AIRTH MEAN * 0.63 * MEDIAN * 0.57 * STD DLV * 0.24 * RANGE * 0.33 TO 1.47 WITH 249 SAMPLES

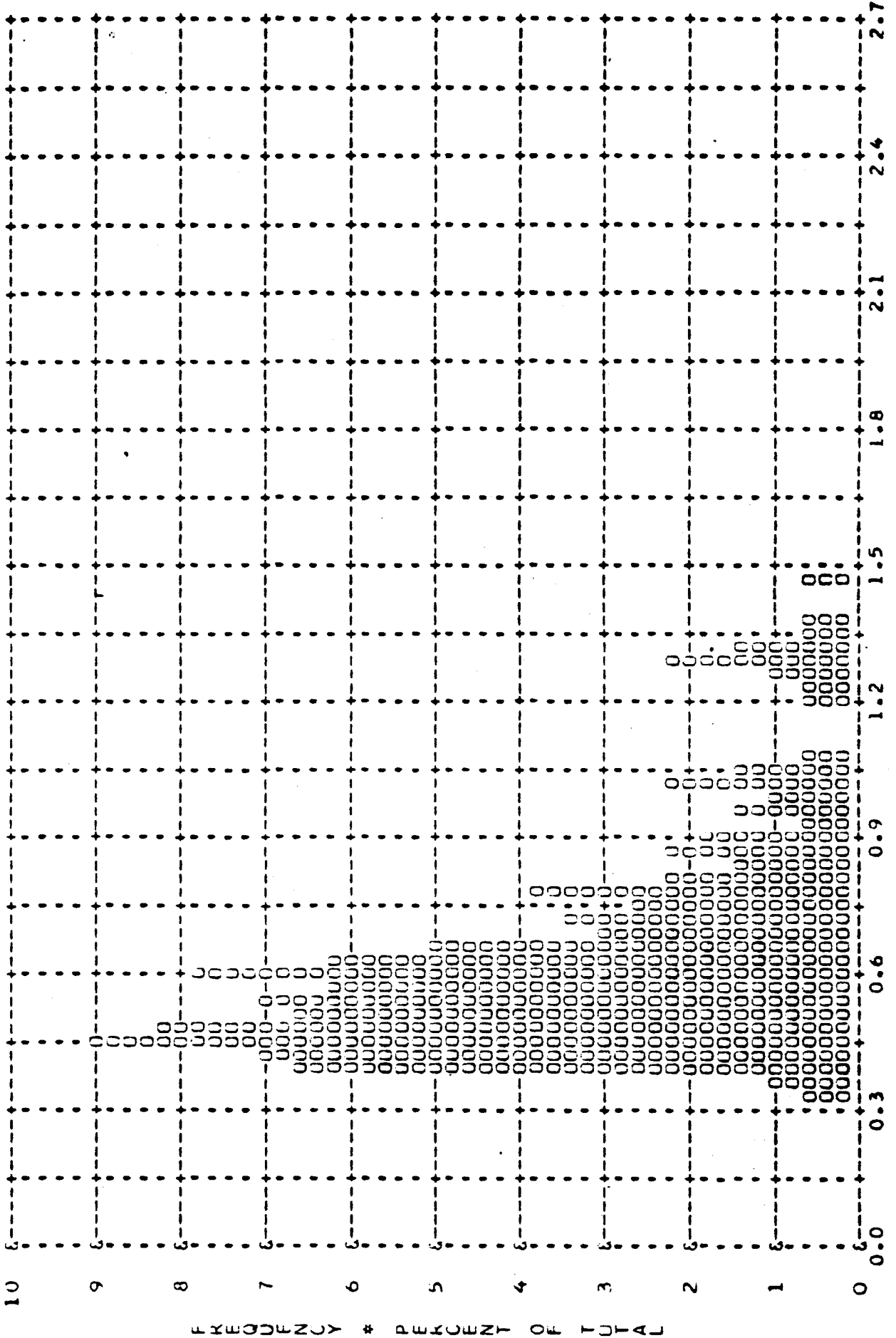


FIGURE A-7

~~TOP SECRET~~ CA

MISSION * 1042-1 * INSTR * FWD * 9/8/67 PLOT OF D MAX * TERRAIN * PROCESSING * ALL LEVELS
AIRTH MEAN * 1.53 * MEDIAN * 1.55 * STD DEV * 0.28 * RANGE * 0.89 TO 2.33 WITH 249 SAMPLES

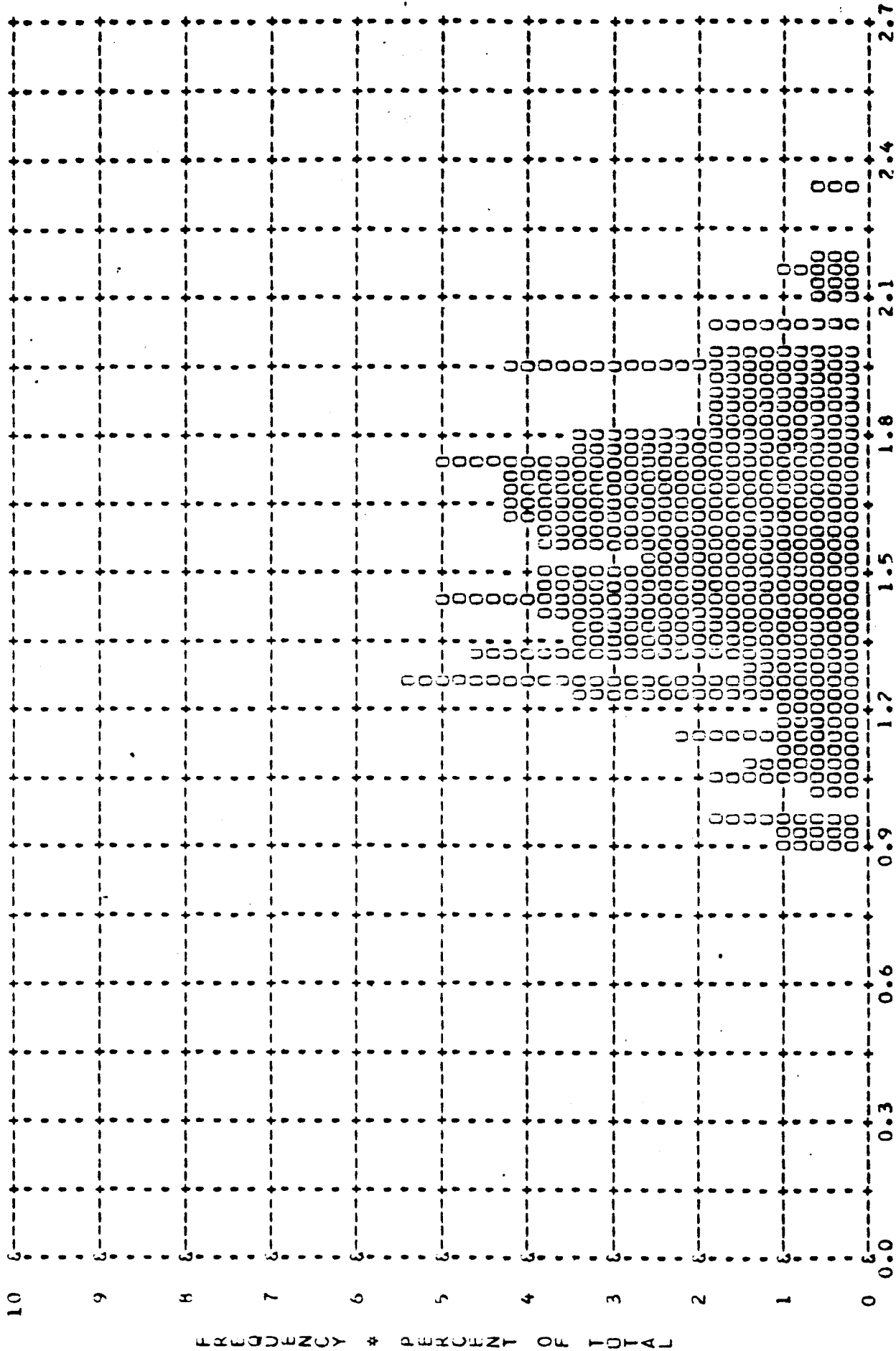
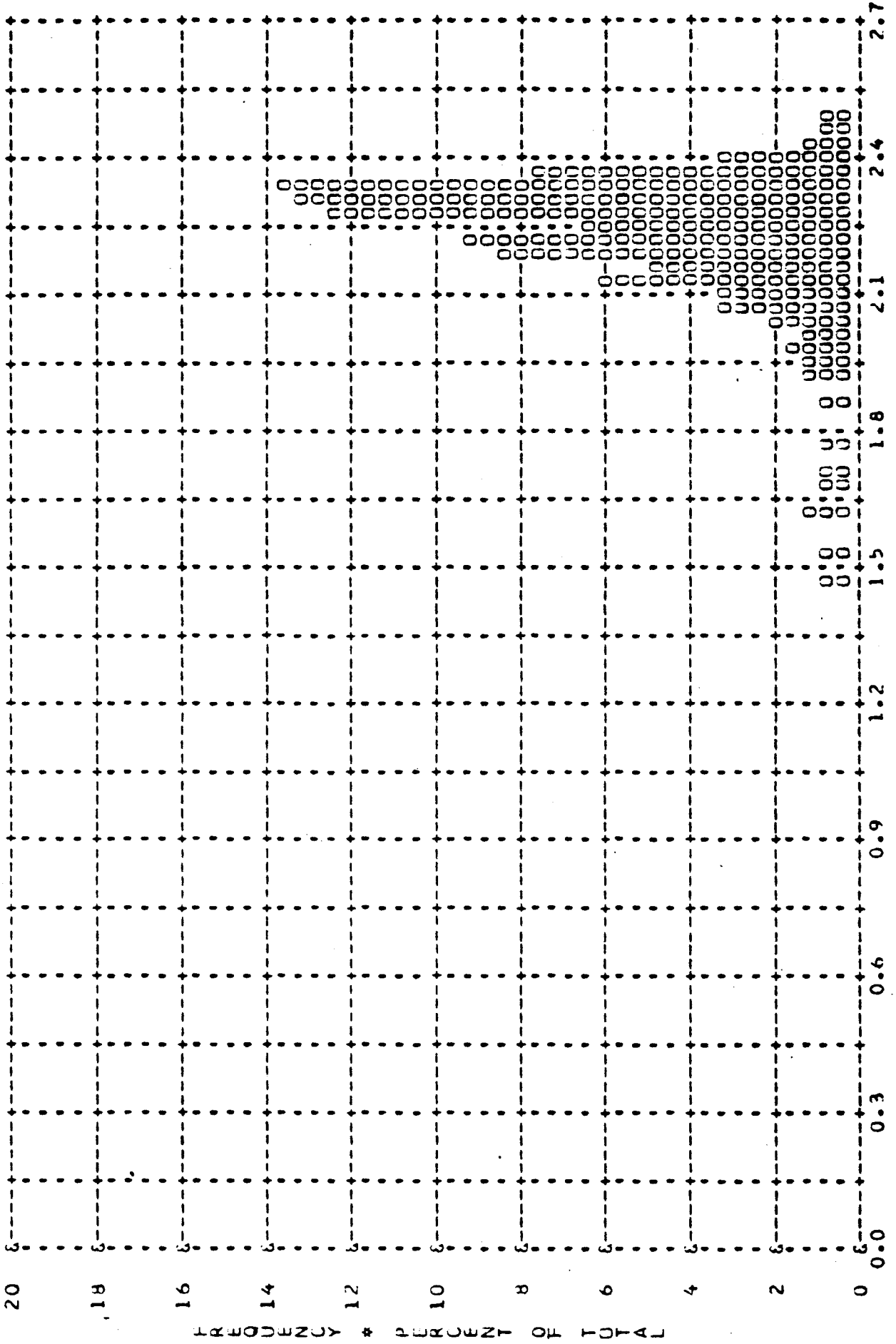


FIGURE A-8

~~TOP SECRET C/~~

MISSION * 1042-1 * INSTR * FWD * 9/8/67 PLOT OF D MAX * CLOUD * PROCESSING * ALL LEVELS
AIRTH MEAN * 2.22 * MEDIAN * 2.25 * SID DEV * 0.15 * RANGE * 1.45 TO 2.49 WITH 230 SAMPLES



* DENSITY *

MISSION * 1042-1 * INSTRUMENT * AFT 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	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	1	0	0	0	0	0	1	0	0
0.15	0	0	0	1	0	0	0	0	0	1	0	0
0.16	0	0	0	2	0	0	0	0	0	2	0	0
0.17	0	0	0	1	0	0	0	0	0	1	0	0
0.18	0	0	0	1	0	0	0	0	0	1	0	0
0.19	0	0	0	1	0	0	0	0	0	1	0	0
0.20	0	0	0	1	0	0	0	0	0	1	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	1	0	0	0	0	0	1	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	1	0	0	1	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	1	0	0	0	0	0	1	0	0
0.38	0	0	0	0	0	0	3	0	0	3	0	0
0.39	0	0	0	0	0	0	2	0	0	2	0	0
0.40	0	0	0	1	0	0	2	0	0	2	0	0
0.41	0	0	0	0	0	0	3	0	0	3	0	0
0.42	0	0	0	2	0	0	5	0	0	5	0	0
0.43	0	0	0	0	0	0	7	0	0	7	0	0
0.44	0	0	0	2	0	0	2	0	0	4	0	0
0.45	0	0	0	0	0	0	3	0	0	3	0	0
0.46	0	0	0	0	0	0	7	0	0	7	0	0
0.47	0	0	0	1	0	0	4	0	0	5	0	0
0.48	0	0	0	2	0	0	7	0	0	9	0	0
0.49	0	0	0	0	0	0	5	0	0	5	0	0
0.50	0	0	0	0	0	0	13	0	0	13	0	0
SUBTOTAL	0	0	0	16	0	0	71	0	0	87	0	0

TABLE A-2

MISSION * 1042-1 * INSTRUMENT * AFT 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM
0.51	0	0	0	2	0	0	5	0	0	7	0	0
0.52	0	0	0	1	0	0	10	0	0	11	0	0
0.53	0	0	0	0	0	0	8	0	0	8	0	0
0.54	0	0	0	1	0	0	5	0	0	6	0	0
0.55	0	0	0	0	0	0	7	0	0	7	0	0
0.56	0	0	0	0	0	0	1	0	0	1	0	0
0.57	0	0	0	0	0	0	3	0	0	3	0	0
0.58	0	0	0	1	0	0	2	0	0	4	0	0
0.59	0	0	0	2	0	0	12	0	0	14	0	0
0.60	0	0	0	0	0	0	5	0	0	5	0	0
0.61	0	0	0	1	0	0	4	1	0	5	1	0
0.62	0	0	0	1	0	0	1	0	0	2	0	0
0.63	0	0	0	0	0	0	4	0	0	5	0	0
0.64	0	0	0	0	0	0	5	0	0	5	0	0
0.65	0	0	0	0	0	0	1	0	0	1	0	0
0.66	0	0	0	0	0	0	1	0	0	1	0	0
0.67	0	0	0	0	0	0	2	0	0	2	0	0
0.68	0	0	0	1	0	0	3	0	0	4	0	0
0.69	0	0	0	1	0	0	2	0	1	3	0	0
0.70	0	0	0	0	0	0	2	0	0	3	0	0
0.71	0	0	0	1	0	0	2	0	0	3	0	0
0.72	0	0	0	1	0	0	2	0	0	3	0	0
0.73	0	0	0	1	0	0	2	0	0	3	0	0
0.74	0	0	0	1	0	0	0	0	0	4	0	0
0.75	0	0	0	1	0	0	0	0	0	1	0	0
0.76	0	0	0	1	0	0	0	0	0	3	0	0
0.77	0	0	0	1	0	0	3	0	0	4	0	0
0.78	0	0	0	0	0	0	5	0	0	5	0	0
0.79	0	0	0	0	0	0	1	0	0	1	0	0
0.80	0	0	0	0	0	0	0	0	0	0	0	0
0.81	0	0	0	0	0	0	0	0	0	0	0	0
0.82	0	0	0	0	0	0	0	0	0	0	0	0
0.83	0	0	0	0	0	0	0	0	0	0	0	0
0.84	0	0	0	2	0	0	1	0	0	3	0	0
0.85	0	0	0	2	0	0	0	0	0	2	0	0
0.86	0	0	0	1	0	0	2	0	0	4	0	0
0.87	0	0	0	1	0	0	1	0	0	2	0	0
0.88	0	0	0	2	0	0	0	0	0	2	0	0
0.89	0	0	0	0	0	0	1	0	0	1	0	0
0.90	0	0	0	0	0	0	1	0	0	0	0	0
0.91	0	0	0	0	0	0	0	0	0	0	0	0
0.92	0	0	0	0	0	0	0	0	0	0	0	0
0.93	0	0	0	2	0	0	2	0	1	4	0	0
0.94	0	0	0	1	0	0	0	0	0	0	0	0
0.95	0	0	0	1	0	0	2	0	0	3	0	0
0.96	0	0	0	2	0	0	0	0	0	2	0	0
0.97	0	0	0	0	0	0	0	0	0	1	0	0
0.98	0	0	0	0	0	0	0	0	0	0	0	0
0.99	0	0	0	1	0	0	1	0	0	1	0	0
1.00	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	34	0	0	118	9	1	152	9	1

TABLE A-2

~~TOP SECRET C~~

MISSION * 1042-1 * INSTRUMENT * AFT 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM
1.01	0	0	0	0	0	0	1	3	0	1	3	0
1.02	0	0	0	0	0	0	0	0	0	0	0	0
1.03	0	0	0	0	0	0	1	0	0	1	0	0
1.04	0	0	0	1	0	0	0	0	0	1	0	0
1.05	0	0	0	3	0	0	0	2	0	3	2	0
1.06	0	0	0	0	0	0	0	1	0	0	1	0
1.07	0	0	0	1	0	0	0	1	0	1	1	0
1.08	0	0	0	0	0	0	0	1	0	0	1	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	1	0	0	1	0	0
1.13	0	0	0	1	0	0	0	0	0	1	0	0
1.14	0	0	0	0	0	0	0	0	0	0	0	0
1.15	0	0	0	1	0	0	0	0	0	1	0	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	2	0	0	0	1	0	2	1	0
1.19	0	0	0	0	1	0	0	2	0	1	3	0
1.20	0	0	0	0	0	0	1	0	0	0	2	0
1.21	0	0	0	0	0	0	0	1	0	0	1	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	1	1	0	0	1	0
1.25	0	0	0	0	0	0	1	4	0	1	4	0
1.26	0	0	0	0	0	0	0	0	0	0	2	0
1.27	0	0	0	0	0	0	0	2	0	0	2	0
1.28	0	0	0	0	0	0	0	1	0	0	1	0
1.29	0	0	0	0	1	0	0	3	0	0	4	0
1.30	0	0	0	0	0	0	0	3	0	0	3	0
1.31	0	0	0	0	0	1	0	1	0	0	1	0
1.32	0	0	0	0	0	0	0	1	0	0	1	0
1.33	0	0	0	0	2	0	0	4	0	0	6	0
1.34	0	0	0	0	0	0	0	7	0	0	7	0
1.35	0	0	0	0	0	0	0	1	0	0	1	0
1.36	0	0	0	0	1	0	0	4	0	0	5	0
1.37	0	0	0	0	2	0	0	2	0	0	4	0
1.38	0	0	0	0	1	0	0	2	0	0	2	0
1.39	0	0	0	0	1	0	0	1	0	0	2	0
1.40	0	0	0	0	1	0	0	2	0	0	3	0
1.41	0	0	0	0	1	0	0	2	0	0	3	0
1.42	0	0	0	0	1	0	0	2	0	0	3	0
1.43	0	0	0	0	1	0	0	4	0	0	3	0
1.44	0	0	0	0	2	0	0	3	0	0	5	0
1.45	0	0	0	0	3	0	0	3	0	0	6	0
1.46	0	0	0	0	1	0	0	6	0	0	3	0
1.47	0	0	0	0	0	0	0	3	0	0	3	0
1.48	0	0	0	0	0	0	0	5	0	0	5	0
1.49	0	0	0	0	0	0	0	4	0	0	4	0
1.50	0	0	0	0	0	0	0	3	0	0	3	0
SUBTOTAL	0	0	0	9	19	1	6	91	2	15	110	3

~~TOP SECRET C~~

TABLE A-2

MISSION * 1042-1 * INSTRUMENT * AFT 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM
1.51	0	0	0	0	0	0	0	4	0	0	4	0
1.52	0	0	0	0	0	0	0	4	0	0	4	0
1.53	0	0	0	0	1	1	0	7	0	0	8	1
1.54	0	0	0	0	1	0	0	2	0	0	3	0
1.55	0	0	0	0	1	0	0	1	0	0	2	0
1.56	0	0	0	0	0	0	0	5	0	0	5	0
1.57	0	0	0	0	1	1	0	4	0	0	5	1
1.58	0	0	0	0	0	0	0	0	0	0	0	0
1.59	0	0	0	0	0	0	0	2	0	0	2	0
1.60	0	0	0	0	2	0	0	4	0	0	5	0
1.61	0	0	0	0	0	0	0	5	0	0	6	0
1.62	0	0	0	0	1	1	0	3	0	0	4	0
1.63	0	0	0	0	1	1	0	2	0	0	3	1
1.64	0	0	0	0	2	0	0	3	0	0	5	0
1.65	0	0	0	0	2	1	0	0	0	0	2	1
1.66	0	0	0	0	2	2	0	2	0	0	4	0
1.67	0	0	0	0	3	0	0	2	0	0	5	0
1.68	0	0	0	0	2	1	0	1	1	0	3	1
1.69	0	0	0	0	0	0	0	1	0	0	1	0
1.70	0	0	0	0	0	0	0	1	0	0	1	0
1.71	0	0	0	0	2	0	0	1	2	0	4	0
1.72	0	0	0	0	2	2	1	1	0	0	3	2
1.73	0	0	0	0	0	3	0	1	3	0	3	0
1.74	0	0	0	0	3	0	0	1	0	0	4	0
1.75	0	0	0	0	2	1	0	1	0	0	3	1
1.76	0	0	0	0	0	1	0	0	0	0	0	1
1.77	0	0	0	0	0	0	0	3	0	0	3	0
1.78	0	0	0	0	0	0	0	3	0	0	3	0
1.79	0	0	0	0	0	0	0	3	0	0	3	0
1.80	0	0	0	0	1	2	0	0	0	0	1	2
1.81	0	0	0	0	1	1	0	0	0	0	1	1
1.82	0	0	0	0	1	1	0	0	1	1	2	1
1.83	0	0	0	0	1	1	0	1	1	2	2	1
1.84	0	0	0	0	1	1	0	1	2	0	2	0
1.85	0	0	0	0	1	1	0	2	0	0	3	0
1.86	0	0	0	0	1	1	0	2	0	0	3	0
1.87	0	0	0	0	0	0	0	2	0	0	2	0
1.88	0	0	0	0	2	0	0	1	1	1	3	0
1.89	0	0	0	0	0	0	0	1	1	1	1	0
1.90	0	0	0	0	0	1	0	3	0	0	3	1
1.91	0	0	0	0	0	1	0	0	0	0	0	1
1.92	0	0	0	0	0	0	0	0	0	0	0	0
1.93	0	0	0	0	0	2	0	3	1	0	3	3
1.94	0	0	0	0	0	0	0	2	2	0	2	2
1.95	0	0	0	0	0	1	0	0	3	0	0	2
1.96	0	0	0	0	1	1	0	0	2	1	1	3
1.97	0	0	0	0	0	0	0	0	2	1	0	3
1.98	0	0	0	0	0	0	0	1	2	0	1	2
1.99	0	0	0	0	0	0	0	0	1	0	0	1
2.00	0	0	0	0	0	0	0	1	0	0	1	0
SUBTOTAL	0	0	0	0	40	18	0	91	18	0	131	36

TABLE A-2

~~TOP SECRET C~~

MISSION * 1042-1 * INSTRUMENT * AFT 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM
2.01	0	0	0	0	0	0	0	0	3	0	0	3
2.02	0	0	0	0	0	0	0	0	0	0	0	0
2.03	0	0	0	0	0	0	1	0	0	0	0	0
2.04	0	0	0	0	0	0	0	1	5	0	1	5
2.05	0	0	0	0	0	0	0	0	1	0	0	1
2.06	0	0	0	0	0	0	0	0	1	0	0	1
2.07	0	0	0	0	0	0	0	0	1	0	0	1
2.08	0	0	0	0	0	0	0	0	3	0	0	3
2.09	0	0	0	0	0	0	0	0	1	0	0	1
2.10	0	0	0	0	0	0	0	0	6	0	0	6
2.11	0	0	0	0	0	0	0	0	3	0	0	3
2.12	0	0	0	0	0	0	1	0	4	0	0	4
2.13	0	0	0	0	0	0	0	0	2	0	0	2
2.14	0	0	0	0	0	0	1	0	2	0	0	2
2.15	0	0	0	0	0	0	0	0	6	0	0	6
2.16	0	0	0	0	0	0	0	0	4	0	0	4
2.17	0	0	0	0	0	0	0	0	3	0	0	3
2.18	0	0	0	0	0	0	0	0	2	0	0	2
2.19	0	0	0	0	0	0	3	1	7	0	0	10
2.20	0	0	0	0	0	0	1	1	9	0	0	10
2.21	0	0	0	0	0	0	1	1	7	0	0	8
2.22	0	0	0	0	0	0	0	0	4	0	0	4
2.23	0	0	0	0	0	0	0	0	8	0	0	8
2.24	0	0	0	0	0	0	0	0	7	0	0	7
2.25	0	0	0	0	0	0	0	0	4	0	0	4
2.26	0	0	0	0	0	0	0	0	5	0	0	5
2.27	0	0	0	0	0	0	0	0	1	0	0	1
2.28	0	0	0	0	0	0	0	0	1	0	0	1
2.29	0	0	0	0	0	0	0	0	2	0	0	2
2.30	0	0	0	0	0	0	0	0	9	0	0	9
2.31	0	0	0	0	0	0	0	0	1	0	0	1
2.32	0	0	0	0	0	0	0	0	5	0	0	5
2.33	0	0	0	0	0	0	0	0	3	0	0	3
2.34	0	0	0	0	0	0	0	0	5	0	0	5
2.35	0	0	0	0	0	0	0	0	8	0	0	8
2.36	0	0	0	0	0	0	0	0	4	0	0	4
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	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	1	0	0	1
2.50	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	0	13	0	4	181	0	4	194

~~TOP SECRET C~~

TABLE A-2

~~TOP SECRET C~~ [REDACTED]

MISSION * 1042-1 * INSTRUMENT * AFT 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM
2.51	0	0	0	0	0	0	0	0	0	0	0	0
2.52	0	0	0	0	0	0	0	0	0	0	0	0
2.53	0	0	0	0	0	0	0	0	0	0	0	0
2.54	0	0	0	0	0	0	0	0	0	0	0	0
2.55	0	0	0	0	0	0	0	0	0	0	0	0
2.56	0	0	0	0	0	0	0	0	0	0	0	0
2.57	0	0	0	0	0	0	0	0	0	0	0	0
2.58	0	0	0	0	0	0	0	0	0	0	0	0
2.59	0	0	0	0	0	0	0	0	0	0	0	0
2.60	0	0	0	0	0	0	0	0	0	0	0	0
2.61	0	0	0	0	0	0	0	0	0	0	0	0
2.62	0	0	0	0	0	0	0	0	0	0	0	0
2.63	0	0	0	0	0	0	0	0	0	0	0	0
2.64	0	0	0	0	0	0	0	0	0	0	0	0
2.65	0	0	0	0	0	0	0	0	0	0	0	0
2.66	0	0	0	0	0	0	0	0	0	0	0	0
2.67	0	0	0	0	0	0	0	0	0	0	0	0
2.68	0	0	0	0	0	0	0	0	0	0	0	0
2.69	0	0	0	0	0	0	0	0	0	0	0	0
2.70	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	59	59	32	195	195	202	254	254	234

~~TOP SECRET C~~ [REDACTED]

TABLE A-2

TOP SECRET - C/

MISSION * 1042-1 * INSTR * AFT * 9/8/67 PLOT OF D MIN * TERRAIN * PROCESSING * INTERMEDIATE
AIRTH MEAN * 0.70 * MEDIAN * 0.74 * STD DEV * 0.14 TO 1.17 WITH 59 SAMPLES

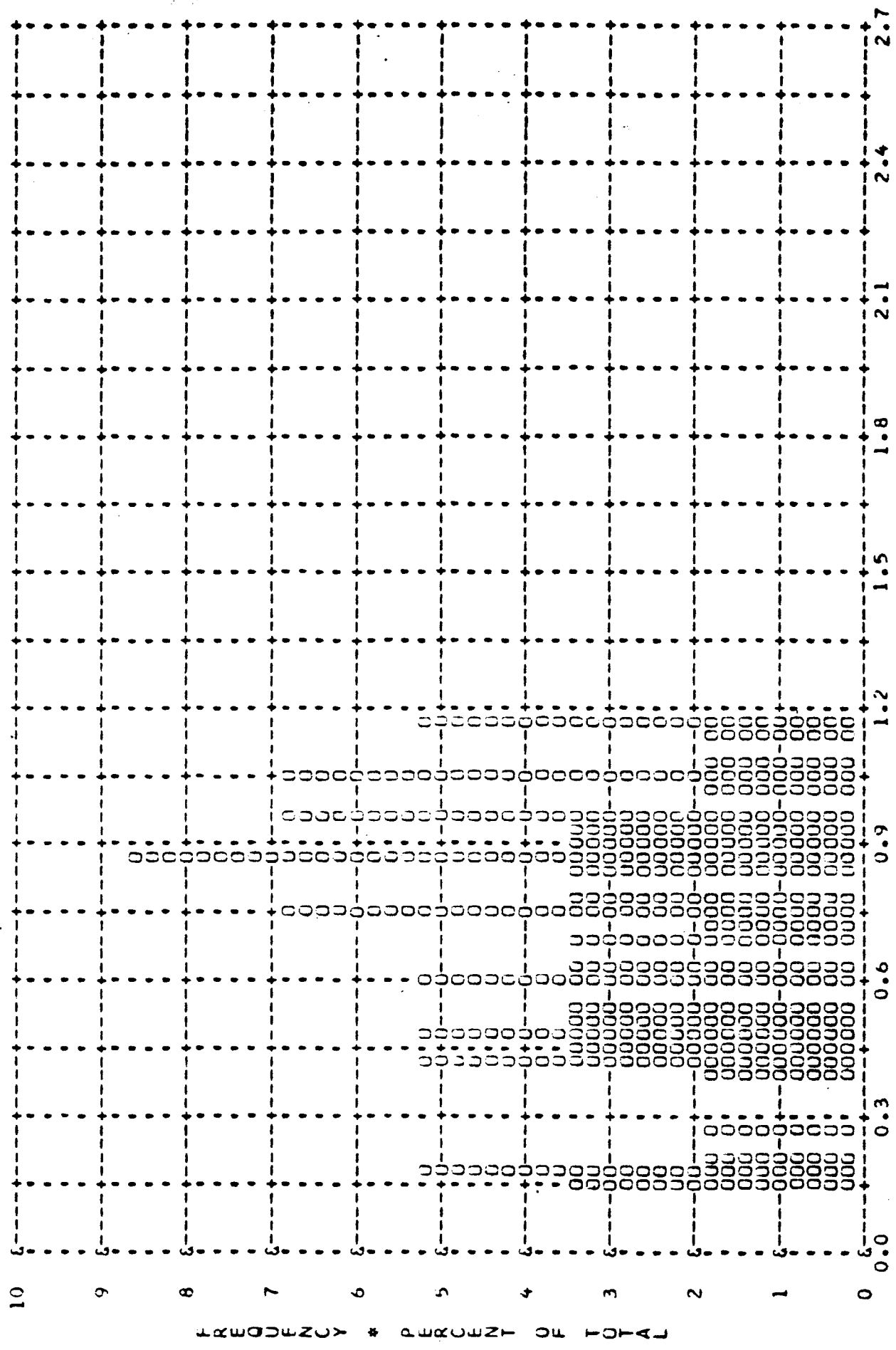
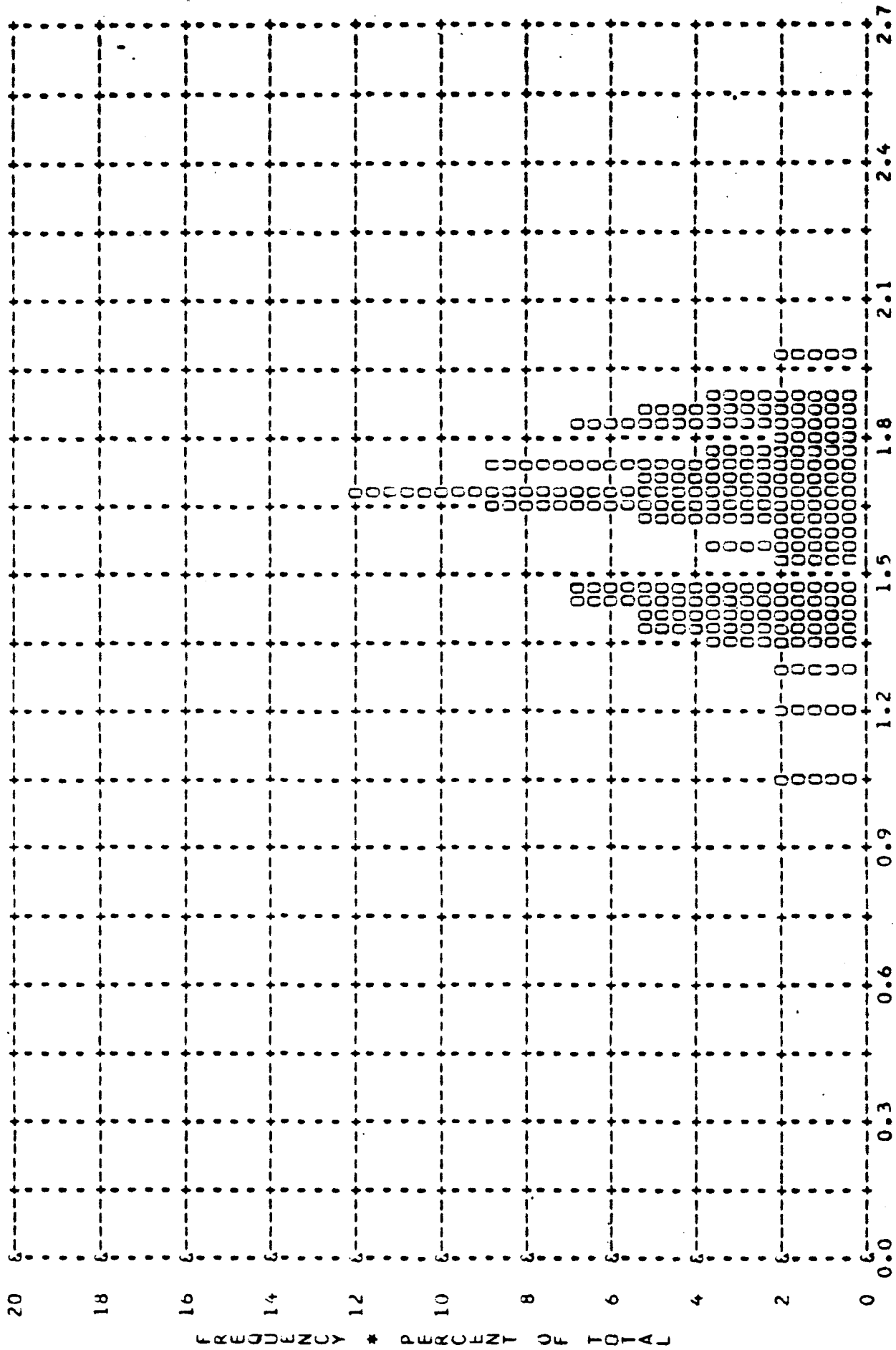


FIGURE A-10

TOP SECRET - C/

MISSION * 1042-1 * INSTR * AFT * 9/8/67 PLOT OF 0 MAX * TERRAIN * PROCESSING * INTERMEDIATE
AIRTH MEAN * 1.60 * MEDIAN * 1.65 * STD DEV * 0.19 * RANGE * 1.03 TO 1.96 WITH 59 SAMPLES



~~TOP SECRET C/~~

MISSION * 1042-1 * INSTR * AFT * 9/8/67 PLOT OF D MAX * CLOUD * PROCESSING * INTERMEDIATE
AIRTH MEAN * 1.91 * MEDIAN * 1.93 * STD DEV * 0.24 * RANGE * 1.32 TO 2.21 WITH 32 SAMPLES

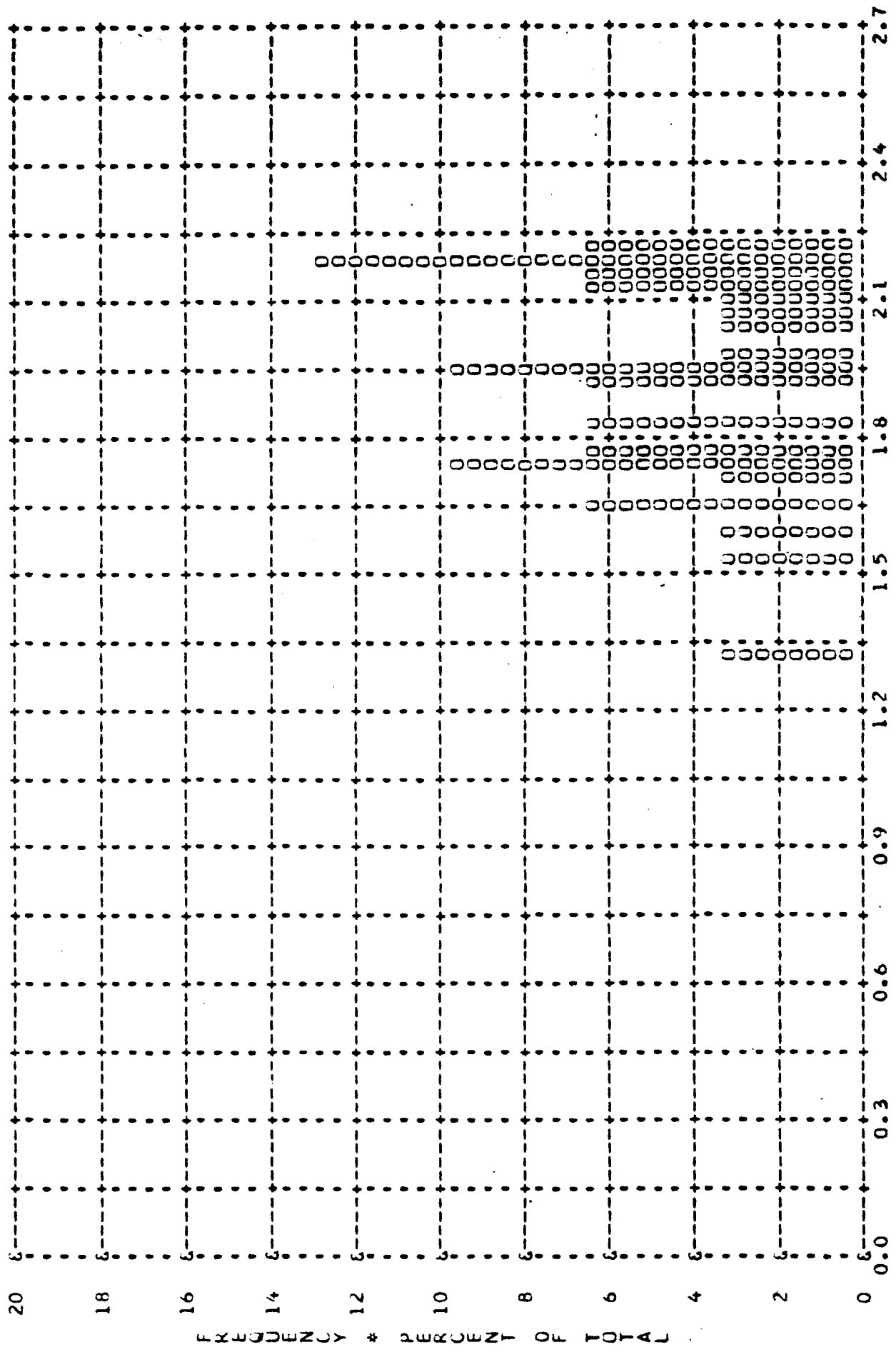


FIGURE A-12

~~TOP SECRET C/~~

~~TOP SECRET CA~~

MISSION * 1042-1 * INSTR * AFT * 9/8/67 PLOT OF D MIN * TERRAIN * PROCESSING * FULL
AIRTH MEAN * 0.59 * MEDIAN * 0.54 * STD DEV * 0.18 * RANGE * 0.28 TU 1.44 WITH 195 SAMPLES

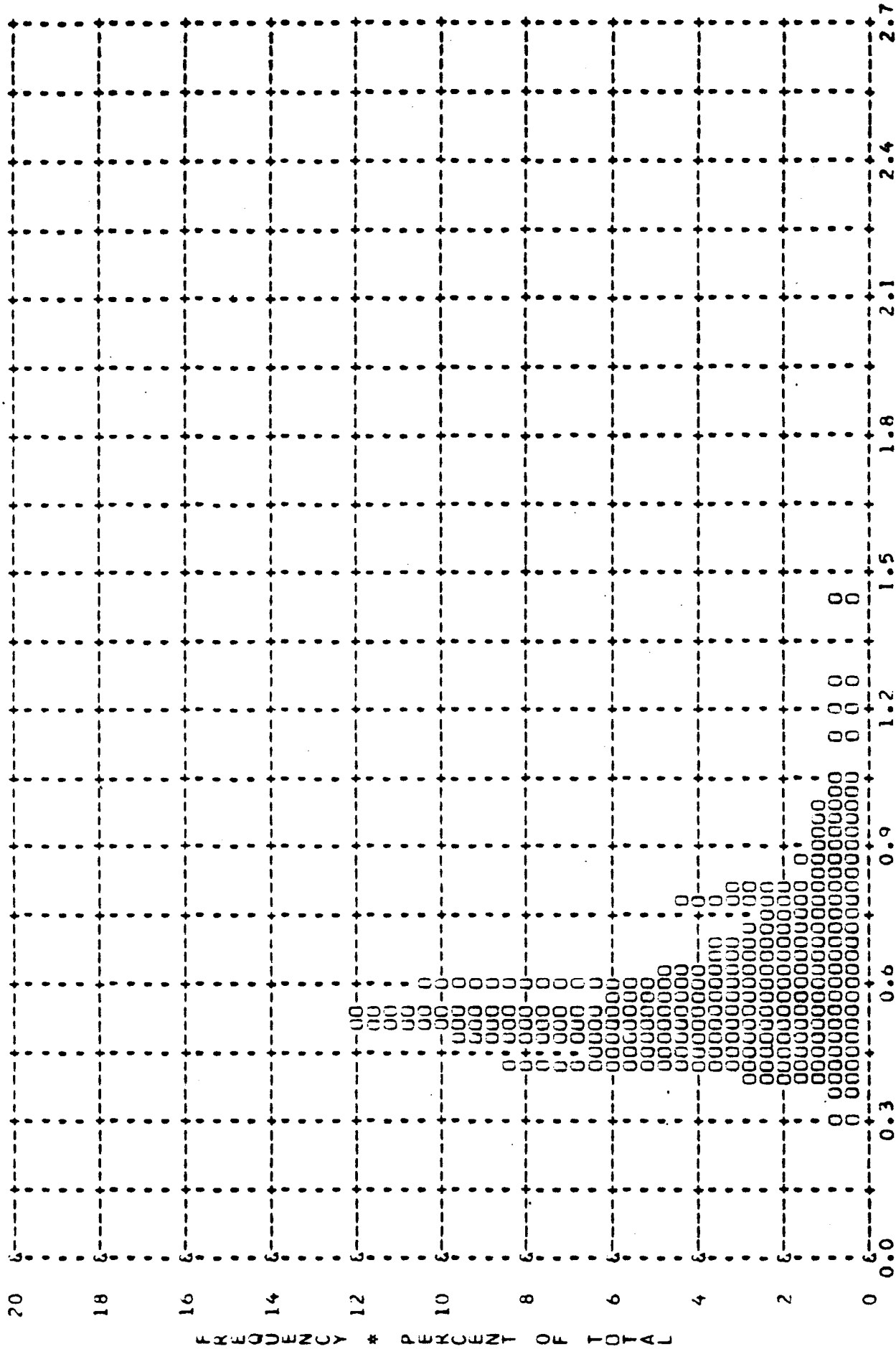


FIGURE A-13

~~TOP SECRET CA~~

MISSION * 1042-1 * INSTR * AIT * 9/8/67 PLOT OF D MAX * TERRAIN * PROCESSING * FULL
AIRTH MEAN * 1.49 * MEDIAN * 1.50 * STD DEV * 0.29 * RANGE * 0.61 TO 2.31 WITH 195 SAMPLES

	0.0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7
10										
9										
8										
7										
6										
5										
4										
3										
2										
1										
0										

FREQUENCY * PERCENT OF TOTAL

* DENSITY *

FIGURE A-14

MISSION * 1042-1 * INSTR * AFI * 9/8/67 PLOT OF D MAX * CLOUD * PROCESSING * FULL
AIRTH MEAN * 2.19 * MEDIAN * 2.23 * STD DEV * 0.18 * RANGE * 0.93 TU 2.49 WITH 202 SAMPLES

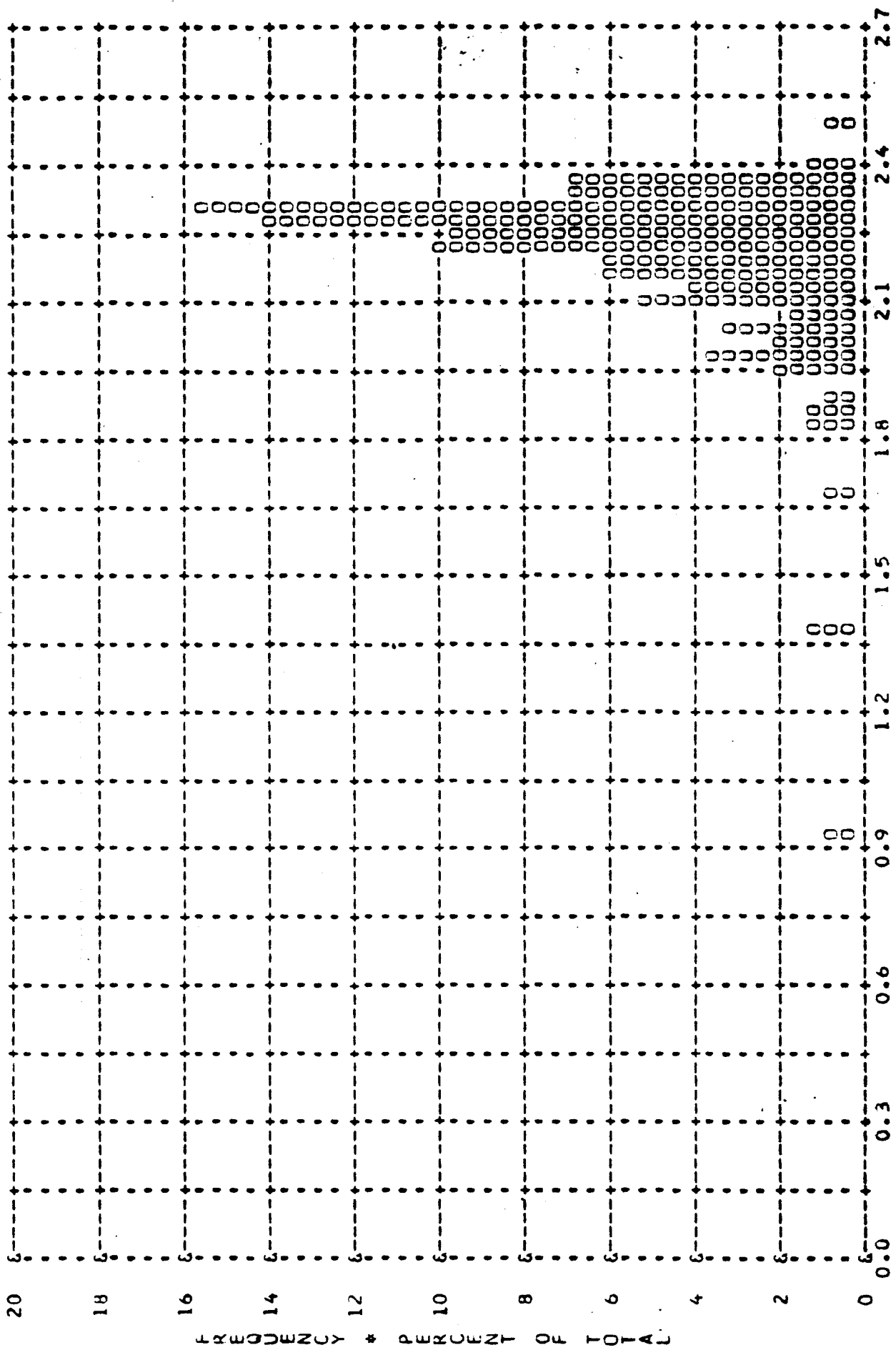


FIGURE A-15

MISSION # 1042-1 * INSTR # AFT * 9/8/67 PLOT OF D MIN * TERRAIN * PROCESSING * ALL LEVELS
AIRTH MEAN # 0.62 * MEDIAN # 0.57 * STD DEV # 0.21 * RANGE # 0.14 TO 1.44 WITH 254 SAMPLES

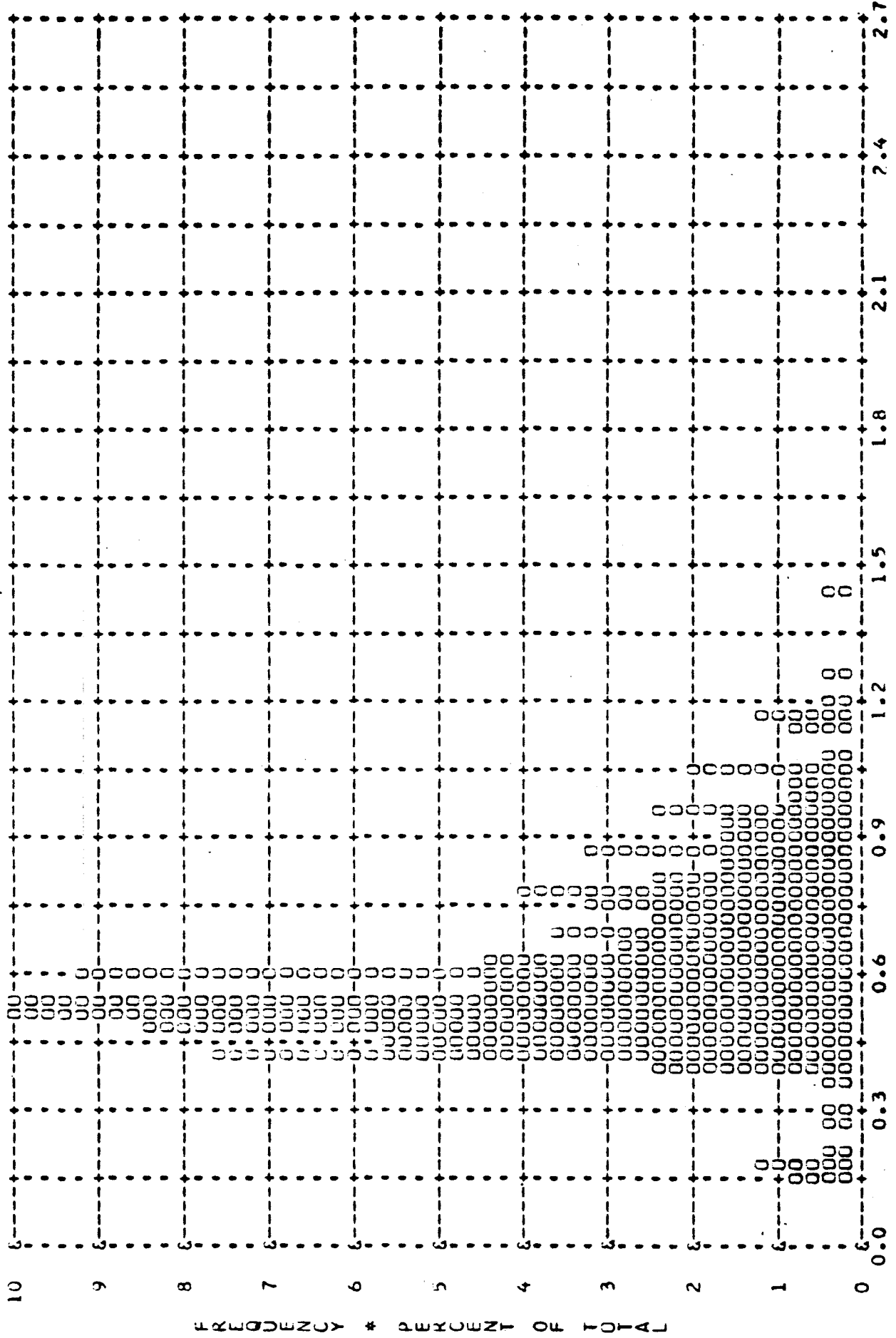


FIGURE A-16

Notice of Missing Page(s)

Page 112 of the original document was missing.

MISSION * 1042-1 * INSTR * AFT * 9/8/67 PLOT OF D MAX * CLOUD * PROCESSING * ALL LEVELS
AIRTH MEAN * 2.15 * MEDIAN * 2.21 * STD DEV * 0.21 * RANGE * 0.93 TO 2.49 WITH 234 SAMPLES

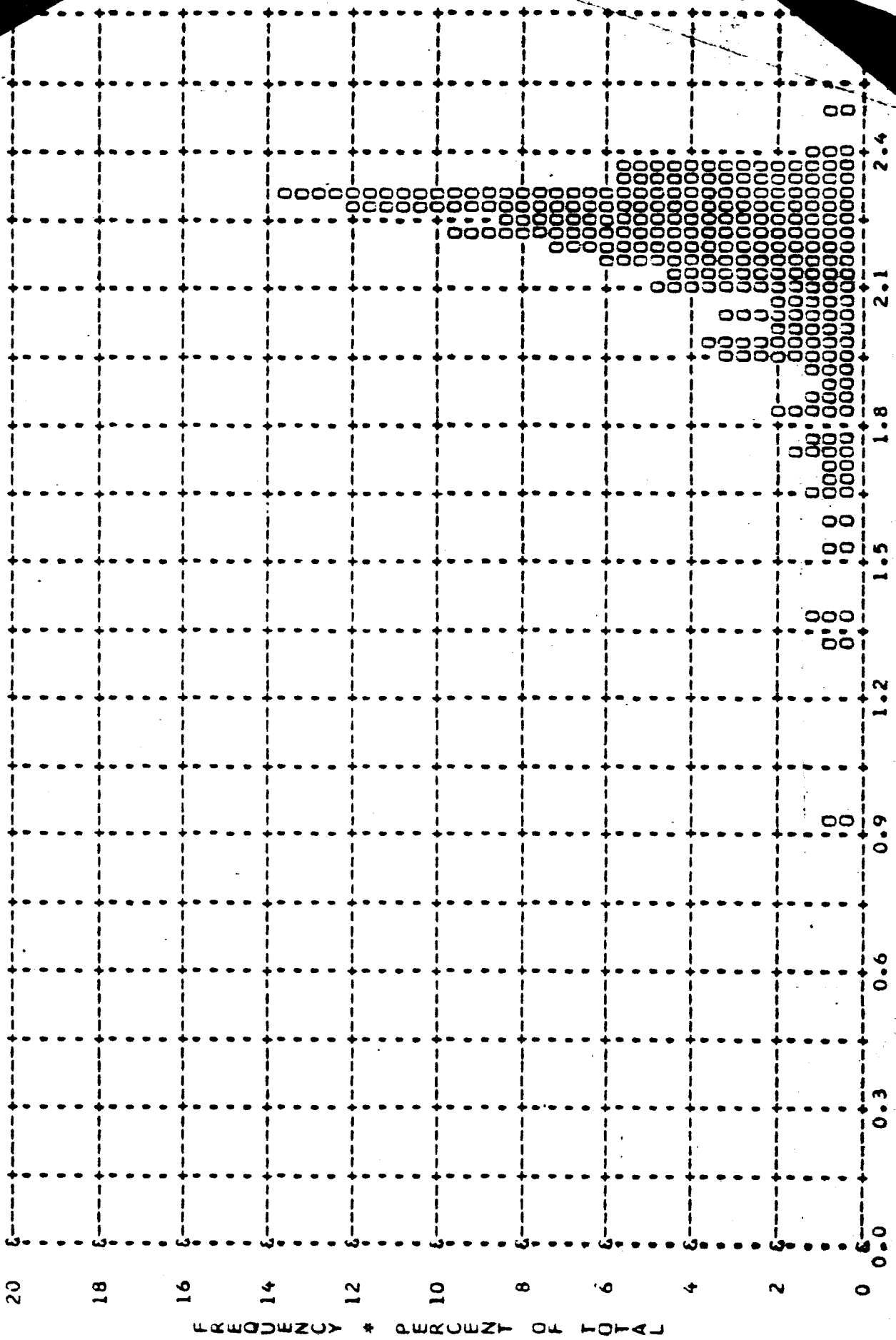


FIGURE A-18

~~TOP SECRET C~~ [REDACTED]

MISSION * 1042-2 * INSTRUMENT * FWD 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	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	1	0	0	0	0	0	1	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	1	0	0	1	0	0
0.18	0	0	0	0	0	0	1	0	0	1	0	0
0.19	0	0	0	0	0	0	0	0	0	0	0	0
0.20	0	0	0	0	0	0	1	0	0	1	0	0
0.21	0	0	0	0	0	0	1	0	0	1	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	1	0	0	1	0	0
0.27	0	0	0	0	0	0	0	0	0	0	0	0
0.28	0	0	0	0	0	0	2	0	0	2	0	0
0.29	0	0	0	0	0	0	3	0	0	3	0	0
0.30	0	0	0	0	0	0	2	0	0	2	0	0
0.31	0	0	0	0	0	0	3	0	0	3	0	0
0.32	0	0	0	0	0	0	4	0	0	4	0	0
0.33	0	0	0	0	0	0	0	0	0	0	0	0
0.34	0	0	0	0	0	0	6	0	0	6	0	0
0.35	0	0	0	0	0	0	5	0	0	5	0	0
0.36	0	0	0	0	0	0	9	0	0	9	0	0
0.37	0	0	0	0	0	0	5	0	0	5	0	0
0.38	0	0	0	0	0	0	5	0	0	5	0	0
0.39	0	0	0	0	0	0	5	0	0	5	0	0
0.40	0	0	0	0	0	0	4	0	0	4	0	0
0.41	0	0	0	1	0	0	4	0	0	5	0	0
0.42	0	0	0	0	0	0	4	0	0	1	0	0
0.43	0	0	0	0	0	0	9	0	0	6	0	0
0.44	0	0	0	0	0	0	6	0	0	6	0	0
0.45	0	0	0	0	0	0	5	0	0	5	0	0
0.46	0	0	0	0	0	0	8	0	0	8	0	0
0.47	0	0	0	2	0	0	6	0	0	4	0	0
0.48	0	0	0	0	0	0	4	0	0	4	0	0
0.49	0	0	0	0	0	0	5	0	0	5	0	0
0.50	0	0	0	0	0	0	4	0	0	4	0	0
SUBTOTAL	0	0	0	5	0	0	123	0	1	128	0	1

~~TOP SECRET C~~ [REDACTED]

TABLE A-3

MISSION * 1042-2 * INSTRUMENT * FWD 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM
0.51	0	0	0	0	0	0	4	0	0	4	0	0
0.52	0	0	0	0	0	0	4	1	0	4	1	0
0.53	0	0	0	0	0	0	3	0	0	3	0	0
0.54	0	0	0	2	0	0	3	0	0	3	0	0
0.55	0	0	0	0	0	0	2	0	0	2	0	0
0.56	0	0	0	0	0	0	2	0	0	2	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	1	0	0	2	0	0	2	0	0
0.60	0	0	0	0	0	0	2	0	0	2	0	0
0.61	0	0	0	2	0	0	1	1	0	3	1	0
0.62	0	0	0	0	0	0	4	0	0	4	0	0
0.63	0	0	0	0	0	0	1	1	0	1	1	0
0.64	0	0	0	0	0	0	1	1	0	1	1	0
0.65	0	0	0	0	0	0	1	1	0	1	1	0
0.66	0	0	0	0	0	0	1	0	0	1	0	0
0.67	0	0	0	0	0	0	1	1	0	1	1	0
0.68	0	0	0	1	0	0	1	1	0	2	1	0
0.69	0	0	0	1	0	0	1	1	0	2	1	0
0.70	0	0	0	0	0	0	1	0	0	1	0	0
0.71	0	0	0	1	0	0	2	0	0	2	0	0
0.72	0	0	0	1	0	0	3	0	0	4	0	0
0.73	0	0	0	1	0	0	0	0	0	1	0	0
0.74	0	0	0	1	0	0	1	0	0	2	0	0
0.75	0	0	0	1	0	0	1	1	0	1	1	0
0.76	0	0	0	0	0	0	1	1	0	1	1	0
0.77	0	0	0	0	0	0	1	0	0	1	0	0
0.78	0	0	0	1	0	0	0	0	0	3	0	0
0.79	0	0	0	1	0	0	2	1	0	3	1	0
0.80	0	0	0	0	0	0	1	0	0	1	0	0
0.81	0	0	0	1	0	0	2	0	0	3	0	0
0.82	0	0	0	0	0	0	0	1	0	0	1	0
0.83	0	0	0	0	0	0	0	1	0	0	1	0
0.84	0	0	0	0	0	0	0	1	0	0	1	0
0.85	0	0	0	0	0	0	2	1	0	2	1	0
0.86	0	0	0	0	0	0	2	0	0	2	0	0
0.87	0	0	0	0	0	0	0	1	0	0	1	0
0.88	0	0	0	1	0	0	1	0	0	2	0	0
0.89	0	0	0	0	0	0	0	0	0	0	0	0
0.90	0	0	0	0	0	0	0	2	0	0	2	0
0.91	0	0	0	2	0	0	0	2	0	3	2	0
0.92	0	0	0	0	0	0	1	5	0	1	5	0
0.93	0	0	0	0	0	0	1	1	0	1	1	0
0.94	0	0	0	0	0	0	1	1	0	1	1	0
0.95	0	0	0	0	0	0	1	1	0	1	1	0
0.96	0	0	0	1	1	0	2	0	0	3	1	0
0.97	0	0	0	1	0	0	0	2	0	1	2	0
0.98	0	0	0	0	0	0	0	0	0	0	0	0
0.99	0	0	0	0	0	0	0	0	0	0	0	0
1.00	0	0	0	0	0	0	1	0	0	1	0	0
SUBTOTAL	0	0	0	17	1	0	73	25	1	90	26	1

TABLE A-3

~~TOP SECRET C~~ [REDACTED]

MISSION * 1042-2 * INSTRUMENT * FWD 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM
1.01	0	0	0	0	0	0	1	0	0	1	0	0
1.02	0	0	0	0	0	0	2	1	0	2	1	0
1.03	0	0	0	0	0	0	1	0	0	1	0	0
1.04	0	0	0	0	0	0	0	2	0	0	2	0
1.05	0	0	0	0	0	0	0	4	0	0	4	0
1.06	0	0	0	0	0	0	0	2	0	0	2	0
1.07	0	0	0	0	0	0	0	2	0	0	2	0
1.08	0	0	0	1	0	0	1	3	0	2	3	0
1.09	0	0	0	0	0	0	0	1	1	0	1	1
1.10	0	0	0	0	0	0	0	1	0	0	1	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	3	0	0	3	0
1.14	0	0	0	0	0	0	0	2	0	0	2	0
1.15	0	0	0	0	0	0	0	2	0	0	2	0
1.16	0	0	0	0	0	0	0	2	0	0	2	0
1.17	0	0	0	0	0	0	1	0	0	1	0	0
1.18	0	0	0	0	0	0	0	2	0	0	2	0
1.19	0	0	0	0	0	0	0	0	0	0	0	0
1.20	0	0	0	0	0	0	0	1	0	0	1	0
1.21	0	0	0	0	0	0	0	2	0	0	2	0
1.22	0	0	0	0	0	0	0	1	0	0	1	0
1.23	0	0	0	0	0	0	0	0	0	0	0	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	1	0	0	0	2	0	1	2	0
1.27	0	0	0	0	0	0	0	0	0	0	0	0
1.28	0	0	0	0	1	0	0	2	0	0	2	0
1.29	0	0	0	0	0	0	0	2	0	0	2	0
1.30	0	0	0	0	0	0	0	2	0	0	2	0
1.31	0	0	0	0	1	0	0	1	0	0	1	0
1.32	0	0	0	0	0	0	0	0	0	0	0	0
1.33	0	0	0	0	0	0	0	2	0	0	2	0
1.34	0	0	0	0	0	0	0	2	0	0	2	0
1.35	0	0	0	0	0	0	0	0	0	0	0	0
1.36	0	0	0	0	1	0	0	4	0	0	5	0
1.37	0	0	0	0	0	0	0	2	0	0	2	0
1.38	0	0	0	0	0	0	0	2	0	0	2	0
1.39	0	0	0	0	0	0	0	2	0	0	2	0
1.40	0	0	0	0	0	0	0	0	1	0	0	1
1.41	0	0	0	0	0	0	0	2	0	0	2	0
1.42	0	0	0	0	0	0	0	0	0	0	0	0
1.43	0	0	0	0	0	0	0	3	0	0	3	0
1.44	0	0	0	0	0	0	0	1	0	0	1	0
1.45	0	0	0	0	1	0	0	0	0	0	0	0
1.46	0	0	0	0	1	0	0	4	0	0	5	0
1.47	0	0	0	0	0	1	0	1	0	0	1	0
1.48	0	0	0	0	0	0	0	3	0	0	4	0
1.49	0	0	0	0	1	0	0	3	0	0	4	0
1.50	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	2	5	1	6	73	2	8	78	3

~~TOP SECRET C~~ [REDACTED]

TABLE A-3

MISSION * 1042-2 * INSTRUMENT * FWD 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM
1.51	0	0	0	0	0	0	0	3	0	0	3	0
1.52	0	0	0	0	2	0	0	1	0	0	1	0
1.53	0	0	0	0	0	0	0	1	0	0	1	0
1.54	0	0	0	0	0	0	0	2	0	0	2	0
1.55	0	0	0	0	0	0	0	1	0	0	1	0
1.56	0	0	0	0	0	0	0	2	0	0	2	1
1.57	0	0	0	0	1	0	0	1	0	0	2	0
1.58	0	0	0	0	0	0	0	5	0	0	5	0
1.59	0	0	0	0	3	0	0	4	0	0	6	0
1.60	0	0	0	0	1	0	0	5	1	0	1	0
1.61	0	0	0	0	0	0	0	5	0	0	3	0
1.62	0	0	0	0	1	0	0	2	1	0	1	0
1.63	0	0	0	0	1	0	0	2	0	0	3	0
1.64	0	0	0	0	1	0	0	4	0	0	5	0
1.65	0	0	0	0	0	0	0	6	0	0	6	0
1.66	0	0	0	0	2	0	0	2	0	0	4	0
1.67	0	0	0	0	0	0	0	0	0	0	0	0
1.68	0	0	0	0	1	0	0	3	1	0	4	0
1.69	0	0	0	0	0	0	0	4	1	0	4	0
1.70	0	0	0	0	0	0	0	1	0	0	1	0
1.71	0	0	0	0	0	0	0	1	1	0	1	0
1.72	0	0	0	0	0	0	0	1	1	0	1	0
1.73	0	0	0	0	1	0	0	2	0	0	3	0
1.74	0	0	0	0	1	0	0	1	1	0	2	0
1.75	0	0	0	0	0	0	0	1	1	0	1	0
1.76	0	0	0	0	0	0	0	1	1	0	1	0
1.77	0	0	0	0	1	0	0	4	0	0	5	0
1.78	0	0	0	0	0	0	0	1	0	0	1	0
1.79	0	0	0	0	0	0	0	1	0	0	1	0
1.80	0	0	0	0	0	0	0	1	0	0	1	0
1.81	0	0	0	0	0	0	0	3	2	0	3	0
1.82	0	0	0	0	0	0	0	3	2	0	3	0
1.83	0	0	0	0	0	0	0	3	2	0	3	0
1.84	0	0	0	0	1	0	0	2	1	0	3	0
1.85	0	0	0	0	0	0	0	1	0	0	1	0
1.86	0	0	0	0	0	0	0	3	0	0	3	0
1.87	0	0	0	0	0	0	0	2	0	0	2	0
1.88	0	0	0	0	0	0	0	2	1	0	2	0
1.89	0	0	0	0	0	0	0	2	1	0	2	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	1	0	0	0	0	0	1	0
1.93	0	0	0	0	0	0	0	1	0	0	1	0
1.94	0	0	0	0	0	0	0	1	0	0	1	0
1.95	0	0	0	0	0	0	0	0	0	0	0	0
1.96	0	0	0	0	0	0	0	1	2	0	1	0
1.97	0	0	0	0	0	0	0	0	2	0	0	0
1.98	0	0	0	0	0	0	0	1	2	0	1	0
1.99	0	0	0	0	0	0	0	0	2	0	0	0
2.00	0	0	0	0	0	0	0	1	2	0	1	0
SUBTOTAL	0	0	0	0	18	4	0	92	25	0	110	29

TABLE A-3

~~TOP SECRET C~~ [REDACTED]

MISSION * 1042-2 * INSTRUMENT * FWD 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM
2.01	0	0	0	0	0	0	0	1	2	0	1	2
2.02	0	0	0	0	0	0	0	0	2	0	0	2
2.03	0	0	0	0	0	0	0	0	1	0	0	1
2.04	0	0	0	0	0	0	0	0	2	0	0	2
2.05	0	0	0	0	0	1	0	0	1	0	0	2
2.06	0	0	0	0	0	0	0	0	0	0	0	2
2.07	0	0	0	0	0	0	0	0	0	0	0	0
2.08	0	0	0	0	0	0	0	0	6	0	0	6
2.09	0	0	0	0	0	0	0	0	4	0	0	4
2.10	0	0	0	0	0	1	0	0	2	0	0	3
2.11	0	0	0	0	0	0	0	0	2	0	0	2
2.12	0	0	0	0	0	0	0	0	3	0	0	3
2.13	0	0	0	0	0	0	0	0	3	0	0	3
2.14	0	0	0	0	0	0	0	0	1	0	0	1
2.15	0	0	0	0	0	0	0	1	3	0	0	3
2.16	0	0	0	0	0	2	0	0	1	0	0	3
2.17	0	0	0	0	0	0	0	0	1	0	0	3
2.18	0	0	0	0	0	0	0	0	2	0	0	3
2.19	0	0	0	0	0	1	0	0	4	0	0	5
2.20	0	0	0	0	0	1	0	0	3	0	0	4
2.21	0	0	0	0	0	0	0	0	5	0	0	5
2.22	0	0	0	0	0	1	0	0	1	0	0	2
2.23	0	0	0	0	0	0	0	0	7	0	0	7
2.24	0	0	0	0	0	0	0	0	9	0	0	9
2.25	0	0	0	0	0	1	0	0	6	0	0	7
2.26	0	0	0	0	0	0	0	0	8	0	0	7
2.27	0	0	0	0	0	0	0	0	7	0	0	7
2.28	0	0	0	0	0	0	0	0	4	0	0	4
2.29	0	0	0	0	0	0	0	0	9	0	0	4
2.30	0	0	0	0	0	0	0	0	1	0	0	10
2.31	0	0	0	0	0	0	0	0	1	0	0	11
2.32	0	0	0	0	0	0	0	0	6	0	0	11
2.33	0	0	0	0	0	0	0	0	2	0	0	11
2.34	0	0	0	0	0	0	0	0	4	0	0	14
2.35	0	0	0	0	0	0	0	0	1	0	0	10
2.36	0	0	0	0	0	0	0	0	1	0	0	11
2.37	0	0	0	0	0	0	0	0	3	0	0	3
2.38	0	0	0	0	0	0	0	0	5	0	0	5
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	3	0	0	3
2.42	0	0	0	0	0	1	0	0	3	0	0	4
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	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
SJBTOTAL	0	0	0	0	0	12	0	12	178	0	12	190

~~TOP SECRET C~~ [REDACTED]

TABLE A-3

~~TOP SECRET C~~ [REDACTED]

MISSION * 1042-2 * INSTRUMENT * FWD 9/8/67 DENSITY FREQ DISIR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM
2.51	0	0	0	0	0	0	0	0	0	0	0	0
2.52	0	0	0	0	0	0	0	0	0	0	0	0
2.53	0	0	0	0	0	0	0	0	0	0	0	0
2.54	0	0	0	0	0	0	0	0	0	0	0	0
2.55	0	0	0	0	0	0	0	0	0	0	0	0
2.56	0	0	0	0	0	0	0	0	0	0	0	0
2.57	0	0	0	0	0	0	0	0	0	0	0	0
2.58	0	0	0	0	0	0	0	0	0	0	0	0
2.59	0	0	0	0	0	0	0	0	0	0	0	0
2.60	0	0	0	0	0	0	0	0	0	0	0	0
2.61	0	0	0	0	0	0	0	0	0	0	0	0
2.62	0	0	0	0	0	0	0	0	0	0	0	0
2.63	0	0	0	0	0	0	0	0	0	0	0	0
2.64	0	0	0	0	0	0	0	0	0	0	0	0
2.65	0	0	0	0	0	0	0	0	0	0	0	0
2.66	0	0	0	0	0	0	0	0	0	0	0	0
2.67	0	0	0	0	0	0	0	0	0	0	0	0
2.68	0	0	0	0	0	0	0	0	0	0	0	0
2.69	0	0	0	0	0	0	0	0	0	0	0	0
2.70	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	24	24	17	202	202	207	226	226	224

MISSION 1042-2 INSTR - FWD 9/8/67 PROCESSING AND EXPOSURE ANALYSIS

PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXPE&PRUC	OVER PROCESSED	OVER EXPOSED
PRIMARY	0	0 PC	0 PC	0 PC	13 PC	13 PC
INTERMEDIATE	24	4 PC	4 PC	67 PC	25 PC	0 PC
FULL	202	27 PC	0 PC	66 PC	7 PC	0 PC
ALL LEVELS	226	24 PC	0 PC	66 PC	9 PC	0 PC

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

~~TOP SECRET C~~ [REDACTED]

TABLE A-3

TOP SECRET C/

MISSION * 1042-2 * INSTR * FWD * 9/8/67 PLOT OF D MIN * TERRAIN * PROCESSING * INTERMEDIATE
AIRTH MEAN * 0.70 * MEDIAN * 0.72 * STD DEV * 0.25 * RANGE * 0.14 TU 1.26 WITH 24 SAMPLES

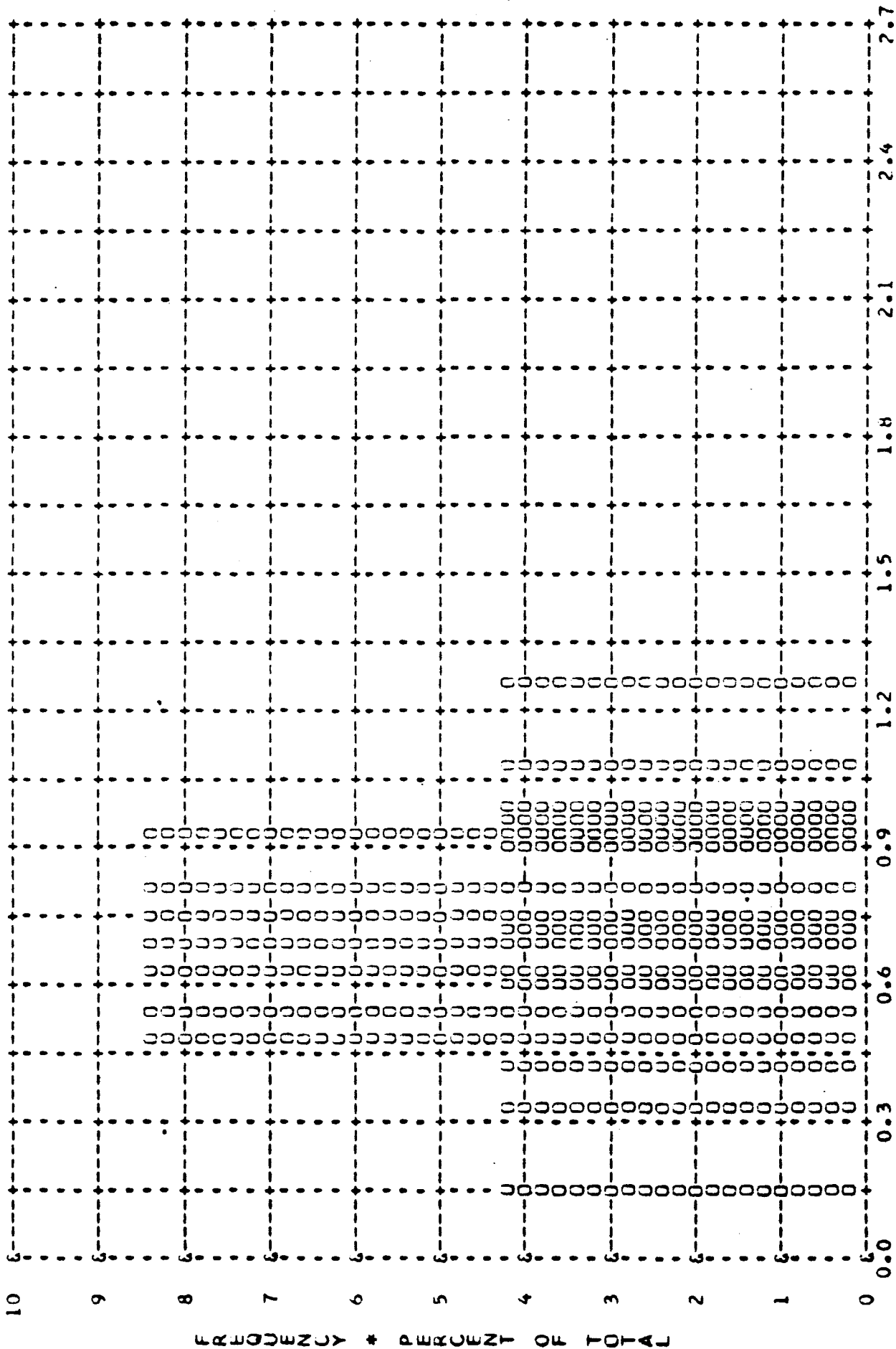


FIGURE A-19

TOP SECRET C/

~~TOP SECRET~~ C/

MISSION * 1042-2 * INSTR * FWD * 9/8/67 PLOT OF D MAX * TERRAIN * PROCESSING * INTERMEDIATE
AIRTH MEAN * 1.57 * MEDIAN * 1.60 * STD DEV * 0.20 * RANGE * 0.96 TO 1.92 WITH 24 SAMPLES

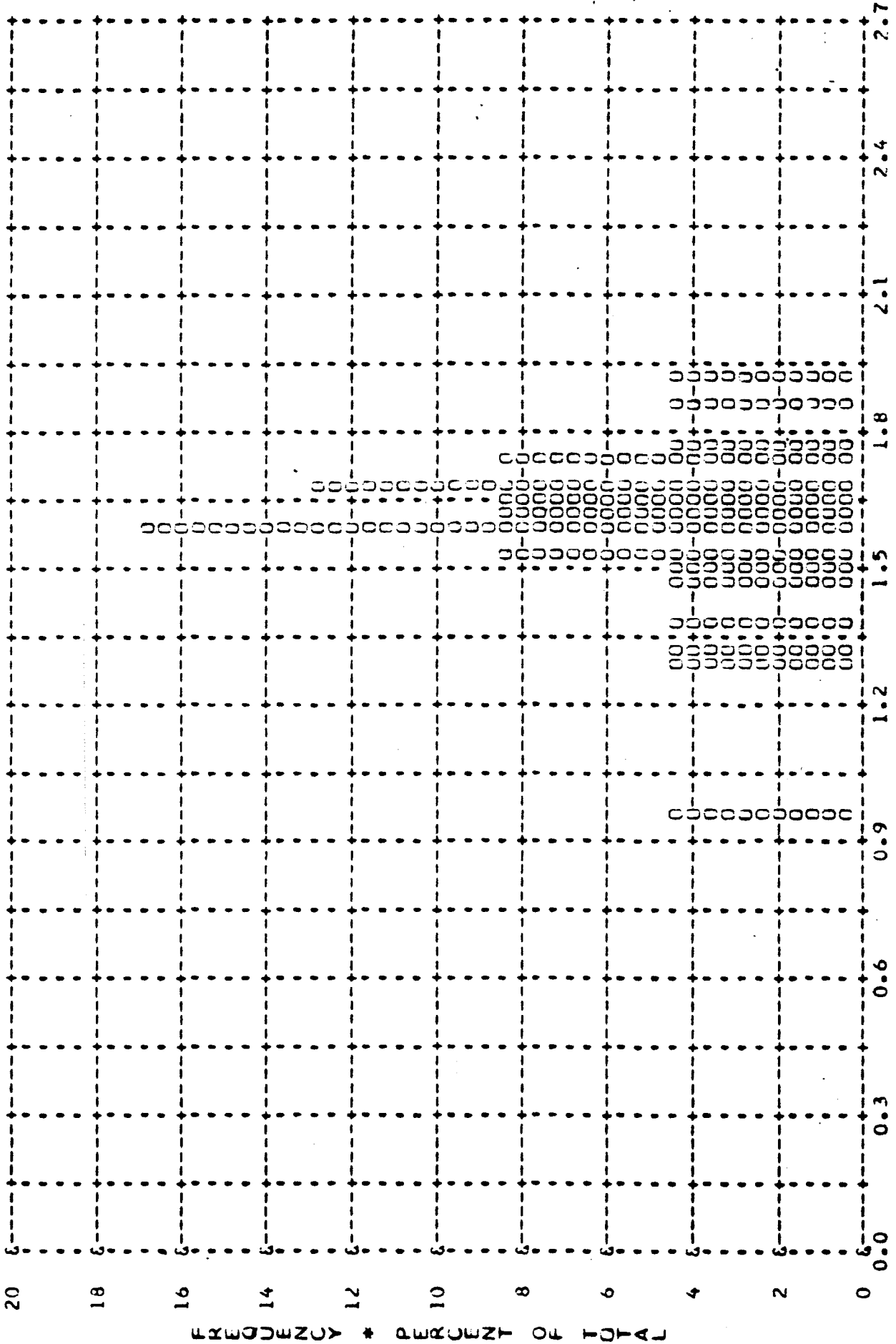


FIGURE A-20

~~TOP SECRET~~ C/

MISSION * 1042-2 * INSTR * FWD * 9/8/67 PLOT OF D MAX * CLOUD * PROCESSING * INTERMEDIATE
AIRTH MEAN * 2.04 * MEDIAN * 2.16 * STD DEV * 0.26 * RANGE * 1.47 TU 2.42 WITH 17 SAMPLES

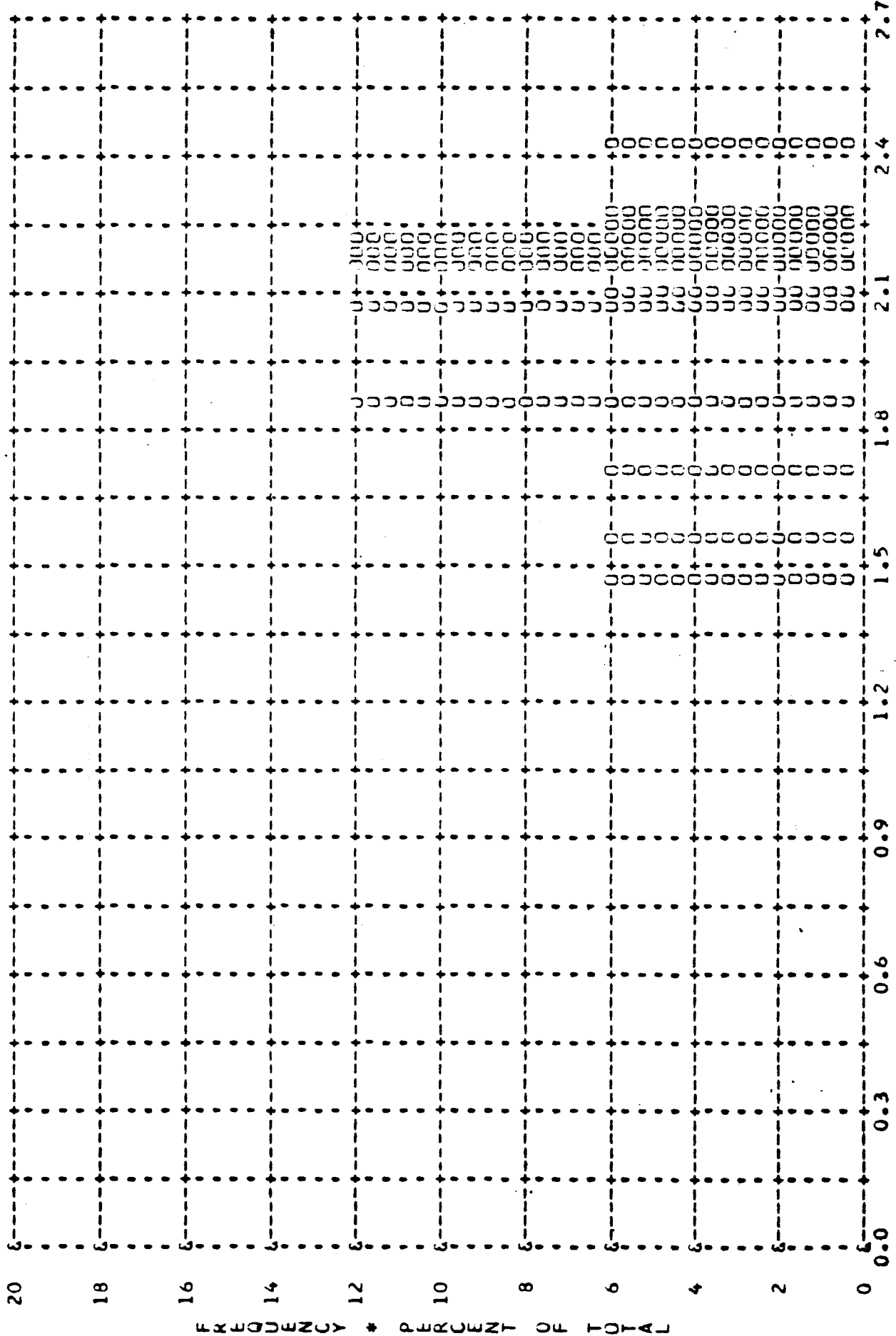


FIGURE A-21

MISSION * 1042-2 * INSTR * FWD * 9/8/67 PLOT OF D MIN * TERRAIN * PROCESSING * FULL
AIRTH MEAN * 0.52 * MEDIAN * 0.46 * STD DEV * 0.19 * RANGE * 0.17 TO 1.17 WITH 202 SAMPLES

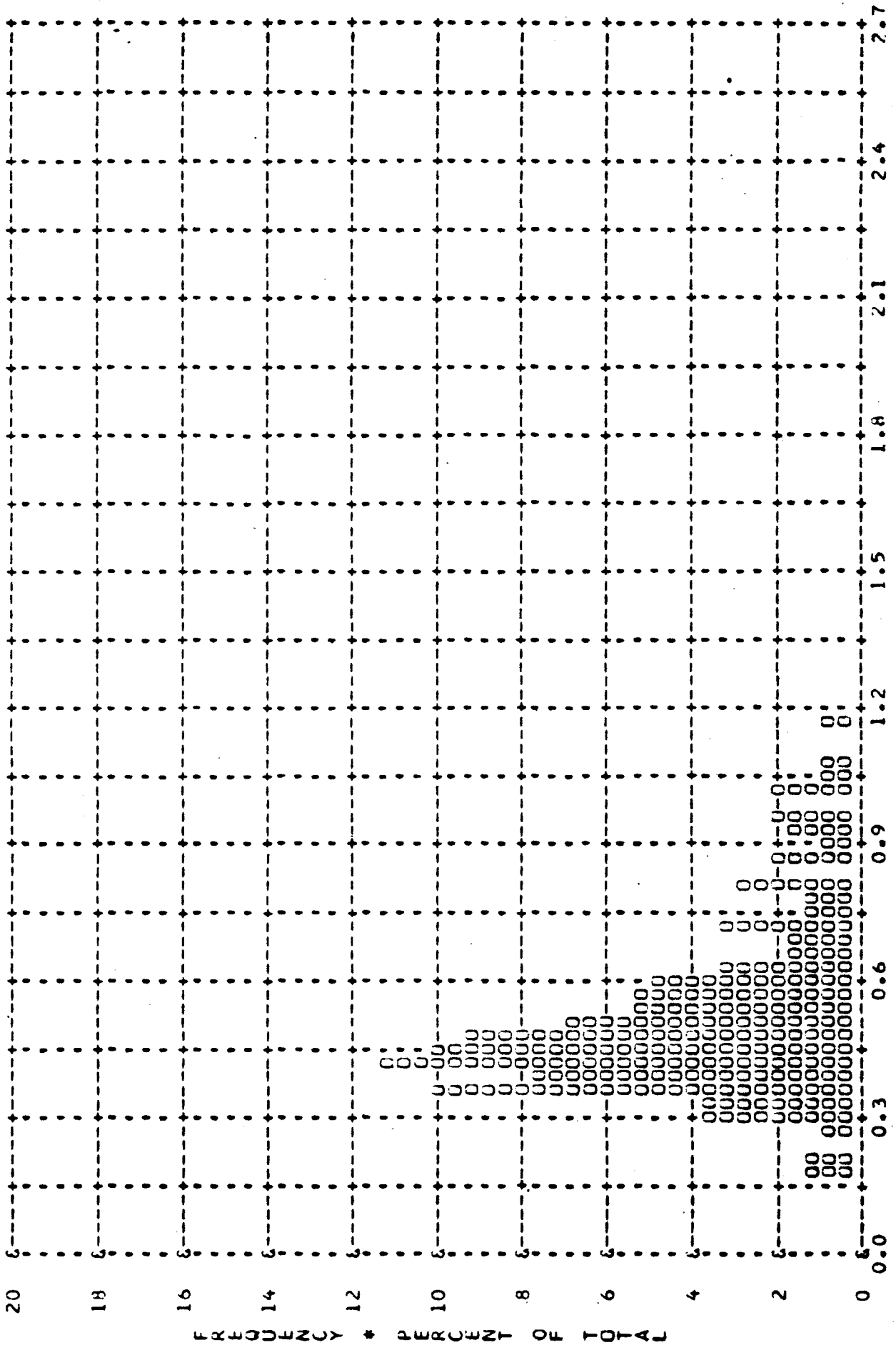


FIGURE A-22

MISSION * 1042-2 * INSTR * FWD * 9/8/67 PLOT OF U MAX * TERRAIN * PROCESSING * FULL
AIRTH MEAN * 1.47 * MEDIAN * 1.52 * STD DEV * 0.38 * RANGE * 0.52 TO 2.39 WITH 202 SAMPLES

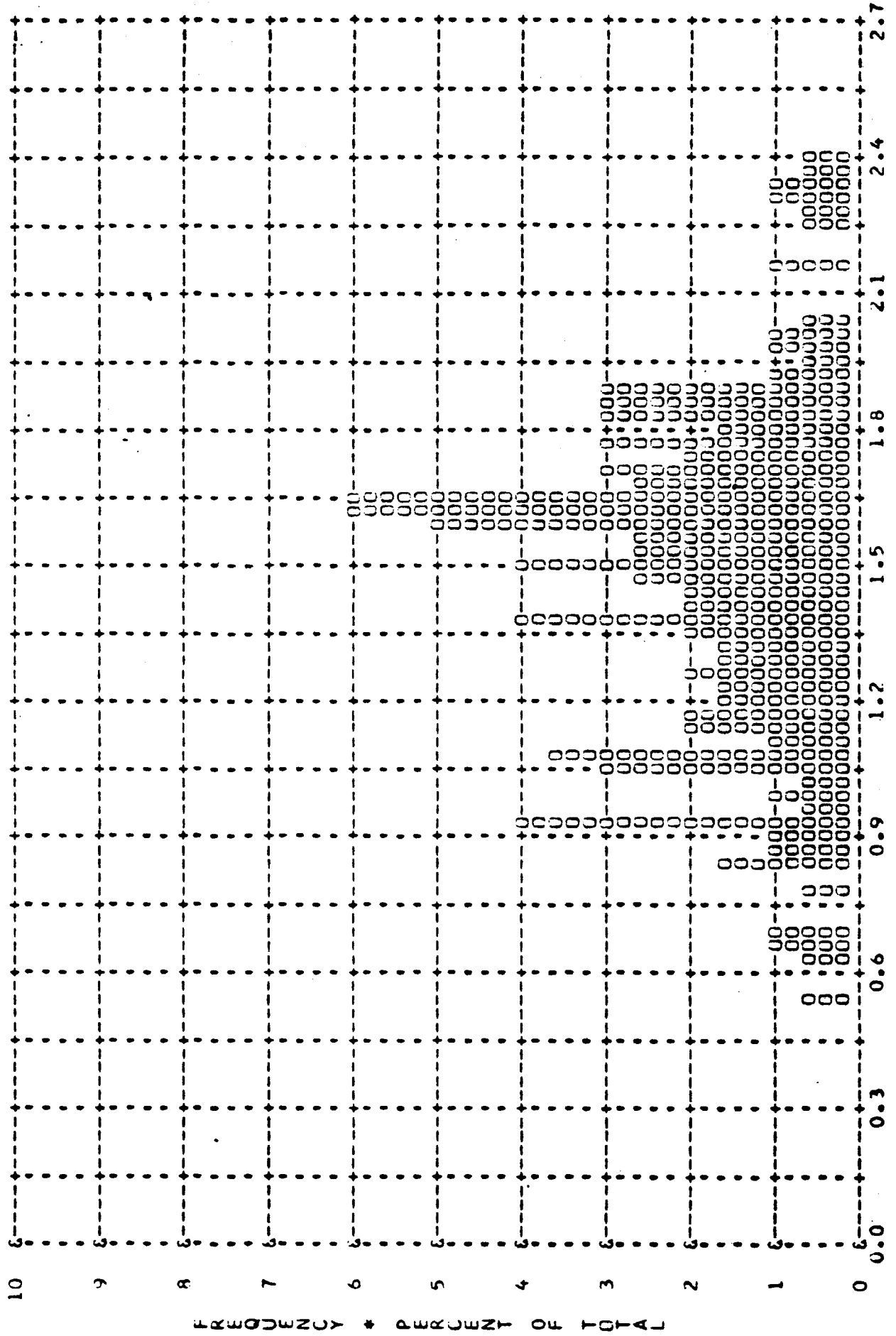
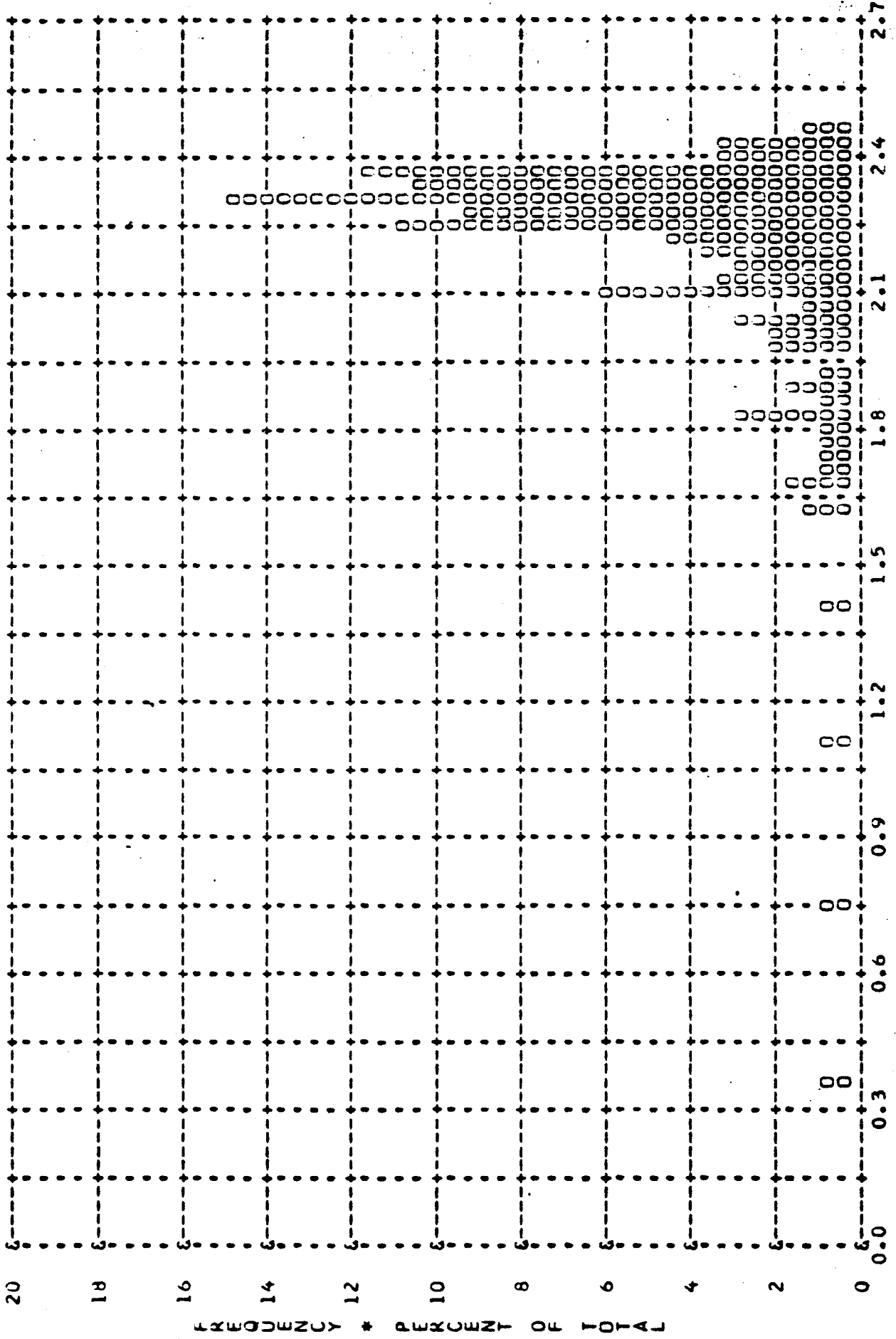


FIGURE A-23

MISSION * 1042-2 * INSTR * FWD * 9/8/67 PLOT OF D MAX * CLOUD * PROCESSING * FULL
AIRTH MEAN * 2.18 * MEDIAN * 2.26 * STD DEV * 0.26 * RANGE * 0.35 TO 2.45 WITH 207 SAMPLES



MISSION * 1042-2 * INSTR * FWD * 9/8/67 PLOT OF D MIN * TERRAIN * PROCESSING * ALL LEVELS
AIRTH MEAN * 0.54 * MEDIAN * 0.47 * STD DEV * 0.14 TO 1.26 WITH 226 SAMPLES

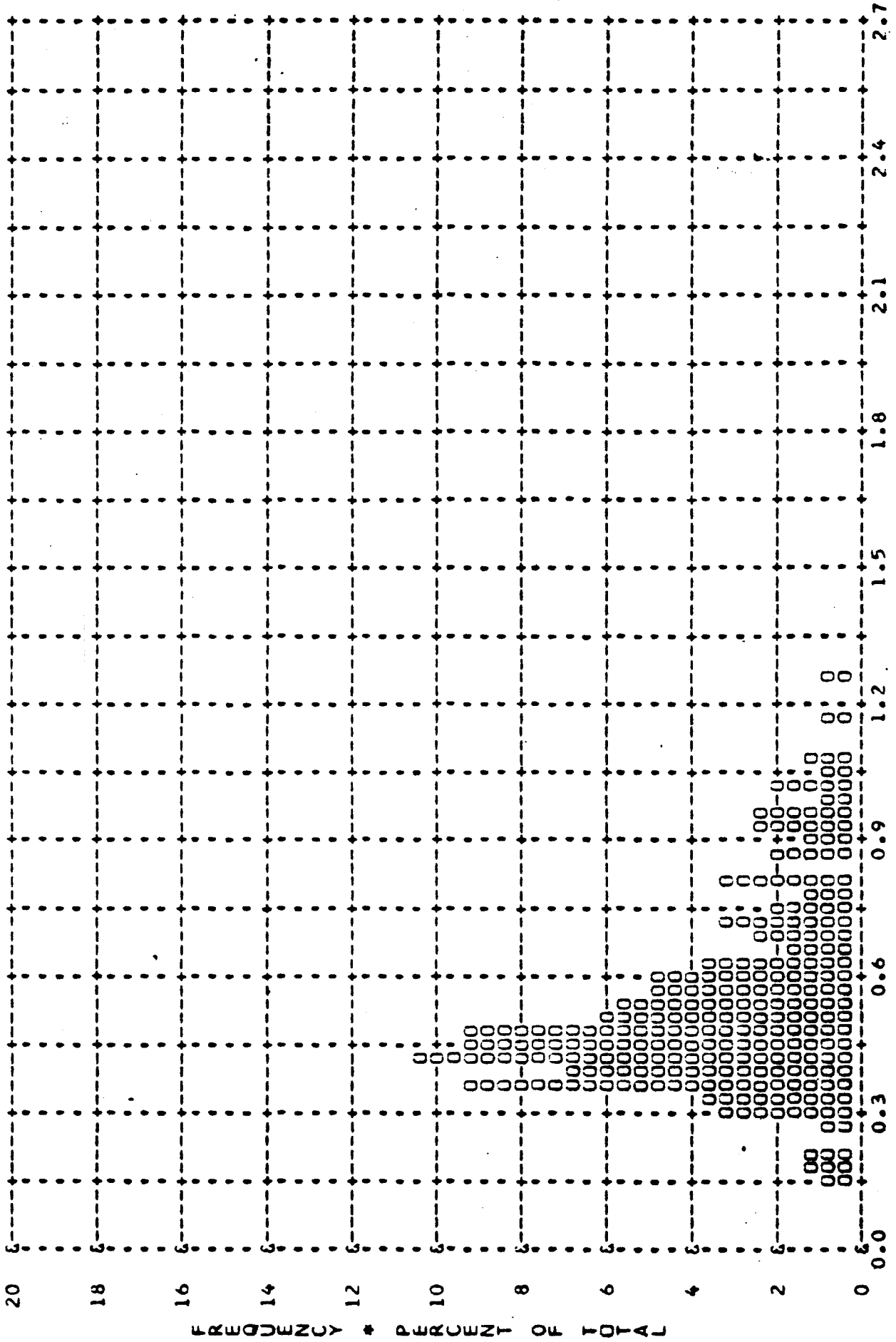
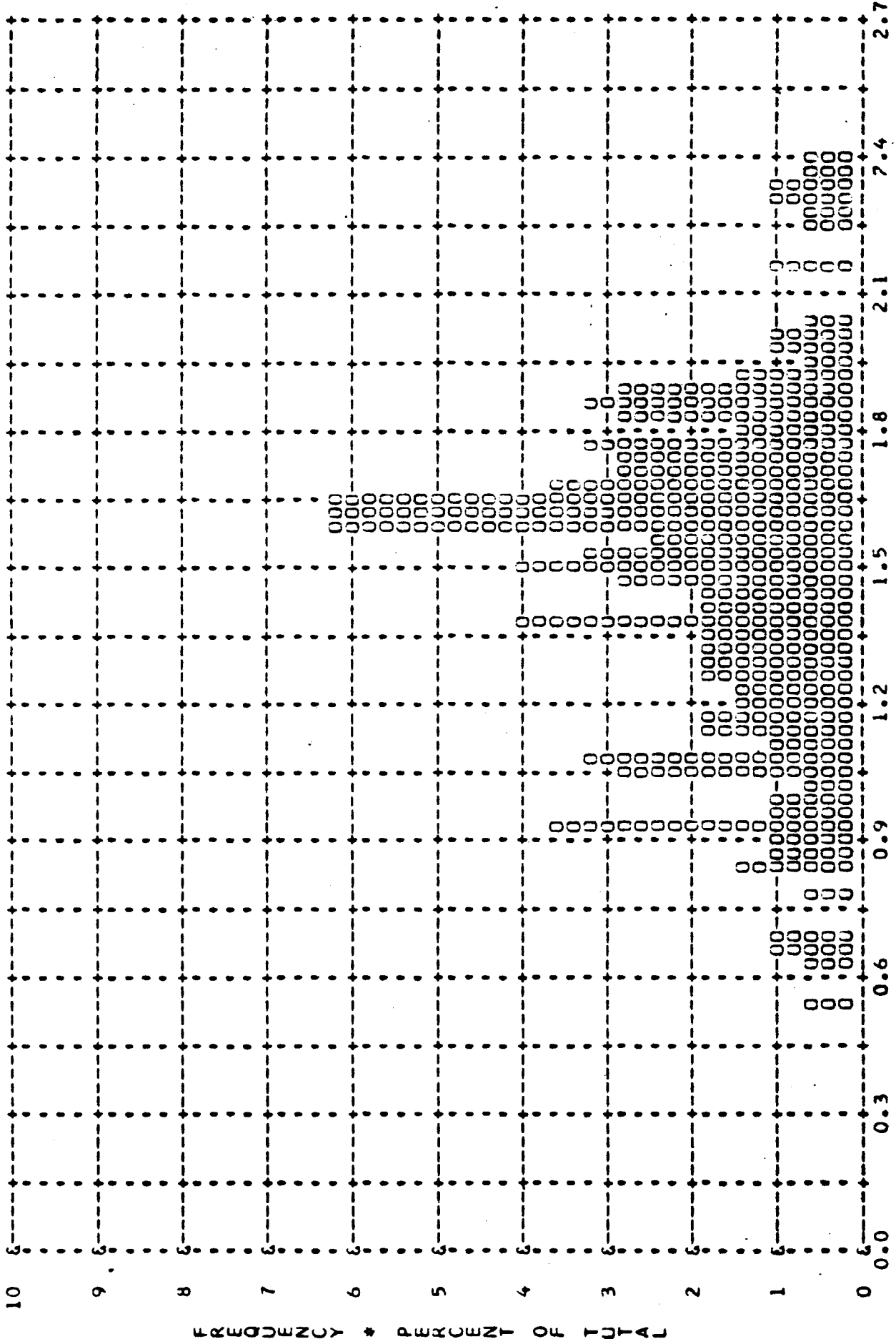


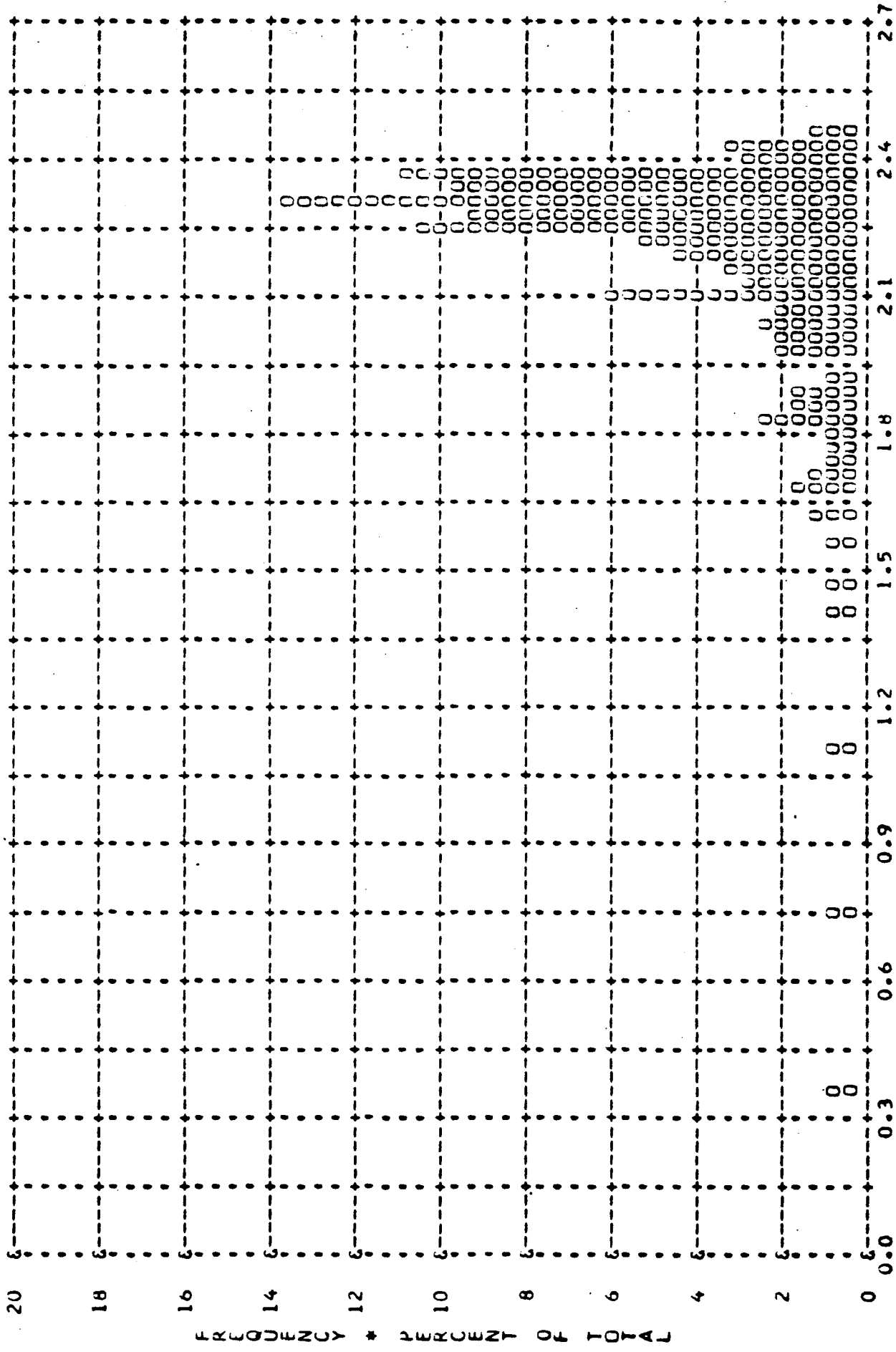
FIGURE A-25

MISSION * 1042-2 * INSTR * FWD * 9/8/67 PLOT OF D MAX * TERRAIN * PROCESSING * ALL LEVELS
AIRTH MEAN * 1.48 * MEDIAN * 1.55 * STD DEV * 0.36 * RANGE * 0.52 TU 2.39 WITH 225 SAMPLES



~~TOP SECRET C~~

MISSION * 1042-2 * INSTR * FWD * 9/8/67 PLOT OF D MAX * CLOUD * PROCESSING * ALL LEVELS
AIRTH MEAN * 2.17 * MEDIAN * 2.25 * STD DEV * 0.26 * RANGE * 0.35 TU 2.45 WITH 224 SAMPLES



* DENSITY *

FIGURE A-27

~~TOP SECRET C~~

~~TOP SECRET C~~

MISSION * 1042-2 * INSTRUMENT * AFT 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	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	1	1	0	1	1	0
0.16	0	0	0	0	0	0	1	1	0	1	1	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	2	0	2	0	0
0.20	0	0	0	0	0	0	1	1	0	1	1	0
0.21	0	0	0	0	0	0	1	1	0	1	1	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	1	0	0	0	0	0	1	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	1	0	0	0	0	0	1	0	0
0.33	0	0	0	0	0	0	0	0	0	0	0	0
0.34	0	0	0	0	0	0	2	2	0	2	2	0
0.35	0	0	0	1	0	0	3	3	0	4	4	0
0.36	0	0	0	0	0	0	7	7	0	7	7	0
0.37	0	0	0	0	0	0	4	4	0	4	4	0
0.38	0	0	0	1	0	0	7	7	0	8	8	0
0.39	0	0	0	0	0	0	12	12	0	12	12	0
0.40	0	0	0	0	0	0	12	8	0	12	8	0
0.41	0	0	0	0	0	0	12	8	0	12	8	0
0.42	0	0	0	0	0	0	12	9	0	12	9	0
0.43	0	0	0	0	0	0	9	9	0	9	9	0
0.44	0	0	0	0	0	0	5	5	0	5	5	0
0.45	0	0	0	2	0	0	5	5	0	5	5	0
0.46	0	0	0	0	0	0	8	8	0	8	8	0
0.47	0	0	0	0	0	0	4	4	0	4	4	0
0.48	0	0	0	1	0	0	5	5	0	6	6	0
0.49	0	0	0	0	0	0	5	7	0	5	7	0
0.50	0	0	0	0	0	0	5	5	0	5	5	0
SUBTOTAL	0	0	0	7	0	0	123	0	0	130	0	0

~~TOP SECRET C~~

TABLE A-4

~~TOP SECRET C~~ [REDACTED]

MISSION * 1042-2 * INSTRUMENT * AFT 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM
0.51	0	0	0	1	0	0	2	0	0	3	0	0
0.52	0	0	0	0	0	0	5	0	0	1	0	0
0.53	0	0	0	0	0	0	1	0	0	6	0	0
0.54	0	0	0	0	0	0	6	0	0	9	0	0
0.55	0	0	0	0	0	0	2	0	0	2	0	0
0.56	0	0	0	0	0	0	3	0	0	3	0	0
0.57	0	0	0	0	0	0	2	0	0	2	0	0
0.58	0	0	0	0	0	0	3	0	0	3	0	0
0.59	0	0	0	0	0	0	4	0	0	4	0	0
0.60	0	0	0	1	0	0	2	0	0	3	0	0
0.61	0	0	0	0	0	0	0	0	0	0	0	0
0.62	0	0	0	1	0	0	3	1	0	4	1	0
0.63	0	0	0	0	0	0	0	0	0	0	0	0
0.64	0	0	0	0	0	0	1	0	0	1	0	0
0.65	0	0	0	0	0	0	4	0	0	4	0	0
0.66	0	0	0	1	0	0	1	1	0	2	1	0
0.67	0	0	0	0	0	0	1	0	0	1	0	0
0.68	0	0	0	0	0	0	3	0	0	3	0	0
0.69	0	0	0	3	0	0	3	0	0	6	0	0
0.70	0	0	0	1	0	0	0	0	0	1	0	0
0.71	0	0	0	1	0	0	0	0	0	1	0	0
0.72	0	0	0	1	0	0	0	0	0	1	0	0
0.73	0	0	0	1	0	0	1	3	0	3	0	0
0.74	0	0	0	0	0	0	3	1	0	3	1	0
0.75	0	0	0	0	0	0	0	0	0	0	0	0
0.76	0	0	0	0	0	0	3	0	0	3	0	0
0.77	0	0	0	0	0	0	1	1	0	1	1	0
0.78	0	0	0	0	0	0	1	1	0	1	1	0
0.79	0	0	0	0	0	0	1	1	0	1	1	0
0.80	0	0	0	0	0	0	3	1	0	3	1	0
0.81	0	0	0	1	0	0	1	2	0	2	1	0
0.82	0	0	0	0	0	0	2	1	0	2	1	0
0.83	0	0	0	0	0	0	3	0	0	3	0	0
0.84	0	0	0	0	0	0	0	0	0	0	0	0
0.85	0	0	0	0	0	0	0	2	1	0	2	1
0.86	0	0	0	0	0	0	0	2	0	0	2	0
0.87	0	0	0	0	0	0	0	0	0	0	0	0
0.88	0	0	0	0	1	0	0	3	0	3	1	0
0.89	0	0	0	1	0	0	1	3	0	2	3	0
0.90	0	0	0	0	0	0	0	1	0	0	1	0
0.91	0	0	0	0	0	0	2	1	0	2	1	0
0.92	0	0	0	0	0	0	0	0	0	0	0	0
0.93	0	0	0	0	0	0	0	1	0	0	1	0
0.94	0	0	0	0	0	0	0	0	0	0	0	0
0.95	0	0	0	0	0	0	1	0	0	1	0	0
0.96	0	0	0	0	0	0	0	1	0	0	1	0
0.97	0	0	0	0	0	0	2	1	0	2	1	0
0.98	0	0	0	0	0	0	0	0	0	0	0	0
0.99	0	0	0	0	0	0	0	1	0	0	1	0
1.00	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	12	1	0	72	19	1	84	20	1

~~TOP SECRET C~~ [REDACTED]

TABLE A-4

TOP SECRET C [REDACTED]

MISSION * 1042-2 * INSTRUMENT * AFT 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM
1.01	0	0	0	1	0	0	0	2	0	1	2	0
1.02	0	0	0	0	0	0	0	0	0	0	0	0
1.03	0	0	0	0	0	0	0	0	0	0	0	0
1.04	0	0	0	0	0	0	0	0	0	0	0	0
1.05	0	0	0	0	0	0	0	0	0	0	0	0
1.06	0	0	0	0	1	0	0	4	1	0	4	1
1.07	0	0	0	0	0	0	0	2	0	0	2	0
1.08	0	0	0	0	0	0	0	3	0	0	3	0
1.09	0	0	0	0	0	0	0	1	0	0	1	0
1.10	0	0	0	0	0	0	0	0	0	0	0	0
1.11	0	0	0	1	0	0	0	2	0	1	2	0
1.12	0	0	0	0	0	0	0	1	0	0	1	0
1.13	0	0	0	0	0	0	0	2	0	0	2	0
1.14	0	0	0	0	0	0	0	1	0	0	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	4	0	0	4	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	2	0	0	2	0
1.20	0	0	0	0	0	0	0	1	0	0	1	0
1.21	0	0	0	0	0	0	0	0	0	0	0	0
1.22	0	0	0	0	0	0	0	1	0	0	1	0
1.23	0	0	0	0	0	0	0	4	0	0	4	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	1	0	0	1	0
1.27	0	0	0	0	0	0	0	0	0	0	0	0
1.28	0	0	0	0	0	0	0	1	0	0	1	0
1.29	0	0	0	0	0	0	0	2	0	0	2	0
1.30	0	0	0	0	0	0	0	0	0	0	0	0
1.31	0	0	0	0	0	0	0	2	0	0	2	0
1.32	0	0	0	0	1	0	0	0	0	0	0	0
1.33	0	0	0	0	1	0	0	5	0	0	5	0
1.34	0	0	0	0	1	0	0	2	0	0	2	0
1.35	0	0	0	0	1	0	0	2	0	0	2	0
1.36	0	0	0	0	0	0	0	1	0	0	1	0
1.37	0	0	0	0	0	0	0	1	0	0	1	0
1.38	0	0	0	0	0	0	0	2	0	0	2	0
1.39	0	0	0	0	0	0	0	5	0	0	5	0
1.40	0	0	0	0	0	0	0	1	0	0	1	0
1.41	0	0	0	0	0	0	0	4	0	0	4	0
1.42	0	0	0	0	0	0	0	1	0	0	1	0
1.43	0	0	0	0	1	0	0	1	0	0	1	0
1.44	0	0	0	0	2	0	0	0	0	0	2	0
1.45	0	0	0	0	0	0	0	3	0	0	3	0
1.46	0	0	0	0	1	0	0	0	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	4	0	0	4	0
1.49	0	0	0	0	0	0	0	5	0	0	5	0
1.50	0	0	0	0	0	0	0	1	0	0	1	0
SUBTOTAL	0	0	0	2	10	3	1	86	3	3	96	6

~~TOP SECRET C~~ [REDACTED]

TABLE A-4

~~TOP SECRET C~~ [REDACTED]

MISSION * 1042-2 * INSTRUMENT * AFT 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM
1.51	0	0	0	0	1	0	0	1	0	0	2	0
1.52	0	0	0	0	0	0	0	5	0	0	2	0
1.53	0	0	0	0	0	0	0	2	0	0	5	0
1.54	0	0	0	0	0	0	0	1	0	0	2	0
1.55	0	0	0	0	0	0	0	3	0	0	1	0
1.56	0	0	0	0	0	0	0	1	0	0	3	0
1.57	0	0	0	0	0	0	0	1	0	0	1	0
1.58	0	0	0	0	0	0	0	1	0	0	1	0
1.59	0	0	0	0	0	0	0	1	0	0	1	0
1.60	0	0	0	0	0	0	0	2	0	0	1	0
1.61	0	0	0	0	1	0	0	0	1	0	2	0
1.62	0	0	0	0	1	0	0	1	0	0	2	0
1.63	0	0	0	0	0	0	0	2	0	0	2	0
1.64	0	0	0	0	0	0	0	1	0	0	2	0
1.65	0	0	0	0	0	0	0	2	0	0	1	0
1.66	0	0	0	0	1	0	0	4	2	0	5	2
1.67	0	0	0	0	2	0	0	1	1	0	3	1
1.68	0	0	0	0	0	0	0	2	0	0	0	0
1.69	0	0	0	0	0	0	0	2	0	0	2	0
1.70	0	0	0	0	0	0	0	7	0	0	7	0
1.71	0	0	0	0	0	0	0	5	1	0	5	1
1.72	0	0	0	0	1	0	0	2	0	0	3	0
1.73	0	0	0	0	1	0	0	2	0	0	2	0
1.74	0	0	0	0	0	0	0	2	0	0	2	0
1.75	0	0	0	0	0	0	0	1	1	0	1	1
1.76	0	0	0	0	0	0	0	2	0	0	2	0
1.77	0	0	0	0	0	0	0	2	0	0	2	0
1.78	0	0	0	0	0	0	0	2	1	0	2	1
1.79	0	0	0	0	0	0	0	2	0	0	2	0
1.80	0	0	0	0	1	0	0	1	0	0	3	0
1.81	0	0	0	0	0	1	0	1	0	0	1	0
1.82	0	0	0	0	0	0	0	0	0	0	0	0
1.83	0	0	0	0	0	0	0	1	0	0	1	0
1.84	0	0	0	0	0	0	0	4	0	0	4	0
1.85	0	0	0	0	0	0	0	2	0	0	2	0
1.86	0	0	0	0	0	0	0	1	2	0	1	2
1.87	0	0	0	0	0	0	0	1	2	0	1	2
1.88	0	0	0	0	0	0	0	0	2	0	0	2
1.89	0	0	0	0	0	0	0	2	2	0	2	0
1.90	0	0	0	0	0	0	0	1	0	0	1	0
1.91	0	0	0	0	0	0	0	1	1	0	1	1
1.92	0	0	0	0	0	0	0	0	1	0	0	1
1.93	0	0	0	0	0	0	0	2	0	0	2	0
1.94	0	0	0	0	0	0	0	0	0	0	0	0
1.95	0	0	0	0	0	0	0	1	0	0	1	0
1.96	0	0	0	0	0	0	0	0	2	0	0	2
1.97	0	0	0	0	0	1	0	0	2	0	0	3
1.98	0	0	0	0	1	0	0	0	1	0	1	0
1.99	0	0	0	0	0	0	0	0	0	0	0	0
2.00	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	10	9	0	76	17	0	86	26

~~TOP SECRET C~~ [REDACTED]

TABLE A-4

MISSION * 1042-2 * INSTRUMENT * AFT 9/8/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY			INTERMEDIATE			FULL			ALL LEVELS		
	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM	MIN	MAX	LIM
2.01	0	0	0	0	0	0	0	1	1	0	0	1
2.02	0	0	0	0	0	0	0	1	1	0	0	1
2.03	0	0	0	0	0	0	0	1	1	0	0	1
2.04	0	0	0	0	0	0	0	1	1	0	0	1
2.05	0	0	0	0	0	0	0	1	1	0	0	1
2.06	0	0	0	0	0	0	0	1	1	0	0	1
2.07	0	0	0	0	0	0	0	1	1	0	0	1
2.08	0	0	0	0	0	0	0	1	1	0	0	1
2.09	0	0	0	0	0	0	0	1	1	0	0	1
2.10	0	0	0	0	0	0	0	1	1	0	0	1
2.11	0	0	0	0	0	0	0	1	1	0	0	1
2.12	0	0	0	0	0	0	0	1	1	0	0	1
2.13	0	0	0	0	0	0	0	1	1	0	0	1
2.14	0	0	0	0	0	0	0	1	1	0	0	1
2.15	0	0	0	0	0	0	0	1	1	0	0	1
2.16	0	0	0	0	0	0	0	1	1	0	0	1
2.17	0	0	0	0	0	0	0	1	1	0	0	1
2.18	0	0	0	0	0	0	0	1	1	0	0	1
2.19	0	0	0	0	0	0	0	1	1	0	0	1
2.20	0	0	0	0	0	0	0	1	1	0	0	1
2.21	0	0	0	0	0	0	0	1	1	0	0	1
2.22	0	0	0	0	0	0	0	1	1	0	0	1
2.23	0	0	0	0	0	0	0	1	1	0	0	1
2.24	0	0	0	0	0	0	0	1	1	0	0	1
2.25	0	0	0	0	0	0	0	1	1	0	0	1
2.26	0	0	0	0	0	0	0	1	1	0	0	1
2.27	0	0	0	0	0	0	0	1	1	0	0	1
2.28	0	0	0	0	0	0	0	1	1	0	0	1
2.29	0	0	0	0	0	0	0	1	1	0	0	1
2.30	0	0	0	0	0	0	0	1	1	0	0	1
2.31	0	0	0	0	0	0	0	1	1	0	0	1
2.32	0	0	0	0	0	0	0	1	1	0	0	1
2.33	0	0	0	0	0	0	0	1	1	0	0	1
2.34	0	0	0	0	0	0	0	1	1	0	0	1
2.35	0	0	0	0	0	0	0	1	1	0	0	1
2.36	0	0	0	0	0	0	0	1	1	0	0	1
2.37	0	0	0	0	0	0	0	1	1	0	0	1
2.38	0	0	0	0	0	0	0	1	1	0	0	1
2.39	0	0	0	0	0	0	0	1	1	0	0	1
2.40	0	0	0	0	0	0	0	1	1	0	0	1
2.41	0	0	0	0	0	0	0	1	1	0	0	1
2.42	0	0	0	0	0	0	0	1	1	0	0	1
2.43	0	0	0	0	0	0	0	1	1	0	0	1
2.44	0	0	0	0	0	0	0	1	1	0	0	1
2.45	0	0	0	0	0	0	0	1	1	0	0	1
2.46	0	0	0	0	0	0	0	1	1	0	0	1
2.47	0	0	0	0	0	0	0	1	1	0	0	1
2.48	0	0	0	0	0	0	0	1	1	0	0	1
2.49	0	0	0	0	0	0	0	1	1	0	0	1
2.50	0	0	0	0	0	0	0	1	1	0	0	1
SUBTOTAL	0	0	0	0	0	11	0	15	184	0	15	195

TABLE A-4

~~TOP SECRET~~ C

MISSION * 1042-2		* INSTRUMENT			* AFT			9/8/67			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	0	21	21	23	196	196	205	217	217	228	

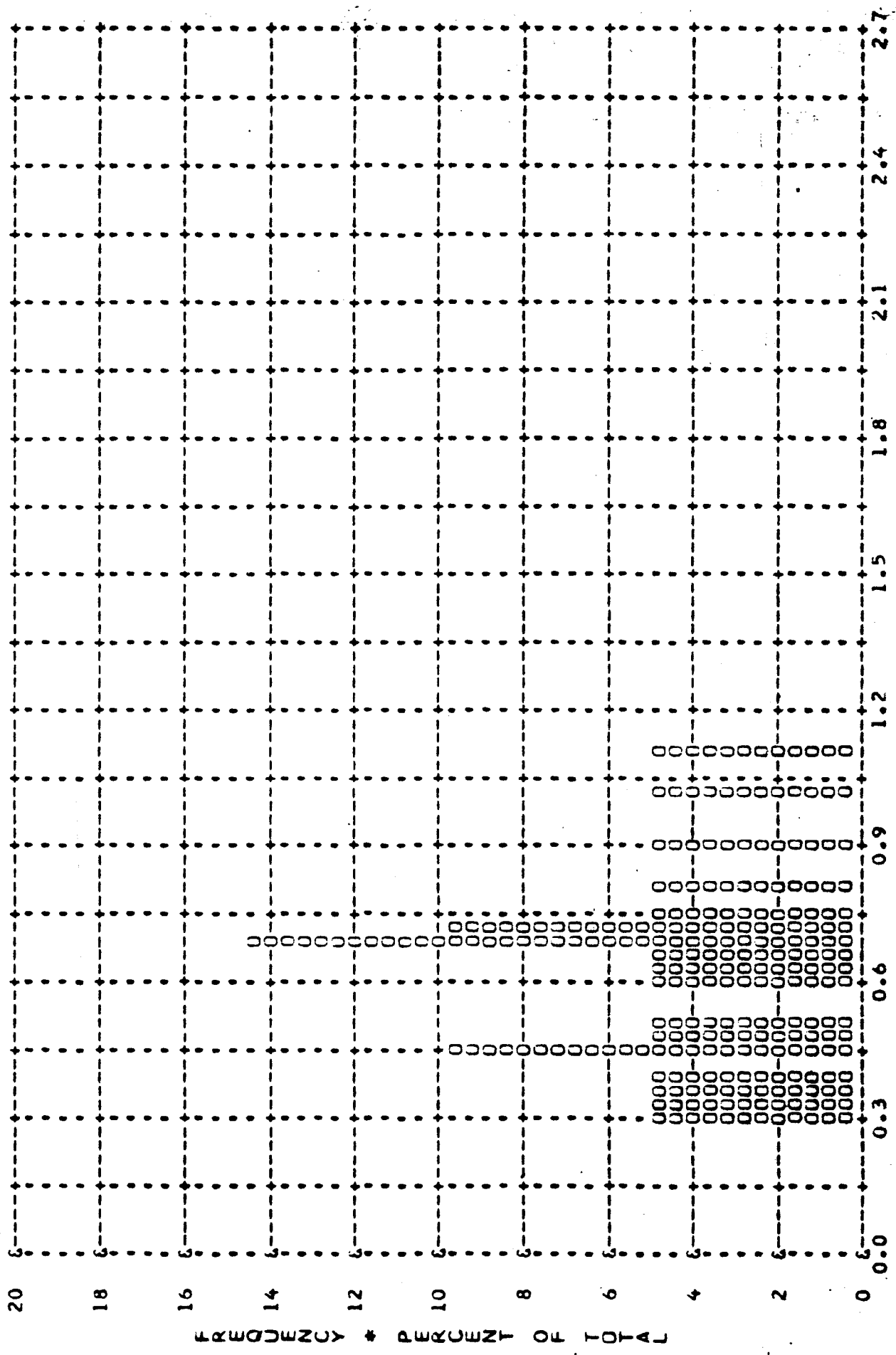
MISSION 1042-2		INSTR - AFT		9/8/67		PROCESSING AND EXPOSURE ANALYSIS		
PROCESS LEVEL	SAMPLE SIZE	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP&PROC	OVER PROCESSED	OVER EXPOSED		
PRIMARY	0	0 PC	0 PC	0 PC	11 PC	11 PC		
INTERMEDIATE	21	0 PC	19 PC	71 PC	10 PC	0 PC		
FULL	196	22 PC	0 PC	75 PC	3 PC	0 PC		
ALL LEVELS	217	20 PC	2 PC	75 PC	4 PC	0 PC		
PROCESS LEVEL	BASE & FOG	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP&PROC	OVER PROCESSED	OVER EXPOSED		
PRIMARY	0.01-0.09	0.01-0.13	0.14-0.39	0.40-0.90	-----	0.91 AND UP		
INTERMED	0.10-0.17	0.01-0.20	0.21-0.39	0.40-0.90	0.91-1.34	1.35 AND UP		
FULL	0.18 AND UP	0.01-0.39	-----	0.40-0.90	0.91-1.69	1.70 AND UP		

~~TOP SECRET~~ C

TABLE A-4

~~TOP SECRET C/~~

MISSION * 1042-2 * INSTR * AFT * 9/8/67 PLOT OF D MIN * TERRAIN * PROCESSING * INTERMEDIATE
AIRTH MEAN * 0.62 * MEDIAN * 0.66 * STD DEV * 0.22 * RANGE * 0.28 TO 1.11 WITH 21 SAMPLES



* DENSITY *

FIGURE A-28

~~TOP SECRET C/~~

MISSION * 1042-2 * INSTR * AFT * 9/8/67 PLOT OF D MAX * TERRAIN * PROCESSING * INTERMEDIATE
AIRTH MEAN * 1.48 * MEDIAN * 1.46 * STD DEV * 0.27 * RANGE * 0.88 TO 1.98 WITH 21 SAMPLES

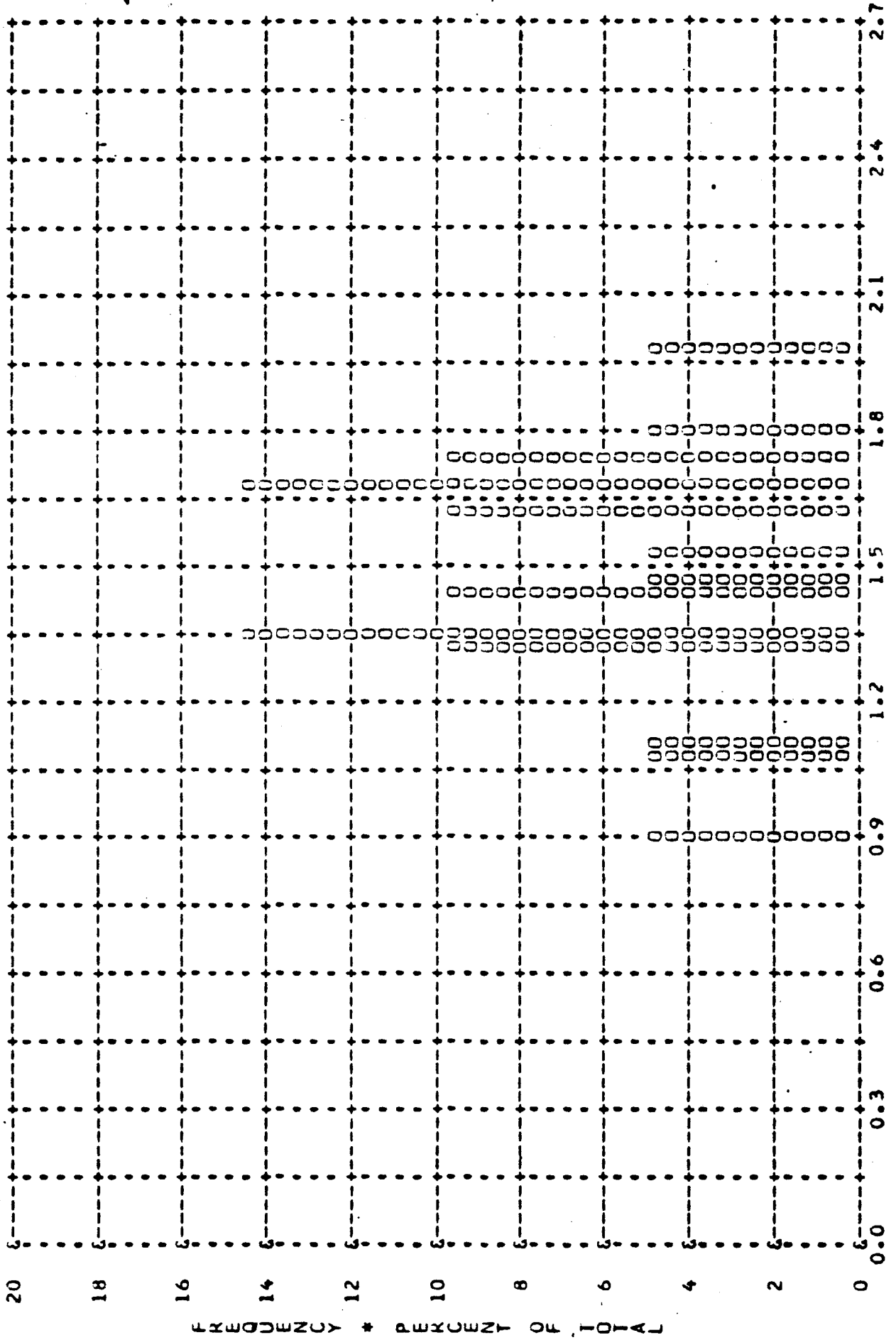
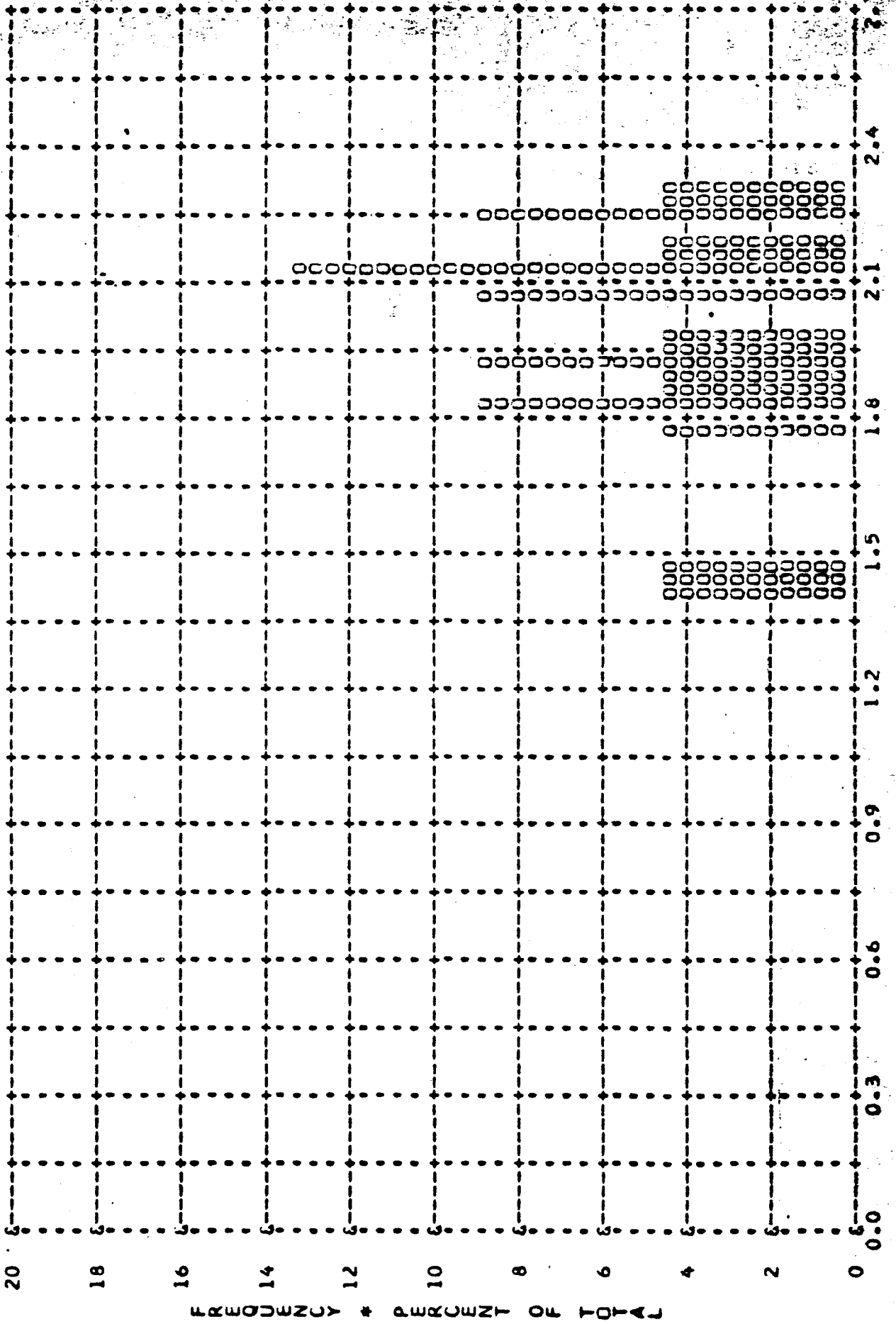


FIGURE A-29

~~TOP SECRET CA~~

MISSION * 1042-2 * INSTR * AFI * 9/8/67 PLOT OF D MAX * CLOUD * PROCESSING * INTERMEDIATE
AIRTH MEAN * 1.96 * MEDIAN * 1.97 * STD DEV * 0.26 * RANGE * 1.41 TO 2.30 WITH 23 SAMPLES



~~TOP SECRET CA~~ * DENSITY * FIGURE A-30

~~TOP SECRET C~~

MISSION * 1042-2 * INSTR * AFT * 9/8/67 PLOT OF D MIN * TERRAIN * PROCESSING * FULL
AIRTH MEAN * 0.51 * MEDIAN * 0.46 * STD DEV * 0.17 * RANGE * 0.15 TO 1.31 WITH 196 SAMPLES

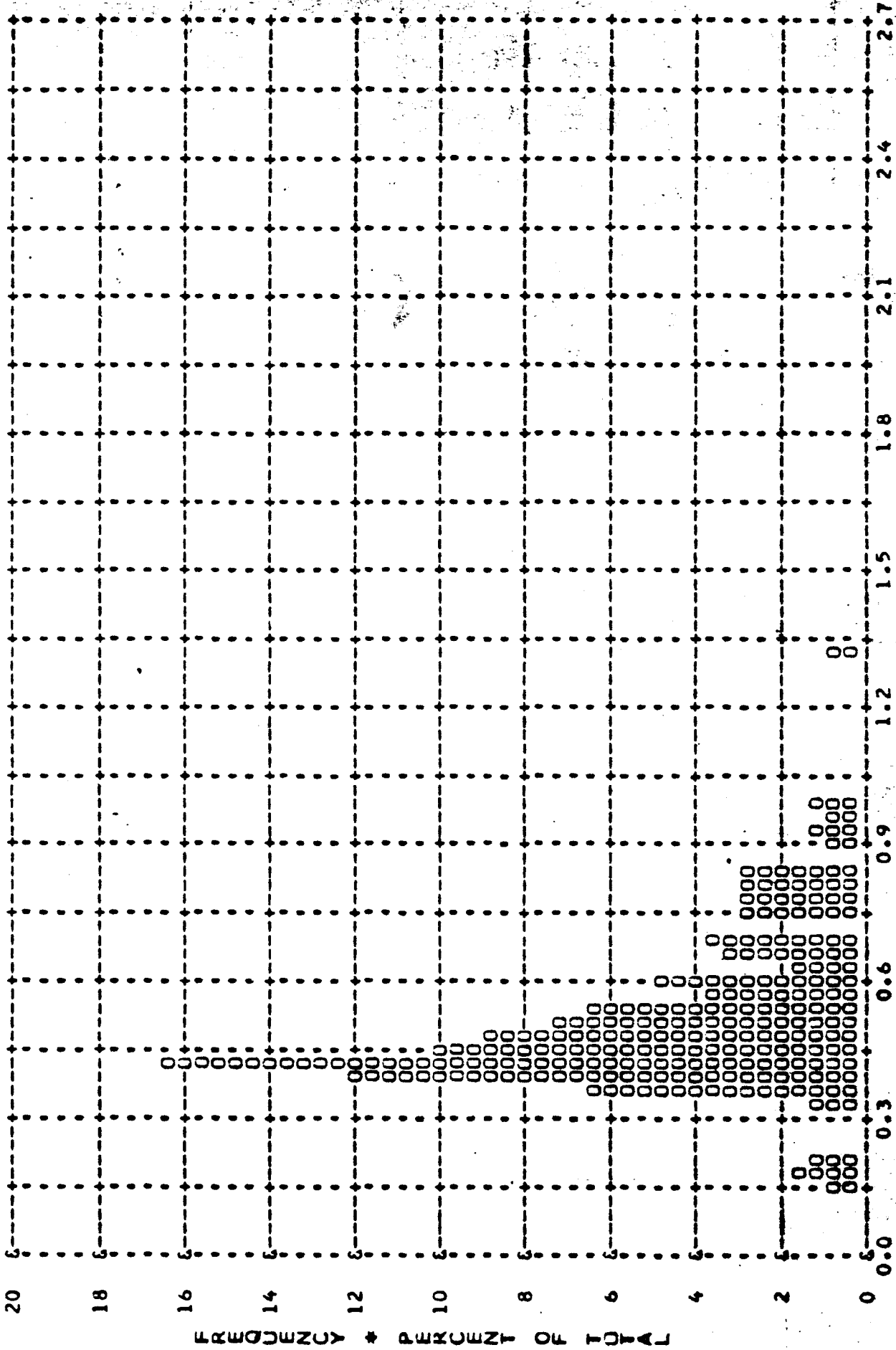


FIGURE A-31

~~TOP SECRET C/~~

MISSION * 1042-2 * INSTR * AFT * 9/8/67 PLOT OF D MAX * TERRAIN * PROCESSING * FULL
AIRTH MEAN * 1.47 * MEDIAN * 1.48 * STD DEV * 0.36 * RANGE * 0.62 TO 2.37 WITH 196 SAMPLES

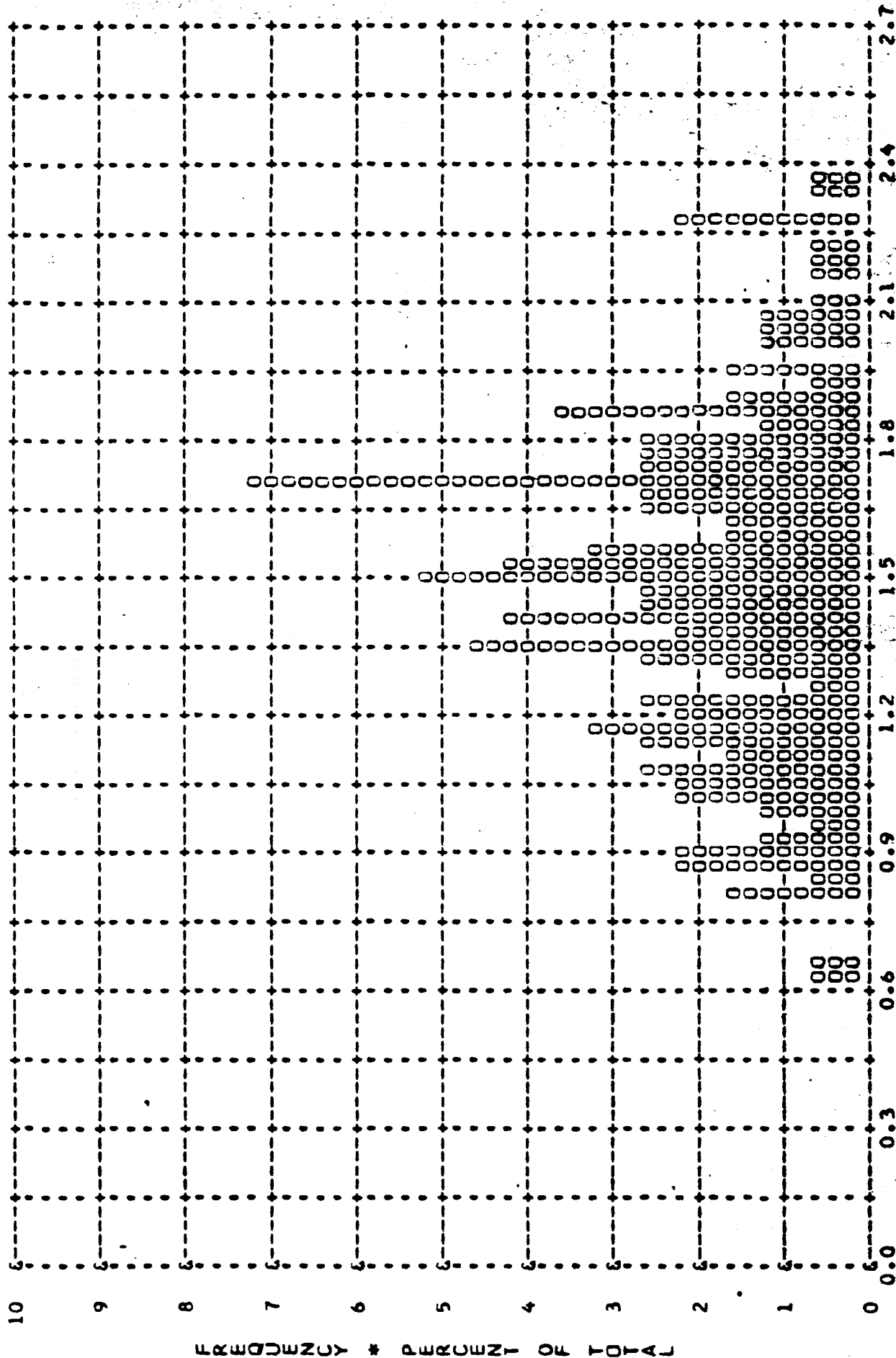


FIGURE A-32

~~TOP SECRET C/~~

~~TOP SECRET C/~~

~~TOP SECRET~~ C

MISSION * 1042-2 * INSTR * AFI * 9/8/67 PLOT OF D MAX * CLOUD * PROCESSING * FULL
AIRTH MEAN * 2.20 * MEDIAN * 2.26 * STD DEV * 0.72 * RANGE * 0.85 TO 2.39 WITH 205 SAMPLES

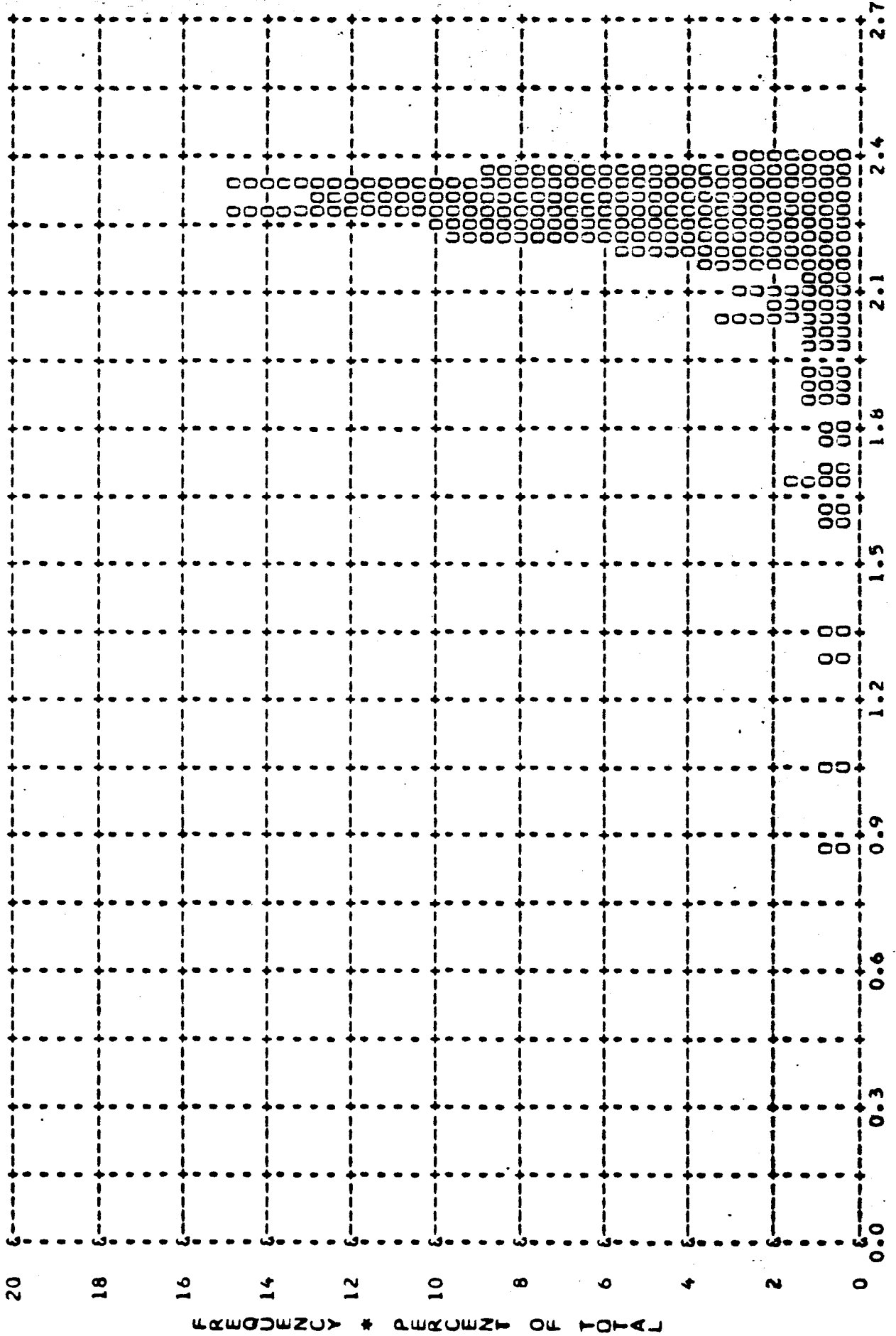
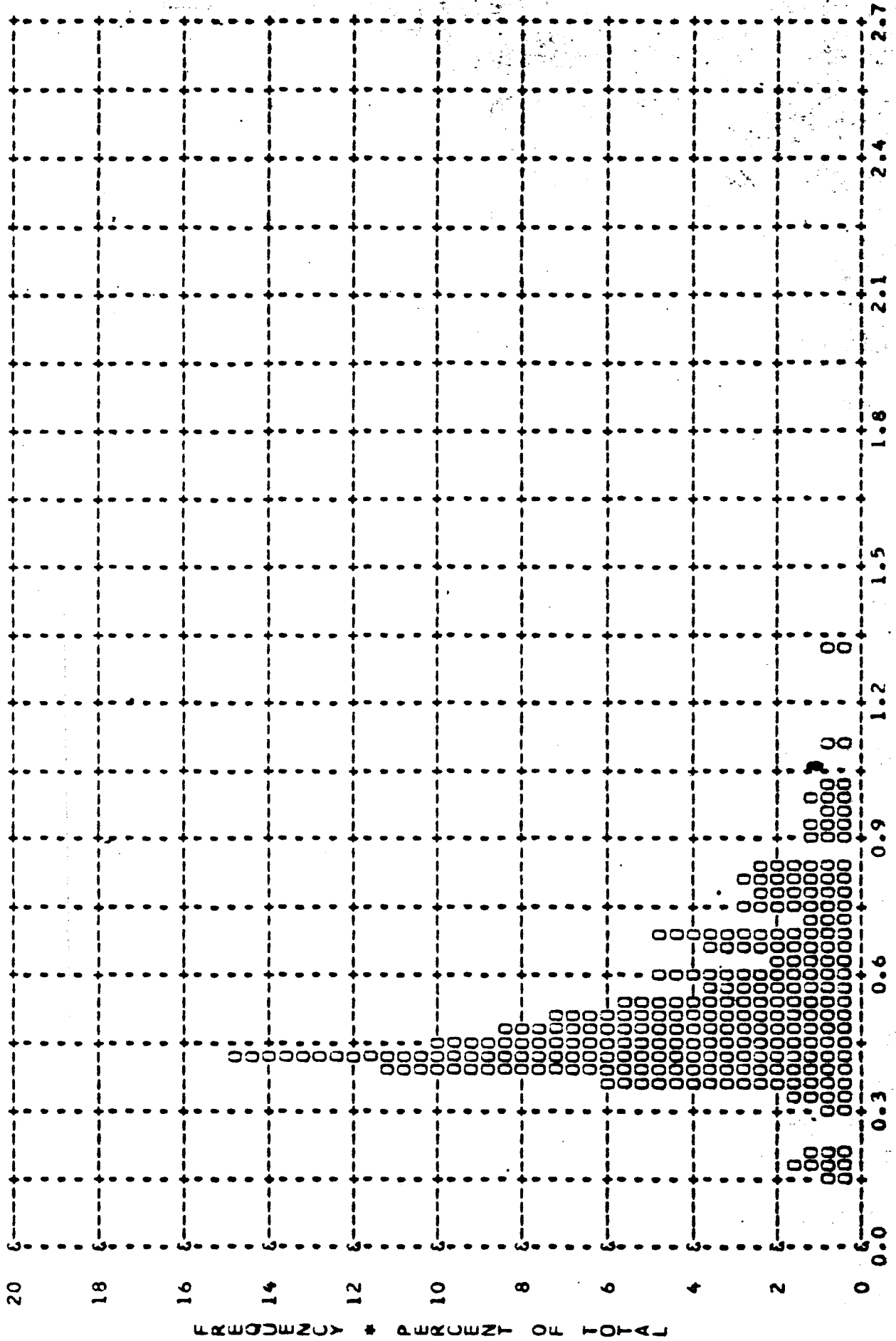


FIGURE A-33

~~TOP SECRET~~ C

~~TOP SECRET~~ CA

MISSION * 1042-2 * INSTR * AFT * 9/8/67 PLOT OF D MIN * TERRAIN * PROCESSING * ALL LEVELS
AIRTH MEAN * 0.52 * MEDIAN * 0.47 * STD DEV * 0.18 * RANGE * 0.15 TO 1.31 WITH 217 SAMPLES



~~TOP SECRET C/~~

MISSION * 1042-2 * INSTR * AFT * 9/8/67 PLOT OF D MAX * TERRAIN * PROCESSING * ALL LEVELS
AIRTH MEAN * 1.47 * MEDIAN * 1.48 * STD DEV * 0.35 * RANGE * 0.62 TU 2.37 WITH 217 SAMPLES

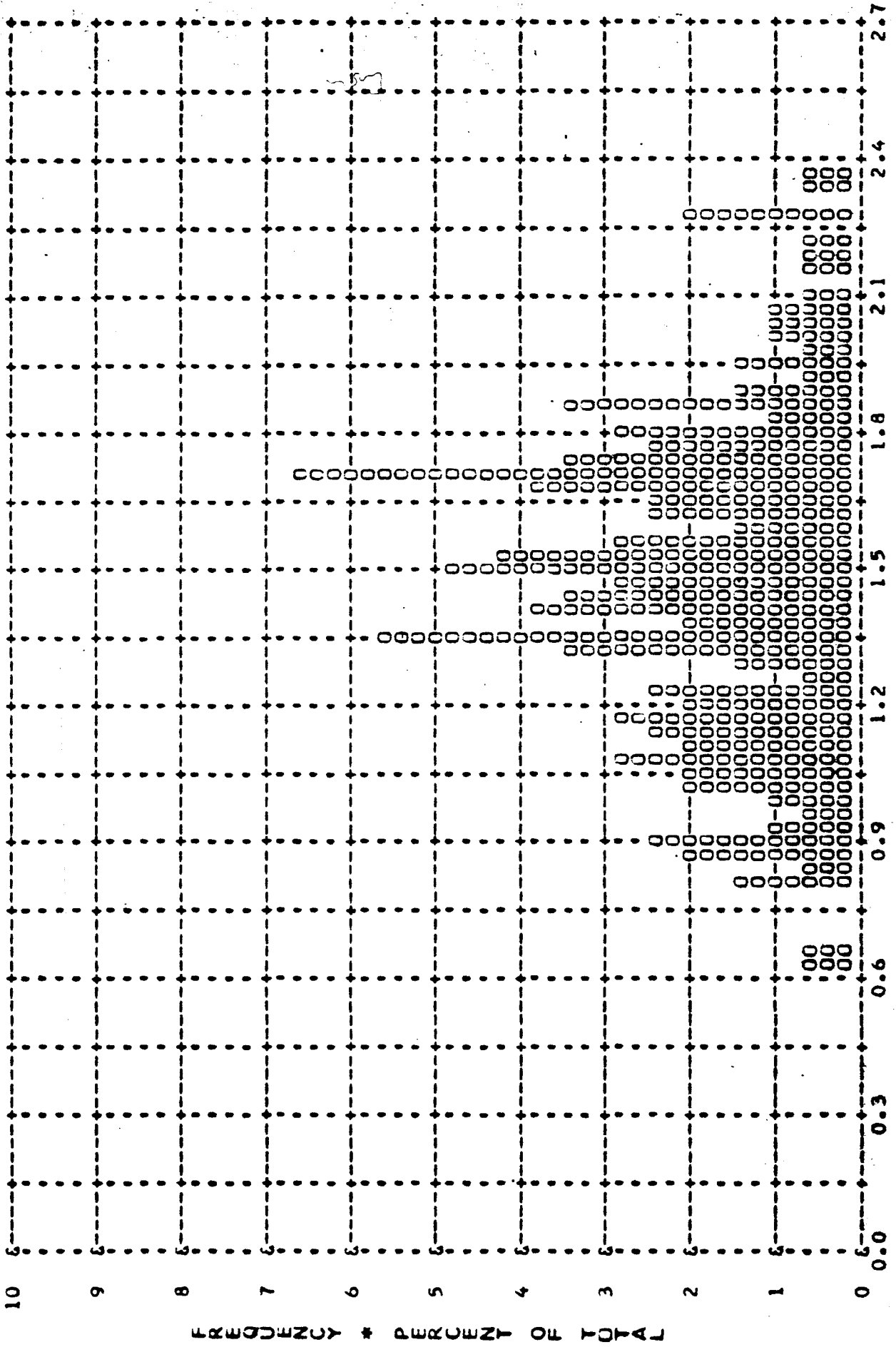


FIGURE A-35

~~TOP SECRET C/~~

~~TOP SECRET C/~~

MISSION * 1042-2 * INSTR * AFT * 9/8/67 PLOT CF D MAX * CLOUD * PROCESSING * ALL LEVELS
AIRTH MEAN * 2.17 * MEDIAN * 2.25 * STD DEV * 0.23 * RANGE * 0.85 TO 2.39 WITH 228 SAMPLES

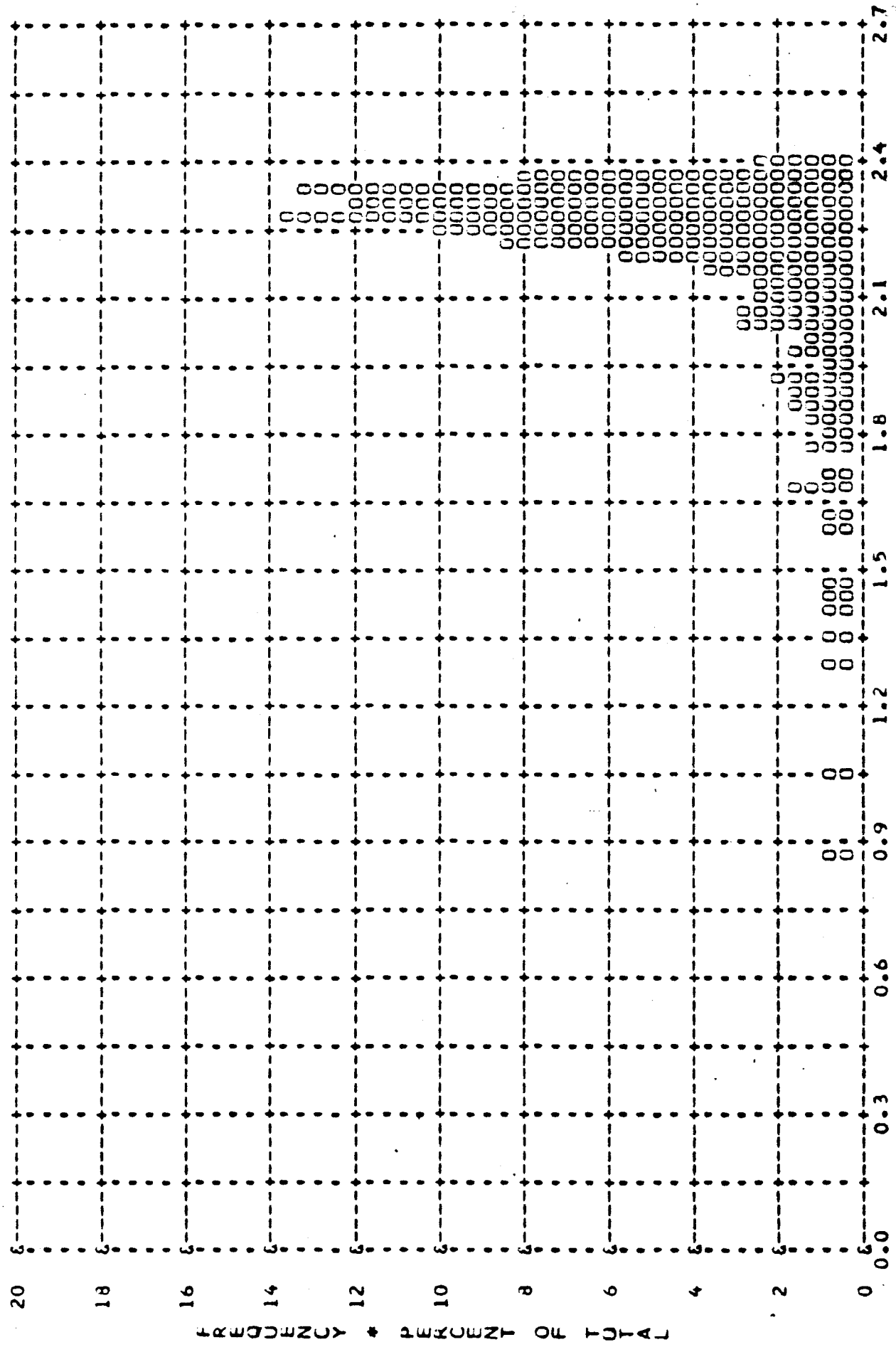
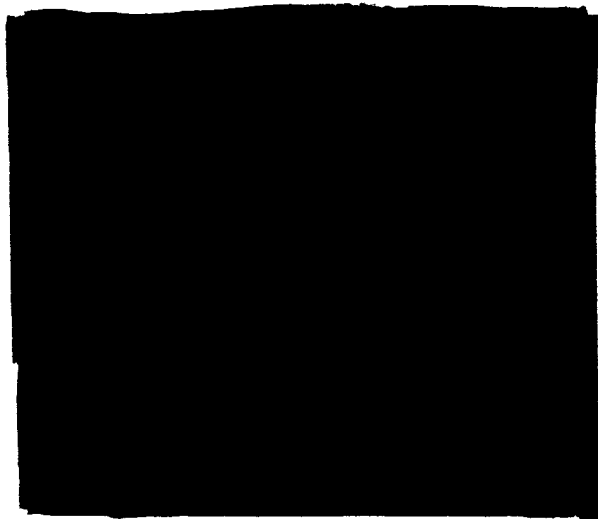


FIGURE A-36

~~TOP SECRET C/~~

~~TOP SECRET C~~ [REDACTED]

Distribution:



~~TOP SECRET C~~ [REDACTED]