CORONA J

PERFORMANCE EVALUATION REPORT

MISSION 1041-1 and 1041-2

FTV 1634, J-49

14 December 1967

Approved: [redacted]
Manager
Advanced Projects

Approved: [redacted]
Mgr.
Program

[redacted]

9 January 1968

TO: [redacted]

THRU:

FROM:

SUBJECT: MISSION 1041-1 and 1041-2 FINAL REPORT(J-40)

Enclosed is the Final Evaluation Report for Mission 1041-1 and 1041-2.

[redacted]
Manager
Advanced Projects

FOREWORD

This report details the performance of the payload system during the operational phase of the Program [redacted] Flight Test Vehicle 1634.

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 1041-1 and 1041-2, system J-40 which was launched on 9 May 1967.

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INTRODUCTION

This report presents the final performance evaluation of Missions 1041-1 and 1041-2 of the Corona Program. The purpose of this report is to define the performance characteristics of the J-10 payload system and to identify the source of in-flight anomalies.

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

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

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

SECTION 1

SYSTEM PERFORMANCE

A. MISSION OBJECTIVES

The payload section of Mission 1041, placed into orbit by Flight Test Vehicle #1634 and THORAD Booster #506, 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-40 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 2152 Z (1452 PDT) on 9 May 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 1041-1 consisted of a 7 day operation and was completed by air recovery on 16 May 1967. Mission 1041-2 was completed with an air recovery on 23 May 1967 following a 7 day photographic operation.

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

ORBITAL PARAMETERS

Parameter	Predicted	Orbit 45 Actuals	Orbit 150 Actuals
Period (Min.)	91.04	94.35	94.21
Perigee (N.M.)	99.8	101.1	103.2
Apogee (N.M.)	256	430.65	430
Inclination (Deg.)	85	85.05	85.05
Perigee Latitude (Deg. N.)	28.6	32.9	57.9
Eccentricity	0.0216	0.0446	0.0441

C. PANORAMIC CAMERAS

The photography was rated good by the photo-interpreters. Both cameras operated satisfactorily.

D. STELLAR-INDEX CAMERAS

There were no significant anomalies in the operation of either unit. The base plus fog densities were higher due to radiation in an unusually high apogee. The images were adequate for attitude determinations.

E. RADIATION

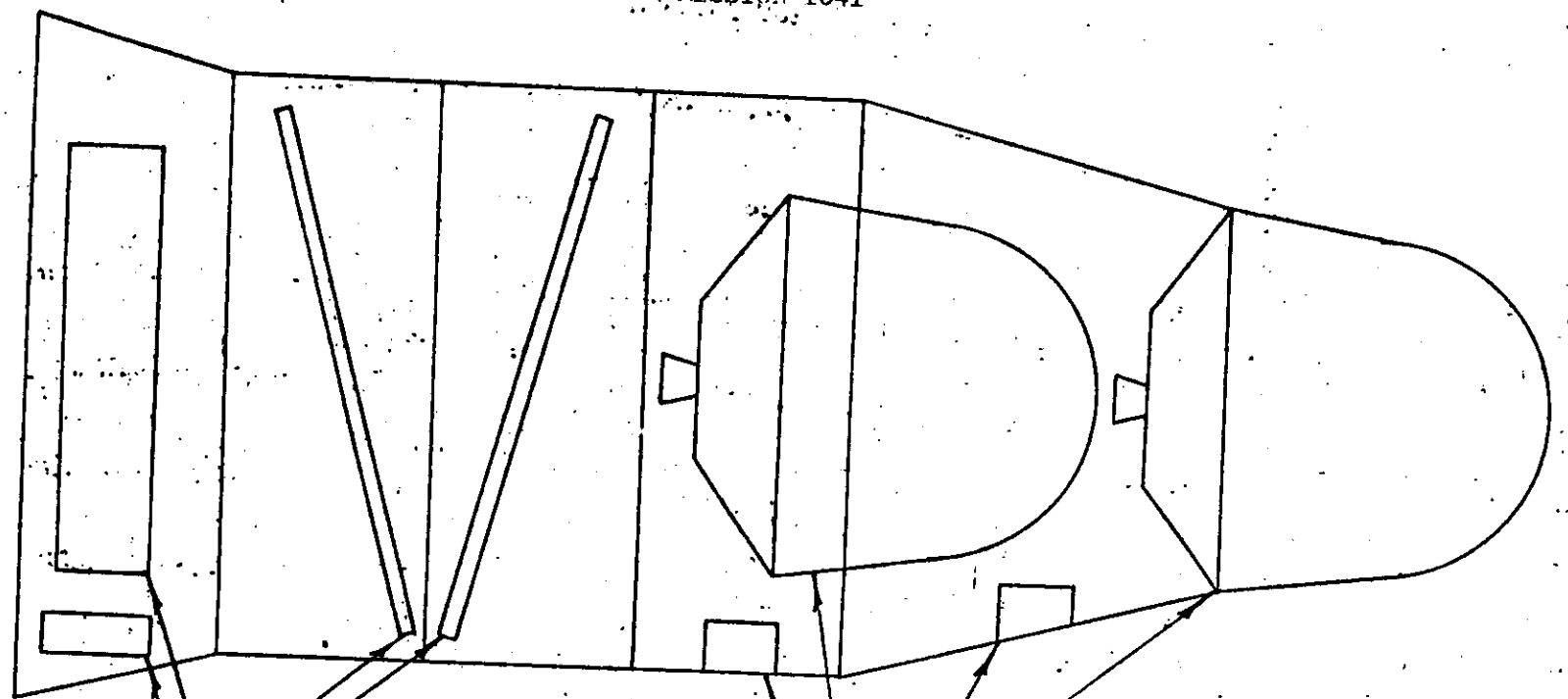
Emulsion	Mission 1041-1 B + F Density	Mission 1041-1 Radiation	Mission 1041-2 B + F Density	Mission 1041-2 Radiation
Type 3401	0.49	4.8 R	0.64	7.6 R
Royal X Pan	0.70	2.6 R	0.80	3.3 R

F. OTHER SUBSYSTEMS

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

SCHEMATIC INBOARD PROFILE - CORONA J SYSTEM J-40

MISSION 1041



Master Camera No: [redacted]

Slave Camera No: [redacted]

Supply Cassette No: [redacted]

Clock No: [redacted]

Yaw Programmer No: [redacted]

"A" Recovery Subsystem No: [redacted]

"A" Stellar-Index Camera No: [redacted]

"B" Recovery Subsystem No: [redacted]

"B" Stellar-Index Camera No: [redacted]

Pressure Make-up Unit No: [redacted]

SECTION 2

PRE-FLIGHT SYSTEMS TESTS

A. ENVIRONMENTAL TESTING

1. Test Objective

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

2. Test Summary

The J-40 HIVOS test was conducted from 3 August to 10 August 1966. During this time 5638 frames were run into the "A" bucket and 4467 frames into the "B" bucket. The lowest pressure attained was one micron.

The pan films exhibited very slight start-up corona on 4 frames.

The last 200 frames on instrument 209 did not indicate any output H.O. shutter operation. The absence of fogging was probably a bulb failure in the fogging fixture since the TM monitor showed a shutter pulse. To conform to a FEWO #1028 the H.O. units were replaced on this instrument.

The S/I unit #102 did not qualify for flight due to excessive corona, marking and double exposures.

Failsafe occurred in instrument No. 2 in Rev No. 10 of the "B" bucket. Malfunction investigation was inconclusive. Due to failsafe, vehicle deactivate sequence was not performed.

Instrumentation performance was satisfactory.

The cycle rates of the two instruments were one and one-half percent apart during entire test. The Master and Slave cycle counter agreed with actual count.

The -1 Stellar/Index moniter performance was normal.

The -2 Stellar/Index moniter was satisfactory. However, there was one missed meter and two shutter pulse failures in Rev. 10.

Clock accuracy was satisfactory.

The pressure make-up system operated normally. Gas consumption, however, was too high at 9.45 PSI/Min. During PMU operates, internal pressure increased to 40-44 microns.

The command system operated normally. The V/H delay stepper failed to home on one rev. This was due to the command not being held in long enough. In Rev 10 of "A" bucket, the V/H programmer failed to start due to improper number of Br. 27 commands being issued.

Transfer from -1 to -2 was commanded by KZ-38. All transfer functions occurred normally.

The orbital sine function generator (O.S.F.G.) operated normally in both missions.

B. RESOLUTION TEST

Resolution and theodolite tests were performed on 2 September 1966. Results of the thru-focus resolution tests of pan instruments 208 and 209 showed the following characteristics:

Master Pan Instrument No. 208

Maximum high contrast resolution 178 lines/mm at 0.000 focal position.

Maximum low contrast resolution 111 lines/mm at 0.000 focal position.

Slave Instrument No. 209

Maximum high contrast resolution 187 lines/mm at 0.000 focal position.

Maximum low contrast resolution 112 lines/mm at 0.000 focal position.

Both instruments met the system requirements specification.

C. LIGHT LEAK TEST

The J-40 system was tested for light leaks on 7 August 1966. A pin hole was found and repaired on one of the Slave instrument H.O. boots. A light search then proved the system to be acceptable.

D. FLIGHT LOADING AND CERTIFICATION

The first Flight Readiness test of Panoramic Instrument #208 and 209 was completed on 1 May 1967. Excessive emulsion build up was noted in the processed imagery of the platen shrinkage markers and along the format edges of both instruments. Instrument #208 and 209 were cleaned and a second Flight Readiness test was conducted on 2 May 1967. Examination of the processed 3404 type film from both panoramic instruments revealed acceptable camera performance including clean format and shrinkage markers, tracking, normal rail scratches, horizon fiducials and shutter function, time track, serial number, binary index marks, and binary word.

Processed film exhibits from Stellar/Index cameras D-101 and D-102 demonstrated acceptable performance. Both Stellar cameras produced good reseau, fiducial, and correlation lamp imagery on film type 3401. Both Index cameras produced good reseau and correlation lamp imagery on film type 3400.

Flight film spools #24T and 13B (Box 50) were placed in the panoramic camera supply cassette but were removed and returned to [redacted] when it was observed that the film wraps were lightly stuck together principally along one film edge. A/P film storage room temperature was 68°F and 38% RH. Box 50 was transferred to the Flight Loading room for a period of 24 hours before opening Box 50 at a room temperature of 70°F and 40% RH.

The supply cassette was reloaded with flight film from Box 26 without incident.

The system pre-flight acceptance run was initiated and completed without incidence on 4 May 1967.

Customer review and final J-40 system buy-off was concluded on the afternoon of 4 May 1967.

SECTION 3

FLIGHT OPERATIONS

A. SUMMARY

FTV 1634 was an Agena Vehicle (SS-013) and a thrust augmented Thor (LV-2A, S/N-508) booster. This vehicle was configured for a tail first in orbit configuration with a dual recovery capability. Launch occurred from VAFB, Pad SLC-3 at 2152 GMT on 09 May 1967.

This payload system was flown with a new main door assembly, which will be standard equipment on systems J-40 and up. There were no problems connected with this new assembly. The J-40 command system was modified to eliminate the capability of real time command (RTC) 15 to reset the intermix sequence and the 4 step counter (operations counter). There were no operational problems encountered with this change. The remainder of the J-40 payload system conformed to the standard J-1 configuration.

The J-40 payload system was prepared for flight utilizing the full Phase III (Factory to Pad) concept.

Launch, ascent, and injection events occurred as programmed. However, a failure of the velocity meter to cut the Agena engine off resulted in burning fuel to depletion with an orbit period longer than predicted. Thus, the orbit achieved was not within 3 sigma dispersions.

Mean camera operational altitudes were approximately five (5) N.M. higher than nominal.

Instrumentation and command systems operated satisfactorily throughout the flight.

The on-orbit sine function generator (OSFG) and clock system functioned normally for the duration of the mission.

Telemetry data indicated a shutter failure on the Index camera during Rev 213. Otherwise the Stellar/Index system functioned normally.

KIK-ZORRO 38 (early -1 to -2 switchover) was performed on Rev 91 by [redacted] 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).

The panoramic film was exhausted on Rev 206 frame 101 on the Master and Rev 213 frame 3 on the Slave.

Panoramic Film Consumption (Frames)

	Actual	
	Master	Slave
Pre-Launch	105	114
-1 Mission	2938	2920
-2 Mission	2995	3004
Total	6038	6038

FMC Match

The initial orbit dispersion affected instrument operations in several areas. The FMC ramps utilized on this mission were never designed for orbits as eccentric as encountered on this flight. It was also necessary to bias the H-Timer to place the programmed operations over the desired targets.

Operations that were taken on the pre-flight FMC ramp settings prior to adequate orbit determination were at altitudes that were 20 to 30 per cent higher than nominal.

There were some operations taken on the wrong point on the FMC ramp after adequate orbit determination had been accomplished. These operations were on orbits on which the H-Timer was biased after the FMC ramp had started.

The actual ground tracks were moving west from the nominal ground track at a rate of 50 nautical miles (N.M.) per orbit at the equator. It was possible to compensate for this longitudinal misalignment by slewing the H-Timer in 1356 N.M. steps. Longitudinal alignment errors of up to 700 N.M. at the equator were encountered.

Latitudinal mismatch of as much as four (4) degrees were encountered even when the H-Timer was synchronized with the orbit. This resulted in biasing the H-Timer even though no longitudinal misalignment existed.

The mean altitudes of the camera operations were approximately 5 N.M. higher than nominal.

C. INSTRUMENTATION AND COMMAND SYSTEM PERFORMANCE

The command system was satisfactory for both missions. This command system was modified to eliminate the capability of resetting the intermix sequence and the four step counter by RFC 15. There were no operational problems encountered during the flight with this modification. The only instrumentation anomaly encountered during this mission was the No. 2 IMU temperature sensor which became an open T/M point during the pre-flight loading sequence.

D. CLOCK SYSTEM PERFORMANCE

Clock system operation was normal for the duration of the flight. Satisfactory time correlation between the flight clock and [redacted] time was obtained.

E. PRESSURE MAKE-UP SYSTEM PERFORMANCE

Pressure make-up system performance was normal throughout the flight. Average gas consumption was approximately 7.9 PSI/min for the 253 minutes of total operate time. The system had a surplus of 550 PSIA at the end of the mission.

F. THERMAL ENVIRONMENT

The average instrument temperatures ranged from a high of 85°F to a low of 51°F.

The thermal control paint pattern on the payload system was modified prior to launch.

SECTION 4

MISSION 1041 RECOVERY SYSTEMS

-1 MISSION

The -1 recovery capsule was successfully recovered by air catch on Rev. 93 at 0036 GMT on 16 May 1967. All re-entry events appeared normal and occurred within specified tolerances. Capsule impact was within the nominal 3-sigma dispersion.

	Latitude	Longitude
Predicted	27° 00'N	163° 35.6'W
Actual	26° 22'N	163° 17.0'W

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

-2 MISSION

The -2 recovery capsule was successfully recovered by air catch on Rev. 215 at 0008 GMT on 24 May 1967. Capsule impact was approximately 240 miles down range and 17 miles off track. Post recovery exercises indicated recovery timer events were within specifications. An investigation is continuing to determine the cause or causes of this anomaly.

	Latitude	Longitude
Predicted	28° 00'N	169° 42.2'W
Actual	24° 10'N	169° 46.0'W

MISSION 1041

RECOVERY SEQUENCE OF EVENTS

Event	Delay Time (Seconds) Actual -1	Actual -2	Nominal
*Arm	76.81	N/A	77.0 ± 1.0
*Transfer	2.00	N/A	2.0 ± 0.25
Electrical Disconnect	0.81	N/A	0.900 $^{+0.43}_{-0.30}$
Separation	---	---	---
**Spin	3.42	N/A	3.4 ± 0.30
Retro	7.60	N/A	7.55 ± 0.45
Despin	10.64	N/A	10.75 ± 0.54
T/C Separation	1.49	N/A	1.5 ± 0.15
***"G" Switch Open	539.36	N/A	539.7(-1) 538.6(-2)
Parachute Cover Off	34.4	33.35	34.0 ± 1.5
Drogue Chute Deployed	0.65	0.60	0.63 ± 0.08
Main Chute Bag Separate	11.47	10.80	10.0 $^{+3.0}_{-2.2}$
Main Chute Deployed	0.65	0.65	0.52 ± 0.13
Main Chute Disreef	4.88	4.55	4.5 ± 0.80

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

TABLE 4-1

SECTION 5

MISSION 1041 PANORAMIC CAMERAS

A. COMPONENT ASSIGNMENT

Component	Master (FWD) Serial Number	Slave (AFT) Serial Number
Main Camera	208	209
Main Camera Lens	2172435	2182435
Supply Horizon Camera	303C6	313C6
Supply Horizon Camera Lens	E12861	E19101
Take-up Horizon Camera	289C5	313C5
Take-up Horizon Camera Lens	E12866	E19105
Supply Cassette	SC-52	SC-52

B. CAMERA DATA AND FLIGHT SETTINGS

Main Camera:		
Lens	24"f/3.5	24"f/3.5
Slit Width	0.225"	0.175"
Filter Type	Wratten 23A	Wratten 21
Film Type (Eastman Kodak)	3404	3404
Supply Horizon Cameras:	Port	Starboard
Lens	55 mm f/6.3	55 mm f/6.3
Aperture Setting	f/6.3	f/8.0
Exposure Time	1/100 second	1/100 second
Filter Type	Wratten 25	Wratten 25
Take-up Horizong Cameras:	Starboard	Port
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

MISSION 1041 PAN CAMERAS

C. POST FLIGHT PERFORMANCE EVALUATION

The overall image quality of this mission is generally good. It is considered better than Mission 1038 and comparable to Missions 1039 and 1040. Several factors combined to limit to a moderate degree the value of this mission for current intelligence. The highly eccentric orbit caused some difficulty in obtaining coverage of targets while the high altitude over a small number of targets at the most northern latitudes reduced the ground resolution. Some further degradation resulted from a small area of out-of-focus imagery of the aft-looking camera. Heavy cloud cover and other atmospheric attenuation in some target areas also limited the value of this mission. However, it is noted that the photo-interpreters judged the mission as "fair to good".

The MIP ratings for the -1 and -2 missions were both 85, and the MIP frames for both mission segments were selected from the forward-looking camera material. Usually the aft-looking camera produces the better quality imagery and the MIP frames are selected from that camera. The relatively good performance of the forward camera on this mission may be partly attributed to the relatively high solar elevations encountered (45° and above). Examination of the FMC for each camera shows no significant differences. It is noted that the Performance Evaluation Team stated that "... the information content of the aft camera imagery is equivalent, and in some cases, better".

The only significant anomaly of the forward-looking panoramic camera was an open shutter failure of the starboard (output) H.O. device for one cycle (two panoramic frames). Examination of images from this H.O. both before and after the anomaly showed normal results. Although a continuous open shutter failure of the H.O. device would be catastrophic for the pan camera concerned, the present anomaly is random and no action is indicated.

On the aft-looking pan camera material there was a small out-of-focus area throughout both mission segments. The extent of this anomaly tended to increase through the mission. The cause is believed to be a film tracking bias across the platen resulting from a slight misalignment. Corrective action beyond the extensive alignment precautions presently used is not contemplated.

SECTION 6

MISSION 1041 STELLAR-INDEX CAMERAS

A. COMPONENT ASSIGNMENT

Component	-1 Mission Serial Number	-2 Mission Serial Number
Camera	D-105	D-102
Index Reseau	134	127
Stellar Reseau	133	127

B. CAMERA DATA AND FLIGHT SETTINGS

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

C. POST FLIGHT EVALUATION

Stellar Cameras

Both Stellar cameras were operational throughout their assigned mission segments. Stellar image motion, which was small throughout the mission, was generally in the roll component. The Stellar images were adequate for altitude determination.

The base plus fog densities of the Stellar films was higher than normal with the Mission 1041-2 fog densities significantly higher than those from 1041-1. It has been determined that the cause is increased radiation exposure resulting from the unusually high orbital apogee.

An unidentified image appeared in a five frame sequence of Mission 1041-1, and again in a four frame sequence of Mission 1041-2. It was noted that these sequences occurred on synchronous orbits. However, it was concluded that the object producing the images was external to the vehicle system and thus beyond the scope of engineering investigation.

There were no significant anomalies in the operation of either Stellar camera.

Index Cameras

Both Index cameras were operational throughout their assigned mission segments. The quality of images from both cameras was acceptable.

An increase in base plus fog densities, corresponding to those observed in the Stellar films, was noted on the Index films. The cause was the same: increased radiation exposure, as described in the paragraphs on Stellar Cameras.

There were no significant anomalies in the operation of either Stellar camera.

SECTION 7

PANORAMIC CAMERA EXPOSURE

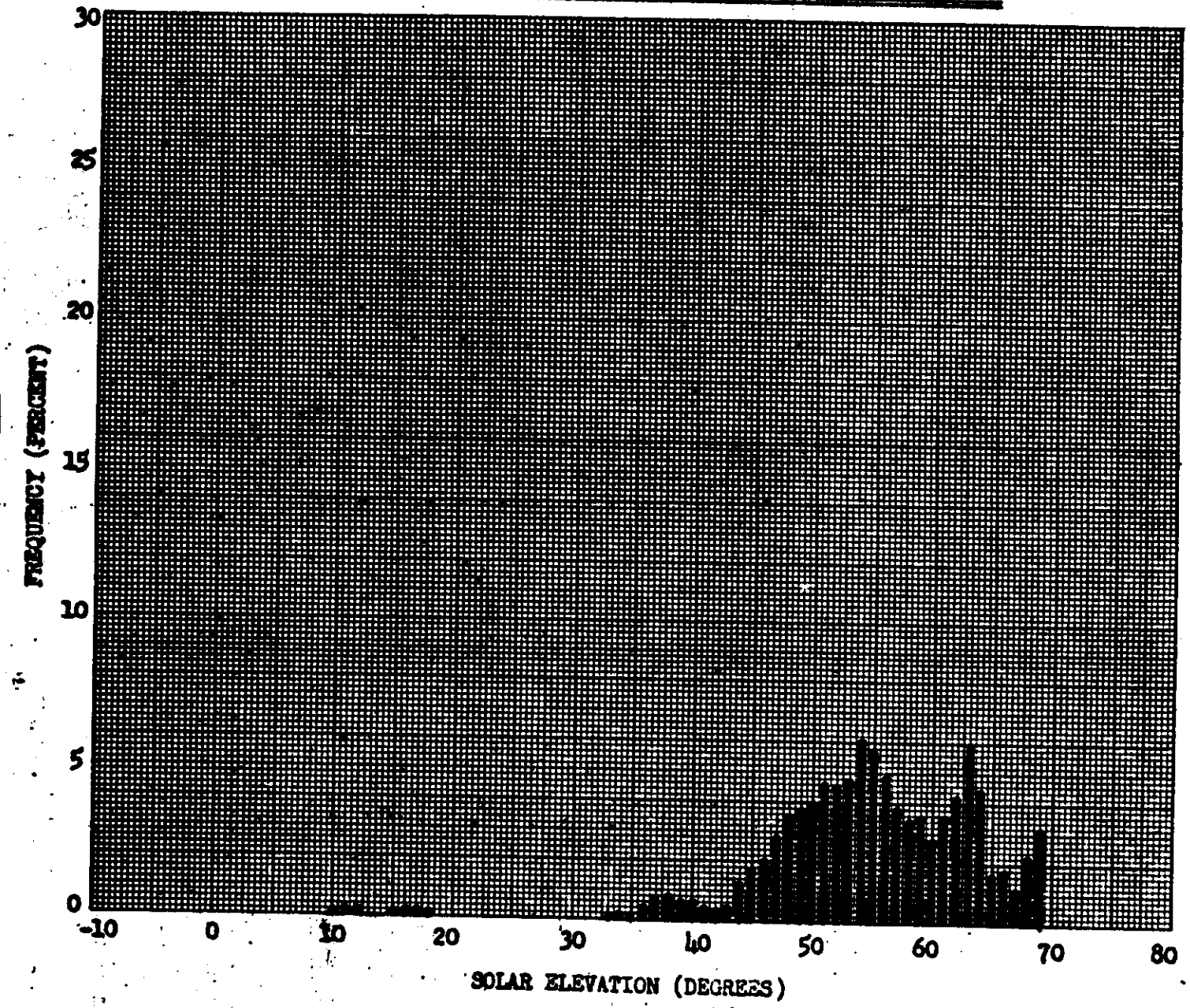
The Master camera contained a 0.225 inch slit and a Wratten 23A filter. The Slave camera had a 0.175 inch slit and a Wratten 21 filter. These conditions placed the nominal exposure near the intermediate processing curve.

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-93, and D-215 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]

Mission	Camera		% Primary	% Intermediate	% Full	% Transition
1041-1	FWD	Predicted	0	100	0	
		Reported	6	31	44	19
1041-1	AFT	Predicted	0	99	1	
		Reported	8	34	40	18
1041-2	FWD	Predicted	1	99	0	
		Reported	5	47	28	20
1041-2	AFT	Predicted	1	99	0	
		Reported	5	20	54	21

SOLAR ELEVATION FREQUENCY DISTRIBUTION



Mission No: 1041-1

Payload No: J-40

Camera No: 208

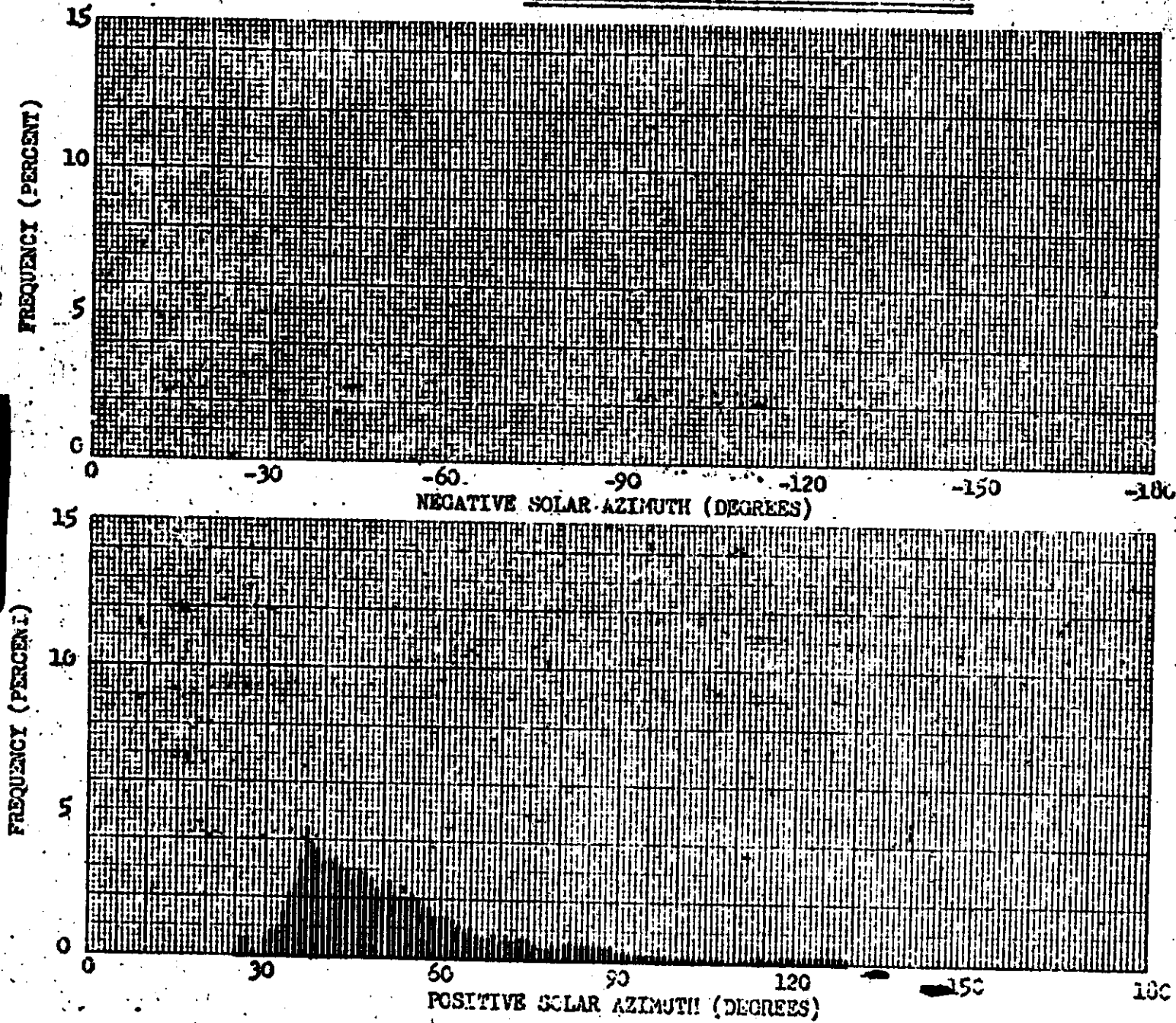
Launch Date: 5/9/67

Launch Time: 2152 Z

Inclination: 85°

FIGURE 7-1

SOLAR AZIMUTH FREQUENCY DISTRIBUTION



Mission No: 1041-1

Payload No: J-40

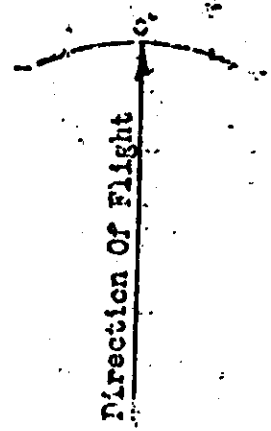
Camera No: 208

Launch Date: 5/9/67

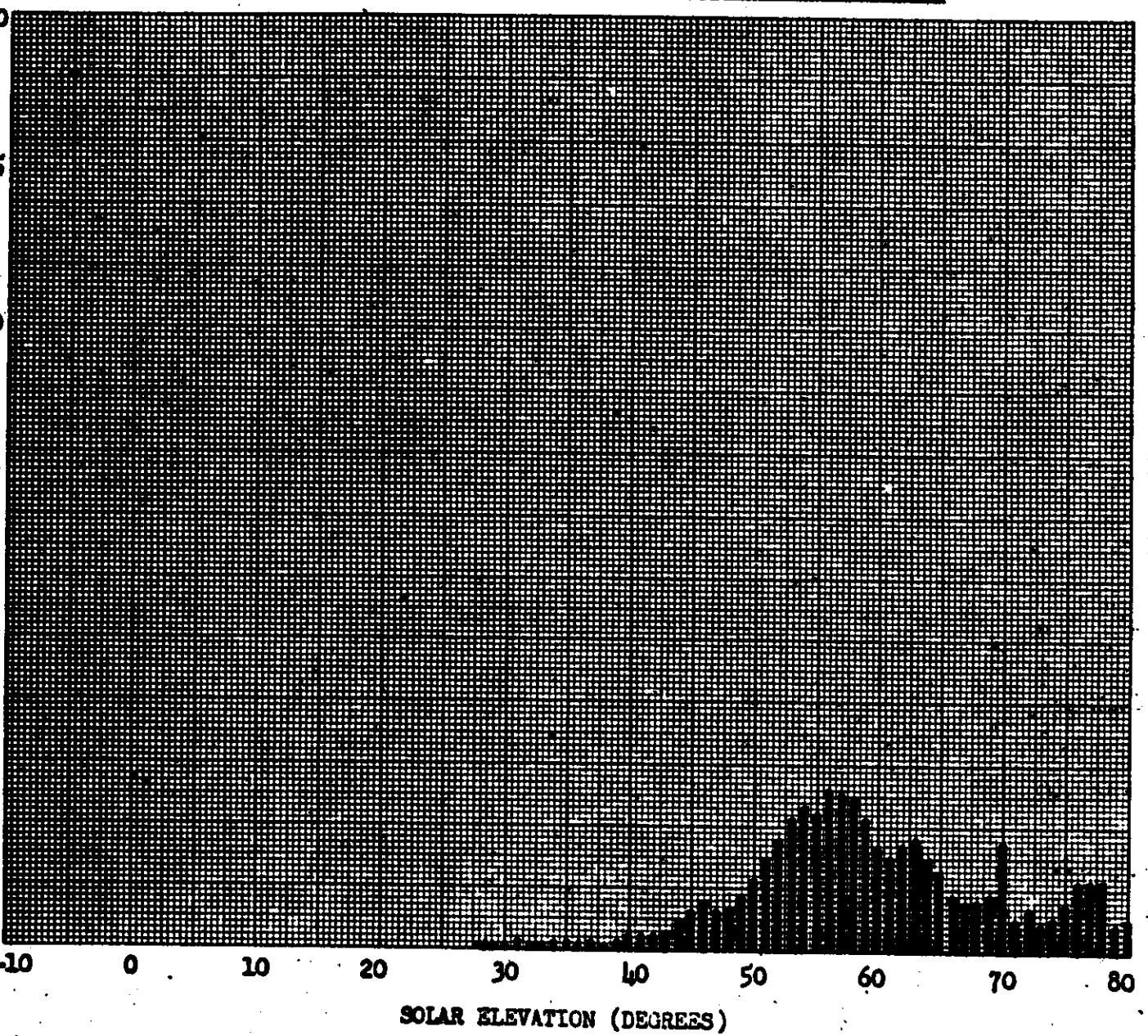
Launch Time: 2152 Z

Inclination: 85°

SIGN NOTATION



SOLAR ELEVATION FREQUENCY DISTRIBUTION



Mission No: 1041-2

Payload No: J-40

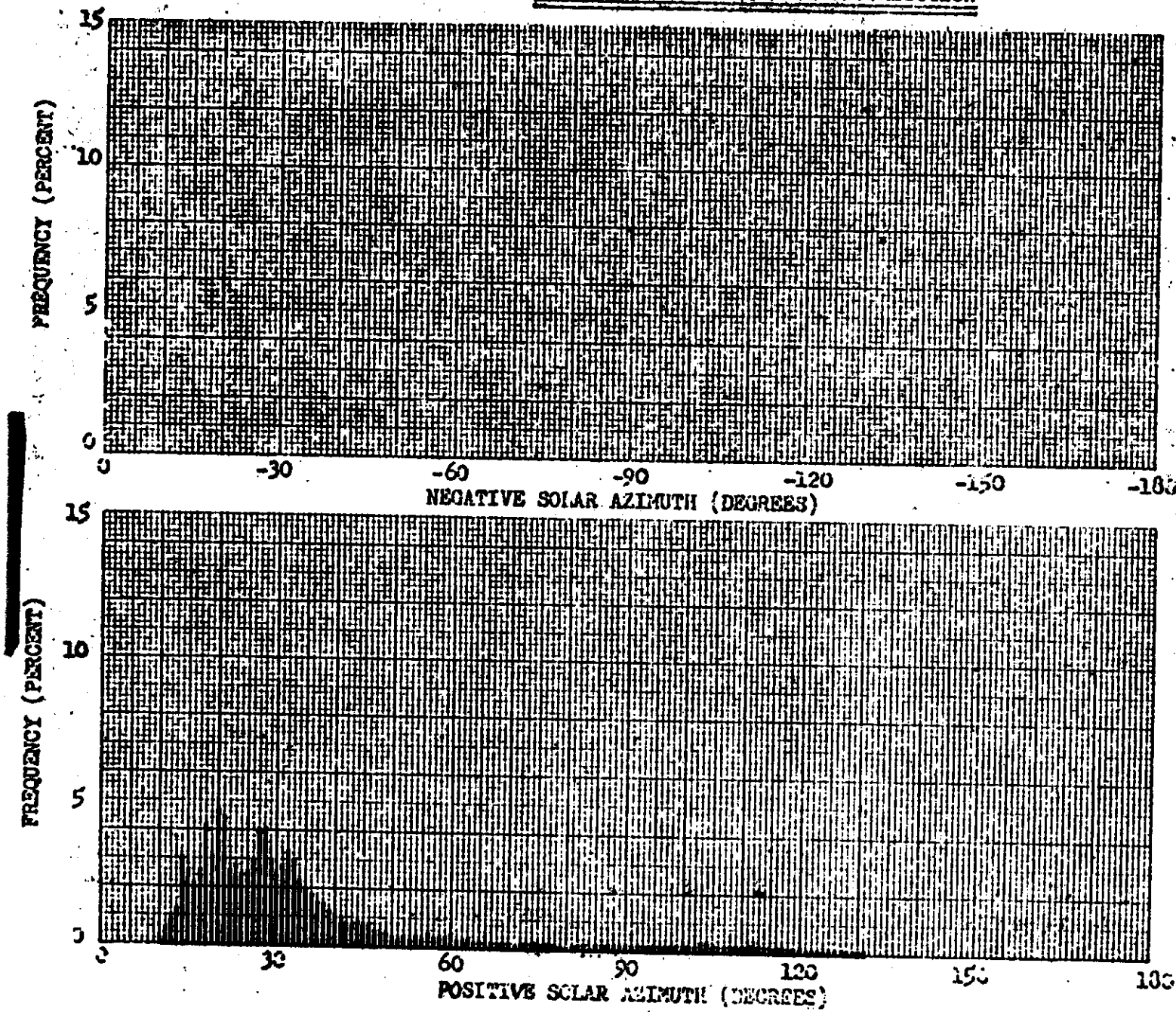
Camera No: 208

Launch Date: 5/9/67

Launch Time: 2152 Z

Inclination: 85°

SOLAR AZIMUTH FREQUENCY DISTRIBUTION



Mission No: 1041-2

Payload No: J-40

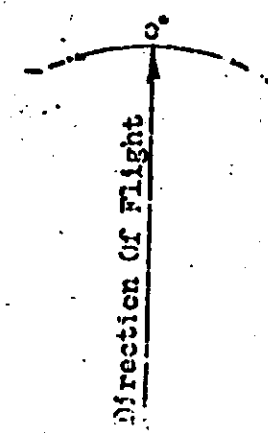
Camera No: 208

Launch Date: 5/9/67

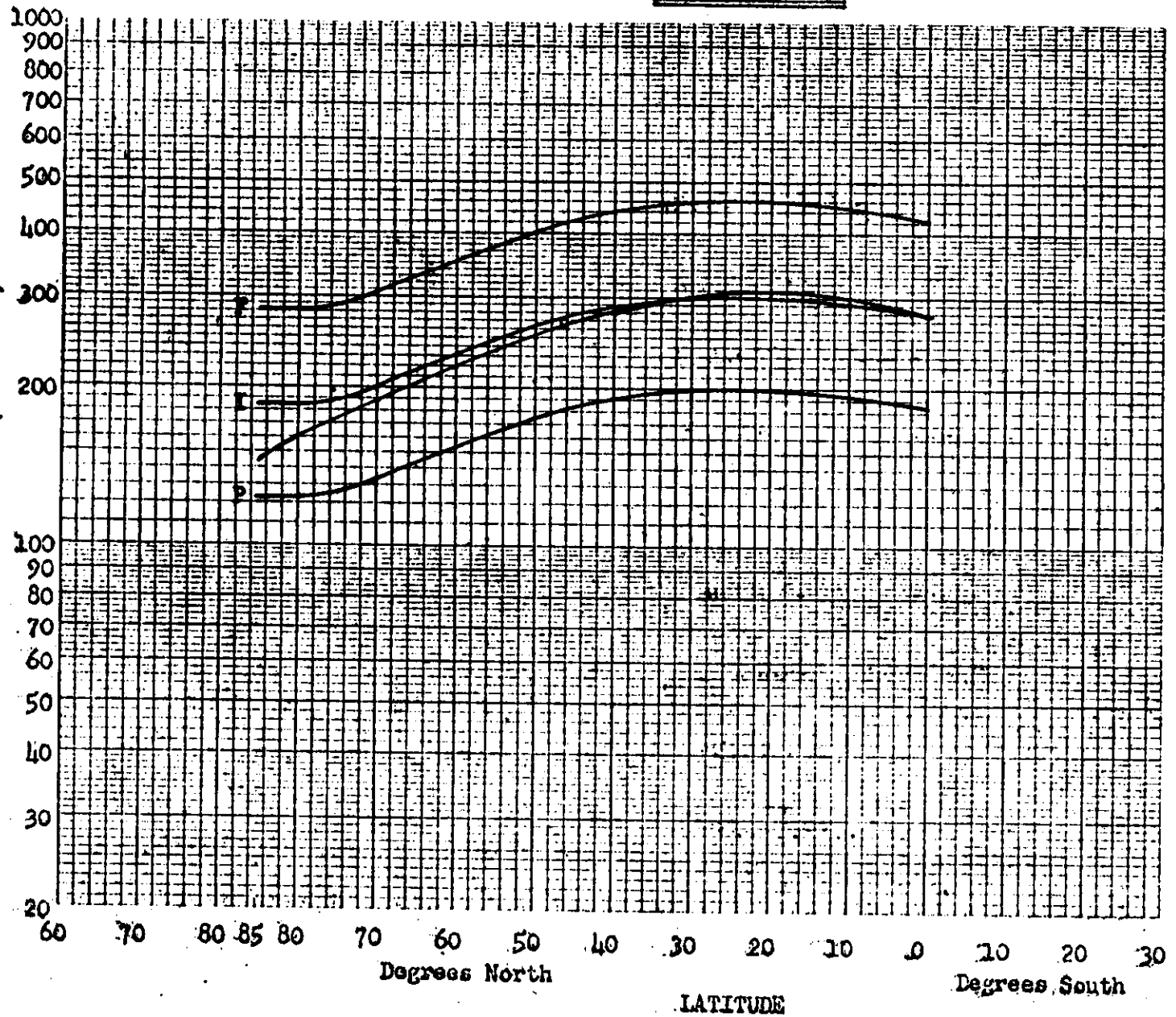
Launch Time: 2152 Z

Inclination: 85°

SIGN NOTATION



EXPOSURE POINTS



Mission No: 1041

Payload No: J-40

Camera No: 208

Pass No: 1

Launch Date: 5/9/67

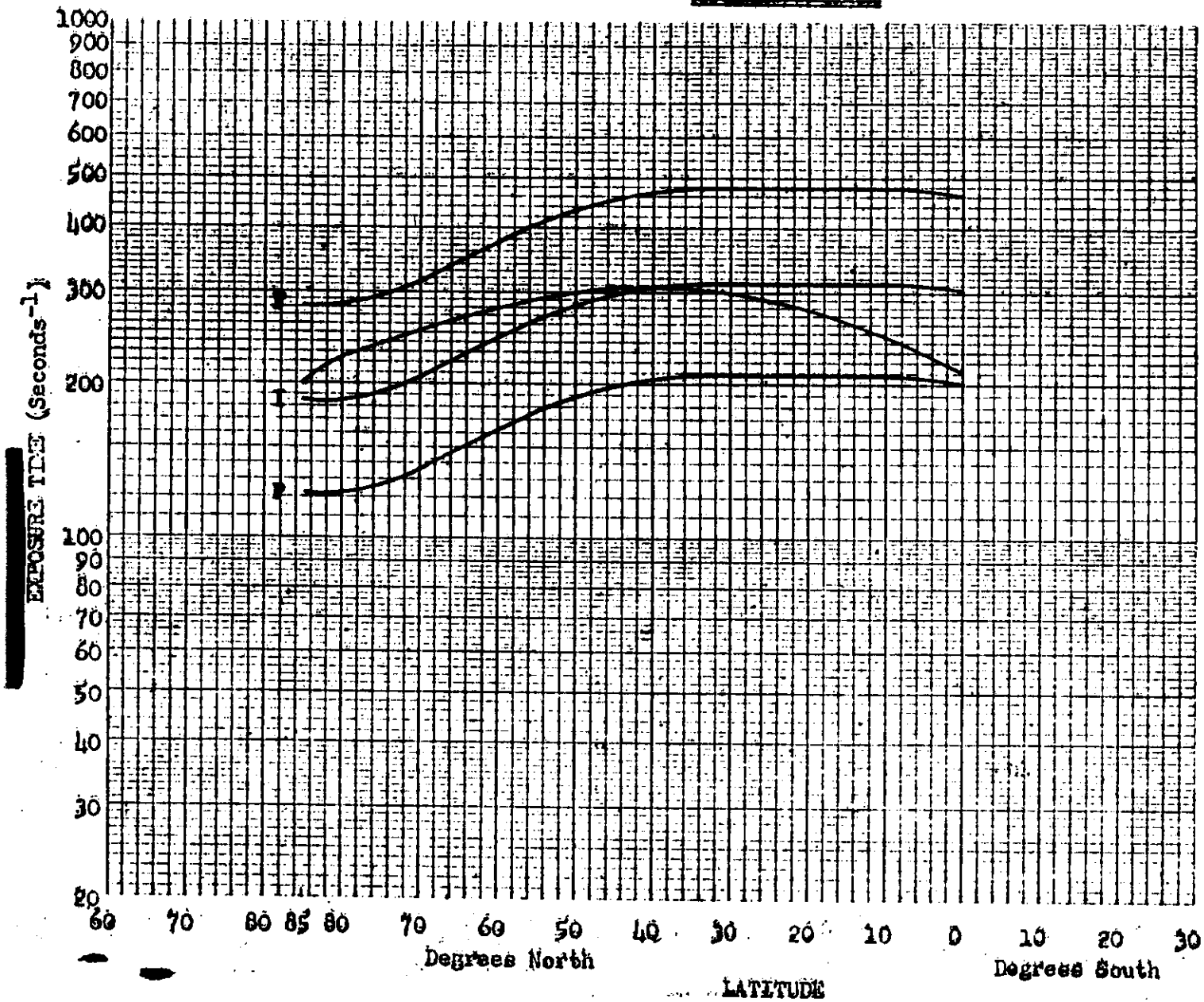
Launch Time: 2152 Z

Slit Width: .225

Filter Type: Wratten 23A

Film Type: 3404

EXPOSURE POINTS



Mission No: 1041

Payload No: J-40

Camera No: 208

Pass No: 93

Launch Date: 5/9/67

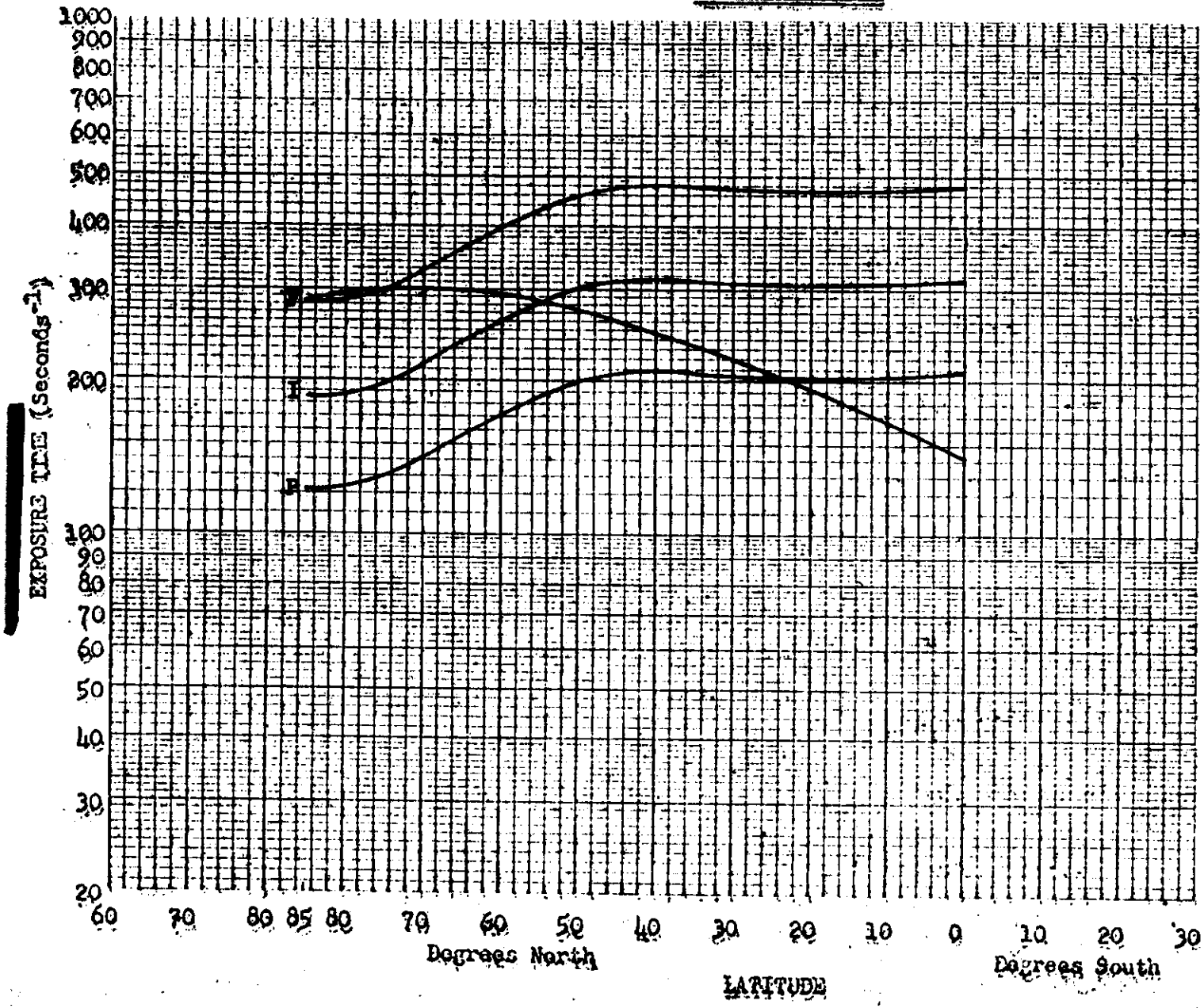
Launch Time: 2152 Z

Slit Width: .225

Filter Type: Wratten 23A

Film Type: 3404

EXPOSURE POINTS



Mission No: 1041

Payload No: J-40

Camera No: 208

Pass No: 215

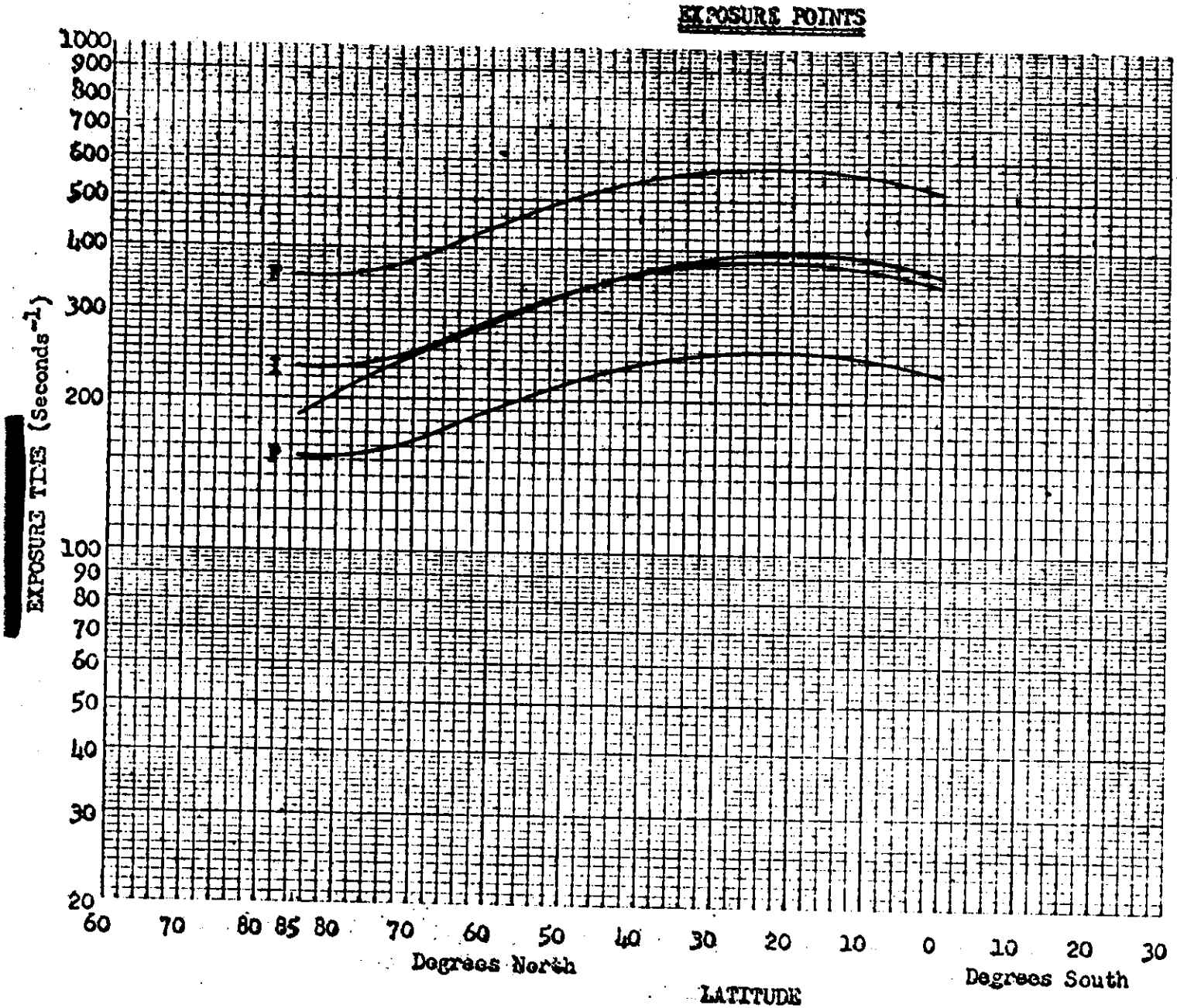
Launch Date: 5/9/67

Launch Time: 2152 Z

Slit Width: .225

Filter Type: Wratten 23A

Film Type: 3404



Mission No: 1041

Payload No: J-40

Camera No: 209

Pass No: 1

Launch Date: 5/9/67

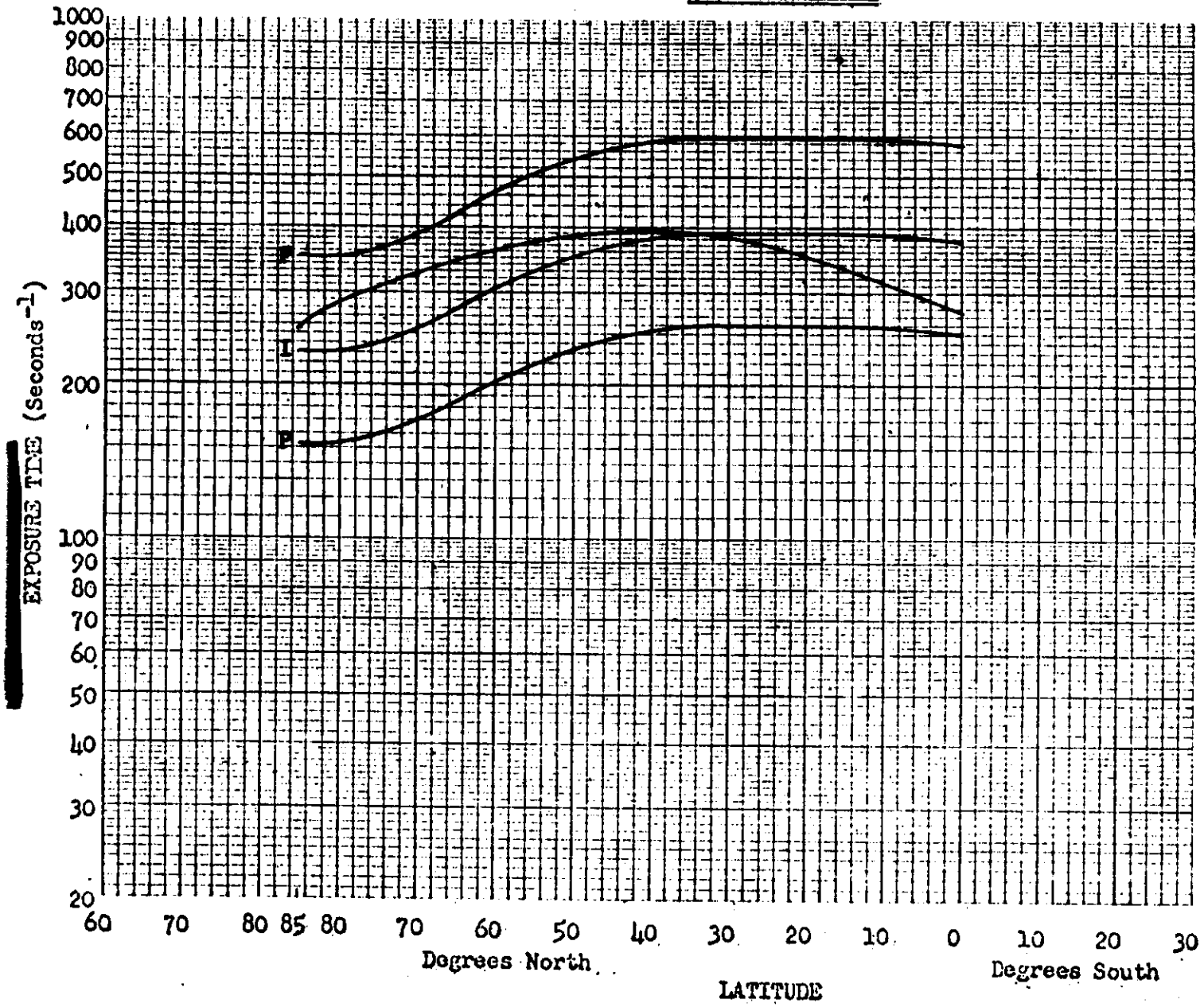
Launch Time: 2152 Z

Slit Width: .175

Filter Type: Wratten 21

Film Type: 3404

EXPOSURE POINTS



Mission No: 1041

Payload No: J-40

Camera No: 209

Pass No: 93

Launch Date: 5/9/67

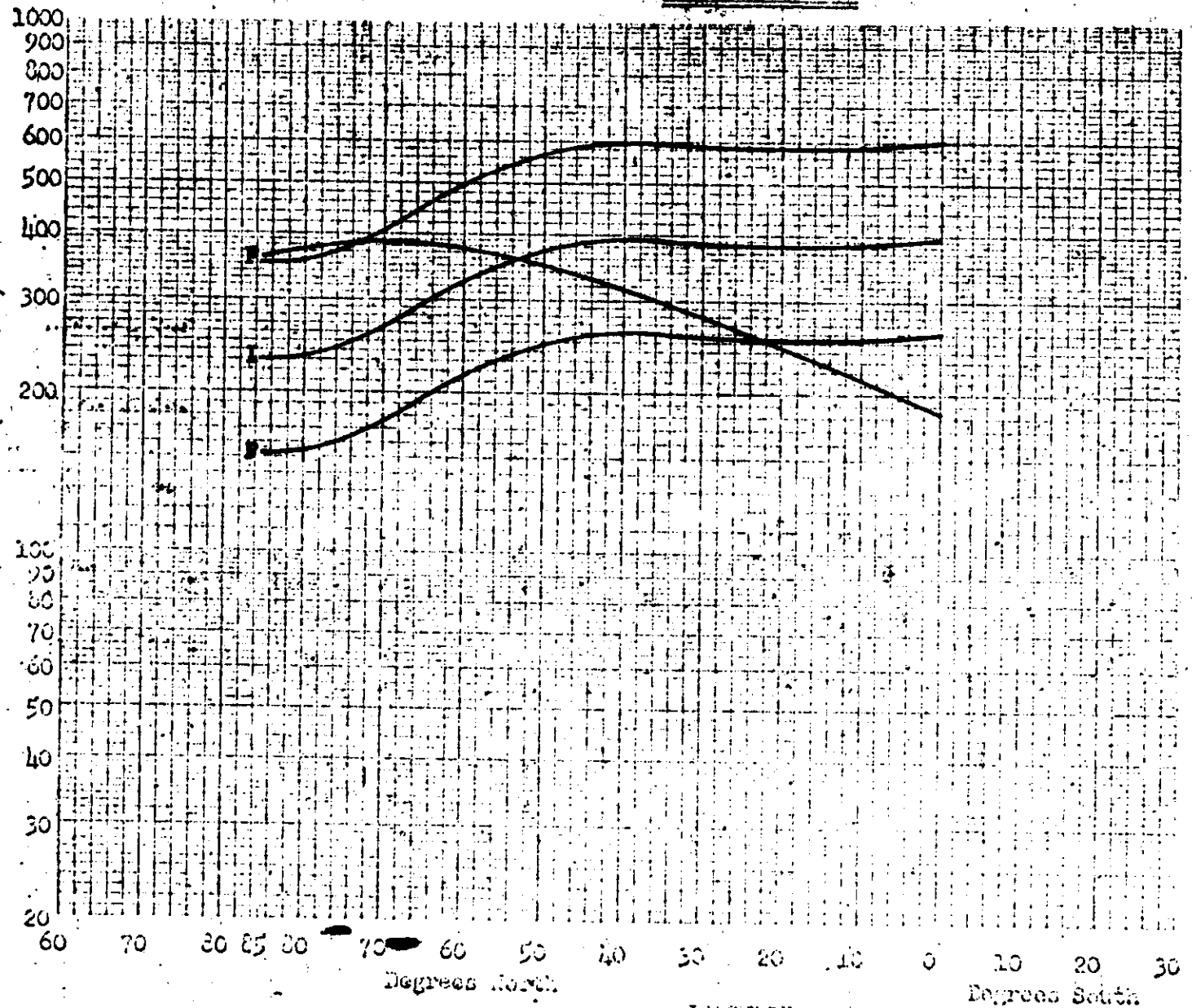
Launch Time: 2152 Z

Slit Width: .175

Filter Type: Wratten 21

Film Type: 3404

EXPOSURE POINTS



Mission No: 1041

Payload No: J-40

Camera No: 209

Pass No: 215

Launch Date: 5/9/67

Launch Time: 2152 Z

Slit Width: .175

Filter Type: Wratten 21

Film Type: 3404

SECTION 8

PERFORMANCE MEASUREMENTS

The photography acquired by both panoramic cameras during Missions 1041-1 and 1041-2 received an MTF rating of 85. A summary is tabulated below of the MTF/AIM resolution values measured by AFSPPF and reported in cycles/mm. The microdensitometer slit used was 1 micron by 80 microns.

Mission	Camera	Cycles/mm	Avg.	Ground Resolution
1041-1	FWD	72		
			73	23.1'
1041-2	FWD	73		
1041-1	AFT	82		
			80	15.0'
1041-2	AFT	78		

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/AIM Program" technique.

SECTION 9

DIFFUSE DENSITY MEASUREMENTS

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

Mission	Camera		% Primary	% Intermediate	% Full	% Transition
1041-1	FWD	Predicted	0	100	0	
		Reported	6	31	44	19
		Computed	0	46	54	
1041-1	AFT	Predicted	0	99	1	
		Reported	8	34	40	18
		Computed	0	47	53	
1041-2	FWD	Predicted	1	99	0	
		Reported	5	17	58	20
		Computed	0	23	77	
1041-2	AFT	Predicted	1	99	0	
		Reported	5	20	54	21
		Computed	0	30	70	

[redacted]

The tabulations of density frequency distributions for Missions 1041-1 and 1041-2 are included in Appendix A, Table A-1 thru A-4. The graphical presentation of the density distribution have been plotted in Appendix A, Figures A-1 thru A-36.

A summary of the processing and exposure analysis is shown in Table 9-1. The terrain D-Min criteria, (range) for prep x exposure and processing is 0.40 to 0.50 density units. The exact value for D-Min is selected subjectively and is not necessarily the absolute D-Min in the photography.

A density range chart Figure 9-1 is included in this report. This type of chart for Missions 1004 to 1031 is included in the S/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 a pixel basis, every tenth frame throughout the mission.

~~TOP SECRET~~ C/[redacted]

MISSION 1041-1 INSTR - FWD 6/27/67 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	54 PC	54 PC
INTERMEDIATE	107	0 PC	22 PC	68 PC	7 PC	2 PC
FULL	126	10 PC	0 PC	88 PC	2 PC	0 PC
ALL LEVELS	233	6 PC	10 PC	79 PC	4 PC	1 PC

MISSION 1041-1 INSTR - AFT 6/27/67 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	54 PC	52 PC
INTERMEDIATE	102	0 PC	10 PC	78 PC	10 PC	2 PC
FULL	113	2 PC	0 PC	92 PC	6 PC	0 PC
ALL LEVELS	215	1 PC	5 PC	86 PC	8 PC	1 PC

MISSION 1041-2 INSTR - FWD 6/27/67 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	27 PC	27 PC
INTERMEDIATE	53	0 PC	9 PC	66 PC	21 PC	4 PC
FULL	177	5 PC	0 PC	85 PC	10 PC	0 PC
ALL LEVELS	230	4 PC	2 PC	80 PC	13 PC	1 PC

MISSION 1041-2 INSTR - AFT 6/27/67 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	38 PC	37 PC
INTERMEDIATE	73	0 PC	10 PC	85 PC	5 PC	0 PC
FULL	170	12 PC	0 PC	82 PC	5 PC	0 PC
ALL LEVELS	243	9 PC	3 PC	83 PC	5 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/[redacted]

J MISSION DENSITY RANGES

FIGURE 3 -

SECTION 10

VEHICLE ATTITUDE

The vehicle attitude errors for both Mission 1041-1 and 1041-2 were derived from the reduction of the Stellar camera photography. This attitude date is supplied to A/P by NPIC.

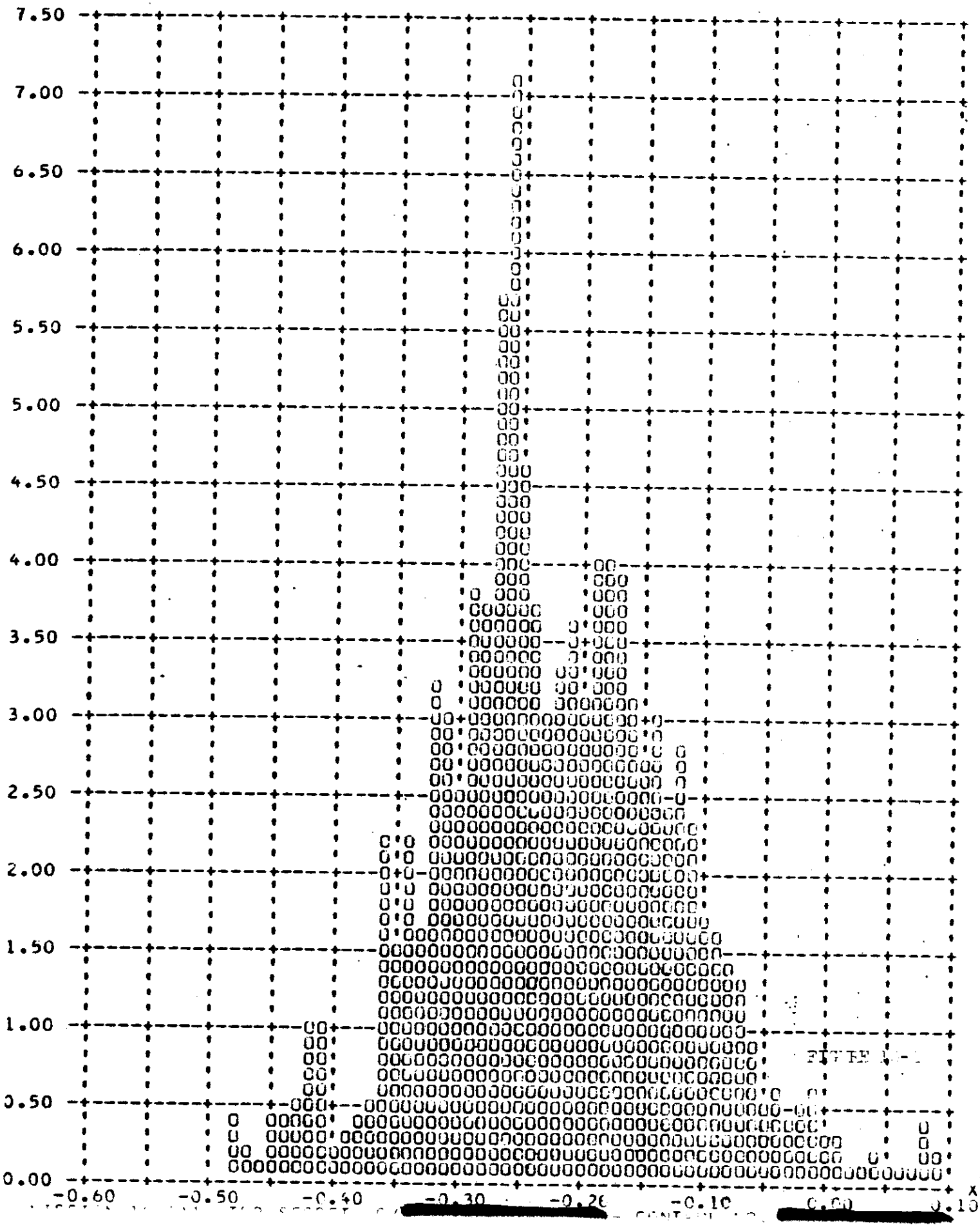
The attitude errors for each frame and the attitude control rates are calculated at the A/P computer facility. The computer also plots the frequency distribution of the rates and errors. Figures 10-1 through 10-6 show these distributions for Mission 1041-1 and Figures 10-7 through 10-12 for Mission 1041-2.

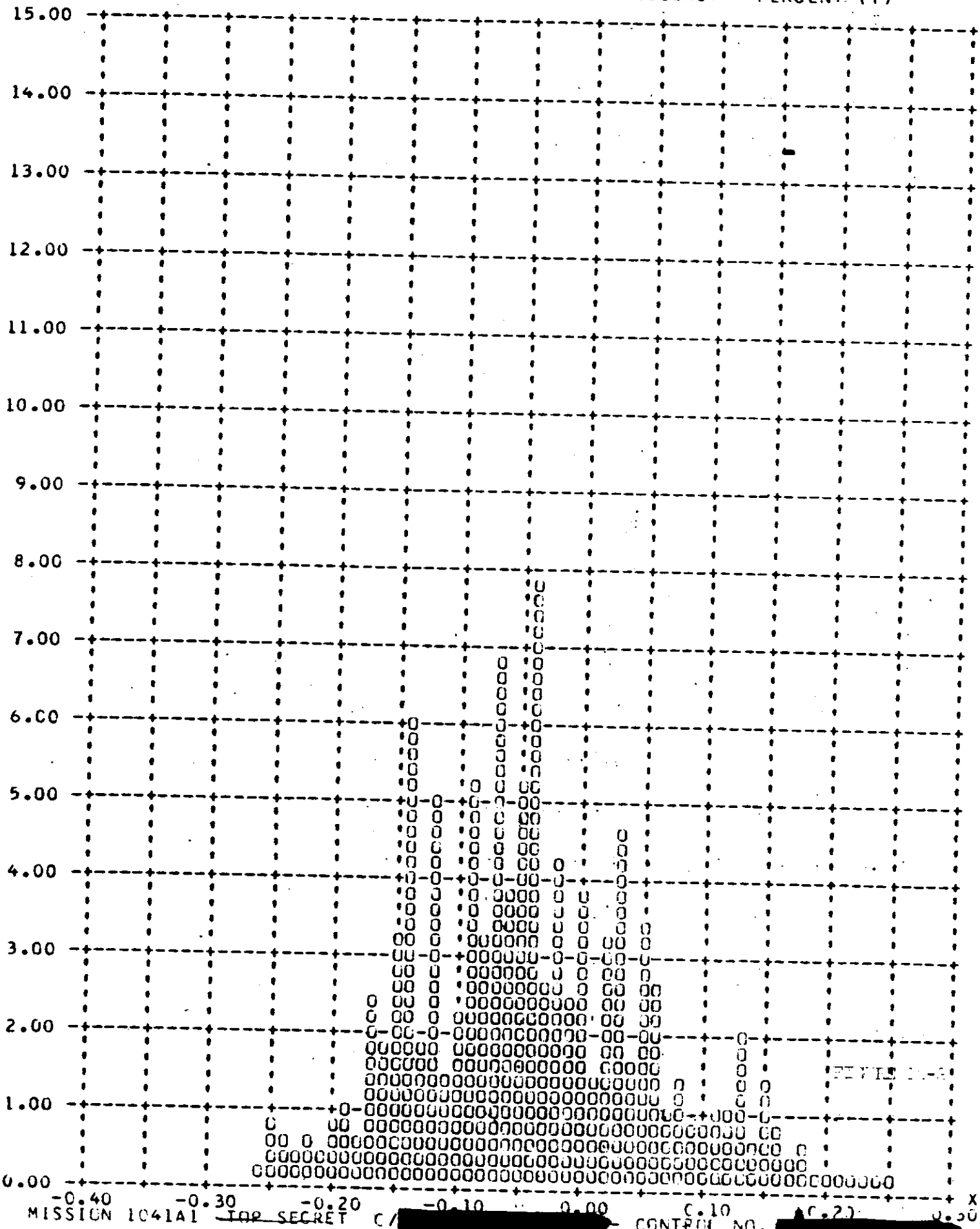
The summary table below lists the maximum attitude errors and rates that were experienced during 90% of the FWD camera photographic operations, excluding the first six frames of each operation, and the total range of the errors and rates.

	Mission 1041-1		Mission 1041-2	
	90%	Range	90%	Range
Pitch Error (°)	0.34	-0.48 to +0.08	0.26	-0.44 to +0.32
Roll Error (°)	0.16	+0.26 to -0.25	0.23	-0.36 to +0.18
Yaw Error (°)	3.05	-3.35 to -0.10	2.94	-3.4 to -0.05
Pitch Rate (°/hr.)	14.73	-38 to +34	22.94	-60 to +50
Roll Rate (°/hr.)	13.97	-30 to +50	15.70	-46 to +38
Yaw Rate (°/hr.)	12.71	-52 to +34	18.83	-50 to +34

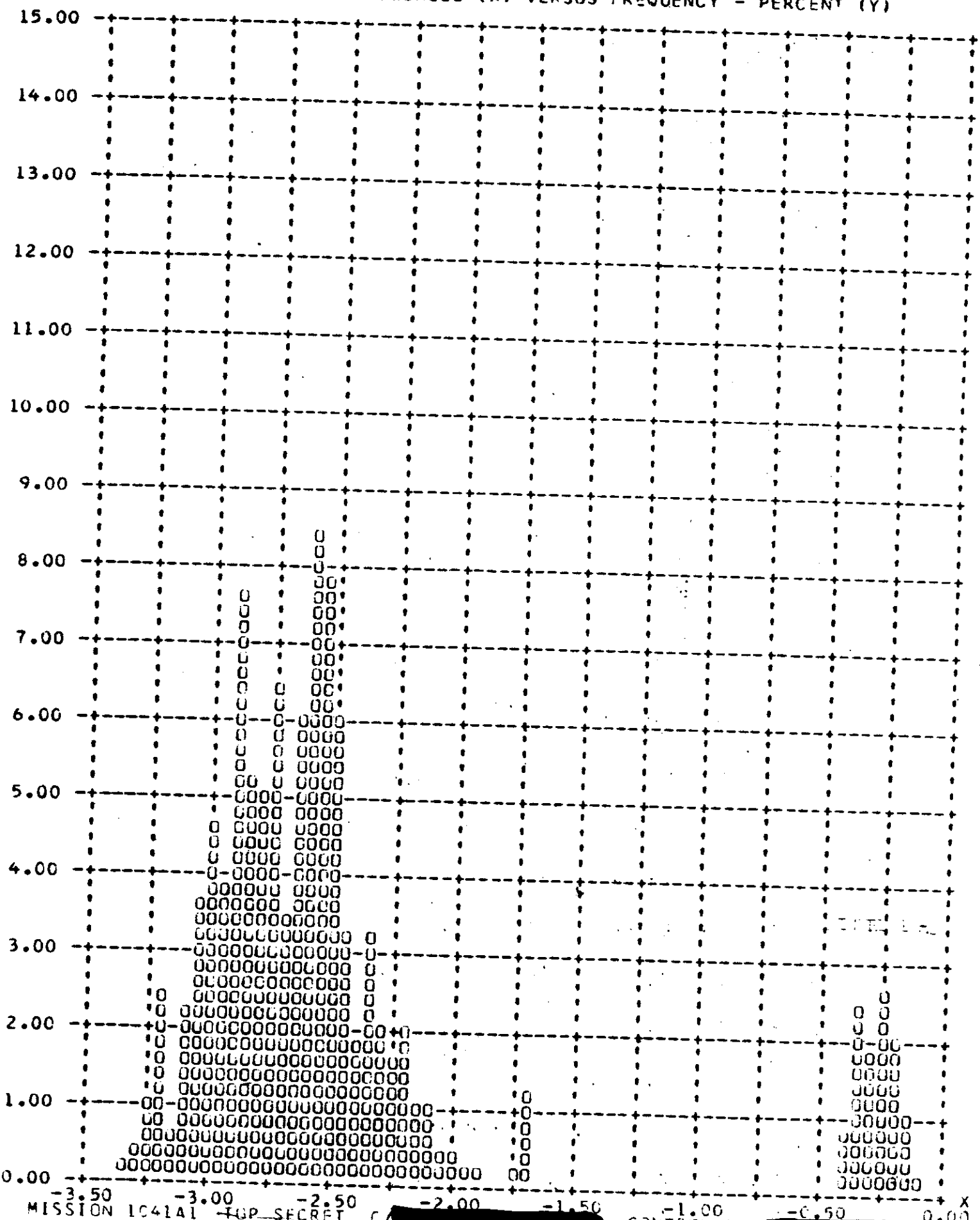
The performance of the attitude control system is comparable to the control systems used on recent missions. The panoramic photography was not degraded by the attitude control system.

MISSION 1041A1 ~~TOP SECRET~~ C[redacted] - CONTROL NO. [redacted]
FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 0.34




Y ROLL ANGLE ERROR - DEGREES (X) VERSUS FREQUENCY - PERCENT (Y)
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
-0.40
-0.30
-0.20
-0.10
0.00
0.10
0.20
0.30
X

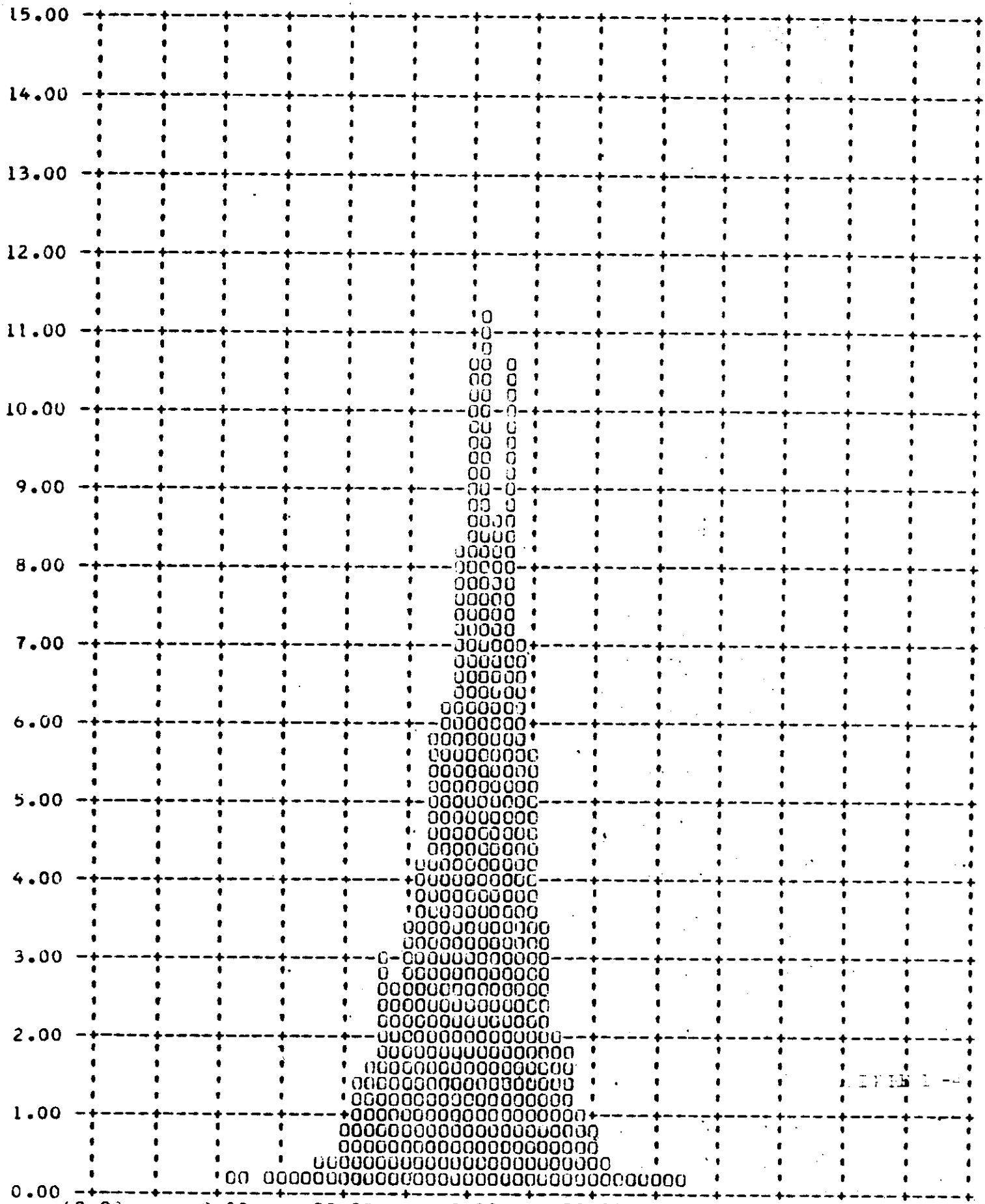
FRAMES 1-6 OF EACH UP OMITTED 90 PERCENT = 3.05



MISSION 1041A1 ~~TOP SECRET~~ C[redacted] - CONTROL NO. [redacted]

FRAMES 1-6 OF EACH UP UNITTED 90 PERCENT = 14.73

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



FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 13.97

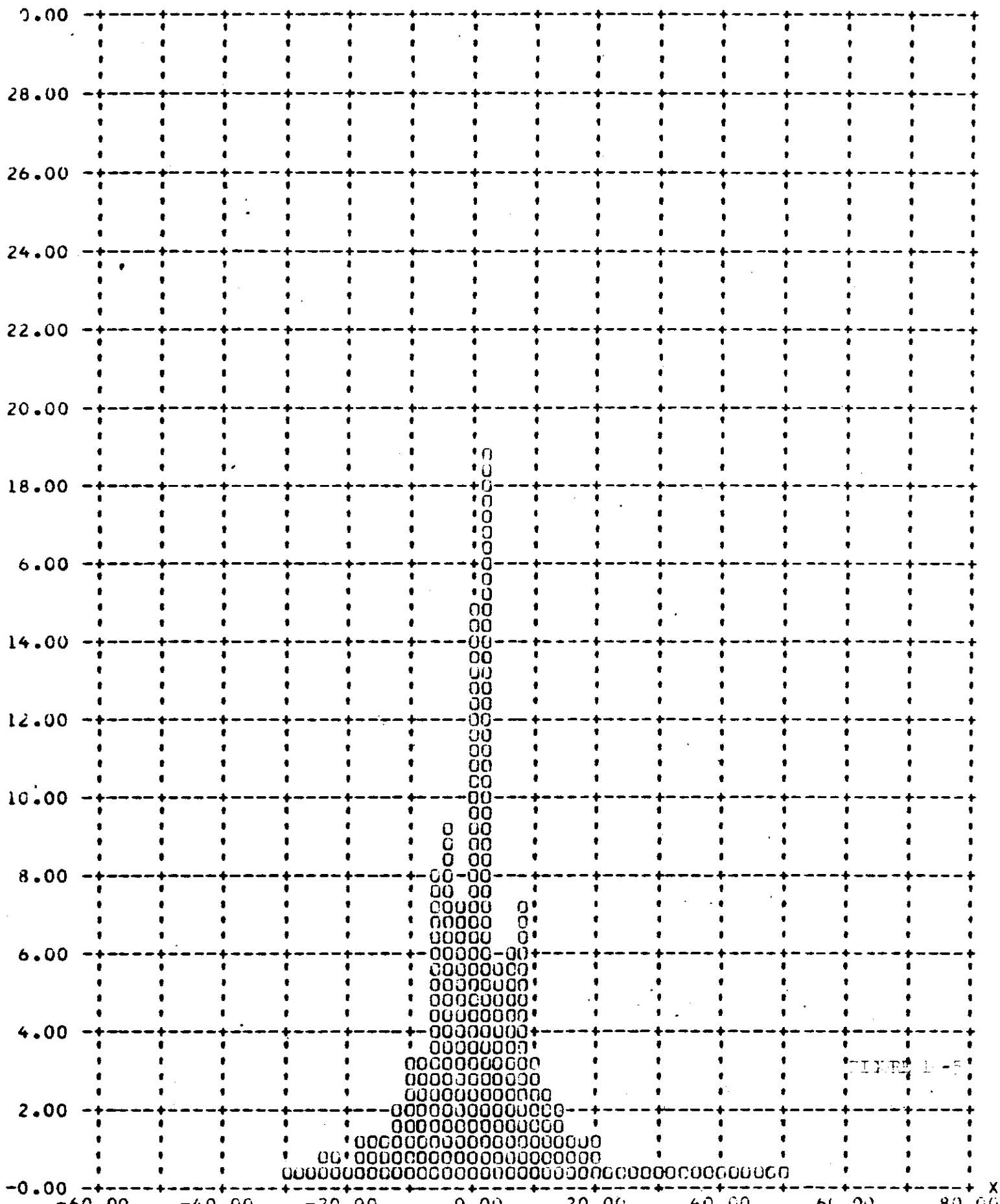


FIGURE 1-5

MISSION 1041A1 ~~TOP SECRET~~ C[redacted] CONTROL NO. [redacted]

FRAMES 1-6 OF EACH UP OMITTED .90 PERCENT = 12.71

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

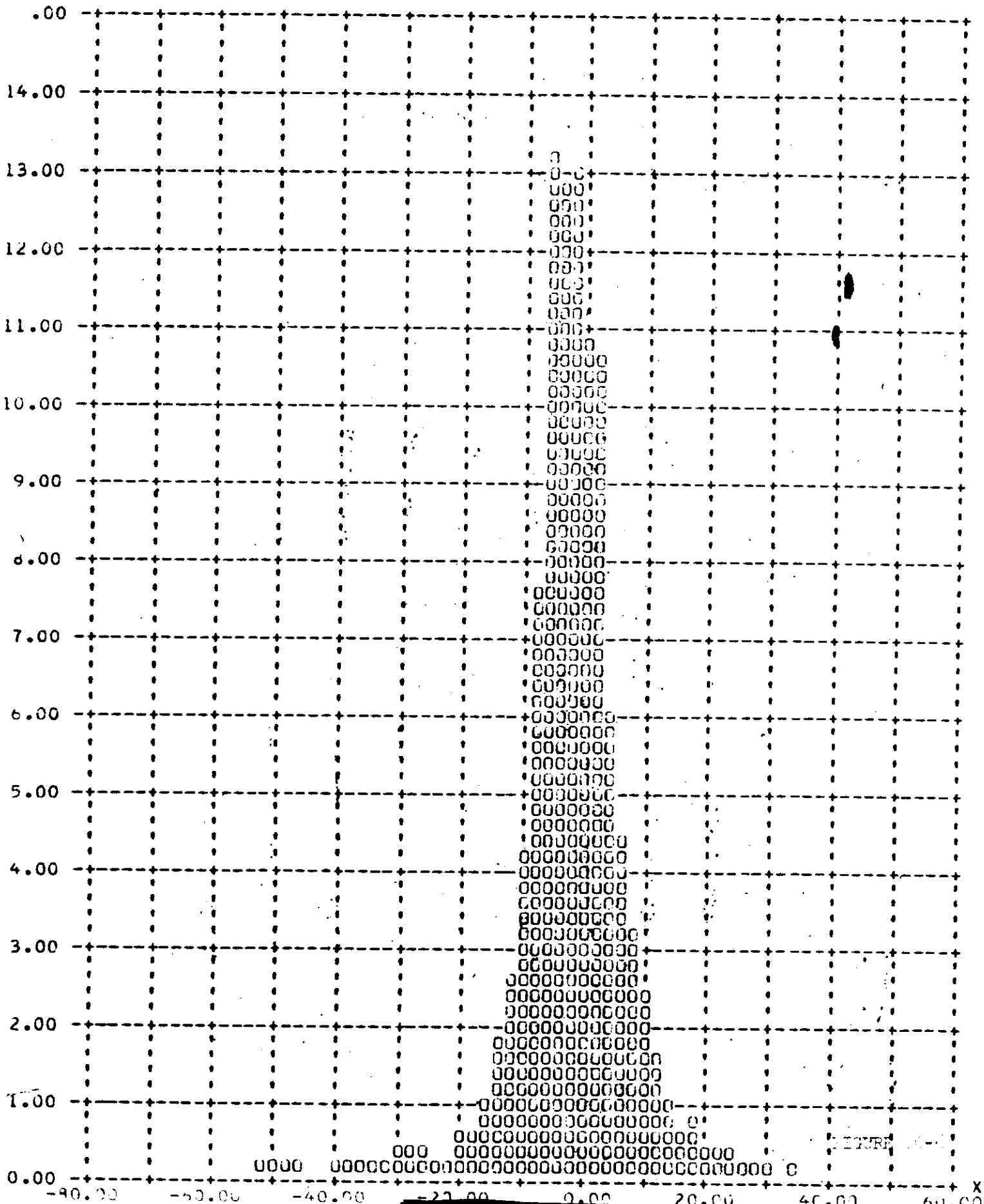
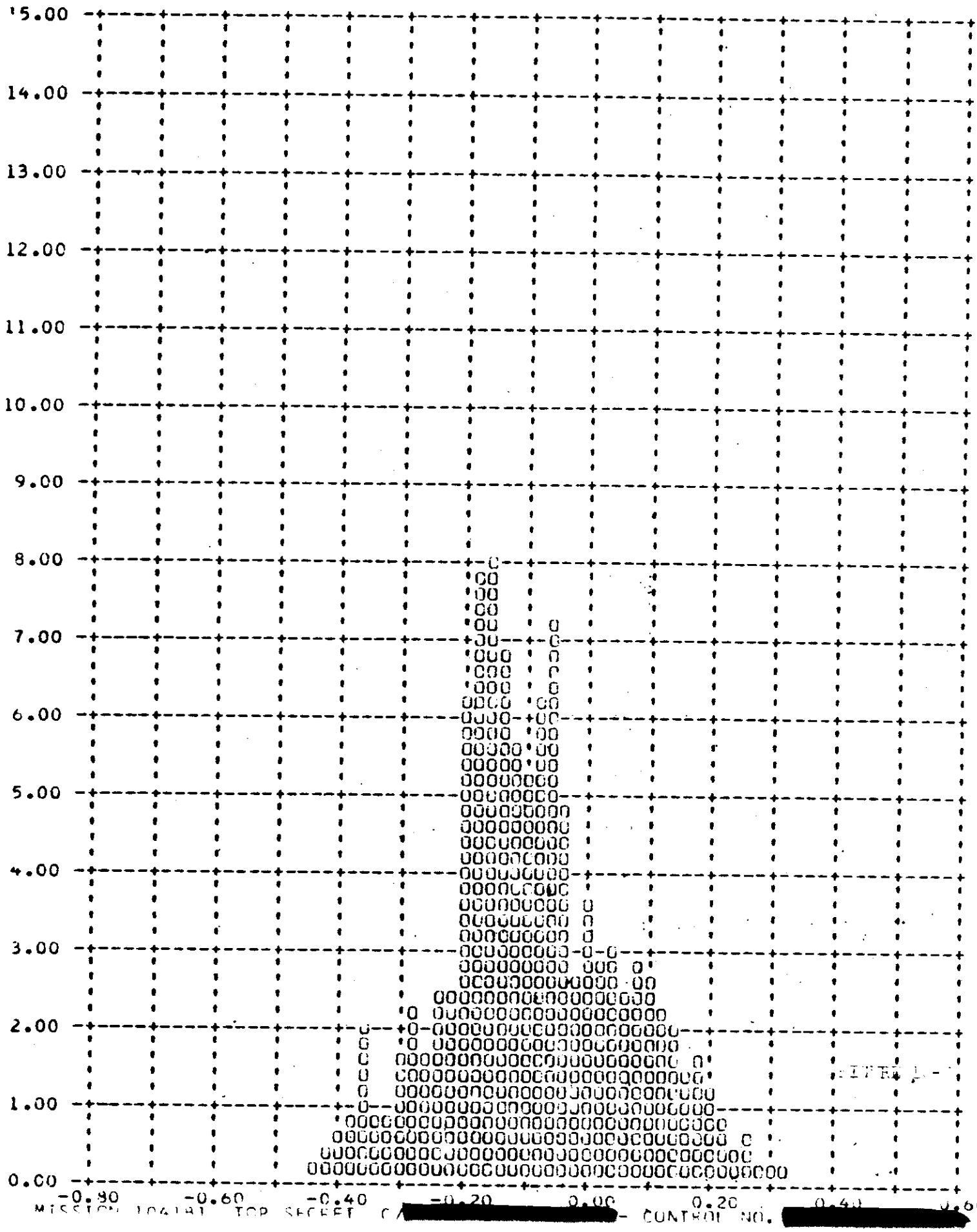


FIGURE [illegible]

MISSION 1041B1 ~~TOP SECRET~~ C/[redacted] CONTROL NO. [redacted]

FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 0.26

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

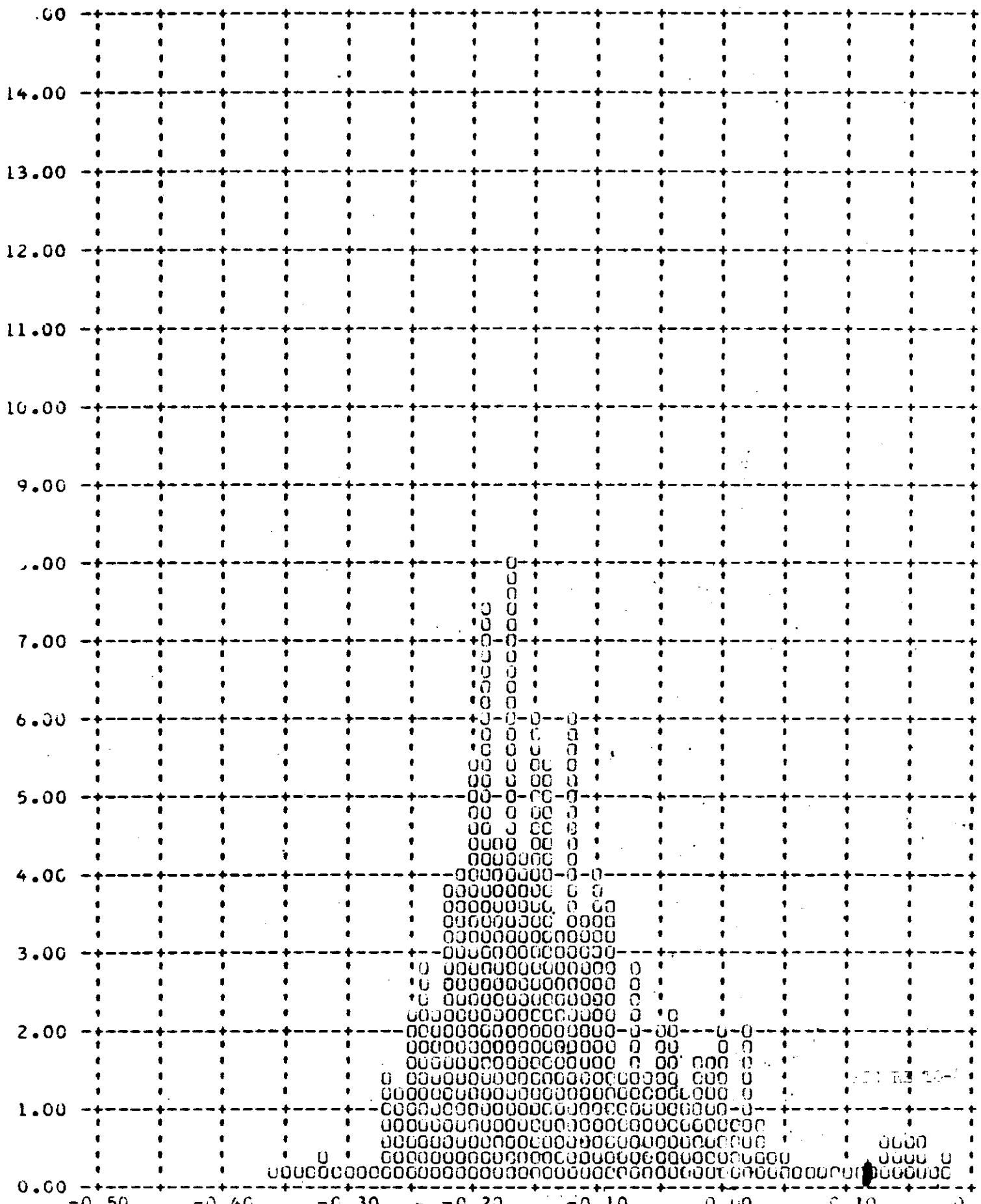


MISSION 1041B1 TOP SECRET C/[redacted] CONTROL NO. [redacted]

MISSION 1041B1 ~~TOP SECRET~~ C[redacted] - CONTROL NO. [redacted]

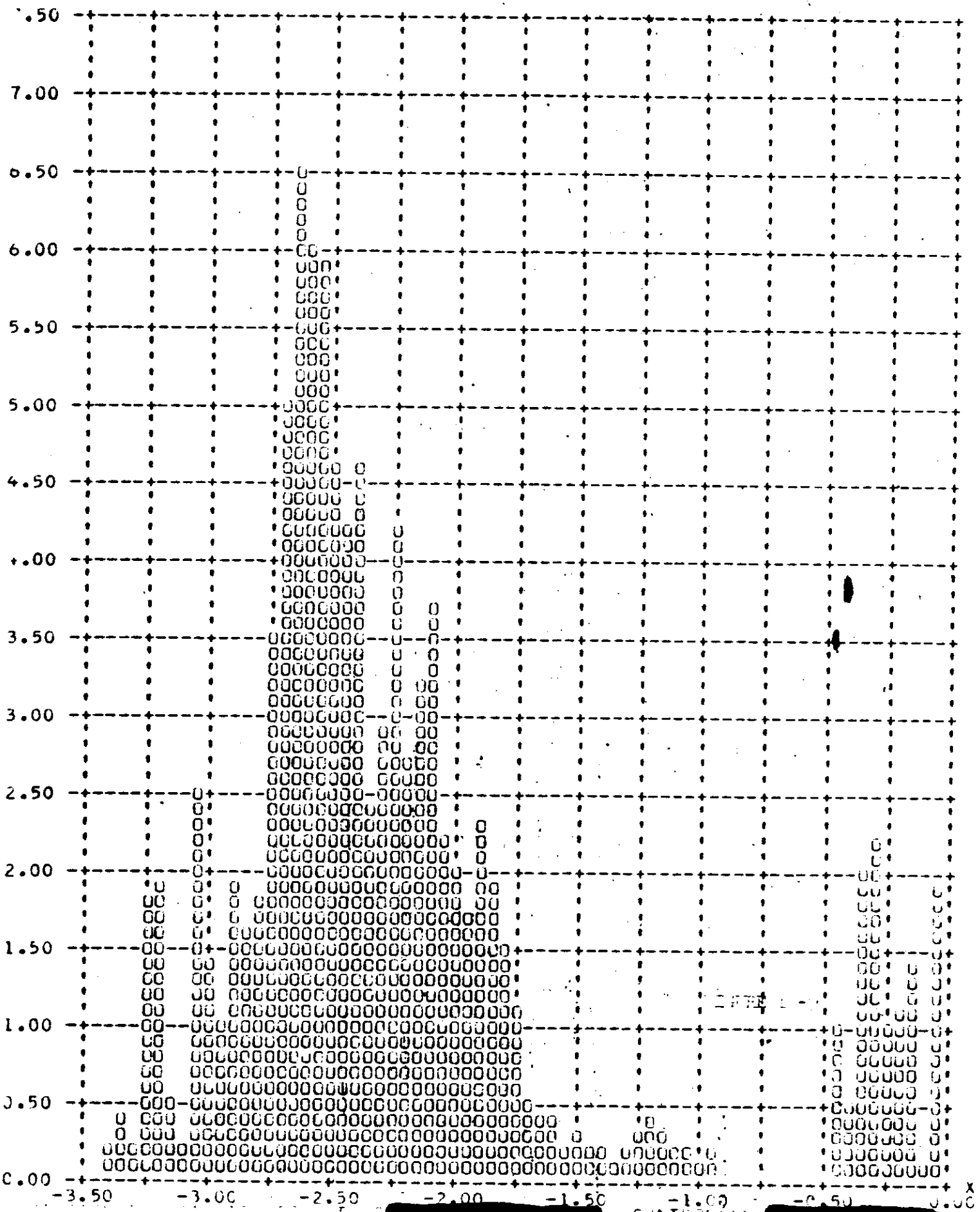
FRAMES 1-6 OF EACH UP OMITTED 90 PERCENT = 0.23

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



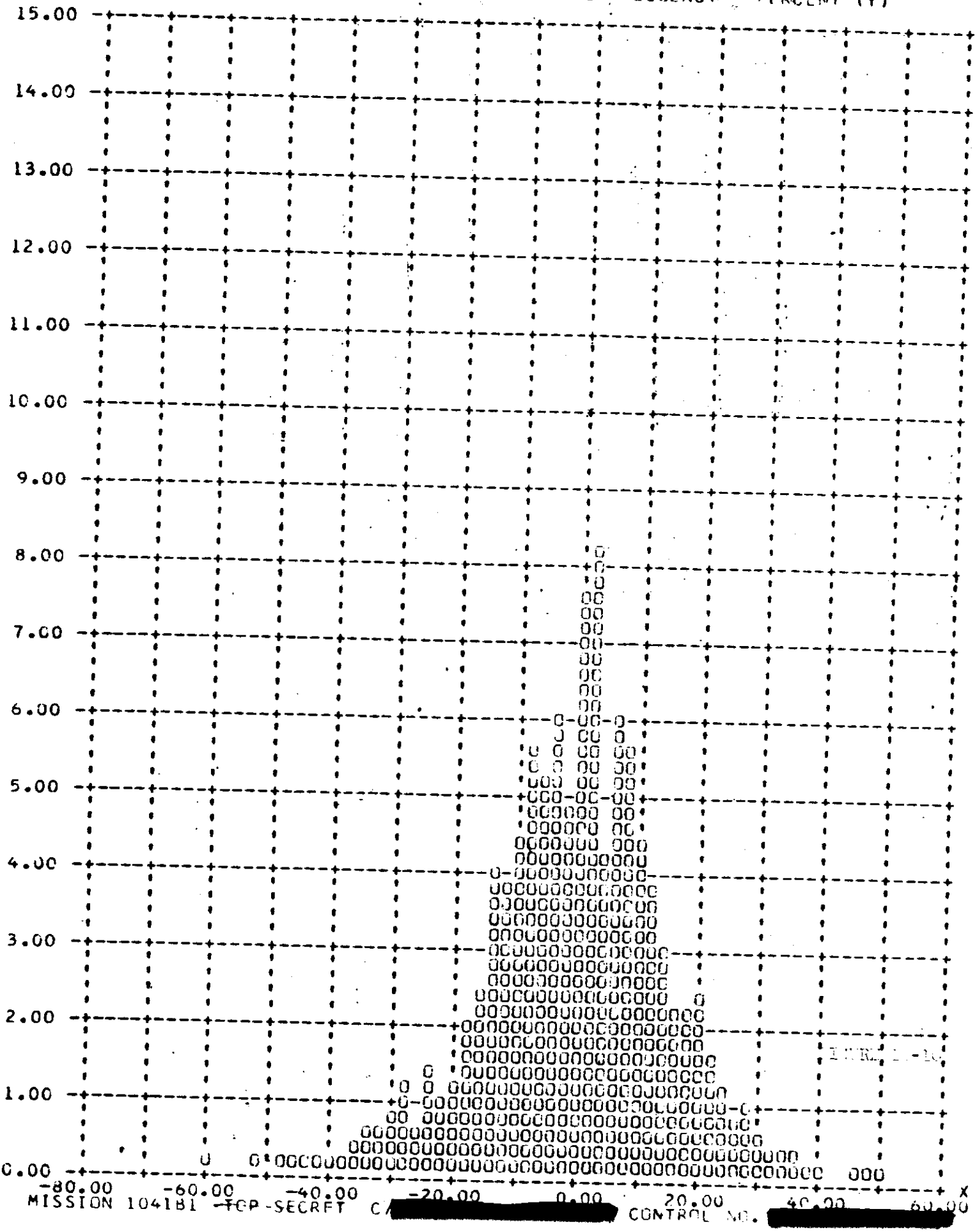
MISSION 104181 ~~TOP SECRET~~ C[redacted] - CONTROL NO. [redacted]

FRAMES 1-6 OF EACH OF OMITTED 90 PERCENT = 2.94



FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 22.94

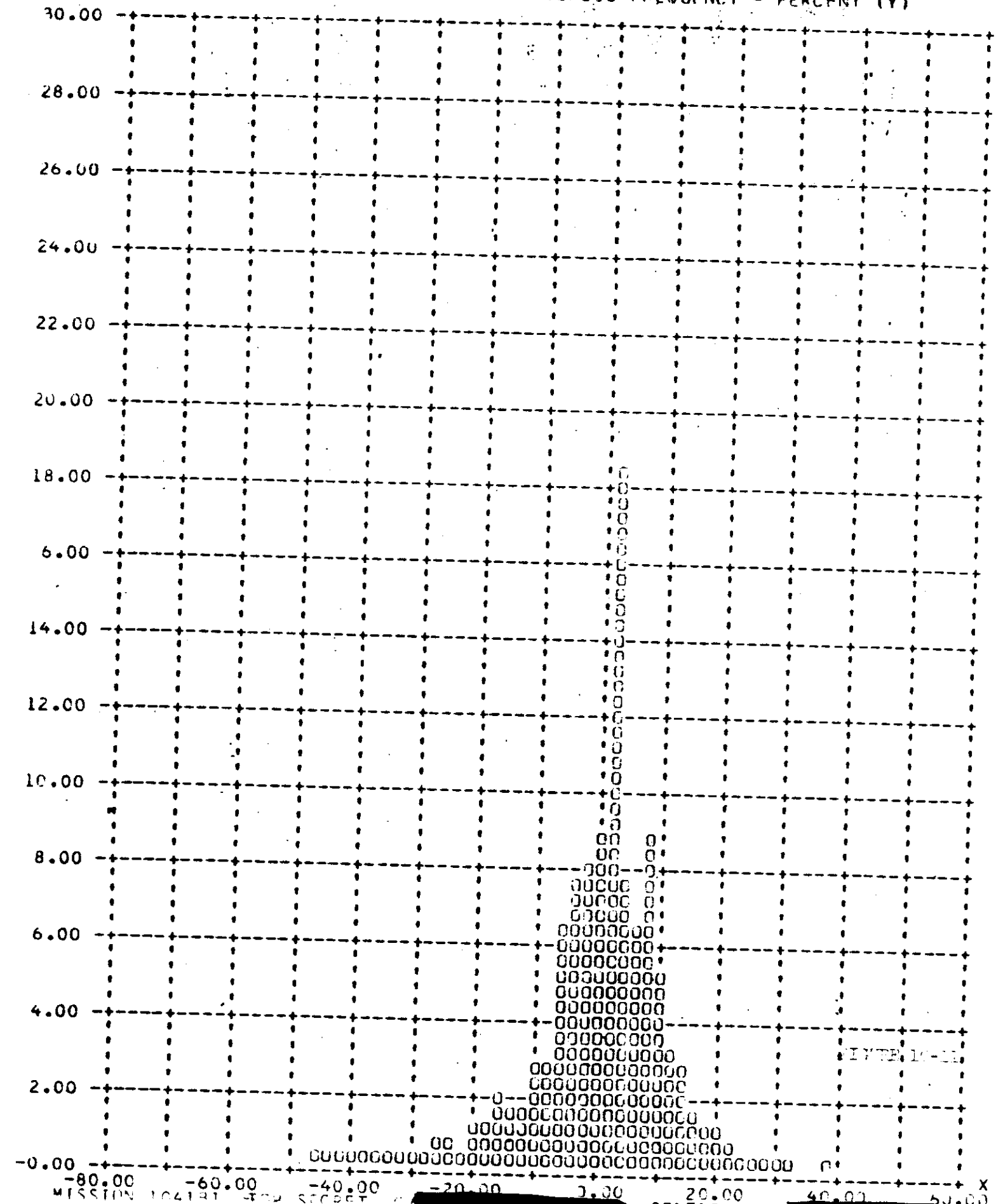
Y PITCH RATE ERROR - DEG/HOUR (X) VERSUS FREQUENCY - PERCENT (Y)



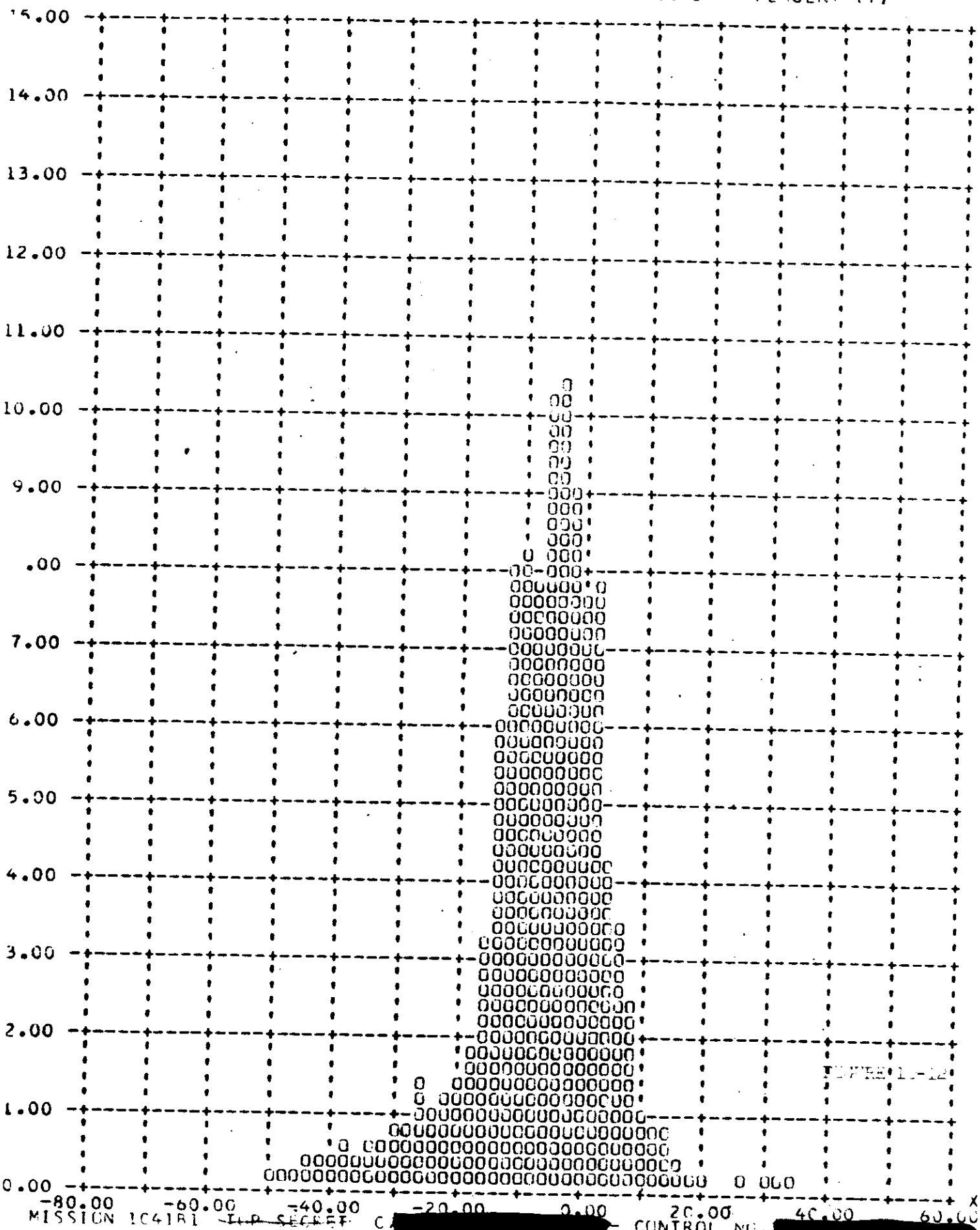
MISSION 1041B1 ~~TOP SECRET~~ C[redacted] - CONTROL NO. [redacted]

FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 15.70

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



FRAMES 1-6 OF EACH GP OMITTED 90 PERCENT = 18.83.



SECTION 11

IMAGE SMEAR ANALYSIS

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

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

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

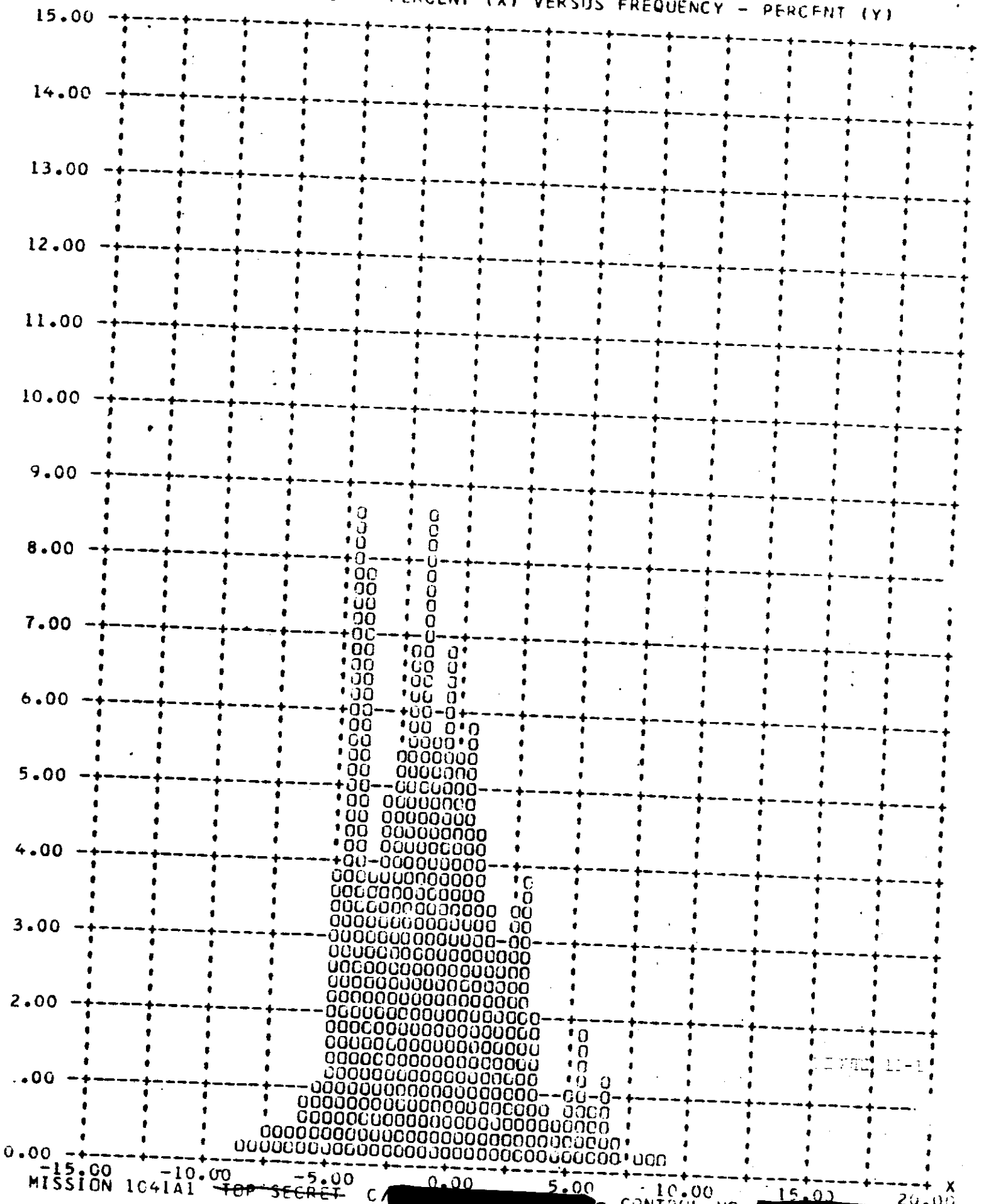
MISSION 1041

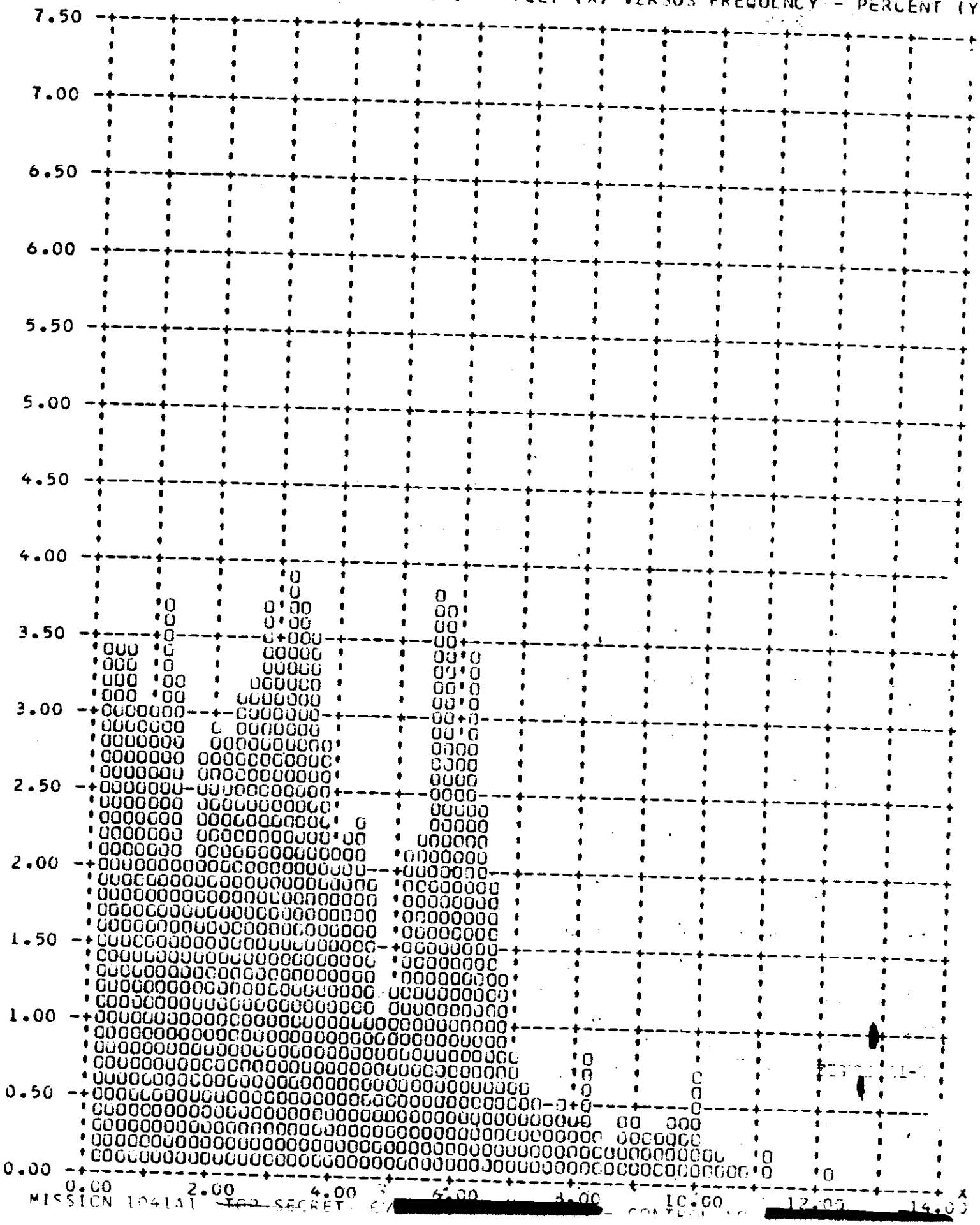
V/H RATIO AND RESOLUTION LIMITS

VALUE	UNITS	CAMERA	MISSION 1041-1 90%	MISSION 1041-1 Range	MISSION 1041-2 90%	MISSION 1041-2 Range
V/H Ratio Error	%	FWD	5.05	-8.0 to +9.0	4.86	-8.5 to +10.0
		AFT	5.84	-8.5 to +9.0	5.55	-8.5 to +9.5
Along Track Resolution Limit	Feet	FWD	6.42	0.2 to 12.2	6.36	0.2 to 13.2
		AFT	5.72	0.2 to 15.4	5.46	0.2 to 10.0
Cross Track Resolution Limit	Feet	FWD	3.43	0.2 to 6.6	2.14	0.2 to 6.0
		AFT	2.98	0.2 to 5.4	2.04	0.2 to 4.6

TABLE 11-1

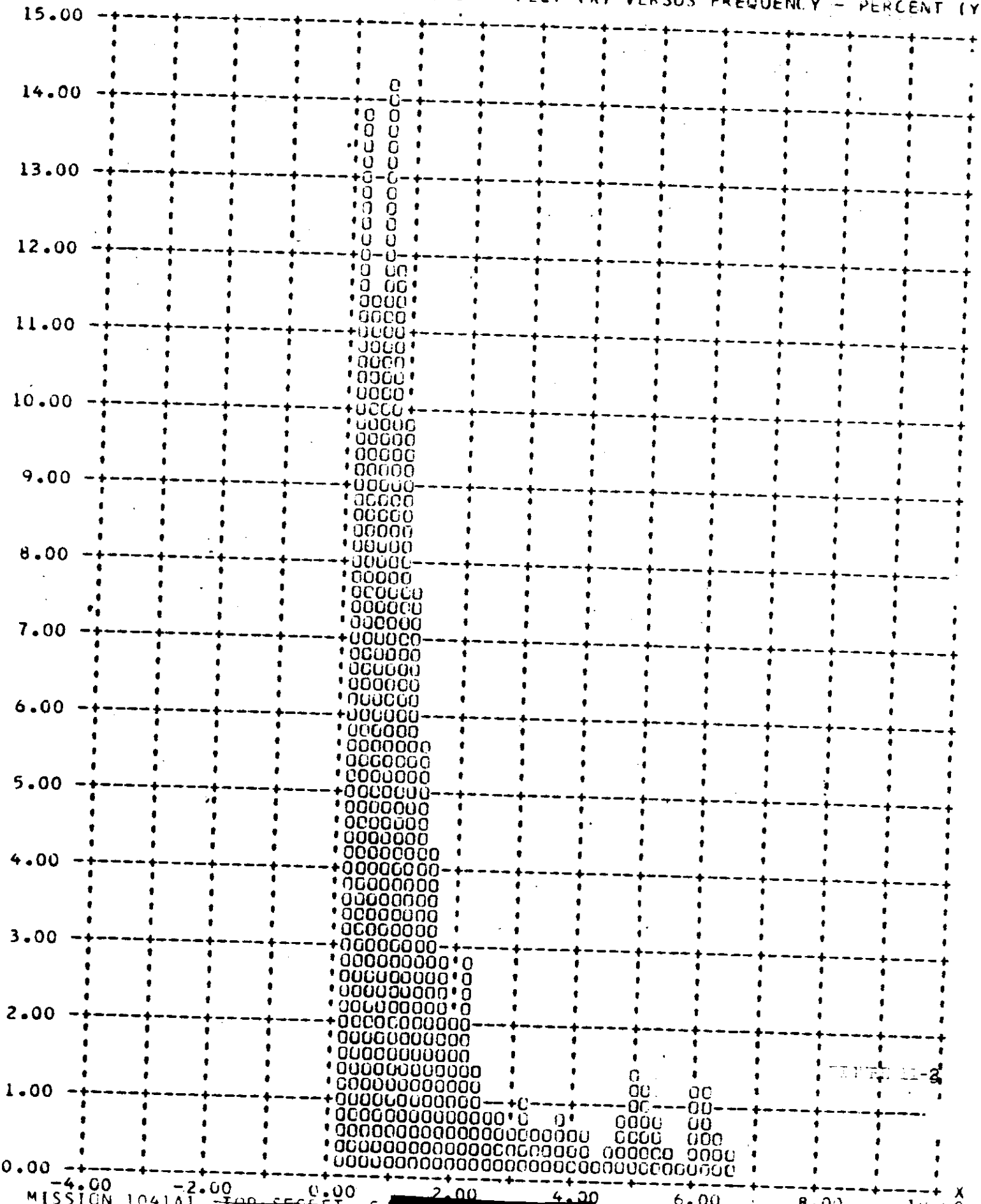
FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 5.05



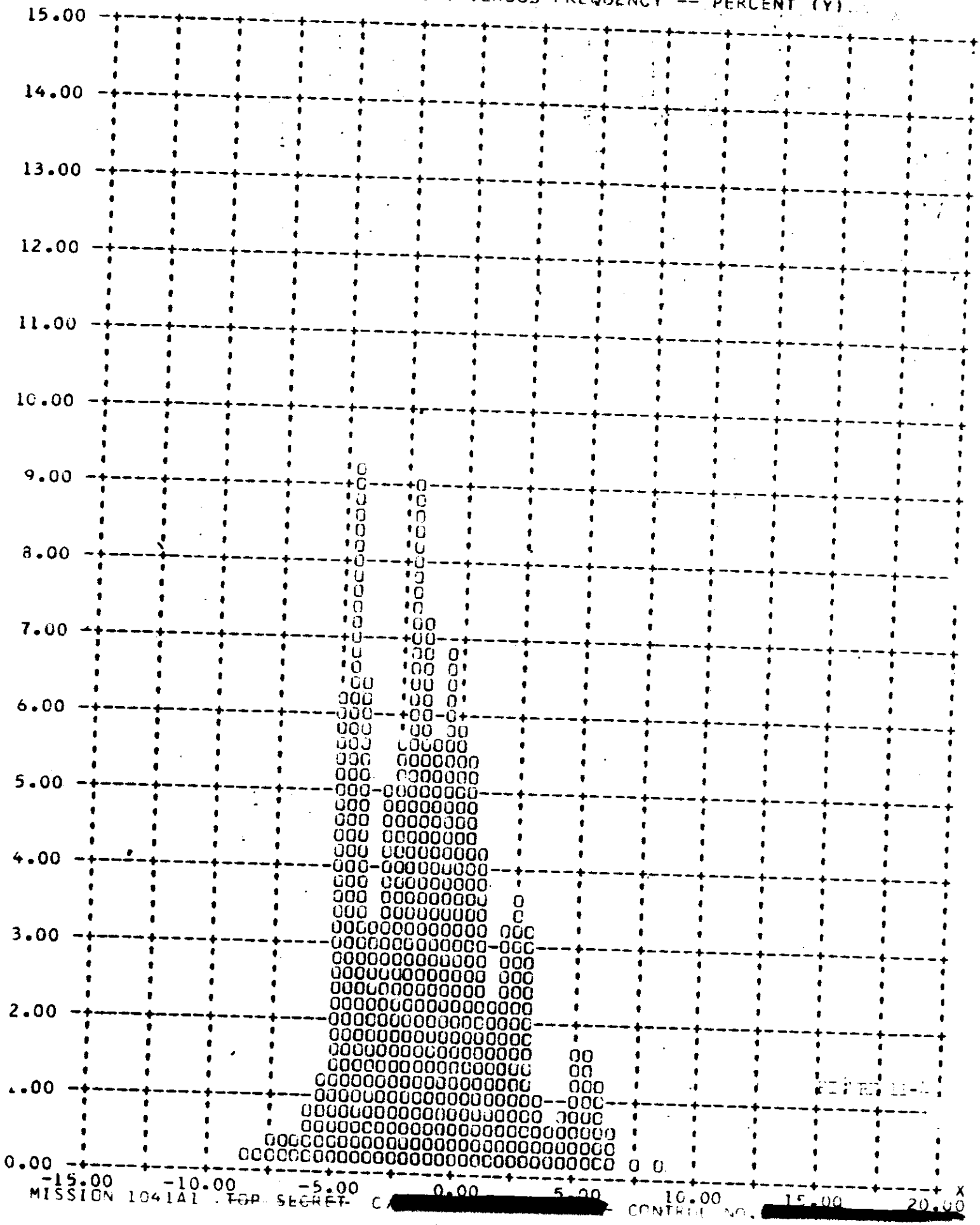

Y ALONG TRACK RESOLUTION LIMIT - FEET (X) VERSUS FREQUENCY - PERCENT (Y)
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00

FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 5.43

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



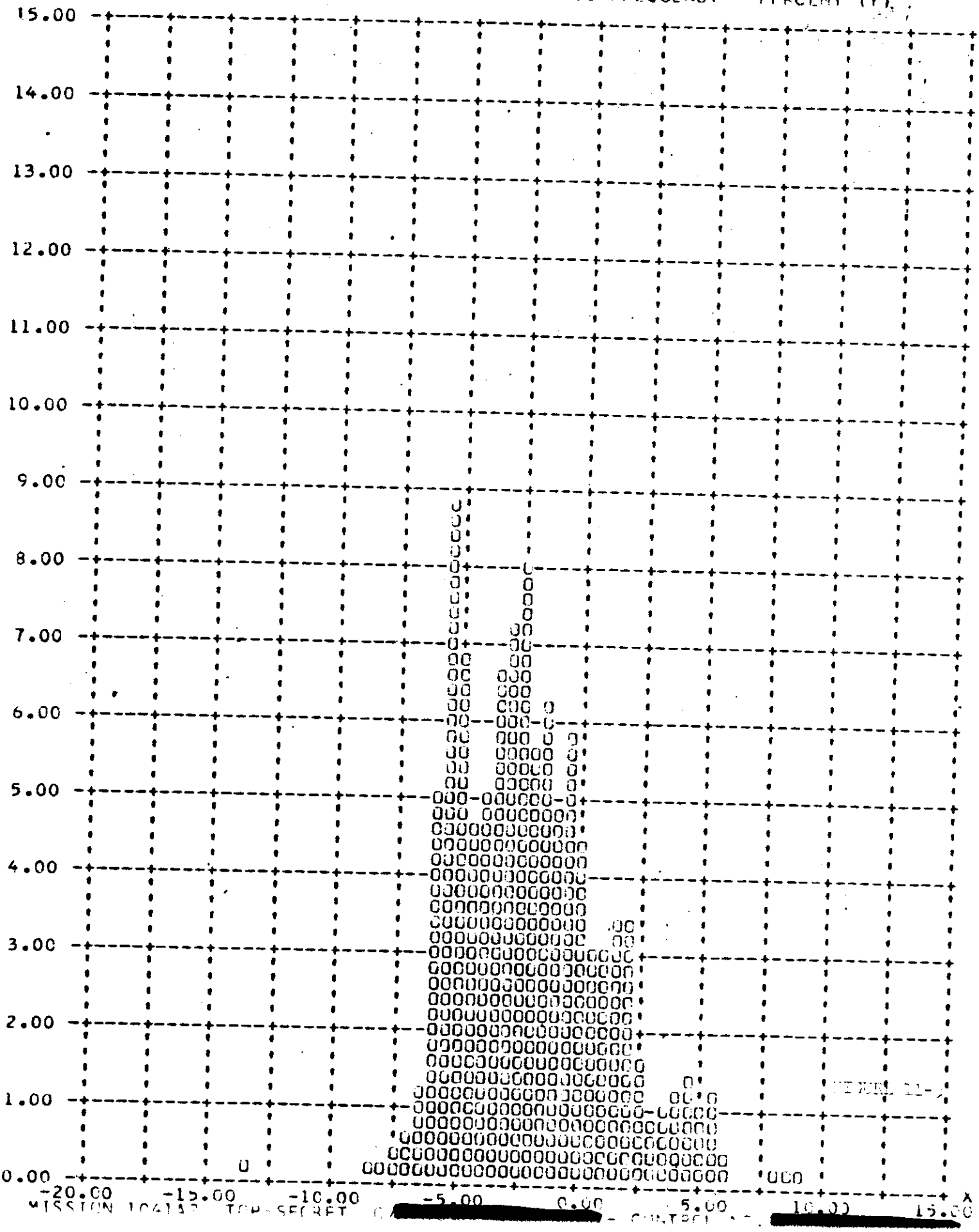
FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 5.15



MISSION 1041A2 ~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

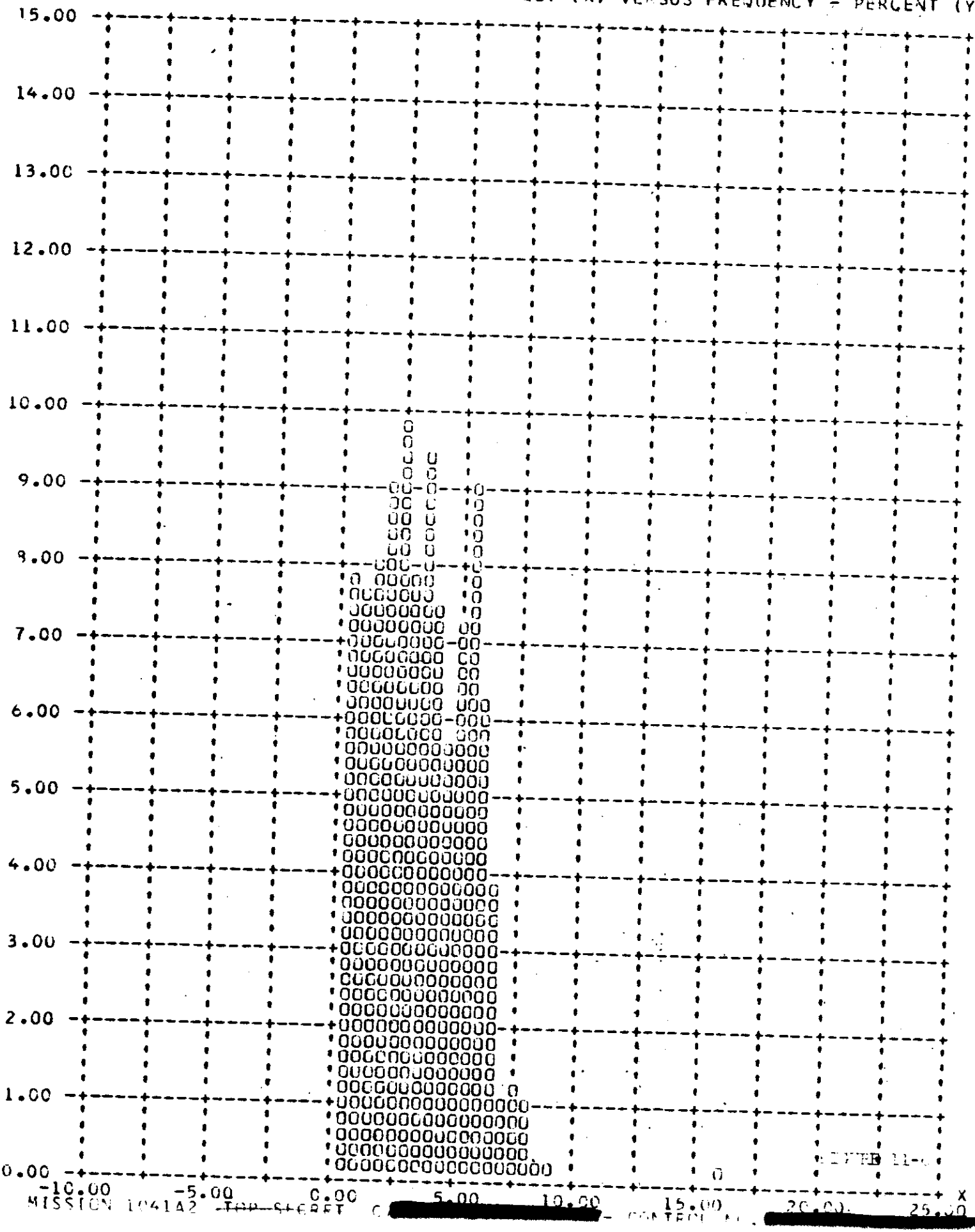
FRAMES 1-6 OF EACH UP UMITTED 90 PERCENT = 5.94

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



FRAMES 1-6 OF EACH OP UMITTED 90 PERCENT = 5.72

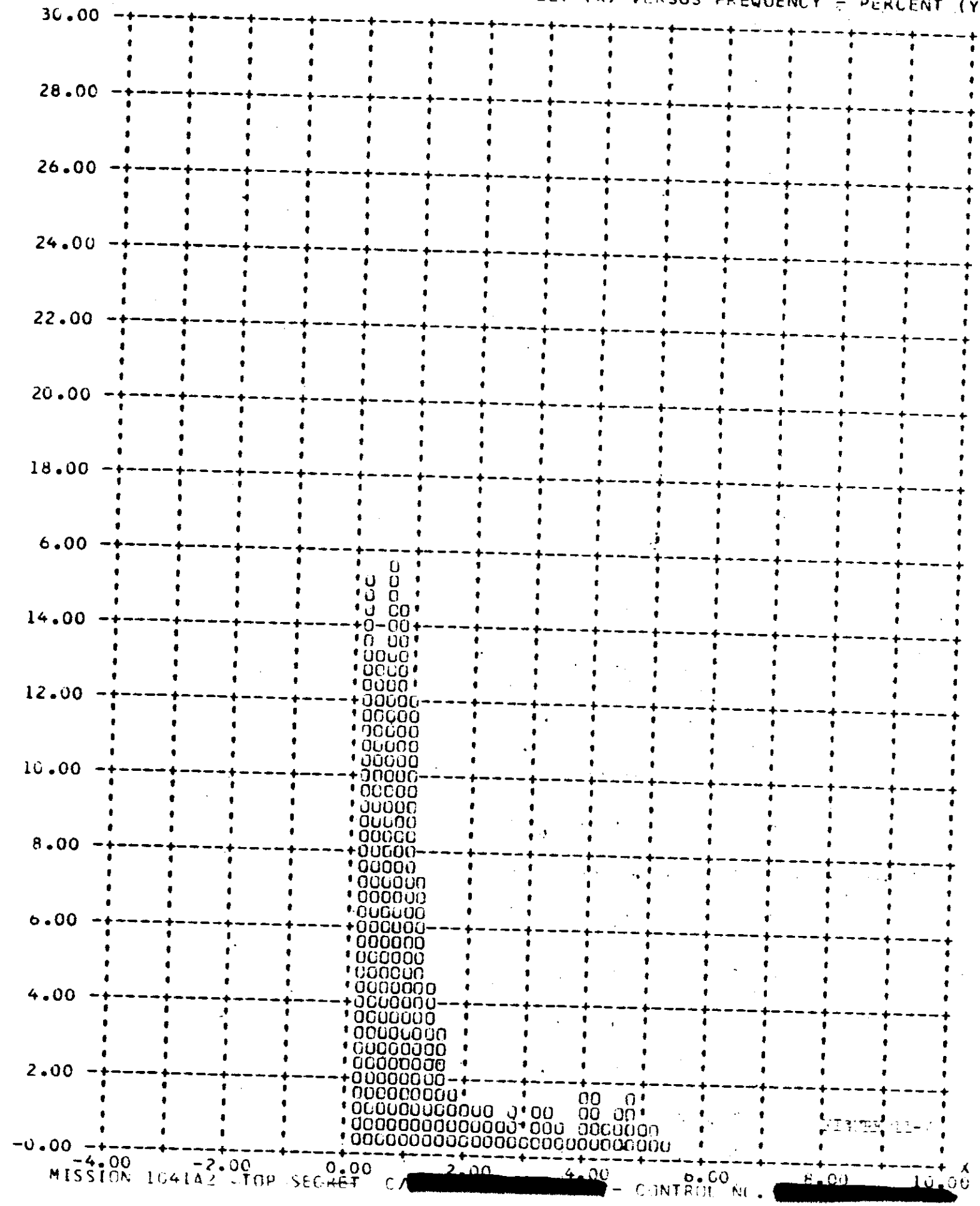
Y ALONG TRACK RESOLUTION LIMIT - FEET (X) VERSUS FREQUENCY - PERCENT (Y)



MISSION 1041A2 ~~TOP SECRET~~ C[redacted] - CONTROL NO. [redacted]

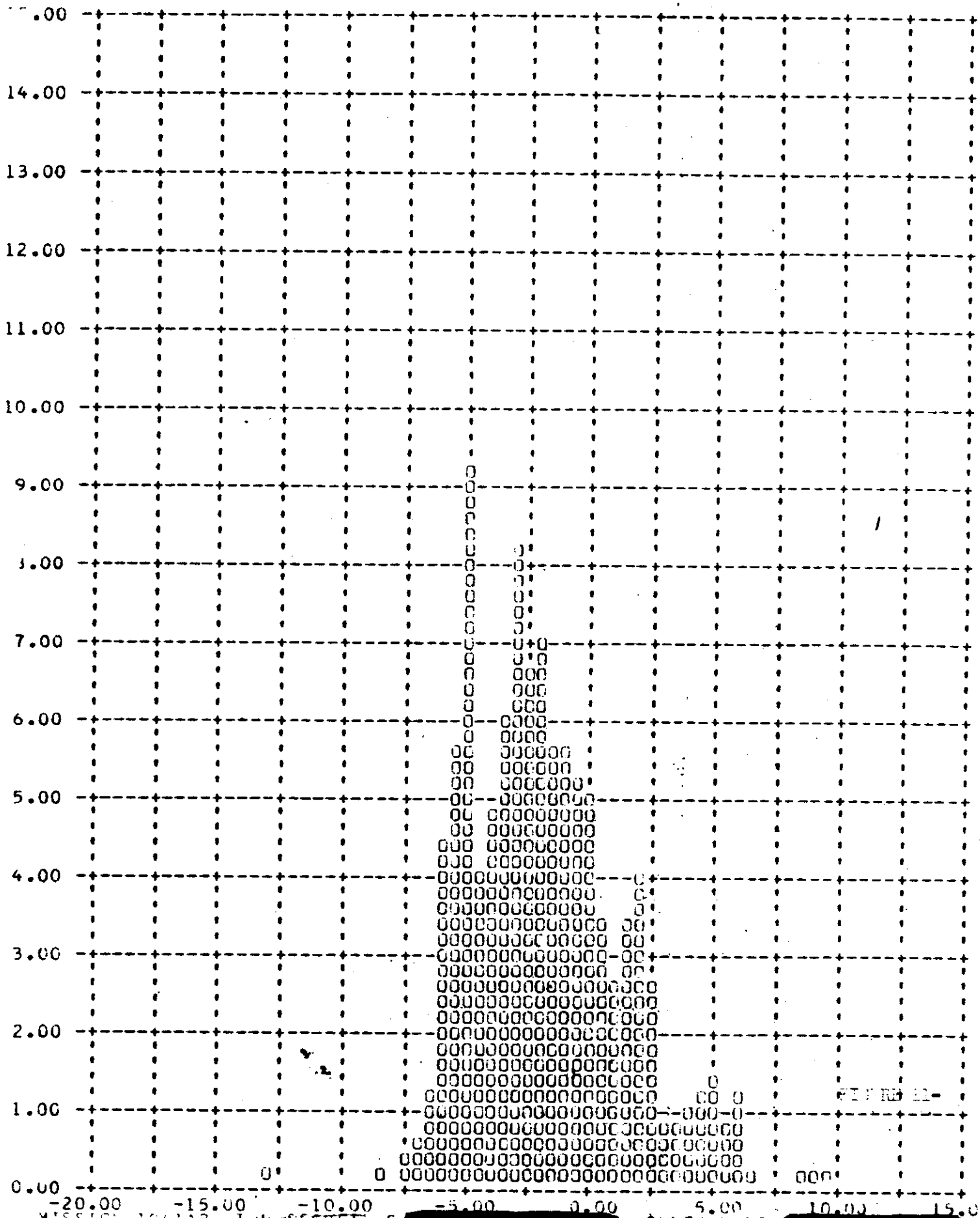
FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 2.98

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



MISSION 1041A2 TOP SECRET C[redacted] - CONTROL NO. [redacted]

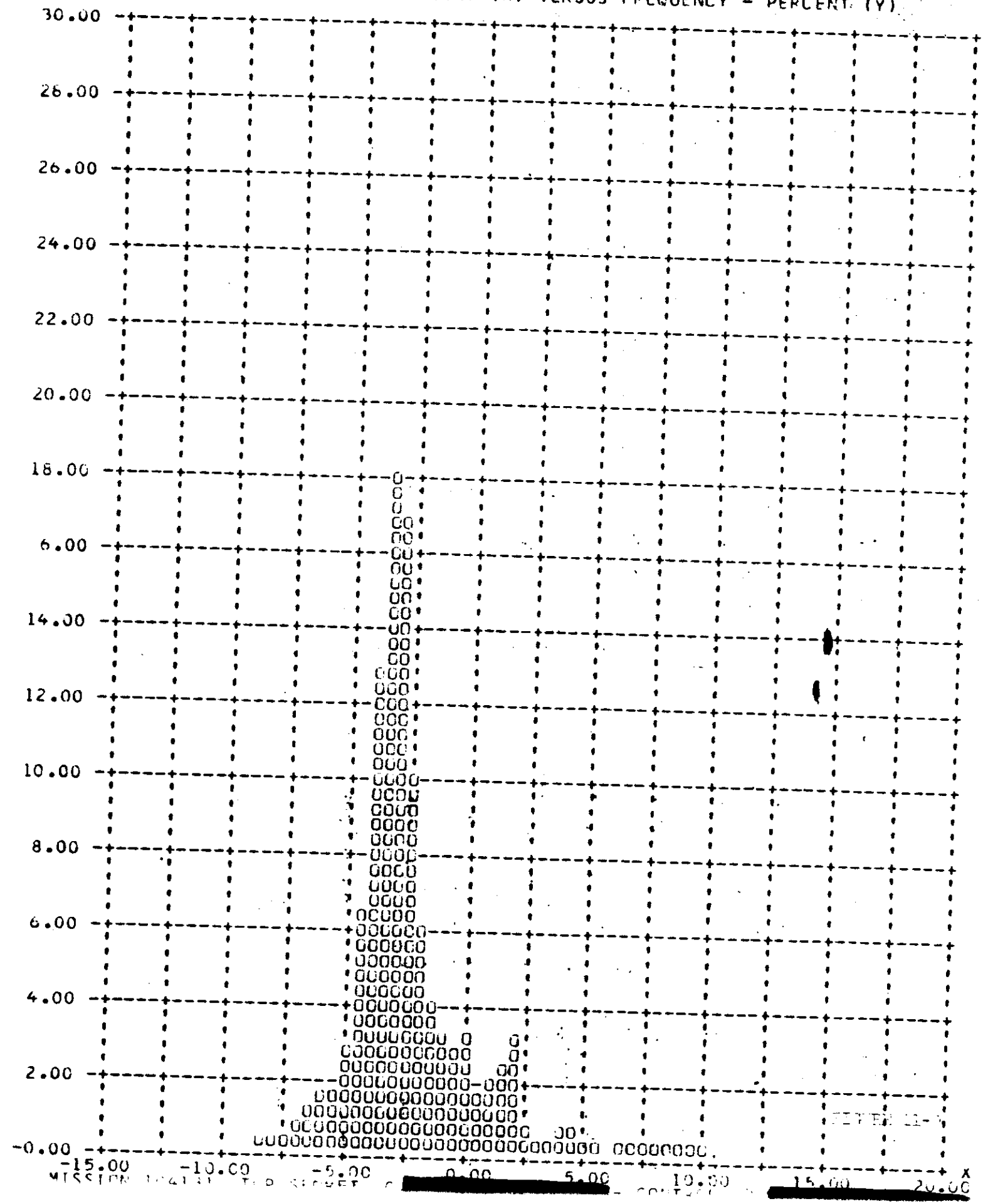
FRAMES 1-6 OF EACH UP UMITTED 90 PERCENT = 5.74



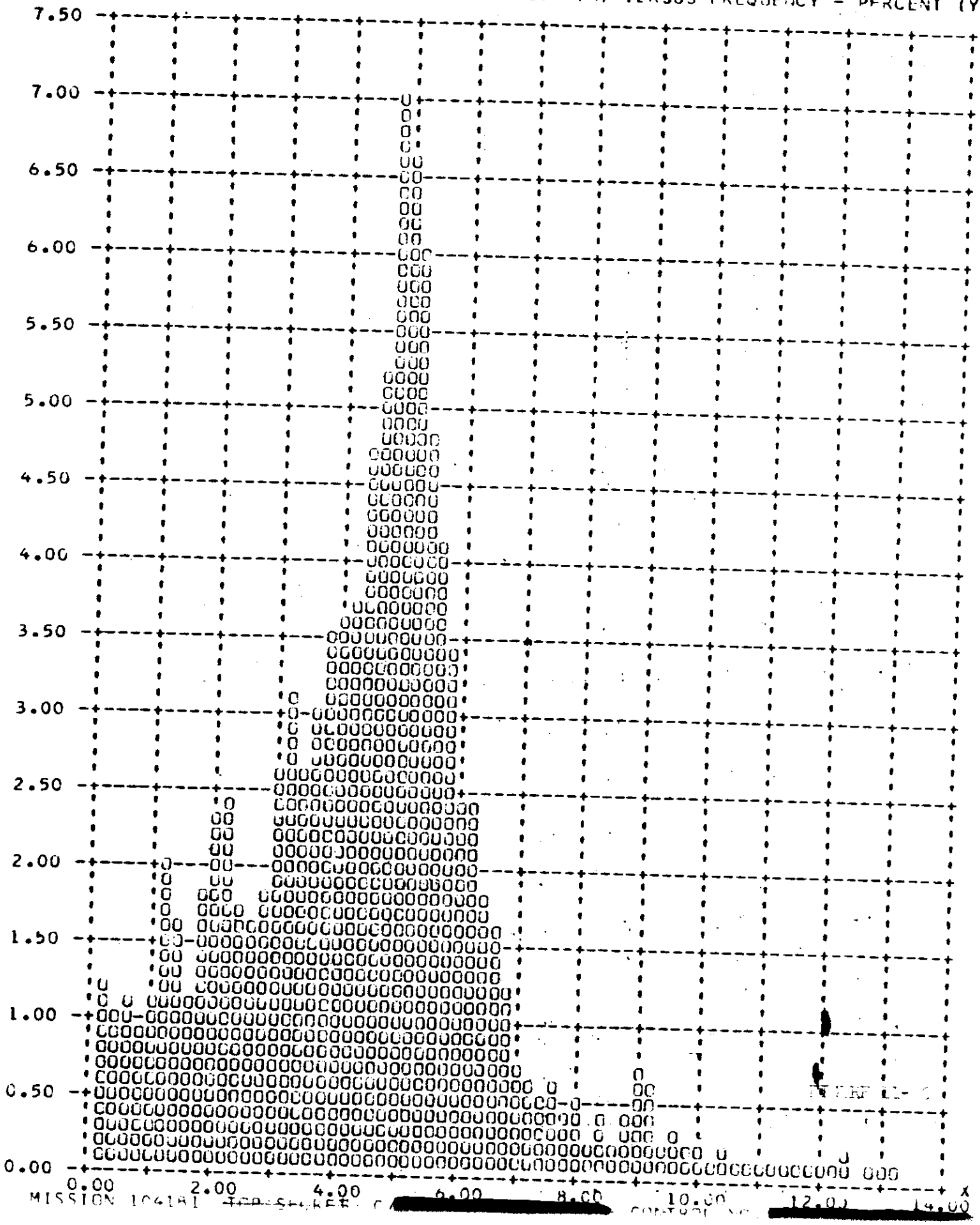
MISSION 104181 ~~TOP SECRET~~ C[redacted] CONTROL NO. [redacted]

FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 4.86

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

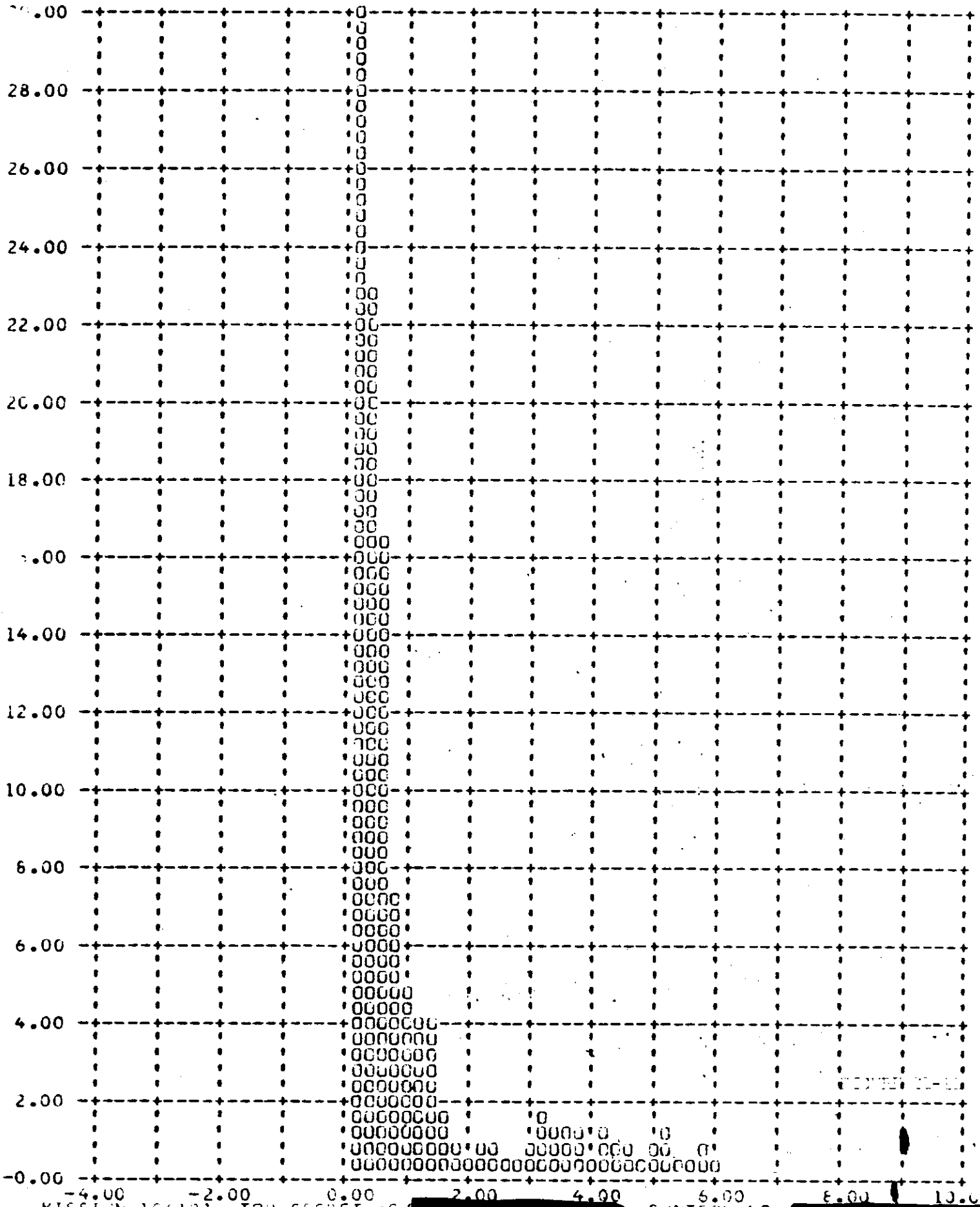


FRAMES 1-6 OF EACH UP OMITTED. 90 PERCENT = 5.36



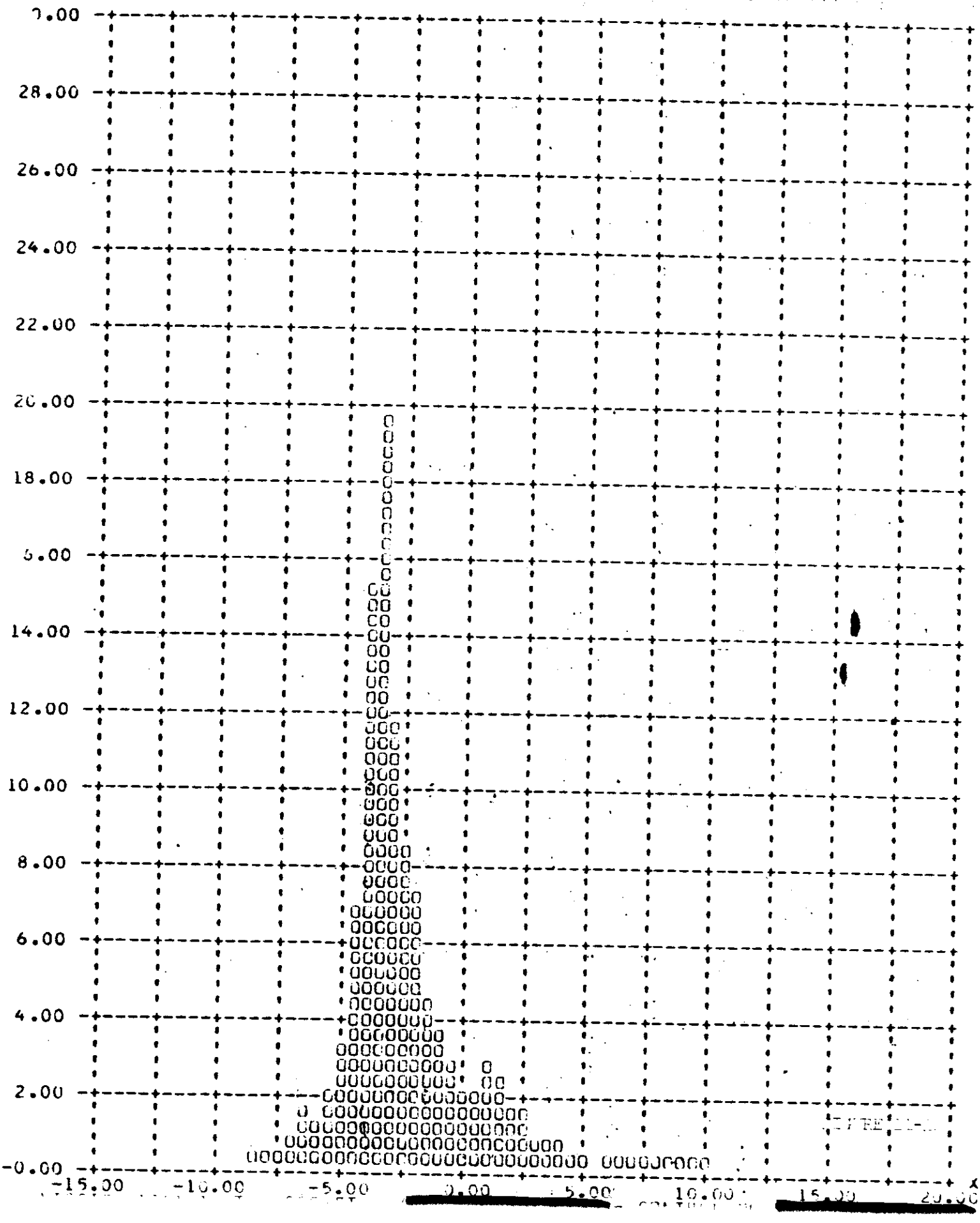
FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 2.14

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



MISSION 104181 ~~TOP SECRET~~ C[redacted] CONTROL NO. [redacted]

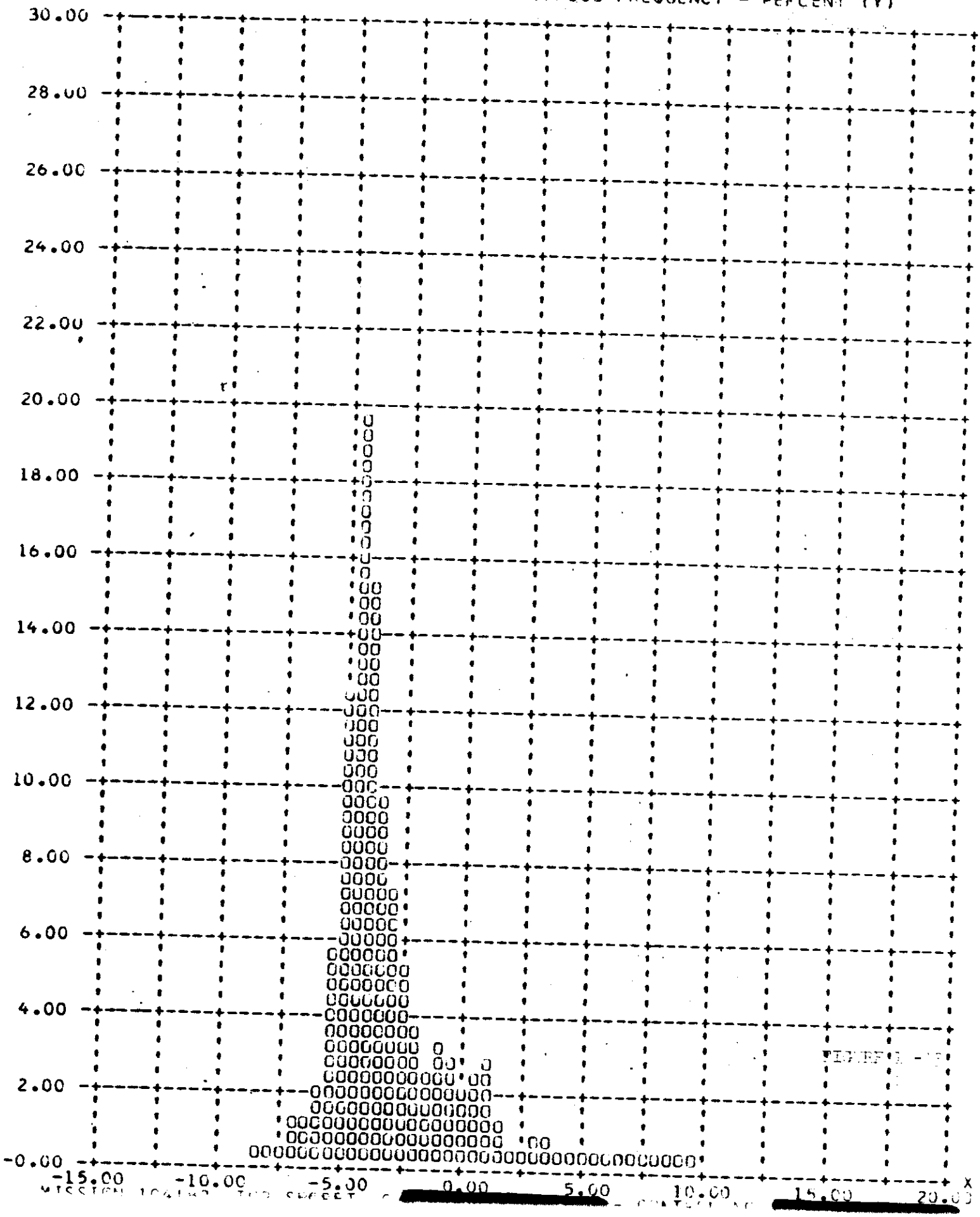
FRAMES 1-6 OF EACH UP OMITTED 90 PERCENT = 4.94



MISSION 104182 ~~TOP SECRET~~ C[redacted] CONTROL NO. [redacted]

FRAMES 1-6 OF EACH CP OMITTED 90 PERCENT = 5.55

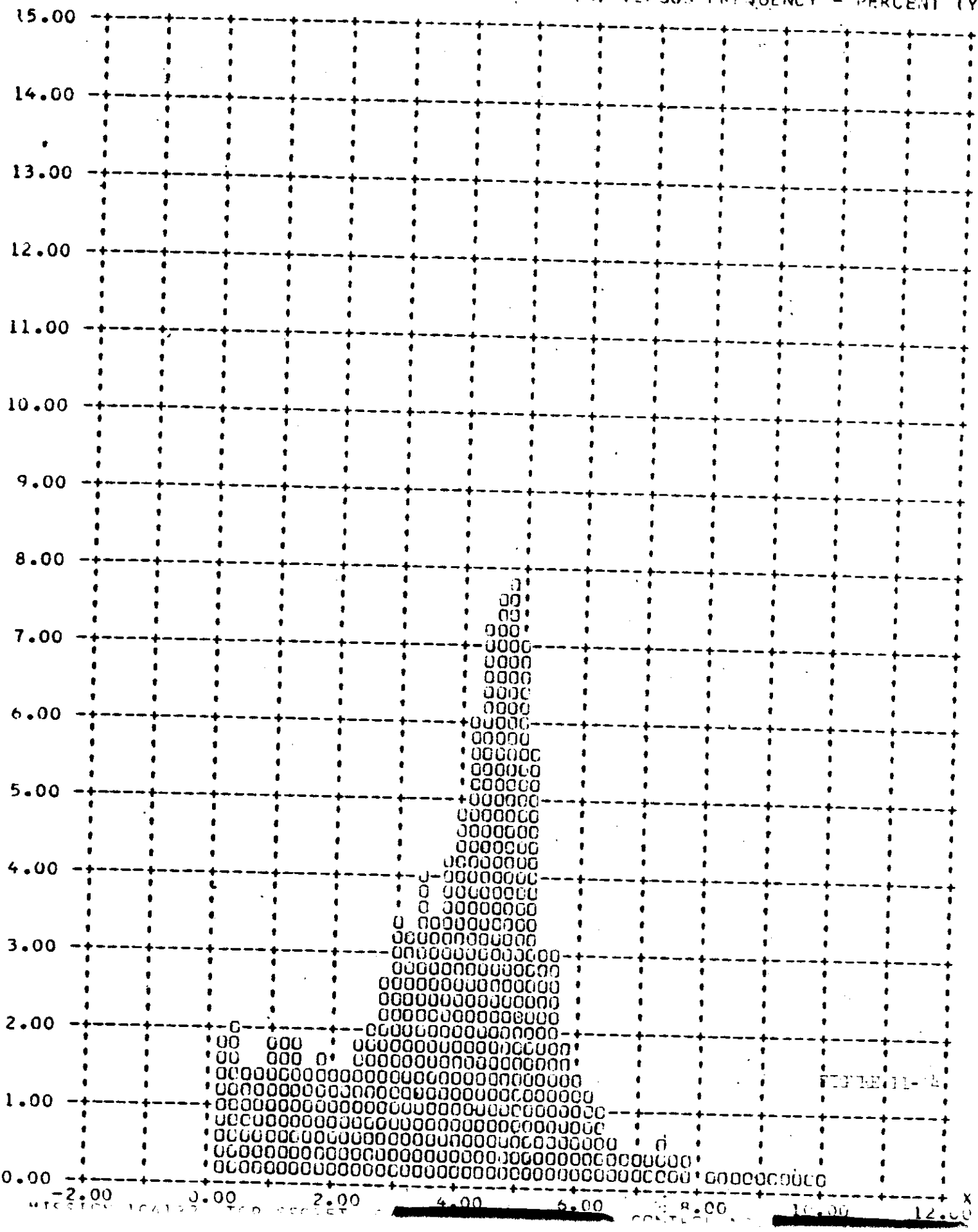
Y V/H RATIO ERROR - PERCENT (X) VERSUS FREQUENCY - PERCENT (Y)



MISSION 1041B2 ~~TOP SECRET~~ C[redacted] CONTROL NO. [redacted]

FRAMES 1-6 OF EACH OP OMITTED 90 PERCENT = 5.46

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



FRAMES 1-6 OF EACH UP UMITTED .90 PERCENT = 2.04

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

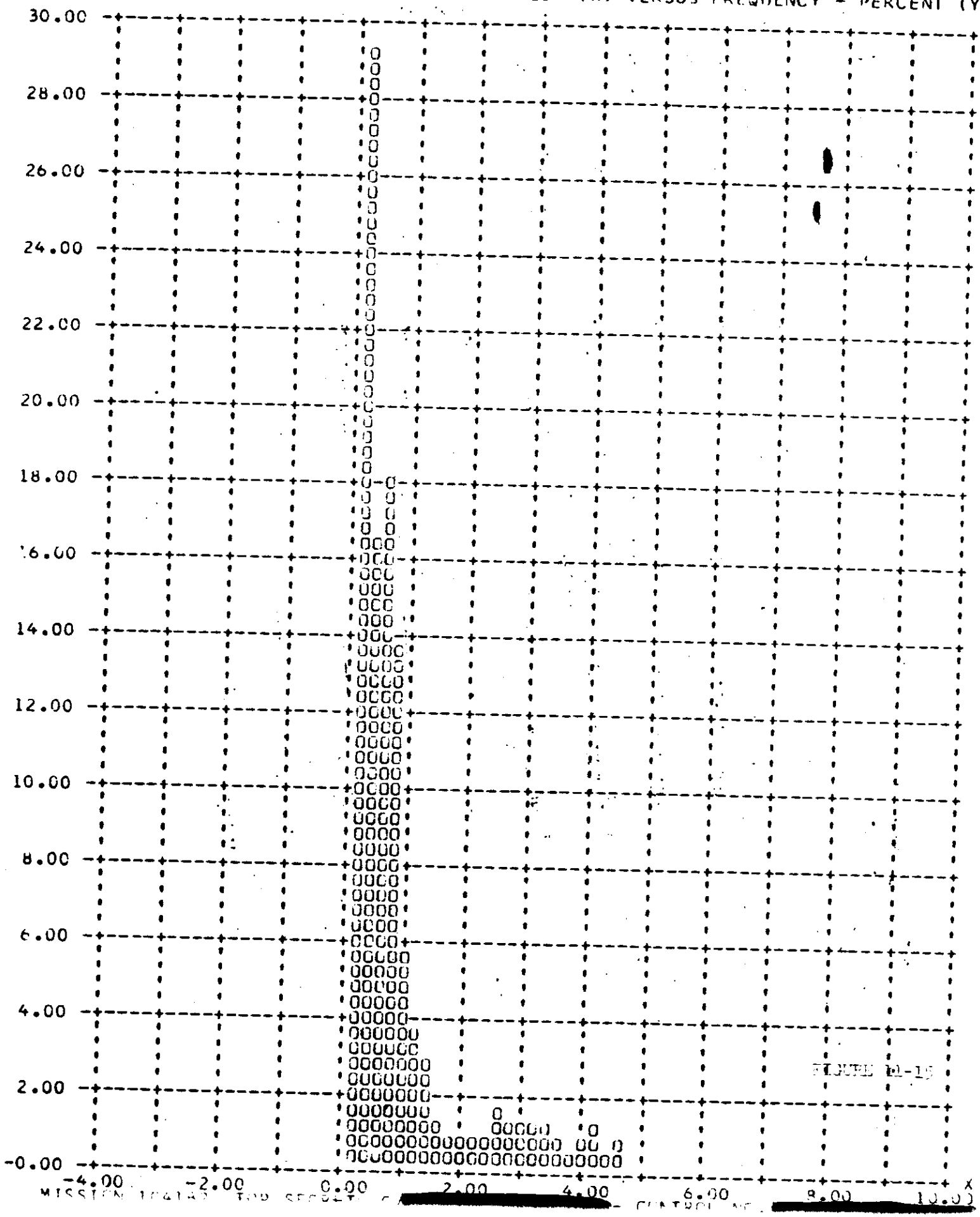


FIGURE 61-15

MISSION 104182 ~~TOP SECRET~~ [redacted] - CONTROL NO. [redacted]

FRAMES 1-6 OF EACH UP OMITTED 90 PERCENT = 5.51

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

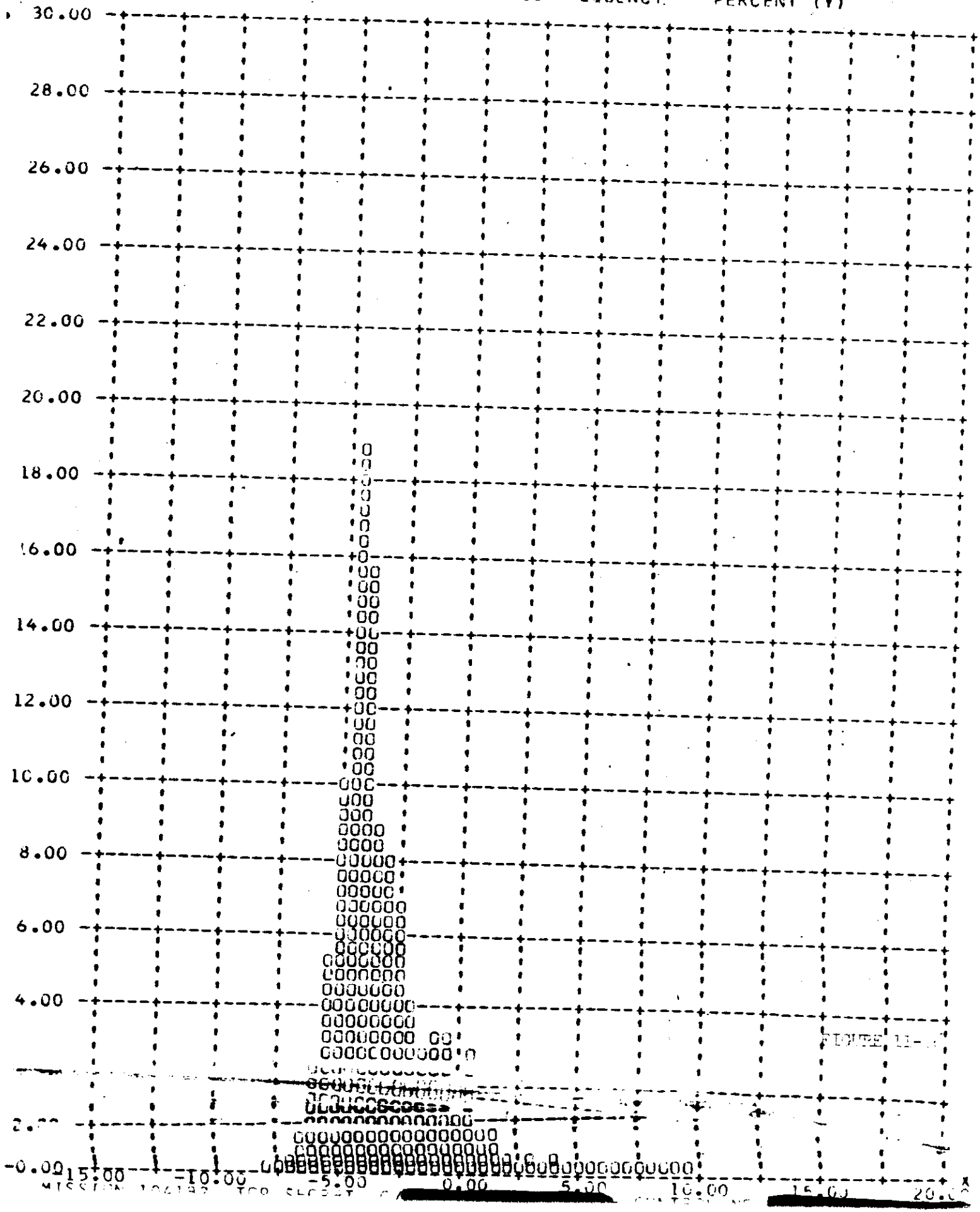


FIGURE 11-

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 modification. However, for primary mission function, the sample size is consistent with reliability reporting for the vehicle.

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

The reliability estimate is also divided into primary and secondary functions. The primary functions are operation of the panoramic cameras, main camera door operation, operation of the payload clock, and recovery operations. The secondary mission functions are horizon camera operation excluding catastrophic open shutter failure mode, auxiliary data recording, and Stellar-Index camera operation. A summary of estimated reliability is shown in Tables 12-1

Panoramic Camera Reliability

Sample Size - 179 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 - 58 vehicles x 2 doors = 116 opportunities to operate

Estimated Reliability = 99.4% at 50% confidence level.

Payload Command and Control

Sample Size - 10,176 hours operation in sample

Two failures

Estimated Reliability = 97.5% at 50% confidence level

Payload Clock Reliability

Sample Size - 10,176 hours operation in sample

No failures

Estimated Reliability = 99.3% at 50% confidence level

Estimated Reliability of Payload Functioning on orbit = 97.6% at 50% confidence level

Recovery System Reliability

81 opportunities to recover

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

Estimated Reliability = 97.9% at 50% confidence level

Stellar-Index Camera Reliability

Sample begins with J5.

Sample size = 25,930

Four filures

Estimated Reliability = 92.6% at 50% confidence level

Horizon Camera Reliability

Sample begins with J5 - 103,500 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)

MISSION NUMBER	PRIMARY FUNCTIONS						SECONDARY FUNCTIONS	
	PANORAMIC CAMERA	PANORAMIC CAMERA DOORS	COMMAND & CONTROL SYSTEM	PAYLOAD BLOCK	ON-ORBIT FUNCTIONS	RECOVERY SYSTEM	STELLAR-INDEX CAMERAS	HORIZON CAMERAS
	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY	RELIABILITY	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY
9036 to 1008	60 OPERATION / 1 / 97.3	52 HOURS / 0 / 98.6	3124 HOURS / 0 / 98.0	3124 HOURS / 0 / 98.0	96.1	18 EXPOSURES / 1 / 90.7	3400 CYCLES / 3 / 83.1	12,000 CYCLES / 0 / 91.7
1008	64 / 1 / 97.4	54 / 0 / 98.7	3216 / 0 / 98.0	3216 / 0 / 98.0	96.2	20 / 1 / 91.8	4250 / 3 / 88.3	15,000 / 0 / 93.4
1010	66 / 1 / 97.6	56 / 0 / 98.8	3432 / 0 / 98.1	3432 / 0 / 98.1	96.4	22 / 1 / 92.6	5100 / 3 / 73.7	18,000 / 0 / 94.4
1011	72 / 1 / 97.7	58 / 0 / 98.9	3600 / 0 / 98.1	3600 / 0 / 98.1	96.8	24 / 1 / 93.0	5525 / 0** / 94.7	21,000 / 0 / 95.2
1012	76 / 1 / 97.8	60 / 0 / 98.9	3720 / 0 / 98.2	3720 / 0 / 98.2	96.9	26 / 1 / 93.5	5525 / 0 / 94.7	24,000 / 0 / 95.8
1013	78 / 1 / 97.8	62 / 0 / 99.0	3840 / 1 / 98.9	3840 / 0 / 98.3	96.0	28 / 1 / 94.0	5850 / 0 / 95.1	25,800 / 0 / 96.0
1014	82 / 1 / 97.9	64 / 0 / 99.0	4056 / 1 / 98.1	4056 / 0 / 98.3	96.1	30 / 1 / 94.4	6375 / 1 / 89.6	28,500 / 0 / 96.4
1015	86 / 1 / 98.0	66 / 0 / 99.0	4320 / 1 / 98.3	4320 / 0 / 98.4	96.1	32 / 1 / 94.8	7225 / 1 / 90.4	31,500 / 0 / 96.7
1016	90 / 1 / 98.1	68 / 0 / 99.0	4560 / 1 / 98.5	4560 / 0 / 98.5	96.4	34 / 1 / 95.2	7650 / 1 / 91.0	34,500 / 0 / 97.0
1017	94 / 10* / 99.3	70 / 0 / 99.0	4760 / 1 / 98.7	4760 / 0 / 98.6	97.6	36 / 1 / 95.4	8925 / 1 / 92.3	37,500 / 0 / 97.3
1018	98 / 1 / 98.3	72 / 0 / 99.1	4920 / 1 / 98.8	4920 / 0 / 98.7	96.7	38 / 1 / 95.6	8980 / 1 / 92.3	40,500 / 0 / 97.5
1019	102 / 1 / 98.4	74 / 0 / 99.1	5136 / 1 / 98.9	5136 / 0 / 98.7	96.8	39 / 1 / 95.8	8075*** / 1 / 91.5	43,500 / 0 / 97.6

* DESIGN FIX NEGATED PREVIOUS FAILURE CONSIDERATIONS

** 1010 SAMPLE OUT OF SEQUENCE

TABLE 12-1

ESTIMATED RELIABILITY SUMMARY

(AT 50% CONFIDENCE LEVEL)

MISSION NUMBER	PRIMARY FUNCTIONS						SECONDARY FUNCTIONS	
	PANORAMIC CAMERA	PANORAMIC CAMERA DOORS	COMMAND & CONTROL SYSTEM	PAYLOAD CLOCK	ON-ORBIT FUNCTIONS	RECOVERY SYSTEM	STELLAR-INDEX CAMERAS	HORIZON CAMERAS
	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY	RELIABILITY	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY	SAMPLE / FAILURES / RELIABILITY
1020	108 / 1 / 98.5	78 / 0 / 99.1	5544 / 1 / 97.1	5544 / 0 / 98.9	96.9	43 / 1 / 96.1	10,680 / 2 / 89.9	48,000 / 0 / 97.9
1021	104 / 1 / 98.5	76 / 0 / 99.1	5376 / 1 / 97.0	5376 / 0 / 98.8	96.9	41 / 1 / 96.0	9830 / 2 / 89.1	46,500 / 0 / 97.8
1022	112 / 1 / 98.5	80 / 0 / 99.2	5784 / 1 / 97.3	5784 / 0 / 98.9	96.9	45 / 1 / 96.3	11,550 / 2 / 90.7	51,000 / 0 / 98.0
1023	114 / 1 / 98.6	82 / 0 / 99.2	6000 / 2 / 95.8	6000 / 0 / 98.9	96.2	47 / 1 / 96.5	12,190 / 2 / 91.1	54,000 / 0 / 98.1
1024	118 / 1 / 98.6	84 / 0 / 99.2	6240 / 2 / 96.0	6240 / 0 / 98.9	96.3	49 / 1 / 96.6	13,040 / 2 / 91.6	57,000 / 0 / 98.2
1025	122 / 1 / 98.6	86 / 0 / 99.2	6480 / 2 / 96.1	6480 / 0 / 99.0	96.4	51 / 1 / 96.7	13,890 / 2 / 92.1	60,000 / 0 / 98.3
1026	126 / 1 / 98.7	88 / 0 / 99.2	6720 / 2 / 96.3	6720 / 0 / 99.0	96.5	53 / 1 / 96.8	14,740 / 2 / 92.6	63,000 / 0 / 98.4
1027	128 / 1 / 98.7	90 / 0 / 99.2	6744 / 2 / 96.3	6744 / 0 / 99.0	96.5	55 / 1 / 97.0	15,165 / 3 / 90.0	64,500 / 0 / 98.4
1028	132 / 1 / 98.7	92 / 0 / 99.2	6960 / 2 / 96.4	6960 / 0 / 99.0	96.7	57 / 1 / 97.1	16,015 / 3 / 90.7	67,500 / 0 / 98.5
1029	136 / 1 / 98.8	94 / 0 / 99.3	7200 / 2 / 96.5	7200 / 0 / 99.1	96.8	59 / 1 / 97.1	16,580 / 4 / 88.7	70,500 / 0 / 98.5
1030	140 / 1 / 98.9	96 / 0 / 99.3	7440 / 2 / 96.6	7440 / 0 / 99.1	96.9	61 / 1 / 97.2	17,430 / 4 / 89.3	73,500 / 0 / 98.6
1031	143 / 1 / 98.8	98 / 0 / 99.3	7704 / 2 / 96.7	7704 / 0 / 99.1	96.9	63 / 1 / 97.3	18,280 / 4 / 89.7	76,500 / 0 / 98.6

TABLE IV-1

ESTIMATED RELIABILITY SUMMARY

(AT 50% CONFIDENCE LEVEL)

KH MISSION SERIES	PRIMARY FUNCTIONS						SECONDARY FUNCTIONS	
	PANORAMIC CAMERA	PANORAMIC CAMERA + DOORS	COMMAND & CONTROL SYSTEM	PAYLOAD CLOCK	ON-ORBIT FUNCTIONS	RECOVERY SYSTEM	STELLAR-INDEX CAMERAS	HORIZON CAMERAS
1032	SAMPLE 147 FAILURES 1 RELIABILITY 98.9	SAMPLE 100 FAILURES 0 RELIABILITY 99.2	SAMPLE 7968 FAILURES 2 RELIABILITY 96.8	SAMPLE 7968 FAILURES 0 RELIABILITY 99.2	RELIABILITY 97.1	SAMPLE 65 FAILURES 1 RELIABILITY 97.4	SAMPLE 19,130 FAILURES 4 RELIABILITY 90.2	SAMPLE 79,500 FAILURES 0 RELIABILITY 98.7
1034	SAMPLE 151 FAILURES 1 RELIABILITY 98.9	SAMPLE 102 FAILURES 0 RELIABILITY 99.3	SAMPLE 8208 FAILURES 2 RELIABILITY 96.9	SAMPLE 8208 FAILURES 0 RELIABILITY 99.2	RELIABILITY 97.2	SAMPLE 67 FAILURES 1 RELIABILITY 97.8	SAMPLE 19,960 FAILURES 4 RELIABILITY 90.5	SAMPLE 82,800 FAILURES 0 RELIABILITY 98.7
1035	SAMPLE 159 FAILURES 1 RELIABILITY 99.0	SAMPLE 106 FAILURES 0 RELIABILITY 99.4	SAMPLE 8760 FAILURES 2 RELIABILITY 97.1	SAMPLE 8760 FAILURES 0 RELIABILITY 99.2	RELIABILITY 97.4	SAMPLE 71 FAILURES 1 RELIABILITY 97.6	SAMPLE 21,680 FAILURES 4 RELIABILITY 91.3	SAMPLE 88,500 FAILURES 0 RELIABILITY 98.8
1036	SAMPLE 168 FAILURES 1 RELIABILITY 98.9	SAMPLE 104 FAILURES 0 RELIABILITY 99.3	SAMPLE 8520 FAILURES 2 RELIABILITY 97.0	SAMPLE 8520 FAILURES 0 RELIABILITY 99.2	RELIABILITY 97.3	SAMPLE 69 FAILURES 1 RELIABILITY 97.8	SAMPLE 20,830 FAILURES 4 RELIABILITY 90.9	SAMPLE 86,500 FAILURES 0 RELIABILITY 98.8
1037	SAMPLE 163 FAILURES 1 RELIABILITY 99.0	SAMPLE 103 FAILURES 0 RELIABILITY 99.4	SAMPLE 9048 FAILURES 2 RELIABILITY 97.2	SAMPLE 9048 FAILURES 0 RELIABILITY 99.3	RELIABILITY 97.4	SAMPLE 73 FAILURES 1 RELIABILITY 97.7	SAMPLE 22,830 FAILURES 4 RELIABILITY 91.6	SAMPLE 91,800 FAILURES 0 RELIABILITY 98.9
1038	SAMPLE 167 FAILURES 1 RELIABILITY 99.0	SAMPLE 110 FAILURES 0 RELIABILITY 99.4	SAMPLE 9336 FAILURES 2 RELIABILITY 97.3	SAMPLE 9336 FAILURES 0 RELIABILITY 99.3	RELIABILITY 97.5	SAMPLE 75 FAILURES 1 RELIABILITY 97.8	SAMPLE 23,380 FAILURES 4 RELIABILITY 91.8	SAMPLE 94,500 FAILURES 0 RELIABILITY 98.9
1039	SAMPLE 171 FAILURES 1 RELIABILITY 99.0	SAMPLE 112 FAILURES 0 RELIABILITY 99.4	SAMPLE 9600 FAILURES 2 RELIABILITY 97.4	SAMPLE 9600 FAILURES 0 RELIABILITY 99.3	RELIABILITY 97.6	SAMPLE 77 FAILURES 1 RELIABILITY 97.8	SAMPLE 24,230 FAILURES 4 RELIABILITY 92.1	SAMPLE 97,800 FAILURES 0 RELIABILITY 98.9
1040	SAMPLE 175 FAILURES 1 RELIABILITY 99.0	SAMPLE 114 FAILURES 0 RELIABILITY 99.4	SAMPLE 9840 FAILURES 2 RELIABILITY 97.4	SAMPLE 9840 FAILURES 0 RELIABILITY 99.3	RELIABILITY 97.5	SAMPLE 79 FAILURES 1 RELIABILITY 97.9	SAMPLE 25,080 FAILURES 4 RELIABILITY 92.4	SAMPLE 100,500 FAILURES 0 RELIABILITY 99.0
1041	SAMPLE 179 FAILURES 1 RELIABILITY 99.1	SAMPLE 118 FAILURES 0 RELIABILITY 99.4	SAMPLE 10,176 FAILURES 2 RELIABILITY 97.5	SAMPLE 10,176 FAILURES 0 RELIABILITY 99.3	RELIABILITY 97.6	SAMPLE 81 FAILURES 1 RELIABILITY 97.9	SAMPLE 26,930 FAILURES 4 RELIABILITY 92.6	SAMPLE 108,500 FAILURES 6 RELIABILITY 99.0

TABLE 12-1

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 1008 are deleted.

MISSION SUMMARY

MISSION NUMBER	PAYLOAD NUMBER	VEHICLE NUMBER	LAUNCH DATE	LAUNCH TIME	ORBIT INCLINATION (°)	PERIGEE		RECOVERY PASS	MASTER CAMERA			SLAVE CAMERA			STELLAR-INDEX CAMERA NUMBER
						ALTITUDE (NM)	LOCATION (°N)		CAMERA NUMBER	SLIT (")	FILTER TYPE	CAMERA NUMBER	SLIT (")	FILTER TYPE	
1004	J-08	1174	2/15/64	2138 Z	74.9	99.9	29.0	49/112	124	0.250	W-21	125	0.250	W-21	D29/29/29 D42/42/37
1006	J-09	1176	6/4/64	2259 Z	79.9	84.0	63.2	65/128	148	0.200	W-21	149	0.200	W-21	D48/47/45 D49/53/42
1007	J-07	1609	6/19/64	2318 Z	85.0	99.2	41.5	65/128	144	0.250	W-25	145	0.200	W-21	D43/43/43 D54/56/51
1008	J-10	1177	7/10/64	2314 Z	85.0	99.4	40.8	49/112	150	0.200	W-21	151	0.200	W-21	D48/45/48 D33/28/33
1009	J-12	1605	8/5/64	2316 Z	80.1	99.6	39.8	49/128	154	0.200	W-21	155	0.200	W-21	D56/54/56 D38/36/34
1010	J-11	1178	9/14/64	2254 Z	84.9	97.4	42.8	65/144	152	0.175	W-21	153	0.175	W-21	D41/41/41 D44/46/44
1011	J-3X	1170	10/5/64	2150 Z	79.9	99.3	20.9	65/—	160	0.175	W-21	161	0.175	W-21	D30/30/30 D57/57/57
1012	J-13	1179	10/17/64	2202 Z	75.0	96.2	32.4	49/81	156	0.200	W-21	157	0.200	W-21	D51/51/47 D46/52/53
1013	J-15	1173	11/2/64	2130 Z	80.0	100.0	25.0	65/81	158	0.225	W-21	159	0.225	W-21	D52/49/55 D47/48/54
1014	J-16	1180	11/18/64	2036 Z	70.0	103.2	65.6	81/145	162	0.250	W-25	139	0.175	W-21	D53/59/49 D50/44/46
1015	J-17	1607	12/19/64	2110 Z	74.9	96.7	21.6	81/175	138	0.250	W-25	141	0.175	W-21	D61/61/61 D58/58/58
1016	J-18	1608	1/18/65	2101 Z	74.9	99.4	30.2	81/159	132	0.250	W-25	133	0.175	W-21	D55/55/50 D59/50/59
1017	J-14	1611	2/25/65	2144 Z	75.0	97.2	25.9	81/145	140	0.250	W-25	165	0.175	W-21	D21/21/21 D60/61/1
1018	J-19	1612	3/25/65	2111 Z	96.0	100.2	40.3	66/99	122	0.250	W-25	123	0.175	W-21	D20/20/20 D22/22/22
1019	J-04	1614	4/29/65	2149 Z	86.0	99.1	27.1	80/—	118	0.250	W-25	119	0.175	W-21	D39/39/35 D19/18/19
1020	J-20	1613	6/9/65	2158 Z	75.1	97.1	40.6	97/113	136	0.250	W-25	137	0.175	W-21	D67/65/80 D62/65/65
1021	J-21	1615	5/18/65	1803 Z	75.0	109.2	24.3	81/161	166	0.175	W-21	167	0.250	W-25	D63/69/69 D25/27/25
1022	J-22	1617	7/19/65	2201 Z	85.0	99.7	30.3	65/144	168	0.250	W-25	169	0.175	W-21	D65/77/70 D24/24/24
1023	J-23	1618	8/17/65	2100 Z	70.0	97.8	29.0	81/144	170	0.225	W-25	171	0.150	W-21	D17/19/82 D66/75/72
1024	J-24	1619	9/22/65	2131 Z	80.0	95.9	18.4	81/161	172	0.225	W-25	173	0.150	W-21	D69/72/84 D64/82/66
1025	JX-28	1616	10/5/65	1746 Z	75.0	112.9	44.3	81/161	142	0.175	W-21	127	0.175	W-21	D73/78/88 D70/88/81
1026	J-25	1620	10/28/65	2117 Z	75.0	93.0	17.0	81/160	174	0.225	W-25	175	0.150	W-21	D75/92/93 D72/89/85
1027	JX-27	1621	12/9/65	2110 Z	80.0	97.4	17.3	17/33	164	0.250	W-25	163	0.175	W-21	D71/87/87 D68/74/83
1028	J-26	1610	12/24/65	2106 Z	80.0	97.6	28.4	81/144	176	0.250	W-25	177	0.175	W-21	D77/91/97 D74/76/95

REC/JOM 4/65

TABLE 13-1

MISSION SUMMARY

MISSION NUMBER	PAYLOAD NUMBER	VEHICLE NUMBER	LAUNCH DATE	LAUNCH TIME	ORBIT INCLINATION (°)	PERIGEE ALTITUDE (NM)	PERIGEE LOCATION (°N)	RECOVERY PASS	MASTER CAMERA CAMERA NUMBER	MASTER CAMERA SLIT (")	MASTER CAMERA FILTER TYPE	SLAVE CAMERA CAMERA NUMBER	SLAVE CAMERA SLIT (")	SLAVE CAMERA FILTER TYPE	STELLAR-INDEX CAMERA NUMBER
1029	J-27	1623	2/2/66	2132 Z	75.1	99.5	22.5	81 / 160	178	0.275	W-25	179	0.175	W-21	D79/94/91 / D76/70/94
1030	J-29	1622	3/9/66	2202 Z	75.0	97.5	18.7	81 / 159	182	0.275	W-25	183	0.175	W-21	D94/100/107 / D82/95/102
1031	J-30	1627	4/7/66	2202 Z	75.1	104.5	23.5	113 / 177	184	0.225	W-23A	185	0.150	W-21	D83/101/89 / D86/106/86
1032	J-28	1625	5/3/66	1925 Z	—	—	—	— / —	180	0.150	W-21	181	0.150	W-21	D81/97/101 / D80/73/100
1033	J-33	1630	5/24/66	0213 Z	66.1	102.0	60.7	82 / 178	194	0.200	W-21	195	0.200	W-21	D91/105/109 / D84/102/75
1034	J-31	1626	6/21/66	2131 Z	80.1	105.4	18.2	81 / 161	186	0.200	W-23A	187	0.150	W-21	D85/109/76 / D87/107/105
1035	J-36	1628	9/20/66	2114 Z	85.0	99.5	29.1	81 / 160	188	0.225	W-23A	189	0.175	W-21	D95/112/113 / D96/104/116
1036	J-32	1631	8/9/66	2046 Z	100.0	102.4	22.9	115 / 212	190	0.200	W-23A	191	0.150	W-21	D89/110/111 / D88/108/106
1037	J-38	1632	11/8/66	1957 Z	100.0	91.8	14.5	66 / 197	198	0.225	W-23A	199	0.175	W-21	D101/128/128 / D106/136/134
1038	J-34	1629	1/14/67	2128 Z	80.1	96.9	29.2	81 / 193	192	0.225	W-23A	193	0.175	W-21	D93/86/112 / D90/111/108
1039	J-39	1635	2/22/67	2202 Z	80.0	97.0	30.2	81 / 177	206	0.225	W-23A	207	0.175	W-21	D103/131/132 / D100/125/123
1040	J-35	1636	3/30/67	1854 Z	85.1	99.7	28.3	81 / 145	196	0.175	W-21	197	0.225	W-23A	D78/95/96 / D92/79/110
1041	J-40	1634	5/9/67	2152 Z	86.1	100.1	33.0	93 / 215	208	0.225	W-23A	209	0.175	W-21	D105/134/133 / D102/127/127

TABLE 2-1

REC/JOM
1/68

PERFORMANCE SUMMARY

MISSION NUMBER	CAMERA	SERIAL NUMBER	M.I.P. VALUE	VISUAL RES	AFSPPL SLIT (μ)	AFSPPL AVERAGE	MTF/AIM SLIT (μ)	MTF/AIM AVERAGE	[redacted] SLIT (μ)	[redacted] AVERAGE ALL	[redacted] AVERAGE HIGH	90% ATTITUDE ERROR (°) PITCH	90% ATTITUDE ERROR (°) ROLL	90% ATTITUDE ERROR (°) YAW	90% ATTITUDE RATES (°/HR) PITCH	90% ATTITUDE RATES (°/HR) ROLL	90% ATTITUDE RATES (°/HR) YAW	90% V/H ERROR (%)	90% RESOLUTION LIMIT (FEET) ALONG TRACK	90% RESOLUTION LIMIT (FEET) CROSS TRACK
1004-1 1004-2	FWD AFT FWD AFT	124 125	85 85	78 85 76 73	350	97 80 88 83	43	109 96 113 106	320	115 117 82 89	127 124 90 95	0.45 0.74	0.42 0.50	1.08 0.91	30.0 44.0	25.0 30.0	21.0 29.0	5.1 4.9	7.7 6.8	6.1 6.5
1006-1 1006-2	FWD AFT FWD AFT	148 149	90 90	78 76 85 83	350	65 71 64 72	43	88 90 81 90	320	84 87 84 87	97 92 90 94	0.41 0.49	0.42 0.40	1.14 1.08	26.8 31.1	28.5 27.9	27.8 30.0	15.4 11.6	13.8 10.1	6.7 7.0
1007-1 1007-2	FWD AFT FWD AFT	144 145	85 85	80 86 79 81	350	60 63 72 77	43	87 83 81 92	320	82 97 68 74	91 110 74 81	0.58 0.64	0.46 0.47	1.43 —	37.6 43.0	23.9 25.8	29.9 —	3.6 4.6 3.2 4.2	3.1 2.1 2.4 1.8	9.4 7.6 — —
1008-1 1008-2	FWD AFT FWD AFT	150 151	85 85	80 76 82 79	350	80 73 84 94	43	95 89 96 83	320	81 86 83 85	89 95 92 91	0.59 0.68	0.39 0.36	0.94 0.71	43.8 42.9	23.9 24.0	29.6 32.5	2.9 2.8	4.9 4.2	5.9 5.4
1009-1 1009-2	FWD AFT FWD AFT	154 155	85 85	92 89 94 87	350	80 85 85 87	—	—	80	75 75 76 72	88 83 84 79	0.65 0.48	0.65 0.65	0.71 0.59	29.2 33.6	22.7 23.9	27.6 27.2	3.3 2.6	5.3 4.9	5.8 5.9
1010-1 1010-2	FWD AFT FWD AFT	152 153	85 85	90 88 92 90	350	90 86 81 82	80	88 80 82 85	80	87 92 82 87	96 103 93 98	0.93 0.59	0.30 0.70	0.87 1.21	39.1 45.4	23.6 23.6	30.8 30.7	4.5 4.6	2.3 7.5	4.4 3.8
1011-1	FWD AFT	160 161	90	84 84	350	76 77	80	96 86	80	78 83	87 93	0.77	0.39	0.97	43.1	28.9	31.1	2.3	5.3	5.6
1012-1 1012-2	FWD AFT FWD AFT	156 157	85 85	92 91 91 89	—	—	80	91 87 89 96	80	84 89 84 85	98 100 91 98	0.65 0.97	0.51 0.77	— 0.51	47.1 45.2	33.2 30.7	— 20.4	1.5 5.9	4.8 3.3	— 5.9
1013-1	FWD AFT	158 159	85	89 77	—	—	80	94 97	80	85 81	99 103	0.64 0.64	0.32 0.32	1.34 1.34	36.9 36.9	29.0 29.0	32.3 32.3	3.7 4.5	7.8 9.6	8.3 8.2
1014-1 1014-2	FWD AFT FWD AFT	162 139	80 80	87 83 83 86	—	—	80	78 80 75 84	80	74 95 70 80	86 107 77 88	0.62 0.62 1.06 1.06	0.41 0.41 0.55 0.59	1.46 1.44 — —	35.0 34.8 38.4 38.1	36.1 36.0 36.4 36.0	38.5 38.3 — —	2.2 3.3 1.4 3.2	6.2 2.8 6.4 2.2	8.8 6.3 — —
1015-1 1015-2	FWD AFT FWD AFT	138 141	85 85	87 87 83 82	—	—	80	76 73 72 72	80	90 97 89 90	—	0.65 0.64 0.50 0.50	0.38 0.39 0.61 0.61	0.53 0.53 0.64 0.64	47.0 46.9 39.1 39.1	29.4 29.2 27.1 27.0	38.2 38.2 36.2 36.3	5.0 6.3 3.2 3.3	5.5 3.4 6.8 4.6	7.8 5.5 7.5 5.3
1016-1 1016-2	FWD AFT FWD AFT	132 133	85 85	85 83 90 91	—	—	80	56 61 55 56	80	81 94 92 91	—	0.72 0.72 0.83 0.83	0.83 0.83 0.93 0.93	2.01 2.01 2.19 2.19	48.9 48.4 42.2 42.2	30.2 30.1 27.2 27.3	40.4 40.4 39.9 39.9	2.0 2.8 1.5 2.3	5.5 3.4 4.9 3.3	10.5 7.4 8.0 7.1
1017-1 1017-2	FWD AFT FWD AFT	140 165	85 85	72 75 86 85	—	—	80	57 70 65 69	80	78 94 80 86	86 107 94 101	0.49 0.49 0.69 0.69	0.76 0.76 0.45 0.45	2.50 2.49 — —	35.5 35.3 36.5 36.3	32.2 32.0 34.0 33.8	38.4 38.5 — —	3.3 4.3 1.8 2.3	9.8 8.3 6.2 5.3	11.6 8.1 — —
1018-1 1018-2	FWD AFT FWD AFT	122 123	85 85	79 77 84 88	—	—	80	70 74 75 71	80	82 96 77 91	92 109 89 103	0.91 0.90 0.84 0.85	0.48 0.47 0.63 0.63	— — — —	47.4 48.2 34.7 34.8	36.7 36.2 30.7 30.7	— — — —	3.4 3.2 3.1 2.8	5.6 3.7 5.8 4.1	— — — —

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TABLE 15-2

PERFORMANCE SUMMARY

MISSION NUMBER	CAMERA	SERIAL NUMBER	M I P VALUE	VISUAL RES.	AFSPPF MTF/AIM SLIT (μ)	AFSPPF MTF/AIM AVERAGE	SLIT (μ)	AVERAGE	[redacted] SLIT (μ)	AVERAGE ALL	AVERAGE HIGH	90% ATTITUDE ERROR (°) PITCH	ROLL	YAW	90% ATTITUDE RATES (°/HR) PITCH	ROLL	YAW	90% V/H ERROR (%)	90% RESOLUTION LIMIT (FEET) ALONG TRACK	CROSS TRACK
1019-1	FWD	178	85	81	—	—	80	76	80	88	104	0.43	0.36	0.97	31.6	34.7	33.0	3.3	9.3	9.1
	AFT	179		89				83		87	101	0.44	0.37	0.96	31.6	34.9	33.1	3.8	5.0	6.5
1020-1	FWD	186	80	88	—	—	80	69	80	78	90	0.46	0.35	0.78	37.4	31.8	26.7	5.4	5.0	8.4
1020-2	FWD	187	—	89				82		84	105	0.46	0.35	0.78	37.4	31.8	26.7	5.3	4.2	5.9
	AFT			—				—		—	—	0.41	0.17	1.06	42.6	23.8	42.5	3.5	6.4	7.6
1021-1	FWD	166	85	88	—	—	80	77	80	86	99	0.41	0.17	1.08	42.6	23.8	42.5	3.4	4.5	2.8
1021-2	FWD	167	85	85				74		88	112	0.59	0.65	—	44.7	50.6	—	3.1	9.2	—
1022-1	FWD	168	85	88	—	—	80	66	80	78	91	0.47	0.51	0.89	28.3	27.1	23.8	3.5	9.8	8.6
1022-2	FWD	169	85	91				83		101	111	0.47	0.51	0.90	27.9	26.6	23.8	3.0	6.2	6.1
	AFT			90				68		74	84	0.40	0.51	0.90	29.4	27.3	31.0	2.6	8.9	8.4
1023-1	FWD	170	85	92	—	—	80	92	80	99	110	0.40	0.51	0.90	29.4	27.3	31.1	1.8	4.9	5.9
1023-2	FWD	171	85	94				87		97	110	0.49	0.33	0.50	33.0	28.7	23.5	3.4	4.0	6.4
	AFT			87				71		83	101	0.49	0.33	0.50	32.9	28.7	23.5	3.5	2.7	4.3
1024-1	FWD	172	85	89	—	—	80	89	80	76	87	0.42	0.36	0.53	29.7	21.0	28.6	2.4	3.9	6.3
1024-2	FWD	173	85	79				95		68	76	0.48	0.37	0.53	29.6	21.3	28.6	2.5	2.7	4.2
	AFT			86				95		90	102	0.42	0.25	0.62	32.2	24.9	30.5	2.6	5.9	6.8
1025-1	FWD	142	85	95	—	—	80	87	80	84	105	0.42	0.25	0.62	32.2	24.9	30.4	2.1	3.8	4.5
1025-2	FWD	127	85	87				97		89	101	0.36	0.31	0.93	30.4	24.5	36.4	5.5	4.7	5.4
	AFT			85				85		100	114	0.36	0.31	0.93	30.6	23.6	36.4	5.1	3.3	3.6
1026-1	FWD	174	88	91	—	—	80	76	80	80	97	0.50	0.41	0.85	28.1	28.7	25.9	2.0	3.9	6.7
1026-2	FWD	175	88	88				88		98	114	0.51	0.42	0.85	28.6	29.7	25.7	3.2	2.8	6.8
	AFT			85				85		96	107	0.52	0.44	0.82	28.0	26.1	29.0	1.7	4.7	6.9
1027-1	FWD	164	85	93	—	—	80	93	80	89	103	0.52	0.44	0.82	28.1	26.0	29.0	1.8	6.7	6.9
	AFT	163						69		80	92	0.65	0.24	0.70	37.9	33.2	28.5	6.1	13.5	6.2
1028-1	FWD	176	85	—	—	—	80	79	80	98	113	0.65	0.24	0.70	37.9	33.2	28.5	6.1	9.1	4.1
1028-2	FWD	177	85					81		92	104	0.55	0.56	0.87	41.1	46.5	30.8	6.1	5.5	6.7
	AFT							92		90	103	0.59	0.65	0.88	43.3	50.0	27.7	6.7	3.3	4.5
1029-1	FWD	178	85	—	80	89	80	88	80	80	—	0.51	0.37	0.74	47.2	25.5	26.4	4.7	10.5	7.2
1029-2	FWD	179	85			91		95		92		0.51	0.37	0.74	47.3	25.2	26.2	3.8	6.0	5.2
	AFT					83		82		89		0.52	0.37	0.50	36.6	28.0	30.5	3.9	4.8	8.0
1030-1	FWD	182	85	—	80	91	80	94	80	93	—	0.52	0.37	0.50	36.6	28.0	30.5	3.1	4.0	5.6
1030-2	FWD	183	85			95		76		87		0.76	0.52	—	42.7	25.7	—	3.2	4.2	—
	AFT					74		79		84		0.76	0.52	—	42.5	25.6	—	2.9	3.3	—
1031-1	FWD	184	85	—	80	77	80	81	80	77	—	0.67	0.34	0.77	29.1	31.3	34.4	2.9	7.8	7.4
1031-2	FWD	185	85			71		74		73		0.68	0.33	0.77	28.5	30.8	34.6	4.6	3.3	4.8
	AFT					91		81		77		0.64	0.48	0.44	38.8	32.5	25.7	2.3	7.5	7.5
1033-1	FWD	194	85	—	80	77	80	94	80	81	—	0.65	0.48	0.44	37.5	32.1	25.7	3.6	2.9	4.9
1033-2	FWD	195	85			67		93		72		0.67	0.25	0.89	29.6	22.7	36.1	3.9	8.9	8.6
	AFT					75		90		98		0.67	0.25	0.89	29.6	22.8	35.9	5.4	5.1	5.6
						93		92		73		0.70	0.27	0.87	28.4	22.7	36.3	4.9	11.2	8.6
												0.70	0.26	0.87	28.2	21.9	36.3	5.0	6.6	5.5
												0.50	0.47	0.96	16.2	17.3	26.6	6.1	13.8	8.4
												0.54	0.41	0.91	18.1	18.7	22.8	6.0	12.0	5.8
												0.57	0.20	0.75	19.0	19.3	15.7	5.4	10.3	4.9
												0.11	0.33	0.80	11.3	34.9	27.3	3.5	8.2	6.2
												0.15	0.27	0.39	8.2	59.6	18.8	4.9	8.1	5.6
												0.21	0.24	1.09	22.3	49.3	17.5	2.6	5.8	6.9
												0.20	0.24	1.08	22.3	50.7	17.4	2.9	7.3	6.7

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PERFORMANCE SUMMARY

MISSION NUMBER	CAMERA	SERIAL NUMBER	M.I.P. VALUE	AFSPPF MTF/AIM			90% ATTITUDE ERROR (°)			90% ATTITUDE RATES (°/HR.)			90% V/H ERROR (%)	90% RESOLUTION LIMIT (FEET)		I.M.C. ERROR
				AVERAGE (LINES/MM)	SLIT (μ)	AVERAGE (LINES/MM)	PITCH	ROLL	YAW	PITCH	ROLL	YAW		ALONG TRACK	CROSS TRACK	
1034 - 1	FWD	186	80	75	80	81	0.20	0.19	0.99	19.3	20.4	24.9	15.0	17.8	5.9	—
1034 - 2	AFT			93		90	0.20	0.19	0.99	19.3	20.4	24.9	15.2	13.6	4.5	—
	FWD	187	80	74		09	0.34	0.26	0.33	21.1	28.9	16.2	8.7	10.4	7.1	—
	AFT			69		86	0.34	0.26	0.33	21.1	29.0	16.2	8.9	8.0	5.3	—
1035 - 1	FWD	188	85	66	80	—	0.16	0.55	2.39	18.9	27.9	33.9	4.0	4.8	3.7	4.0
1035 - 2	AFT			80			0.17	0.54	2.43	19.3	23.4	32.2	4.1	3.7	2.4	4.1
	FWD	189	85	91			0.16	0.50	3.02	18.4	30.1	27.5	3.2	4.0	3.5	3.2
	AFT			82			0.17	0.51	3.02	19.9	24.7	26.3	3.4	3.3	2.4	3.4
1036 - 1	FWD	190	85	89	80	—	0.76	0.95	0.60	31.2	25.6	29.5	3.4	5.1	6.8	—
1036 - 2	AFT			94			0.76	0.98	0.60	31.1	25.5	29.4	3.3	3.6	5.1	—
	FWD	191	85	73			0.94	0.70	0.40	33.0	29.7	23.3	3.3	3.8	6.5	—
	AFT			84			0.94	0.70	0.40	32.9	29.7	23.3	3.1	2.7	1.9	—
1037 - 1	FWD	198	85	80	60	—	0.25	0.25	1.50	22.8	40.0	29.3	9.5	10.1	8.0	9.8
1037 - 2	AFT			71			0.25	0.27	1.51	26.7	36.9	32.4	10.1	8.0	6.1	10.3
	FWD	199	85	88			0.24	0.30	1.17	25.5	52.5	26.2	6.3	6.6	7.3	6.5
	AFT			81			0.27	0.32	1.18	33.8	36.6	63.4	6.5	5.4	5.9	7.0
1038 - 1	FWD	192	80	53	60	—	0.22	0.25	2.98	18.7	33.7	39.9	3.6	4.1	3.7	3.5
1038 - 2	AFT			76			0.27	0.24	2.99	41.8	27.2	34.4	3.4	3.3	2.5	3.7
	FWD	193	80	63			0.39	0.81	2.87	20.0	46.7	27.8	3.4	3.6	3.8	3.1
	AFT			77			0.39	0.51	2.90	50.4	28.3	27.3	3.4	3.6	2.4	3.9
1039 - 1	FWD	206	85	59	60	—	0.21	0.43	3.03	19.0	27.8	39.2	5.1	6.2	4.6	5.2
1039 - 2	AFT			71			0.20	0.41	3.05	37.5	23.0	28.5	5.2	4.6	3.2	5.2
	FWD	207	85	71			0.30	0.34	2.60	33.1	30.2	25.0	4.6	5.5	5.4	4.7
	AFT			65			0.34	0.53	2.52	27.1	24.2	23.9	4.8	4.6	3.8	6.0
1040 - 1	FWD	196	85	94	60	—	0.33	0.50	2.90	28.0	22.2	28.4	2.6	3.9	2.1	2.8
1040 - 2	AFT			68			0.30	0.50	3.00	22.1	23.2	28.5	2.1	1.9	2.5	2.1
	FWD	197	85	61			0.32	0.49	2.96	27.5	30.0	32.5	1.8	2.2	2.0	1.7
	AFT			75			0.29	0.46	2.96	27.2	26.4	28.7	2.7	2.5	2.2	2.6
1041 - 1	FWD	208	85	72	80	—	0.34	0.18	3.05	14.7	14.0	12.7	5.1	6.4	3.4	5.2
1041 - 2	AFT			82			0.35	0.16	3.05	15.8	13.5	13.0	5.6	5.7	3.0	5.7
	FWD	209	85	73			0.26	0.23	2.94	22.9	15.7	18.8	4.9	6.4	2.1	4.9
	AFT			78			0.28	0.24	3.01	23.9	16.2	21.0	5.6	5.5	2.0	5.5

EXPOSURE - PROCESSING SUMMARY

MISSION NUMBER	CAMERA	SOLAR ELEVATION RANGE (°)		SOLAR AZIMUTH RANGE (°)		PREDICTED PROCESSING (%)			REPORTED PROCESSING (%)			COMPUTED PROCESSING (%)			TERRAIN D-MIN				-TERRAIN D-MAX				CLOUD D-MAX				UNDER EXPOSED (%)	UNDER PROCESSED (%)	NOMINAL EXP & PRO (%)	OVER PROCESSED (%)	OVER EXPOSED (%)	CLOUD COVER (%)
		LOW	HIGH	LOW	HIGH	P	I	F	P	I	F	P	I	F	RANGE LOW	RANGE HIGH	MEAN	MEDIAN	RANGE LOW	RANGE HIGH	MEAN	MEDIAN	RANGE LOW	RANGE HIGH	MEAN	MEDIAN						
1004-1	FWD	-5	61	25	124	5	76	19	4	79	17	0	79	21	0.26	1.89	0.83	0.78	0.43	2.43	1.97	2.02	1.00	2.43	2.04	2.08	0	4	60	31	5	35
	AFT	-5	61	25	124	5	74	21	4	78	17	0	80	20	0.22	1.56	0.76	0.70	0.93	2.45	1.92	1.94	1.08	2.43	1.98	2.03	1	4	67	26	3	35
1004-2	FWD	-4	68	10	131	7	76	17	37	50	13	4	83	13	0.29	1.80	0.83	0.78	0.36	2.30	1.84	1.90	0.41	2.37	1.87	1.93	0	4	59	27	9	35
	AFT	-4	68	10	131	7	76	17	37	50	13	4	77	19	0.29	1.91	0.81	0.73	0.36	2.39	1.89	1.99	0.43	2.46	1.89	1.98	0	4	67	20	9	35
1006-1	FWD	58	56	52	140	1	99	0	1	51	48	0	51	49	0.23	1.81	0.71	0.68	0.80	2.31	1.58	1.52	1.31	2.40	2.20	2.24	0	5	72	21	1	60
	AFT	58	56	52	140	1	99	0	0	23	77	0	24	76	0.36	1.66	0.87	0.84	0.96	2.35	1.72	1.72	1.14	2.40	2.24	2.28	0	1	58	40	1	60
1006-2	FWD	32	64	36	147	2	98	0	30	41	29	11	59	30	0.21	1.14	0.53	0.50	0.56	2.28	1.49	1.50	1.30	2.38	2.11	2.16	2	21	72	4	1	60
	AFT	32	64	36	147	2	98	0	35	40	25	21	54	25	0.26	1.34	0.62	0.58	0.65	2.19	1.48	1.47	1.56	2.50	2.12	2.16	0	11	77	9	3	45
1007-1	FWD	12	49	50	103	0	5	95	11	20	79	0	25	75	0.86	1.22	0.52	0.47	0.62	2.20	1.44	1.40	1.22	1.36	2.17	2.21	20	8	67	5	0	60
	AFT	11	49	48	102	0	100	0	10	42	48	6	77	17	0.26	1.76	0.58	0.55	0.78	2.31	1.52	1.52	1.54	2.39	2.20	2.24	1	13	80	5	0	60
1007-2	FWD	32	57	83	112	0	25	75	3	28	69	0	26	74	0.26	1.23	0.51	0.48	0.70	2.32	1.44	1.40	0.90	2.37	2.15	2.20	18	9	71	2	0	60
	AFT	31	57	38	111	0	100	0	19	41	40	3	88	9	0.24	1.56	0.60	0.56	0.44	2.27	1.50	1.52	0.84	2.41	2.17	2.25	1	16	74	9	1	65
1008-1	FWD	50	51	80	102	0	100	0	4	32	64	1	35	64	0.32	1.48	0.66	0.62	0.78	2.24	1.55	1.54	1.46	2.35	2.21	2.24	2	2	86	8	1	65
	AFT	30	51	80	102	0	100	0	4	27	69	0	34	66	0.32	1.57	0.71	0.69	0.81	2.21	1.57	1.58	1.08	2.37	2.21	2.24	1	1	84	13	1	45
1008-2	FWD	29	56	42	105	0	100	0	3	31	66	0	27	73	0.14	1.81	0.76	0.72	0.57	2.10	1.54	1.55	1.09	2.40	2.20	2.25	2	1	73	23	0	45
	AFT	29	56	42	105	0	100	0	3	30	67	0	29	71	0.52	1.64	0.77	0.76	0.73	2.10	1.55	1.55	1.10	2.35	2.18	2.22	1	3	69	27	1	65
1009-1	FWD	12	49	42	132	0	100	0	1	26	73	0	34	66	0.32	1.40	0.65	0.62	0.85	2.41	1.53	1.52	0.83	2.51	2.30	2.36	5	4	77	14	0	65
	AFT	12	49	42	132	0	100	0	0	20	80	0	45	55	0.28	1.42	0.70	0.64	0.92	2.28	1.58	1.55	0.63	2.51	2.32	2.36	1	5	73	20	0	50
1009-2	FWD	23	58	35	138	2	98	0	3	21	76	0	40	60	0.29	1.55	0.69	0.64	0.73	2.37	1.53	1.53	1.06	2.45	2.25	2.30	4	4	74	17	0	50
	AFT	23	58	35	138	2	98	0	4	47	49	0	56	44	0.26	1.47	0.69	0.64	0.44	2.42	1.61	1.60	1.61	2.50	2.31	2.34	1	4	77	18	0	55
1010-1	FWD	18	47	45	83	0	21	79	0	13	87	0	9	91	0.28	1.14	0.52	0.47	0.43	2.32	1.38	1.32	1.11	2.42	2.16	2.20	18	3	75	4	0	55
	AFT	18	47	45	83	0	21	79	0	19	81	0	16	84	0.27	1.25	0.57	0.52	0.78	2.42	1.45	1.41	0.96	2.46	2.20	2.26	9	4	81	6	0	48
1010-2	FWD	15	52	38	76	0	50	50	0	16	84	0	13	87	0.26	1.51	0.55	0.50	0.92	2.36	1.41	1.38	1.00	2.44	2.14	2.20	22	4	67	6	0	48
	AFT	15	52	38	76	0	50	50	0	23	77	0	25	75	0.20	1.48	0.59	0.56	0.30	2.40	1.47	1.45	1.29	2.48	2.18	2.22	13	3	76	8	0	45
1011-1	FWD	2	58	33	66	0	64	36	2	23	75	2	23	75	0.18	0.99	0.50	0.46	0.56	2.36	1.48	1.43	0.78	2.40	2.07	2.16	17	11	70	2	0	45
	AFT	2	58	33	66	0	67	33	3	47	50	0	37	63	0.24	1.48	0.60	0.56	0.50	2.35	1.57	1.55	0.74	2.37	2.11	2.18	3	7	81	8	0	40
1012-1	FWD	0	45	38	71	0	64	36	7	56	37	0	65	35	0.25	1.80	0.59	0.53	0.54	2.39	1.40	1.42	0.90	2.39	1.93	2.00	6	17	68	10	0	40
	AFT	0	45	38	71	0	64	36	0	33	67	0	49	51	0.26	1.40	0.61	0.58	0.47	2.27	1.44	1.40	0.72	2.32	1.89	1.96	5	10	74	11	0	60
1012-2	FWD	0	57	34	106	0	77	23	6	44	50	0	49	51	0.30	1.20	0.58	0.55	0.73	2.32	1.49	1.42	0.67	2.34	1.91	2.00	4	9	80	7	0	60
	AFT	0	57	34	106	0	77	23	3	15	82	0	10	90	0.30	1.27	0.68	0.62	0.48	2.33	1.55	1.58	0.79	2.38	1.96	2.02	4	0	72	23	0	40
1013-1	FWD	0	56	28	83	0	64	36	0	42	58	0	55	45	0.20	1.66	0.56	0.36	0.52	2.29	1.56	1.59	1.21	2.41	2.03	2.10	7	13	76	4	0	40
	AFT	0	56	28	82	0	64	36	2	17	81	0	33	67	0.28	1.56	0.66	0.48	0.64	2.28	1.59	1.63	1.10	2.36	1.97	2.03	5	5	74	16	0	47
1014-1	FWD	0	59	15	71	0	21	79	1	38	61	0	63	37	0.17	0.99	0.40	0.36	0.26	2.36	1.40	1.42	1.01	2.88	1.94	2.05	27	33	39	1	0	47
	AFT	0	59	14	69	0	31	69	0	13	87	0	36	64	0.18	1.26	0.51	0.48	0.28	2.38	1.42	1.49	0.42	2.43	1.91	2.00	19	12	64	5	0	40
1014-2	FWD	0	77	0	36	0	21	79	0	26	74	0	61	39	0.17	1.06	0.36	0.34	0.23	2.32	1.30	1.36	0.42	2.36	1.72	1.80	31	40	27	2	0	40
	AFT	0	76	0	34	0	29	71	0	5	95	0	68	32	0.18	1.49	0.44	0.40	0.27	2.28	1.34	1.45	0.26	2.44	1.71	1.84	19	29	50	2	0	40
1015-1	FWD	5	68	19	68	0	8	92	2	2	96	0	2	98	0.26	1.70	0.54	0.47	0.54	2.28	1.44	1.46	0.46	2.41	1.86	1.90	28	0	65	7	0	40
	AFT	4	66	18	67	0	30	70	0	5	95	0	4	96	0.29	1.20	0.60	0.56	0.46	2.28	1.49	1.50	0.80	2.36	1.86	1.95	14	0	77	8	0	45
1015-2	FWD	0	80	-2	71	0	10	90	0	10	80	0	11	89	0.22	1.10	0.50	0.46	0.34	2.07	1.29	1.30	0.28	2.34	1.69	1.78	28	4	65	3	0	45
	AFT	0	79	-2	71	0	21	79	0	9	91	0	9	91	0.26	1.21	0.59	0.52	0.36	2.22	1.37	1.38	0.38	2.40	1.74	1.80	17	1	70	12	0	40
1016-1	FWD	5	69	13	76	0	7	93	1	41	58	0	59	41	0.13	1.55	0.51	0.45	0.70	2.43	1.67	1.68	0.85	2.44	1.91	1.90	19	17	56	8	1	45
	AFT	4	69	12	76	0	27	73	0	28	74	0	42	58	0.22	1.65	0.64	0.58	0.62	2.34	1.69	1.72	0.98	2.46	1.90	1.92	11	9	62	17	1	45
1016-2	FWD	1	84	-4	76	0	8	92	0	31	69	0	48	52	0.18	1.56	0.48	0.44	0.29	2.35	1.45	1.44	0.34	2.50	1.76	1.82	22	18	56	3	0	40
	AFT	0	84	-4	76	0	19	81	1	27	72	0	40	60	0.20	1.88	0.55	0.49	0.26	2.32	1.52	1.60	0.30	2.49	1.75	1.82	23	5	65	6	1	40
1017-1	FWD	-11	50	21	99	0	0	100	13	63	24	0	82	18	0.20	1.65	0.66	0.61	0.46	2.23	1.74	1.78	0.60	2.32	1.93	2.00	1	8	77	13	1	25
	AFT	-1	57	15	98	0	17	83	24	58	18	4	90	6	0.20	1.62	0.64	0.60	0.60	2.29	1.75	1.75	1.18	2.36	1.88	1.90	1	13	74	11	2	25
1017-2	FWD	1	78	9	139	0	0	100	5	62	33	7	77	16	0.22	1.22	0.58	0.55	0.37	2.30	1.70	1.80	0.86	2.37	1.93	1.94	3	14	74	9	0	30
	AFT	1	79	7	135	0	7	93	18	62	20	0	89	11	0.20	1.54	0.64	0.62	0.30	2.30	1.62	1.68	0.38	2.34	1.85	1.92	2	13	74	10	1	30
1018-1	FWD	6	77	13	134	0	0	100	9	63	28	1	83	16	0.19	1.46	0.56	0.52	0.64	2.22	1.66	1.73	1.00	2.32	1.96	1.99	2	19	71	7	0	35
	AFT	6	78	10	125	0	22	78	9	53	38	5	72	23	0.18	1.36	0.62	0.58	0.68	2.20	1.68	1.80	1.03	2.28	1.95	2.00	1	12	77	9	2	35
1018-2	FWD	8	77	14	134	0	0	100	18	74	8	17	79	4	0.16	1.78	0.57	0.49	0.50	2.24	1.50	1.54	0.90	2.26	1.85	1.91	1	31	56	9	4	45
	AFT	8	77	10	132	0	15	85	1	50	49	0	74	26	0.22	1.50	0.81	0.79	0.94	2.26	1.70	1.74	1.09	2.35	1.98	2.04	0	5	58	35	2	45

REC / JSN
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EXPOSURE - PROCESSING SUMMARY

MISSION NUMBER	CAMERA	SOLAR ELEVATION RANGE (°) LOW	SOLAR ELEVATION RANGE (°) HIGH	SOLAR AZIMUTH RANGE (°) LOW	SOLAR AZIMUTH RANGE (°) HIGH	PREDICTED PROCESSING (%) P	PREDICTED PROCESSING (%) I	PREDICTED PROCESSING (%) F	REPORTED PROCESSING (%) P	REPORTED PROCESSING (%) I	REPORTED PROCESSING (%) F	COMPUTED PROCESSING (%) P	COMPUTED PROCESSING (%) I	COMPUTED PROCESSING (%) F	TERRAIN D-MIN RANGE LOW	TERRAIN D-MIN RANGE HIGH	TERRAIN D-MIN MEAN	TERRAIN D-MIN MEDIAN	TERRAIN D-MAX RANGE LOW	TERRAIN D-MAX RANGE HIGH	TERRAIN D-MAX MEAN	TERRAIN D-MAX MEDIAN	CLOUD D-MAX RANGE LOW	CLOUD D-MAX RANGE HIGH	CLOUD D-MAX MEAN	CLOUD D-MAX MEDIAN	UNDER EXPOSED (%)	UNDER PROCESSED (%)	NOMINAL EXP & PRO (%)	OVER PROCESSED (%)	OVER EXPOSED (%)	CLOUD COVER (%)
1019-1	FWD	24	70	24	152	0	21	79	22	32	46	4	56	40	0.26	1.92	0.71	0.61	0.60	2.15	1.45	1.50	0.84	2.26	1.94	2.00	4	7	64	17	7	45
	AFT	23	70	21	152	0	92	8	26	65	19	3	87	10	0.13	1.70	0.66	0.60	0.39	2.26	1.46	1.45	0.80	2.30	1.96	2.02	1	13	70	14	3	45
1020-1	FWD	30	75	19	156	0	19	81	13	48	39	1	58	41	0.23	1.30	0.55	0.52	0.80	2.28	1.57	1.54	1.40	2.38	2.10	2.16	1	18	78	4	0	42
	AFT	29	75	17	156	0	64	36	15	56	29	0	74	26	0.23	1.20	0.55	0.54	0.70	2.20	1.47	1.46	1.28	2.29	2.04	2.10	0	18	76	5	0	42
1020-2	FWD	47	69	18	35	INSUFFICIENT DATA																										
	AFT	46	68	17	33																											
1021-1	FWD	15	66	-148	-23	0	68	32	14	39	47	1	52	47	0.25	1.90	0.64	0.58	0.74	2.18	1.50	1.50	0.97	2.36	1.92	2.00	5	9	72	11	3	35
	AFT	14	66	-147	-25	0	99	1	15	38	47	0	57	43	0.17	1.70	0.65	0.57	0.54	2.24	1.45	1.42	0.85	2.30	1.90	2.00	5	5	75	12	3	35
1021-2	FWD	13	52	-133	-41	0	29	71	13	41	46	0	57	43	0.18	1.52	0.54	0.50	0.60	2.36	1.36	1.34	1.05	2.23	1.82	1.85	14	13	66	6	0	20
	AFT	13	52	-133	-41	0	100	0	53	25	22	0	50	50	0.33	1.38	0.76	0.76	0.70	2.30	1.52	1.50	1.30	2.36	1.94	1.94	6	0	71	21	1	20
1022-1	FWD	28	67	30	180	0	36	64	8	36	56	0	42	58	0.18	1.49	0.45	0.40	0.54	2.42	1.57	1.60	1.32	2.55	2.24	2.29	30	19	47	3	0	35
	AFT	27	67	26	180	0	89	11	7	42	51	0	53	47	0.24	1.48	0.57	0.50	0.52	2.30	1.63	1.68	1.30	2.47	2.21	2.25	4	15	71	9	1	35
1022-2	FWD	29	74	21	152	0	8	92	1	37	62	0	43	57	0.20	0.99	0.39	0.35	0.62	2.65	1.45	1.45	1.16	2.45	2.23	2.28	35	28	35	1	0	45
	AFT	28	74	19	152	0	100	0	10	44	46	0	53	47	0.21	1.40	0.48	0.44	0.50	2.32	1.51	1.52	1.45	2.49	2.25	2.28	10	25	61	4	0	45
1023-1	FWD	22	82	6	164	0	5	95	19	54	27	0	72	28	0.15	1.26	0.39	0.35	0.43	2.41	1.22	1.22	0.87	2.41	2.06	2.11	20	44	34	2	0	35
	AFT	20	81	5	163	0	11	89	0	39	61	0	42	58	0.20	1.40	0.53	0.48	0.41	2.21	1.31	1.37	0.94	2.45	2.15	2.20	13	14	65	7	0	35
1023-2	FWD	29	81	-13	177	0	7	93	0	19	81	0	18	82	0.22	1.38	0.48	0.42	0.41	2.03	1.18	1.22	0.90	2.41	2.03	2.11	35	2	60	2	1	35
	AFT	28	80	-13	178	0	3	97	0	34	66	0	28	72	0.22	1.60	0.52	0.48	0.44	2.31	1.24	1.24	1.08	2.46	2.10	2.17	13	10	73	4	0	35
1024-1	FWD	10	61	24	137	0	0	100	0	57	43	0	72	28	0.17	1.74	0.35	0.32	0.40	2.25	1.22	1.15	0.58	2.34	1.97	2.03	27	49	23	0	0	35
	AFT	9	61	21	136	0	0	100	0	28	72	0	82	18	0.20	1.22	0.40	0.37	0.48	2.32	1.30	1.24	0.94	2.40	1.97	2.06	13	46	39	2	0	35
1024-2	FWD	9	79	11	151	0	0	100	12	19	69	0	25	75	0.24	1.17	0.46	0.42	0.35	2.40	1.30	1.27	1.01	2.45	1.91	1.99	36	3	58	2	0	35
	AFT	8	79	9	151	0	0	100	1	22	77	0	66	34	0.20	1.39	0.47	0.40	0.29	2.26	1.31	1.32	0.90	2.40	1.89	1.95	20	25	50	5	0	35
1025-1	FWD	1	70	-123	-18	0	68	32	10	41	49	0	56	44	0.18	1.42	0.43	0.37	0.29	2.36	1.37	1.39	0.42	2.35	1.81	1.92	33	25	38	4	1	35
	AFT	0	70	-121	-19	0	72	28	8	49	43	0	61	39	0.18	1.69	0.49	0.42	0.26	2.26	1.33	1.38	0.23	2.32	1.75	1.90	25	20	47	7	1	35
1025-2	FWD	0	56	-124	-31	0	71	29	3	42	55	0	56	44	0.18	1.22	0.45	0.39	0.26	2.24	1.32	1.33	0.63	2.29	1.78	1.89	29	21	45	4	0	22
	AFT	0	56	-122	-33	0	73	27	3	45	52	0	51	49	0.21	1.32	0.53	0.48	0.39	2.16	1.31	1.35	0.48	2.23	1.71	1.79	19	12	61	8	0	22
1026-1	FWD	0	57	23	135	0	4	96	0	21	79	0	24	76	0.20	1.26	0.38	0.33	0.31	2.27	1.22	1.22	0.40	2.28	1.77	1.87	57	13	28	2	0	45
	AFT	0	57	21	135	0	5	95	0	4	96	0	38	62	0.20	1.16	0.39	0.34	0.24	2.36	1.29	1.30	0.37	2.40	1.78	1.86	39	27	33	1	0	45
1026-2	FWD	1	72	6	84	0	0	100	1	5	94	0	5	95	0.19	1.32	0.36	0.30	0.23	2.17	1.05	1.02	0.48	2.24	1.63	1.70	78	2	19	1	0	50
	AFT	0	57	13	78	0	0	100	2	5	93	0	15	85	0.21	1.35	0.39	0.32	0.27	2.20	1.08	1.03	0.30	2.26	1.61	1.70	60	12	25	3	0	50
1027-1	FWD	3	63	26	110	0	0	100	0	0	100	0	3	97	0.26	1.54	0.52	0.46	0.50	2.38	1.45	1.52	0.71	2.39	2.03	2.10	36	2	58	4	0	50
	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	50
1028-1	FWD	3	73	15	135	0	4	96	0	4	96	0	11	89	0.22	1.08	0.37	0.32	0.40	2.32	1.42	1.42	0.62	2.30	1.77	1.83	65	6	28	1	0	30
	AFT	1	73	14	133	0	5	95	0	16	84	0	11	89	0.20	1.01	0.41	0.36	0.30	2.23	1.35	1.40	0.68	2.26	1.72	1.77	56	5	37	1	0	30
1028-2	FWD	2	81	5	48	0	3	97	1	9	90	0	15	85	0.23	0.98	0.40	0.35	0.37	2.20	1.36	1.38	0.30	2.33	1.72	1.77	59	3	37	1	0	30
	AFT	1	80	5	43	0	10	90	0	6	94	0	6	94	0.22	1.40	0.50	0.40	0.28	2.21	1.40	1.43	0.30	2.35	1.69	1.75	47	1	44	7	1	30
1029-1	FWD	3	63	18	130	0	8	92	1	16	83	0	14	86	0.25	1.80	0.64	0.54	0.50	2.30	1.72	1.76	0.48	2.39	2.03	2.08	20	0	62	14	3	35
	AFT	2	62	16	128	0	20	80	0	21	79	0	25	75	0.16	1.73	0.57	0.48	0.20	2.32	1.62	1.65	0.36	2.40	1.91	1.95	24	5	59	10	1	35
1029-2	FWD	0	80	4	146	0	4	96	2	28	70	0	20	80	0.22	1.68	0.54	0.45	0.31	2.35	1.52	1.59	0.45	2.40	1.88	2.00	33	5	50	11	2	25
	AFT	0	80	3	145	0	10	90	2	24	74	0	25	75	0.20	1.58	0.56	0.49	0.30	2.34	1.52	1.60	0.34	2.40	1.87	1.93	23	5	59	11	2	25
1030-1	FWD	5	63	27	130	0	58	42	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	5	40
	AFT	4	63	22	129	0	53	47	0	46	54	0	71	29	0.25	1.64	0.76	0.69	0.66	2.30	1.69	1.74	1.00	2.40	1.97	2.05	1	9	64	22	4	48
1030-2	FWD	3	78	10	158	1	42	57	0	53	47	0	70	30	0.24	1.65	0.64	0.57	0.76	2.26	1.69	1.70	1.17	2.36	1.99	2.05	5	9	71	13	2	30
	AFT	2	78	7	157	1	23	76	0	28	72	0	30	70	0.34	1.94	0.82	0.77	0.83	2.40	1.79	1.82	0.63	2.43	2.06	2.10	2	0	66	30	2	30
1031-1	FWD	17	70	20	140	0	99	1	18	34	48	0	51	49	0.25	1.67	0.71	0.63	0.72	2.33	1.74	1.80	1.36	2.44	2.10	2.18	2	8	70	17	3	45
	AFT	17	70	18	140	0	14	86	15	43	42	0	47	53	0.24	1.66	0.71	0.62	0.53	2.35	1.65	1.70	1.15	2.35	2.00	2.05	4	4	70	18	4	45
1031-2	FWD	19	82	6	67	0	99	1	8	53	39	0	60	40	0.26	1.88	0.80	0.72	0.46	2.34	1.73	1.82	1.40	2.57	2.05	2.09	0	5	64	22	9	40
	AFT	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1033-1	FWD	10	47	46	135	0	89	11	0	3	97	0	2	98	0.28	1.10	0.54	0.50	0.70	2.28	1.35	1.30	1.26	2.42	2.15	2.20	11	1	85	3	0	45
	AFT	11	47	45	135	0	10	90	3	8	89	0	3	97	0.30	1.20	0.53	0.50	0.64	2.32	1.40	1.40	0.84	2.44	2.13	2.20	8	1	90	1	0	45
1033-2	FWD	0	54	34	131	0	84	16	1	4	95	0	0	100	0.30	1.52	0.53	0.49	0.49	2.30	1.30	1.26	0.54	2.41	2.15	2.21	16	0	79	5	0	50
	AFT	0	54	34	131	0	86	14	0	5	95	0	1	99	0.26	1.38	0.54	0.50	0.50	2.32	1.25	1.20	0.38	2.44	2.15	2.24	12	0	84	4	0	50

TABLE 19-3

REC/JOM
12/65

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 RANGE				UNDER EXPOSED (%)	UNDER PROCESSED (%)	NOMINAL EXP. & PRO. (%)	OVER PROCESSED (%)	OVER EXPOSED (%)	CLOUD COVER (%)
		LOW	HIGH	LOW	HIGH	P	I	F	P	I	F	P	I	F	LOW	HIGH	MEAN	MEDIAN	LOW	HIGH	MEAN	MEDIAN	LOW	HIGH	MEAN	MEDIAN						
1034-1	FWD	23	77	16	168	0	96	4	3	21	76	0	20	80	0.25	1.80	0.57	0.50	0.55	2.42	1.58	1.61	0.88	2.45	2.22	2.26	18	3	70	7	2	35
	AFT	23	77	10	165	0	55	45	2	31	67	0	16	84	0.29	1.63	0.56	0.50	0.41	2.35	1.55	1.60	0.97	2.44	2.19	2.25	18	4	71	7	0	35
1034-2	FWD	29	86	0	178	0	88	12	9	26	65	0	27	73	0.19	1.82	0.57	0.52	0.72	2.40	1.63	1.60	1.21	2.47	2.25	2.31	12	4	76	8	0	45
	AFT	30	86	0	178	0	41	59	5	37	57	0	34	66	0.26	1.60	0.54	0.49	0.70	2.32	1.59	1.62	1.08	2.48	2.22	2.29	12	10	73	4	2	45
1035-1	FWD	13	68	19	144	0	17	83	0	11	89	0	5	95	0.28	1.90	0.52	0.45	0.61	2.44	1.40	1.40	1.06	2.43	2.15	2.22	23	1	71	4		30
	AFT	13	68	18	144	0	5	95	1	14	85	0	9	91	0.24	1.39	0.50	0.43	0.60	2.42	1.48	1.53	0.90	2.55	2.15	2.24	27	3	66	5	0	30
1035-2	FWD	4	81	10	158	0	22	78	4	18	78	0	18	82	0.21	1.50	0.52	0.47	0.43	2.33	1.32	1.30	0.96	2.50	2.09	2.18	24	6	66	4	0	30
	AFT	3	81	8	158	0	23	77	1	20	79	0	12	88	0.21	1.39	0.55	0.51	0.50	2.25	1.34	1.30	0.74	2.60	2.09	2.16	14	3	76	7	0	40
1036-1	FWD	13	82	7	170	0	66	34	8	14	78	1	14	85	0.20	1.91	0.49	0.42	0.80	2.40	1.54	1.53	1.10	2.47	2.26	2.33	33	5	59	2	1	40
	AFT	15	83	5	171	0	5	95	3	9	88	0	10	90	0.24	1.65	0.55	0.51	0.55	2.25	1.49	1.52	1.20	2.43	2.23	2.29	12	2	80	5	0	40
1036-2	FWD	10	78	12	167	0	15	85	1	19	80	0	18	82	0.26	1.43	0.47	0.42	0.50	2.20	1.30	1.36	1.18	2.60	2.12	2.16	38	6	53	3	0	40
	AFT	12	78	9	168	0	4	96	3	20	77	0	17	83	0.28	1.14	0.48	0.44	0.48	2.10	1.37	1.40	1.54	2.40	2.15	2.20	28	4	64	4	0	35
1037-1	FWD	9	84	-172	-6	0	29	71	8	10	82	0	11	89	0.31	1.47	0.64	0.58	0.61	2.38	1.54	1.53	1.05	2.46	2.07	2.14	4	1	83	12	0	35
	AFT	9	84	-171	-6	0	25	75	6	19	81	0	12	88	0.29	1.45	0.66	0.61	0.84	2.33	1.48	1.44	1.15	2.45	2.02	2.10	3	2	79	16	0	35
1037-2	FWD	8	87	-173	-3	0	25	75	14	26	60	0	12	88	0.26	1.20	0.66	0.61	0.82	2.43	1.51	1.46	0.90	2.50	2.04	2.12	4	0	84	13	0	30
	AFT	8	87	-173	-3	0	24	76	11	33	56	0	23	77	0.25	1.80	0.67	0.64	0.55	2.33	1.51	1.45	1.10	2.43	2.03	2.10	4	5	77	14	0	30
1038-1	FWD	5	68	18	131	0	22	78	2	16	82	1	15	84	0.16	1.11	0.51	0.46	0.84	2.36	1.56	1.52	1.18	2.46	2.11	2.19	29	3	65	3	0	35
	AFT	5	68	18	130	0	22	78	1	13	86	0	14	86	0.25	1.37	0.53	0.47	0.52	2.31	1.53	1.52	1.13	2.43	2.05	2.16	33	3	57	6	0	35
1038-2	FWD	7	80	1	164	1	37	62	0	15	85	0	13	88	0.21	1.40	0.58	0.51	0.55	2.42	1.57	1.54	1.00	2.50	1.99	2.06	23	1	65	10	0	35
	AFT	7	80	1	164	3	29	68	0	27	73	0	26	74	0.19	1.78	0.61	0.49	0.47	2.38	1.56	1.57	0.35	2.48	1.96	2.01	14	12	56	17	1	40
1039-1	FWD	7	65	27	140	0	62	38	8	22	70	1	24	75	0.24	1.53	0.65	0.58	0.79	2.39	1.78	1.80	1.11	2.68	2.14	2.18	3	4	79	14	0	40
	AFT	7	65	25	140	0	60	40	6	30	64	0	31	69	0.27	1.55	0.67	0.62	0.77	2.39	1.75	1.79	1.11	2.47	2.13	2.18	4	3	77	15	1	40
1039-2	FWD	8	75	10	144	4	61	35	19	38	43	3	41	56	0.30	1.58	0.65	0.59	1.06	2.36	1.69	1.66	0.84	2.50	2.04	2.12	2	5	81	12	0	40
	AFT	8	75	10	144	2	47	51	20	45	35	7	57	36	0.27	1.60	0.67	0.65	0.83	2.30	1.61	1.60	0.77	2.51	2.02	2.09	1	4	81	12	2	35
1040-1	FWD	11	73	-149	-15	0	79	21	10	31	59	2	35	63	0.25	1.71	0.71	0.68	0.94	2.38	1.71	1.74	1.18	2.40	2.04	2.10	0	3	79	17	0	85
	AFT	11	73	-149	-15	0	67	33	14	42	44	2	53	45	0.26	1.62	0.66	0.60	0.35	2.38	1.85	1.64	0.96	2.41	2.04	2.15	1	6	79	13	1	25
1040-2	FWD	12	68	-149	-21	0	66	34	7	30	63	3	29	68	0.24	1.67	0.77	0.72	0.77	2.58	1.61	1.61	1.08	2.45	2.01	2.06	1	1	72	25	1	30
	AFT	11	68	-149	-24	1	58	41	3	35	62	0	32	68	0.11	1.43	0.68	0.63	0.90	2.43	1.72	1.74	1.07	2.45	2.08	2.12	3	2	78	16	0	30
1041-1	FWD	10	66	30	129	0	100	0	7	40	53	0	46	54	0.14	2.14	0.56	0.51	0.67	2.33	1.62	1.58	0.17	2.46	2.19	2.26	6	10	79	4	1	45
	AFT	9	69	24	129	0	99	1	9	43	48	0	47	53	0.22	1.62	0.62	0.57	0.92	2.33	1.62	1.58	0.15	2.43	2.15	2.23	1	5	86	8	1	45
1041-2	FWD	28	78	14	126	1	99	0	7	26	67	0	23	77	0.31	1.51	0.66	0.62	0.73	2.38	1.54	1.51	1.40	2.46	2.15	2.19	4	2	80	13	1	45
	AFT	28	80	11	130	1	99	0	6	30	64	0	30	70	0.17	1.42	0.60	0.57	0.62	2.37	1.55	1.54	1.05	2.47	2.19	2.25	9	3	83	5	0	45

SECTION A

APPENDIX

MISSION * 1041-1 * INSTRUMENT * FWD 6/27/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.01	0	0	0	0	0	0	0	0	0	0	0	0
0.02	0	0	0	0	0	0	0	0	0	0	0	0
0.03	0	0	0	0	0	0	0	0	0	0	0	0
0.04	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0
0.06	0	0	0	0	0	0	0	0	0	0	0	0
0.07	0	0	0	0	0	0	0	0	0	0	0	0
0.08	0	0	0	0	0	0	0	0	0	0	0	0
0.09	0	0	0	0	0	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0	0	0	0	0	0
0.11	0	0	0	0	0	0	0	0	0	0	0	0
0.12	0	0	0	0	0	0	0	0	0	0	0	0
0.13	0	0	0	0	0	0	0	0	0	0	0	0
0.14	0	0	0	0	0	0	1	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	1	0	0	0	0	0	1
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	2	0	0	0	0	1	2	0	1
0.23	0	0	0	1	0	0	0	0	0	1	0	0
0.24	0	0	0	1	0	0	1	0	0	2	0	0
0.25	0	0	0	1	0	0	0	0	0	1	0	0
0.26	0	0	0	0	0	0	0	0	0	0	0	0
0.27	0	0	0	0	0	0	0	0	0	0	0	0
0.28	0	0	0	0	0	0	0	0	0	0	0	0
0.29	0	0	0	0	0	0	1	0	0	1	0	0
0.30	0	0	0	1	0	0	1	0	0	2	0	0
0.31	0	0	0	1	0	0	1	0	0	1	0	0
0.32	0	0	0	2	0	0	1	0	0	3	0	0
0.33	0	0	0	0	0	0	1	0	0	1	0	0
0.34	0	0	0	0	0	0	0	0	0	0	0	0
0.35	0	0	0	2	0	0	1	0	0	3	0	0
0.36	0	0	0	5	0	0	1	0	0	6	0	0
0.37	0	0	0	1	0	0	0	0	0	1	0	0
0.38	0	0	0	5	0	0	2	0	0	7	0	0
0.39	0	0	0	2	0	0	4	0	0	6	0	0
0.40	0	0	0	2	0	0	5	0	0	7	0	0
0.41	0	0	0	2	0	0	2	0	0	4	0	0
0.42	0	0	0	5	0	0	1	0	0	6	0	0
0.43	0	0	0	1	0	0	5	0	0	6	0	0
0.44	0	0	0	5	0	0	5	0	0	10	0	0
0.45	0	0	0	4	0	0	5	0	0	9	0	0
0.46	0	0	0	0	0	0	4	0	0	4	0	0
0.47	0	0	0	0	0	0	8	0	0	8	0	0
0.48	0	0	0	2	0	0	5	0	0	7	0	0
0.49	0	0	0	0	0	0	8	0	0	8	0	0
0.50	0	0	0	2	0	0	7	0	0	9	0	0
SUBTOTAL	0	0	0	47	0	1	68	0	1	115	0	2

TABLE A-1

MISSION * 1041-1 * INSTRUMENT * FWD 6/27/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.51	0	0	0	4	0	0	3	0	0	7	0	0
0.52	0	0	0	3	0	0	2	0	0	5	0	0
0.53	0	0	0	1	0	0	7	0	0	8	0	0
0.54	0	0	0	4	0	0	5	0	0	9	0	0
0.55	0	0	0	0	0	0	5	0	0	5	0	0
0.56	0	0	0	3	0	0	2	0	0	5	0	0
0.57	0	0	0	3	0	0	3	0	0	6	0	0
0.58	0	0	0	0	0	0	1	0	0	1	0	0
0.59	0	0	0	1	0	0	3	0	0	4	0	0
0.60	0	0	0	0	0	0	1	0	0	1	0	0
0.61	0	0	0	0	0	0	4	0	0	4	0	0
0.62	0	0	0	2	1	0	3	0	0	5	1	0
0.63	0	0	0	2	0	0	1	0	0	3	0	0
0.64	0	0	0	2	0	0	1	0	0	3	0	0
0.65	0	0	0	2	0	0	1	0	0	3	0	0
0.66	0	0	0	3	0	0	0	0	0	3	0	0
0.67	0	0	0	1	0	0	2	0	0	3	0	0
0.68	0	0	0	1	0	0	1	0	0	2	0	0
0.69	0	0	0	2	0	0	1	0	0	3	0	0
0.70	0	0	0	2	0	0	2	0	0	4	0	0
0.71	0	0	0	2	0	0	1	0	0	3	0	0
0.72	0	0	0	1	0	0	1	0	0	2	0	0
0.73	0	0	0	2	0	0	1	0	0	3	0	0
0.74	0	0	0	1	0	0	1	0	0	2	0	0
0.75	0	0	0	2	0	0	1	0	0	3	0	0
0.76	0	0	0	0	0	0	1	0	0	1	0	0
0.77	0	0	0	2	0	0	1	0	0	3	0	0
0.78	0	0	0	1	0	0	0	0	0	1	0	0
0.79	0	0	0	1	0	0	1	0	0	2	0	0
0.80	0	0	0	0	0	0	1	0	0	1	0	0
0.81	0	0	0	1	0	0	0	0	0	1	0	0
0.82	0	0	0	1	0	0	0	0	0	1	0	0
0.83	0	0	0	0	0	0	0	0	0	0	0	0
0.84	0	0	0	1	0	0	0	0	0	1	0	0
0.85	0	0	0	0	0	0	0	0	0	0	0	0
0.86	0	0	0	0	0	0	0	0	0	0	0	0
0.87	0	0	0	0	0	0	0	0	0	0	0	0
0.88	0	0	0	0	0	0	0	0	0	0	0	0
0.89	0	0	0	0	0	0	0	0	0	0	0	0
0.90	0	0	0	0	0	0	0	0	0	0	0	0
0.91	0	0	0	0	0	0	0	0	0	0	0	0
0.92	0	0	0	0	0	0	0	0	0	0	0	0
0.93	0	0	0	0	0	0	1	0	0	1	0	0
0.94	0	0	0	0	0	0	0	0	0	0	0	0
0.95	0	0	0	1	0	0	1	0	0	2	0	0
0.96	0	0	0	0	0	0	0	0	0	0	0	0
0.97	0	0	0	1	0	0	0	0	0	1	0	0
0.98	0	0	0	0	0	0	0	0	0	0	0	0
0.99	0	0	0	0	0	0	0	0	0	0	0	0
1.00	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	52	2	1	58	1	0	110	3	1

TABLE A-1

~~TOP SECRET~~ C[redacted]

MISSION * 1041-1 * INSTRUMENT * FWD 6/27/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.01	0	0	0	0	0	0	0	0	0	0	0	0
1.02	0	0	0	0	1	0	0	0	0	0	1	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	1	0	0	0	0
1.06	0	0	0	0	0	0	0	1	0	0	1	0
1.07	0	0	0	0	0	0	0	2	0	0	1	0
1.08	0	0	0	0	0	0	0	2	0	0	2	0
1.09	0	0	0	1	0	0	0	2	0	1	2	0
1.10	0	0	0	0	1	0	0	1	0	0	2	0
1.11	0	0	0	1	1	0	0	0	0	1	1	0
1.12	0	0	0	0	0	0	0	0	0	0	1	0
1.13	0	0	0	0	0	0	0	0	0	0	0	0
1.14	0	0	0	1	0	0	0	0	0	1	0	0
1.15	0	0	0	0	0	0	0	0	0	0	0	0
1.16	0	0	0	0	1	0	0	0	0	0	1	0
1.17	0	0	0	0	1	0	0	0	0	0	1	0
1.18	0	0	0	1	2	0	0	0	0	1	2	0
1.19	0	0	0	0	0	0	0	0	0	0	0	0
1.20	0	0	0	1	0	0	0	0	0	1	0	0
1.21	0	0	0	0	1	0	0	0	0	0	1	0
1.22	0	0	0	1	0	0	0	0	0	1	0	0
1.23	0	0	0	0	1	0	0	0	0	0	1	0
1.24	0	0	0	0	0	0	0	0	0	0	0	0
1.25	0	0	0	0	1	1	0	1	0	0	2	1
1.26	0	0	0	0	1	1	0	1	0	0	2	1
1.27	0	0	0	1	0	0	0	0	0	1	0	0
1.28	0	0	0	0	1	1	0	1	2	0	1	3
1.29	0	0	0	0	0	0	0	0	0	0	0	0
1.30	0	0	0	0	1	1	0	1	1	0	2	2
1.31	0	0	0	0	0	0	0	0	0	0	0	0
1.32	0	0	0	0	1	0	0	1	1	0	1	2
1.33	0	0	0	0	0	0	0	0	0	0	0	0
1.34	0	0	0	0	2	0	0	1	1	0	2	3
1.35	0	0	0	0	0	0	0	0	0	0	0	0
1.36	0	0	0	0	0	0	0	3	1	0	3	1
1.37	0	0	0	0	0	0	0	0	0	0	0	0
1.38	0	0	0	0	1	0	0	1	0	0	1	0
1.39	0	0	0	0	0	0	0	0	0	0	0	0
1.40	0	0	0	0	1	0	0	5	1	0	6	1
1.41	0	0	0	0	2	0	0	2	0	0	2	0
1.42	0	0	0	0	2	0	0	4	0	0	4	0
1.43	0	0	0	0	1	0	0	2	0	0	3	0
1.44	0	0	0	0	3	0	0	1	0	0	4	0
1.45	0	0	0	0	0	0	0	0	0	0	0	0
1.46	0	0	0	0	1	0	0	2	0	0	3	0
1.47	0	0	0	0	1	0	0	2	0	0	3	0
1.48	0	0	0	0	1	0	0	4	0	0	4	0
1.49	0	0	0	0	1	0	0	3	1	0	4	1
1.50	0	0	0	1	0	0	0	1	0	1	1	0
SUBTOTAL	0	0	0	7	31	2	0	53	1	7	84	3

~~TOP SECRET~~ C[redacted]

TABLE A-1

MISSION * 1041-1 * INSTRUMENT * FWD 6/27/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.51	0	0	0	0	1	0	0	4	0	0	5	0
1.52	0	0	0	0	2	0	0	1	0	0	3	0
1.53	0	0	0	0	2	0	0	1	0	0	3	0
1.54	0	0	0	0	4	0	0	0	0	0	2	0
1.55	0	0	0	0	1	0	0	6	0	0	10	1
1.56	0	0	0	0	1	0	0	1	0	0	2	0
1.57	0	0	0	0	1	0	0	3	0	0	3	0
1.58	0	0	0	0	1	0	0	1	0	0	2	0
1.59	0	0	0	0	4	0	0	4	0	0	8	0
1.60	0	0	0	0	0	0	0	3	0	0	3	0
1.61	0	0	0	0	0	0	0	1	0	0	1	0
1.62	0	0	0	0	1	0	0	3	0	0	3	0
1.63	0	0	0	0	3	0	0	1	0	0	2	0
1.64	0	0	0	0	3	0	0	2	0	0	5	0
1.65	0	0	0	0	1	0	0	1	0	0	4	0
1.66	0	0	0	0	1	0	0	2	0	0	3	0
1.67	0	0	0	0	1	0	0	2	0	0	3	0
1.68	0	0	0	0	1	0	0	1	0	0	2	0
1.69	0	0	0	0	1	0	0	2	0	0	3	0
1.70	0	0	0	0	2	0	0	0	0	0	2	0
1.71	0	0	0	0	2	0	0	1	0	0	3	0
1.72	0	0	0	0	1	0	0	0	0	0	1	0
1.73	0	0	0	0	3	0	0	0	0	0	3	0
1.74	0	0	0	0	2	0	0	0	0	0	2	0
1.75	0	0	0	0	0	0	0	1	0	0	1	0
1.76	0	0	0	0	1	0	0	1	0	0	2	0
1.77	0	0	0	0	1	0	0	2	0	0	3	0
1.78	0	0	0	0	1	0	0	0	0	0	1	0
1.79	0	0	0	0	1	0	0	0	0	0	1	0
1.80	0	0	0	0	1	0	0	0	1	0	2	1
1.81	0	0	0	0	1	0	0	2	0	0	2	0
1.82	0	0	0	0	2	0	0	1	0	0	3	0
1.83	0	0	0	0	1	0	0	1	0	0	3	0
1.84	0	0	0	0	1	0	0	0	0	0	1	0
1.85	0	0	0	0	1	0	0	0	0	0	2	0
1.86	0	0	0	0	1	0	0	0	0	0	1	0
1.87	0	0	0	0	2	0	0	0	0	0	1	0
1.88	0	0	0	0	1	0	0	1	0	0	3	0
1.89	0	0	0	0	2	0	0	0	0	0	1	0
1.90	0	0	0	0	2	0	0	2	0	0	4	0
1.91	0	0	0	0	0	0	0	0	1	0	2	1
1.92	0	0	0	0	0	0	0	0	0	0	0	0
1.93	0	0	0	0	0	0	0	0	1	0	0	1
1.94	0	0	0	0	0	0	0	0	0	0	1	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	0	0	0	0
1.97	0	0	0	0	0	0	0	0	0	0	1	0
1.98	0	0	0	0	1	0	0	0	0	0	1	0
1.99	0	0	0	0	0	0	0	0	0	0	0	0
2.00	0	0	0	0	2	2	0	1	0	0	3	2
SUBTOTAL	0	0	0	0	58	30	0	57	2	0	115	32

TABLE A-1

MISSION * 1041-1 * INSTRUMENT * FWD 6/27/67 DENSITY FREQ. DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.01	0	0	0	0	0	0	0	0	0	0	0	0
2.02	0	0	0	0	0	0	0	0	0	0	0	0
2.03	0	0	0	0	0	1	0	0	0	0	0	1
2.04	0	0	0	0	0	1	0	0	1	0	0	1
2.05	0	0	0	0	0	1	0	0	1	0	0	2
2.06	0	0	0	0	0	1	0	0	1	0	0	2
2.07	0	0	0	0	0	1	0	0	2	0	0	3
2.08	0	0	0	0	0	1	0	0	2	0	0	3
2.09	0	0	0	0	0	1	0	0	2	0	0	4
2.10	0	0	0	0	0	1	0	0	1	0	0	2
2.11	0	0	0	0	0	3	0	0	2	0	0	5
2.12	0	0	0	0	0	1	0	0	2	0	0	3
2.13	0	0	0	0	1	1	0	0	1	0	1	2
2.14	0	0	0	1	0	5	0	0	0	1	0	5
2.15	0	0	0	0	1	3	0	0	1	0	1	4
2.16	0	0	0	0	1	3	0	0	1	0	1	4
2.17	0	0	0	0	0	3	0	0	1	0	0	3
2.18	0	0	0	0	1	4	0	0	2	0	1	6
2.19	0	0	0	0	0	5	0	0	2	0	0	7
2.20	0	0	0	0	0	5	0	0	2	0	0	7
2.21	0	0	0	0	1	4	0	0	2	0	1	6
2.22	0	0	0	0	1	4	0	0	2	0	1	6
2.23	0	0	0	0	1	4	0	0	2	0	1	6
2.24	0	0	0	0	1	5	0	0	2	0	1	7
2.25	0	0	0	0	3	4	0	0	2	0	3	6
2.26	0	0	0	0	3	4	0	0	2	0	3	6
2.27	0	0	0	0	0	2	0	0	2	0	0	4
2.28	0	0	0	0	1	4	0	0	3	0	1	7
2.29	0	0	0	0	0	4	0	0	5	0	0	9
2.30	0	0	0	0	1	1	0	0	2	0	1	3
2.31	0	0	0	0	1	4	0	0	9	0	1	13
2.32	0	0	0	0	0	3	0	0	4	0	0	7
2.33	0	0	0	0	0	2	0	0	3	0	0	5
2.34	0	0	0	0	0	1	0	0	8	0	0	9
2.35	0	0	0	0	0	0	0	0	10	0	0	10
2.36	0	0	0	0	0	2	0	0	8	0	0	10
2.37	0	0	0	0	0	1	0	0	4	0	0	5
2.38	0	0	0	0	0	0	0	0	12	0	0	12
2.39	0	0	0	0	0	2	0	0	10	0	0	12
2.40	0	0	0	0	0	0	0	0	7	0	0	7
2.41	0	0	0	0	0	0	0	0	4	0	0	4
2.42	0	0	0	0	0	0	0	0	1	0	0	1
2.43	0	0	0	0	0	0	0	0	2	0	0	2
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	0	1
2.46	0	0	0	0	0	0	0	0	1	0	0	1
2.47	0	0	0	0	0	0	0	0	0	0	0	0
2.48	0	0	0	0	0	0	0	0	0	0	0	0
2.49	0	0	0	0	0	0	0	0	0	0	0	0
2.50	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	1	16	83	0	15	129	1	31	212

TABLE A-1

~~TOP SECRET~~ C[redacted]

MISSION * 1041-1 * INSTRUMENT * FWD 6/27/67 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	107	107	117	126	126	133	233	233	250

MISSION 1041-1 INSTR - FWD 6/27/67 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	54 PC	54 PC
INTERMEDIATE	107	0 PC	22 PC	68 PC	7 PC	2 PC
FULL	126	10 PC	0 PC	88 PC	2 PC	0 PC
ALL LEVELS	233	6 PC	10 PC	79 PC	4 PC	1 PC

PROCESS LEVEL	BASE & FOG	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP&PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	0.01-0.09	0.01-0.13	0.14-0.39	0.40-0.90	---------	0.91 AND 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

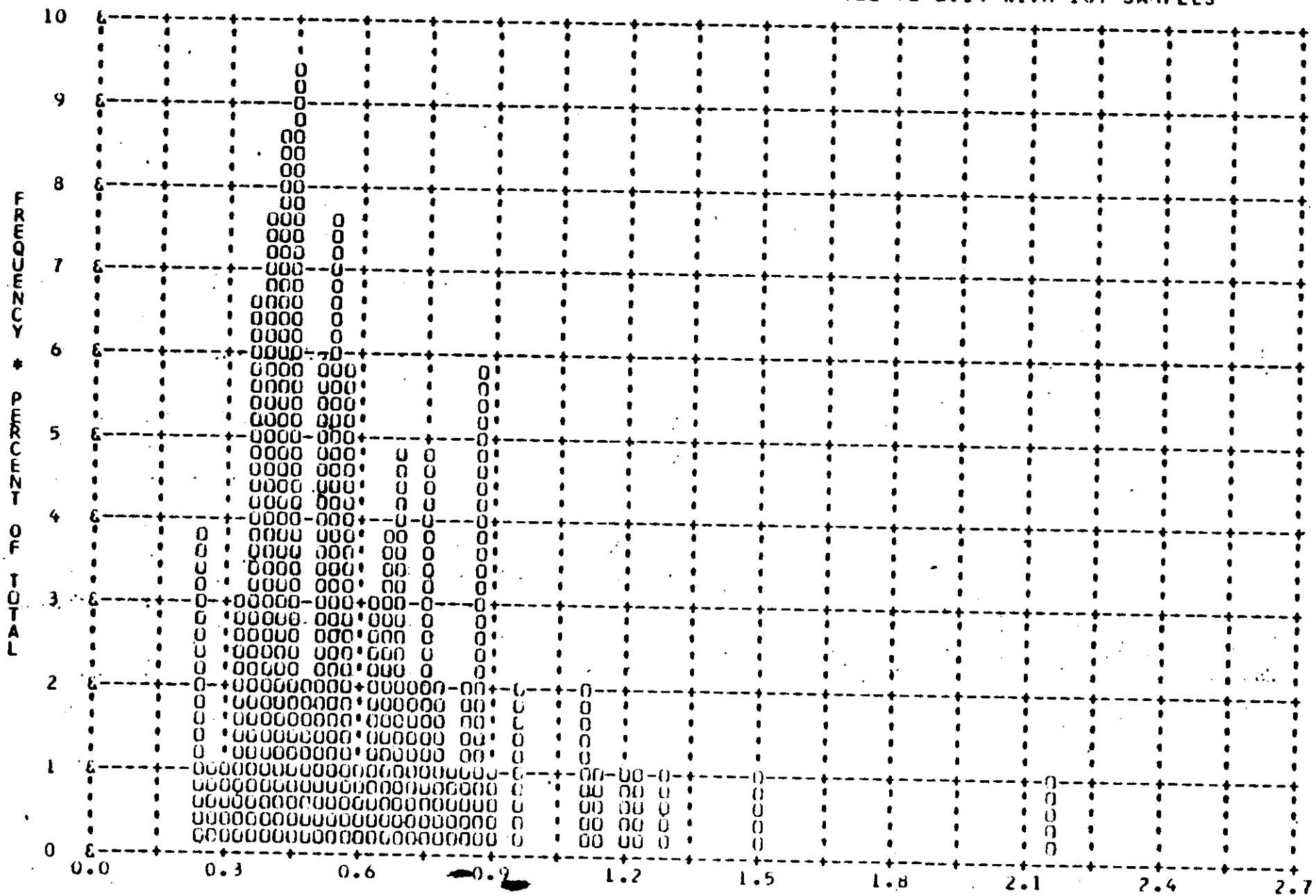
~~TOP SECRET~~ C[redacted]

TABLE A-1

~~TOP SECRET~~ C/[redacted]

MISSION * 1041-1 * INSTR * FWD * 6/27/67 PLOT OF D MIN * TERRAIN * PROCESSING * INTERMEDIATE

AIRTH MEAN * 0.60 * MEDIAN * 0.52 * STD DEV * 0.29 * RANGE * 0.22 TO 2.14 WITH 107 SAMPLES

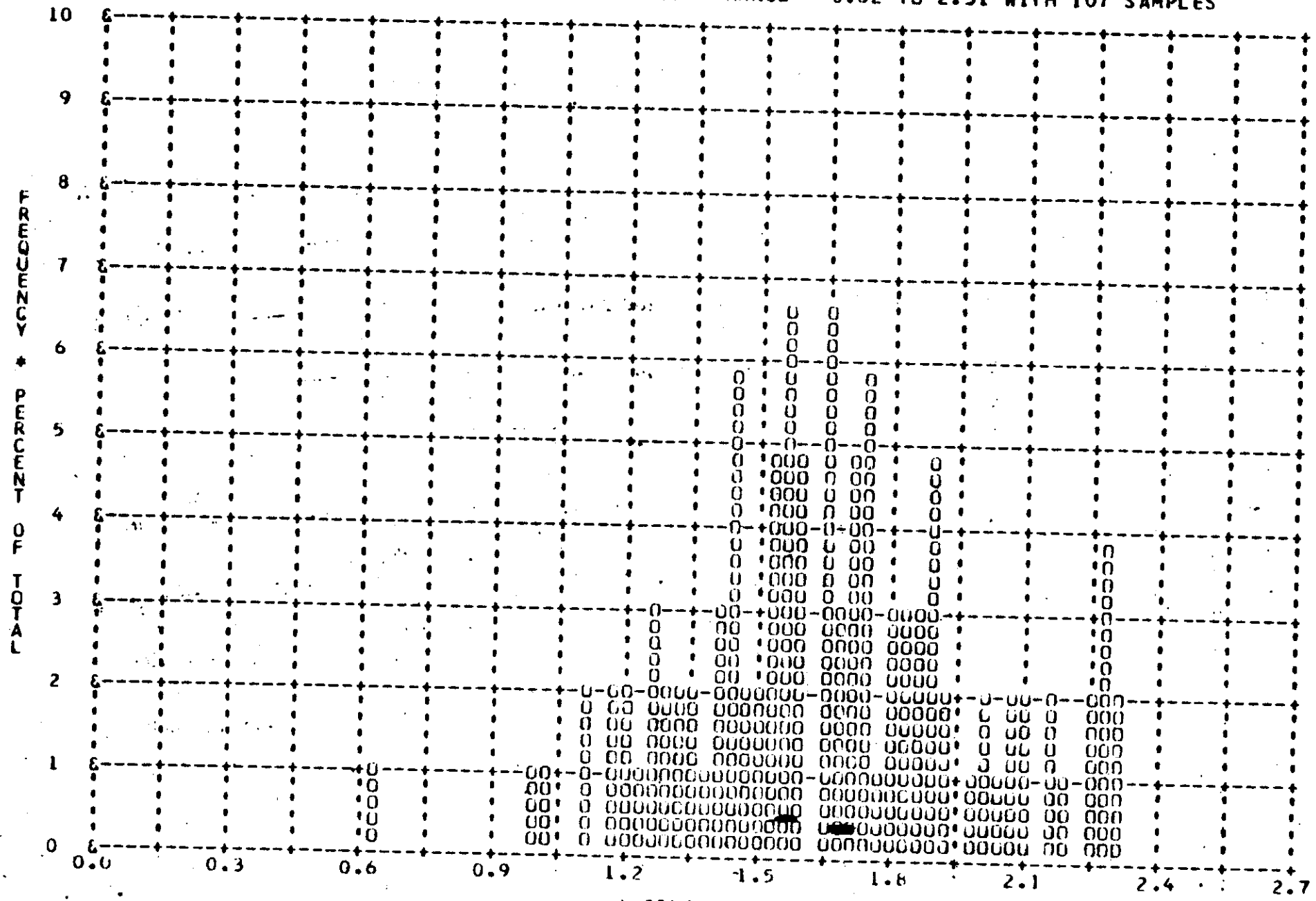


~~TOP SECRET~~ C/[redacted]

~~TOP SECRET~~ C/[redacted]

MISSION * 1041-1 * INSTR * FWD * 6/27/67 PLOT OF D MAX * TERRAIN * PROCESSING * INTERMEDIATE

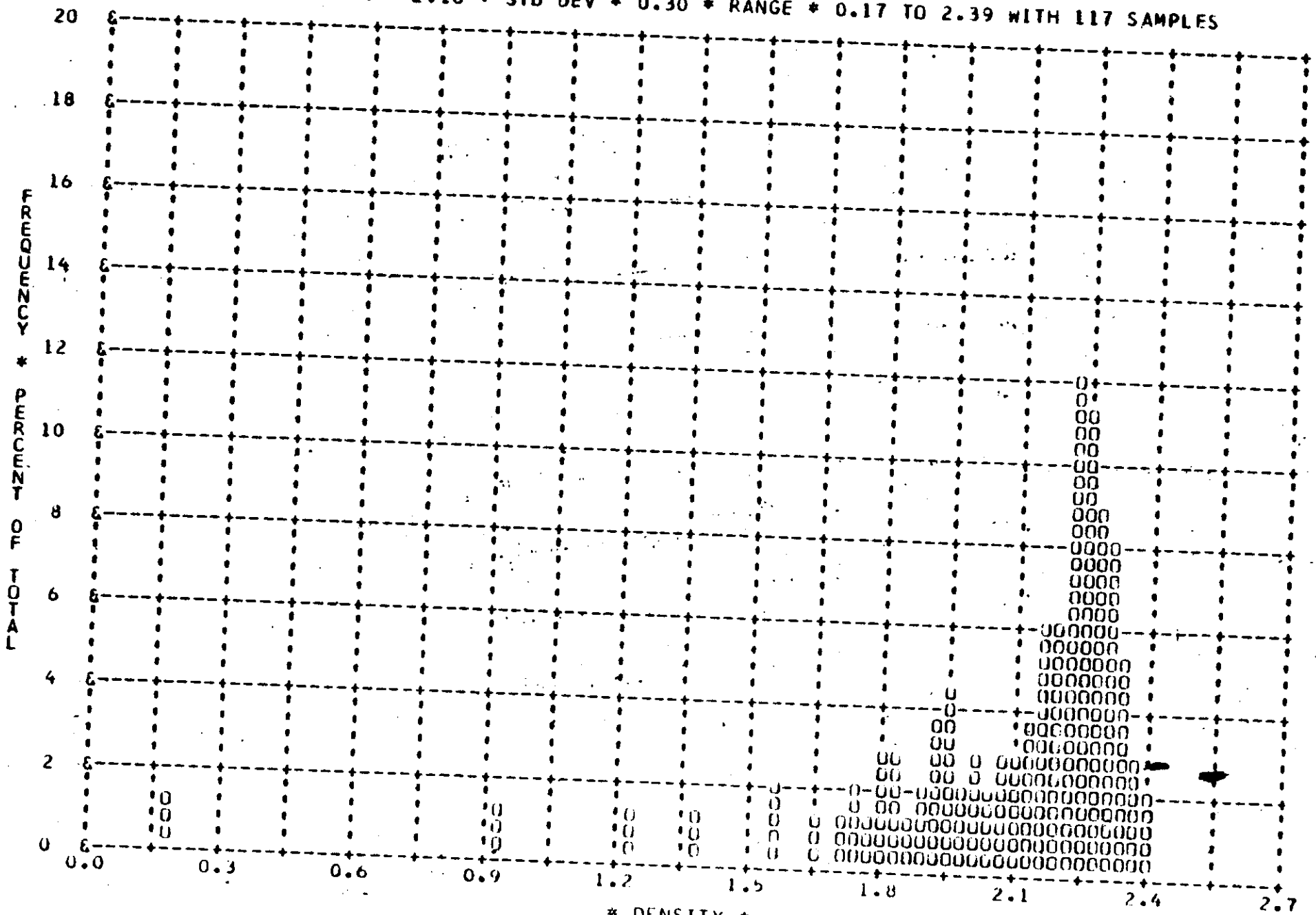
AIRTH MEAN * 1.65 * MEDIAN * 1.64 * STD DEV * 0.33 * RANGE * 0.62 TO 2.31 WITH 107 SAMPLES



~~TOP SECRET~~ C/[redacted]

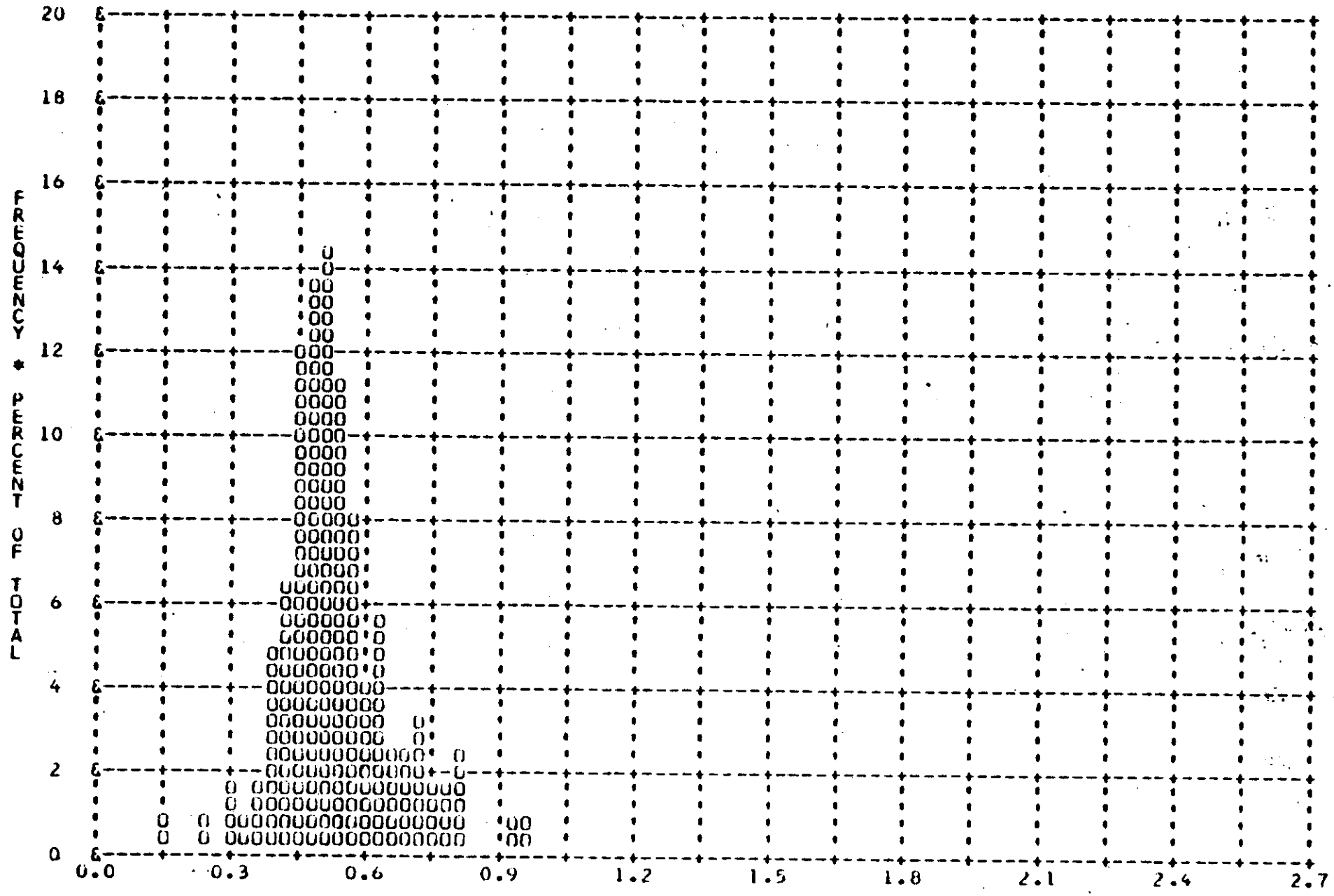
MISSION * 1041-1 * INSTR * FWD * 6/27/67 PLOT OF D MAX * CLOUD * PROCESSING * INTERMEDIATE

AIRTH MEAN * 2.08 * MEDIAN * 2.18 * STD DEV * 0.30 * RANGE * 0.17 TO 2.39 WITH 117 SAMPLES



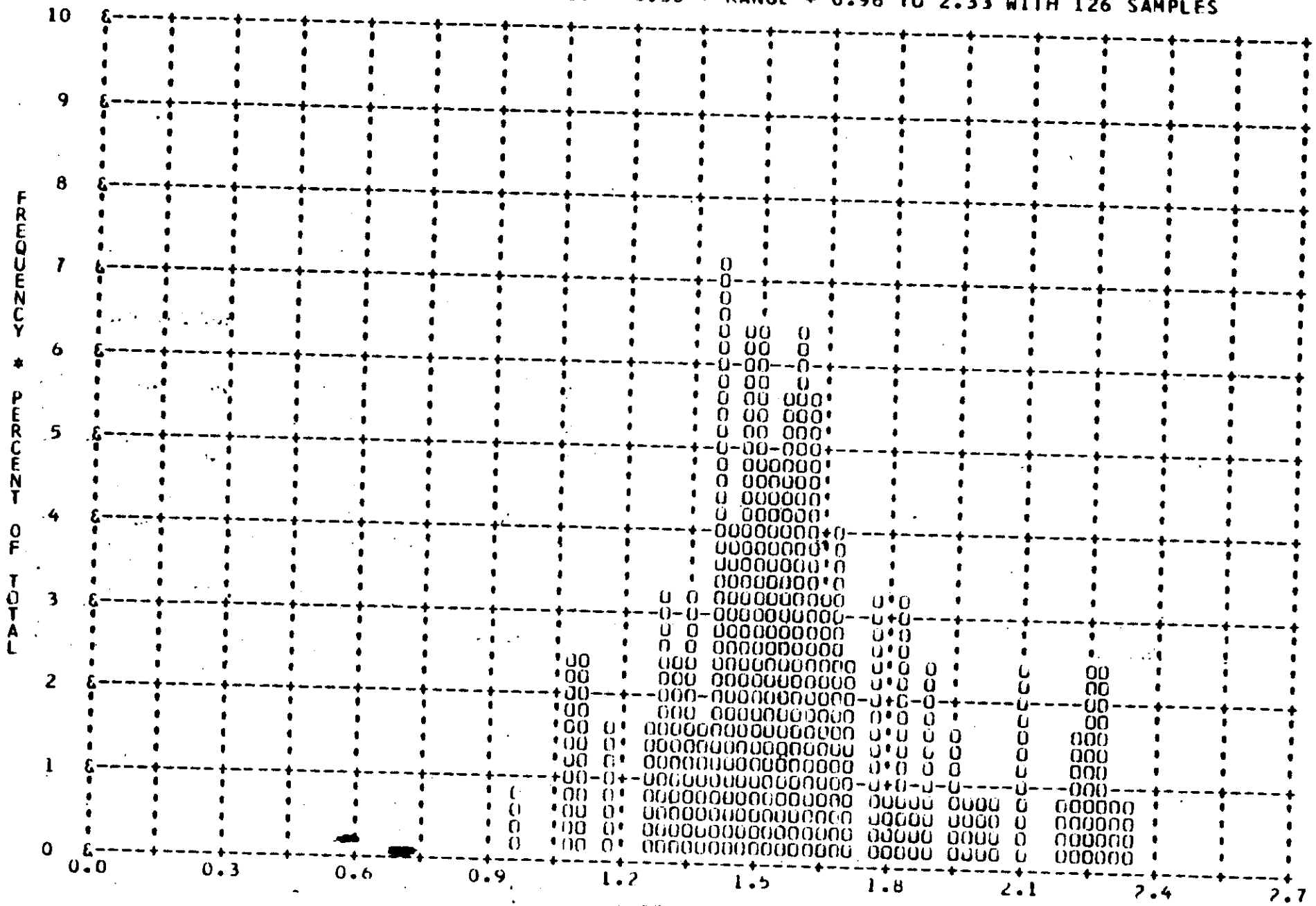
MISSION * 1041-1 * INSTR * FWD * 6/27/67 PLOT OF D MIN * TERRAIN * PROCESSING * FULL

AIRTH MEAN * 0.52 * MEDIAN * 0.50 * STD DEV * 0.12 * RANGE * 0.14 TO 0.94 WITH 126 SAMPLES



MISSION * 1041-1 * INSTR * FWD * 6/27/67 PLOT OF D MAX * TERRAIN * PROCESSING * FULL

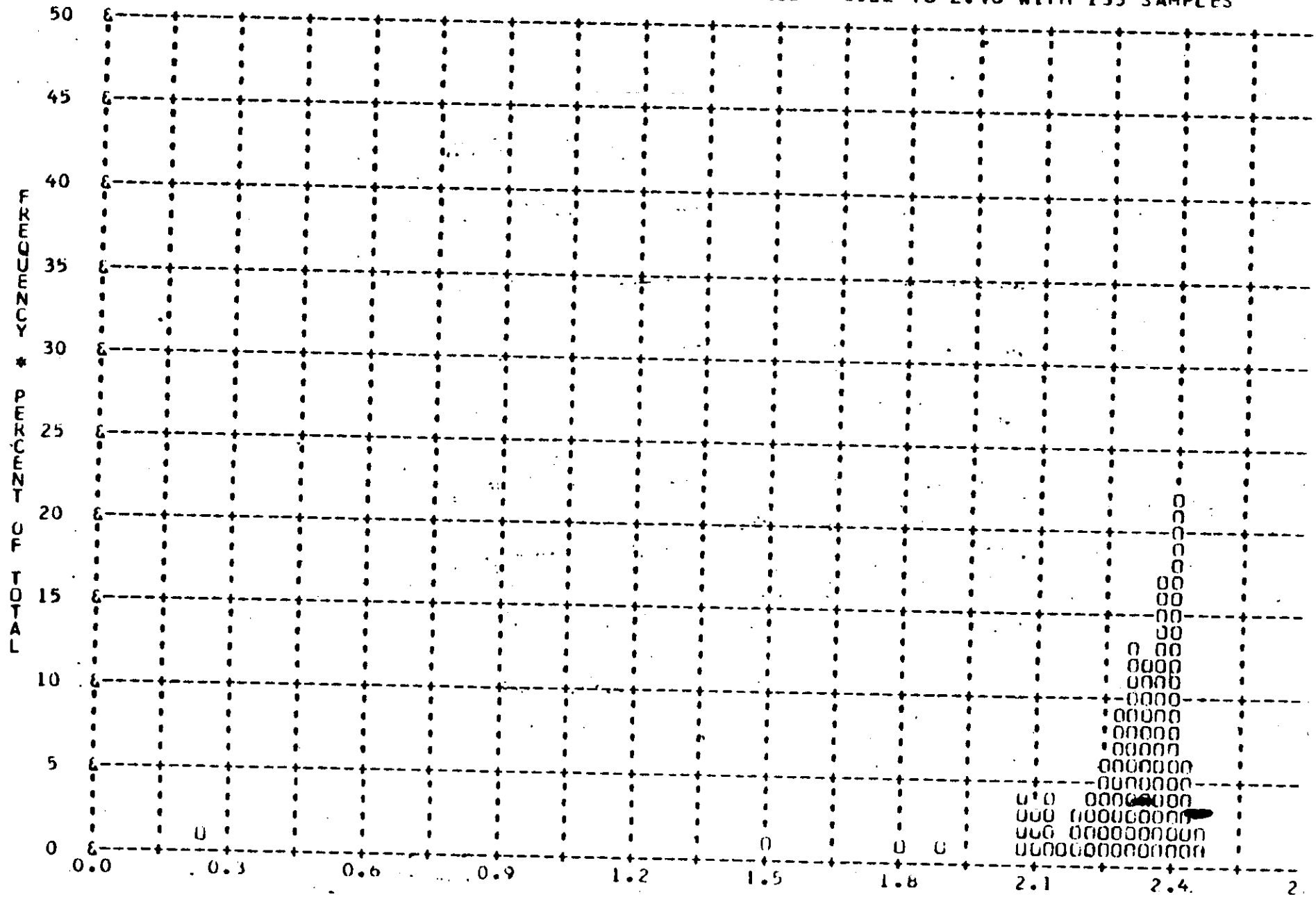
AIRTH MEAN * 1.60 * MEDIAN * 1.55 * STD DEV * 0.30 * RANGE * 0.96 TO 2.33 WITH 126 SAMPLES



~~TOP SECRET~~ C/[redacted]

MISSION * 1041-1 * INSTR * FWD * 6/27/67 PLOT OF D MAX * CLOUD * PROCESSING * FULL

AIRTH MEAN * 2.28 * MEDIAN * 2.34 * STD DEV * 0.22 * RANGE * 0.22 TO 2.46 WITH 133 SAMPLES



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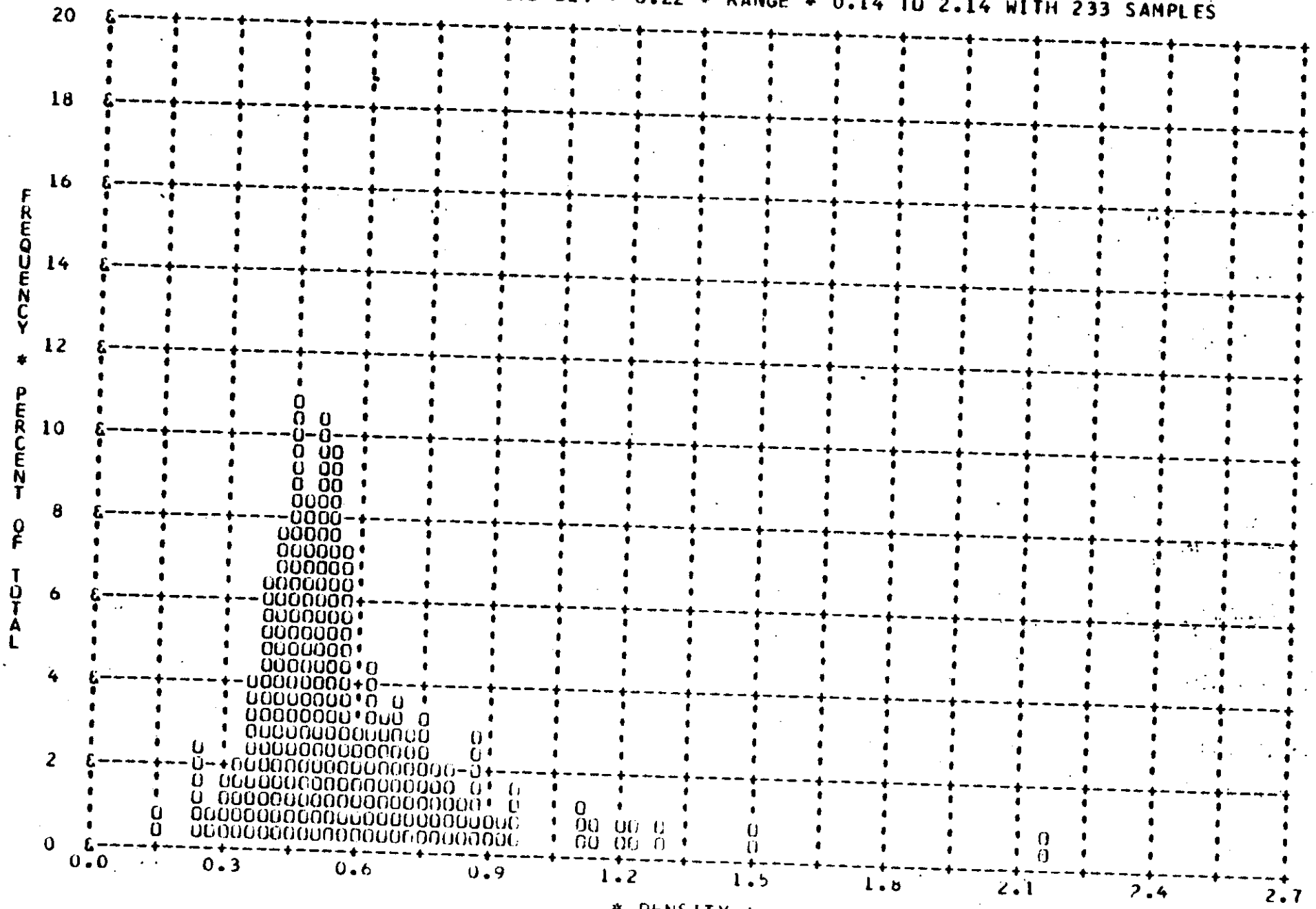
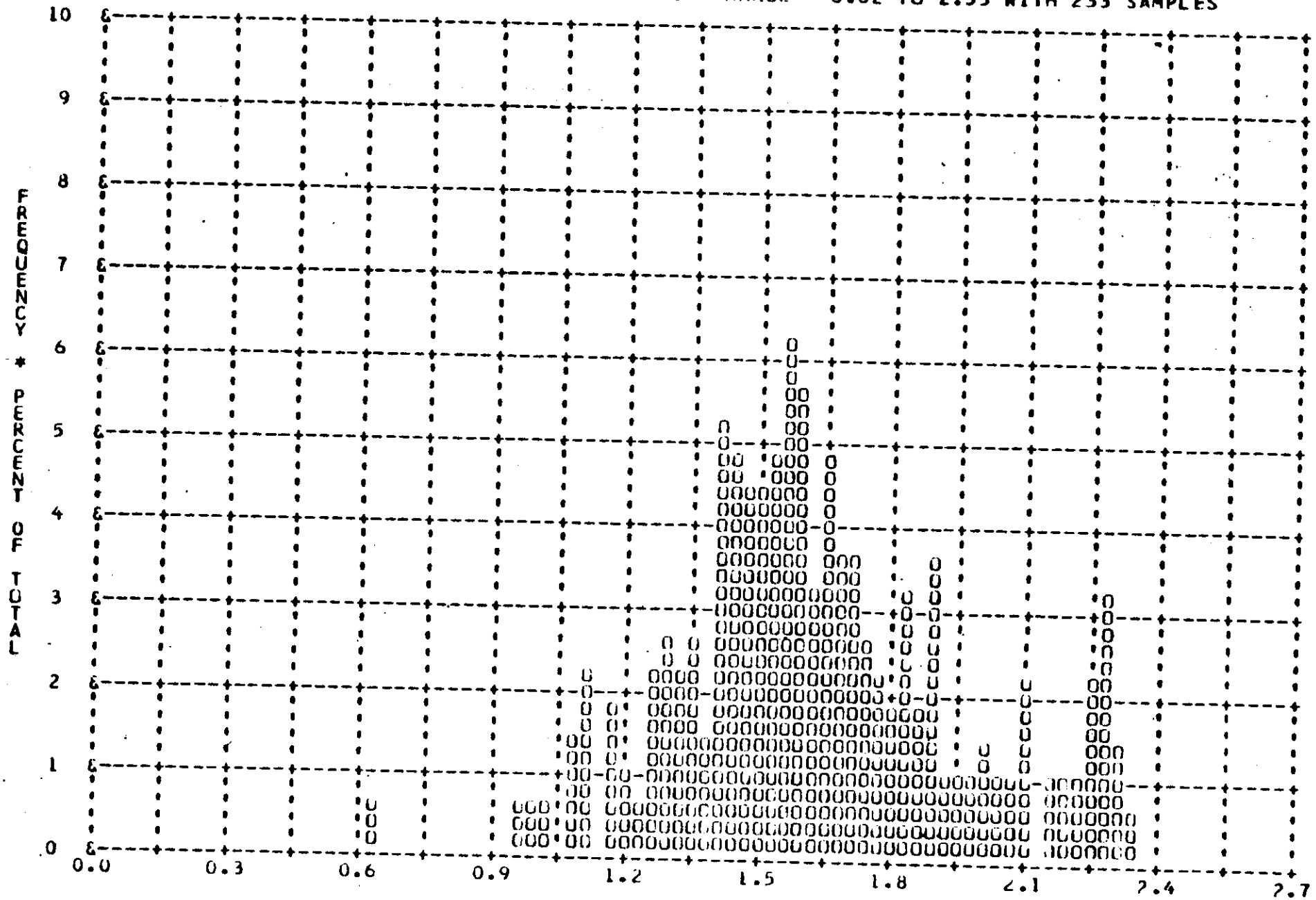
MISSION * 1041-1 * INSTR * FWD * 6/27/67 PLOT OF D MIN * TERRAIN * PROCESSING * ALL LEVELS

AIRTH MEAN * 0.56 * MEDIAN * 0.51 * STD DEV * 0.22 * RANGE * 0.14 TO 2.14 WITH 233 SAMPLES



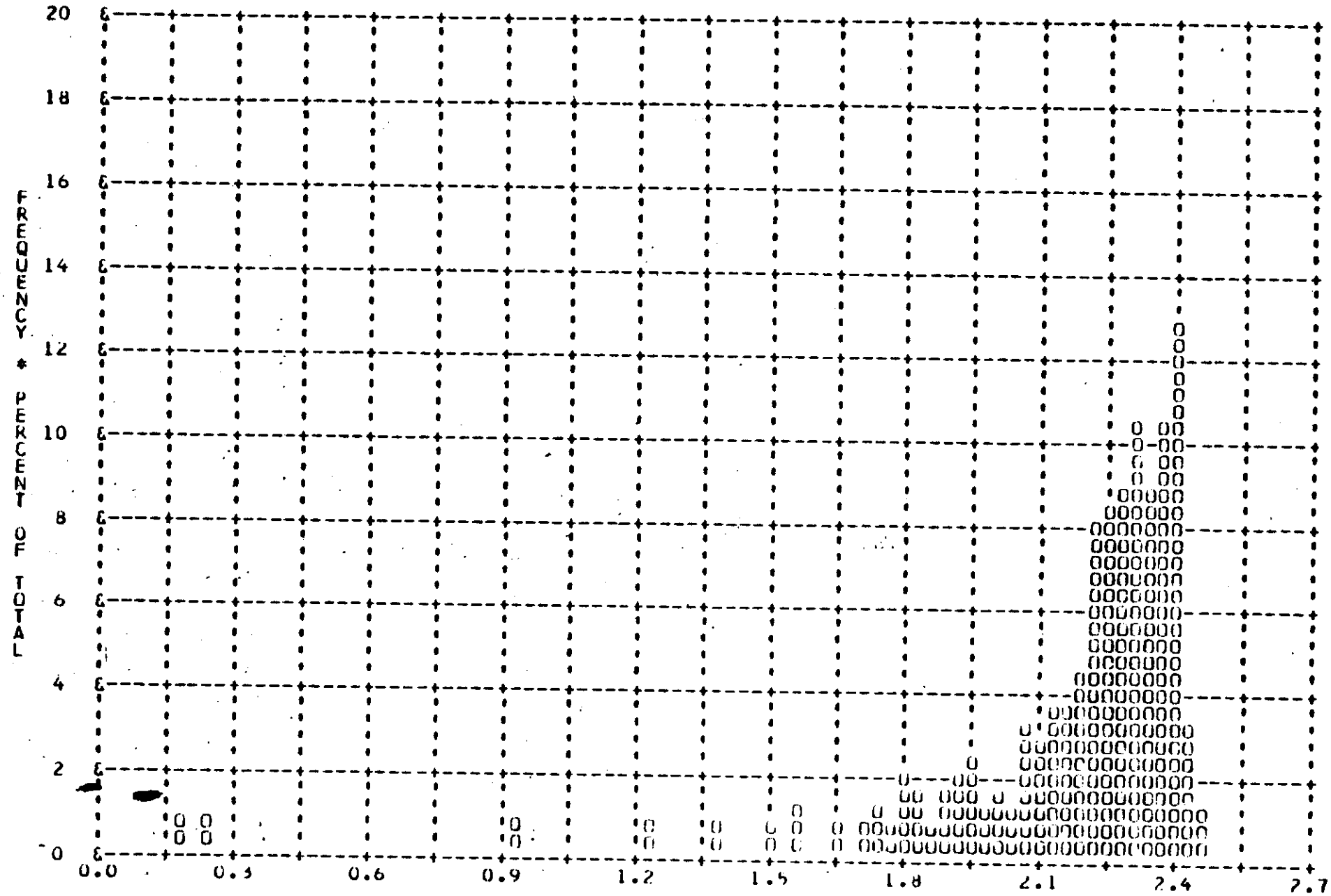
MISSION * 1041-1 * INSTR * FWD * 6/27/67 PLOT OF D MAX * TERRAIN * PROCESSING * ALL LEVELS

AIRTH MEAN * 1.62 * MEDIAN * 1.58 * STD DEV * 0.31 * RANGE * 0.62 TO 2.33 WITH 233 SAMPLES



MISSION * 1041-1 * INSTR * FWD * 6/27/67 PLOT OF D MAX * CLOUD * PROCESSING * ALL LEVELS

AIRTH MEAN * 2.19 * MEDIAN * 2.26 * STD DEV * 0.28 * RANGE * 0.17 TO 2.46 WITH 250 SAMPLES



MISSION * 1041-1 * INSTRUMENT * AFT 6/27/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.01	0	0	0	0	0	0	0	0	0	0	0	0
0.02	0	0	0	0	0	0	0	0	0	0	0	0
0.03	0	0	0	0	0	0	0	0	0	0	0	0
0.04	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0
0.06	0	0	0	0	0	0	0	0	0	0	0	0
0.07	0	0	0	0	0	0	0	0	0	0	0	0
0.08	0	0	0	0	0	0	0	0	0	0	0	0
0.09	0	0	0	0	0	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0	0	0	0	0	0
0.11	0	0	0	0	0	0	0	0	0	0	0	0
0.12	0	0	0	0	0	0	0	0	0	0	0	0
0.13	0	0	0	0	0	0	0	0	0	0	0	0
0.14	0	0	0	0	0	0	0	0	0	0	0	0
0.15	0	0	0	0	0	1	0	0	0	0	0	1
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	1	0	0	0	0	0	1	0	0
0.23	0	0	0	0	0	0	0	0	0	0	0	0
0.24	0	0	0	0	0	0	0	0	0	0	0	0
0.25	0	0	0	0	0	0	0	0	0	0	0	0
0.26	0	0	0	0	0	0	0	0	0	0	0	0
0.27	0	0	0	0	0	0	0	0	0	0	0	0
0.28	0	0	0	0	0	0	0	0	0	0	0	0
0.29	0	0	0	0	0	0	0	0	0	0	0	0
0.30	0	0	0	0	0	0	0	0	0	0	0	0
0.31	0	0	0	0	0	0	0	0	0	0	0	0
0.32	0	0	0	0	0	0	0	0	0	0	0	0
0.33	0	0	0	0	0	0	0	0	0	0	0	0
0.34	0	0	0	0	0	0	0	0	0	0	0	0
0.35	0	0	0	0	0	0	0	0	0	0	0	0
0.36	0	0	0	1	0	0	1	0	0	2	0	0
0.37	0	0	0	1	0	0	1	0	0	2	0	0
0.38	0	0	0	4	0	0	0	0	0	4	0	0
0.39	0	0	0	3	0	0	0	0	0	3	0	0
0.40	0	0	0	2	0	0	0	0	0	2	0	0
0.41	0	0	0	1	0	0	2	0	0	3	0	0
0.42	0	0	0	4	0	0	2	0	0	6	0	0
0.43	0	0	0	1	0	0	4	0	0	5	0	0
0.44	0	0	0	3	0	0	1	0	0	4	0	0
0.45	0	0	0	5	0	0	4	0	0	9	0	0
0.46	0	0	0	2	0	0	4	0	0	6	0	0
0.47	0	0	0	1	0	0	4	0	0	5	0	0
0.48	0	0	0	3	0	0	2	0	0	5	0	0
0.49	0	0	0	3	0	0	0	0	0	3	0	0
0.50	0	0	0	2	0	0	5	0	0	7	0	0
SUBTOTAL	0	0	0	37	0	1	30	0	0	67	0	1

TABLE A-2

MISSION * 1041-1 * INSTRUMENT * AFT 6/27/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.51	0	0	0	0	0	0	5	0	0	5	0	0
0.52	0	0	0	3	0	0	5	0	0	8	0	0
0.53	0	0	0	3	0	0	2	0	0	5	0	0
0.54	0	0	0	4	0	0	2	0	0	6	0	0
0.55	0	0	0	0	0	0	3	0	0	3	0	0
0.56	0	0	0	2	0	0	4	0	0	6	0	0
0.57	0	0	0	5	0	0	6	0	0	11	0	0
0.58	0	0	0	0	0	0	4	0	0	4	0	0
0.59	0	0	0	3	0	0	3	0	0	6	0	0
0.60	0	0	0	4	0	0	1	0	0	5	0	0
0.61	0	0	0	2	0	0	1	0	0	3	0	0
0.62	0	0	0	0	0	0	2	0	0	0	0	0
0.63	0	0	0	2	0	0	1	0	0	4	0	0
0.64	0	0	0	3	0	0	5	0	0	4	0	0
0.65	0	0	0	1	0	0	3	0	0	6	0	0
0.66	0	0	0	2	0	0	2	0	0	5	0	0
0.67	0	0	0	1	0	0	3	0	0	3	0	0
0.68	0	0	0	0	0	0	1	0	0	2	0	0
0.69	0	0	0	1	0	0	4	0	0	4	0	0
0.70	0	0	0	1	0	0	2	0	0	2	0	0
0.71	0	0	0	1	0	0	3	0	0	5	0	0
0.72	0	0	0	1	0	0	1	0	0	3	0	0
0.73	0	0	0	0	0	0	4	0	0	4	0	0
0.74	0	0	0	0	0	0	2	0	0	1	0	0
0.75	0	0	0	3	0	0	3	0	0	0	0	0
0.76	0	0	0	0	0	0	0	0	0	4	0	0
0.77	0	0	0	0	0	0	1	0	0	1	0	0
0.78	0	0	0	2	0	0	2	0	0	2	0	0
0.79	0	0	0	1	0	0	3	0	0	5	0	0
0.80	0	0	0	0	0	0	1	0	0	2	0	0
0.81	0	0	0	1	0	0	1	0	0	1	0	0
0.82	0	0	0	1	0	0	0	0	0	2	0	0
0.83	0	0	0	0	0	0	1	0	0	0	0	0
0.84	0	0	0	1	0	0	0	0	0	1	0	0
0.85	0	0	0	0	0	0	0	0	0	0	0	0
0.86	0	0	0	0	0	0	1	0	0	1	0	0
0.87	0	0	0	0	0	0	0	0	0	0	0	0
0.88	0	0	0	0	0	0	0	0	0	0	0	0
0.89	0	0	0	1	0	0	0	0	0	1	0	0
0.90	0	0	0	2	0	0	1	0	0	3	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	1	0	0	0	0	0	1	0	0
0.94	0	0	0	0	0	0	0	0	0	0	0	0
0.95	0	0	0	0	0	0	0	0	0	0	0	0
0.96	0	0	0	0	0	0	1	0	0	1	0	0
0.97	0	0	0	2	0	0	0	0	0	2	0	0
0.98	0	0	0	0	0	0	0	0	0	0	0	0
0.99	0	0	0	2	0	0	0	0	0	2	0	0
1.00	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	57	2	1	78	0	0	135	2	1

TABLE A-9

MISSION * 1041-1 * INSTRUMENT * AFT 6/27/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.01	0	0	0	0	0	0	0	0	0	0	0	0
1.02	0	0	0	0	0	0	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	1	0	0	1	0	0	1	0	0
1.05	0	0	0	1	0	0	2	0	0	3	0	0
1.06	0	0	0	1	0	0	0	0	0	1	0	0
1.07	0	0	0	0	0	0	1	0	0	1	0	0
1.08	0	0	0	0	0	0	1	0	0	1	0	0
1.09	0	0	0	1	0	0	0	0	0	1	0	0
1.10	0	0	0	1	0	0	0	0	0	1	0	0
1.11	0	0	0	0	0	0	0	0	0	0	0	0
1.12	0	0	0	0	0	0	0	1	0	0	1	0
1.13	0	0	0	0	0	0	0	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	1	0	0	0	0	0	1	0	0
1.17	0	0	0	0	1	0	0	0	0	0	1	0
1.18	0	0	0	1	0	0	0	0	0	1	0	0
1.19	0	0	0	0	0	0	1	0	0	1	0	0
1.20	0	0	0	1	0	0	0	0	0	1	0	0
1.21	0	0	0	0	1	0	0	0	0	0	1	0
1.22	0	0	0	0	0	0	0	1	0	0	1	0
1.23	0	0	0	0	1	0	0	0	0	0	1	0
1.24	0	0	0	1	1	0	0	4	0	1	5	0
1.25	0	0	0	0	0	0	0	0	0	0	0	0
1.26	0	0	0	1	1	0	0	1	0	1	2	0
1.27	0	0	0	0	0	0	0	0	0	0	0	0
1.28	0	0	0	1	1	0	0	2	0	1	3	0
1.29	0	0	0	0	0	0	0	0	0	0	0	0
1.30	0	0	0	0	2	0	0	1	0	0	3	0
1.31	0	0	0	0	0	0	0	0	0	0	0	0
1.32	0	0	0	0	3	0	0	2	0	0	5	0
1.33	0	0	0	0	0	0	0	0	0	0	0	0
1.34	0	0	0	0	2	0	0	1	0	0	3	0
1.35	0	0	0	0	0	0	0	0	0	0	0	0
1.36	0	0	0	0	1	0	0	1	0	0	1	0
1.37	0	0	0	0	0	0	0	0	0	0	0	0
1.38	0	0	0	0	5	0	0	1	0	0	6	0
1.39	0	0	0	0	0	0	0	0	0	0	0	0
1.40	0	0	0	0	1	0	0	1	0	0	1	0
1.41	0	0	0	0	0	0	0	0	0	0	0	0
1.42	0	0	0	0	0	0	0	2	0	0	2	0
1.43	0	0	0	0	0	0	0	0	0	0	0	0
1.44	0	0	0	0	2	0	0	1	0	0	3	0
1.45	0	0	0	0	0	0	0	0	0	0	0	0
1.46	0	0	0	0	3	0	0	2	0	0	5	0
1.47	0	0	0	0	1	0	1	0	0	1	1	0
1.48	0	0	0	0	1	0	0	1	0	0	2	0
1.49	0	0	0	0	0	0	0	2	0	0	2	0
1.50	0	0	0	0	1	0	0	2	0	0	3	0
SUBTOTAL	0	0	0	7	34	3	5	45	0	12	79	3

TABLE A-2

MISSION * 1041-1 * INSTRUMENT * AFT 6/27/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.51	0	0	0	0	2	0	0	1	0	0	3	0
1.52	0	0	0	0	3	0	0	1	0	0	4	0
1.53	0	0	0	0	4	0	0	1	0	0	5	0
1.54	0	0	0	0	0	0	0	2	0	0	2	0
1.55	0	0	0	0	1	1	0	1	0	0	2	1
1.56	0	0	0	0	1	0	0	5	0	0	6	0
1.57	0	0	0	0	1	0	0	2	0	0	3	0
1.58	0	0	0	0	2	0	0	2	0	0	3	0
1.59	0	0	0	0	2	1	0	1	0	0	3	1
1.60	0	0	0	0	1	0	0	2	0	0	3	0
1.61	0	0	0	0	1	0	0	5	1	0	6	1
1.62	0	0	0	1	1	0	0	4	1	1	5	1
1.63	0	0	0	0	1	1	0	2	1	0	2	1
1.64	0	0	0	0	2	0	0	2	0	0	4	0
1.65	0	0	0	0	3	0	0	0	0	0	3	0
1.66	0	0	0	0	0	2	0	1	0	0	1	2
1.67	0	0	0	0	1	1	0	2	0	0	3	1
1.68	0	0	0	0	4	1	0	1	0	0	5	1
1.69	0	0	0	0	3	1	0	4	0	0	7	1
1.70	0	0	0	0	2	1	0	2	0	0	4	1
1.71	0	0	0	0	0	0	0	1	0	0	1	0
1.72	0	0	0	0	0	1	0	0	0	0	0	1
1.73	0	0	0	0	1	0	0	1	0	0	2	0
1.74	0	0	0	0	1	1	0	1	0	0	2	1
1.75	0	0	0	0	2	1	0	1	0	0	3	1
1.76	0	0	0	0	5	1	0	1	0	0	6	1
1.77	0	0	0	0	1	0	0	0	0	0	1	0
1.78	0	0	0	0	0	2	0	0	0	0	0	2
1.79	0	0	0	0	0	1	0	0	0	0	1	1
1.80	0	0	0	0	0	2	0	1	0	0	1	2
1.81	0	0	0	0	0	1	0	1	0	0	1	1
1.82	0	0	0	0	0	0	0	0	1	0	0	1
1.83	0	0	0	0	0	0	0	0	0	0	0	0
1.84	0	0	0	0	0	0	0	1	0	0	1	0
1.85	0	0	0	0	0	1	0	0	1	0	0	1
1.86	0	0	0	0	0	2	0	0	0	0	0	2
1.87	0	0	0	0	0	0	0	0	0	0	0	0
1.88	0	0	0	0	0	1	0	0	1	0	0	2
1.89	0	0	0	0	0	1	0	1	1	0	0	2
1.90	0	0	0	0	0	0	0	1	1	0	0	1
1.91	0	0	0	0	0	0	0	0	1	0	0	1
1.92	0	0	0	0	0	0	0	0	0	0	0	0
1.93	0	0	0	0	0	0	0	0	0	0	0	0
1.94	0	0	0	0	0	0	0	0	0	0	0	0
1.95	0	0	0	0	0	1	0	0	0	0	0	1
1.96	0	0	0	0	1	0	0	0	0	0	1	0
1.97	0	0	0	0	0	5	0	0	0	0	0	5
1.98	0	0	0	0	1	2	0	0	1	0	1	3
1.99	0	0	0	0	0	2	0	0	0	0	0	2
2.00	0	0	0	0	0	1	0	1	0	0	1	1
SUBTOTAL	0	0	0	1	50	35	0	53	9	1	103	44

TABLE A-2

~~TOP SECRET~~ C/[redacted]

MISSION * 1041-1 * INSTRUMENT * AFT 6/27/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.01	0	0	0	0	0	2	0	0	1	0	0	3
2.02	0	0	0	0	0	1	0	0	0	0	0	1
2.03	0	0	0	0	0	1	0	0	0	0	0	1
2.04	0	0	0	0	0	1	0	0	0	0	0	1
2.05	0	0	0	0	0	1	0	0	1	0	0	1
2.06	0	0	0	0	0	1	0	0	1	0	0	1
2.07	0	0	0	0	0	2	0	0	1	0	0	2
2.08	0	0	0	0	0	2	0	0	1	0	0	2
2.09	0	0	0	0	0	2	0	0	1	0	0	2
2.10	0	0	0	0	0	0	0	0	1	0	0	0
2.11	0	0	0	0	0	1	0	0	1	0	0	1
2.12	0	0	0	0	0	3	0	0	1	0	0	3
2.13	0	0	0	0	1	6	0	0	2	0	1	8
2.14	0	0	0	0	1	2	0	0	1	0	1	3
2.15	0	0	0	0	1	3	0	0	0	0	1	3
2.16	0	0	0	0	1	1	0	0	3	0	1	4
2.17	0	0	0	0	1	1	0	0	2	0	1	3
2.18	0	0	0	0	0	6	0	0	3	0	1	9
2.19	0	0	0	0	1	3	0	0	4	0	1	7
2.20	0	0	0	0	1	3	0	0	2	0	1	5
2.21	0	0	0	0	1	3	0	0	3	0	1	6
2.22	0	0	0	0	1	5	0	0	3	0	1	8
2.23	0	0	0	0	1	3	0	0	2	0	1	5
2.24	0	0	0	0	1	4	0	0	3	0	2	7
2.25	0	0	0	0	1	3	0	0	7	0	2	10
2.26	0	0	0	0	2	4	0	0	9	0	3	13
2.27	0	0	0	0	1	0	0	0	1	0	2	1
2.28	0	0	0	0	0	3	0	0	7	0	2	10
2.29	0	0	0	0	0	3	0	0	4	0	2	7
2.30	0	0	0	0	1	3	0	0	8	0	2	11
2.31	0	0	0	0	2	3	0	0	10	0	2	13
2.32	0	0	0	0	2	2	0	0	6	0	2	8
2.33	0	0	0	0	0	0	0	0	5	0	1	5
2.34	0	0	0	0	0	1	0	0	1	0	1	2
2.35	0	0	0	0	0	0	0	0	12	0	0	12
2.36	0	0	0	0	0	0	0	0	8	0	0	8
2.37	0	0	0	0	0	0	0	0	5	0	0	5
2.38	0	0	0	0	0	2	0	0	2	0	0	4
2.39	0	0	0	0	0	1	0	0	2	0	0	3
2.40	0	0	0	0	0	0	0	0	1	0	0	1
2.41	0	0	0	0	0	0	0	0	1	0	0	1
2.42	0	0	0	0	0	0	0	0	0	0	0	0
2.43	0	0	0	0	0	0	0	0	1	0	0	1
2.44	0	0	0	0	0	0	0	0	0	0	0	0
2.45	0	0	0	0	0	0	0	0	0	0	0	0
2.46	0	0	0	0	0	0	0	0	0	0	0	0
2.47	0	0	0	0	0	0	0	0	0	0	0	0
2.48	0	0	0	0	0	0	0	0	0	0	0	0
2.49	0	0	0	0	0	0	0	0	0	0	0	0
2.50	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	16	79	0	15	125	0	31	204

~~TOP SECRET~~ C/[redacted]

TABLE A-2

MISSION * 1041-1 * INSTRUMENT * AFT 6/27/67 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	102	102	119	113	113	134	215	215	253

MISSION 1041-1 INSTR - AFT 6/27/67 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	54 PC	52 PC
INTERMEDIATE	102	0 PC	10 PC	78 PC	10 PC	2 PC
FULL	113	2 PC	0 PC	92 PC	6 PC	0 PC
ALL LEVELS	215	1 PC	5 PC	86 PC	8 PC	1 PC

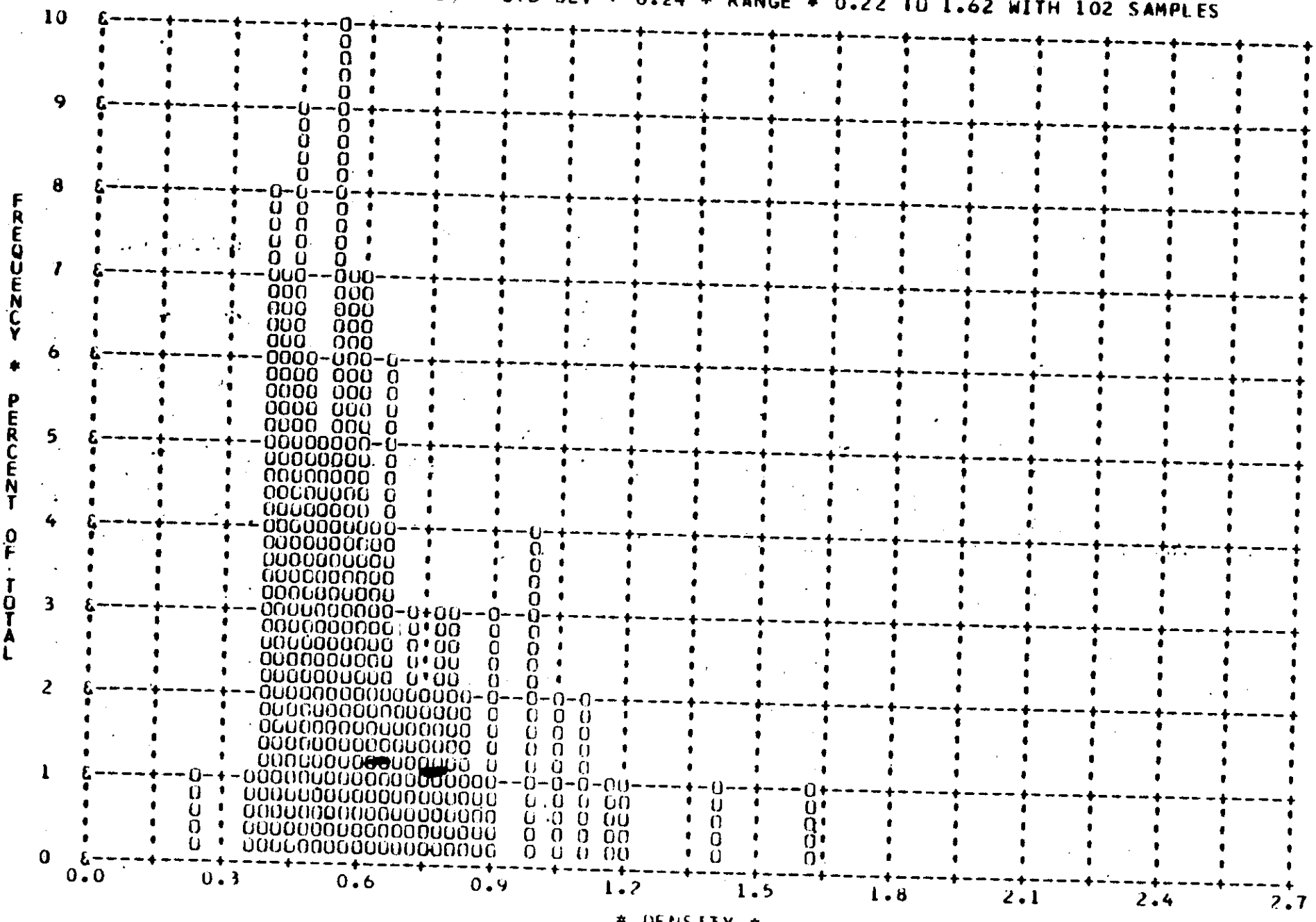
PROCESS LEVEL	BASE & FOG	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP&PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	0.01-0.09	0.01-0.13	0.14-0.39	0.40-0.90	---------	0.91 AND UP
INTERMED	0.10-0.17	0.01-0.20	0.21-0.39	0.40-0.90	0.91-1.34	1.35 AND UP
FULL	0.18 AND UP	0.01-0.39	---------	0.40-0.90	0.91-1.69	1.70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

TABLE A-2

~~TOP SECRET~~ C[redacted]

MISSION * 1041-1 * INSTR * AFT * 6/27/67 PLOT OF D MIN * TERRAIN * PROCESSING * INTERMEDIATE

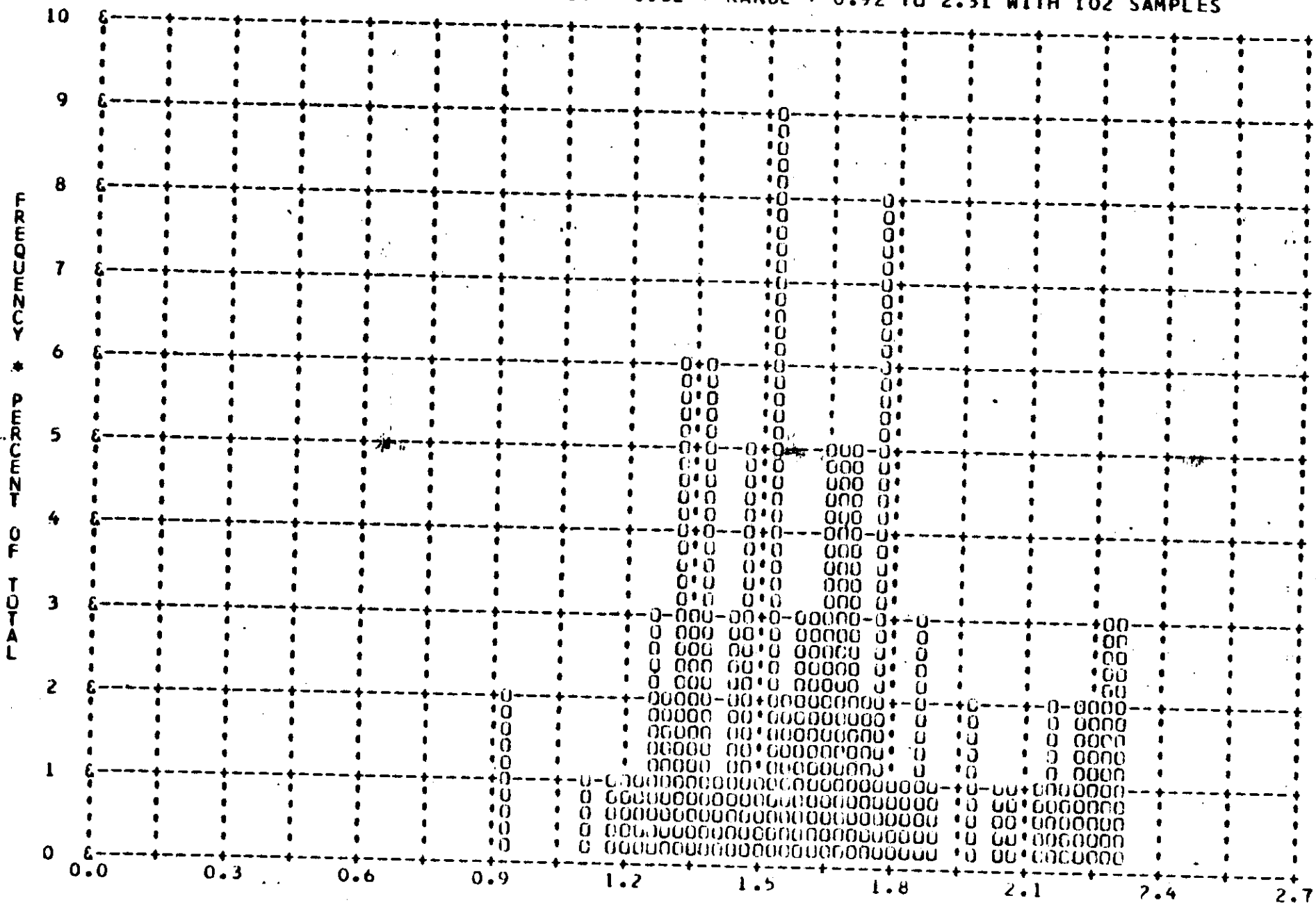
AIRTH MEAN * 0.63 * MEDIAN * 0.57 * STD DEV * 0.24 * RANGE * 0.22 TO 1.62 WITH 102 SAMPLES



[redacted]

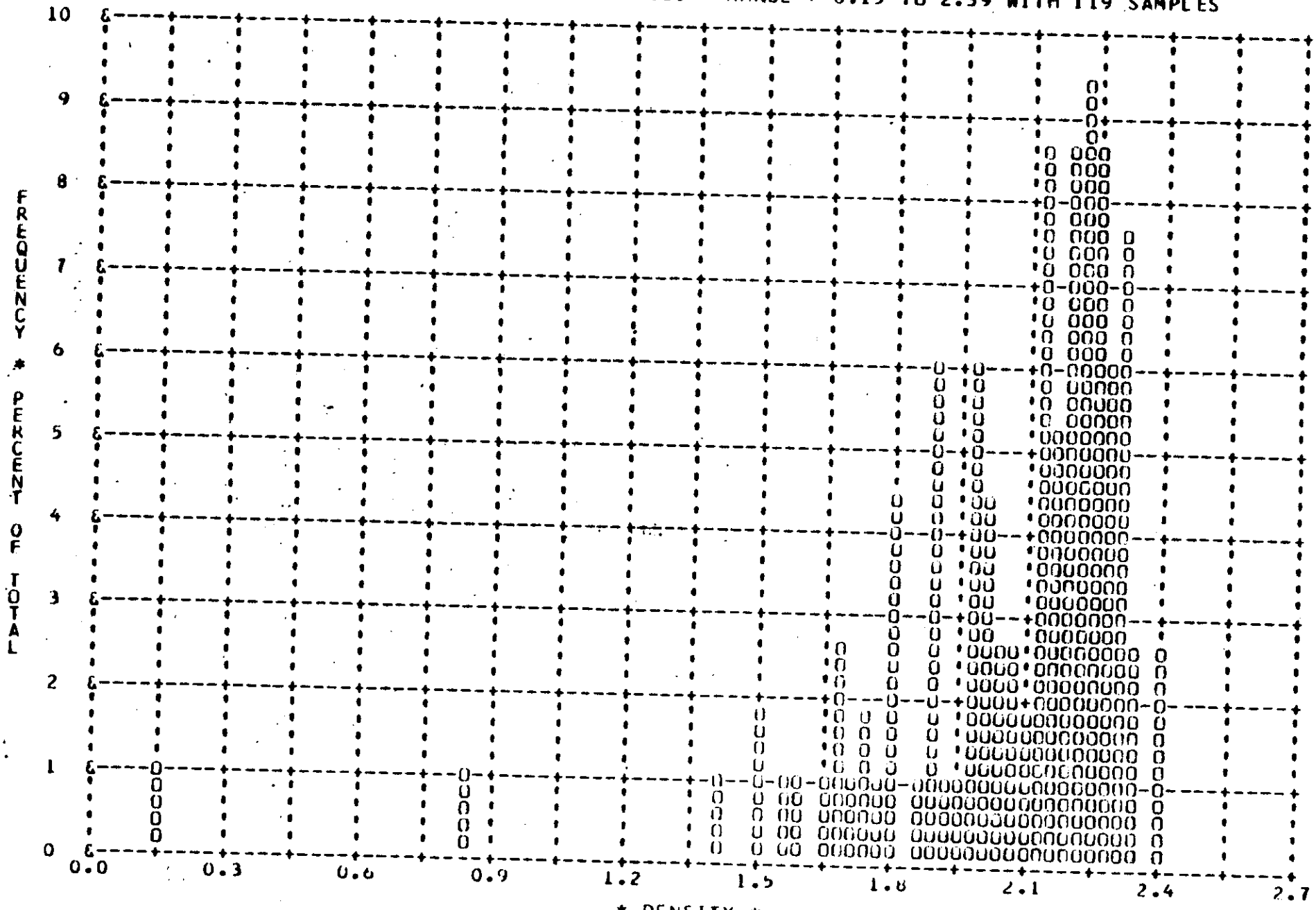
MISSION * 1041-1 * INSTR * AFT * 6/27/67 PLOT OF D MAX * TERRAIN * PROCESSING * INTERMEDIATE

AIRTH MEAN * 1.64 * MEDIAN * 1.61 * STD DEV * 0.32 * RANGE * 0.92 TO 2.31 WITH 102 SAMPLES



MISSION * 1041-1 * INSTR * AFT * 6/27/67 PLOT OF D MAX * CLOUD * PROCESSING * INTERMEDIATE

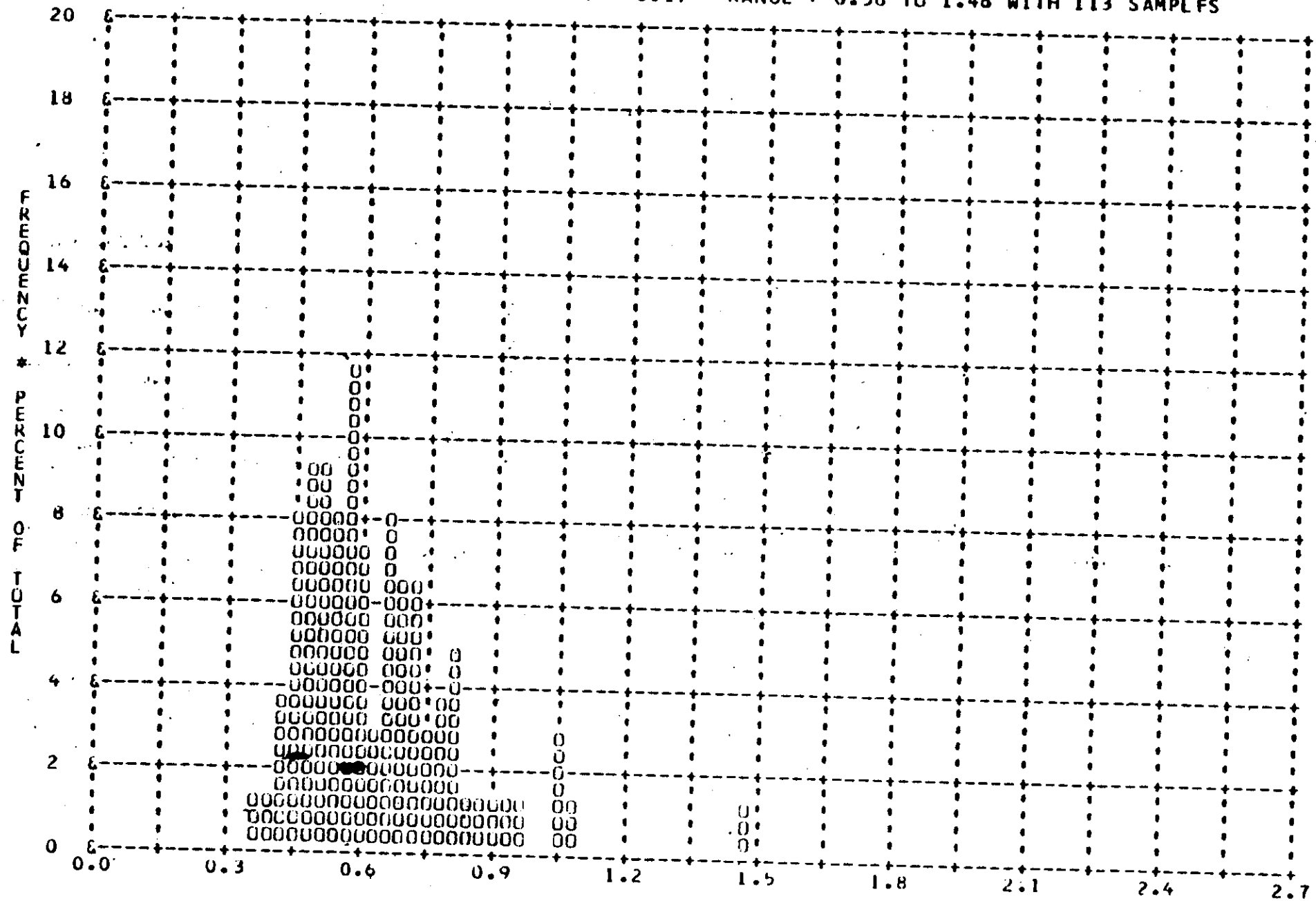
AIRTH MEAN * 2.05 * MEDIAN * 2.13 * STD DEV * 0.30 * RANGE * 0.15 TO 2.39 WITH 119 SAMPLES



~~TOP SECRET~~ C/[redacted]

MISSION * 1041-1 * INSTR * AFT * 6/27/67 PLOT OF D MIN * TERRAIN * PROCESSING * FULL

AIRTH MEAN * 0.62 * MEDIAN * 0.57 * STD DEV * 0.17 * RANGE * 0.36 TO 1.46 WITH 113 SAMPLES



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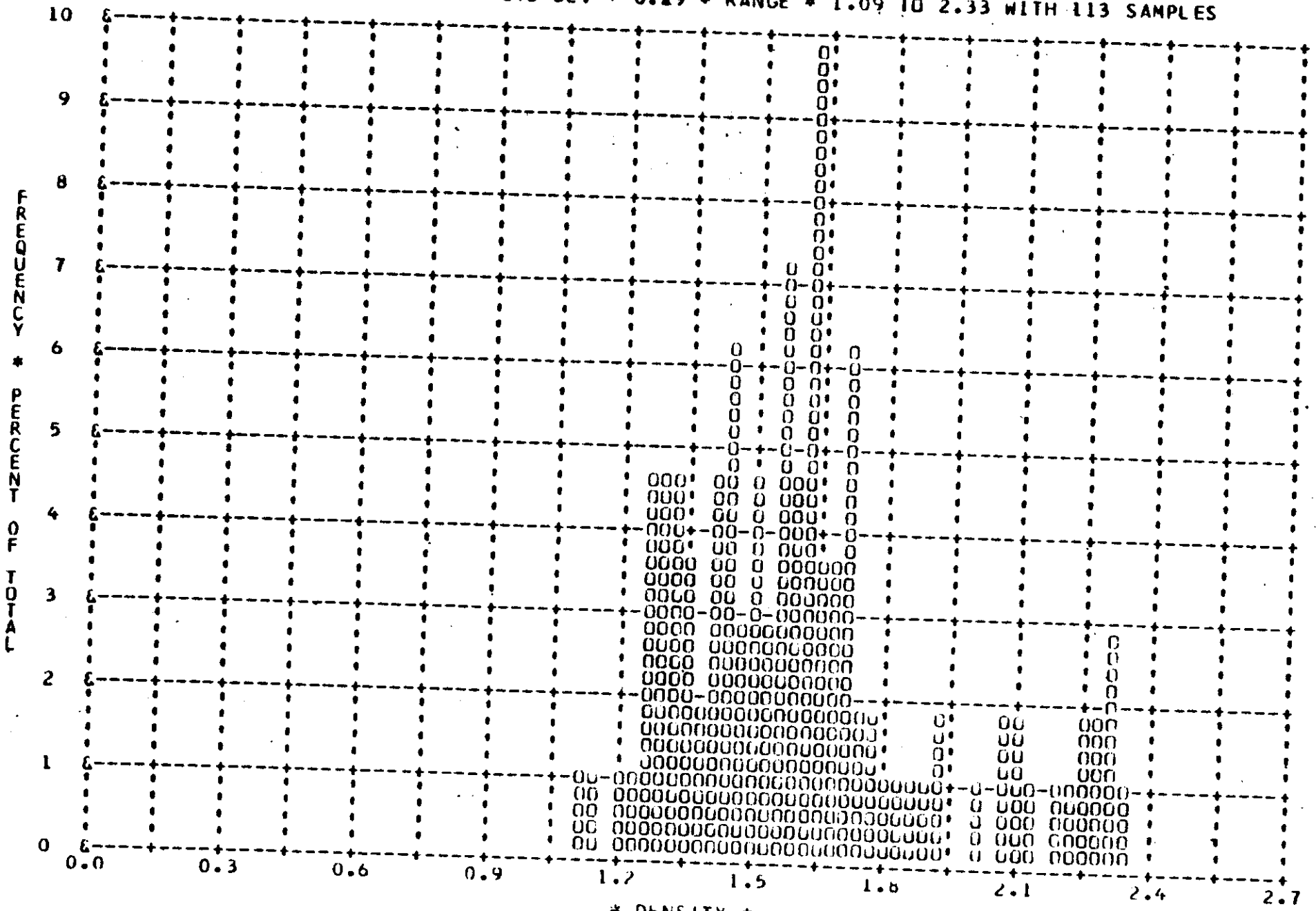
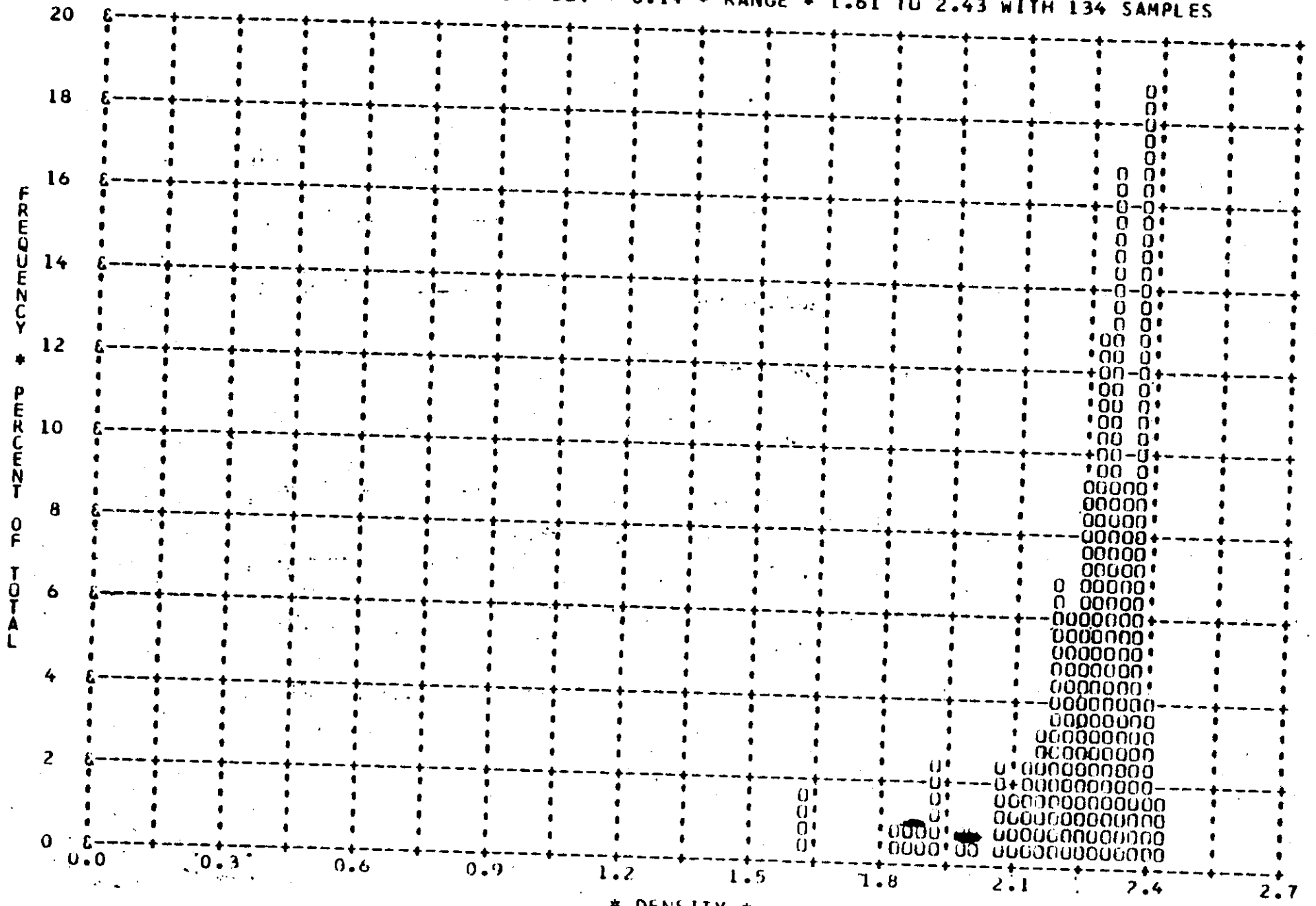
MISSION * 1041-1 * INSTR * AFT * 6/27/67 PLOT OF D MAX * TERRAIN * PROCESSING * FULL

AIRTH MEAN * 1.61 * MEDIAN * 1.57 * STD DEV * 0.29 * RANGE * 1.09 TO 2.33 WITH 113 SAMPLES



MISSION * 1041-1 * INSTR * AFT * 6/27/67 PLOT OF D MAX * CLOUD * PROCESSING * FULL

AIRTH MEAN * 2.25 * MEDIAN * 2.28 * STD DEV * 0.14 * RANGE * 1.61 TU 2.43 WITH 134 SAMPLES



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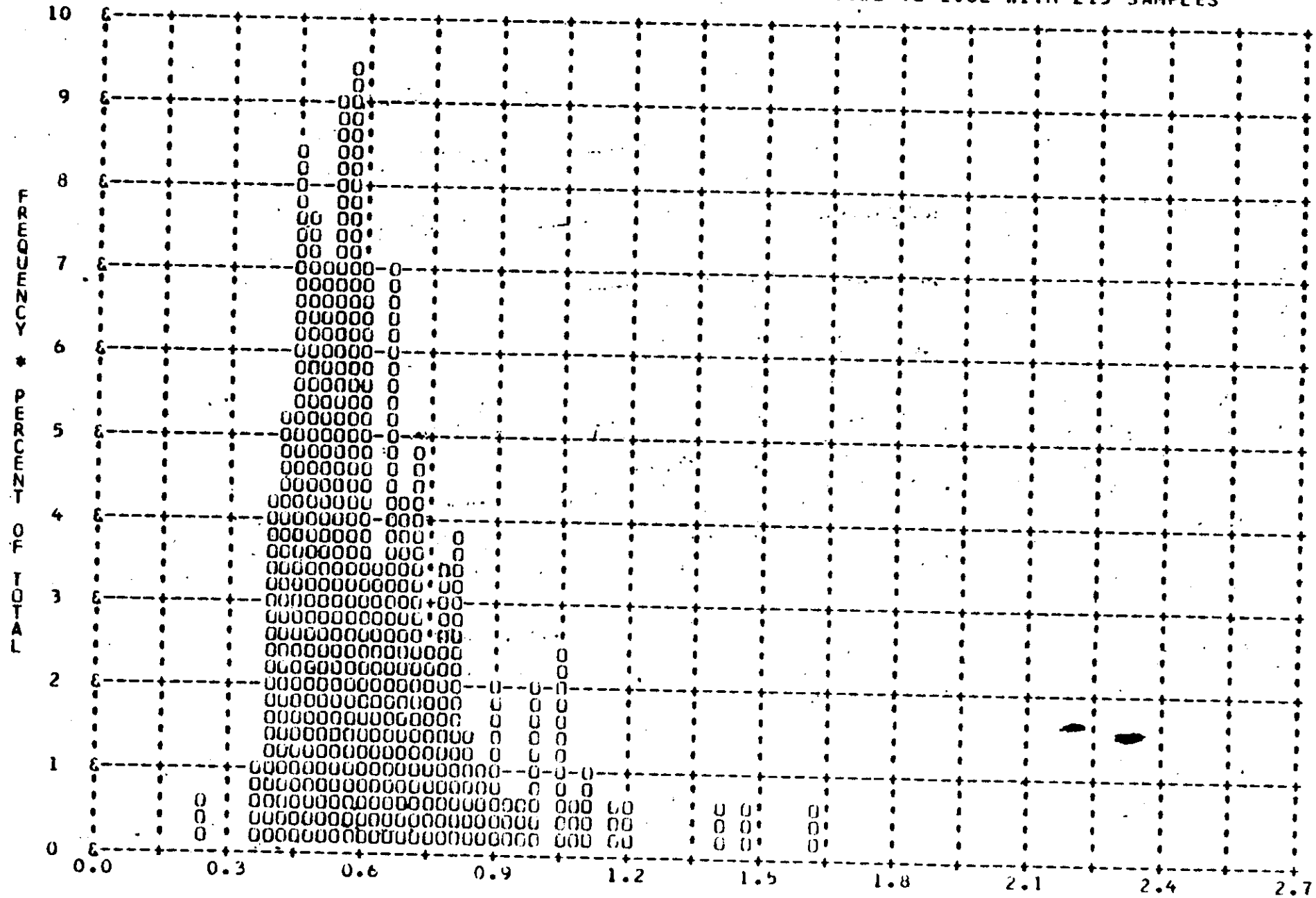
MISSION * 1041-1 * INSTR * AFT * 6/27/67 PLOT OF D MIN * TERRAIN * PROCESSING * ALL LEVELS

AIRTH MEAN * 0.62 * MEDIAN * 0.57 * STD DEV * 0.20 * RANGE * 0.22 TO 1.62 WITH 215 SAMPLES



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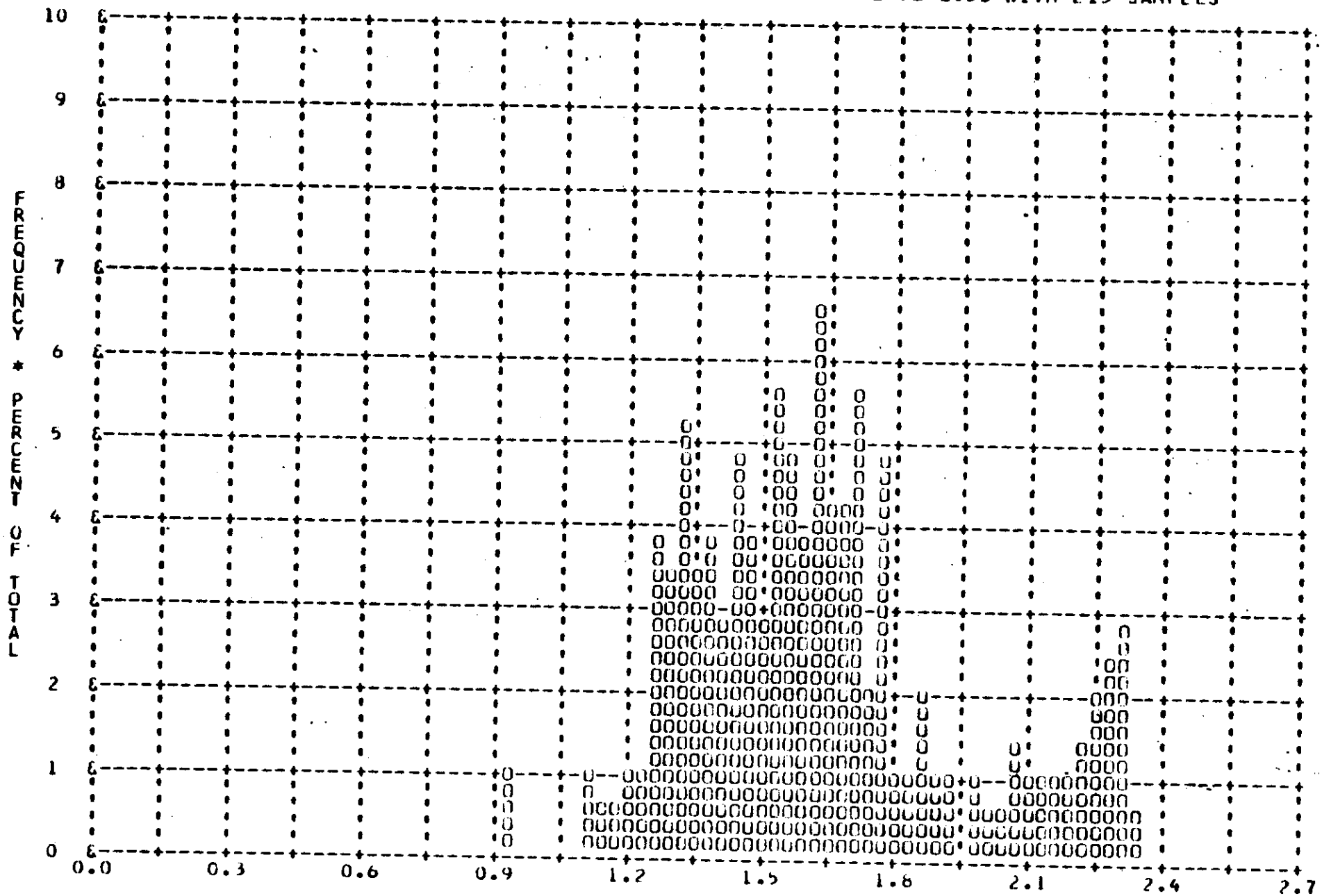
MISSION * 1041-1 * INSTR * AFT * 6/27/67 PLOT OF D MAX * TERRAIN * PROCESSING * ALL LEVELS

AIRTH MEAN * 1.62 * MEDIAN * 1.58 * STD DEV * 0.31 * RANGE * 0.92 TO 2.33 WITH 215 SAMPLES



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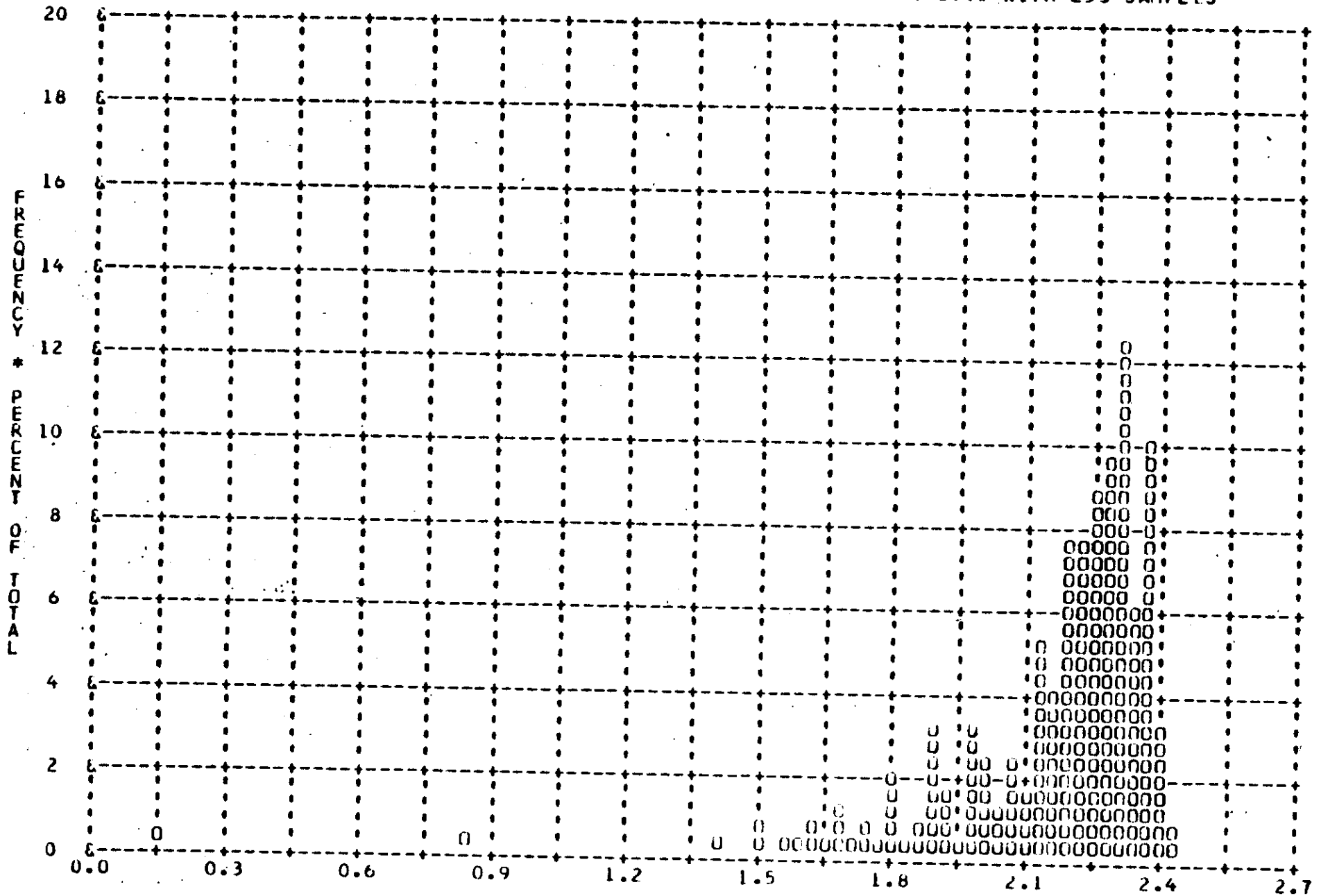
~~TOP SECRET~~ C [redacted]

MISSION * 1041-1 * INSTR * AFT * 6/27/67 PLOT OF D MAX * CLOUD * PROCESSING * ALL LEVELS

AIRTH MEAN * 2.15 * MEDIAN * 2.23 * STD DEV * 0.25 * RANGE * 0.15 TO 2.43 WITH 253 SAMPLES



~~TOP SECRET~~ C [redacted]

MISSION *. 1041-2 * INSTRUMENT * FWD 6/27/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.01	0	0	0	0	0	0	0	0	0	0	0	0
0.02	0	0	0	0	0	0	0	0	0	0	0	0
0.03	0	0	0	0	0	0	0	0	0	0	0	0
0.04	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0
0.06	0	0	0	0	0	0	0	0	0	0	0	0
0.07	0	0	0	0	0	0	0	0	0	0	0	0
0.08	0	0	0	0	0	0	0	0	0	0	0	0
0.09	0	0	0	0	0	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0	0	0	0	0	0
0.11	0	0	0	0	0	0	0	0	0	0	0	0
0.12	0	0	0	0	0	0	0	0	0	0	0	0
0.13	0	0	0	0	0	0	0	0	0	0	0	0
0.14	0	0	0	0	0	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0	0	0	0	0	0
0.16	0	0	0	0	0	0	0	0	0	0	0	0
0.17	0	0	0	0	0	0	0	0	0	0	0	0
0.18	0	0	0	0	0	0	0	0	0	0	0	0
0.19	0	0	0	0	0	0	0	0	0	0	0	0
0.20	0	0	0	0	0	0	0	0	0	0	0	0
0.21	0	0	0	0	0	0	0	0	0	0	0	0
0.22	0	0	0	0	0	0	0	0	0	0	0	0
0.23	0	0	0	0	0	0	0	0	0	0	0	0
0.24	0	0	0	0	0	0	0	0	0	0	0	0
0.25	0	0	0	0	0	0	0	0	0	0	0	0
0.26	0	0	0	0	0	0	0	0	0	0	0	0
0.27	0	0	0	0	0	0	0	0	0	0	0	0
0.28	0	0	0	0	0	0	0	0	0	0	0	0
0.29	0	0	0	0	0	0	0	0	0	0	0	0
0.30	0	0	0	0	0	0	0	0	0	0	0	0
0.31	0	0	0	0	0	0	1	0	0	1	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	1	0	0	1	0	0	2	0	0
0.37	0	0	0	2	0	0	1	0	0	3	0	0
0.38	0	0	0	1	0	0	5	0	0	6	0	0
0.39	0	0	0	1	0	0	2	0	0	3	0	0
0.40	0	0	0	0	0	0	5	0	0	5	0	0
0.41	0	0	0	0	0	0	4	0	0	5	0	0
0.42	0	0	0	1	0	0	4	0	0	5	0	0
0.43	0	0	0	0	0	0	2	0	0	2	0	0
0.44	0	0	0	0	0	0	6	0	0	10	0	0
0.45	0	0	0	0	0	0	5	0	0	5	0	0
0.46	0	0	0	4	0	0	5	0	0	5	0	0
0.47	0	0	0	0	0	0	3	0	0	4	0	0
0.48	0	0	0	1	0	0	0	0	0	0	0	0
0.49	0	0	0	0	0	0	3	0	0	3	0	0
0.50	0	0	0	3	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	15	0	0	48	0	0	63	0	0

TABLE A-3

MISSION * 1041-2 * INSTRUMENT * FWD 6/27/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.51	0	0	0	0	0	0	6	0	0	6	0	0
0.52	0	0	0	1	0	0	5	0	0	6	0	0
0.53	0	0	0	0	0	0	3	0	0	3	0	0
0.54	0	0	0	2	0	0	5	0	0	7	0	0
0.55	0	0	0	0	0	0	3	0	0	3	0	0
0.56	0	0	0	2	0	0	1	0	0	3	0	0
0.57	0	0	0	0	0	0	2	0	0	2	0	0
0.58	0	0	0	2	0	0	2	0	0	4	0	0
0.59	0	0	0	1	0	0	5	0	0	6	0	0
0.60	0	0	0	0	0	0	2	0	0	2	0	0
0.61	0	0	0	2	0	0	5	0	0	7	0	0
0.62	0	0	0	2	0	0	3	0	0	5	0	0
0.63	0	0	0	0	0	0	5	0	0	5	0	0
0.64	0	0	0	2	0	0	4	0	0	6	0	0
0.65	0	0	0	1	0	0	6	0	0	8	0	0
0.66	0	0	0	0	0	0	3	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	5	0	0	5	0	0
0.69	0	0	0	0	0	0	5	0	0	5	0	0
0.70	0	0	0	2	0	0	5	0	0	7	0	0
0.71	0	0	0	0	0	0	4	0	0	4	0	0
0.72	0	0	0	1	0	0	1	0	0	2	0	0
0.73	0	0	0	0	0	0	3	0	0	4	0	0
0.74	0	0	0	1	0	0	1	0	0	2	0	0
0.75	0	0	0	0	0	0	2	0	0	3	0	0
0.76	0	0	0	0	0	0	2	0	0	2	0	0
0.77	0	0	0	1	0	0	1	0	0	2	0	0
0.78	0	0	0	0	0	0	0	0	0	1	0	0
0.79	0	0	0	0	0	0	0	0	0	0	0	0
0.80	0	0	0	1	0	0	4	0	0	5	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	0	0	0	0	0
0.83	0	0	0	0	0	0	1	0	0	1	0	0
0.84	0	0	0	2	0	0	5	0	0	7	0	0
0.85	0	0	0	0	0	0	1	0	0	1	0	0
0.86	0	0	0	0	0	0	1	0	0	1	0	0
0.87	0	0	0	1	0	0	0	0	0	1	0	0
0.88	0	0	0	0	0	0	0	0	0	0	0	0
0.89	0	0	0	0	0	0	0	0	0	0	0	0
0.90	0	0	0	1	0	0	1	0	0	2	0	0
0.91	0	0	0	0	0	0	0	0	0	0	0	0
0.92	0	0	0	0	0	0	0	0	0	0	0	0
0.93	0	0	0	0	0	0	1	0	0	1	0	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	2	0	0	1	0	0	3	0	0
0.97	0	0	0	0	0	0	1	0	0	1	0	0
0.98	0	0	0	1	0	0	1	0	0	1	0	0
0.99	0	0	0	2	0	0	0	0	0	2	0	0
1.00	0	0	0	0	0	0	1	0	0	1	0	0
SUBTOTAL	0	0	0	30	2	0	115	5	0	145	7	0

TABLE A-3

MISSION * 1041-2 * INSTRUMENT * FWD 6/27/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.01	0	0	0	0	0	0	2	2	0	2	2	0
1.02	0	0	0	0	0	0	2	2	0	2	2	0
1.03	0	0	0	2	0	0	1	2	0	3	1	0
1.04	0	0	0	0	0	0	1	2	0	0	2	0
1.05	0	0	0	0	0	0	0	2	0	0	2	0
1.06	0	0	0	1	0	0	0	2	1	1	2	0
1.07	0	0	0	0	0	0	2	1	0	2	1	0
1.08	0	0	0	0	0	0	1	1	0	1	1	0
1.09	0	0	0	0	0	0	1	4	0	0	4	0
1.10	0	0	0	1	0	0	1	1	0	0	2	0
1.11	0	0	0	1	0	0	0	1	0	1	1	0
1.12	0	0	0	0	0	0	0	1	0	0	1	0
1.13	0	0	0	0	0	0	1	0	1	1	0	1
1.14	0	0	0	0	0	0	0	1	1	0	1	1
1.15	0	0	0	0	0	0	0	1	3	0	1	3
1.16	0	0	0	0	0	0	0	0	3	0	0	3
1.17	0	0	0	1	0	0	0	0	3	1	0	3
1.18	0	0	0	0	0	0	0	0	3	0	0	3
1.19	0	0	0	0	0	0	0	0	1	0	0	1
1.20	0	0	0	0	0	0	1	0	0	1	0	0
1.21	0	0	0	0	0	0	1	0	0	1	0	0
1.22	0	0	0	0	0	0	0	0	2	0	0	2
1.23	0	0	0	0	0	0	0	1	0	0	1	0
1.24	0	0	0	0	0	0	0	1	0	0	1	0
1.25	0	0	0	0	0	0	0	1	0	0	1	0
1.26	0	0	0	0	0	0	0	0	3	0	0	3
1.27	0	0	0	0	0	0	0	0	4	0	0	4
1.28	0	0	0	0	0	0	0	0	1	0	0	1
1.29	0	0	0	0	0	0	0	0	4	0	0	4
1.30	0	0	0	0	0	0	0	0	4	0	0	4
1.31	0	0	0	0	0	0	0	0	2	0	0	2
1.32	0	0	0	0	0	0	0	0	2	0	0	2
1.33	0	0	0	0	0	0	0	0	1	0	0	1
1.34	0	0	0	0	0	0	0	0	5	0	0	5
1.35	0	0	0	0	0	0	0	0	3	0	0	3
1.36	0	0	0	0	0	0	0	0	2	0	0	2
1.37	0	0	0	0	0	0	0	0	6	0	0	6
1.38	0	0	0	0	0	0	0	0	3	0	0	3
1.39	0	0	0	0	0	0	0	0	2	0	0	2
1.40	0	0	0	0	0	0	0	0	5	0	0	5
1.41	0	0	0	0	0	0	0	0	2	0	0	2
1.42	0	0	0	0	0	0	0	0	3	0	0	3
1.43	0	0	0	0	0	0	0	0	2	0	0	2
1.44	0	0	0	0	0	0	0	0	5	0	0	5
1.45	0	0	0	0	0	0	0	0	3	0	0	3
1.46	0	0	0	0	0	0	0	0	1	0	0	1
1.47	0	0	0	0	0	0	0	0	4	0	0	4
1.48	0	0	0	0	0	0	0	0	2	0	0	2
1.49	0	0	0	1	0	0	0	0	4	1	0	0
1.50	0	0	0	0	1	0	0	0	3	0	1	0
SUBTOTAL	0	0	0	8	9	0	13	98	2	21	107	2

TABLE A-3

MISSION * 1041-2 * INSTRUMENT * FWD 6/27/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.51	0	0	0	0	0	0	1	3	0	1	3	0
1.52	0	0	0	0	0	0	0	2	0	0	2	0
1.53	0	0	0	0	0	0	0	1	0	0	1	0
1.54	0	0	0	0	0	0	0	1	0	0	1	0
1.55	0	0	0	0	2	0	0	3	0	0	5	0
1.56	0	0	0	0	1	0	0	0	0	0	1	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	2	0	0	3	0	0	5	0
1.60	0	0	0	0	2	0	0	1	1	0	3	1
1.61	0	0	0	0	0	0	0	1	0	0	1	0
1.62	0	0	0	0	0	0	0	0	0	0	0	0
1.63	0	0	0	0	0	0	0	6	0	0	6	0
1.64	0	0	0	0	1	0	0	5	0	0	6	0
1.65	0	0	0	0	1	1	0	2	0	0	3	1
1.66	0	0	0	0	1	0	0	2	0	0	3	0
1.67	0	0	0	0	0	0	0	1	0	0	1	0
1.68	0	0	0	0	0	1	0	1	1	0	1	1
1.69	0	0	0	0	3	1	0	2	0	0	5	1
1.70	0	0	0	0	0	1	0	1	0	0	1	1
1.71	0	0	0	0	0	1	0	0	0	0	0	1
1.72	0	0	0	0	1	0	0	1	0	0	1	1
1.73	0	0	0	0	1	2	0	0	1	0	1	2
1.74	0	0	0	0	2	1	0	0	1	0	2	1
1.75	0	0	0	0	2	0	0	1	0	0	2	0
1.76	0	0	0	0	3	0	0	1	1	0	4	1
1.77	0	0	0	0	0	0	0	1	0	0	4	0
1.78	0	0	0	0	1	0	0	3	1	0	4	1
1.79	0	0	0	0	1	2	0	1	0	0	2	2
1.80	0	0	0	0	2	0	0	0	2	0	2	2
1.81	0	0	0	0	0	2	0	0	2	0	2	2
1.82	0	0	0	0	1	0	0	2	1	0	3	1
1.83	0	0	0	0	1	1	0	2	0	0	3	1
1.84	0	0	0	0	1	0	0	3	1	0	4	2
1.85	0	0	0	0	0	1	0	1	1	0	2	2
1.86	0	0	0	0	0	1	0	0	1	0	1	2
1.87	0	0	0	0	3	1	0	2	0	0	5	1
1.88	0	0	0	0	2	3	0	0	0	0	2	3
1.89	0	0	0	0	0	1	0	0	1	0	0	1
1.90	0	0	0	0	1	0	0	0	0	0	1	0
1.91	0	0	0	0	0	1	0	1	0	0	1	1
1.92	0	0	0	0	0	2	0	0	1	0	1	2
1.93	0	0	0	0	1	1	0	0	0	0	1	1
1.94	0	0	0	0	1	0	0	0	1	0	1	1
1.95	0	0	0	0	0	0	0	0	1	0	0	1
1.96	0	0	0	0	1	3	0	2	0	0	3	3
1.97	0	0	0	0	0	0	0	0	1	0	0	1
1.98	0	0	0	0	1	1	0	0	1	0	1	2
1.99	0	0	0	0	0	1	0	1	0	0	1	1
2.00	0	0	0	0	0	1	0	1	0	0	1	1
SUBTOTAL	0	0	0	0	37	26	1	58	19	1	95	45

TABLE A-3

~~TOP SECRET~~ C[redacted]

MISSION * 1041-2 * INSTRUMENT * FWD 6/27/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.01	0	0	0	0	0	0	0	1	3	0	1	3
2.02	0	0	0	0	0	1	0	0	1	0	0	1
2.03	0	0	0	0	0	2	0	0	3	0	0	2
2.04	0	0	0	0	0	2	0	0	4	0	0	2
2.05	0	0	0	0	0	3	0	0	4	0	0	3
2.06	0	0	0	0	0	4	0	0	4	0	0	4
2.07	0	0	0	0	0	1	0	0	4	0	0	2
2.08	0	0	0	0	0	3	0	0	4	0	0	3
2.09	0	0	0	0	0	0	0	0	4	0	0	2
2.10	0	0	0	0	0	2	0	0	4	0	0	3
2.11	0	0	0	0	0	1	0	0	4	0	0	3
2.12	0	0	0	0	0	2	0	0	4	0	0	3
2.13	0	0	0	0	0	1	0	0	4	0	0	3
2.14	0	0	0	0	0	3	0	0	4	0	0	3
2.15	0	0	0	0	0	2	0	0	4	0	0	3
2.16	0	0	0	0	0	4	0	0	4	0	0	4
2.17	0	0	0	0	0	1	0	0	4	0	0	3
2.18	0	0	0	0	0	0	0	0	4	0	0	3
2.19	0	0	0	0	0	1	0	0	4	0	0	3
2.20	0	0	0	0	0	2	0	0	4	0	0	3
2.21	0	0	0	0	0	5	0	0	4	0	0	3
2.22	0	0	0	0	0	3	0	0	4	0	0	3
2.23	0	0	0	0	0	1	0	0	4	0	0	3
2.24	0	0	0	0	0	2	0	0	4	0	0	3
2.25	0	0	0	0	0	1	0	0	4	0	0	3
2.26	0	0	0	0	0	0	0	0	4	0	0	3
2.27	0	0	0	0	0	1	0	0	4	0	0	3
2.28	0	0	0	0	0	0	0	0	4	0	0	3
2.29	0	0	0	0	0	1	0	0	4	0	0	3
2.30	0	0	0	0	0	0	0	0	4	0	0	3
2.31	0	0	0	0	0	1	0	0	4	0	0	3
2.32	0	0	0	0	0	0	0	0	4	0	0	3
2.33	0	0	0	0	0	1	0	0	4	0	0	3
2.34	0	0	0	0	0	0	0	0	4	0	0	3
2.35	0	0	0	0	0	1	0	0	4	0	0	3
2.36	0	0	0	0	0	0	0	0	4	0	0	3
2.37	0	0	0	0	0	1	0	0	4	0	0	3
2.38	0	0	0	0	0	0	0	0	4	0	0	3
2.39	0	0	0	0	0	1	0	0	4	0	0	3
2.40	0	0	0	0	0	0	0	0	4	0	0	3
2.41	0	0	0	0	0	1	0	0	4	0	0	3
2.42	0	0	0	0	0	0	0	0	4	0	0	3
2.43	0	0	0	0	0	1	0	0	4	0	0	3
2.44	0	0	0	0	0	0	0	0	4	0	0	3
2.45	0	0	0	0	0	1	0	0	4	0	0	3
2.46	0	0	0	0	0	0	0	0	4	0	0	3
2.47	0	0	0	0	0	1	0	0	4	0	0	3
2.48	0	0	0	0	0	0	0	0	4	0	0	3
2.49	0	0	0	0	0	1	0	0	4	0	0	3
2.50	0	0	0	0	0	0	0	0	4	0	0	3
SUBTOTAL	0	0	0	0	5	58	0	16	171	0	21	229

~~TOP SECRET~~ C[redacted]

TABLE A-3

~~TOP SECRET~~ C [redacted]

MISSION * 1041-2 * INSTRUMENT * FWD 6/27/67 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	53	53	84	177	177	192	230	230	276

MISSION 1041-2 INSTR - FWD 6/27/67 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	27 PC	27 PC
INTERMEDIATE	53	0 PC	9 PC	66 PC	21 PC	4 PC
FULL	177	5 PC	0 PC	85 PC	10 PC	0 PC
ALL LEVELS	230	4 PC	2 PC	80 PC	13 PC	1 PC

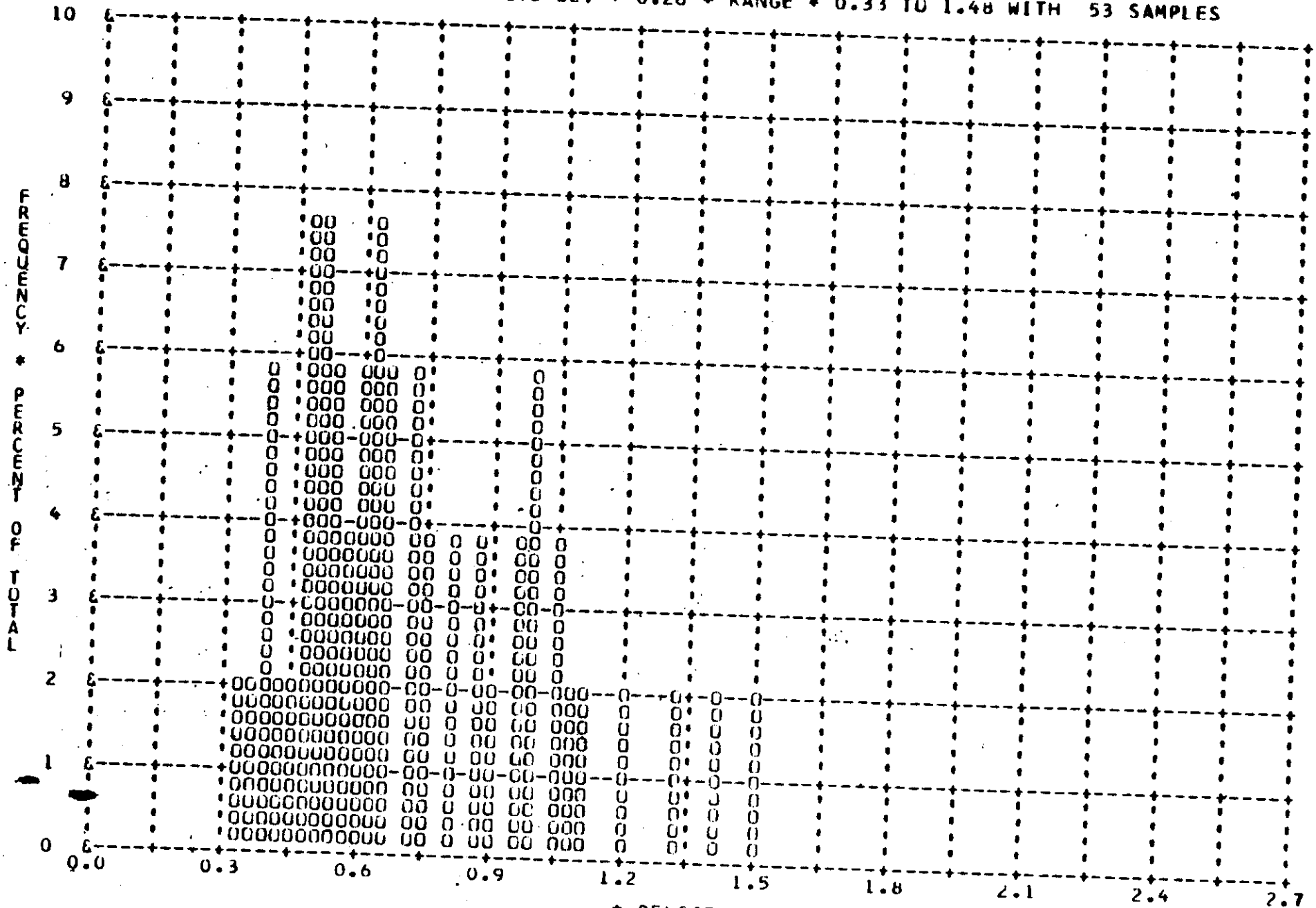
PROCESS LEVEL	BASE & FOG	UNDER EXPOSED	UNDER PROCESSED	CORRECT EXP&PROC	OVER PROCESSED	OVER EXPOSED
PRIMARY	0.01-0.09	0.01-0.13	0.14-0.39	0.40-0.90	---------	0.91 AND UP
INTERMED	0.10-0.17	0.01-0.20	0.21-0.39	0.40-0.90	0.91-1.34	1.35 AND UP
FULL	0.18 AND UP	0.01-0.39	---------	0.40-0.90	0.91-1.69	1.70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

~~TOP SECRET~~ C [redacted]

TABLE A-3

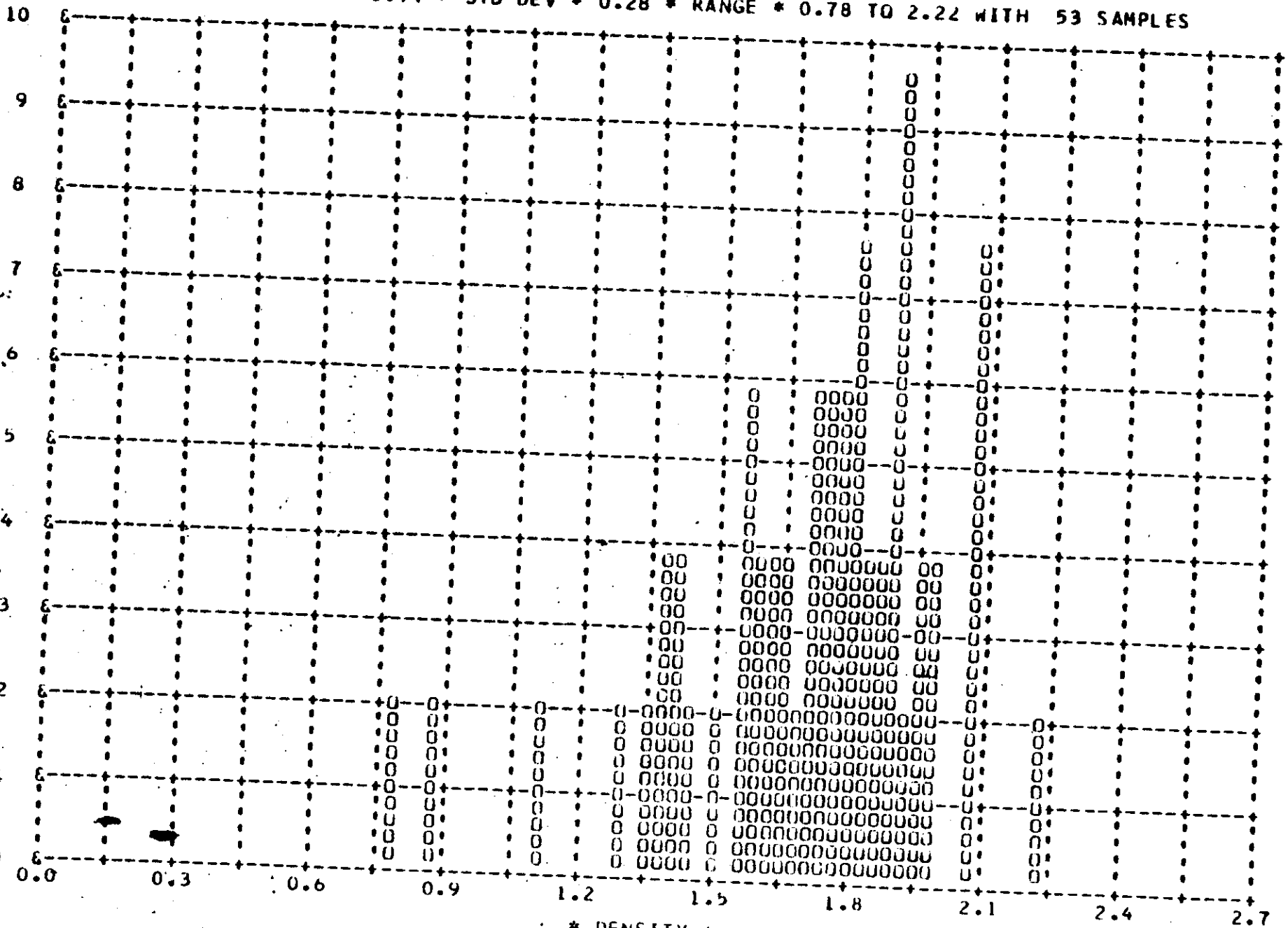
MISSION * 1041-2 * INSTR * FWD * 6/27/67 PLOT OF D MIN * TERRAIN * PROCESSING * INTERMEDIATE

AIRTH MEAN * 0.71 * MEDIAN * 0.62 * STD DEV * 0.28 * RANGE * 0.33 TO 1.48 WITH 53 SAMPLES



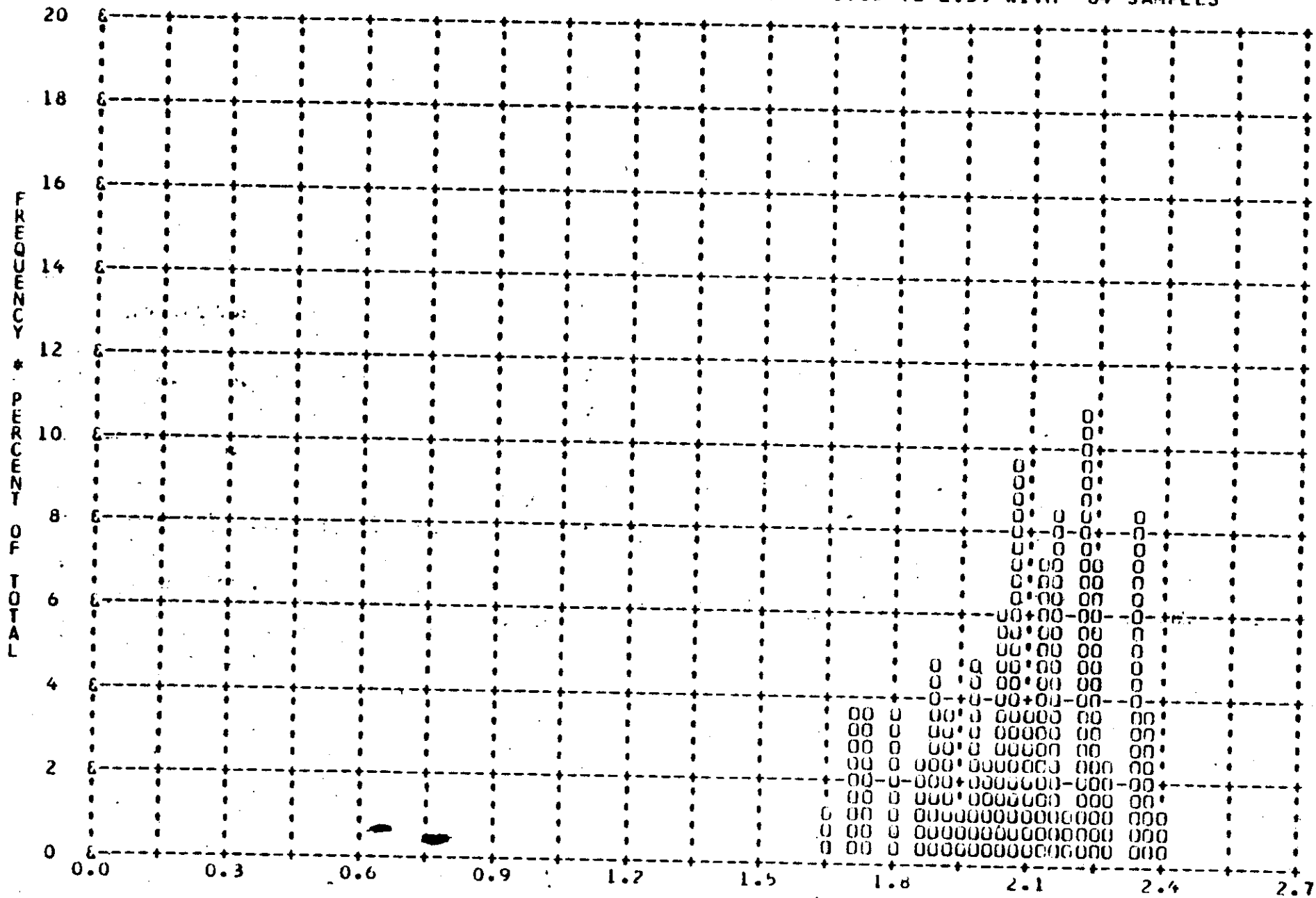
MISSION * 1041-2 * INSTR * FWD * 6/27/67 PLOT OF D MAX * TERRAIN * PROCESSING * INTERMEDIATE

AIRTH MEAN * 1.69 * MEDIAN * 1.74 * STD DEV * 0.28 * RANGE * 0.78 TO 2.22 WITH 53 SAMPLES



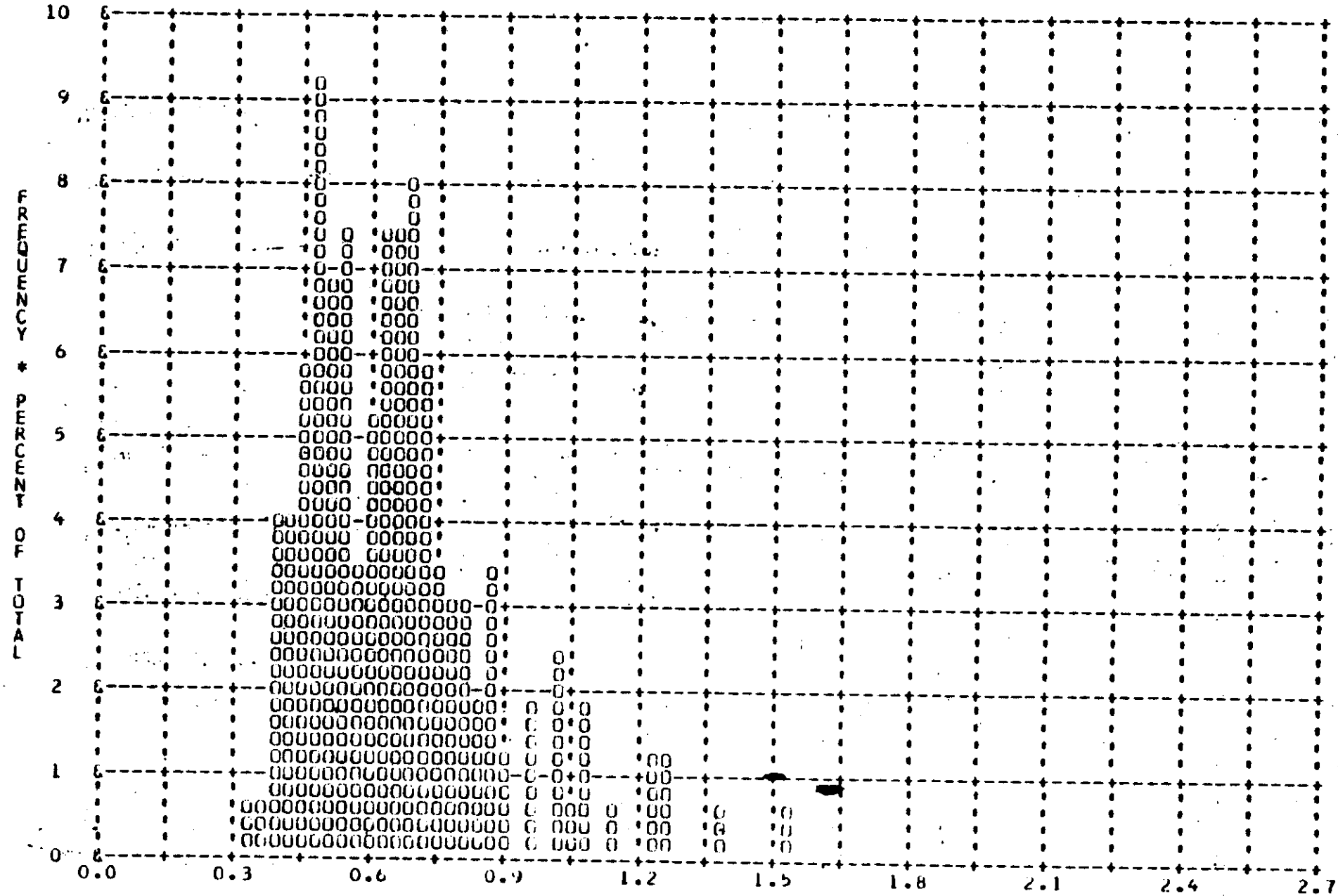
MISSION * 1041-2 * INSTR * FWD * 6/27/67 PLOT OF D MAX * CLOUD * PROCESSING * INTERMEDIATE

AIRTH MEAN * 2.08 * MEDIAN * 2.11 * STD DEV * 0.19 * RANGE * 1.65 TO 2.39 WITH 84 SAMPLES



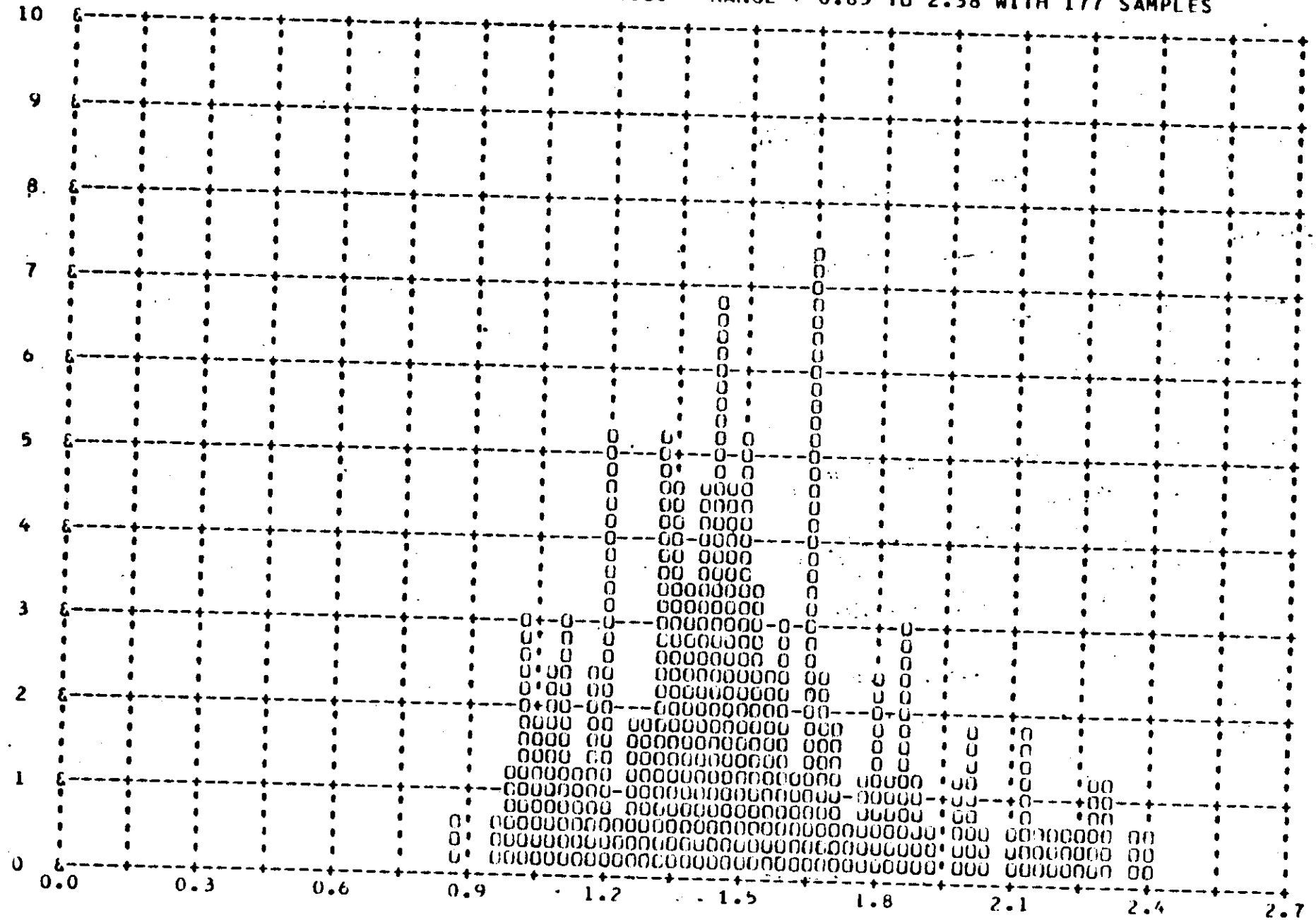
MISSION * 1041-2 * INSTR * FWD * 6/27/67 PLOT OF D MIN * TERRAIN * PROCESSING * FULL

AIRTH MEAN * 0.65 * MEDIAN * 0.62 * STD DEV * 0.21 * RANGE * 0.31 TO 1.51 WITH 177 SAMPLES



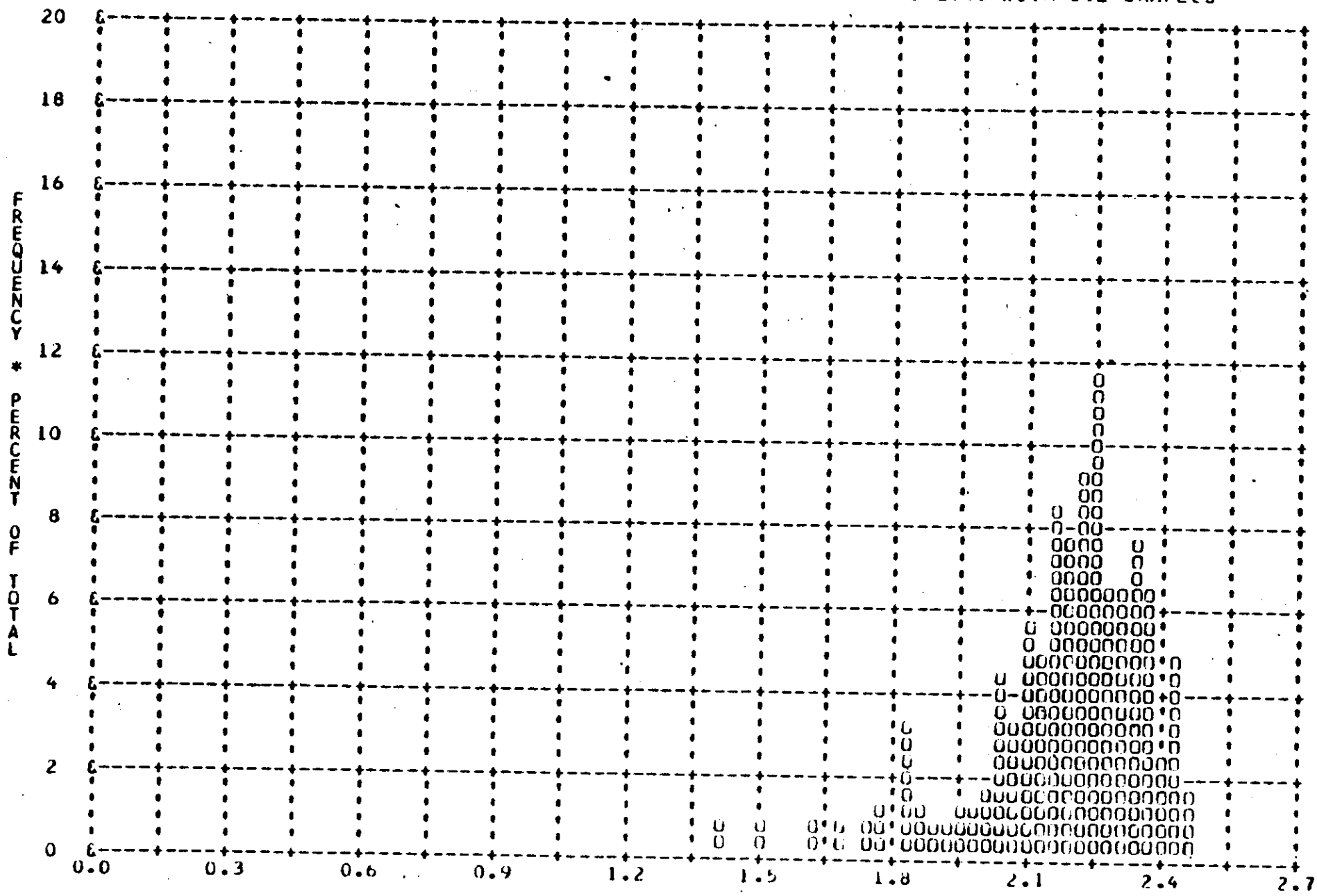
MISSION * 1041-2 * INSTR * FWD * 6/27/67 PLOT OF D MAX * TERRAIN * PROCESSING * FULL

AIRTH MEAN * 1.50 * MEDIAN * 1.45 * STD DEV * 0.33 * RANGE * 0.85 TO 2.38 WITH 177 SAMPLES



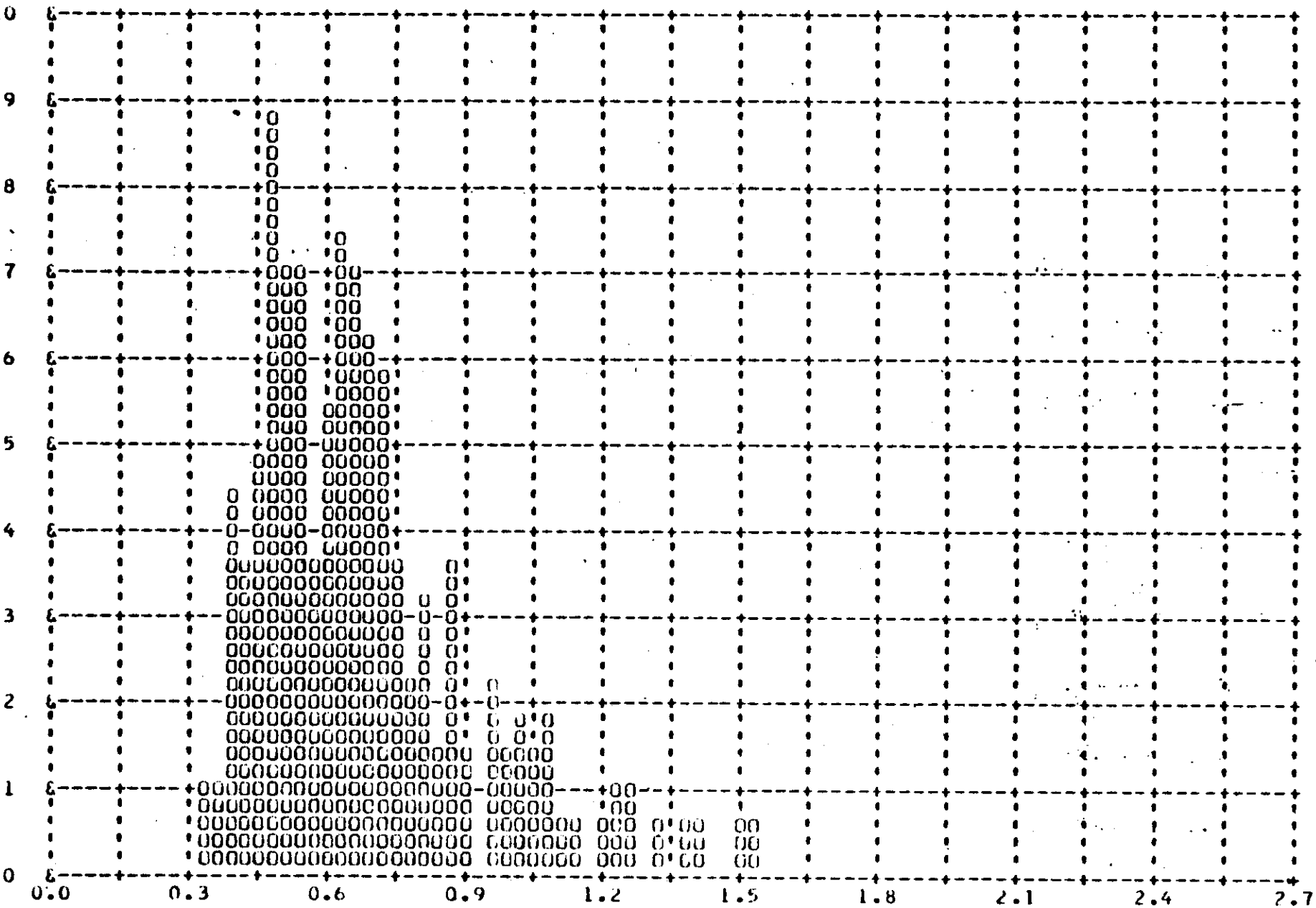
MISSION * 1041-2 * INSTR * FWD * 6/27/67 PLOT OF D MAX * CLOUD * PROCESSING * FULL

AIRTH MEAN * 2.18 * MEDIAN * 2.21 * STD DEV * 0.18 * RANGE * 1.40 TO 2.46 WITH 192 SAMPLES



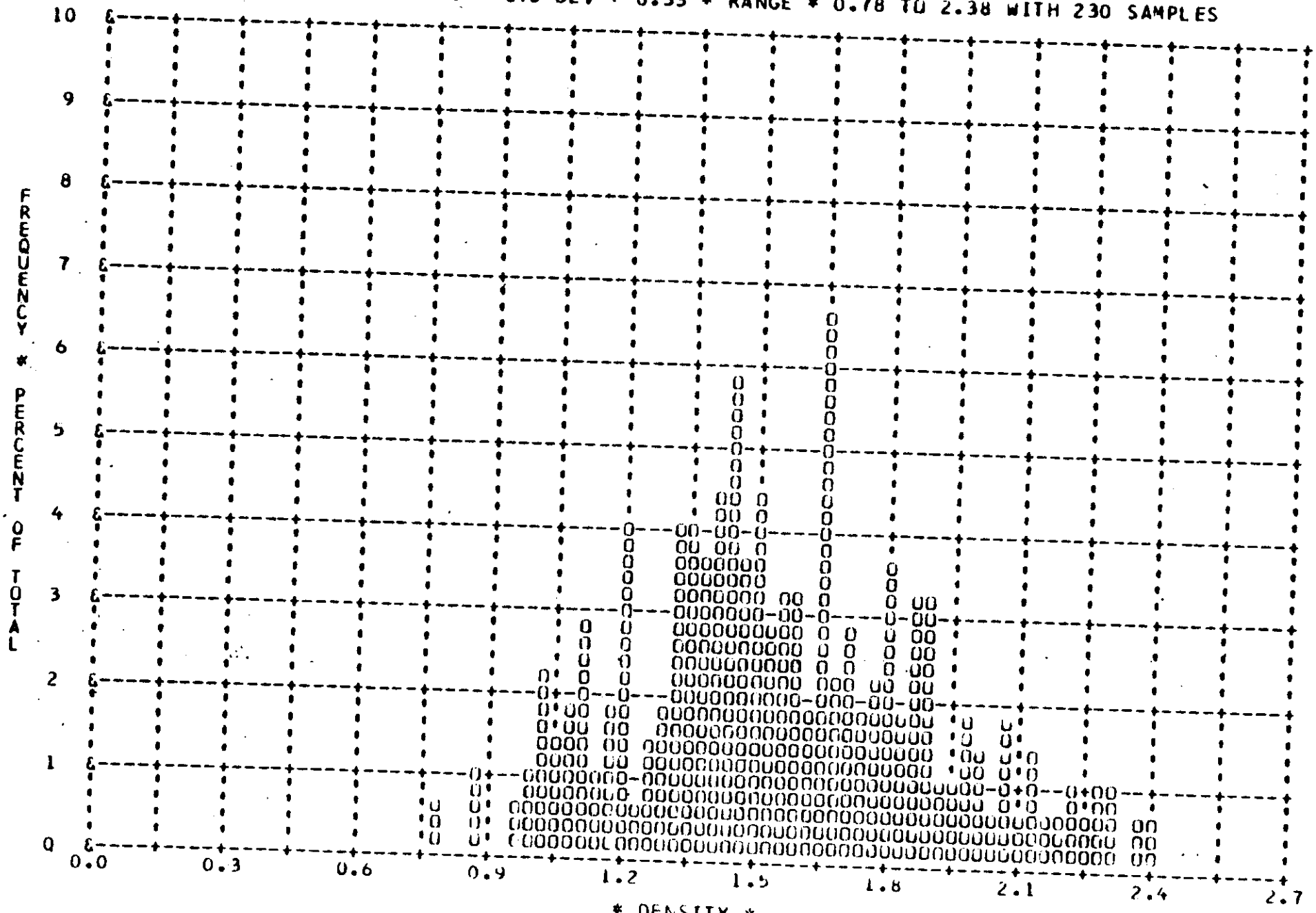
MISSION * 1041-2 * INSTR * FWD * 6/27/67 PLOT OF D MIN * TERRAIN * PROCESSING * ALL LEVELS

AIRTH MEAN * 0.66 * MEDIAN * 0.62 * STD DEV * 0.23 * RANGE * 0.31 TO 1.51 WITH 230 SAMPLES



MISSION * 1041-2 * INSTR * FWD * 6/27/67 PLOT OF D MAX * TERRAIN * PROCESSING * ALL LEVELS

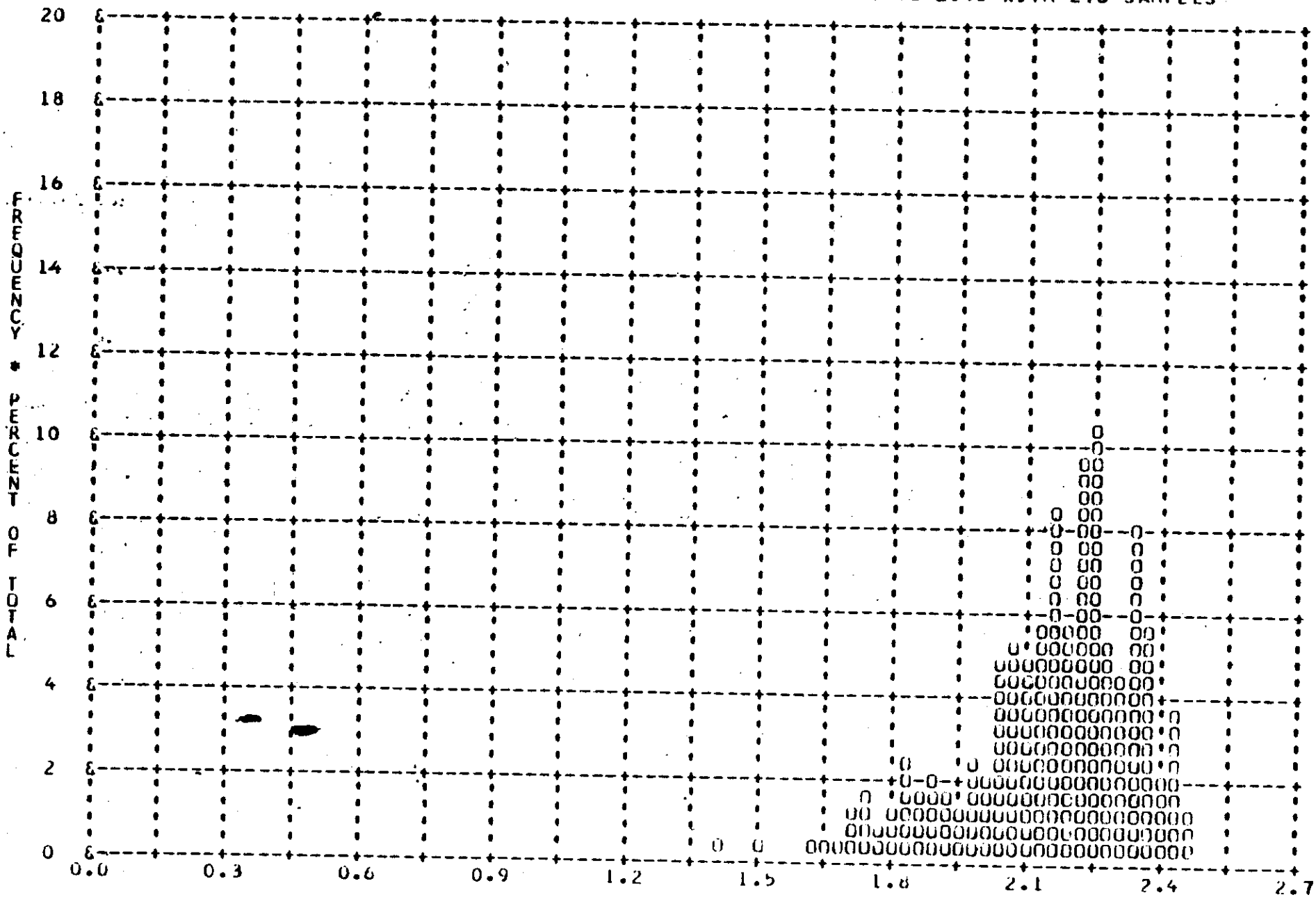
AIRTH MEAN * 1.54 * MEDIAN * 1.51 * STD DEV * 0.33 * RANGE * 0.78 TO 2.38 WITH 230 SAMPLES



~~TOP SECRET~~ C[redacted]

MISSION * 1041-2 * INSTR * FWD * 6/27/67 PLOT OF D MAX * CLOUD * PROCESSING * ALL LEVELS

AIRTH MEAN * 2.15 * MEDIAN * 2.19 * STD DEV * 0.19 * RANGE * 1.40 TO 2.46 WITH 276 SAMPLES



~~TOP SECRET~~ C[redacted]

MISSION * 1041-2 * INSTRUMENT * AFT 6/27/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.01	0	0	0	0	0	0	0	0	0	0	0	0
0.02	0	0	0	0	0	0	0	0	0	0	0	0
0.03	0	0	0	0	0	0	0	0	0	0	0	0
0.04	0	0	0	0	0	0	0	0	0	0	0	0
0.05	0	0	0	0	0	0	0	0	0	0	0	0
0.06	0	0	0	0	0	0	0	0	0	0	0	0
0.07	0	0	0	0	0	0	0	0	0	0	0	0
0.08	0	0	0	0	0	0	0	0	0	0	0	0
0.09	0	0	0	0	0	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0	0	0	0	0	0
0.11	0	0	0	0	0	0	0	0	0	0	0	0
0.12	0	0	0	0	0	0	0	0	0	0	0	0
0.13	0	0	0	0	0	0	0	0	0	0	0	0
0.14	0	0	0	0	0	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0	0	0	0	0	0
0.16	0	0	0	0	0	0	0	0	0	0	0	0
0.17	0	0	0	0	0	0	1	0	0	1	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	1	0	0	1	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	1	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	2	0	0	2	0	0
0.31	0	0	0	1	0	0	1	0	0	2	0	0
0.32	0	0	0	0	0	0	1	0	0	1	0	0
0.33	0	0	0	1	0	0	2	0	0	3	0	0
0.34	0	0	0	0	0	0	2	0	0	2	0	0
0.35	0	0	0	1	0	0	2	0	0	3	0	0
0.36	0	0	0	0	0	0	1	0	0	1	0	0
0.37	0	0	0	1	0	0	2	0	0	3	0	0
0.38	0	0	0	1	0	0	2	0	0	3	0	0
0.39	0	0	0	2	0	0	3	0	0	5	0	0
0.40	0	0	0	1	0	0	1	0	0	2	0	0
0.41	0	0	0	0	0	0	2	0	0	2	0	0
0.42	0	0	0	3	0	0	1	0	0	4	0	0
0.43	0	0	0	4	0	0	4	0	0	8	0	0
0.44	0	0	0	1	0	0	4	0	0	5	0	0
0.45	0	0	0	1	0	0	5	0	0	6	0	0
0.46	0	0	0	1	0	0	9	0	0	10	0	0
0.47	0	0	0	3	0	0	6	0	0	9	0	0
0.48	0	0	0	3	0	0	4	0	0	7	0	0
0.49	0	0	0	1	0	0	3	0	0	4	0	0
0.50	0	0	0	0	0	0	4	0	0	4	0	0
SUBTOTAL	0	0	0	25	0	0	64	0	0	89	0	0

TABLE A-4

~~TOP SECRET~~ C [redacted]

MISSION * 1041-2 * INSTRUMENT * AFT 6/27/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
0.51	0	0	0	2	0	0	0	0	0	2	0	0
0.52	0	0	0	1	0	0	2	0	0	3	0	0
0.53	0	0	0	3	0	0	6	0	0	9	0	0
0.54	0	0	0	2	0	0	5	0	0	7	0	0
0.55	0	0	0	1	0	0	3	0	0	4	0	0
0.56	0	0	0	1	0	0	5	0	0	6	0	0
0.57	0	0	0	0	0	0	6	0	0	6	0	0
0.58	0	0	0	3	0	0	3	0	0	6	0	0
0.59	0	0	0	0	0	0	2	0	0	2	0	0
0.60	0	0	0	1	0	0	4	0	0	5	0	0
0.61	0	0	0	2	0	0	7	0	0	9	0	0
0.62	0	0	0	0	0	0	1	1	0	1	1	0
0.63	0	0	0	1	0	0	2	1	0	3	1	0
0.64	0	0	0	1	0	0	1	0	0	2	0	0
0.65	0	0	0	1	0	0	1	0	0	2	0	0
0.66	0	0	0	1	0	0	1	0	0	2	0	0
0.67	0	0	0	3	0	0	1	0	0	4	0	0
0.68	0	0	0	2	0	0	1	0	0	3	0	0
0.69	0	0	0	0	0	0	7	0	0	7	0	0
0.70	0	0	0	0	0	0	4	0	0	4	0	0
0.71	0	0	0	1	0	0	2	0	0	3	0	0
0.72	0	0	0	0	0	0	1	0	0	1	0	0
0.73	0	0	0	1	0	0	2	0	0	3	0	0
0.74	0	0	0	2	0	0	3	0	0	5	0	0
0.75	0	0	0	1	0	0	3	0	0	4	0	0
0.76	0	0	0	1	0	0	4	0	0	5	0	0
0.77	0	0	0	4	0	0	4	0	0	8	0	0
0.78	0	0	0	1	0	0	0	0	0	1	0	0
0.79	0	0	0	0	0	0	2	0	0	2	0	0
0.80	0	0	0	1	0	0	0	0	0	1	0	0
0.81	0	0	0	0	0	0	1	0	0	1	0	0
0.82	0	0	0	2	0	0	2	0	0	4	0	0
0.83	0	0	0	1	0	0	1	0	0	2	0	0
0.84	0	0	0	0	0	0	3	0	0	3	0	0
0.85	0	0	0	0	0	0	2	1	0	2	1	0
0.86	0	0	0	2	0	0	0	1	0	2	1	0
0.87	0	0	0	1	0	0	1	0	0	2	0	0
0.88	0	0	0	1	0	0	2	0	0	3	0	0
0.89	0	0	0	1	0	0	1	0	0	1	0	0
0.90	0	0	0	0	0	0	1	0	0	1	0	0
0.91	0	0	0	1	0	0	0	0	0	1	0	0
0.92	0	0	0	0	0	0	1	0	0	1	0	0
0.93	0	0	0	0	1	0	0	0	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	0	0	0	0	0	0
0.96	0	0	0	0	0	0	1	0	0	1	0	0
0.97	0	0	0	1	0	0	0	1	0	1	1	0
0.98	0	0	0	0	0	0	0	0	0	0	0	0
0.99	0	0	0	0	0	0	1	0	0	1	0	0
1.00	0	0	0	0	0	0	0	1	0	0	1	0
SUBTOTAL	0	0	0	46	1	0	100	6	0	146	7	0

~~TOP SECRET~~ C [redacted]

TABLE A-4

~~TOP SECRET~~ C[redacted]

MISSION * 1041-2 * INSTRUMENT * AFT 6/27/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.01	0	0	0	0	0	0	0	0	0	0	0	0
1.02	0	0	0	0	0	0	0	0	0	0	0	0
1.03	0	0	0	0	0	0	0	1	0	0	1	0
1.04	0	0	0	0	1	0	0	1	0	0	1	0
1.05	0	0	0	0	0	1	1	0	0	1	0	1
1.06	0	0	0	0	0	1	0	1	0	0	1	1
1.07	0	0	0	0	1	0	1	0	0	1	1	0
1.08	0	0	0	0	1	0	1	2	0	1	2	0
1.09	0	0	0	0	0	0	1	0	0	1	0	1
1.10	0	0	0	0	0	0	1	1	0	1	1	0
1.11	0	0	0	0	0	1	1	1	0	1	1	1
1.12	0	0	0	0	0	1	1	1	0	1	1	1
1.13	0	0	0	1	0	0	1	0	0	1	1	0
1.14	0	0	0	1	0	0	0	1	0	1	1	0
1.15	0	0	0	1	0	0	0	1	0	1	1	0
1.16	0	0	0	1	0	0	0	1	0	1	1	0
1.17	0	0	0	1	0	0	0	2	0	1	2	0
1.18	0	0	0	0	2	0	0	0	0	0	2	0
1.19	0	0	0	0	2	0	0	0	0	0	2	0
1.20	0	0	0	0	1	0	0	2	0	0	3	0
1.21	0	0	0	0	1	0	0	4	0	0	5	0
1.22	0	0	0	0	1	0	0	3	0	0	3	0
1.23	0	0	0	0	0	1	0	1	0	0	1	0
1.24	0	0	0	0	0	1	0	2	0	0	3	0
1.25	0	0	0	0	0	1	0	2	0	0	3	0
1.26	0	0	0	0	1	0	0	2	0	0	3	0
1.27	0	0	0	0	1	0	0	3	0	0	3	0
1.28	0	0	0	0	0	2	0	2	0	0	2	0
1.29	0	0	0	0	2	0	0	2	0	0	4	0
1.30	0	0	0	0	1	0	0	4	0	0	5	0
1.31	0	0	0	0	1	0	0	5	0	0	5	0
1.32	0	0	0	0	1	0	0	1	0	0	2	0
1.33	0	0	0	0	1	0	0	4	0	0	5	0
1.34	0	0	0	0	1	0	0	4	0	0	5	0
1.35	0	0	0	0	1	0	0	3	0	0	4	0
1.36	0	0	0	0	1	0	0	4	0	0	5	0
1.37	0	0	0	0	1	0	0	4	0	0	5	0
1.38	0	0	0	0	1	0	0	2	0	0	3	0
1.39	0	0	0	0	0	0	0	3	0	0	3	0
1.40	0	0	0	0	0	0	1	0	0	1	0	0
1.41	0	0	0	0	0	1	0	2	0	0	2	0
1.42	0	0	0	0	1	0	0	5	0	0	6	0
1.43	0	0	0	0	1	0	0	1	0	0	2	0
1.44	0	0	0	0	1	0	0	3	0	0	4	0
1.45	0	0	0	0	0	1	0	4	0	0	4	0
1.46	0	0	0	0	0	1	0	3	0	0	3	0
1.47	0	0	0	0	0	0	0	1	0	0	1	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	2	21	2	6	84	0	8	105	2

~~TOP SECRET~~ C[redacted]

TABLE A-4

~~TOP SECRET~~ C[redacted]

MISSION * 1041-2 * INSTRUMENT * AFT 6/27/67 DENSITY FREQ DISTR

DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
1.51	0	0	0	0	0	0	0	3	0	0	3	0
1.52	0	0	0	0	1	0	0	1	0	0	2	0
1.53	0	0	0	0	0	0	0	3	0	0	3	0
1.54	0	0	0	0	0	0	0	2	0	0	2	0
1.55	0	0	0	0	1	0	0	4	0	0	5	0
1.56	0	0	0	0	1	0	0	2	1	0	3	1
1.57	0	0	0	0	3	0	0	3	0	0	6	0
1.58	0	0	0	0	2	0	0	3	0	0	5	0
1.59	0	0	0	0	0	0	0	0	1	0	0	1
1.60	0	0	0	0	1	0	0	4	1	0	5	1
1.61	0	0	0	0	1	0	0	4	0	0	5	0
1.62	0	0	0	0	1	0	0	2	0	0	3	0
1.63	0	0	0	0	0	0	0	2	0	0	2	0
1.64	0	0	0	0	1	0	0	1	1	0	2	1
1.65	0	0	0	0	3	0	0	0	4	0	3	0
1.66	0	0	0	0	3	0	0	4	0	0	7	0
1.67	0	0	0	0	1	0	0	0	1	0	1	0
1.68	0	0	0	0	3	0	0	1	0	0	4	0
1.69	0	0	0	0	0	0	0	1	0	0	1	0
1.70	0	0	0	0	4	1	0	0	0	0	4	1
1.71	0	0	0	0	3	1	0	3	0	0	6	1
1.72	0	0	0	0	2	0	0	1	0	0	3	0
1.73	0	0	0	0	2	0	0	2	0	0	2	0
1.74	0	0	0	0	0	0	0	0	0	0	0	0
1.75	0	0	0	0	1	1	0	2	0	0	3	1
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	0	0
1.78	0	0	0	0	0	0	0	0	0	0	0	0
1.79	0	0	0	0	0	0	0	0	1	0	0	1
1.80	0	0	0	0	1	0	0	2	1	0	3	1
1.81	0	0	0	0	0	2	0	2	0	0	2	2
1.82	0	0	0	0	1	0	0	0	2	0	1	2
1.83	0	0	0	0	0	0	0	1	2	0	1	2
1.84	0	0	0	0	0	1	0	0	1	0	0	2
1.85	0	0	0	0	1	2	0	2	0	0	3	2
1.86	0	0	0	0	0	2	0	0	2	0	0	4
1.87	0	0	0	0	1	1	0	0	1	0	1	2
1.88	0	0	0	0	0	1	0	0	1	0	0	2
1.89	0	0	0	0	1	0	0	0	0	0	1	0
1.90	0	0	0	0	0	0	0	1	2	0	1	2
1.91	0	0	0	0	1	0	0	2	3	0	3	3
1.92	0	0	0	0	0	5	0	0	1	0	0	6
1.93	0	0	0	0	1	0	0	0	1	0	1	1
1.94	0	0	0	0	0	0	0	1	2	0	1	2
1.95	0	0	0	0	0	1	0	0	0	0	0	1
1.96	0	0	0	0	0	0	0	0	1	0	0	1
1.97	0	0	0	0	0	0	0	0	1	0	0	1
1.98	0	0	0	0	0	0	0	1	2	0	1	2
1.99	0	0	0	0	0	0	0	1	1	0	1	1
2.00	0	0	0	0	0	0	0	2	1	0	2	1
SUBTOTAL	0	0	0	0	40	17	0	67	28	0	107	45

~~TOP SECRET~~ C[redacted]

TABLE A-4

~~TOP SECRET~~ C [redacted]

MISSION * 1041-2 * INSTRUMENT * AFT 6/27/67 DENSITY FREQ DISTR

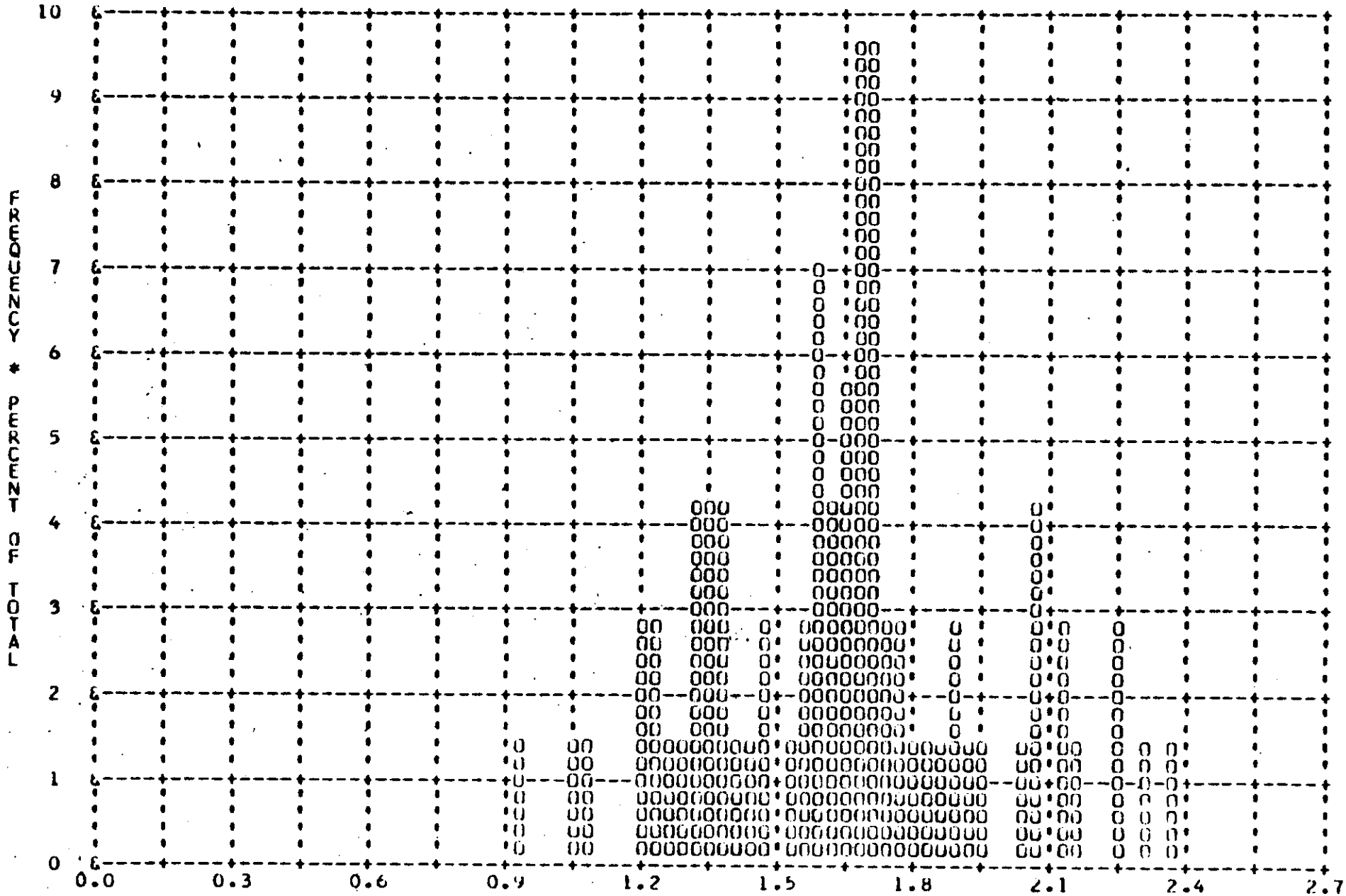
DENSITY VALUE	PRIMARY MIN	PRIMARY MAX	PRIMARY LIM	INTERMEDIATE MIN	INTERMEDIATE MAX	INTERMEDIATE LIM	FULL MIN	FULL MAX	FULL LIM	ALL LEVELS MIN	ALL LEVELS MAX	ALL LEVELS LIM
2.01	0	0	0	0	0	0	0	1	1	0	1	1
2.02	0	0	0	0	1	1	0	1	2	0	1	2
2.03	0	0	0	0	1	2	0	1	3	0	1	3
2.04	0	0	0	0	0	4	0	0	1	0	0	5
2.05	0	0	0	0	0	4	0	0	1	0	0	5
2.06	0	0	0	0	2	1	0	1	2	0	3	3
2.07	0	0	0	0	1	3	0	1	3	0	2	4
2.08	0	0	0	0	0	3	0	0	3	0	0	3
2.09	0	0	0	0	0	3	0	0	3	0	0	3
2.10	0	0	0	0	0	2	0	0	2	0	0	2
2.11	0	0	0	0	0	2	0	0	2	0	0	2
2.12	0	0	0	0	1	1	0	0	2	0	2	3
2.13	0	0	0	0	1	1	0	0	2	0	2	3
2.14	0	0	0	0	1	0	0	0	1	0	1	1
2.15	0	0	0	0	1	0	0	0	1	0	1	1
2.16	0	0	0	0	0	1	0	0	1	0	0	1
2.17	0	0	0	0	0	1	0	0	1	0	0	1
2.18	0	0	0	0	0	0	0	0	0	0	0	0
2.19	0	0	0	0	0	0	0	0	0	0	0	0
2.20	0	0	0	0	0	0	0	0	0	0	0	0
2.21	0	0	0	0	0	0	0	0	0	0	0	0
2.22	0	0	0	0	0	0	0	0	0	0	0	0
2.23	0	0	0	0	0	0	0	0	0	0	0	0
2.24	0	0	0	0	0	0	0	0	0	0	0	0
2.25	0	0	0	0	0	0	0	0	0	0	0	0
2.26	0	0	0	0	0	0	0	0	0	0	0	0
2.27	0	0	0	0	0	0	0	0	0	0	0	0
2.28	0	0	0	0	0	0	0	0	0	0	0	0
2.29	0	0	0	0	0	0	0	0	0	0	0	0
2.30	0	0	0	0	0	0	0	0	0	0	0	0
2.31	0	0	0	0	0	1	0	0	1	0	0	1
2.32	0	0	0	0	0	1	0	0	1	0	0	1
2.33	0	0	0	0	0	0	0	0	0	0	0	0
2.34	0	0	0	0	0	0	0	0	0	0	0	0
2.35	0	0	0	0	0	0	0	0	0	0	0	0
2.36	0	0	0	0	0	1	0	0	1	0	0	1
2.37	0	0	0	0	0	1	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	0	0	0	0
2.41	0	0	0	0	0	0	0	0	0	0	0	0
2.42	0	0	0	0	0	0	0	0	0	0	0	0
2.43	0	0	0	0	0	0	0	0	0	0	0	0
2.44	0	0	0	0	0	0	0	0	0	0	0	0
2.45	0	0	0	0	0	0	0	0	0	0	0	0
2.46	0	0	0	0	0	0	0	0	0	0	0	0
2.47	0	0	0	0	0	0	0	0	0	0	0	0
2.48	0	0	0	0	0	0	0	0	0	0	0	0
2.49	0	0	0	0	0	0	0	0	0	0	0	0
2.50	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	0	0	0	0	11	73	0	13	158	0	24	231

~~TOP SECRET~~ C [redacted]

TABLE A-4

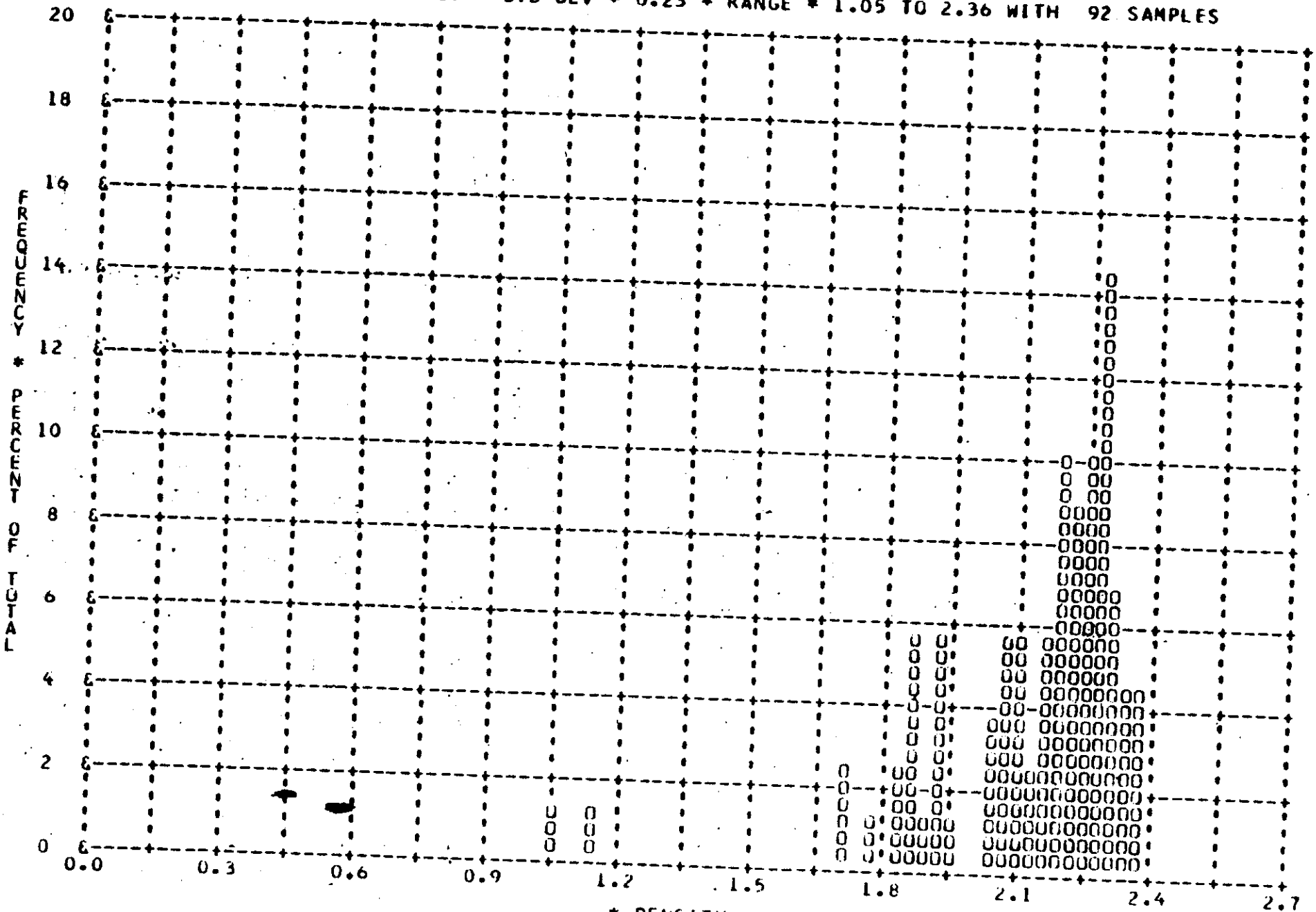
MISSION * 1041-2 * INSTR * AFT * 6/27/67 PLOT OF D MAX * TERRAIN * PROCESSING * INTERMEDIATE

AIRTH MEAN * 1.64 * MEDIAN * 1.65 * STD DEV * 0.31 * RANGE * 0.93 TO 2.37 WITH 73 SAMPLES



MISSION * 1041-2 * INSTR * AFT * 6/27/67 PLOT OF D MAX * CLOUD * PROCESSING * INTERMEDIATE

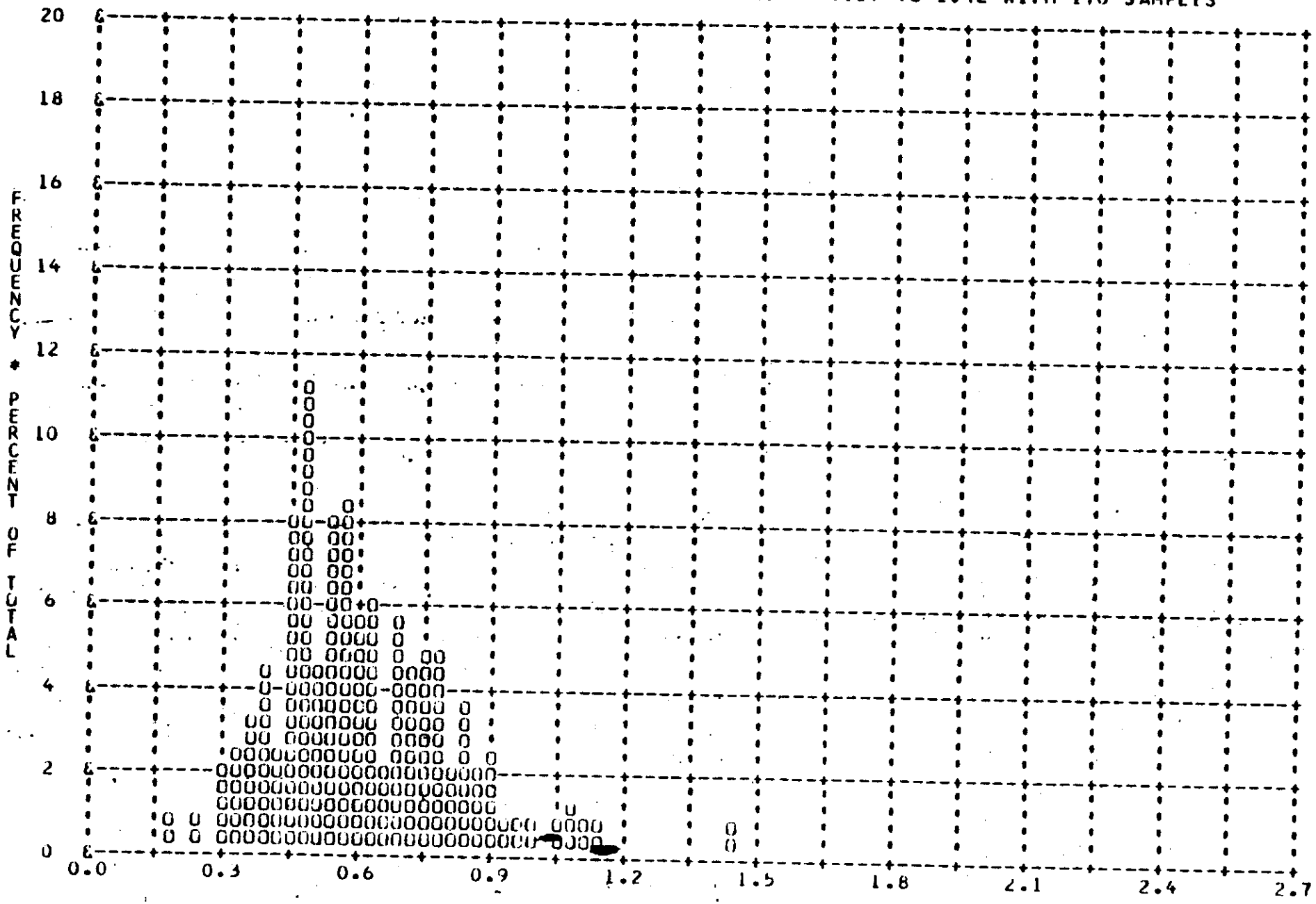
AIRTH MEAN * 2.12 * MEDIAN * 2.19 * STD DEV * 0.23 * RANGE * 1.05 TO 2.36 WITH 92 SAMPLES



~~TOP SECRET~~ C[redacted]

MISSION * 1041-2 * INSTR * AFT * 6/27/67 PLOT OF D MIN * TERRAIN * PROCESSING * FULL

AIRTH MEAN * 0.60 * MEDIAN * 0.57 * STD DEV * 0.19 * RANGE * 0.17 TO 1.42 WITH 170 SAMPLES

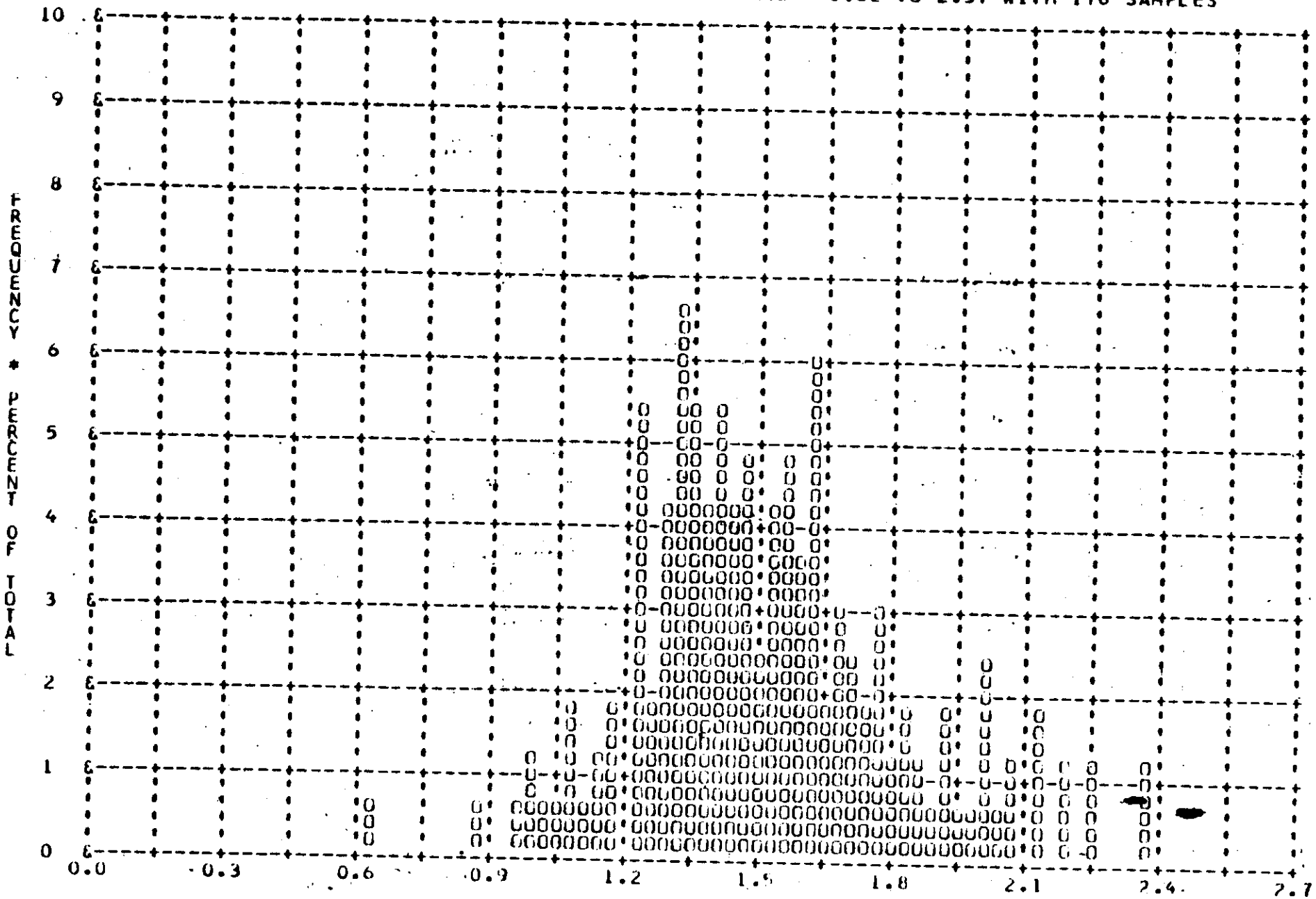


~~TOP SECRET~~ C[redacted]

~~TOP SECRET~~ C[redacted]

MISSION * 1041-2 * INSTR * AFT * 6/27/67 PLOT OF D MAX * TERRAIN * PROCESSING * FULL

AIRTH MEAN * 1.52 * MEDIAN * 1.47 * STD DEV * 0.30 * RANGE * 0.62 TO 2.37 WITH 170 SAMPLES

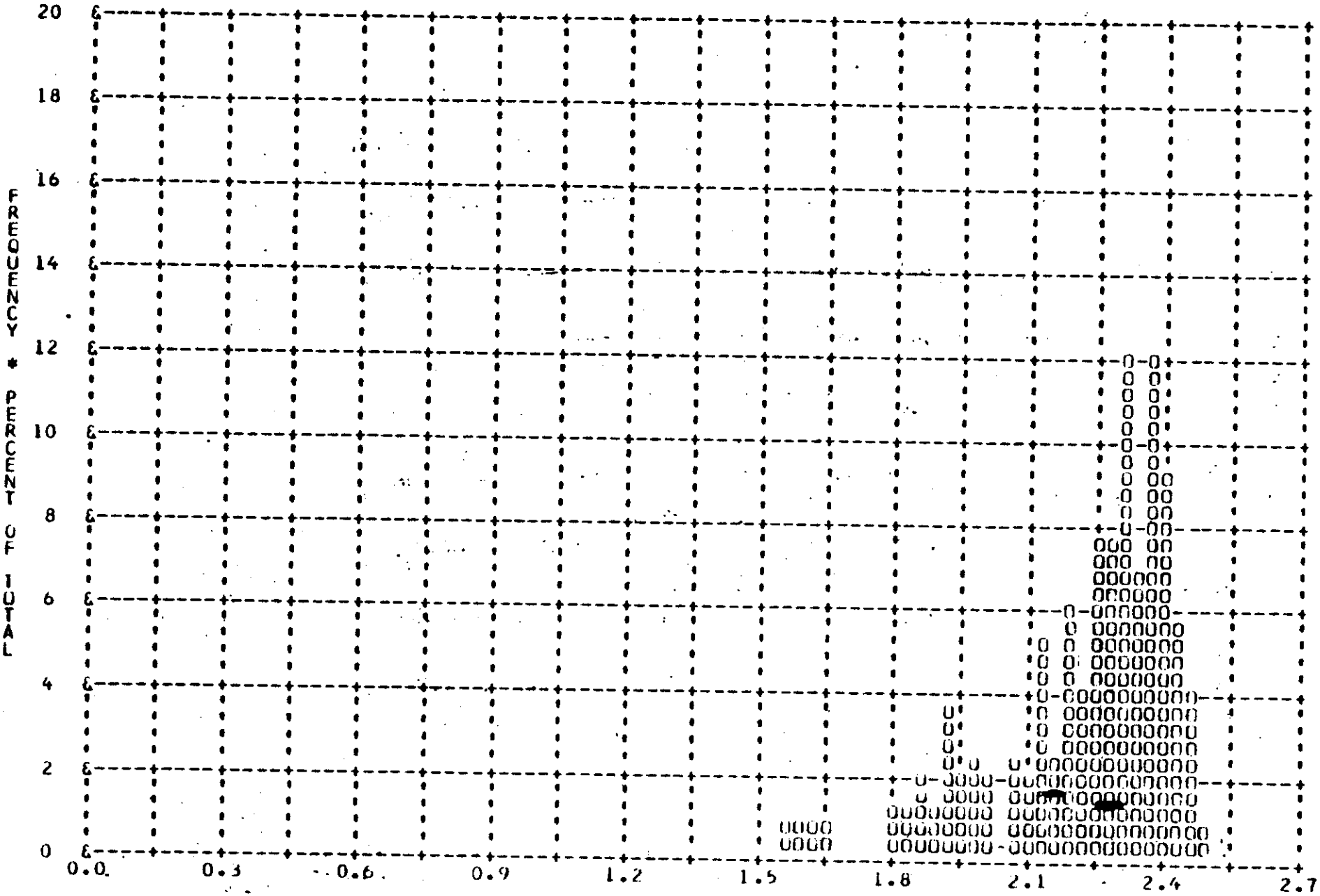


~~TOP SECRET~~ C[redacted]

~~TOP SECRET~~ C[redacted]

MISSION * 1041-2 * INSTR * AFT * 6/27/67 PLOT OF D MAX * CLOUD * PROCESSING * FULL

AIRTH MEAN * 2.23 * MEDIAN * 2.28 * STD DEV * 0.19 * RANGE * 1.56 TO 2.47 WITH 186 SAMPLES



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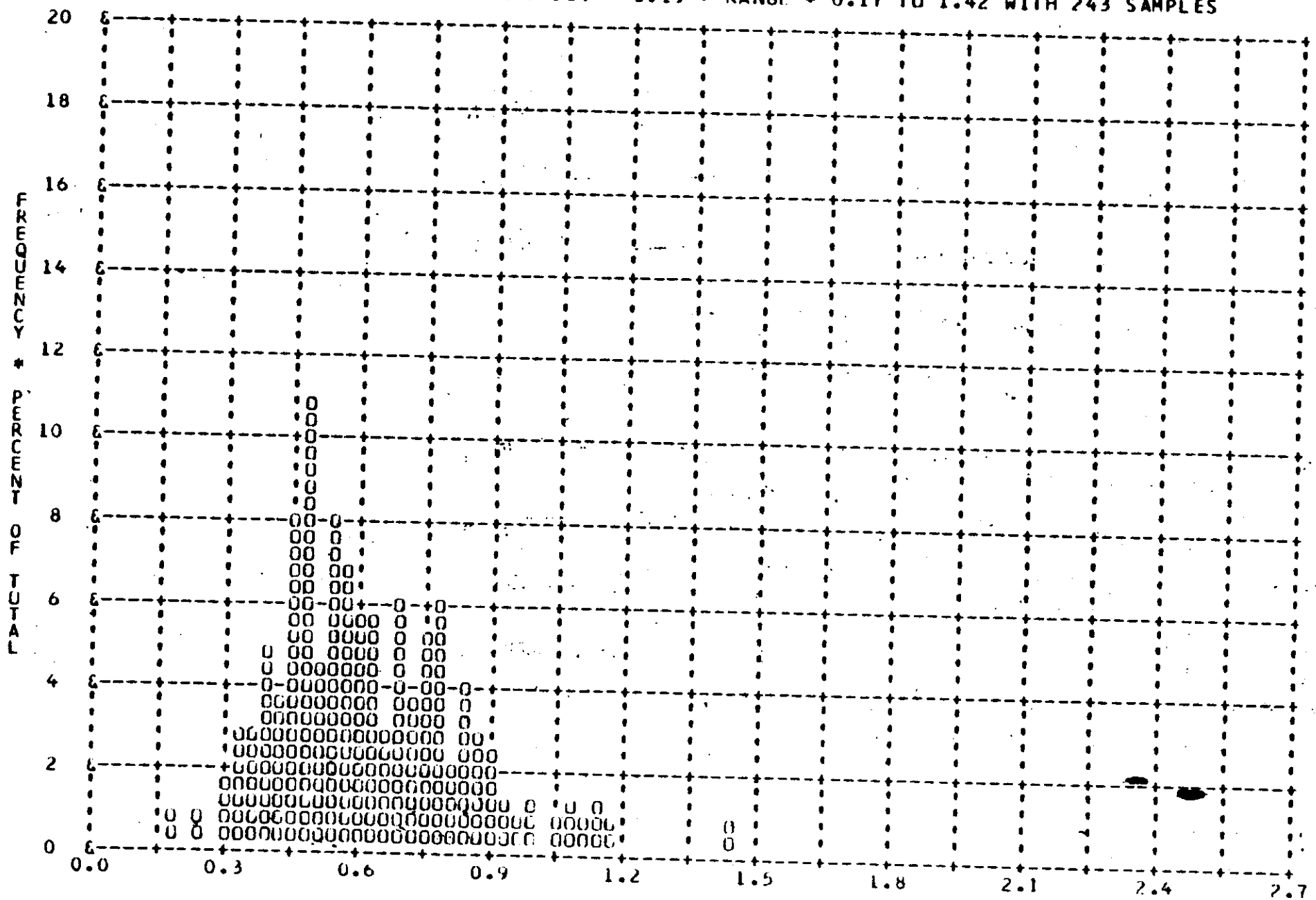
MISSION * 1041-2 * INSTR * AFT * 6/27/67 PLOT OF D MIN * TERRAIN * PROCESSING * ALL LEVELS

AIRTH MEAN * 0.60 * MEDIAN * 0.57 * STD DEV * 0.19 * RANGE * 0.17 TO 1.42 WITH 243 SAMPLES



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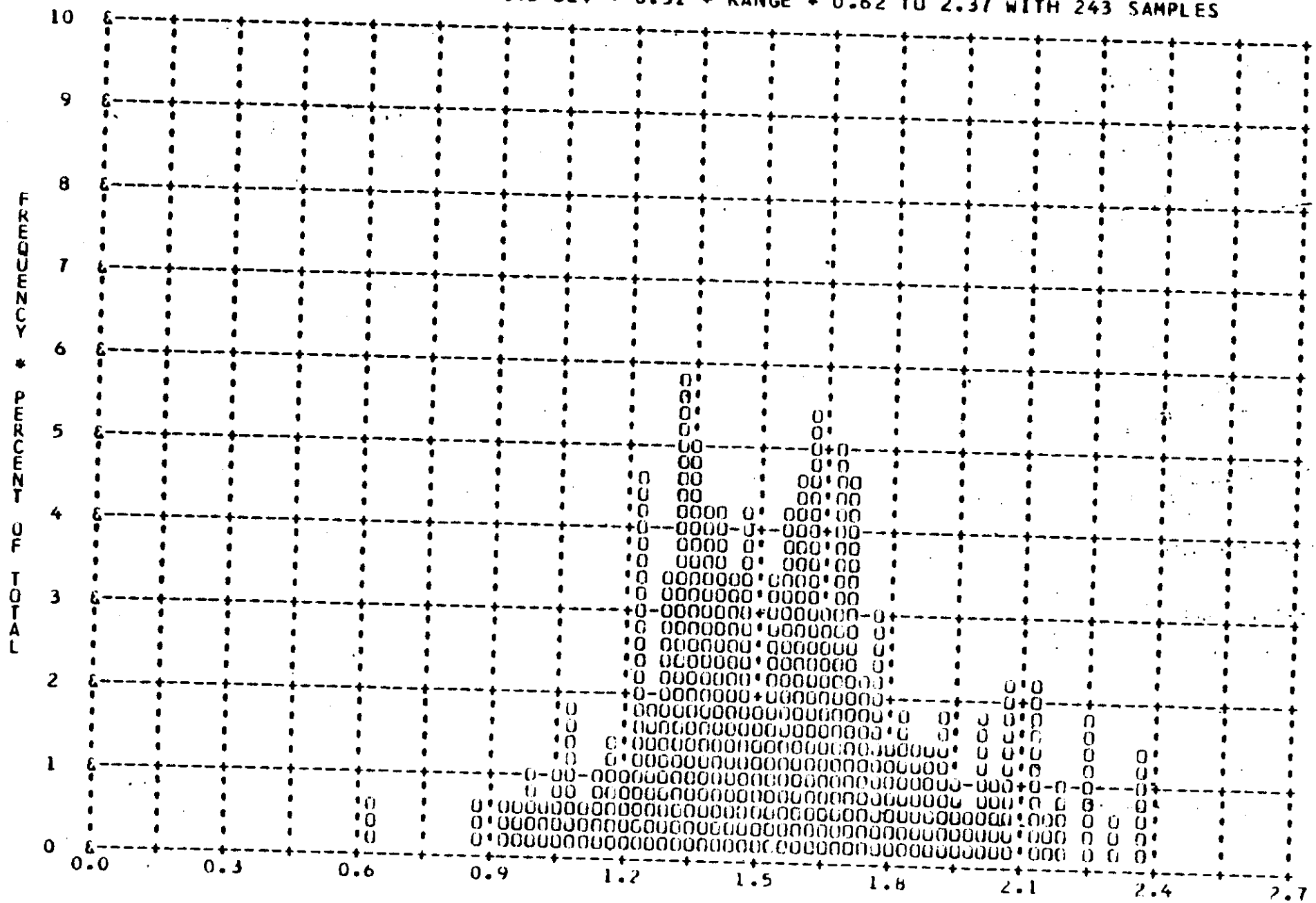
MISSION * 1041-2 * INSTR * AFT * 6/27/67 PLOT OF D MAX * TERRAIN * PROCESSING * ALL LEVELS

AIRTH MEAN * 1.55 * MEDIAN * 1.54 * STD DEV * 0.31 * RANGE * 0.62 TO 2.37 WITH 243 SAMPLES



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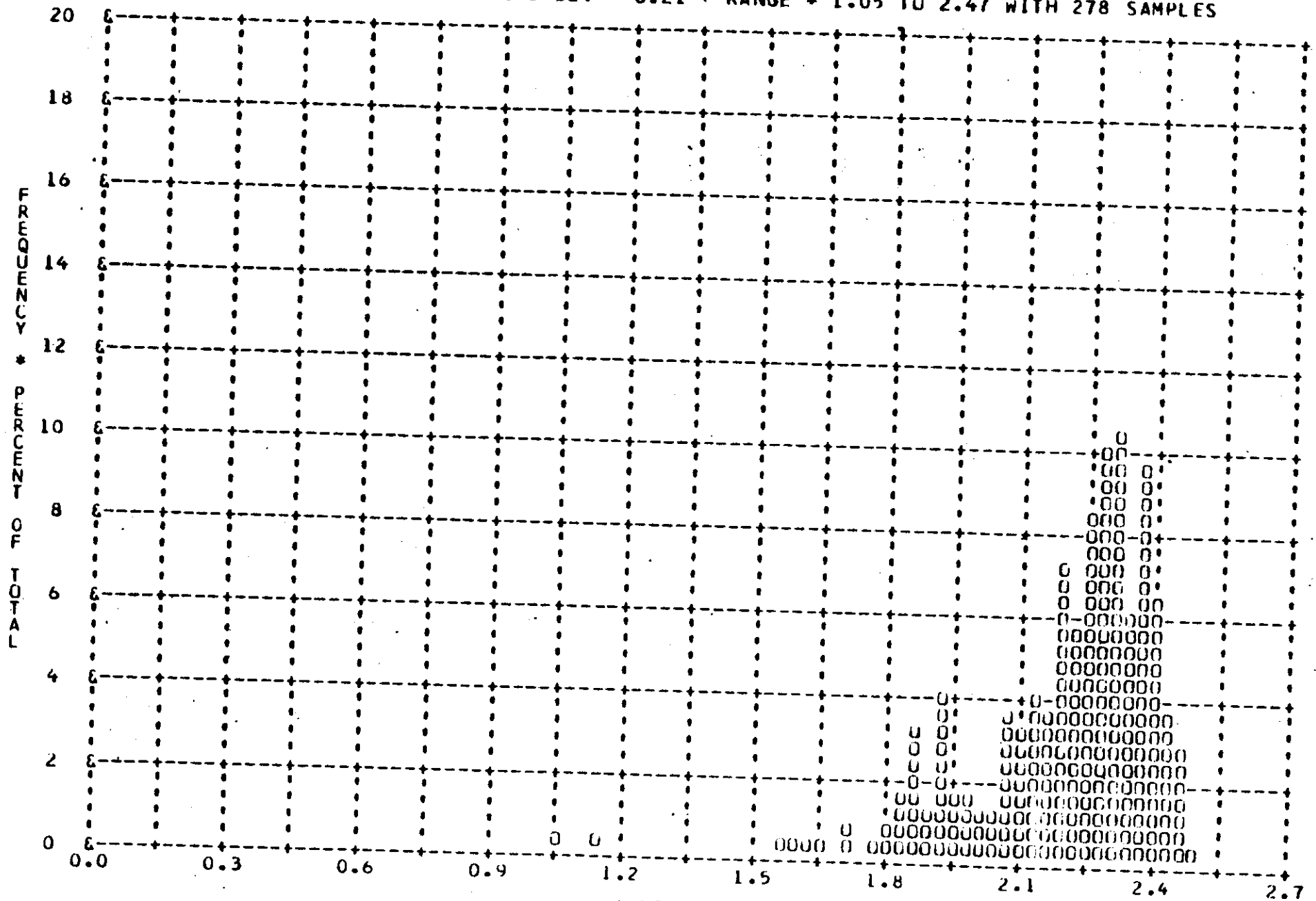
~~TOP SECRET~~ C [redacted]

MISSION * 1041-2 * INSTR * AFT * 6/27/67 PLOT OF D MAX * CLOUD * PROCESSING * ALL LEVELS

AIRTH MEAN * 2.19 * MEDIAN * 2.25 * STD DEV * 0.21 * RANGE * 1.05 TO 2.47 WITH 278 SAMPLES



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Distribution:

Copy No.	To
[redacted]	